

D.O.T. 66

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**FILE** STP-114-1(72) Cobb County **OFFICE** Preconstruction  
P. I. No. 721310  
SR 120/Roswell Road Widening **DATE** February 16, 2005

**FROM** *Cyber Kunkle*  
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

**DISTRIBUTION:**

- David Mulling
- Harvey Keepler
- Ken Thompson
- Jamie Simpson
- Michael Henry
- Keith Golden
- Joe Palladi (file copy)
- Babs Abubakari
- Ben Buchan
- Bryant Poole
- BOARD MEMBER

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE **STP-114-1(72), Cobb County** OFFICE Urban Design  
SR 120/Roswell Road Widening  
P.I. No. 721310  
FROM *James B. Buchan*  
James B. Buchan, P.E., State Urban Design Engineer DATE February 3, 2005  
TO Margaret B. Pirkle, P.E., Assistant Director of Pre-Construction  
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).

In order to design this project to meet current GDOT guidelines, the shoulders for this project must be modified. The shoulders described in the approved concept report meet the requirements set forth in 1997, but not those used today. Modification of the shoulders will also result in expanding the proposed right-of-way. Finally, the original project was set to be done in metric units, but will now be completed in English units.

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

DATE 2/09/05

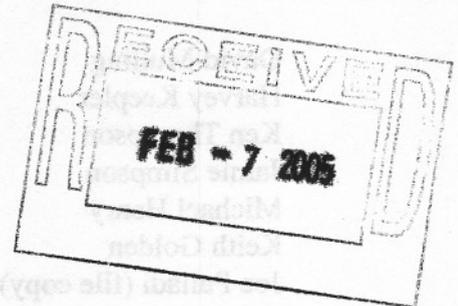
*DVM*  
JBB:DVM:PBSJ

*Joseph P. Palladi*  
Joseph P. Palladi, P.E.  
State Transportation Planning Administrator

*Distribution:*

David Mulling, Project Review Engineer, w/attachment  
Harvey Keepler, State Environmental/Location Engineer, w/attachment  
Keith Golden, Traffic Safety and Design Engineer, w/attachment  
Joe Palladi, State Transportation Planning Administrator, w/attachment  
Jamie Simpson, Financial Management Administrator, w/attachment  
Bryant Poole, District Engineer, w/attachment

Attachments (1): Revised Concept Report



# REVISED PROJECT CONCEPT REPORT

SR 120/Roswell Road Widening

SPT-114-1(72), Cobb County

P.I. No. 721310

## Need and Purpose:

The proposed upgrading of SR 120/Roswell Road from the SR 120 Loop to Bridgegate Drive (TIP# CO-177) is based upon the need to provide a facility that will better handle present and future traffic demands in an efficient and safe manner. Without these proposed improvements the roadway will not be able to serve its function as a principal arterial. In addition, without these improvements, the safety of the roadway will continue to degrade as increased traffic volumes create greater congestion. The current traffic volumes on SR 120/Roswell Road either approach or exceed the capacity of a four-lane roadway, and as a result, additional capacity must be provided to account for projected volumes.

The need for the planned roadway improvements becomes increasingly evident when developing traffic volumes for 2030. By the design year of 2030, two-way traffic volumes in the P.M. peak hour at major intersections along the project corridor will range from over 5,700 vehicles near East Piedmont Road to over 6,300 vehicles at the Robinson Road intersection. The existing roadway would operate at a level-of-service (LOS) F for its entire length in the design year. Implementation of the proposed project would provide LOS D or better at all intersections in the design year.

In addition, traffic volumes at or near the roadway's capacity have resulted in safety problems. The roadway with its current center turn-lane has an accident rate higher than the statewide average for a facility of this type. As traffic volumes increase, the potential for conflicts and accidents on the roadway will also increase as motorists will have trouble entering and exiting the roadway. Implementations of the project will reduce the number of conflict points with the addition of a median, thereby reducing the potential for accidents. This will improve safety on this section of Roswell Road. The project is in the ARC TIP, RTP, and the Cobb County local options sales tax program.

## Project location:

The proposed project begins at SR 120 Loop (milepost 13.70) and continues east along SR 120/Roswell Road for approximately 1.82 miles to Bridgegate Drive (milepost 15.52). The project is located entirely within Cobb County. The initial 22% of the project is located within the city of Marietta (milepost 14.09).

## Description of the approved concept:

The approved concept proposes to expand the existing five-lane section with a center turn lane to a six-lane section with 11-foot lanes and an 8-foot to 20-foot raised median from SR 120 Loop to East Piedmont Road with turn lanes as required. In addition, the approved concept proposed to widen the existing four-lane section divided with median to six-lane section divided with median from East Piedmont Road to Bridgegate Drive. The shoulders were to be 10 feet with curb and gutter.

**PDP Classification:** Major , Minor ,

**Federal Oversight:** Full Oversight (  ), Exempt (X), SF (  ), Other (  )

**Functional Classification:** Principal Arterial, Non-Freeway Urban

**U.S. Route Number:** NA

**State Route Number:** SR 120

**Traffic (AADT) as shown in the approved concept:**

Opening Year (2000): 69,000 ADT

Design Year (2020): 91,900 ADT

**Proposed features to be revised:**

Typical Section

The approved concept report shows 10-foot urban shoulders with 2:1 tie slopes at the back of the shoulders. This does not comply with current GDOT policy. Additionally, sidewalks will be required throughout the project.

Right-of-Way

The right-of-way was previously shown as "varies", however this revision will increase the total right-of-way required. It is also now being proposed that some right-of-way and easement be acquired from the historic Methodist Marietta Campground and the Marietta Campground Methodist Church Cemetery. Previously no acquisition was shown in this area.

Design Exceptions and Variance

A Design Exception will be requested for a steep vertical grade and for stopping sight distance in a vertical curve. A Design Variance will be requested to allow the lane width to be reduced to 11 feet.

**Describe the revised features to be approved:**

Typical Section

The project was changed from metric units to English units. Current GDOT guidelines require that the shoulder for this project be 16 feet. The shoulder will have a 6-foot grass strip followed by a 5-foot sidewalk. The proposed changes to the shoulders will make the project compliant with current ADA guidelines. In areas where there are right turn lanes, the shoulders will be reduced to 12 feet. This shoulder will have a 2-foot textured strip instead of a 6-foot grass strip. This change in shoulder width will not affect ADA compliance because there are no driveways with valley gutters in any of the right turn lanes. At the historic Methodist Marietta Campground and the Marietta Campground Methodist Church Cemetery the shoulders will be 12 feet with 2:1 tie-ins in order to avoid significant impacts. A design variance will be requested for the substandard shoulders at the campground and the cemetery.

Right-of-Way

The new proposed right-of-way will be located at the edge of the shoulder. Right-of-way will vary from 118 feet, in areas with no right turn lanes, to 132 feet, where there are right turn lanes on both sides of the road. Small amounts of right-of-way will be required at the historic Methodist Marietta Campground and the Marietta Campground Methodist Church Cemetery and easement will be required at the historic Methodist Marietta Campground. This will allow for the construction of sidewalk through the area, as well as improvements to the shoulders.

Design Exceptions and Variance

There is an existing vertical curve and vertical grade on SR 120/Roswell Road that does not meet current AASHTO guidelines. The vertical curve and grade are near the interchange with SR 120 Loop. In order to bring these up to current AASHTO standards, it would be necessary to replace

the SR 120 Loop bridges and further impact Sope Creek. A Design Exception will be requested in order to avoid these impacts. In addition, a design variance will be requested to allow 11-foot lanes. This is a highly developed commercial area with many buildings and parking lots in close proximity to SR 120/Roswell Road. 11-foot lanes will help to reduce impacts to these buildings and parking spaces.

**Updated traffic data (AADT):**

Base Year (2010): 64,000 ADT Design Year (2030): 76,600 ADT

**Programmed/Schedule:**

P.E. 2004

R/W 2005

Construction: 2006

**Revised Cost Estimates:**

1. Construction cost including inflation and E&C,: \$6,585,844
2. Right-of-way,: \$6,500,000
3. Utilities: \$500,000

**Is the project located in a Non-attainment area?**  **Yes**  **No**

The proposed project concept matches the conforming plan's model description. The project proposes to widen SR 120/Roswell Road to a six lane divided section from SR 120 loop to Bridgegate Drive. The proposed changes are scheduled to be open to traffic in 2010.

**Recommendation:** Recommend that the proposed revision to the concept be approved for implementation.

**Attachments:**

1. Sketch Map
2. Cost Estimate
3. Typical Section
4. Conforming Plan's Network Schematics
5. Traffic Data
6. Capacity Analysis
7. LGPA
8. Meeting Minutes
9. 11" x 17" Conceptual Layout Sheet

**Exempt projects**

Concur:

*Becky Ant*

Director of Preconstruction

Approve:

*Paul W. Mulla*

Chief Engineer

### Estimate Report for file "721310"

<b>Section 1. Roadway</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
150-1000	1.00	LS	500000.00	TRAFFIC CONTROL - PROJECT NO. STP-114-1 (72)	500000.0
153-1300	1.00	EA	49465.29	FIELD ENGINEERS OFFICE TP 3	49465.29
207-0203	110.00	CY	34.21	FOUND BK FILL MATL, TP II	3763.1
210-0100	1.00	LS	260000.00	GRADING COMPLETE - PROJECT NO. STP-114-1(72)	260000.0
310-5120	25000.00	SY	13.90	GR AGGR BASE CRS, 12 INCH, INCL MATL	347500.0
318-3000	1000.00	TN	15.67	AGGR SURF CRS	15670.0
402-1802	250.00	TN	60.69	RECYCLED ASPH CONC PATCHING, INCL BITUM MATL & H LIME	15172.5
402-1812	3900.00	TN	38.32	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	149448.0
402-3121	11000.00	TN	35.71	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	392810.0
402-3130	7900.00	TN	36.60	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM	289140.0
402-3190	4125.00	TN	39.12	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM	161370.0
413-1000	16000.00	GL	0.94	BITUM TACK COAT	15040.0
441-0104	11000.00	SY	22.04	CONC SIDEWALK, 4 IN	242440.0
441-0740	6300.00	SY	23.29	CONCRETE MEDIAN, 4 IN	146727.0
441-4030	425.00	SY	32.93	CONC VALLEY GUTTER, 8 IN	13995.25
441-6022	19000.00	LF	10.07	CONC CURB & GUTTER, 6 IN X 30 IN, TP 2	191330.0
441-6720	15100.00	LF	10.75	CONC CURB & GUTTER, 6 IN X 30 IN, TP 7	162325.0
446-1002	19000.00	LF	2.81	PVMT REINF FABRIC STRIPS, TP 2, INCL BITUM BINDER	53390.0
550-1180	8400.00	LF	27.78	STORM DRAIN PIPE, 18 IN, H 1-10	233352.0
550-1240	2400.00	LF	32.30	STORM DRAIN PIPE, 24 IN, H 1-10	77520.0
550-1360	1200.00	LF	50.56	STORM DRAIN PIPE, 36 IN, H 1-10	60672.0
634-1200	114.00	EA	83.24	RIGHT OF WAY MARKERS	9489.35
641-1200	2400.00	LF	10.99	GUARDRAIL, TP W	26376.0
641-5001	10.00	EA	419.84	GUARDRAIL ANCHORAGE, TP 1	4198.4
641-5012	10.00	EA	1384.73	GUARDRAIL ANCHORAGE, TP 12	13847.3
668-1100	60.00	EA	1756.49	CATCH BASIN, GP 1	105389.4
668-1200	10.00	EA	2473.18	CATCH BASIN, GP 2	24731.8
668-2100	5.00	EA	1895.69	DROP INLET, GP 1	9478.45
<b>Section Sub Total:</b>					<b>\$3,574,640.85</b>

<b>Section 2. Temporary Erosion Control</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
163-0232	10.00	AC	447.01	TEMPORARY GRASSING	4470.1
163-0240	300.00	TN	193.05	MULCH	57915.0
163-0300	6.00	EA	1041.36	CONSTRUCTION EXIT	6248.16
163-0530	500.00	LF	2.16	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	1080.0
163-0550	70.00	EA	181.23	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	12686.09
165-0010	500.00	LF	1.01	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	505.0
165-0030	6500.00	LF	1.20	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	7800.0
165-0050	1000.00	LF	2.51	MAINTENANCE OF SILT RETENTION BARRIER	2510.0
165-0070	250.00	LF	1.20	MAINTENANCE OF BALED STRAW EROSION CHECK	300.0
165-0101	6.00	EA	335.59	MAINTENANCE OF CONSTRUCTION EXIT	2013.54
165-0105	70.00	EA	80.58	MAINTENANCE OF INLET SEDIMENT TRAP	5640.59
167-1000	2.00	EA	2648.22	WATER QUALITY MONITORING AND SAMPLING	5296.44
167-1500	24.00	MO	666.85	WATER QUALITY INSPECTIONS	16004.40
170-1000	500.00	LF	11.77	FLOATING SILT RETENTION BARRIER	5885.0
170-2000	500.00	LF	10.50	STAKED SILT RETENTION BARRIER	5250.0
171-0010	1000.00	LF	1.71	TEMPORARY SILT FENCE, TYPE A	1710.0
171-0030	13000.00	LF	3.08	TEMPORARY SILT FENCE, TYPE C	40040.0
<b>Section Sub Total:</b>					<b>\$175,354.34</b>

<b>Section 3. Permanent Erosion Control</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
603-2180	200.00	SY	30.87	STN DUMPED RIP RAP, TP 3, 12 IN	6174.0
603-7000	200.00	SY	3.53	PLASTIC FILTER FABRIC	706.0
700-6910	20.00	AC	739.28	PERMANENT GRASSING	14785.59
700-7000	60.00	TN	59.64	AGRICULTURAL LIME	3578.4
700-7010	50.00	GL	20.71	LIQUID LIME	1035.5
700-8000	14.00	TN	234.18	FERTILIZER MIXED GRADE	3278.52
700-8100	1000.00	LB	1.43	FERTILIZER NITROGEN CONTENT	1430.0
716-2000	5000.00	SY	1.12	EROSION CONTROL MATS, SLOPES	5600.00
<b>Section Sub Total:</b>					<b>\$36,588.02</b>

<b>Section 4. Signing &amp; Marking</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
636-XXXX	1.00	Lump Sum	25000.00	MISCELLANEOUS SIGNING	25000.0
653-0120	120.00	EA	56.18	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	6741.6
653-1501	30000.00	LF	0.25	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	7500.0
653-1502	19000.00	LF	0.23	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	4370.0
653-3501	36000.00	GLF	0.13	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	4680.0
653-6004	140.00	SY	2.45	THERMOPLASTIC TRAF STRIPING, WHITE	343.0
653-6006	240.00	SY	2.58	THERMOPLASTIC TRAF STRIPING, YELLOW	619.2
654-1003	1000.00	EA	3.19	RAISED PVMT MARKERS TP 3	3190.0
<b>Section Sub Total:</b>					<b>\$52,443.80</b>

<b>Section 5. Signals</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
647-1000	1.00	LS	990000.00	TRAFFIC SIGNAL INSTALLATION	990000.0
<b>Section Sub Total:</b>					<b>\$990,000.00</b>

<b>Section 6. Structures</b>					
Item Number	Quantity	Units	Unit Price	Item Description	Cost
500-XXXX	1.00	Lump Sum	200000.00	EXTEND QUAD 10x10 BOX CULVERT	200000.0
627-1000	25200.00	SF	38.02	MSE WALL FACE, 0 - 10 FT HT, WALL NO -	958104.00
<b>Section Sub Total:</b>					<b>\$1,158,104.00</b>

**Total Estimated Cost: \$5,987,131.01**

<b>Subtotal Construction Cost</b>	<b>\$5,987,131.01</b>
E&C Rate 10.0 %	\$598,713.10
Inflation Rate 0.0 % @ 0.0 Years	\$0.00
<b>Total Construction Cost</b>	<b>\$6,585,844.11</b>
Right Of Way	\$6,500,000.00
ReImb. Utilities	\$500,000.00
<b>Grand Total Project Cost</b>	<b>\$13,585,844.11</b>