

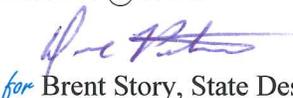
**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

**OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE**

FILE P.I. # 662510-
STP00-00MS-00(007)
Gordon County
GDOT District 6 - Cartersville
South Calhoun Bypass from SR 53 @ CR 13 East
to SR53 @ CR 64

OFFICE Design Policy & Support

DATE February 25, 2013

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED REVISED CONCEPT REPORT

Attached is the approved Revised Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Bobby Hilliard, Program Control Administrator
Genetha Rice-Singleton, State Program Delivery Engineer
Glenn Bowman, State Environmental Administrator
Cindy VanDyke, State Transportation Planning Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Angela Robinson, Financial Management Administrator
Lisa Myers, State Project Review Engineer
Charles "Chuck" Hasty, State Materials Engineer
Mike Bolden, State Utilities Engineer
Paul Tanner, Asst. State Transportation Data Administrator
Attn: Systems & Classification Branch
Ken Thompson, Statewide Location Bureau Chief
Tamaya Huff, State Pedestrian and Bicycle Coordinator
DeWayne Comer, District Engineer
Michael Haithcock, District Preconstruction Engineer
Kerry Bonner, District Utilities Engineer
Steve Adewale, Project Manager
BOARD MEMBER - 9th and 11th Congressional Districts
FHWA – attn: Rodney Barry, Georgia Division Administrator



U.S. Department
of Transportation
**Federal Highway
Administration**

Georgia Division

February 12, 2013

61 Forsyth Street SW
Suite 17T100
Atlanta, Georgia 30303
Phone 404-562-3630
Fax 404-562-3703
Georgia.fhwa@fhwa.dot.gov

Keith Golden, P.E., Commissioner
Georgia Department of Transportation
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308

In Reply Refer To:
HPE-GA

Dear Commissioner Golden:

The revised Concept Report submitted for project STP00-00MS-00(007) in Gordon County has been reviewed. As noted in the revised Concept Report, Georgia Department of Transportation (GDOT) recommends a reduction of the typical section for South Calhoun Bypass from four lanes to two lanes. As a result of review of the information submitted and further coordination with the GDOT on December 10, 2012, Federal Highway Administration (FHWA) has concurred with the recommended revisions and provided the following comments:

- Prior to completing the environmental reevaluation on the proposed project to let for construction, please provide the details of the environmental impacts associated with the GDOT's revised proposal. For example, please provide documentation regarding the impacts of the proposal of a two lane facility in comparison with a four lane facility (e.g., wetlands and streams).
- Please note additional public involvement is required to inform the public of the revised scope at an appropriate time. Please coordinate with FHWA's office regarding the scope and schedule for public involvement.

Please contact Vuong (Victor) Dang, Transportation Engineer, at (404) 562-3654 if you have any questions or comments.

Sincerely,

Rodney N. Barry, P.E.
Division Administrator

Cc: Glenn Bowman, GDOT Environmental Administrator

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
REVISED PROJECT CONCEPT REPORT**

| | | | |
|-----------------------|-----------------------|---------------------|---------------------|
| Project Type: | <u>Full Oversight</u> | P.I. Number: | <u>662510</u> |
| GDOT District: | <u>6</u> | County: | <u>Gordon</u> |
| Federal Route Number: | <u>N/A</u> | State Route Number: | <u>Future SR 53</u> |

Changes and reasons for changes:

The typical section for the South Calhoun Bypass has been changed to have a 32 ft depressed grassed median and to pave only the westbound lanes to be used for two way traffic from SR 53(Western Terminus) to US 41/SR 3 per recommendation of the Value Engineering Study.

The horizontal alignment of South Calhoun Bypass has been shifted approximately 15 feet northward along the frontage of Shaw Industries to minimize impacts to the parcel and a driveway used for internal operations.

The alignment for Oak Grove Road has been shortened at the northern tie-in by 390 ft to reduce environmental impacts. The alignment was revised to lengthen two curves that were shorter than the minimum allowable by the GDOT Design Policy manual.

Bridges 2 and 3 have been combined into one bridge to reduce environmental impacts. This also avoids settlement and undesirable ride conditions in the distance between the bridges.

** Submissions and Recommendations on File*
Submitted for approval:

Shawn Flut

Heath & Lineback Engineers, Inc. 10-16-2012
DATE

** Genetha Rice-Singleton* *KLP*

State Program Delivery Engineer 8-29-12
DATE

** Steve Adewale* *KLP*

GDOT Project Manager 8-29-12
DATE

Recommendation for approval:

** Glenn Bowman* *KLP*

State Environmental Administrator 9-7-12
DATE

** Ben Rabun* *KLP*

State Bridge Design Engineer 9-26-12
DATE

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

** Cynthia L. VanDyke* *KLP*

State Transportation Planning Administrator 9-19-12
DATE

PI# 662510 CST phase is not in current FY '12-15 STIP, but is proposed in FY '16 in the Draft FY '13-16 STIP currently in the development stage. Itis Planning's understanding this project will be in the FY '13-16 STIP once it is approved. (note from Dave Cox on file)

PLANNING, APPROVED CONCEPT, & BACKGROUND DATA

Project Justification Statement:

The project’s approved Need and Purpose is attached. The subject project is constructing a new southern bypass around the city of Calhoun to provide an alternate route to traffic traveling along SR 53 with an opportunity to avoid the highly congested commercial area between W.C. Bryant and I-75. This project will also remove through trucks from the commercial area and provide an alternate route to the airport and industrial area.

PDP Classification: Major Minor

Federal Oversight: Full Oversight Exempt State Funded Other

Projected Traffic as shown in the approved Concept Report: ADT

Open Year (2005): 4,750-14,000

Design Year (2025): 9,500-26,000

Updated Traffic: ADT

Open Year (2015): 13,350

Design Year (2035): 24,250

Functional Classification (Mainline): Rural Principal Arterial

VE Study anticipated: No Yes Completed – Date: 5/14/2007

PROPOSED REVISIONS

| Approved Features: | Proposed Features: |
|--|--|
| <ul style="list-style-type: none"> • The approved typical section includes four 12 ft lanes. • The approved typical section includes a 44 ft depressed grassed median from SR 53(Western Terminus) to US 41/SR 3. | <ul style="list-style-type: none"> • Only the westbound lanes of the typical section will be paved for two way traffic from SR 53(Western Terminus) to US 41/SR 3. • The typical section will now include a 32 ft depressed grassed median from SR 53(Western Terminus) to US 41/SR 3. |
| <ul style="list-style-type: none"> • The Oak Grove Road alignment is designed with two substandard horizontal curves that are shorter than the minimum required 525 ft length in the GDOT Design Policy manual. Oak Grove Road impacts Wetland 5 and Buffered Stream 6B which would require an additional stream buffer variance. | <ul style="list-style-type: none"> • The Oak Grove Road alignment curves are lengthened to meet GDOT Design Policy manual which required the intersection location to shift approximately 40 ft along the South Calhoun Bypass alignment. The northern tie-in is being shortened by 390 ft. |

| | |
|---|--|
| <ul style="list-style-type: none"> The South Calhoun Bypass alignment impacts a driveway along the frontage of the Shaw Industries property used for internal operations while only minimally impacting the Historic Moore property. | <ul style="list-style-type: none"> The horizontal alignment has been shifted approximately 15 ft northward. |
| <ul style="list-style-type: none"> The implemented VE study recommended separating the bridge over CSX and Oothkalooga Creek into 2 bridges instead of 1. | <ul style="list-style-type: none"> Reversal of the VE recommendation to separate the bridges. |

Reason(s) for changes:

South Calhoun Bypass Typical Sections:

By recommendation of the Value Engineering Study to reduce costs due to decreased traffic volumes for this segment of the Bypass, only the westbound lanes will be paved. The grading for the eastbound lanes will be constructed as originally designed. The paved westbound lanes will now carry both east and westbound traffic.

GDOT Design Policy Manual now allows median widths for arterials with design speeds greater than or equal to 55 mph to be 32 ft depressed. By recommendation of the Value Engineering Study, the typical section will be revised to include a 32 ft depressed grassed median. This recommendation reduces cost and environmental impacts.

South Calhoun Bypass Horizontal Alignment Shift:

The horizontal alignment of South Calhoun Bypass has been shifted approximately 15 feet northward along the frontage of Shaw Industries to minimize impacts to the Parcel and to a driveway used for internal operations. Adverse impacts to the Historic Moore property to the north are avoided by including a box culvert along the property.

Oak Grove Road Alignment:

The alignment for Oak Grove Road has been modified to shorten the length of the northern tie-in and to change the location of the intersection on South Calhoun Bypass. The previous alignment impacted Wetland 5 and Buffered Stream 6B and would require an additional stream buffer variance. Two of the horizontal curves on the Oak Grove Road alignment were shorter than the minimum required 525 ft length in the GDOT Design Policy manual, one of which could not be lengthened without changing the point of intersection with South Calhoun Bypass.

Combine Bridges 2 and 3:

Bridges 2 and 3 have been combined into one bridge. This change reduces environmental impacts by eliminating the fill in Wetland 15, avoids an island of fill into the middle of a wetland between two closely spaced bridges, avoids settlement and undesirable ride conditions in the distance between the bridges. The Value Engineering Study Recommends two separate bridges but a more detailed cost comparison revealed no significant reduction in cost in separating the bridges.

ENVIRONMENTAL

Air Quality:

Is the project located in a PM 2.5 Non-attainment area?

No

Yes

Is the project located in an Ozone Non-attainment area?

No

Yes

Level of Air and Noise studies required: Type I Noise Impact Assessment per GDOT Noise Policy (effective July 13, 2011)

Potential environmental impacts of proposed revision: Environmental impacts have been reduced by avoiding impacts to Wetland 15 and the Moore historic boundary due to reductions in the project footprint. Stream 6B impacts have been reduced by shortening the tie-in on Oak Grove Road.

Have proposed revisions been reviewed by environmental staff?

No

Yes

Environmental responsibilities (Studies/Documents/Permits): Edwards Pittman Environmental, Inc. & Georgia Department of Transportation, Office of Environmental Service

PROJECT COST & ADDITIONAL INFORMATION

| Updated Cost Estimate | | Date of Estimate |
|---------------------------------|------------------------|------------------|
| Base Construction Cost: | \$26,044,800.60 | 10/16/2012 |
| Engineering and Inspection: | \$1,041,792.02 | 10/16/2012 |
| Liquid AC Adjustment: | \$2,327,317.54 | 10/16/2012 |
| <u>Total Construction Cost:</u> | \$29,413,910.16 | 10/16/2012 |
| | | |
| Right-of-Way: | \$7,730,000.00 | 6/16/2011 |
| | | |
| Utilities (reimbursable costs): | \$1,807,809.00 | 6/25/2012 |
| | | |
| Environmental Mitigation: | \$2,318,222.39 | 10/16/2012 |
| | | |
| TOTAL PROJECT COST: | \$41,269,941.55 | 7/30/2012 |

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

Attachments:

1. Need & Purpose
2. Location Map
3. Roadway Typical Section
4. Cost Estimate Summary
5. Construction Cost Estimate
6. Liquid AC Adjustments, Utility Cost Estimate & Right of Way Cost Estimate
7. Green Sheet/Environmental Commitments Cost Estimate
8. Environmental Commitments Cost Estimate Project Breakdown
9. VE Reversal letters from GDOT and H&L
10. VE Implementation Letter and Responses
11. Traffic Diagrams

APPROVALS

Concur: 
Director of Engineering

Approve: 
Division Administrator, FHWA

2/12/13 please see FHWA
Date letter from 2/12/13

Approve: 
Chief Engineer

11/6/2012
Date

Need & Purpose

Introduction

The proposed Projects STP00-00MS-00(007) and NHSTP-0075-03(203), Gordon County, would construct a new South Calhoun Bypass (multi-lane facility with variable width median) using portions of the existing County Road (CR) 65/Union Grove Road and new location for a total project length of approximately 6.7 miles (See Project Location Map). The proposed Project STP00-00MS-00(007) would begin at State Route (SR) 53 approximately 5.25 miles southwest of the existing I-75 interchange with SR 53/Fairmount Highway and end at SR 53 approximately 2.7 miles southeast of the existing I-75 interchange with SR 53/Fairmount Highway. The proposed Project NHSTP-0075-03(203) would include the construction of a new full diamond interchange at I-75 and CR 65/Union Grove Road with a bridge approximately 330 feet long and 91.5 feet wide over I-75. The new interchange would add an access break to I-75, approximately 1.9 miles south of the existing I-75 interchange with SR 53/Fairmount Highway, between Exit 306/S.R. 140/Folsom Road and Exit 312/SR 53/Fairmount Highway. An Interchange Justification Report (IJR) was approved on June 20, 2001 for the proposed action. The IJR was validated in January of 2012.

The proposed bypass would utilize both rural design, with open grassed swale drainage ditches, and urban design with curb-and-gutter and a closed drainage system. The criteria selected for a particular section depends on the terrain and natural drainage conditions as well as adjacent land use.

Planning Basis for the Action

The primary purpose of the proposed construction is to provide direct access to I-75 from the Calhoun-Gordon County/Tom B. David Field Airport and the Calhoun-Gordon County Industrial Park area. Currently, the airport has a 6,000-foot runway and 17 hangars, accommodating 115 aircraft and a terminal which was completed in 2006. Additionally, there are currently three completed industrial parks within the Calhoun-Gordon County area, with one park under development and one new park that is in the planning stage.

The proposed project is in the 2012-2015 State Transportation Improvement Plan (STIP) identified as 662510 & 610870. The proposed project is also in the April 1992 Gordon County/City Comprehensive plan for recommended roadway improvements to relieve congestion on SR 53. The project would serve to relieve truck traffic from industrial land use along CR 65/Union Grove Road.

The proposed project is not located in a non-attainment area for ozone or PM 2.5.

The industrial park under development is located on McDaniel Station Road between SR 53 and the SR 53 Spur. At this time, the park is still under development. The planned industrial park will be located on CR 334/Old Dixie Highway between CR 65/Union Grove Road and Adairsville. The proposed

South Calhoun Bypass would provide access to these industrial parks from I-75. Daily vehicle and truck trips generated by the industrial park area are projected to reach 25,000 additional vehicles per day (VPD) by the year 2010. Currently, the closest access from I-75 south of the industrial area is approximately two miles south of the Gordon County line in Bartow County. As proposed, the interchange and the improvements to Union Grove Road would provide an alternate route for SR 53 and act as a bypass for vehicles traveling through the South Calhoun area.

Currently, east-west traffic movements from I-75 in the southern portion of the City of Calhoun occur along SR 53, and movement is hampered by the number of driveways and turning movements from cars accessing retail and restaurant developments along the route. Traffic analysis of the existing SR 53 corridor in the proposed project vicinity indicates that additional widening is needed before 2031 if an alternate route is not provided to relieve congestion on SR 53. Traffic volumes on SR 53 would exceed 36,200 VPD in 2011 and would exceed 65,300 VPD in 2031, resulting in levels-of-service (LOS) of "C" in 2011 and "F" in 2031 without construction of the proposed bypass and additional interstate access. The best LOS is "A" or "B" for facility operations. This traffic analysis indicates a need to widen SR 53 to six lanes by 2031; however, widening SR 53 to six lanes would severely impact several businesses due to their proximity to the existing roadway. The LOS for the bypass would be "C" or better. The proposed South Calhoun Bypass would consist of variable typical sections to minimize impacts to physical and natural resources. The following provides a detailed explanation of the proposed typical sections of the bypass.

- From SR 53 (west terminus) to US 41, 4 lanes depressed median, but only 2 lanes will be paved initially.
- From US 41 to Marine Road, 4 lanes raised concrete median, rural shoulder.
- From Marine Road to just east of Shaw Property (where proposed Union Grove Spur leaves the main alignment), 4 lanes raised median, with curb, gutter and sidewalk.
- From just east of Shaw Property (where proposed Union Grove Spur leaves the main alignment) to Union Grove Church Road, 4 lanes raised median, rural shoulder.
- From Union Grove Church Road to SR 53 (east terminus) 2 lanes, rural shoulder (2-lanes of right of way)
- All side streets will be two lanes.

As noted above, a section of the selected alternative (from S.R. 53 to U.S. 41 — west terminus) would have two lanes paved on four lanes of right of way. This action is in response to the Value Engineering Study (VE) due to future traffic volumes in this area not warranting a four lane section upon design year construction. With the new proposed interchange with Interstate 75, property value would certainly increase, therefore it is proposed to purchase the required right of way for the four-lane section and construct two lanes. Environmental consequences of a four-lanes section have been addressed.

Currently CR 65/Union Grove Road is the center of over 3,000 acres of zoned industrial land uses, and is adjacent to the Calhoun-Gordon County/Tom B. David Field Airport. The proposed connector route

bypass with a raised median would serve these areas and divert truck traffic from using SR 53 and the SR 53/1-75 interchange, allowing an acceptable LOS to be maintained along SR 53 until the year 2031. Traffic analysis shows that the estimated traffic volumes on SR 53 at the 1-75 interchange would be reduced by 23 percent westbound and 21 percent eastbound for 2011, and would be reduced by 26 percent westbound and 23 percent eastbound for 2031. The LOS for SR 53 under the proposed project would be "C" in 2011 and would be "D" in 2031. Further, both City of Calhoun and Gordon County plans recommend the implementation of the bypass and interchange, and these are identified in the Short Term Work Program of the City of Calhoun's Comprehensive Plan.

In the proposed project area, SR 53 and I-75 are part of the Surface Transportation Assistance Act (STAA) National Network. SR 53 is classified as a STAA Access Route to the east of I-75 and as an Other National Network Route to the west of I-75. SR 53 connects with US 411 in Rome, Georgia, and continues into Alabama. SR 53/US 411 also connects with US 27/SR 1 in Rome. US 27/SR 1 is part of the Governor's Road Improvement Program (GRIP), which is meant to stimulate the economy of rural Georgia towns by providing multi-lane highway access. I-75 is part of the Eisenhower Interstate System, which runs through Georgia from Florida to Tennessee. The STAA of 1982 designated specific routes to facilitate the movement of freight. Federal law prohibits oversized trucks (wide body, twin trailer) from traveling more than one mile from a designated STAA route. Georgia has identified STAA access routes, which are routes that allow truck traffic to reach terminals and delivery points more directly. SR 53 provides east-west access to US 41/SR 3, to US 411, to US 27/SR 1 to the west of I-75, and to US 411/SR 61 to the east of I-75.

According to Year 2010 census data from the U.S. Census Bureau, Calhoun's population has increased 46.7 percent since 2000. Gordon County experienced a 25.1 percent increase in population between 2000 and 2010. The Atlanta Journal-Constitution (AJC) reported that "Calhoun...draws its own commuters..." and quoted Cathy Harrison, Calhoun's City Administrator and Chief Financial Officer, as saying, "We've got 30,000 jobs here, and Calhoun has a population of 11,000" (AJC, August 4, 2003). According to the same article, 15,172 of the people who work in Gordon County live there. Floyd County sends 1,813 workers into the county, while Bartow County has 1,203 of its residents working there. Whitfield and Murray counties send a combined 1,469. Whitfield, Bartow, and Floyd are also the main counties drawing workers out of Gordon County with 2,909 traveling to Whitfield, 1,034 to Bartow County and 966 to Rome, Floyd County. Three Fortune 500 companies are also reported to be considering locations in Gordon County, which would bring in approximately 1,900 jobs.

The neighboring counties experienced growth from 2000 to 2010, with Bartow County to the south experiencing a 31.8 percent increase in population, and Whitfield County to the north experiencing a 22.8 percent increase in population. These counties contain the cities of Cartersville and Dalton respectively, which also have large industrial bases. The region of US 41/SR 3 between Dalton and Cartersville is known as a focal point for the carpet industry. This industry has such a presence in the area that Dalton is referred to as the "Carpet Capital of the World" on the city of Dalton website. Mohawk Industries, Dixie Yarns, Aladdin Manufacturing, and Bretlin/Globaltex were the top four

employers in 2003, all of which are textile based (AJC, August 4, 2003). While many industry operations are still related to carpeting or flooring, other industries have moved into the area and have provided a diverse industrial base. Gordon County, particularly the City of Calhoun, has a growing industrial and commercial base, and a rapidly growing population that would be served by the proposed South Calhoun Bypass and new I-75 interchange. I-75 currently has three (3) lanes in each direction in the area of the proposed bypass. The Georgia Department of Transportation (GDOT) has recognized a future need for I-75 to be widened to four (4) lanes in each direction.

In the proposed project vicinity, there are three other GDOT projects. Currently, there are two projects in the pre-construction stage on SR 53. One project will add median turn lanes from north of Floyd County to the SR 53 Spur, and another will widen SR 53 from the WC Bryant Parkway/County Secondary 814 to just west of I-75. Intersection improvements at CR 5/McDaniel Station Road are listed in the Construction Work Program, and a widening project along US 41/SR 3 from CR 65/Union Grove Road north to SR 53 is in the preconstruction stage. Figure 1-3, Adjoining Projects Map, identifies the location of those projects outlined in Table I-1, Adjoining Projects.

TABLE I-1 Adjoining Projects

| PROJECT NO.; P.I. No. | FACILITY | LIMITS | DESCRIPTION | SCHEDULE |
|--------------------------------|-----------------|---|---|---|
| STP00-0001-00(578); 0001578 | SR 53 | From north of Floyd County to SR 53 Spur | Addition of median turn-lanes/Safety Improvements (3.48 miles). | Let — December 2008 |
| STP00-0001-06(35); 621365 | US 41/ SR 3 | From CR 65/Union Grove Road north to SR 53 including bridge | Widening/ Reconstruction/ Rehabilitation (2.84 miles). | Right of Way — 2011/2012 Construction 2016 |
| STP00-0004-00(048); 0004048 | SR 53 | SR 53 at CR 5 McDaniel Station Road | Intersection Improvement (.52 mile) | Right of Way — Authorized Construction — July 2008 |
| NHSTP-0075-03(203); 610870 | Future SR 53 | Marine Road to Johnson Lake/Belwood Rd along CR 65/Union Grove Rd | New Interchange Project | Let – February 2012 |

Deficiencies in the System

The current deficiencies in the system are traffic congestion, above average accident rates, frequent flooding, and a substandard intersection. Roadways are rated for operational effectiveness using a level-of-service (LOS). LOS is a standard means of classifying traffic conditions associated with various traffic volume levels and traffic flow conditions. There are six levels of service at which a roadway can operate, represented by the letters "A" through "F". Each level is defined by a maximum value for the ratio of traffic volume (V) to facility capacity (C). An LOS of A is when volume is well below capacity and traffic is flowing freely. LOS of "B" is when traffic flow is steady but the presence of other vehicles begins

to be noticeable. An LOS of "C" allows for steady traffic flow, but the higher volumes more closely control speeds and maneuverability. LOS of "D" is approaching an unsteady flow in which speed and maneuverability are severely restricted. LOS of "E" is when traffic flow is reduced to a slow but relatively uniform speed, and traffic volume is equal to or nearly equal to capacity and maneuverability is extremely difficult. The lowest LOS of "F" is when the volume greatly exceeds the capacity and lengthy delays occur.

Project location

The STP00-00MS-00(007) proposed concept would be on new location within Gordon County. The beginning terminus intersects SR 53 approximately at mile post 4.5 and the ending terminus intersects SR 53 approximately at mile post 12.5. The total length of the project is approximately 6.8 miles. STP00--00MS-00(007) is paired with NHSTP-0075-03(203).

Description of the approved concept

Project STP00-00MS-00(007), known as the South Calhoun Bypass, begins at SR 53 southwest of Calhoun near CR 113 in Gordon County. The proposed concept would travel east/southeastward to the intersection of I-75, then veer northeastward and tie back into SR 53 on the east side of Calhoun near the intersection of SR 53 and Masson Rd (CR 64). An exception to this project is set between Marine Road(CR 825) and Johnson Lake/Belwood Road(CR 68). This section of the concept is project NHSTP-0075-03(203).

The proposed typical section from the beginning of the project, to approximately 1600 feet west of the intersection of US 41/SR 3 is set for two lanes in each direction divided by a 44 foot grassed median all of which is on new location. The right-of-way would vary from 250'-350'. From 1600 foot west of the intersection, the typical section tapers to have a 20 foot raised median. The alignment crosses US 41/SR 3 on new location and then follows a short section of Union Grove Road (CR 65) to Marine Road (CR 825). From Marine Road intersection, the alignment follows Union Grove Road to Johnson Lake/Belwood Road (CR 68) with a full urban typical section carrying two lanes in each direction, a 20 foot raise median, and 16 foot shoulders with sidewalk and curb and gutter. Due to the horizontal alignment of the proposed concept and unacceptable load capacity and cost effectiveness of the existing bridge over I-75, two new parallel structures would be constructed. In order to avoid impacting the proposed interchange ramps at I-75, Johnson Lake/Belwood Road (CR 68) would be relocated approximately 800 foot further east from its existing location. The proposed right-of-way would be 100 foot.

East of the intersection of Johnson Lake/Belwood Road (CR 68) the typical section drops the urban shoulders for rural shoulders and continues with two lanes in each direction with a 20 foot raised median following Union Grove Road (CR 65). Approximately 0.4 miles east of Johnson Lake/Belwood Road (CR 68), the alignment veers northeast onto new location. The typical section then tapers to a

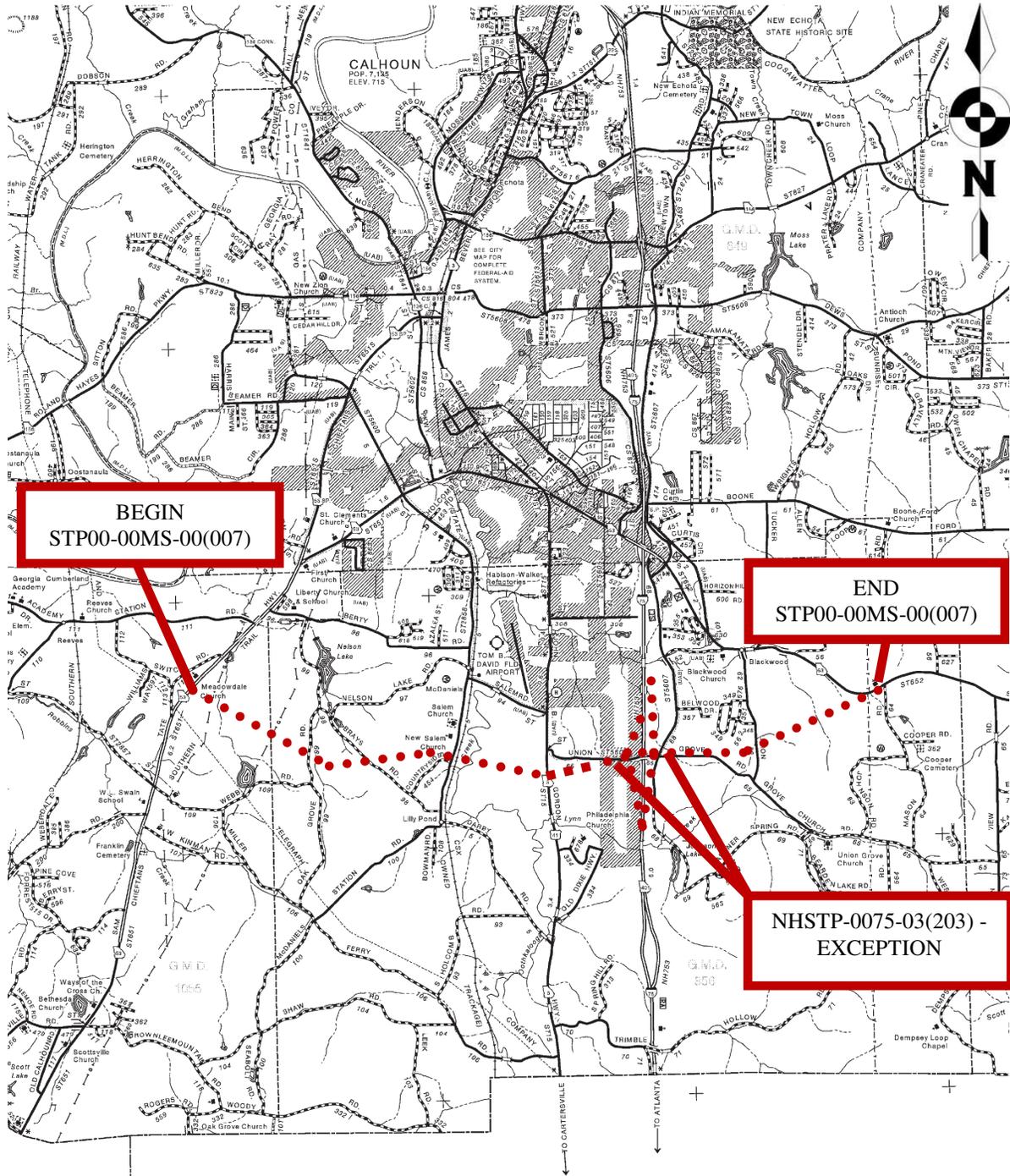
two-lane rural section 400 foot east of crossing Union Grove Church Road and continues on new location to SR 53 west of Calhoun. The right-of-way would vary from 250 to 350 foot through this section.

At the beginning, the concept would extend eastward onto new location from SR 53 approximately 0.3 mile north of CR 113. The concept would proceed southeastward and cross over a tributary to the Oostanaula River. It would then intersect Oak Grove Road (CR 99) at-grade approximately 0.2 mile north of Webb Road (CR 109). The alignment would then continue eastward and bridge Brays Road (CR 98) approximately 0.6 mile north of Country Side Drive (CR 454). It would then proceed eastward and bridge both CR 5 and the CSX Railroad as well as Oothkalooga Creek. Continuing eastward, the proposed alignment would intersect US 41/SR 3 at-grade approximately 0.3 mile south of Union Grove Road (CR 65). The proposed concept would then turn northeastward. It would tie into Union Grove Road (CR 65) approximately 0.5 mile east of US 41/SR 3. From this point, the concept would follow along Union Grove Road (CR 65) for approximately 0.5 mile, then bridge I-75 on new location. Once the concept clears the interchange, it would turn northeastward and proceed on new location to a point approximately 0.3 mile east of Johnson Lake/Belwood Road (CR 68) and would continue northeast and bridge over Union Grove Church Rd (CR 62). Just past this intersection, the concept would continue northeastward and continue to SR 53 on the east side of Calhoun just west of Masson Rd (CR 64).

This project is currently programmed to begin at SR 3 and end at SR 53 on the east side of Calhoun for a length of 3.2 miles. It is recommended by this office that the project be extended to SR 53 on the west side of Calhoun. This extension would help eliminate logical termini issues and provide a southern bypass of the city of Calhoun. The total length of the concept is 6.7 miles.

Johnson Lake Road (CR 68), located just east of the I-75 interchange, would be shifted onto new location for approximately 0.9 mile to avoid being impacted by the new Interchange. Belwood Road (CR 68) would be realigned with Johnson Lake Road (CR 68) to provide a new crossover. This new intersection would be approximately 800 foot further east from its existing location. The section between where the concept ties into Union Grove Road (CR 65) and relocated Johnson Lake Road (CR 68) would have a 45 mph speed design to enhance safety and allow for adequate distance between median crossovers.

Project Location Map



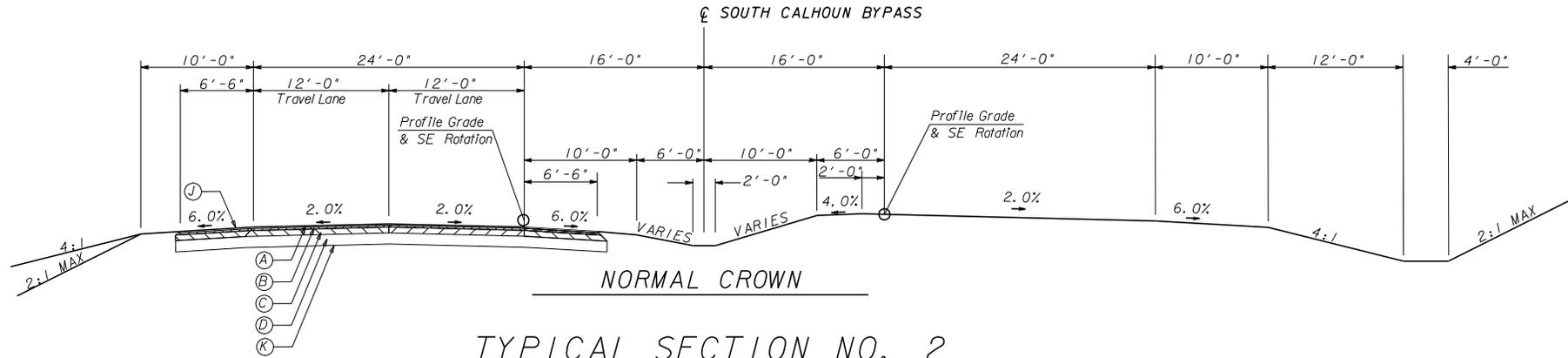
BARTOW

Project: STP00-00MS-00(007), Gordon County

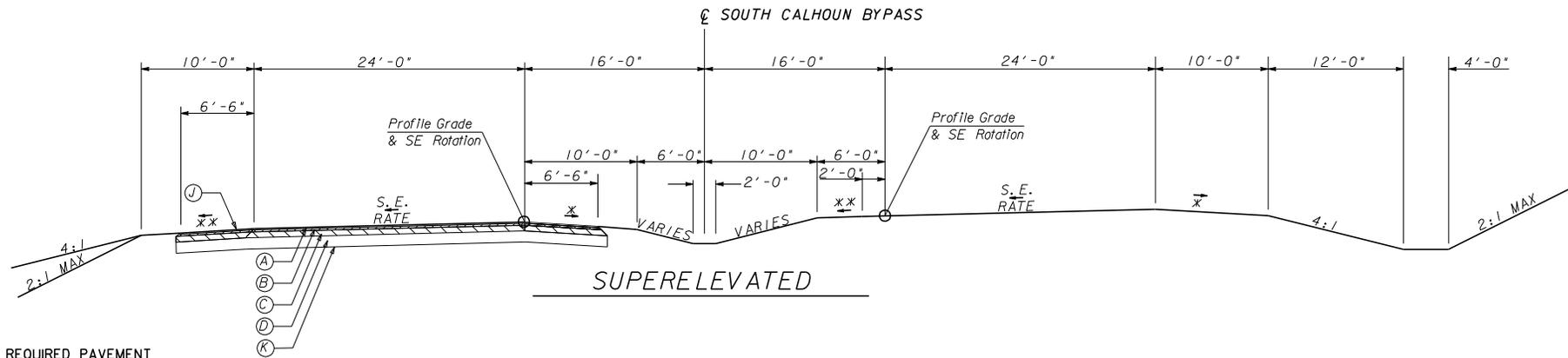
PI No.: 662510

Description: South Calhoun Bypass

TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2



REQUIRED PAVEMENT

- (A) RECYCLED ASPH CONC 12.5 mm SUPERPAVE, GP 2 ONLY, INCL BITUM & H LIME (165 LBS/SY)
- (B) RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/SY)
- (C) RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (660 LBS/SY)
- (D) GR AGGR BASE CRS, 12 INCH, INCL MATL
- (J) INDENTATION RUMBLE STRIPS - GROUND-IN-PLACE (CONTINUOUS)
- (K) LIME STABILIZATION

* SHOULDER TO SLOPE AT NORMAL RATE, HOWEVER, THE ALGEBRAIC DIFFERENCE IN PAVING SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 8%. MINIMUM SHOULDER SLOPE TO BE 2%.

** SHOULDER TO SLOPE AT NORMAL RATE OR SUPERELEVATION RATE, WHICHEVER IS GREATER.



NO SCALE

REVISION DATES

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |
| | | |

STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: PROGRAM DELIVERY
 TYPICAL SECTIONS

STP00-OOMS-001(007)
 SOUTH CALHOUN BYPASS

DRAWING No.
5-001

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE PROJECT No. , **OFFICE**
 DATE

P.I. No.

FROM

TO Lisa L. Myers, 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

Reduced Construction Cost due to updated quantities, unit prices, and liquid AC price adjustment calculations as per GDOT policy.

CONTINGENCY SUMMARY

| | | |
|-----------------------------|-------------------------|---------------------------|
| Construction Cost Estimate: | \$ 26,044,800.60 | (Base Estimate) |
| Engineering and Inspection: | \$ 1,041,792.02 | (Base Estimate x 4 %) |
| Total Liquid AC Adjustment | \$ 2,327,317.54 | (From attached worksheet) |
| Construction Total: | \$ 29,413,910.16 | |

REIMBURSABLE UTILITY COST

Utility Owner

Reimbursable Cost

| | |
|------------------------|-----------------------|
| Dalton Utilities | \$90,000.00 |
| North Ga. EMC | \$442,000.00 |
| Southern Natural Gas | \$1,165,809.00 |
| Tenn. Valley Authority | \$110,000.00 |
| | |
| | |
| | |
| | |
| Total | \$1,807,809.00 |

Attachments

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JOB DETAIL ESTIMATE
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JOB NUMBER : 662510_H&L SPEC YEAR: 01
DESCRIPTION: SOUTH CALHOUN BYPASS
 BYPASS

ITEMS FOR JOB 662510_H&L

| LINE | ITEM | ALT | UNITS | DESCRIPTION | QUANTITY | PRICE | AMOUNT |
|------|----------|-----|-------|--|------------|-----------|------------|
| 0001 | 150-1000 | | LS | TRAFFIC CONTROL - STP00-00MS-00(007) | 1.000 | 365000.00 | 365000.00 |
| 0002 | 150-5010 | | EA | TRAF CTRL,PORTABLE IMPACT ATTN | 4.000 | 8537.04 | 34148.16 |
| 0007 | 153-1300 | | EA | FIELD ENGINEERS OFFICE TP 3 | 1.000 | 58720.50 | 58720.50 |
| 0012 | 201-1500 | | LS | CLEARING & GRUBBING - STP00-00MS-00(007) | 1.000 | 920000.00 | 920000.00 |
| 0017 | 205-0001 | | CY | UNCLASS EXCAV | 964233.000 | 3.46 | 3343333.29 |
| 0022 | 225-4840 | | SY | SOIL-LIME TRT/SUBBASE/CL B/8" | 214439.000 | 1.95 | 418156.05 |
| 0026 | 225-9001 | | TN | LIME | 3216.000 | 165.00 | 530640.00 |
| 0037 | 310-1101 | | TN | GR AGGR BASE CRS, INCL MATL | 143440.000 | 14.95 | 2145084.96 |
| 0042 | 318-3000 | | TN | AGGR SURF CRS | 2500.000 | 18.44 | 46124.25 |
| 0047 | 402-1812 | | TN | RECYL AC LEVELING,INC BM&HL | 1213.000 | 69.22 | 83968.12 |
| 0052 | 402-3113 | | TN | RECYL AC 12.5MM SP,GP1/2,BM&HL | 19495.000 | 53.67 | 1046427.46 |
| 0057 | 402-3121 | | TN | RECYL AC 25MM SP,GP1/2,BM&HL | 70770.000 | 53.46 | 3783597.03 |
| 0062 | 402-3190 | | TN | RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL | 39802.000 | 53.50 | 2129703.13 |
| 0067 | 413-1000 | | GL | BITUM TACK COAT | 45370.000 | 1.39 | 63195.87 |
| 0071 | 432-0206 | | SY | MILL ASPH CONC PVMT/ 1.50" DEP | 1504.000 | 6.91 | 10406.61 |
| 0072 | 432-0214 | | SY | MILL ASPH CONC PVMT, 3.5" DPTH | 1732.000 | 5.21 | 9027.58 |
| 0076 | 433-1000 | | SY | REINF CONC APPROACH SLAB | 1037.000 | 166.75 | 172923.74 |
| 0077 | 436-1000 | | LF | ASPH CONC CURB - 5 IN | 21238.000 | 6.53 | 138831.74 |
| 0081 | 441-0018 | | SY | DRIVEWAY CONCRETE, 8 IN TK | 3333.000 | 34.71 | 115710.16 |
| 0082 | 441-0050 | | SY | CONC SLOPE DRAIN | 350.000 | 39.65 | 13879.90 |
| 0087 | 441-0104 | | SY | CONC SIDEWALK, 4 IN | 1945.000 | 30.46 | 59252.52 |
| 0092 | 441-0301 | | EA | CONC SPILLWAY, TP 1 | 12.000 | 1727.33 | 20728.00 |
| 0097 | 441-0302 | | EA | CONC SPILLWAY, TP 2 | 2.000 | 2075.90 | 4151.82 |
| 0102 | 441-0303 | | EA | CONC SPILLWAY, TP 3 | 16.000 | 1832.30 | 29316.89 |
| 0107 | 441-0304 | | EA | CONC SPILLWAY, TP 4 | 5.000 | 1868.30 | 9341.51 |
| 0112 | 441-0740 | | SY | CONC MEDIAN, 4 IN | 6790.000 | 25.75 | 174843.11 |
| 0117 | 441-6222 | | LF | CONC CURB & GUTTER/ 8"X30"TP2 | 3548.000 | 16.92 | 60049.19 |
| 0122 | 441-6740 | | LF | CONC CURB & GUTTER/ 8"X30" TP7 | 17719.000 | 11.12 | 197145.85 |
| 0132 | 446-1100 | | LF | PVMT REF FAB STRIPS, TP2,18 INCH WIDTH | 5000.000 | 4.42 | 22126.15 |
| 0137 | 456-2015 | | GLM | INDENT. RUMB. STRIPS - GRND-IN-PL (SKIP) | 7.000 | 956.83 | 6697.82 |
| 0142 | 500-3200 | | CY | CL B CONC | 122.000 | 378.46 | 46172.38 |
| 0147 | 576-1010 | | LF | SLOPE DRAIN PIPE, 10 IN | 2000.000 | 8.14 | 16296.06 |
| 0152 | 603-2024 | | SY | STN DUMPED RIP RAP, TP 1, 24" | 1209.000 | 44.34 | 53617.03 |
| 0157 | 603-2181 | | SY | STN DUMPED RIP RAP, TP 3, 18" | 972.000 | 37.75 | 36699.77 |
| 0162 | 603-6012 | | SY | SAND-CEMENT BAG RIP RAP, 12 IN | 42.000 | 140.00 | 5880.00 |
| 0167 | 603-7000 | | SY | PLASTIC FILTER FABRIC | 2223.000 | 4.00 | 8892.49 |
| 0172 | 620-0100 | | LF | TEMP BARRIER, METHOD NO. 1 | 2354.000 | 35.84 | 84375.72 |
| 0177 | 634-1200 | | EA | RIGHT OF WAY MARKERS | 319.000 | 102.16 | 32591.54 |
| 0182 | 641-1100 | | LF | GUARDRAIL, TP T | 248.000 | 51.13 | 12682.55 |

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|------|----------|----|-----------------------------------|------------|---------|------------|
| 0187 | 641-1200 | LF | GUARDRAIL, TP W | 21263.000 | 13.38 | 284694.77 |
| 0192 | 641-5001 | EA | GUARDRAIL ANCHORAGE, TP 1 | 22.000 | 629.96 | 13859.23 |
| 0197 | 641-5012 | EA | GUARDRAIL ANCHORAGE, TP 12 | 33.000 | 1760.59 | 58099.64 |
| 0202 | 643-0010 | LF | FIELD FENCE WOVEN WIRE | 57720.000 | 3.76 | 217101.08 |
| 0207 | 643-2153 | LF | CH FEN,W/X ARM/BWIRE,ZC,6',11G | 2035.000 | 15.00 | 30525.00 |
| 0212 | 643-8010 | EA | GATE, CHAIN LINK ZC COAT - 16 FT | 2.000 | 960.39 | 1920.80 |
| 0217 | 207-0203 | CY | FOUND BK FILL MATL, TP II | 1858.000 | 39.43 | 73261.76 |
| 0222 | 550-1180 | LF | STM DR PIPE 18",H 1-10 | 7547.000 | 32.70 | 246795.50 |
| 0227 | 550-1240 | LF | STM DR PIPE 24",H 1-10 | 1848.000 | 39.13 | 72315.05 |
| 0232 | 550-1300 | LF | STM DR PIPE 30",H 1-10 | 557.000 | 54.68 | 30461.25 |
| 0237 | 550-1360 | LF | STM DR PIPE 36",H 1-10 | 140.000 | 72.88 | 10204.12 |
| 0242 | 550-1420 | LF | STM DR PIPE 42",H 1-10 | 22.000 | 97.35 | 2141.89 |
| 0247 | 550-1480 | LF | STM DR PIPE 48",H 1-10 | 1077.000 | 101.24 | 109043.25 |
| 0252 | 550-1181 | LF | STM DR PIPE 18",H 10-15 | 935.000 | 40.53 | 37902.10 |
| 0257 | 550-1301 | LF | STM DR PIPE 30",H 10-15 | 50.000 | 77.10 | 3855.41 |
| 0262 | 550-1182 | LF | STM DR PIPE 18",H 15-20 | 348.000 | 35.58 | 12383.43 |
| 0267 | 550-1302 | LF | STM DR PIPE 30",H 15-20 | 308.000 | 73.56 | 22658.75 |
| 0272 | 550-1183 | LF | STM DR PIPE 18",H 20-25 | 95.000 | 37.42 | 3554.94 |
| 0277 | 550-1303 | LF | STM DR PIPE 30",H 20-25 | 93.000 | 85.00 | 7905.00 |
| 0282 | 550-1543 | LF | STM DR PIPE 54",H 20-25 | 46.000 | 130.00 | 5980.00 |
| 0287 | 550-1184 | LF | STM DR PIPE 18",H 25-30 | 107.000 | 43.12 | 4614.35 |
| 0292 | 550-1244 | LF | STM DR PIPE 24",H 25-30 | 320.000 | 51.77 | 16566.92 |
| 0297 | 550-1304 | LF | STM DR PIPE 30",H 25-30 | 230.000 | 100.00 | 23000.00 |
| 0302 | 550-1544 | LF | STM DR PIPE 54",H 25-30 | 210.000 | 150.00 | 31500.00 |
| 0307 | 550-1186 | LF | STM DR PIPE 18",H 35-40 | 283.000 | 61.23 | 17329.61 |
| 0312 | 550-1487 | LF | STM DR PIPE 48",H 40-50 | 328.000 | 125.00 | 41000.00 |
| 0317 | 550-2180 | LF | SIDE DR PIPE 18",H 1-10 | 1008.000 | 25.35 | 25558.77 |
| 0322 | 550-2300 | LF | SIDE DR PIPE 30",H 1-10 | 591.000 | 36.67 | 21676.17 |
| 0327 | 550-4236 | EA | FLARED END SECT 36 IN, ST DR | 2.000 | 1026.12 | 2052.25 |
| 0332 | 550-2243 | LF | SIDE DR PIPE 24",H 20-25 | 160.000 | 40.00 | 6400.00 |
| 0337 | 550-2600 | LF | SIDE DR PIPE 60",H 1-10 | 86.000 | 90.00 | 7740.00 |
| 0342 | 550-4218 | EA | FLARED END SECT 18 IN, ST DR | 54.000 | 541.47 | 29239.91 |
| 0347 | 550-4224 | EA | FLARED END SECT 24 IN, ST DR | 26.000 | 593.88 | 15441.14 |
| 0352 | 550-4230 | EA | FLARED END SECT 30 IN, ST DR | 20.000 | 844.02 | 16880.53 |
| 0357 | 550-4118 | EA | FLARED END SECT 18 IN, SIDE DR | 46.000 | 359.69 | 16545.99 |
| 0362 | 550-4124 | EA | FLARED END SECT 24 IN, SIDE DR | 2.000 | 530.81 | 1061.63 |
| 0367 | 550-4130 | EA | FLARED END SECT 30 IN, SIDE DR | 10.000 | 594.54 | 5945.47 |
| 0371 | 550-3448 | EA | SAFETY END SECTION 48",SD,4:1 | 1.000 | 1245.00 | 1245.00 |
| 0372 | 668-2100 | EA | DROP INLET, GP 1 | 34.000 | 2273.74 | 77307.22 |
| 0377 | 668-2110 | LF | DROP INLET, GP 1, ADDL DEPTH | 192.000 | 229.16 | 43999.24 |
| 0382 | 668-2200 | EA | DROP INLET, GP 2 | 1.000 | 3218.77 | 3218.78 |
| 0387 | 668-2210 | LF | DROP INLET, GP 2, ADDL DEPTH | 22.000 | 230.41 | 5069.05 |
| 0392 | 668-1100 | EA | CATCH BASIN, GP 1 | 48.000 | 2755.81 | 132278.92 |
| 0397 | 668-1110 | LF | CATCH BASIN, GP 1, ADDL DEPTH | 28.000 | 206.01 | 5768.54 |
| 0402 | 668-4300 | EA | STORM SEW MANHOLE, TP 1 | 2.000 | 2491.98 | 4983.96 |
| 0417 | 668-4400 | EA | STORM SEW MANHOLE, TP 2 | 7.000 | 2780.20 | 19461.44 |
| 0422 | 668-4411 | LF | ST SEW MANHOLE,TP 2,A DEP,CL 1 | 10.000 | 244.61 | 2446.15 |
| 0427 | 668-4412 | LF | ST SEW MANHOLE,TP 2,A DEP,CL 2 | 17.000 | 226.18 | 3845.07 |
| 0432 | 668-4413 | LF | ST SEW MANHOLE,TP 2,A DEP,CL 3 | 21.000 | 228.57 | 4800.15 |
| 0437 | 500-3101 | CY | CLASS A CONCRETE | 3233.000 | 392.18 | 1267933.14 |
| 0442 | 500-3800 | CY | CL A CONC, INCL REINF STEEL | 47.000 | 760.79 | 35757.16 |
| 0447 | 511-1000 | LB | BAR REINF STEEL | 379431.000 | 0.74 | 281757.87 |
| 0457 | 700-9500 | AC | RIPARIAN, STR REST, WET & STR MIT | 2.000 | 1500.00 | 3000.00 |
| 0462 | 163-0232 | AC | TEMPORARY GRASSING | 51.000 | 231.25 | 11793.77 |

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|------|----------|----|---|------------|---------|-----------|
| 0467 | 163-0240 | TN | MULCH | 2035.000 | 140.84 | 286621.45 |
| 0472 | 643-8200 | LF | BARRIER FENCE (ORANGE), 4 FT | 16086.000 | 1.12 | 18076.16 |
| 0477 | 163-0300 | EA | CONSTRUCTION EXIT | 17.000 | 1400.09 | 23801.53 |
| 0482 | 163-0503 | EA | CONSTR AND REMOVE SILT CONTROL GATE, TP 3 | 52.000 | 366.12 | 19038.53 |
| 0486 | 163-0528 | LF | CONSTR AND REM FAB CK DAM -TP C SLT FN | 1087.000 | 2.60 | 2832.94 |
| 0487 | 163-0529 | LF | CNST/REM TEMP SED BAR OR BLD STRW CK DM | 6477.000 | 2.91 | 18888.03 |
| 0492 | 163-0531 | EA | CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- STA 130+50 RT | 1.000 | 6434.68 | 6434.69 |
| 0497 | 163-0531 | EA | CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- STA 174+25 RT | 1.000 | 6434.68 | 6434.69 |
| 0502 | 163-0531 | EA | CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- STA 198+00 LT | 1.000 | 6434.68 | 6434.69 |
| 0507 | 163-0531 | EA | CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- STA 408+50 RT | 1.000 | 6434.68 | 6434.69 |
| 0512 | 163-0531 | EA | CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- STA 411+50 LT | 1.000 | 6434.68 | 6434.69 |
| 0517 | 163-0531 | EA | CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- STA 434+50 RT | 1.000 | 6434.68 | 6434.69 |
| 0522 | 163-0531 | EA | CONSTR & REM SEDIMENT BASIN, TP 1, STA NO- STA 451+75 RT | 1.000 | 6434.68 | 6434.69 |
| 0527 | 165-0030 | LF | MAINT OF TEMP SILT FENCE, TP C | 73791.000 | 0.65 | 47968.58 |
| 0532 | 165-0041 | LF | MAINT OF CHECK DAMS - ALL TYPES | 1087.000 | 1.07 | 1169.91 |
| 0537 | 163-0550 | EA | CONS & REM INLET SEDIMENT TRAP | 94.000 | 125.52 | 11799.53 |
| 0542 | 165-0060 | EA | MAINT OF TEMP SEDIMENT BASIN, STA NO - STA 130+50 RT | 1.000 | 1010.13 | 1010.14 |
| 0547 | 165-0060 | EA | MAINT OF TEMP SEDIMENT BASIN, STA NO - STA 174+25 RT | 1.000 | 1010.13 | 1010.14 |
| 0552 | 165-0060 | EA | MAINT OF TEMP SEDIMENT BASIN, STA NO - STA 198+00 LT | 1.000 | 1010.13 | 1010.14 |
| 0557 | 165-0060 | EA | MAINT OF TEMP SEDIMENT BASIN, STA NO - STA 408+50 RT | 1.000 | 1010.13 | 1010.14 |
| 0562 | 165-0060 | EA | MAINT OF TEMP SEDIMENT BASIN, STA NO - STA 411+50 LT | 1.000 | 1010.13 | 1010.14 |
| 0567 | 165-0060 | EA | MAINT OF TEMP SEDIMENT BASIN, STA NO - STA 434+50 RT | 1.000 | 1010.13 | 1010.14 |
| 0572 | 165-0060 | EA | MAINT OF TEMP SEDIMENT BASIN, STA NO - STA 451+75 RT | 1.000 | 1010.13 | 1010.14 |
| 0577 | 165-0071 | LF | MAINT OF SEDIMENT BARRIER - BALED STRAW | 16659.000 | 0.59 | 9990.74 |
| 0582 | 165-0087 | EA | MAINT OF SILT CONTROL GATE, TP 3 | 52.000 | 106.86 | 5556.74 |
| 0586 | 165-0101 | EA | MAINT OF CONST EXIT | 17.000 | 529.78 | 9006.40 |
| 0587 | 165-0105 | EA | MAINT OF INLET SEDIMENT TRAP | 94.000 | 51.63 | 4853.80 |
| 0592 | 167-1000 | EA | WATER QUALITY MONITORING AND SAMPLING | 8.000 | 478.38 | 3827.09 |
| 0597 | 167-1500 | MO | WATER QUALITY INSPECTIONS | 24.000 | 780.88 | 18741.21 |
| 0602 | 171-0030 | LF | TEMPORARY SILT FENCE, TYPE C | 147581.000 | 2.26 | 333662.93 |
| 0607 | 225-9001 | TN | LIME | 10.000 | 175.00 | 1750.00 |
| 0612 | 700-6910 | AC | PERMANENT GRASSING | 102.000 | 738.25 | 75301.87 |
| 0617 | 700-7000 | TN | AGRICULTURAL LIME | 471.000 | 66.83 | 31481.18 |
| 0622 | 700-8000 | TN | FERTILIZER MIXED GRADE | 105.000 | 349.40 | 36687.09 |
| 0627 | 700-8100 | LB | FERTILIZER NITROGEN CONTENT | 5192.000 | 1.50 | 7814.12 |

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|------|----------|-----|--|------------|-----------|-----------|
| 0632 | 716-2000 | SY | EROSION CONTROL MATS, SLOPES | 229297.000 | 0.74 | 171789.31 |
| 0637 | 702-7450 | EA | BARE ROOT SEEDLINGS AND PLANTINGS | 400.000 | 10.00 | 4000.00 |
| 0642 | 615-1200 | LF | DIRECTIONAL BORE - 5 IN | 50.000 | 13.50 | 675.27 |
| 0647 | 639-4004 | EA | STRAIN POLE, TP IV | 4.000 | 5648.55 | 22594.20 |
| 0652 | 647-1000 | LS | TRAF SIGNAL INSTALLATION NO - SIGNAL NO. 1 | 1.000 | 150000.00 | 150000.00 |
| 0657 | 682-6233 | LF | CONDUIT, NONMETL, TP 3, 2 IN | 715.000 | 4.83 | 3460.07 |
| 0662 | 636-1020 | SF | HWY SGN,TP1MAT,REFL SH TP3 | 805.000 | 13.40 | 10793.73 |
| 0667 | 636-1029 | SF | HWY SGN,TP2 MATL,REFL SH TP 3 | 158.000 | 15.89 | 2510.64 |
| 0672 | 636-1033 | SF | HWY SIGNS, TP1MAT,REFL SH TP 9 | 889.000 | 18.62 | 16555.12 |
| 0676 | 636-1041 | SF | HWY SIGNS,TP 2MAT,REFL SH TP 9 | 13.000 | 39.10 | 508.40 |
| 0677 | 636-2070 | LF | GALV STEEL POSTS, TP 7 | 1472.000 | 8.06 | 11872.40 |
| 0682 | 636-2080 | LF | GALV STEEL POSTS, TP 8 | 1583.000 | 10.38 | 16443.57 |
| 0687 | 636-3010 | EA | GROUND-MOUNTED BREAKAWAY SIGN SUPPORT | 5.000 | 545.26 | 2726.31 |
| 0692 | 653-0110 | EA | THERM PVMT MARK, ARROW, TP 1 | 7.000 | 67.52 | 472.65 |
| 0697 | 653-0120 | EA | THERM PVMT MARK, ARROW, TP 2 | 103.000 | 67.31 | 6933.64 |
| 0702 | 653-0170 | EA | THERM PVMT MARK, ARROW, TP 7 | 18.000 | 79.53 | 1431.65 |
| 0707 | 653-1501 | LF | THERMO SOLID TRAF ST 5 IN, WHI | 93914.000 | 0.26 | 25038.41 |
| 0712 | 653-1502 | LF | THERMO SOLID TRAF ST, 5 IN YEL | 62139.000 | 0.29 | 18262.03 |
| 0717 | 653-1704 | LF | THERM SOLID TRAF STRIPE,24",WH | 549.000 | 3.53 | 1943.11 |
| 0722 | 653-1804 | LF | THERM SOLID TRAF STRIPE, 8",WH | 4000.000 | 1.71 | 6866.40 |
| 0727 | 653-3501 | GLF | THERMO SKIP TRAF ST, 5 IN, WHI | 32296.000 | 0.20 | 6481.81 |
| 0732 | 653-3502 | GLF | THERMO SKIP TRAF ST, 5 IN, YEL | 6480.000 | 0.13 | 884.78 |
| 0737 | 653-6004 | SY | THERM TRAF STRIPING, WHITE | 5052.000 | 2.81 | 14220.42 |
| 0742 | 653-6006 | SY | THERM TRAF STRIPING, YELLOW | 4159.000 | 2.65 | 11044.18 |
| 0747 | 654-1001 | EA | RAISED PVMT MARKERS TP 1 | 814.000 | 3.11 | 2539.60 |
| 0752 | 654-1003 | EA | RAISED PVMT MARKERS TP 3 | 1031.000 | 3.20 | 3300.61 |
| 0757 | 657-1085 | LF | PRF PL SD PVT MKG,8",B/W,TP PB | 2859.000 | 6.16 | 17629.08 |
| 0762 | 657-6085 | LF | PRF PL SD PVMT MKG,8",B/Y,TPPB | 1861.000 | 5.31 | 9899.09 |
| 0766 | 657-3085 | GLF | PRF PL SK PVMT MKG,8",B/W,TPPB | 383.000 | 4.92 | 1887.93 |
| 0767 | 657-3086 | GLF | FPR PL SK PVMT MKG,8",B/Y,TPPB | 498.000 | 3.35 | 1668.80 |
| 0772 | 211-0200 | CY | BR EXCAV, GRADE SEPARATION | 280.000 | 41.83 | 11714.31 |
| 0777 | 441-0004 | SY | CONC SLOPE PAV, 4 IN | 1087.000 | 36.99 | 40215.55 |
| 0782 | 500-0100 | SY | GROOVED CONCRETE | 878.000 | 4.00 | 3516.39 |
| 0787 | 500-1006 | LS | SUPERSTR CONCRETE, CL AA, BR NO - BR NO. 1 | 294.000 | 650.00 | 191100.00 |
| 0792 | 500-2100 | LF | CONCRETE BARRIER | 403.000 | 40.67 | 16392.34 |
| 0797 | 500-3002 | CY | CL AA CONCRETE | 265.000 | 405.25 | 107392.85 |
| 0802 | 507-9003 | LF | PSC BEAMS,AASHTO TP III,BR NO- BR NO. 1 | 1016.000 | 107.28 | 108998.92 |
| 0807 | 511-1000 | LB | BAR REINF STEEL | 48039.000 | 0.84 | 40426.74 |
| 0812 | 511-3000 | LS | SUPERSTR REINF STEEL, BR NO - BR NO. 1 | 69824.000 | 0.70 | 48876.80 |
| 0817 | 520-0573 | EA | H-PILE POINTS, HP 14 X 73 | 28.000 | 154.92 | 4337.93 |
| 0822 | 520-1147 | LF | PIL-IN-PL,STEEL H,HP 14 X 73 | 1950.000 | 61.71 | 120353.28 |
| 0827 | 520-4147 | EA | LOAD TEST, STEEL H, HP 14 X 73 | 1.000 | 0.87 | 0.88 |
| 0832 | 207-0203 | CY | FOUND BKFILL MATL, TP II | 20.000 | 55.99 | 1119.87 |
| 0837 | 211-0200 | CY | BR EXCAV, GRADE SEPARATION | 538.000 | 36.46 | 19617.55 |
| 0842 | 441-0004 | SY | CONC SLOPE PAV, 4 IN | 396.000 | 39.09 | 15479.80 |
| 0847 | 500-0100 | SY | GROOVED CONCRETE | 4353.000 | 2.90 | 12659.83 |
| 0852 | 500-1006 | LS | SUPERSTR CONCRETE, CL AA, BR NO - BR NO. 2 | 1410.000 | 650.00 | 916500.00 |
| 0857 | 500-2100 | LF | CONCRETE BARRIER | 2041.000 | 34.30 | 70022.28 |
| 0862 | 500-3002 | CY | CL AA CONCRETE | 628.000 | 477.76 | 300035.96 |

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| 0867 | 507-9002 | LF | PSC BEAMS,AASHTO TP II, BR NO- BR NO. 2 | 884.000 | 114.60 | 101309.76 |
| 0872 | 507-9003 | LF | PSC BEAMS,AASHTO TP III,BR NO- BR NO. 2 | 329.000 | 125.08 | 41153.16 |
| 0877 | 507-9030 | LF | PSC BEAMS,AASHTO,BULB TEE, 54" | 2675.000 | 156.86 | 419624.84 |
| 0882 | 507-9031 | LF | PSC BEAMS,AASHTO,BULB TEE, 63" | 1192.000 | 177.78 | 211915.49 |
| 0887 | 511-1000 | LB | BAR REINF STEEL | 107563.000 | 0.80 | 86207.44 |
| 0892 | 511-3000 | LS | SUPERSTR REINF STEEL, BR NO - BR NO. 2 | 320729.000 | 0.70 | 224510.30 |
| 0897 | 520-0353 | EA | H-PILE POINTS, HP 12 X 53 | 5.000 | 169.58 | 847.93 |
| 0902 | 520-0573 | EA | H-PILE POINTS, HP 14 X 73 | 10.000 | 166.32 | 1663.24 |
| 0907 | 520-1125 | LF | PIL-IN-PL,STEEL H,HP 12 X 53 | 360.000 | 59.46 | 21407.93 |
| 0912 | 520-1147 | LF | PIL-IN-PL,STEEL H,HP 14 X 73 | 1120.000 | 63.30 | 70899.83 |
| 0917 | 520-4125 | EA | LOAD TEST, STEEL H, HP 12 X 53 | 1.000 | 1.04 | 1.04 |
| 0922 | 520-4147 | EA | LOAD TEST, STEEL H, HP 14 X 73 | 1.000 | 0.87 | 0.88 |
| 0927 | 524-0010 | LF | DRILLED CAISSON - BR NO. 2 | 224.000 | 1230.29 | 275586.59 |
| 0932 | 603-2024 | SY | STN DUMPED RIP RAP, TP 1, 24" | 436.000 | 44.61 | 19451.90 |
| 0937 | 603-7000 | SY | PLASTIC FILTER FABRIC | 436.000 | 4.12 | 1796.70 |
| 0942 | 211-0200 | CY | BR EXCAV, GRADE SEPARATION | 366.000 | 39.54 | 14472.94 |
| 0947 | 441-0004 | SY | CONC SLOPE PAV, 4 IN | 1367.000 | 36.53 | 49946.71 |
| 0952 | 500-0100 | SY | GROOVED CONCRETE | 1731.000 | 3.49 | 6053.12 |
| 0957 | 500-1006 | LS | SUPERSTR CONCRETE, CL AA, BR NO - BR NO. 3 | 603.000 | 650.00 | 391950.00 |
| 0962 | 500-2100 | LF | CONCRETE BARRIER | 366.000 | 41.08 | 15038.57 |
| 0967 | 500-3002 | CY | CL AA CONCRETE | 407.000 | 405.25 | 164939.21 |
| 0972 | 507-9003 | LF | PSC BEAMS,AASHTO TP III,BR NO- BR NO. 3 | 1851.000 | 98.86 | 183004.87 |
| 0977 | 511-1000 | LB | BAR REINF STEEL | 81814.000 | 0.81 | 66666.14 |
| 0982 | 511-3000 | LS | SUPERSTR REINF STEEL, BR NO - BR NO. 3 | 130434.000 | 0.70 | 91303.80 |
| 0987 | 520-0573 | EA | H-PILE POINTS, HP 14 X 73 | 67.000 | 145.88 | 9774.03 |
| 0992 | 520-1147 | LF | PIL-IN-PL,STEEL H,HP 14 X 73 | 4010.000 | 59.71 | 239475.11 |
| 0997 | 520-4147 | EA | LOAD TEST, STEEL H, HP 14 X 73 BR NO. 3 | 1.000 | 0.87 | 0.88 |
| ----- | | | | | | |
| ITEM TOTAL | | | | | | 26044800.60 |
| INFLATED ITEM TOTAL | | | | | | 26044800.60 |
| ----- | | | | | | |
| TOTALS FOR JOB 662510_H&L | | | | | | |
| ----- | | | | | | |
| ESTIMATED COST: | | | | | | 26044800.66 |
| CONTINGENCY PERCENT (0.0): | | | | | | 0.00 |
| ESTIMATED TOTAL: | | | | | | 26044800.66 |
| ----- | | | | | | |

PROJ. NO.

STP-00-00MS-00(007)

CALL NO. N/A

P.I. NO.

662510

DATE

10/16/2012

INDEX (TYPE)

REG. UNLEADED

Oct-12

\$ 3.595

DIESEL

\$ 4.019

LIQUID AC

\$ 571.00

Link to Fuel and AC Index:

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

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)

2248826.4

\$ 2,248,826.40

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 913.60

Monthly Asphalt Cement Price month project let (APL)

\$ 571.00

Total Monthly Tonnage of asphalt cement (TMT)

6564

| ASPHALT | Tons | %AC | AC ton |
|-----------|---------------|------|-------------|
| Leveling | 1213 | 5.0% | 60.65 |
| 12.5 OGFC | | 5.0% | 0 |
| 12.5 mm | 19495 | 5.0% | 974.75 |
| 9.5 mm SP | | 5.0% | 0 |
| 25 mm SP | 70770 | 5.0% | 3538.5 |
| 19 mm SP | 39802 | 5.0% | 1990.1 |
| | 131280 | | 6564 |

BITUMINOUS TACK COAT

Price Adjustment (PA)

\$ 66,762.03

\$ 66,762.03

Monthly Asphalt Cement Price month placed (APM)

Max. Cap

60%

\$ 913.60

Monthly Asphalt Cement Price month project let (APL)

\$ 571.00

Total Monthly Tonnage of asphalt cement (TMT)

194.8687288

Bitum Tack

| Gals | gals/ton | tons |
|-------|----------|------------|
| 45370 | 232.8234 | 194.868729 |

PROJ. NO.

STP-00-00MS-00(007)

CALL NO. N/A

P.I. NO.

662510

DATE

10/16/2012

BITUMINOUS TACK COAT (surface treatment)

| | | | | | | |
|--|--|----------|-----|--------------------|----|------------------|
| Price Adjustment (PA) | | | | 11729.11834 | \$ | 11,729.12 |
| Monthly Asphalt Cement Price month placed (APM) | | Max. Cap | 60% | \$ 913.60 | | |
| Monthly Asphalt Cement Price month project let (APL) | | | | \$ 571.00 | | |
| Total Monthly Tonnage of asphalt cement (TMT) | | | | 34.23560518 | | |

| Bitum Tack | SY | Gals/SY | Gals | gals/ton | tons |
|--------------------|------|---------|---------|----------|-------------|
| Single Surf. Trmt. | | 0.20 | 0 | 232.8234 | 0 |
| Double Surf.Trmt. | 3375 | 0.44 | 1485 | 232.8234 | 6.378224869 |
| Triple Surf. Trmt | 9135 | 0.71 | 6485.85 | 232.8234 | 27.85738031 |
| | | | | | 34.23560518 |

| | | | | | | |
|-----------------------------------|--|--|--|--|----|---------------------|
| TOTAL LIQUID AC ADJUSTMENT | | | | | \$ | 2,327,317.54 |
|-----------------------------------|--|--|--|--|----|---------------------|

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE STP00-00MS-00 (007), Gordon County OFFICE: Cartersville
P.I. No. 662510
South Calhoun Bypass DATE: June 25, 2012

FROM  Kerry D. Bonner, District Utilities Engineer

TO Bobby Hilliard, P. E., State Program Delivery Engineer
Attn: Steve Adewale, Office of Program Delivery

SUBJECT UPDATED UTILITY COST ESTIMATE

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

| FACILITY OWNER | NON-REIMBURSABLE | REIMBURSABLE |
|--------------------------|------------------|----------------|
| *City of Calhoun (Water) | \$1,320,000.00 | |
| *City of Calhoun (Sewer) | \$330,000.00 | |
| *City of Calhoun (Fiber) | \$35,000.00 | |
| Dalton Utilities | | \$90,000.00 |
| BellSouth | \$165,000.00 | |
| Georgia Power (Dist.) | No Conflict | |
| Georgia Power (Trans) | No Facilities | |
| Comcast | \$38,000.00 | |
| North Ga. EMC | \$48,000.00 | \$442,000.00 |
| Southern Natural Gas | | \$1,165,809.00 |
| Atlanta Gas Light | \$1,425,140.00 | |
| Tenn. Valley Authority | | \$110,000.00 |
| Totals | \$3,361,140.00 | \$1,807,809.00 |

Total Updated Utility Cost Estimate: \$5,168,949.00.

*The reimbursable amount could increase to \$3,492,809.00 if the City of Calhoun were to apply for utility assistance for the relocation of their facilities.

If you have any questions, please contact Stan McCarley at 770-387-3751.

KDB/sm

C: Jeff Baker, State Utilities Engineer;
Angie Robinson, Office of Financial Management Administrator
File/Estimating Book

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: R/W Cost Estimate

OFFICE: Cartersville

DATE: 6/16/11

FROM: Pam Digsby, District Right of Way Team Manager 

TO: Howard P. Copeland State Right of Way Administrator
ATTN: Floyd Williams

SUBJECT: RIGHT OF WAY COST ESTIMATE
PROJECT: STP00-00MS-00(007)
COUNTY: Gordon
P.I. NUMBER: 662510

Attached is the project Right of Way Cost Estimate on the above referenced project. It is estimated that the cost of right of way plus all related expenses will be \$ 7,730,000.00.

If we can offer further assistance, please contact me or Claudette Sams of this office at (770) 387-3658.

ATTACHMENTS: Detailed ROW Cost Estimate Summary; Parcel by Parcel Breakdown Spreadsheet; Project Location Map; Subject / Comp Location Map; Comparable Sales Data Spreadsheet

CC: Review Appraiser Manager

ENVIRONMENTAL COMMITMENTS TABLE

Project Information

STP00-00MMS-00(007)
&
NHSTP-0075-03(203)

County : Gordon

PI No.: 662510 & 610870

Status: Reevaluation for
LET

Date Updated: February 23, 2012

Project Manager Review

I have reviewed these commitments and verified their feasibility.

All delineations are marked on the plans.

Steve Adamele 2/29/2012

PM Signature

Date

Specialist Review

Air/Noise

Archaeology

Ecology/404

History

NEPA

See E-Mails attached for approvals.
y y y
See attached E-Mails for approval.
y

| NO. | COMMITMENT/REQUIREMENT (Separate out commitments by PI No.) | DOCUMENT STIPULATED IN | RESPONSIBLE PARTY | ESTIMATED COST* | PLACE ON PLANS (Yes or No) | REQUIRES A SPECIAL PROVISION (Yes or No) | STATUS (Pre- and Post Construction - Complete or Incomplete; During Construction - Signature Required) |
|-----|--|------------------------------|----------------------|--------------------|----------------------------------|---|---|
|-----|--|------------------------------|----------------------|--------------------|----------------------------------|---|---|

Pre-Construction Commitments

| | | | | | | | |
|---|---|---|----------------------------|----|-----|----|----------|
| 1 | All streams and stream buffers to be delineated on plans. Any staging of equipment or other action within the buffer areas is prohibited. | G&O email from Environmental to G&O Design 4-2-09 and Ecology Addendum V dated September 2011 | Office of Program Delivery | NA | Yes | No | Complete |
| 2 | Wetland delineation placed on the plans. | G&O email from Environmental to G&O Design 4-2-09 and Ecology Addendum V dated September 2011 | Office of Program Delivery | NA | Yes | No | Complete |
| 3 | Historic site boundaries on the plans. Notes stating no staging of equipment within the boundaries on the plans. | G&O memo from Environmental to G&O Design 4-2-09 | Office of Program Delivery | NA | Yes | No | Complete |

ENVIRONMENTAL COMMITMENTS TABLE
 Project No. STP00-00MS-00(0007) & NHS/TP-0075-03(203), Gordon County
 Date Updated: February 23, 2012

| NO. | COMMITMENT/REQUIREMENT (Separate out commitments by PINs.) | DOCUMENT STIPULATED IN | RESPONSIBLE PARTY | ESTIMATED COST | PLACE ON PLANS (Yes or No) | REQUIRES A SPECIAL PROVISION (Yes or No) | STATUS (Pre- and Post Construction - Complete or Incomplete; During Construction - Signature Required) |
|-----|---|--|----------------------------------|-------------------|----------------------------------|---|---|
| 4 | The eligible National Register boundary of the A.L. Shaw Barn would be documented with medium format photography. A landscape plan would be developed for the A.L. Shaw Barn. The landscaping will be placed just inside the proposed right-of-way along the north side of the proposed roadway. The proposed landscaping will extend for approximately 500 feet and would include plant material that is native to the area and that would provide a visual barrier between the resource and new roadway. | Memorandum of Agreement | Office of Environmental Services | NA | Yes | No | Complete |
| 5 | A landscape plan would be developed for the Holcomb House. The landscaping will be placed just inside the proposed right-of-way along the north side of the proposed roadway. The proposed landscaping will extend for approximately 800 feet and would include plant material that is native to the area and that would provide a visual barrier between the resource and the new roadway. | Memorandum of Agreement | Office of Environmental Services | NA | Yes | No | Incomplete-This commitment has been removed per the March 9, 2011 letter from GDOT to SHPO, replacing the stipulations in the ratified MOA. See Commitment 7. |
| 6 | A landscape plan would be developed for the Holcomb House. The landscaping will be placed just inside the proposed right-of-way along the north side of the proposed roadway. The proposed landscaping will extend for approximately 800 feet and would include plant material that is native to the area and that would provide a visual barrier between the resource and the new roadway. | Memorandum of Agreement | Office of Environmental Services | NA | Yes | No | Incomplete-This commitment has been removed per the March 9, 2011 letter from GDOT to SHPO, replacing the stipulations in the ratified MOA. See Commitment 7. |
| 7 | Include General Note in the construction contract to ensure that orange barrier fencing is installed immediately behind the construction limits in the areas of the A.L. Shaw barn and the Holcomb House so as to protect existing vegetation in the area of the right-of-way outside the construction limits. | Letter from GDOT to SHPO dated March 9, 2011 | Office of Environmental Services | NA | No | No | Complete |

*Estimated Cost for planning purposes only; in current dollars as of Date Updated

ENVIRONMENTAL COMMITMENTS TABLE
 Project No. STP00-00MS-00(007) & NHSTP-0075-03(203), Gordon County
 Date Updated: February 23, 2012

| NO. | COMMITMENT/REQUIREMENT (Separate out commitments by PI No.) | DOCUMENT STIPULATED IN | RESPONSIBLE PARTY | ESTIMATED COST | PLACE ON PLANS (Yes or No) | REQUIRES A SPECIAL PROVISION (Yes or No) | STATUS (Pre- and Post Construction - Complete or Incomplete; During Construction - Signature Required) |
|-----|--|--|----------------------------------|-------------------|----------------------------------|---|---|
| 8 | Two Stream Buffer Variances (one for each project) for longitudinal encroachment. PI 610870 Open Water 29 Stream 31B PI 662510 Open Waters 19 and 52 Stream 6B and 31C | Ecology Addendum V dated September 2011 | Office of Environmental Services | NA | No | No | <i>Complete AB attached</i> Incomplete— Both variance applications submitted to Georgia Environmental Protection Division (GA EPD) 8/30/2011 |
| 9 | FWCA Coordination for channel loss to 11 streams; Streams 2, 6A, 6B, 20, 21, 25, 31A, 31B, 31C, 37, and 45 | FWCA Coordination Letter and Ecology Addendum dated September 2011 | Office of Environmental Services | NA | No | No | Completed date 6/10/2011 |
| 10 | FEMA Coordination for floodway associated with Oothkalooga Creek | FONSI | Office of Bridge Design | NA | No | No | Complete (January 17, 2003) |
| 11 | UST Survey | FONSI | Office of Material and Research | NA | No | No | Complete |
| 12 | Section 404 Individual Permit | FONSI | Office of Environmental Services | NA | No | No | Complete - Draft submitted to USACE 8/29/2011 - Received IP on 2.23.12 |

ENVIRONMENTAL COMMITMENTS TABLE
 Project No. STP00-00MS-00(007) & NHSTP-0075-03(203), Gordon County
 Date Updated: February 23, 2012

| NO. | COMMITMENT/REQUIREMENT (Separate out commitments by PI No.) | DOCUMENT STIPULATED IN | RESPONSIBLE PARTY | ESTIMATED COST | PLACE ON PLANS (Yes or No) | REQUIRES A SPECIAL PROVISION (Yes or No) | STATUS (Pre- and Post Construction - Complete or Incomplete; During Construction - Signature Required) |
|-----|--|---|----------------------------------|-------------------|----------------------------------|---|---|
| 13 | Mitigation for impacts to jurisdictional Waters of the US: Wetlands and Open Water 18.91 acres of permanent impacts 10.53 acres of temporary impacts Perennial and Intermittent Streams 3.438 linear feet of impact Deduct the following mitigation credits from approved USACE mitigation banks. HUC 03150102 Wetland Credits - 3.1 Stream Credits - 0.0 HUC 03150103 Wetland Credits - 179.8 Stream Credits - 17.082 | Ecology Addendum dated September 2011 | Office of Environmental Services | \$2,995,000.00 | No | No | Complete - attached Incomplete |
| 14 | Special Provision 107.23G - Protection of Federally Protected Environmentally Sensitive Migratory Bird Species including but not limited to barn swallow (<i>Hirundo rustica</i>), cliff swallows (<i>Petrochelidon pyrrhonota</i>), and eastern phoebe (<i>Sayornis phoebe</i>) for inclusion in the construction contract. | Ecology Assessment V dated September 2011 | Office of Environmental Services | NA | No | Yes | Complete |
| 15 | Delineate the Oothkaalooaga Mission Cemetery (Parcel 211A) as an Environmentally Sensitive Area. Specified work restrictions within the ESA are to be included on the plans. | Internal Memo dated 5/24/2011 | Office of Program Delivery | NA | Yes | No | Complete |

*Estimated Cost for planning purposes only; in current dollars as of Date Updated

| NO. | COMMITMENT/REQUIREMENT (Separate out commitments by PI No.) | DOCUMENT STIPULATED IN | RESPONSIBLE PARTY | ESTIMATED COST | PLACE ON PLANS (Yes or No) | REQUIRES A SPECIAL PROVISION (Yes or No) | STATUS (Pre- and Post Construction - Complete or Incomplete; During Construction - Signature Required) |
|-----|--|------------------------------|----------------------|-------------------|----------------------------------|---|---|
|-----|--|------------------------------|----------------------|-------------------|----------------------------------|---|---|

During Construction Commitments
Construction or Area Engineer signature required upon the completion of all During Construction Commitments.

| | | | | | | | |
|----|---|--|------------------------|----|-----|-----|--|
| 16 | No staging of equipment within the historic or archaeological boundaries placed on the plans. | FONSI | Office of Construction | NA | Yes | Yes | Area of Construction Engineer Signature upon completion: |
| 17 | Contractor implement landscaping plans for A.L. Shaw Barn | Memorandum of Agreement | Office of Construction | NA | Yes | Yes | See Status-Commitments 5 and 6 |
| 18 | Contractor implement landscaping plan for Holcomb House (contractor) | Memorandum of Agreement | Office of Construction | NA | Yes | Yes | See Status-Commitments 5 and 6 |
| 19 | Ensure that orange barrier fencing is installed immediately behind the construction limits in the areas of the A.L. Shaw barn and the Holcomb House so as to protect existing vegetation in the area of the right-of-way outside the construction limits. | Letter from GDOT to SHPO dated March 9, 2011 | Office of Construction | NA | No | No | Area of Construction Engineer Signature upon completion: |
| 20 | A NPDES permit shall be required for this project. The permit shall be acquired following the award of the contract but prior to the start of construction. | EA/FONSI Reevaluation | Office of Construction | NA | No | No | Area of Construction Engineer Signature upon completion: |

| NO. | COMMITMENT/REQUIREMENT (Separate out commitments by PI No.) | DOCUMENT STIPULATED IN | RESPONSIBLE PARTY | ESTIMATED COST | PLACE ON PLANS (Yes or No) | REQUIRES A SPECIAL PROVISION (Yes or No) | STATUS (Pre- and Post Construction - Complete or Incomplete; During Construction - Signature Required) |
|-----|--|--|-------------------------------|-------------------|----------------------------------|---|---|
| 21 | <p>Special Provision 107.23G - Protection of Federally Protected Environmentally Sensitive Migratory Bird Species including but not limited to barn swallow (<i>Hirundo rustica</i>), cliff swallows (<i>Petrochelidon pyrrhonota</i>), and eastern phoebe (<i>Sayornis phoebe</i>) would be followed.</p> <p>If birds are observed nesting under the I-75 bridge, demolition or reconstruction of the bridge will be scheduled to take place outside of the breeding season of the migratory birds, beginning April 1st and extending through August 31st, or as long as active nests are found under the bridge.</p> | <p>Ecology Assessment V dated September 2011</p> | <p>Office of Construction</p> | <p>NA</p> | <p>No</p> | <p>Yes</p> | <p>Area or Construction Engineer Signature upon completion:</p> |

Post Construction Commitments

| | | | | | | | |
|--|------|--|--|--|--|--|--|
| | None | | | | | | |
|--|------|--|--|--|--|--|--|

Total Estimated Cost* for all Project Commitments: \$2,995,000.00

*Estimated Cost for planning purposes only; in current dollars as of Date Updated

Project Environmental Commitments Cost Estimate

10/15/2012

| NHSTP-0075-03(203) - Union Grove Road Interchange | | | |
|---|-----------------|---------------|-----------------|
| | Credit Required | \$/Credit | Total |
| Wetland Credits | 51.15 | \$ 8,095.00 | \$ 414,059.25 |
| Stream Credits | 2,968.00 | \$ 88.69 | \$ 263,218.35 |
| | | Project Total | \$ 677,277.60 |
| STP00-00MS-00(007) - South Calhoun Bypass | | | |
| | Credit Required | \$/Credit | Total |
| Wetland Credits | 131.75 | \$ 8,095.00 | \$ 1,066,516.25 |
| Stream Credits | 14,114.00 | \$ 88.69 | \$ 1,251,706.14 |
| | | Project Total | \$ 2,318,222.39 |
| Green Sheet Grand Total | | | \$ 2,995,500.00 |

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: STP00-00MS-00(007), Gordon County **OFFICE:** Program Delivery
South Calhoun Bypass
P.I. No. 662510 **DATE:** August 20, 2012

FROM: ^{S.lt.} Genetha Rice-Singleton, State Program Delivery Engineer

TO: Lisa Myers, State Project Review Engineer

SUBJECT: Value Engineering Implementation Revision Request

This office requests a Value Engineering (VE) Study Implementation Revision on the above noted project. The VE Implementation letter was sent to your office on October 13, 2007.

This office requests to revise the implementation of alternative No. C-13. This Design Suggestion recommended separating bridges at McDaniel Station Road/CSX and Oothkalooga Creek into four bridges instead of two bridges. After reviewing the preliminary Bridge Layout, Roadway Plans, and Hydraulic Study, we found that the Design Suggestion No. C-13 is not feasible for implementation. The VE Study was completed prior to a Hydraulic Analysis, therefore bridge length assumptions had been made for the bridge spanning Oothkalooga Creek. The assumed bridge lengths were approximately 350 feet each, leaving approximately 450 feet of roadway between the bridges. The actual bridge lengths shown on the preliminary layouts are 246.5 feet over McDaniel Station Road/CSX and 700 feet over Oothkalooga Creek leaving the actual length of roadway between the bridges at 132 feet. Both bridge lengths have been validated based on the approved Hydraulic Study and required clearance for the railroad and roadway.

The roadway between the bridges is on approximately 30 feet of fill. Placing a 250 feet long (at the base) " of fill in wetlands will be difficult. The length of the fill between the bridges is not sufficient to adequately compact, resulting in the potential for maintenance problems in the future. Also, the construction time to complete the "island" and the roadway will be longer than constructing the additional 132 feet of bridge length.

Lisa Myers, State Project Review Engineer
VE Engineering Implementation Revision Request
Page 2

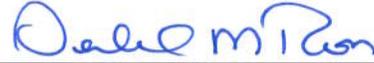
Combining the bridges into one long bridge will eliminate the need for fill and will reduce impacts to the wetlands.

The cost of using one bridge is only 2% greater than the cost of using separate bridges. The initial construction will be easier and the final condition will present fewer maintenance issues in the future as per the attachment. Also attached is a copy of Bridge Design Office e-mail dated June 18, 2010 of their review and recommendation for this reversal.

If you have any questions about this request or need additional information, please contact Steve Adewale, the project manager at 404-631-1578.

Approved:  Date: 8/23/12

Lisa Myers, State Project Review Engineer

Approved:  Date: 8/30/2012

Gerald M. Ross, PE, Chief Engineer

Approved:  Date: 9/10/12

 Rodney Barry, PE, FHWA Division Administrator

^{S. It}
GRS:SH:ASA
Attachments

Shawn Fleet

From: Cashin, Ted <tcashin@dot.ga.gov>
Sent: Friday, June 18, 2010 11:52 AM
To: Shawn Fleet
Cc: Masood Shabazaz; Danny Smith; William Allen Krivsky; Adewale, Steve (Adesoji); Liles, Paul; DuVall, Bill
Subject: RE: TO#6, STP00-00MS-00(007), Gordon County, P.I. No. 662510 - Recommendation to Combine Bridges No. 2 & 3

Bridge Design concurs with this recommendation. Based on costs, the two options are about equal, but by having one bridge you will avoid having to bring an island of fill into the middle of the wetlands. Also by avoiding having fill between two closely spaced bridges, we will avoid having settlement and a bad ride in that small distance between bridge ends.

We will need a revised hydro study so that we get revised scour numbers and also a VE recommendation reversal will need to be processed through management.

Ted Cashin
Bridge Design Group Leader
Georgia DOT, Office of Bridge Design
600 West Peachtree Street, NW
Atlanta, GA 30308
(404)631-1910
(404)631-1954 fax

From: Shawn Fleet [<mailto:sfleet@heath-lineback.com>]
Sent: Thursday, May 27, 2010 10:50 AM
To: Cashin, Ted
Cc: Masood Shabazaz; Danny Smith; William Allen Krivsky; Adewale, Steve (Adesoji); Liles, Paul; DuVall, Bill
Subject: TO#6, STP00-00MS-00(007), Gordon County, P.I. No. 662510 - Recommendation to Combine Bridges No. 2 & 3

Gentlemen,

Please see the attached letter we are sending in the mail today concerning combining bridges No. 2 & 3 on the referenced project.

Thank you,

Shawn C. Fleet, P.E., *Heath & Lineback Engineers, Inc.*
2390 Canton Road, Building 200
Marietta, GA 30066-5393
Voice: 770.424.1668
Direct: 678-569-2467
Fax: 770.424.2907
sfleet@heath-lineback.com
www.heath-lineback.com

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Heath & Lineback Engineers I N C O R P O R A T E D

2390 CANTON ROAD • BUILDING 200 • MARIETTA, GEORGIA 30066-5393

e-mail: hle@heath-lineback.com

(770) 424-1668 • Fax (770) 424-2907

May 27, 2010

Paul V. Liles, Jr., P.E.
Georgia Department of Transportation
600 West Peachtree Street, 24th Floor
Atlanta, GA 30308
Attn.: Ted Cashin, P.E.

RE: STP00-00MS-00(007) Gordon County, PI No. 662510
South Calhoun Bypass (Task Order No. 6)
Recommendation to Combine Bridges No. 2 & 3

Dear Paul:

We have completed a validation for the above referenced project and found reasons described below that justify reversal of the VE Recommendation approved for implementation.

Two VE Study recommendations that affect the bridges are Design Suggestion No. C-9 – Construct 2 lanes of the 4-lane section from S.R. 53 to U.S. 41 for two way traffic and Design Suggestion No. C-13 – Separate bridges at McDaniel Station Road/CSX & Oothkalooga Creek into four bridges instead of two bridges. These Design Suggestions were both recommended for implementation.

After reviewing the preliminary Bridge Layout, Roadway Plans, and Hydraulic Study, we find that Design Suggestion No. C-9 is validated to be feasible based on the approved traffic data. However, Design Suggestion No. C-13 is not feasible for implementation. The VE Study was completed prior to a Hydraulic Analysis, therefore bridge length assumptions had been made for the bridge spanning Oothkalooga Creek. The assumed bridge lengths were approximately 350 feet each, leaving approximately 450 feet of roadway between the bridges. The actual bridge lengths shown on the preliminary layouts are 246.5 feet over McDaniel Station Road/CSX and 700 feet over Oothkalooga Creek leaving the actual length of roadway between the bridges at 132 feet. Both bridge lengths have been validated based on the approved Hydraulic Study and required clearance for the railroad and roadway.

The roadway between the bridges is on approximately 30 feet of fill. Placing a 250 foot long (at the base) “island” of fill in wetlands will be difficult. The length of the fill between the bridges is not sufficient to adequately compact, resulting in the potential for maintenance problems in the future. Also, the construction time to complete the “island” and the roadway will be longer than constructing the additional 132 feet of bridge length.

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Combining the bridges into one long bridge will eliminate the need for fill and will reduce impacts to the wetlands.

The cost of using one bridge is only 2% greater than the cost of using separate bridges. The initial construction will be easier and the final condition will present fewer maintenance issues in the future.

Cost estimate for separate bridges with roadway between:

| | | |
|---------------------|-----------------------------|--------------|
| Bridge #2: | 245.5' x 41.25' x \$85/sf = | \$ 864,000 |
| Bridge #3: | 700' x 41.25' x \$85/sf = | \$ 2,454,000 |
| Fill: | 28,000 cy x \$8/cy = | \$ 224,000 |
| Roadway: | 132 lf x 44 ft x \$10/sf = | \$ 58,000 |
| Approach Slabs: | 2 x 30 lf x 40 ft x \$17/sf | \$ 41,000 |
| Wetland Mitigation: | 1 ac x \$64,000/ac = | \$ 64,000 |
| Total: | | \$ 3,705,000 |

Cost estimate for one combined bridge:

| | | |
|------------|----------------------------|--------------|
| Bridge #2: | 1078' x 41.25' x \$85/sf = | \$ 3,780,000 |
|------------|----------------------------|--------------|

Please advise us how you would like to proceed.

If you have any questions or need additional information, please let us know.

Very truly yours,
Heath & Lineback Engineers, Inc.



Masood Shabazaz, P.E.
Vice President, Manager of Bridge Engineering

CY: Adesoji (Steve) Adewale, CPEng, P.E.,
Bill DuVall, P.E.
Shawn Fleet, P.E.

MS:scf

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**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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INTERDEPARTMENT CORRESPONDENCE

FILE: NH-STP-75-3(203) & STP-00MS(7) Gordon **OFFICE:** Engineering Services
P. I. Nos.: 610870 & 662510
I-75/Union Grove Interchange/South Calhoun Bypass

DATE: December 5, 2007

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

TO: Babs Abubakari, P.E., State Program Delivery and Consultant Design 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 |
|--|---|-------------------|-----------|---|
| (I) I-75/Union Grove Road Interchange (P.I. No. 610870) | | | | |
| I-1 | Use AASHTO Type III Beams for bridge instead of 54' Bulb Tees | \$99,075 | No | Would result in a higher stressed beam. The Type III Beams would also require special fabrication due to their higher strength. |
| I-2 | Verify vertical clearance of 17'-0" vs. 17'-6" | Design Suggestion | No | The 17'-6" vertical clearance would result in a more costly bridge when compared to a 17'-0" clearance. |
| I-3 | Shift alignment of Bridge +30' to the south to eliminate stage construction of bridge | \$273,768 | No | The alignment as shown incorporates a compromise between the SHPO and the property owner. |
| I-5 | Shorten lengths of Ramps C & D | \$336,573 | Yes | This should be done. |
| I-6 | Clarify MSE Wall locations | Design Suggestion | Yes | This should be done. |

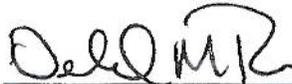
| ALT No. | Description | Savings PW & LCC | Implement | Comments |
|--|--|---|-----------|---|
| (I) I-75/Union Grove Road Interchange (P.I. No. 610870) - continued | | | | |
| I-7 | Construct Ramps of Asphalt instead of PCC | -\$2,677,250 (Cost increase) | No | Results in a cost increase when Life Cycle Costs are considered over a 25 year period. |
| I-8 | Construct Calhoun Bypass mainline (within the interchange project) of Asphalt instead of PCC | -\$4,847,270 (Cost increase) | No | Results in a cost increase when Life Cycle Costs are considered over a 25 year period. |
| I-9 | Use portions of Bypass Project area as Borrow source | Design Suggestion | Yes | This should be done. |
| I-10 | Shorten bridge, eliminate end spans, use MSE abutments | \$605,370 | Yes | This should be done. This would still accommodate any future widening on I-75. |
| I-11 | Eliminate Guardrail in locations of 4:1 slopes | \$34,100 | Yes | This should be done. |
| I-15 | Shorten spans over Interstate by using guardrail or concrete barrier along I-75 | Design Suggestion | No | Would require guardrail or barrier wall to protect the Clear Zone. |
| I-16 | Selectively reduce shoulder widths on ramps | \$573,924 | No | The additional 6' of paved shoulders on the ramps would help prevent future maintenance problems associated with trucks parking on the ramps. |
| I-19 | Widen bridge to increase left turn storage length | -\$1,953,221 (Cost increase) | No | Based on traffic projections, an adequate storage length has been provided. |
| I-20 | Eliminate mast arm lighting standards in interchange | \$605,110 | Yes | This should be done. |
| (C) South Calhoun Bypass (P.I. No. 662510) | | | | |
| C-1 | Optimize right of way takings | Design Suggestion | Yes | This should be done. |
| C-8 | Reduce median width from 44' wide to 30' wide | \$1,063,454 (proposed) \$911,532 (revised) | Yes | A 32' median width will be used instead of a 30' width. |

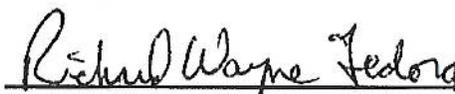
| ALT No. | Description | Savings PW & LCC | Implement | Comments |
|---|--|-------------------|-----------|---|
| (C) South Calhoun Bypass (P.I. No. 662510) - continued | | | | |
| C-9 | Construct eastbound roadway from S.R. 53 to U.S. 41 for two way traffic | \$6,475,524 | Yes | This should be done. |
| C-10 | Offset roadway east of Union Grove Road 34' from the centerline | Design Suggestion | No | There are no proposals at this time to widen this section of roadway over to S.R. 53 in the future. |
| C-11 | Increase inside paved shoulder width from 2' to 4' | Design Suggestion | No | This would increase project costs. |
| C-13 | Separate bridges at McDaniel Station Road/CSX & Oothkalooga Creek into four bridges instead of two bridges | Design Suggestion | Yes | This should be done. |
| C-14 | Provide disposition for abandoned roadway/tie-in locations | Design Suggestion | Yes | This should be done. |
| C-16 | Consider use of 3:1 fill slopes in areas where clear zone requirements can be met beyond toe of slope | Design Suggestion | No | There would be future maintenance issues with ensuring the clear zone is clear of vegetation. |

A meeting was held on November 7, 2007 to discuss the above recommendations. Chris Rideout and William Ruhsam with Greenhorne and O'Mara, Stanley Hill, and Steve Adewale with Consultant Design and Brian Summers and Ron Wishon with Engineering Services were in attendance. Additional information was provided on November 13, 2007.

The above reflects the consensus of those in attendance and those that provided comments.

NH-STP-75-3(203) & STP-00MS(7) Gordon
P.I. No. 610870 & 662510
VE Study Implementation
Page 4.

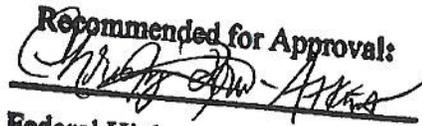
Approved:  Date: 12/17/07
Gerald M. Ross, P. E., Chief Engineer

Approved:  Date: 2/25/2008
for Rodney Barry, P.E., FHWA Division Administrator

BKS/REW

Attachments

- c: Gus Shanine/Christy Poon-Atkins
Todd Long
Stanley Hill
Steve Adewale
Lowell James
Lonnie Jones
Kenny Beckworth
Judy Meisner
Ken Werho
Nabil Raad
Melanie Nable
Lisa Myers

Recommended for Approval:

Federal Highway Administration

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE: NH-STP-75-3(203), STP-00MS(7), Gordon County OFFICE: Consultant Design
PI No.: 610870, 662510
Union Grove Interchange, South Calhoun Bypass DATE: October 23, 2007
FROM: *Son* Mohammed (Babs) Abubakari, P.E.
State Program Delivery and Consultant Design Engineer
TO: Brian Summers, P.E., State Project Review Engineer

SUBJECT: Value Engineering Study-Responses

Reference is made to the recommendations that are contained in the Value Engineering Study Report dated May 14, 2007 for the above referenced projects. Our responses and recommendations are as follows:

1) Value Engineering Alternative No. I-1 – Use AASHTO Type III Beams for Bridge instead of 54" Bulb Tees

Approval of the VE Alternative No. I-1 is not recommended.

- The Cross Section LF has been revised since first submitted to now show 10 beams spaced at 8 feet 9 inches. In lieu of this revision the quantity as shown in the VE study for LF of Bulb Tee should be adjusted to 1984 ft, to replace the 2160 LF shown.
- The cost per unit used in the study for the Type III beams appears to be the average for the year 2006. We believe this will not accurately depict the true cost of the beams as these beams will be the costliest of Type III beams, not the average, due to the fact that the required strength will likely be 10,000 psi. Assuming a 10-15% markup in the price the cost savings is reduced significantly. In years prior to 2006, the cost of a type III and a 54 BT were much closer than 2006, and we believe the 2006 numbers may be a bit of an anomaly. Additionally, these high strength Type III beams will require special fabrication due to their high strength.
- We believe it prudent to use a larger sized beam (54 BT) at normal capacity rather than a smaller beam at its absolute maximum strength and stress when the cost differences are this close.

2) Value Engineering Design Suggestion No. I-2 – Verify Vertical Clearance of 17'-0" vs. 17'-6"

Approval of the VE Design Suggestion No. I-2 is not recommended.

- The use of a 17'-0" clearance for the interstate crossover bridge has been verified. This is the recommended clearance preferred by the GDOT Bridge Office for Interstate bridges.

3) Value Engineering Alternative No. I-3 – Shift Alignment at bridge 30' ± to south to eliminate stage construction of bridge

Approval of the VE Alternative No. I-3 is not recommended.

- The Alignment as set prior to the VE Study incorporates compromises between the State Historic Preservation Office and Shaw Industries, Inc. Revising the alignment at the bridge would require

revisiting this compromise, negatively impacting the schedule for the environmental document and right of way acquisition.

- 4) **Value Engineering Alternative No. I-5 – Shorten Lengths of Ramps C and D**
Approval of the VE Alternative No. I-5 is recommended for implementation.
 - Shortening the ramps will reduce the amount of R/W necessary for constructing the interchange project.
- 5) **Value Engineering Design Suggestion No. I-6 – Clarify MSE Wall locations**
Approval of the VE Design Suggestion No. I-6 is not recommended.
 - All MSE walls illustrated in the concept are unneeded. No MSE Walls from the Concept will be included in the final design.
- 6) **Value Engineering Alternative No. I-7 – Construct ramps of asphalt instead of PCC**
Approval of the VE Alternative No. I-7 is not recommended.
 - Utilizing asphalt for ramp paving instead of PCC is a GDOT District 6 policy on interstate ramps.
- 7) **Value Engineering Alternative No. I-8 – Construct Calhoun Bypass mainline (within the interchange project) of asphalt instead of PCC**
Approval of the VE Alternative No. I-8 is not recommended.
 - It is a GDOT policy to install PCC pavement between ramp terminals on an interchange. Note that only 40% (approximately 1,220') of the interchange mainline is proposed to be PCC. Asphalt will be installed on the remaining portion of the mainline.
- 8) **Value Engineering Design Suggestion No. I-9 – Use portions of the Bypass project as Borrow source**
Approval of the VE Design Suggestion No. I-9 is not recommended.
 - GDOT projects do not include provisions for borrow pits as a matter of policy. This is left to the contractor
- 9) **Value Engineering Alternative No. I-10 – Shorten Bridge, eliminate end spans, use MSE abutments**
Approval of the VE Alternative No. I-10 is not recommended.
 - While using MSE abutments will likely result in a significant cost savings, it will limit future expansions of the roadway, will not provide the same sight distances as bridges on end rolls, and are susceptible to settlement issues from the retained earth behind the wall
- 10) **Value Engineering Alternative No. I-11 – Eliminate guardrail in locations of 4:1 slopes**
Approval of the VE Alternative No. I-11 is recommended.
 - Any guardrail shown on 4:1 slopes was an error. 4:1 slope is recoverable and will not be protected by guardrail.
- 11) **Value Engineering Design Suggestion No. I-15 – Shorten spans over Interstate by using guardrail or concrete barrier along I-75**
Approval of the VE Design Suggestion No. I-15 is not recommended.
 - Shortening the spans will reduce construction costs, but introducing barrier or guardrail places an obstruction in the clear zone that may lead to collisions. For safety considerations, Interstate bridge piers will be placed outside of the roadway clear zone.

- 12) **Value Engineering Alternative No. I-16 – Selectively reduce shoulder widths on ramps.**
Approval of the VE Alternative No. I-16 is not recommended.
 - Existing outside shoulder specifications for interchange ramps (14' with 12' paved) is a design utilized on other sections of I-75 throughout the state.

- 13) **Value Engineering Alternative No. I-19 – Widen Bridge to increase left turn storage length.**
Approval of the VE Alternative No. I-19 is not recommended.
 - Sufficient storage for project turning volumes is already provided. In the design year, the 95th Percentile back-of-queue for left turning traffic is within the design parameters of the left turn bays.

- 14) **Value Engineering Alternative No. I-20 – Eliminate Mast Arm lighting standards in interchange.**
Approval of the VE Alternative No. I-20 is not recommended.
 - In order to meet the requirements that GDOT maintains for lighting, a mixture of high- and low-mast lighting is used. To meet specifications without low-mast lighting would require more high mast lighting, impacting the cost savings this recommendation is intended to address.

- 15) **Value Engineering Design Suggestion No. C-1 – Optimize right of way takings.**
Approval of the VE Design Suggestion No. C-1 is recommended for implementation
 - Right of Way limits will be optimized during the later stages of preliminary design.

- 16) **Value Engineering Alternative No. C-8 – Reduce median width from 44' wide to 30' wide**
Approval of the VE Alternative No. C-8 is not recommended.
 - A 44' depressed grassy median width is the current GDOT standard for rural divided arterials. Whereas reducing the width of the median will undeniably have a positive impact on project costs, there is no specific design- or safety-related reason to use a reduced width.

- 17) **Value Engineering Alternative No. C-9 – Construct eastbound roadway from SR 53 to US 41 for two way traffic**
Approval of the VE Alternative No. C-9 is not recommended
 - Does not meet the Need and Purpose of the project. The Need and Purpose states, "The proposed South Calhoun Bypass will divert through traffic [on SR 53] from the commercial area of SR 53 and specifically help reduce the through truck traffic in the area." The intent of this project is to route large-capacity vehicles, i.e. tractor-trailer combinations on their way to I-75 away from the downtown areas of the City of Calhoun. Providing positive separation of vehicles by building a rural 4 lane divided section will be the safest and most efficient type of roadway.

- 18) **Value Engineering Design Suggestion No. C-10 – Reduce Offset roadway east of Union Grove Road 34' from centerline**
Approval of the VE Design Suggestion No. C-10 is not recommended
 - This suggestion refers to the proposed two-lane section of the South Calhoun Bypass east of Union Grove Church Road, connecting to SR 53 on the eastern terminus. It is intended to allow for future expansion of this section of roadway to four-lane divided. However, the concept for this project does not envision further expansion in the future and does not incorporate R/W purchases to account for future construction. Offsetting the two-lane construction to account for future expansion will require changes to the R/W limits and is therefore not recommended.

19) Value Engineering Design Suggestion No. C-11 – Increase inside paved shoulder width from 2' to 4'

Approval of the VE Design Suggestion No. C-11 is not recommended

- Currently, GDOT policy calls for 2' of inside paved shoulder. There are no overriding reasons to deviate from this policy on these projects.

20) Value Engineering Design Suggestion No. C-13 – Separate bridges at McDaniel Station Road/CSX & Oothkalooga Creek into four bridges instead of two bridges

Approval of the VE Design Suggestion No. C-13 is recommended for implementation

- Between distribution of the VE Study materials and the VE Study Report, this recommendation was already implemented by the bridge design consultants.

21) Value Engineering Design Suggestion No. C-14 – Provide disposition for abandoned roadways/tie-in locations

Approval of the VE Design Suggestion No. C-14 is recommended for implementation

- Any roadway being cut/abandoned will have details on the construction plans illustrating what specific work is to occur, whether it is obliterate-grade-to-drain, cul de sac, or relocated tie-in. All existing access will be maintained through alternate routes if necessary.

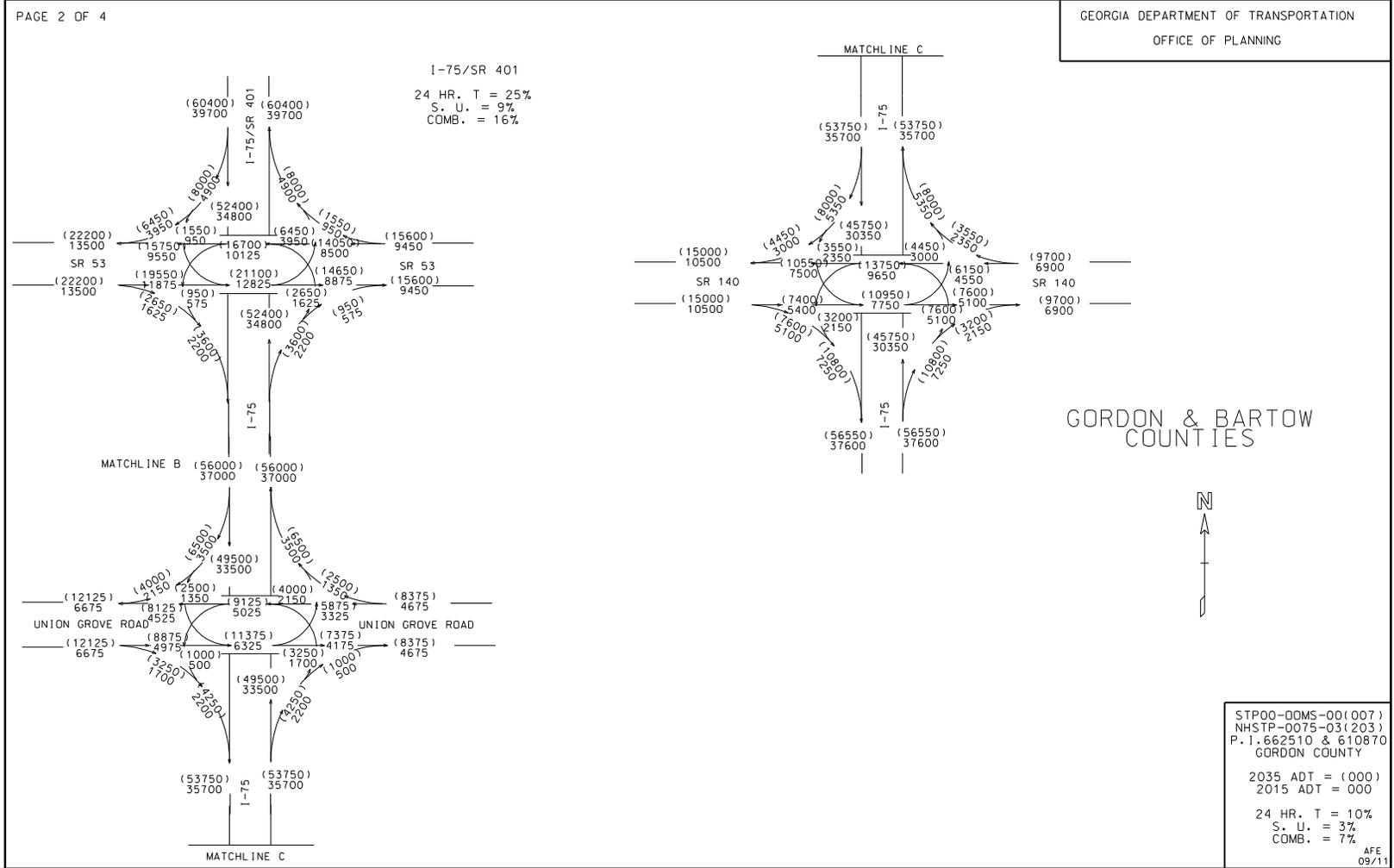
22) Value Engineering Design Suggestion No. C-16 – Consider use of 3:1 fill slopes in areas where clear zone requirements can be met beyond toe of slope.

Approval of the VE Design Suggestion No. C-16 is not recommended

- While this is an innovative approach to reducing costs by reducing earthwork, it is non-standard and may not be applied well in the field. As noted on the Design Suggestion Form, maintenance crews will need to ensure that the clear zone beyond the toe of slope is clear of vegetation. Crews generally mow slopes to the toe and no farther. A failure in maintenance would increase the likelihood of a clear zone violation and therefore a run-off-the-road collision.

MBA:SA:wmr

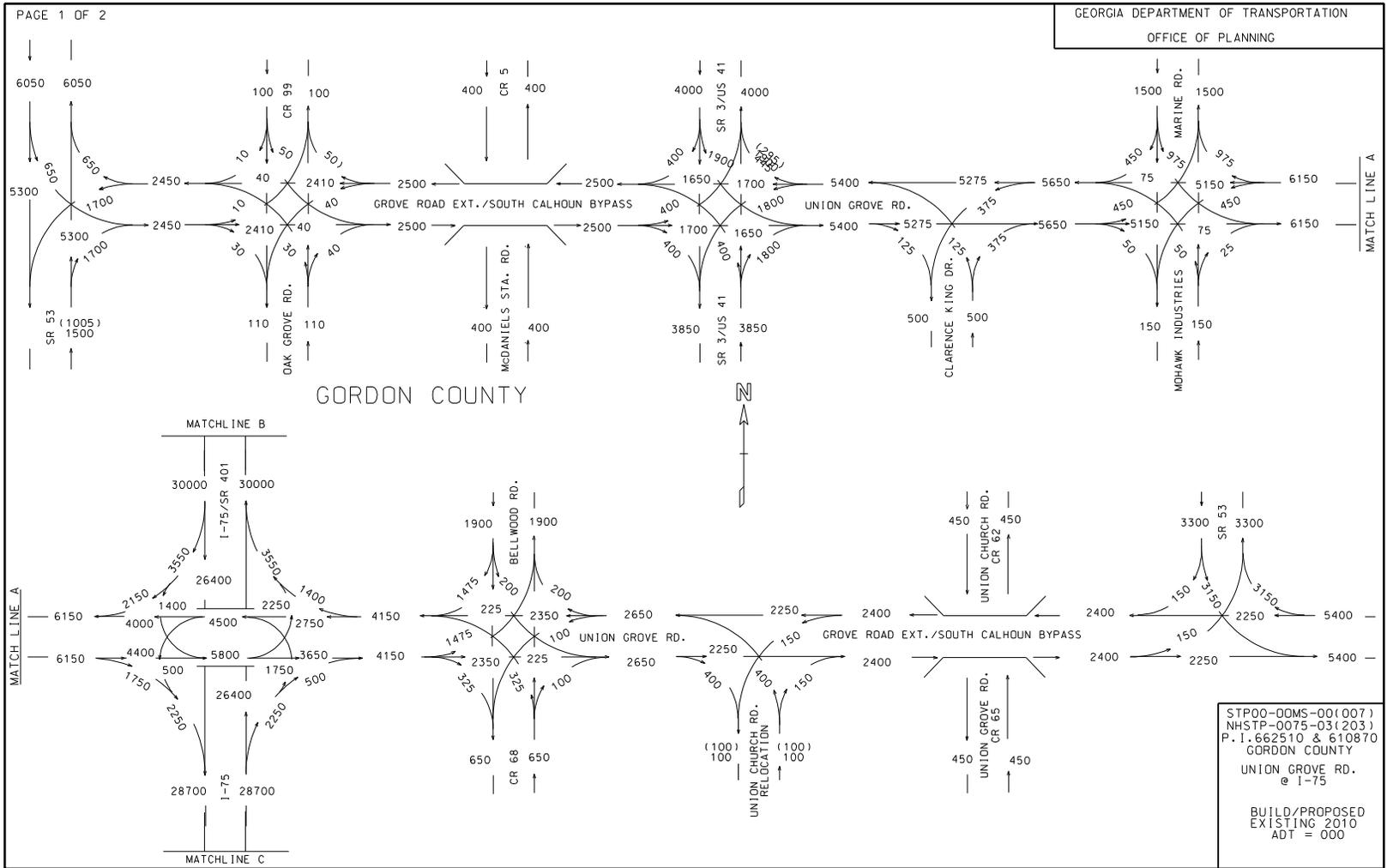
Cc: Lisa Meyers, Design Review Manager, GDOT



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 (770)434-1668

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DEPARTMENT OF TRANSPORTATION
OFFICE: CONSULTANT DESIGN
TRAFFIC DIAGRAM

STP00-DOMS-00(007)
SOUTH CALHOUN BYPASS

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