

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE** P. I. No. 222620-, Emanuel County **OFFICE** Preconstruction  
STP-043-1(55)  
SR 4 Business Widening **DATE** April 5, 2007

**FROM** *Cynthia Kumbalski*  
Genetha Rice-Singleton, Assistant Director of Preconstruction

**TO** *for -* David E. Studstill, Jr., P.E. Chief Engineer

**SUBJECT APPROVED PROJECT CONCEPT REPORT**

Attached for your files is the approval for subject project.

GRS/cj

Attachment

**DISTRIBUTION:**

Brian Summers  
Harvey Keepler  
Ken Thompson  
Jamie Simpson  
Michael Henry  
Keith Golden  
Angela Alexander (file copy)  
Paul Liles  
Babs Abubakari  
Mike Thomas  
BOARD MEMBER

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** P. I. No. 222620-, Emanuel County **OFFICE:** Preconstruction  
 STP-043-1(55)  
 SR 4 Business Widening **DATE:** March 19, 2007

**FROM:** *Genetha Rice-Singleton*  
 Genetha Rice-Singleton, Assistant Director of Preconstruction

**TO:** David E. Studstill, Jr., P.E., Chief Engineer

**SUBJECT: PROJECT CONCEPT REPORT**

This project is the widening and reconstruction of SR 4 Business from CR 452/Modoc Road to SR 4/US 1 (Swainsboro Bypass) on the north side of the city of Swainsboro. The proposed project length is 2.67 miles. When the Swainsboro West Bypass was constructed, SR 4 was re-routed and this portion of the existing route became SR 4 Business. Several residential subdivisions have been constructed in this area since the Bypass was constructed increasing the need for operational improvements. The existing roadway within the project limits consist of a two lane roadway comprised of one, 12' lane in each direction with 6' grassed shoulders on 100' of existing right-of-way. Traffic is projected to be 5,150 VPD and 7,508 VPD in the years 2015 and 2035 respectively.

The proposed construction will provide two, 12' travel lanes in each direction with a 14' flush median and urban shoulders including curb, gutter and sidewalk from MP 5.20 to MP 6.0. The remainder of the project (MP 6.0 to MP 7.87) will consist of two, 12' lanes in each direction with a 14' flush median and 10' rural shoulders (4' paved). Horizontal and vertical alignments will be corrected to meet current AASHTO guidelines. Traffic will be maintained on the existing route with the use of on-site detours in areas of vertical reconstruction.

Environmental concerns include requiring a COE 404 permit; a Categorical Exclusion will be prepared; a public hearing open house is not required; time saving procedures are appropriate.

The estimated costs for this project are:

	PROPOSED	APPROVED	FUNDING	PROG DATE
Construction (includes E&C and inflation)	\$5,491,000	\$5,491,000	L050	LR
Right-of-Way	\$1,105,000	\$1,105,000	L050	LR
Utilities*	\$ 313,000			

David Studstill  
Page 2

P. I. No. 222620-, Emanuel  
March 19, 2007

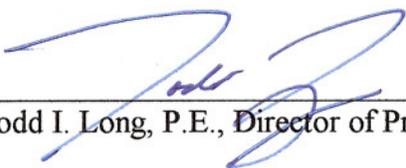
\*PFA required Emanuel County and Swainsboro do utilities 1-24-07; notification letter sent to Emanuel County and Swainsboro 11-30-05.

I recommend this project concept be approved.

GRS:JDQ/cj

Attachment

CONCUR



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Todd I. Long, P.E., Director of Preconstruction

APPROVE



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David E. Studstill, Jr., P.E., Chief Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENTAL CORRESPONDENCE**

**FILE:** NH-043-1(55) Emanuel                      **OFFICE:** Engineering Services  
P.I. No. 222620  
S.R. 4 Widening/Reconstruction

**DATE:** February 22, 2007

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

**TO:** Genetha Rice-Singleton, Assistant Director of Preconstruction

**SUBJECT: CONCEPT REPORT**

We have reviewed the Concept Report submitted February 19, 2007 and have no comments.

The costs for this project are:

Construction	\$4,991,450	
E & C	\$499,145	
Reimbursable Utilities	<del>Not provided</del>	313,000
Right of Way	<del>Not provided</del>	1,105,000

*APel  
2/23/07  
=*

REW

c: Mike Thomas, (Tennille); attn. Alan Smith

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

*District Two Design Office*

Project Number: *NH-043-1(55)*

County: *Emanuel*

P. I. Number: *222620*

Federal Route Number: *None*

State Route Number: *4 Business*

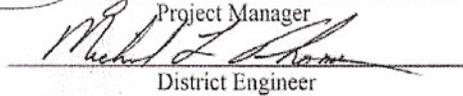
County Road Number: *None*

Recommendation for approval:

DATE *2-19-07*

DATE *2-19-07*

  
Project Manager

  
District Engineer

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

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Programming Engineer

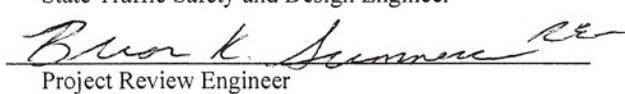
DATE \_\_\_\_\_

\_\_\_\_\_  
State Environmental/Location Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Traffic Safety and Design Engineer

DATE *2/22/07*

  
Project Review Engineer

DATE \_\_\_\_\_

\_\_\_\_\_  
State Bridge & Structural Design Engineer

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

**INTERDEPARTMENT CORRESPONDENCE**

**DATE 2-19-07**

**FROM** Alan Smith, District Design Engineer  
**TO** Genetha Rice-Singleton, Assistant Director of Preconstruction  
Attn: Johnny Quarles

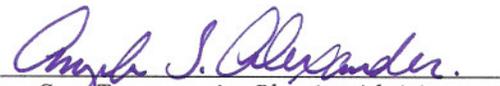
**SUBJECT NH-043-1 (55) Emanuel County, P.I. # 222620  
Widening of SR 4 Business from Modoc Road to the US 1 By-Pass north of the City  
of Swainsboro  
Project Concept Report**

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

The above mentioned project consists of the widening of SR 4 Business from a 2 lane roadway to 4-lane roadway with a flush median from the intersection of Modoc Road to the US 1 By-Pass north of the City of Swainsboro. Horizontal and vertical alignments will be corrected to meet current AASHTO Guidelines. Traffic will be maintained on the existing route with the use of On-Site detours in areas of vertical reconstruction.

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

DATE 2-27-07

  
State Transportation Planning Administrator

*Distribution:*

Brian Summers  
Harvey Keeper  
Keith Golden  
Angela Alexander  
Jamie Simpson

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

*District Two Design Office*

Project Number: *NH-043-1(55)*

County: *Emanuel*

P. I. Number: *222620*

Federal Route Number: *None*

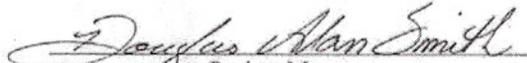
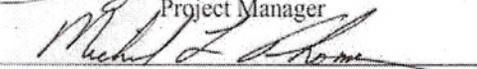
State Route Number: *4 Business*

County Road Number: *None*

Recommendation for approval:

DATE *2-19-07*

DATE *2-19-07*

  
Project Manager  
  
District Engineer

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

DATE \_\_\_\_\_

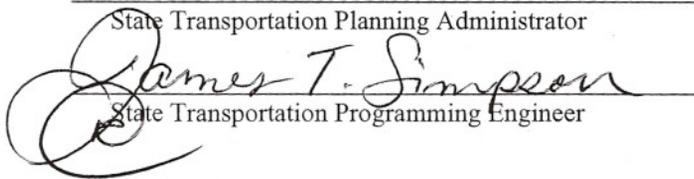
DATE *2-26-07*

DATE \_\_\_\_\_

DATE \_\_\_\_\_

DATE \_\_\_\_\_

DATE \_\_\_\_\_

\_\_\_\_\_  
State Transportation Planning Administrator  
  
State Transportation Programming Engineer  
\_\_\_\_\_  
State Environmental/Location Engineer  
\_\_\_\_\_  
State Traffic Safety and Design Engineer  
\_\_\_\_\_  
Project Review Engineer  
\_\_\_\_\_  
State Bridge & Structural Design Engineer

## SCORING RESULTS AS PER TOPPS 2440-2

<b>Project Number:</b> NH-043-1(55)		<b>County:</b> Emanuel		<b>PI No.:</b> 222620	
<b>Report Date:</b> February 19, 2007		<b>Concept By:</b> DOT Office: District 2			
<input checked="" type="checkbox"/> Concept Stage		Consultant: N/A			
<b>Project Type:</b> Choose One From Each Column		<input type="checkbox"/> Major <input checked="" type="checkbox"/> Minor	<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural	<input type="checkbox"/> ATMS <input type="checkbox"/> Bridge Replacement <input type="checkbox"/> Building <input type="checkbox"/> Interchange Reconstruction <input type="checkbox"/> Intersection Improvement <input type="checkbox"/> Interstate <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Widening & Reconstruction <input type="checkbox"/> Miscellaneous	
<b>FOCUS AREAS</b>	<b>SCORE</b>	<b>RESULTS</b>			
<b>Presentation</b>	100				
<b>Judgement</b>	100				
<b>Environmental</b>	100				
<b>Right of Way</b>	100				
<b>Utility</b>	100				
<b>Constructability</b>	100				
<b>Schedule</b>	100				

**NOTICE OF LOCATION AND DESIGN APPROVAL**

**NH-043-1 (55) Emanuel County  
P.I. # 222620**

Notice is hereby given in compliance with Georgia Code 22-22-109 that the Georgia Department of Transportation has approved the Location and Design of the above project.

The date of location and design approval was APRIL 5, 2007  
Date of Approval

This project consists of the widening of SR 4 Business from (MP 5.20) CR 452 / Modoc Road to SR 4 / US 1 (Swainsboro By-Pass) (MP 7.87) on the north side of the City of Swainsboro. The total project length is 2.67 miles. Traffic will be maintained on the existing alignment during construction except in areas of vertical reconstruction. On-Site detours will be utilized in these areas.

Drawings of the proposed project are on file and are available for inspection at the Georgia Department of Transportation.

Bonnie McMakin  
[Bonnie.McMakin@dot.state.ga.us](mailto:Bonnie.McMakin@dot.state.ga.us)  
685 Kite Road  
Swainsboro, Georgia 30401

Any interested party may obtain a copy of the drawings or maps or plats or portions thereof by paying a nominal fee and requesting in writing to:

GEORGE M. BREWER  
PRECONSTRUCTION ENGINEER  
P.O. BOX 8  
TENNILLE, GEORGIA 31089  
478-552-4629

Any written request or communication in reference to this project SHOULD include the Project and PI numbers as noted at the top of this notice.

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

*District Two Design Office*

Project Number: *NH-043-1(55)*

County: *Emanuel*

P. I. Number: *222620*

Federal Route Number: *None*

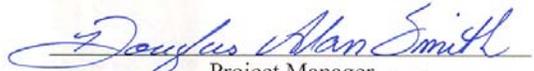
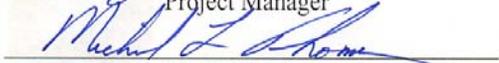
State Route Number: *4 Business*

County Road Number: *None*

Recommendation for approval:

DATE *2-19-07*

DATE *2-19-07*

  
Project Manager  
  
District Engineer

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

DATE _____	_____
	State Transportation Planning Administrator
DATE _____	_____
	State Transportation Programming Engineer
DATE _____	_____
	State Environmental/Location Engineer
DATE _____	_____
	State Traffic Safety and Design Engineer
DATE _____	_____
	Project Review Engineer
DATE _____	_____
	State Bridge & Structural Design Engineer



**Need and Purpose:** *See Attachment # 1*

**Description of the proposed project:** *This project consists of the widening of SR 4 Business in the City of Swainsboro from CR 452 / Modoc Road (MP 5.2) to the Swainsboro By-Pass / US 1 ( MP 7.87) from a 2-lane roadway to a 4-lane roadway with a flush median. The horizontal and vertical alignments will be corrected to meet current AASHTO Green Book criteria. Traffic will be maintained on the existing alignment with on-site detours used in areas of grade change.*

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

**PDP Classification:**  Minor  Major

**Federal Oversight:** Full Oversight , Exempt , State Funded , or Other

**Functional Classification:** *Urban Principal Arterial - MP 5.20 to MP 7.15*  
*Rural Principal Arterial - from MP 7.15 to MP 7.87*

**U. S. Route Number(s):** *None*  
**County Road Number(s):** *None*

**State Route Number(s):** *4 Business*

**Traffic (AADT):**

Current Year: *5150 (2015)*

Design Year: *7508 (2035)*

**Existing design features:**

- Typical Section: *SR 4 Business begins at CR 452 / Modoc Road with an existing 4 lane section comprised of 2 - 12-ft travel lanes in each direction with a 14-ft. flush median, just north of CR 452 this transitions to a 2 lane roadway comprised of 1 - 12-ft. travel lane in each direction with 6-ft. grassed shoulders.*
- Posted speed: *45 - 55 MPH* Maximum degree of curvature: *5 Degree*
- Maximum grade: *5%*
- Width of right of way: *100-ft.*
- Major structures: *None*  
*Sufficiency Rating: NA*
- Major interchanges or intersections along the project: *None*
- Existing length of roadway: *2.67 miles*

**Proposed Design Features:**

- Proposed typical section(s): *MP 5.20 to MP 6.00: 2 - 12-ft. travel lanes in each direction with a 14-ft. flush median and urban shoulders including curb, gutter and sidewalk*  
*MP 6.00 to 7.87: 2 - 12-ft. travel lanes in each direction with a 14-ft. flush median and rural 10-ft. wide shoulders (4-ft. each paved) with rumble strips.*
- Proposed Design Speed Mainline: *45 MPH*
- Proposed Maximum grade Mainline: *5%*
- Maximum grade allowable Mainline: *5%*
- Proposed Maximum grade Side Street: *12%*
- Maximum grade allowable on Side Streets: *12%*
- Proposed Maximum grade driveway: *11%*
- Proposed Minimum radii of curve: *1146-ft.*
- Minimum Radii allowable: *643-ft.*
- Right of way
  - Width: *100-ft.*
  - Easements: Temporary , Permanent , Utility , Other .
  - Type of access control: Full , Partial , By Permit , Other .
  - Number of parcels: *70*      Number of displacements: *2*
    - Business: *0*
    - Residences: *2*
    - Mobile homes: *0*
    - Other: *0*
- Structures:
  - Bridges: *None*
  - Retaining walls: *None*
- Major intersections and interchanges: *None*
- Traffic control during construction: *Traffic will be maintained on the existing alignment during construction where existing grades meet current AASHTO Green Book criteria. An on-site detour will be required near the intersection of SR 4 Business and CS 955 / Ralph Lee Street due to the correction of the poor vertical alignment at this location.*
- Design Exceptions to controlling criteria anticipated:

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
HORIZONTAL ALIGNMENT:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ROADWAY WIDTH:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SHOULDER WIDTH:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VERTICAL GRADES:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CROSS SLOPES:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
STOPPING SIGHT DISTANCE:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SUPERELEVATION RATES:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HORIZONTAL CLEARANCE:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SPEED DESIGN:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VERTICAL CLEARANCE:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BRIDGE WIDTH:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BRIDGE STRUCTURAL CAPACITY:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- Design Variances: *None Anticipated.*

- Environmental concerns: *The environmental document will have to address impacts to several churches located along SR 4 Business within the project limits. These are the Apostolic Church at the intersection of SR 4 Business @ CR 471, the 1<sup>st</sup> Church of the Nazarene at the intersection of SR 4 Business and CR 95 and HillCrest Baptist Church on SR 4 Business. Impacts to these properties should be land acquisition only with no significant impacts to structures. There will also be minor wetland involvement with this project at some of the stream crossings. There are possible UST sites located at the intersections of SR 4 Business at Eloise Street and at Modoc Road that will have to be studied for leaks.*
  
- Anticipated Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes , No .
  - Categorical exclusion .
  - Environmental Assessment/Finding of No Significant Impact (FONSI) , or
  - Environmental Impact Statement (EIS) .
  
- Utility involvements:
  - Telephone - *BellSouth Telecommunications, Inc.*
  - Power – *Georgia Power Company / Altamaha EMC*
  - Water – *City of Swainsboro*
  - Sewer – *City of Swainsboro*
  - Gas – *Atlanta Gas Light Company*
  - Cable TV – *Northland Cable TV*

**Project responsibilities:**

- Design: *District Two*
- Right of Way Acquisition: *District Two*
- Relocation of Utilities: *District Two*
- Letting to contract: *Contracts Administration*
- Supervision of construction: *Swainsboro AE Office*
- Providing material pits: *In Contract*
- Providing detours: *In Contract*

**Coordination**

- Concept meeting date: *2-16-07*
- P. A. R. meetings: *NA*
- FEMA, USCG, and/or TVA: *NA*
- Public involvement: *None*
- Local government commitments: *The local government will be asked to relocate their own utilities at their costs.*
- Other projects in the area: *222630 Emanuel County*

**Scheduling – Responsible Parties’ Estimate**

- Time to complete the environmental process: *1 Year*
- Time to complete preliminary construction plans: *1 Year*
- Time to complete right of way plans: *6 Months*
- Time to complete the Section 404 Permit: *1 Year*
- Time to complete final construction plans: *1 Year*
- Time to complete to purchase right of way: *2 Years*

**Other alternates considered:**

1. *The only other alternate considered for this project was "No-Build".*

**Comments:** *This office recommends that this concept be approved for implementation.*

**Attachments:**

- Need & Purpose
- Traffic Data
- Cost Estimates:  
Construction including E&C
- Typical Sections
- Pavement Design
- Location and Design Notice

## **Need and Purpose Statement**

**Project: STP-043-1 (55)**

**P.I. #: 222620**

**Emanuel County**

**Widening of SR 4 Business from CR 454 / Modoc Road to SR 4 / US 1**

### **Location / Background:**

This project consists of the widening of SR 4 Business from (MP 5.20) CR 452 / Modoc Road to SR 4 / US 1 (Swainsboro By-Pass) (MP 7.87) on the north side of the City of Swainsboro. When the Swainsboro west By-Pass was constructed, SR 4 was re-routed and this portion of the existing route became SR 4 Business. Several residential subdivisions have been constructed in this area since the By-Pass was constructed increasing the need for operational improvements.

### **Functional Classification:**

**SR 4 Business - Urban Principal Arterial / Rural Principal Arterial**

### **Roadway Characteristics:**

The horizontal alignment meanders with curves that appear to meet current AASHTO guidelines for a 55 MPH speed design. The vertical alignment has grades that vary from 1% to 5% with one crest vertical curve that causes limited sight distance at the intersection of SR 4 Business and CR 95 / R.J. Holder Road. There are several side roads that intersect SR 4 Business that intersect at angles less than 70 degrees that will need to be corrected. All of these roads appear to have vertical alignments that meet current AASHTO Green Book criteria for their posted speeds.

### **Travel Demand and Operational Conditions:**

SR 4 Business is considered the main street for the City of Swainsboro. Most of the shopping centers, fast food restaurants and government offices are located along SR 4 Business. It also serves as the main route to town square from the approaching northbound and southbound directions. SR 4 Business currently has an (2015) ADT of 5150 with a truck percentage of 7%. The projected ADT for this project is 7508 ADT (2035). SR 4 Business is currently operating on a Level of Service of "C". Traffic appears to be flowing steadily with little delay to commute times. The truck percentage has been reduced from 36% to 7% since the Swainsboro By-Pass has been constructed. The traffic is comprised of local residents in passenger cars, school buses and emergency vehicles commuting to and from the downtown Swainsboro area north along SR 4 Business to and from work, school and shopping areas. The 20-yr. projected Level of Service for this portion of SR 4 Business with no improvements is also "C". Once the roadway is widened to 4-lanes with a 14-ft. flush median, capacity will be increased which will allow the Level of Service to become "A".

### **Safety:**

Accident data has been compiled for the years 2000-2004 for the portion of SR 4 Business within this project's limits. Since 2000 there have been a total of 13 accidents within the proposed project limits. Of these, there were 7 angle intersecting collisions, 4 rear-end collisions, 2 side-swipe collisions and 0 head-on collisions. The average accident rate for 2004 was 79/MVM compared to the statewide average of 44/MVM for this type of route.

### **Logical Termini:**

The southern portion of SR 4 Business begins at SR 4 / US 1 / Swainsboro By-Pass and runs north through the City of Swainsboro to SR 4 / US 1 / Swainsboro By-Pass on the north side of the City of Swainsboro. The existing roadway consists of 2 - 12-ft. asphalt travel lanes with 6-ft. grassed shoulders on the southern end and northern ends with an existing 4-lane section with a 14-ft. flush median through the middle of town. There is currently a GDOT project (P.I. # 222630) under design to widen the southern portion of SR 4 Business to 2 - 12-ft. travel lanes in each direction with a 14-ft. flush median from the beginning of SR 4 Business to the existing 4-lane section. Upon completion of Project 222630, SR 4 Business will be a 4-lane roadway with a 14-ft. flush median from the beginning to SR 4 Business to the intersection of Modoc Road / CR 452. This project begins at the intersection of CR 452 / Modoc Road and extends the 4-lane section to the end of SR 4 Business at the intersection of SR 4 / US 1 North.

The current ADT along SR 4 Business from the downtown area to Modoc Road is 8250 VPD. This changes to 5150 VPD just past the intersection of Modoc Road / CR 452 which indicates that 3100 vpd turn at Modoc Road. The ending terminus for the project is the intersection of the newly constructed Swainsboro By-Pass which is also the end of SR 4 Business. By establishing these termini for this project, the existing 4-lane section would be extended to the By-Pass which would complete the 4-lane section of roadway for the entire length of SR 4 Business. This will increase capacity of the route and improve safety as traffic volumes increase due to predicted economic growth in this area.

### **Project Need and Purpose:**

The need exist to improve the operational and safety conditions of SR 4 Business due to predicted economic development from the intersection of CR 452 (Modoc Rd) to SR 4 / US 1. The purpose of this project is to accomplish this goal by providing 2 travel lanes in each direction to accommodate traffic volumes, enhancing left turn opportunities by constructing a two-way left turn lane in the flush median, and providing auxiliary lanes for vehicles turning right to clear them from the travel lanes. These improvements will increase the capacity of this portion of SR 4 Business and improve safety for the traveling public along this portion of roadway.





## NH-043-1 (55) Emanuel County

### P.I. # 222620

Widening of SR 4 Business from Modoc Road to US 1 / By-Pass

#### ROADWAY

Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	225000.00	TRAFFIC CONTROL -	225000.00
201-1500	1	LS	150000.00	CLEARING & GRUBBING -	150000.00
205-0001	17105	CY	4.28	UNCLASS EXCAV	73209.40
206-0002	57728	CY	4.99	BORROW EXCAV, INCL MATL	288062.72
207-0203	40	CY	40.23	FOUND BK FILL MATL, TP II	1609.20
310-1101	34168	TN	21.00	GR AGGR BASE CRS, INCL MATL	717528.00
318-3000	1100	TN	17.95	AGGR SURF CRS	19745.00
402-1812	3200	TN	48.24	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	154368.00
402-3111	8615	TN	65.00	RECYCLED ASPH CONC 19 MM MIX, GP 1 OR 2, INCL BITUM MATL & H LIME	559975.00
402-3121	13785	TN	65.00	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	896025.00
402-3131	10339	TN	65.00	RECYCLED ASPH CONC 9.5 MM SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	672035.00
413-1000	7520	GL	1.26	BITUM TACK COAT	9475.20
432-5010	800	SY	1.90	MILL ASPH CONC PVMT, VARIABLE DEPTH	1520.00
441-0016	228	SY	32.45	DRIVEWAY CONCRETE, 6 IN TK	7398.60
441-0018	100	SY	38.32	DRIVEWAY CONCRETE, 8 IN TK	3832.00
441-0104	5347	SY	29.56	CONC SIDEWALK, 4 IN	158057.32
441-0740	1333	SY	28.79	CONCRETE MEDIAN, 4 IN	38377.07
441-4030	450	SY	43.67	CONC VALLEY GUTTER, 8 IN	19651.50
441-6222	9625	LF	14.62	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	140717.50
444-1000	380	LF	2.49	SAWED JOINTS IN EXIST PAVEMENTS - PCC	946.20
446-1100	28196	LF	4.51	PVMT REINF FABRIC STRIPS, TP 2, 18 INCH WIDTH	127163.96
500-3800	8	CY	737.29	CLASS A CONCRETE, INCL REINF STEEL	5898.32
500-9999	18	CY	178.59	CLASS B CONC, BASE OR PVMT WIDENING	3214.62
550-1180	3080	LF	34.88	STORM DRAIN PIPE, 18 IN, H 1-10	107430.40
550-1240	770	LF	43.96	STORM DRAIN PIPE, 24 IN, H 1-10	33849.20
550-1360	328	LF	65.70	STORM DRAIN PIPE, 36 IN, H 1-10	21549.60
550-1540	80	LF	152.86	STORM DRAIN PIPE, 54 IN, H 1-10	12228.80
550-2180	1354	LF	26.58	SIDE DRAIN PIPE, 18 IN, H 1-10	35989.32
550-2240	270	LF	30.80	SIDE DRAIN PIPE, 24 IN, H 1-10	8316.00
550-3618	38	EA	585.22	SAFETY END SECTION 18 IN, SIDE DRAIN, 6:1 SLOPE	22238.36
550-3624	14	EA	867.98	SAFETY END SECTION 24 IN, SIDE DRAIN, 6:1 SLOPE	12151.72
550-4218	6	EA	547.28	FLARED END SECTION 18 IN, STORM DRAIN	3283.68
550-4224	3	EA	624.89	FLARED END SECTION 24 IN, STORM DRAIN	1874.67
550-4236	8	EA	1019.32	FLARED END SECTION 36 IN, STORM DRAIN	8154.56
634-1200	44	EA	94.36	RIGHT OF WAY MARKERS	4151.84
668-1100	29	EA	1889.40	CATCH BASIN, GP 1	54792.60
668-2100	16	EA	2816.32	DROP INLET, GP 1	45061.12
668-3300	4	EA	2844.53	SAN SEWER MANHOLE, TP 1	11378.12
668-5000	12	EA	1796.16	JUNCTION BOX	21553.92
<b>Section Sub Total:</b>					<b>\$4,677,813.52</b>

#### EROSION CONTROL

Item Number	Quantity	Units	Unit Price	Item Description	Cost
603-2181	50	SY	38.43	STN DUMPED RIP RAP, TP 3, 18 IN	1921.50
603-7000	50	SY	4.26	PLASTIC FILTER FABRIC	213.00

700-6910	44	AC	835.78	PERMANENT GRASSING	36774.32
700-7000	44	TN	59.16	AGRICULTURAL LIME	2603.04
700-7010	110	GL	18.64	LIQUID LIME	2050.40
700-8000	27	TN	288.53	FERTILIZER MIXED GRADE	7790.31
700-8100	6600	LB	1.68	FERTILIZER NITROGEN CONTENT	11088.00
710-9000	3000	SY	3.58	PERMANENT SOIL REINFORCING MAT	10740.00
716-2000	8000	SY	1.12	EROSION CONTROL MATS, SLOPES	8960.00
<b>Section Sub Total:</b>					<b>\$82,140.57</b>

<b>TEMPORARY EROSION CONTROL</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
163-0232	22	AC	524.79	TEMPORARY GRASSING	11545.38
163-0240	220	TN	203.71	MULCH	44816.20
163-0300	6	EA	1814.52	CONSTRUCTION EXIT	10887.12
163-0530	3600	LF	3.02	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	10872.00
163-0550	61	EA	261.57	CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	15955.77
165-0010	2200	LF	1.06	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	2332.00
165-0030	2200	LF	1.34	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	2948.00
165-0070	1800	LF	1.76	MAINTENANCE OF BALED STRAW EROSION CHECK	3168.00
165-0101	6	EA	481.87	MAINTENANCE OF CONSTRUCTION EXIT	2891.22
165-0105	61	EA	95.74	MAINTENANCE OF INLET SEDIMENT TRAP	5840.14
167-1000	2	EA	1542.18	WATER QUALITY MONITORING AND SAMPLING	3084.36
167-1500	18	MO	926.02	WATER QUALITY INSPECTIONS	16668.36
171-0010	4400	LF	1.93	TEMPORARY SILT FENCE, TYPE A	8492.00
171-0030	4400	LF	3.31	TEMPORARY SILT FENCE, TYPE C	14564.00
<b>Section Sub Total:</b>					<b>\$154,064.55</b>

<b>SIGNING / MARKING</b>					
<b>Item Number</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Price</b>	<b>Item Description</b>	<b>Cost</b>
636-1020	184	SF	14.35	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	2640.40
636-1033	153	SF	21.18	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 9	3240.54
636-2070	250	LF	7.41	GALV STEEL POSTS, TP 7	1852.50
647-1000	1	LS	47780.54	TRAFFIC SIGNAL INSTALLATION NO -	47780.54
652-0110	36	EA	38.96	PAVEMENT MARKING, ARROW, TP 1	1402.56
652-0120	24	EA	39.71	PAVEMENT MARKING, ARROW, TP 2	953.04
652-5451	34848	LF	0.15	SOLID TRAFFIC STRIPE, 5 IN, WHITE	5227.20
652-5452	34848	LF	0.16	SOLID TRAFFIC STRIPE, 5 IN, YELLOW	5575.68
652-5701	320	LF	2.67	SOLID TRAF STRIPE, 24 IN, WHITE	854.40
652-5801	200	LF	1.02	SOLID TRAF STRIPE, 8 IN, WHITE	204.00
652-6501	1800	GLF	0.18	SKIP TRAFFIC STRIPE, 5 IN, WHITE	324.00
652-6502	34848	GLF	0.10	SKIP TRAFFIC STRIPE, 5 IN, YELLOW	3484.80
654-1001	528	EA	3.59	RAISED PVMT MARKERS TP 1	1895.52
654-1003	528	EA	3.78	RAISED PVMT MARKERS TP 3	1995.84
<b>Section Sub Total:</b>					<b>\$77,431.02</b>

**Total Estimated Cost: \$4,991,449.66**

<b>Subtotal Construction Cost</b>	<b>\$4,991,449.66</b>
E&C Rate 10.0 %	\$499,144.97
Inflation Rate 0.0 % @ 0.0 Years	\$0.00
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<b>Total Construction Cost</b>	<b>\$5,490,594.63</b>
Right Of Way	\$0.00
ReImb. Utilities	\$0.00
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<b>Grand Total Project Cost</b>	<b>\$5,490,594.63</b>

