

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
TIA PROJECT CONCEPT REPORT

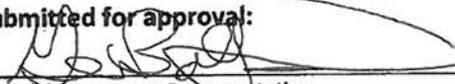
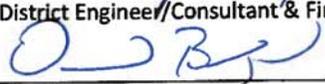
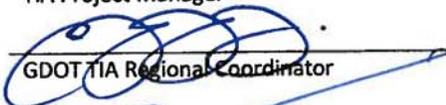


Project Type: Reconstruction/Rehabilitation
GDOT District: 2
Federal Route Number: N/A
State Route Number: SR 104

P.I. Number: 232020
County: Richmond
RC Project ID: RC07-000120

Project Description: The construction of a concrete median barrier, associated drainage improvements and lighting installation on Riverwatch Parkway from River Shoals Parkway to Jones Street.

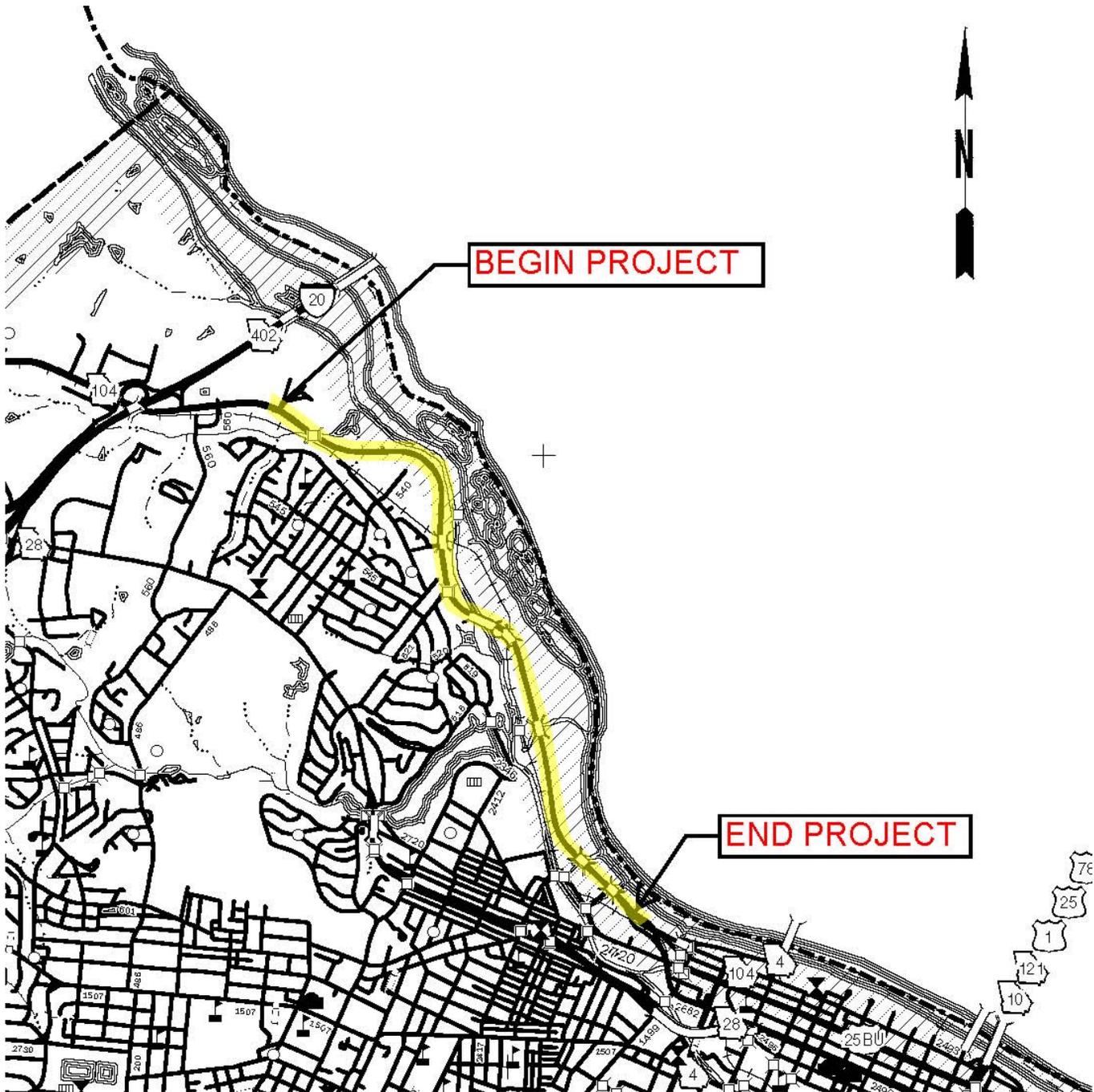
Submitted for approval:

| | |
|--|----------------------------|
|  Local Government Representative | <u>12-5-14</u> DATE |
| <u>Davette Jenkins, CH2M HILL</u> District Engineer/Consultant & Firm | <u>12/1/14</u> DATE |
|  TIA Project Manager | <u>12/1/14</u> DATE |
|  GDOT TIA Regional Coordinator | <u>12/2/14</u> DATE |
|  TIA Program Manager | <u>02 DEC 2014</u> DATE |
| <u>Michael Dora</u> GDOT State TIA Administrator | <u>12/3/2014</u> DATE |

Approval:

| | |
|---|-------------------------|
| Concur: <u>Mike Boman</u> GDOT Director of Engineering | <u>12/8/14</u> DATE |
| Approve: <u>Del R. McManis</u> GDOT Chief Engineer | <u>12/10/14</u> DATE |

PROJECT LOCATION



County: Richmond

PLANNING & BACKGROUND DATA

Project Intended Benefit: This project would benefit the public by replacement of the existing worn and damaged metal guardrail with concrete barriers in the median, associated drainage improvements, and installation of lighting along the roadway.

Description of the proposed project: This project would analyze, design and construct median, drainage, and lighting improvements along Riverwatch Parkway from River Shoals Parkway to Jones Street. Within the existing 10-foot wide median, W-beam guardrail is currently used to separate the opposing directions of traffic. Where there is a bridge within the project limits, the guardrail transitions to a concrete barrier in the median. The proposed improvements include removing the guardrail in the median, constructing a Type 20 concrete barrier, adding associated drainage improvements, and providing lighting throughout the corridor. The Type 20 New Jersey shape barrier will be utilized throughout the project corridor. **Attachment A** shows the typical section for Riverwatch Parkway.

Due to the addition of the median barrier, there are eight horizontal curves that do not meet the required stopping sight distance. The proposed widening will eliminate six deficiencies which reduces the number of deficient curves to two. A design exception will be submitted for these two curves because the cost of right-of-way, major widening, and impacts to existing bridges is not within the project budget. Mitigation will include the addition of lighting, warning signage, and using Type 20 Jersey barrier instead of Type S-1 barrier.

Federal Oversight: Exempt State Funded TIA Other

MPO: Augusta Regional Transportation Study (ARTS)

MPO Project ID: 680

Regional Commission: Central Savannah River RC

RC Project ID: RC07-000120

Congressional District(s): 12

Projected Traffic (AADT):

Current Year (2014): 19,988 Open Year (2018): 20,799 Design Year (2038): 25,379

Numbers are based on 2013 counts at Station 2450933 in Richmond County (LRS ID: 2451010400) assuming a 1% compounded growth rate.

Functional Classification (Mainline): Rural Principal Arterial

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? No Yes

Pavement Evaluation and Recommendations

Preliminary Pavement Evaluation Summary Report Required? No Yes

Preliminary Pavement Type Selection Report Required? No Yes

Feasible Pavement Alternatives: HMA PCC HMA & PCC

County: Richmond

[HMA = Hot Mix Asphalt; PCC = Portland Cement Concrete]

Will Context Sensitive Solutions procedures be utilized?

No

Yes

DESIGN AND STRUCTURAL DATA

Mainline Design Features: *Riverwatch Parkway (SR 104)*

| Feature | Existing | Standard* | Proposed |
|----------------------------------|-----------------|---------------------|------------------|
| Typical Section | | | |
| - Number of Lanes | 4 | 4 | 4 |
| - Lane Width(s) | 12' | 12' | 11' |
| - Overall Median Width | 10' | 32'-44' or 24' | 14' |
| - Median Type | GR only | Depressed or Raised | Concrete barrier |
| - Outside Shoulder | 12', 2.5' paved | 10', 6.5' paved | 12', 2.5' paved |
| - Outside Shoulder Slope | 6% | 6% | 6% |
| - Inside (Median) Shoulder Width | 4' | 6', 2' paved | 5.8' |
| - Inside (Median) Shoulder Slope | 2% | 4%, 2% | 2% |
| - Sidewalks | N/A | N/A | N/A |
| - Auxiliary Lanes | N/A | N/A | N/A |
| - Bike Lanes | None | 4' | None |
| Posted Speed | 55 mph | | 55 mph |
| Design Speed | 55 mph | --- | 55 mph |
| Min Horizontal Curve Radius | 1,150' | 1,650' | 1,150' |
| Superelevation Rate | < 10% (varies) | 10% max | < 10% (varies) |
| Grade | 1%-6% | 6% max | 1%-6% |
| Access Control | Limited Access | Limited Access | Limited Access |
| Right-of-Way Width | 200' min | --- | 200' min |
| Design Vehicle | WB-40 or BUS-40 | WB-40 or BUS-40 | WB-40 or BUS-40 |

*According to current GDOT design policy, if applicable

Major Structures:

| <u>Structure ID</u> | <u>Existing</u> | <u>Proposed</u> |
|---------------------|---|-----------------|
| 1. unknown | SR 104 over Rock Creek | No change |
| 2. unknown | SR 104 over Canal Access, CSX RR & Riverlook Dr | No change |
| 3. unknown | SR 104 over Augusta Canal & Augusta Canal Trail | No change |
| 4. 000000024501240 | SR 104 over CSX RR (#4) | No change |
| 5. 000000024501230 | SR 104 over Raes Creek (#5) | No change |
| 6. 000000024501220 | SR 104 over Sibley Mill Gates (#6) | No change |
| 7. 000000024501210 | SR 104 over King Mill Gates (#7) | No change |

Major Interchanges/Intersections: None

Utility Involvements: There are several utilities within the right-of-way of Riverwatch Parkway. At the intersection with River Shoals Parkway, there are drainage pipes, overhead signals, underground signal conduits, and overhead electric lines. Along the project corridor, there are several locations where

County: Richmond

overhead electric lines cross the roadway. Because all the work associated with this project will occur in the median, the only potential impact to utilities is where overhead utility lines cross the corridor.

Public Interest Determination Policy and Procedure recommended (Utilities)? No Yes

SUE Required: No Yes

Railroad Involvement: There are two bridges over CSX railroad, but no involvement is anticipated.

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: None Bicycle Pedestrian Transit

Right-of-Way:

Required Right-of-Way anticipated: No Yes Undetermined
Easements anticipated: None Temporary Permanent Utility Other

Anticipated number of impacted parcels: 0
Displacements Anticipated: 0
Businesses: 0
Residences: 0
Other: 0

Transportation Management Plan [TMP] Required: No Yes
If Yes: Project classified as: Non-Significant Significant
TMP Components Anticipated: TTC TO PI

Design Exceptions to FHWA/AASHTO controlling criteria anticipated: Stopping Sight Distance

Design Variances to GDOT Standard Criteria anticipated: None

ENVIRONMENTAL DATA

Anticipated Environmental Document:

GEPA: Type A Letter Type B Letter
NEPA: CE EA/FONSI

Project Air Quality: (On-system projects only)

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
Is a Carbon Monoxide hotspot analysis required? No Yes

MS4 Compliance – Is the project located in an MS4 area? No Yes

County: Richmond

Environmental Permits/Variances/Commitments/Coordination anticipated: The project would consist of minor land disturbing activities within the existing right-of-way. The project is not anticipated to require a 404 Permit or Stream Buffer Variance. Additionally, no Section 4(f) involvement is anticipated.

NEPA/GEPA Comments & Information: The project would consist of minor land disturbing activities. Based on project type, the project would not be anticipated to significantly affect the quality of the environment; therefore, the project would qualify for a Type A letter.

PROJECT RESPONSIBILITIES

Project Activities:

| Project Activity | Party Responsible for Performing Task(s) |
|---|--|
| Concept Development | CH2M Hill |
| Design | CH2M Hill |
| Right-of-Way Acquisition | N/A |
| Utility Relocation | GDOT TIA Office |
| Letting to Contract | GDOT TIA Office |
| Construction Supervision | GDOT TIA Office |
| Project Activity | Party Responsible for Performing Task(s) |
| Providing Material Pits | N/A |
| Providing Detours | N/A |
| Environmental Studies, Documents, and Permits | Edwards Pitman |
| Environmental Mitigation | Edwards Pitman |
| Construction Inspection & Materials Testing | GDOT TIA Office |

Lighting required: No Yes

Other projects in the area:

P.I. Number Description

- P.I. 0011404 Riverwatch Parkway / Stevens Creek Road Intersection
- P.I. 0011392 Richmond ITS Master Plan Implementation
- P.I. 0011402 Riverwatch Parkway Adaptive Signal
- P.I. 0011403 Riverwatch Parkway / Fury's Ferry Road Intersection
- P.I. 0011401 Riverwatch Parkway Resurfacing
- P.I. 0011400 Richmond County Emergency and Transit Vehicle Preemption System
- P.I. 0011699 Riverwatch Pkwy Corridor Improvements from I-20 to River Shoals Pkwy

Other coordination to date: On 11/5/13, a meeting with Steve Cassell, City of Augusta Assistant Director at that time, was held to discuss the Riverwatch Parkway project. Steve Cassell and Daveitta Jenkins drove the project corridor and Steve noted the extreme darkness at night along the corridor.

County: Richmond

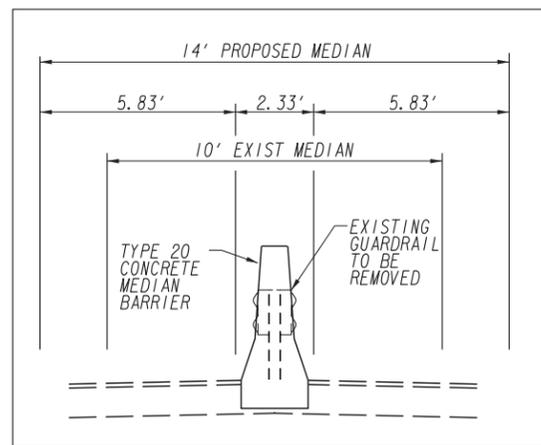
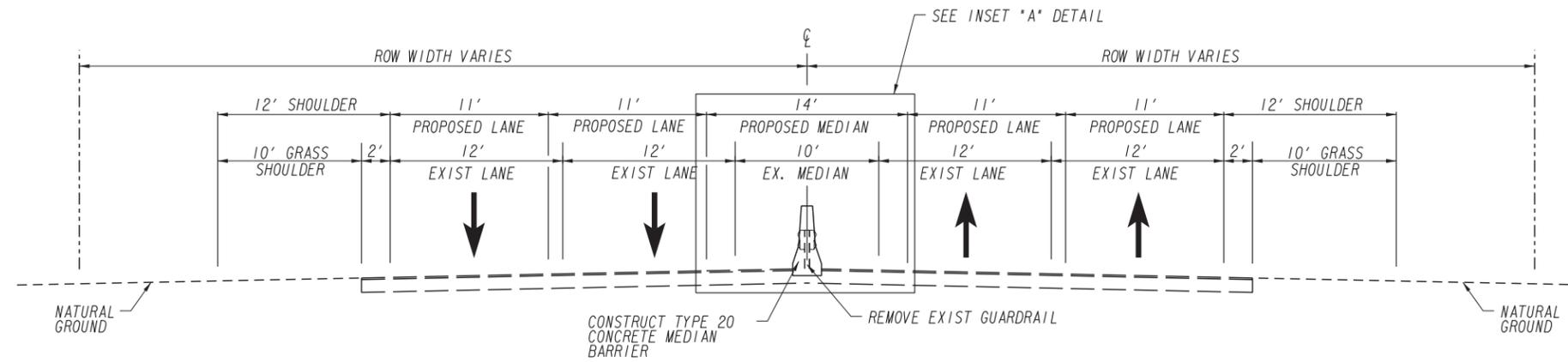
Project Cost Estimate and Funding Responsibilities:

| | Breakdown of PE | Breakdown of ROW | Breakdown of Reimbursable Utilities | Breakdown of CST | Breakdown of RISK | Total Cost |
|---|--------------------|---------------------|--|---------------------|----------------------|--------------------|
| Date of Estimate | 10/29/14 | 10/29/14 | 10/29/14 | 10/29/14 | 10/29/14 | |
| TIA Current Programmed Budget \$ | \$915,000 | \$0 | \$0 | \$6,954,000 | \$731,000 | \$8,600,000 |
| | | | | | | |
| Estimated \$ Amount | \$488,616 | \$0 | \$0 | \$6,708,971* | \$0 | |
| Project Contingency \$ | \$0 | \$0 | \$0 | \$0 | \$237,184 | |
| LOE & Program \$ Amount | \$0 | \$0 | \$0 | \$0 | \$489,485 | |
| Total Estimated Cost | \$488,616 | \$0 | \$0 | \$6,708,971 | \$726,669 | \$7,924,256 |

* Includes CEI amount of \$435,044.23.

Note: Construction cost estimate is located in **Attachment B**.**Comments/additional information:** None**Attachments:**

- A. Typical section
- B. Cost estimates
- C. TIA Project Fact Sheet



INSET "A" DETAIL

CH2MHILL

Embassy Row
6600 Peachtree Dunwoody Road
Building 400 - Suite 600
Atlanta, GA 30328
770-604-9095

REVISION DATES

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STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

RIVERWATCH PKWY MEDIAN PROJECT

ATTACHMENT A
TYPICAL SECTION

DRAWING No.

Attachment B
Riverwatch Parkway Median Improvement Project
Conceptual Construction Cost Estimate
P.I. Number: 232020

| <u>Description</u> | <u>Quantity</u> | <u>Unit</u> | <u>Unit Cost*</u> | <u>Total Cost</u> |
|---|-----------------|-------------|-------------------|------------------------|
| Traffic Control - Conceptual | 1 | LS | \$ 509,247.30 | \$ 509,247.30 |
| Erosion Control - Conceptual | 1 | LS | \$ 101,849.46 | \$ 101,849.46 |
| 10" Graded Aggregate Base | 15313 | SY | \$ 20.68 | \$ 316,682.03 |
| Recycled Asph. Conc. 12.5mm Superpave, GP2 Only, incl. bit matl & h lime (1.5") | 1263 | TN | \$ 89.03 | \$ 112,476.87 |
| Recycled Asph. Conc. 19mm Superpave, GP1 or 2, incl. bit matl & h lime (2") | 1684 | TN | \$ 103.38 | \$ 174,141.43 |
| Recycled Asph. Conc. 25mm Superpave, GP1 or 2, incl. bit matl & h lime (4") | 3369 | TN | \$ 80.01 | \$ 269,550.31 |
| Remove Roadway Slab | 4907 | SY | \$ 33.06 | \$ 162,227.95 |
| Remove Guardrail | 18930 | LF | \$ 5.03 | \$ 95,217.90 |
| Concrete Barrier, Type 20 & Colorado F-Shape | 16316 | LF | \$ 75.00 | \$ 1,223,697.75 |
| Highway Signs, TP 1 Matl, Refl Sheeting, TP 9 | 61 | SF | \$ 19.24 | \$ 1,173.64 |
| Highway Signs, TP 2 Matl, Refl Sheeting, TP 9 | 48 | SF | \$ 34.35 | \$ 1,648.80 |
| Guardrail Anchorage, TP 9 | 40 | EA | \$ 2,000.00 | \$ 80,000.00 |
| Lighting Std, SPCL Design (35 FT MH, Dual 6 FT Arms) | 159 | EA | \$ 11,000.00 | \$ 1,749,000.00 |
| Luminaire, TP 3, 200 W, HP Sodium | 318 | EA | \$ 877.75 | \$ 279,124.50 |
| Cable, TP RHH/RHW, AWG NO 2 | 57100 | LF | \$ 2.93 | \$ 167,303.00 |
| Conduit, Nonmetal, TP 2, 2 IN | 400 | LF | \$ 7.21 | \$ 2,884.00 |
| Conduit, Nonmetal, TP 2 - Power Service, 2 IN | 57100 | LF | \$ 6.28 | \$ 358,588.00 |
| Electrical Power Service Assembly (Aerial Service Point) | 1 | EA | \$ 4,774.00 | \$ 4,774.00 |
| Main Service Pick Up Point | 1 | LS | \$ 13,043.00 | \$ 13,043.00 |
| SVC Pole Riser | 1 | EA | \$ 6,170.00 | \$ 6,170.00 |
| Electrical Junction Box | 5 | EA | \$ 2,337.50 | \$ 11,687.50 |
| Directional Bore | 100 | LF | \$ 14.17 | \$ 1,417.00 |
| Pole Cable Distribution System, Wall Mount | 159 | EA | \$ 387.83 | \$ 61,664.97 |
| Subtotal: | | | | \$ 5,703,569.41 |
| 10% Contingency: | | | | \$ 570,356.94 |
| CEI: | | | | \$ 435,044.23 |
| Total: | | | | \$ 6,708,970.58 |

* Unit cost values were derived from 2013-2014 GDOT Item Mean Summary

Attachment C Project Sheet

Project Number: RC07-000120 **Project Name:** Improvements to SR 104 / Riverwatch Parkway Median Barrier – Jones Street to I-20

GDOT ID: 232020-

Project Description: Construct median barrier from I-20 to Jones Street.

Regional Commission: Central Savannah River Area

County: Richmond County

| Phase | Total Project Cost | Total TIA Amount | Comments (Please note all cost estimates are in 2011 dollars and actual costs for all phases at year of expenditure will be higher): |
|--------------|--------------------|--------------------|--|
| CST | \$8,600,000 | \$8,600,000 | |
| Total | \$8,600,000 | \$8,600,000 | |

| Public Benefit | Notes |
|------------------------------|--|
| Ensuring Safety and Security | This project would benefit the public by potentially reducing the incidence of crashes along this roadway segment, corridor, and/or intersection. |
| Additional Benefits | This project would benefit the public by enhancing safety by replacing worn / damaged existing median metal guardrails with concrete barriers, install storm drainage structures and install lighting along the roadway. |

Project Location

