

ORIGINAL TO GENERAL FILES

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

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

FILE P.I. #0010193

OFFICE Design Policy & Support

GDOT District 2 - Tennille
Richmond County
I-20 Additional Noise Wall

DATE April 18, 2011

FROM  for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT APPROVED CONCEPT REPORT

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

Attachment

DISTRIBUTION:

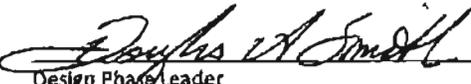
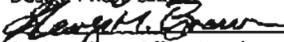
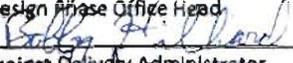
Genetha Rice-Singleton, Program Control Administrator
Bobby Hilliard, State Program Delivery Engineer
Cindy VanDyke, State Transportation Planning Administrator
Angela Robinson, Financial Management Administrator
Glenn Bowman, State Environmental Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Georgene Geary, State Materials & Research Engineer
Ron Wishon, State Project Review Engineer
Jeff Baker, State Utilities Engineer
Ken Thompson, Statewide Location Bureau Chief
Jimmy Smith, District Engineer
George Brewer, District Preconstruction Engineer
Jamie Lindsey, Acting District Utilities Engineer
David Moyer, Project Manager
BOARD MEMBER - 10th Congressional District

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA PROJECT CONCEPT REPORT

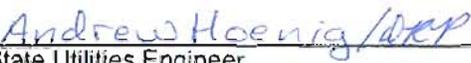
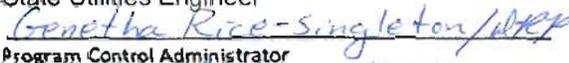
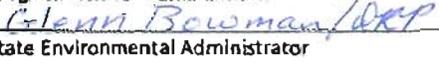
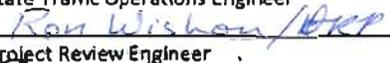
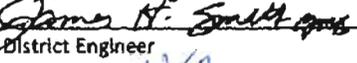
Project Number: 0010193
County: Richmond
P. I. Number: 0010193
Federal Route Number(s): Interstate 20
State Route Number(s): 402

Extension of an existing sound wall along I-20 westbound just West of Washington Road

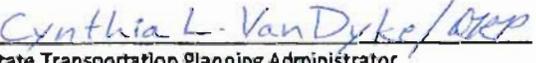
Submitted for approval:

DATE <u>3/13/2011</u>	 _____ Design Phase Leader
DATE <u>3/4/2011</u>	 _____ Design Phase Office Head
DATE <u>3/7/2011</u>	 _____ Project Delivery Administrator
DATE <u>3/7/2011</u>	 _____ Project Manager

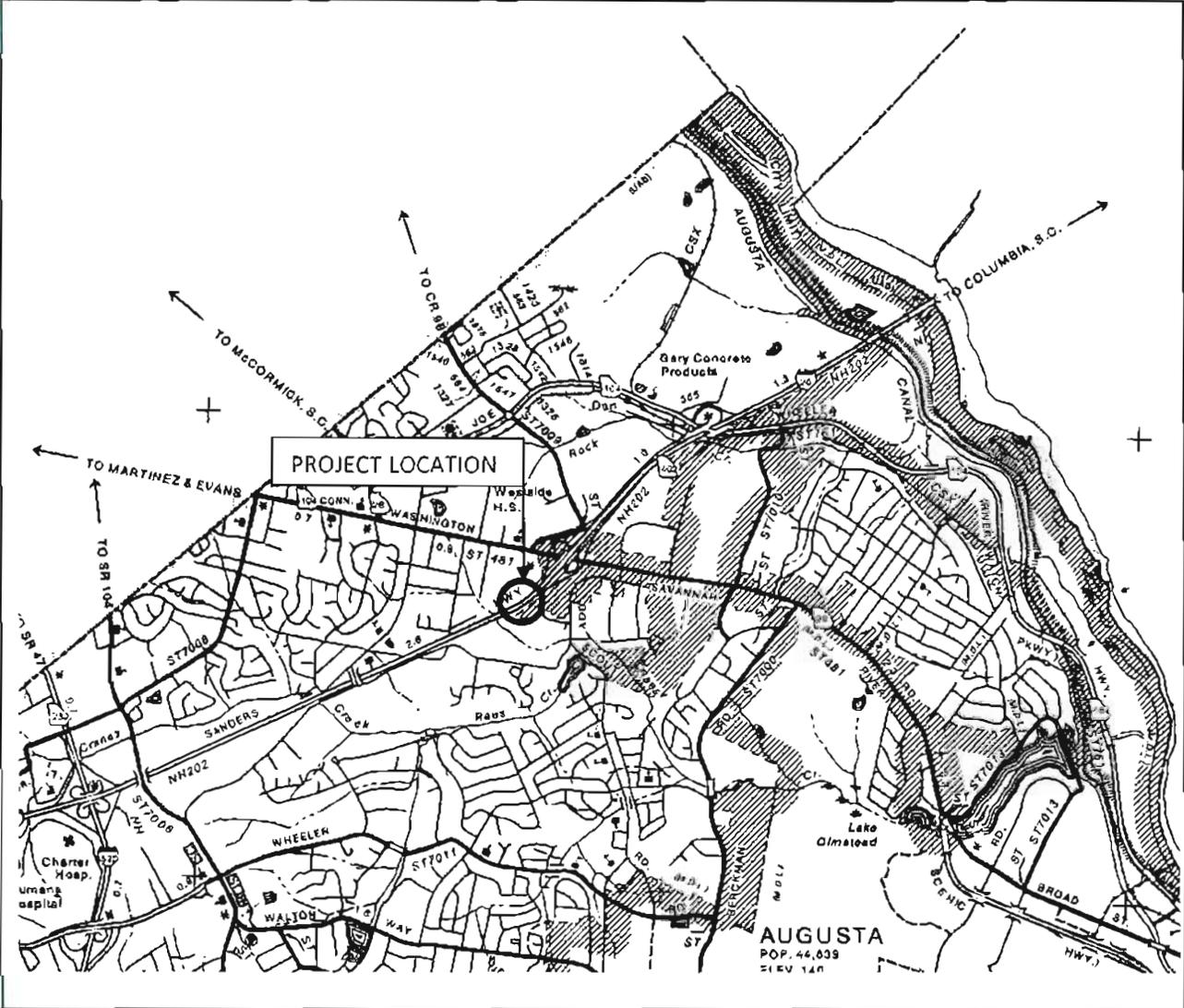
Recommendation for approval:

DATE <u>03/09/11</u>	for  _____ State Utilities Engineer
DATE <u>03/25/11</u>	 _____ Program Control Administrator
DATE <u>03/09/11</u>	 _____ State Environmental Administrator
DATE _____	_____ State Traffic Operations Engineer
DATE <u>03/11/11</u>	 _____ Project Review Engineer
DATE <u>3/4/11</u>	 _____ District Engineer
DATE <u>—</u>	<u>N/A</u> _____ State Bridge Design Engineer (if applicable)
DATE _____	_____ State Transportation Financial Management Administrator

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

DATE <u>03/09/11</u>	 _____ State Transportation Planning Administrator
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Project Concept Report page 2
Project Number: 0010193
P.I. Number: 0010193
County: Richmond



Project Concept Report page 3
Project Number: 0010193
P.I. Number: 0010193
County: Richmond

Need and Purpose: *Noise barrier walls along I-20 in Richmond County were installed under widening projects 210450, 210570 and 0008219 from Belair Road to Riverwatch Parkway. In a letter dated May 16, 2008 the Federal Highway Administration (FHWA) requested an updated noise impact assessment for the three projects. The updated assessment dated May 2009 reviewed the expected impacts along I-20 from Belair Road in Georgia to Martintown Road in South Carolina and identified the need for additional noise barrier. Traffic noise analysis was conducted for 628 sites along the corridor.*

The northeast quadrant of the I-520/Wrightsboro Road Interchange included Sites 08-22 to 08-24 which are included at this location. These three locations account for 27 of the 221 impacted sites. The 27 sites considered feasible and reasonable for abatement.

The proposed location consists of impacted sites that are considered feasible and reasonable for abatement and will require abatement measures in order to satisfy Department Policy 4415-11.

Description of Project: *This project consists of the extension of an existing sound barrier wall along I-20 westbound located just west of the Washington Road entrance ramp. The project will begin at approximately MP 3.74 and end at approximate MP 4.03. The existing shoulder of I-20 will be paved with asphalt for a width of 5.5-ft. to accommodate guardrail installation to protect the newly constructed wall.*

Is the project located in a PM 2.5 Non-attainment area? Yes No

Is this project located in an Ozone Non-attainment area? Yes No

PDP Classification: Major Minor

Federal Oversight: Full Exempt State Funded or Other

Functional Classification: Interstate Principle Arterial

U.S. Route Number(s): I-20 State Route Number(s): 402

Traffic (AADT):

Base Year: (2011) 79843

Design Year: (2031) 123722

Existing Design Features:

- Typical section: *The existing roadway consists of three concrete travel lanes in each direction with a 28-ft. wide flush median and concrete median barrier. The rural shoulders are 16-ft. wide with 12-ft. of them paved with concrete.*
- Posted Speed: 55 mph Minimum radius for curve: NA-ft.
- Maximum super-elevation rate for curve: NA%
- Maximum Grade: NA
- Width of right-of-way: Varies from 300-ft. to 336-ft.
- Major Structures: None
- Major Interchanges or intersections along the project: I-20 at I-520 Interchange is located approximately 1 mile to the west of this project.
- Existing length of roadway segment and the beginning mile logs for each county segment: mp 3.74 to 4.03 miles

Proposed Design Features:

- Proposed Typical Section(s): No roadway widths will be changed with this project. The existing 12-ft. paved shoulder will be widened with an additional 5.5-ft. of asphalt to accommodate guardrail installation.
- Proposed Design Speed: 70 mph
- Proposed Maximum grade Mainline: NA%
- Proposed grade allowable: NA%
- Proposed Maximum grade Side Street: NA%
- Maximum grade allowable: NA%
- Proposed Maximum grade driveway: NA%
- Proposed minimum radius of curve: NA ft.
- Minimum Radius allowable: NA ft.
- Maximum allowable super-elevation rate: NA%
- Proposed maximum super-elevation rate: NA%
- Right-Of-Way:
 - Width: All work will be accomplished within the limits of existing Right of Way
 - Easements: Temporary Permanent Utility Other
 - Type of Access control: Full Partial By Permit Other
 - Number of Parcels: 0 Number of displacements: NA
 - Business: NA
 - Residences: NA
 - Mobile homes: NA
 - Other: NA
- Structures:
 - Bridges: None
 - Retaining walls: None
- Major Intersections, interchanges, median openings and signal locations: None
- Transportation Management Plan Anticipated: Yes No
- Design Exceptions to controlling criteria anticipated:

	YES	NO	UNDETERMINED
HORIZONTAL ALIGNMENT:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LANE WIDTH:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SHOULDER WIDTH:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VERTICAL GRADE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CROSS SLOPES:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
STOPPING SIGHT DISTANCE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SUPERELEVATION RATES:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VERTICAL CLEARANCE:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BRIDGE WIDTH:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BRIDGE STRUCTURAL CAPACITY:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LATERAL OFFSET TO OBSTRUCTION:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VERTICAL ALIGNMENT:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DESIGN SPEED:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- Design Variances: *None Anticipated*
- Environmental Concerns: *This wall is being extended as part of a environmental commitment originally required by the noise study for GDOT project NH-IM-20-2(145) Richmond County.*
- Anticipated Level of Environmental Analysis:
 - Are time savings procedures appropriate: Yes No
 - A Categorical Exclusion was approved for this work with GDOT project 210570-Richmond Co. This document is being reevaluated at this time.
 - Environmental Assessment/Finding of No Significant Impacts (FONSI) anticipated
 - Environmental Impacts Statement (EIS) anticipated
- Utility Involvements:
 - Communications/Cable TV: *NA*
 - Telephone: *NA*
 - Power: *NA*
 - Gas: *Atlanta Gas Light Company*
 - Petroleum: *NA*
 - ITS: *NA*
 - Railroad(s): *NA*
- VE Study Anticipated: Yes No
- Benefit/Cost Ratio: *NA*

Project Cost Estimate and Funding Responsibilities:

	PE	ROW	UTILITY**	CST*	MITIGATION
By Whom	GDOT	GDOT	GDOT	GDOT	GDOT
\$ Amount	\$100,000.00	\$0,000.00	\$0,000.00	\$443,098.84	\$0,000.00

*CST Cost Includes: Construction, Engineering and Inspection, Fuel Cost Adjustment, and Asphalt Cement Cost Adjustment.

** There are no reimbursable utility costs due to all work being done only in existing Right of Way.

Project Activities Responsibilities:

- Design: GDOT - District Two Road Design
- Right-of-Way Acquisition: NA
- Right-of-Way funding (real property): NA
- Relocation of Utilities: AGL – No conflicts anticipated
- Letting to Contract: GDOT - Construction Bidding Administration
- Supervision of construction: GDOT - Augusta Area Engineer's Office
- Providing material pits: In Contract
- Providing Detours: NA
- Environmental Studies/Documents/Permits: GDOT - Office of Environmental Services
- Environmental Mitigation: NA

Project Concept Report page 6
Project Number: 0010193
P.I. Number: 0010193
County: Richmond

Coordination:

- Initial Concept Meeting Date and brief summary: *Not Required*
- Concept meeting date and brief summary: *Not Required*
- P.A.R. meetings, dates, and results: *Not Required*
- Public Involvement: *Not Required*
- Local Government comments: *None*
- Other Projects in area: *GDOT project NH-IM-20-1(145) Richmond County (Recently constructed)*
- Railroads: *Not Required*
- Other coordination to date: *None*

Scheduling – Responsible Parties’ Estimate:

- | | | |
|---|--------------------|------------------|
| • Time to complete the environmental process | Begin: [4/15/2011] | End: [4/15/2011] |
| • Time to complete preliminary plans: | Begin: [4/15/2011] | End: [4/15/2011] |
| • Time to complete right-of-way plans: | Begin: [NA] | End: [NA] |
| • Time to complete the Section 404 Permit: | Begin: [NA] | End: [NA] |
| • Time to complete the final construction plans: | Begin: [4/15/2011] | End: [4/15/2011] |
| • Time to complete the purchase of the right-of-way: | Begin: [NA] | End: [NA] |
| • List other major items that will affect the project schedule: | Begin: [NA] | End: [NA] |

Footnote: The environmental document for this project was approved, and a re-evaluation is scheduled to be completed on 4/15/2011.

Other Alternatives Considered:

No-Build Alternative – This project is being proposed to fulfill an environmental commitment originally designated by GDOT project NH-IM-20-1(145) Richmond County. The only other alternative is No-Build which would not provide noise protection where the noise study has indicated the need.

Comments:

Attachments:

1. *Detailed Cost Estimates including:*
 - a. *Construction including Engineering and Inspection*
 - b. *Completed Fuel & Asphalt Price Adjustment forms*
2. *Typical Section*

Concur: 
Director of Engineering

Approve: 
Chief Engineer

Date: 4-14-11

JOB NUMB 0010193_MS

FED/STATE PROJECT NUMBER:

SPEC YEAI01

ENGINEERING AND INSPECTION:

DESCRIPTI INTERSTATE 20/S.R. 402 SOUND WALL INSTALLATION

ITEMS FOR JOB 0010193_MS

0010 - ROADWAY

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0005	150-1000	1.000	LS	\$39,350.00	TRAFFIC CONTROL - 0010193	\$39,350.00
0010	210-0100	1.000	LS	\$54,450.00	GRADING COMPLETE - 0010193	\$54,450.00
0015	310-1101	120.000	TN	\$43.20	GR AGGR BASE CRS, INCL MATL	\$5,184.00
0035	441-5002	600.000	LF	\$12.87	CONC HEADER CURB, 6", TP 2 6 IN	\$7,722.51
0040	444-1000	500.000	LF	\$3.51	SAWED JTS IN EXIST PVMTS - PCC	\$1,755.11
0045	500-3200	104.000	CY	\$419.28	CL B CONC	\$43,604.87
0050	511-1000	60.000	LB	\$1.03	BAR REINF STEEL	\$61.77
0060	603-6006	3.000	SY	\$132.02	SAND-CEMENT BAG RIP RAP, 6 IN	\$396.06
0065	610-1075	2.000	EA	\$1,350.00	REM GUARDRAIL ANCH, ALL TYPES	\$2,700.00
0070	624-0400	13400.000	SF	\$18.20	SOUND BARRIER, TYPE- C	\$243,918.86
0075	641-1200	595.000	LF	\$16.33	GUARDRAIL, TP W	\$9,715.15
0074	643-8200	130.000	LF	\$1.94	BARRIER FENCE (ORANGE), 4 FT	\$252.21
Total for ROADWAY						\$409,110.54

0020 - EROSION CONTROL

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0080	700-6910	1,000	AC	\$840.62	PERMANENT GRASSING	\$840.62
0085	700-7000	3,000	TN	\$65.52	AGRICULTURAL LIME	\$196.57
0090	700-7010	3,000	GL	\$21.37	LIQUID LIME	\$64.10
0095	700-8000	2,000	TN	\$479.14	FERTILIZER MIXED GRADE	\$958.29
0100	700-8100	94,000	LB	\$3.02	FERTILIZER NITROGEN CONTENT	\$284.13
Total for EROSION CONTROL						\$2,343.71

0030 - TEMP EROSION CONTROL

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0105	163-0232	3,000	AC	\$372.03	TEMPORARY GRASSING	\$1,116.08
0110	163-0240	17,000	TN	\$311.74	MULCH	\$5,299.61
0115	163-0300	1,000	EA	\$1,243.94	CONSTRUCTION EXIT	\$1,243.94
0119	163-0530	260,000	LF	\$3.81	CONSTR AND REMOVE BALED STRW EROSION CHK	\$991.01
0120	165-0030	1100,000	LF	\$0.81	MAINT OF TEMP SILT FENCE, TP C	\$894.17
0124	165-0071	130,000	LF	\$1.33	MAINT OF SEDIMENT BARRIER - BALED STRAW	\$173.34
0125	165-0101	1,000	EA	\$397.12	MAINT OF CONST EXIT	\$397.12
0130	167-1000	1,000	EA	\$734.25	WATER QUALITY MONITORING AND SAMPLING	\$734.25
0135	167-1500	9,000	MO	\$933.23	WATER QUALITY INSPECTIONS	\$8,399.07
0140	171-0030	2200,000	LF	\$3.25	TEMPORARY SILT FENCE, TYPE C	\$7,159.02
Total for TEMP EROSION CONTROL						\$26,407.61

0040 - SIGNING AND MARKING

LINE	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0145	610-9001	1.000	EA	\$170.00	REM SIGN	\$170.00
0150	610-9001	1.000	EA	\$170.00	REM SIGN	\$170.00
0155	610-9001	1.000	EA	\$170.00	REM SIGN	\$170.00
0160	611-5551	1.000	EA	\$340.00	RESET SIGN	\$340.00
0165	611-5551	1.000	EA	\$340.00	RESET SIGN	\$340.00
0170	611-5551	1.000	EA	\$340.00	RESET SIGN	\$340.00
Total for SIGNING AND MARKING						\$1,530.00

GRAND TOTAL FOR JOB 0010193_MS \$439,391.86

TOTALS FOR JOB 0010193_MS

ESTIMATED COST:	\$439,391.86
CONTINGENCY PERCENT (5.0):	\$21,969.59
ENGINEERING AND INSPECTION (5.0):	\$21,969.59
ESTIMATED TOTAL:	\$439,391.86

P.I. Number 10193

County Richmond

Date 3/28/2011

Project Number 10193

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

ENTER FPL DIESEL	3.254
ENTER FPM DIESEL	7.322

ENTER FPL UNLEADED	2.99
ENTER FPM UNLEADED	6.7275

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

INCREASE ADJUSTMENT
125.00%

INCREASE ADJUSTMENT
125.00%

ROADWAY ITEMS	QUANTITY	DIESEL FACTOR	GALLONS DIESEL	UNLEADED FACTOR	GALLONS UNLEADED	REMARKS
Excavations paid as specified by Sections 205 (CUBIC YARD)		0.29		0.15		
Excavations paid as specified by Sections 206 (CUBIC YARD)		0.29		0.15		
GAB paid as specified by the ton under Section 310 (TON)	120.000	0.29	34.80	0.24	28.80	
Hot Mix Asphalt paid as specified by the ton under Sections 400 (TON)		2.90		0.71		
Hot Mix Asphalt paid as specified by the ton under Sections 402 (TON)	84.000	2.90	243.60	0.71	59.64	
PCC Pavement paid as specified by the square yard under Section 430 (SY)		0.25		0.20		

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

BRIDGE ITEMS	Quantity	Unit Price	QF/1000	Diesel Factor	Gallons Diesel	Unleaded Factor	Gallons Unleaded	REMARKS
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Stru Steel Plan Quantity (LB) Section 501				8.00		1.50	
Stru Steel Plan Quantity (LB) Section 501				8.00		1.50	
PSC Beams_____(LF) Section 507				8.00		1.50	
PSC Beams_____(LF) Section 507				8.00		1.50	
PSC Beams_____(LF) Section 507				8.00		1.50	
Stru Reinf Plan Quantity(LB) Section 511				8.00		1.50	
Stru Reinf Plan Quantity(LB) Section 511				8.00		1.50	
Bar Reinf Steel (LB) Section 511				8.00		1.50	
Piling____inch (LF) Section 520				8.00		1.50	
Piling____inch (LF) Section 520				8.00		1.50	
Piling____inch (LF) Section 520				8.00		1.50	
Piling____inch (LF) Section 520				8.00		1.50	
Piling____inch (LF) Section 520				8.00		1.50	
Piling____inch (LF) Section 520				8.00		1.50	
Drilled Caisson,____(LF) Section 524				8.00		1.50	
Drilled Caisson,____(LF) Section 524				8.00		1.50	
Drilled Caisson,____(LF) Section 524				8.00		1.50	
Pile Encasement,____(LF) Section 547				8.00		1.50	
Pile Encasement,____(LF) Section 547				8.00		1.50	
SUM QF DIESEL=		278.40		SUM QF UNLEADED=		88.44	
DIESEL PRICE ADJUSTMENT(\$)				\$1,041.80			
UNLEADED PRICE ADJUSTMENT(\$)				\$304.10			

ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)

APPLICABLE TO CONTRACTS CONTAINING THE 413 SPEC. SECTION 413.5.01 ADJUSTMENTS ASPHALT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT

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

ENTER APL

ENTER APM

125.00% **INCREASE ADJUSTMENT**

Use this side for Asphalt Emulsion Only

L.I.N.	TYPE	ASPHALT EMULSION (GALLONS)
TMT = <input style="width: 100px;" type="text"/>		
REMARKS: <input style="width: 90%; height: 20px;" type="text"/>		

Use this side for Asphalt Cement Only

L.I.N.	TYPE	TACK (GALLONS)
TMT = <input style="width: 100px;" type="text"/>		
REMARKS: <input style="width: 90%; height: 20px;" type="text"/>		

MONTHLY PRICE ADJUSTMENT(\$)

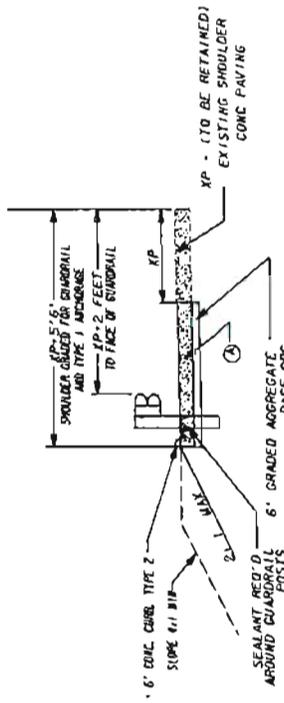
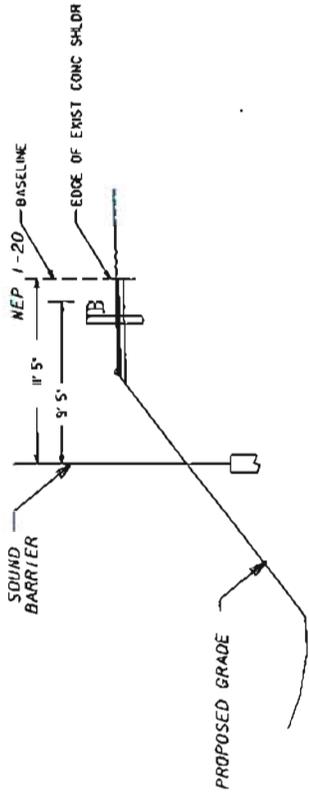
ADJUSTMENT SUMMARY

FUEL PRICE ADJUSTMENT (<i>ENGLISH 125% MAX</i>)	
DIESEL PRICE ADJUSTMENT(\$)	<u>\$1,041.80</u>
UNLEADED PRICE ADJUSTMENT(\$)	<u>\$304.10</u>
ASPHALT CEMENT PRICE ADJUSTMENT (BITUMINOUS TACK COAT 125% MAX)	<u>\$42.68</u>
400 / 402 ASPHALT CEMENT PRICE ADJUSTMENT 125% MAX	<u>\$2,318.40</u>
ASPHALT CEMENT PRICE ADJUSTMENT FOR BITUMINOUS TACK COAT(Surface Treatment 125% MAX)	

REMARKS:

TOTAL ADJUSTMENTS

\$3,706.98



SHOULDER DETAIL FOR GUARDRAIL
 SEE PLAN FOR LOCATION
 (1) CLASS B CONCRETE

SOUND BARRIER
 STA 222+97.79 TO 235+78.45 LT 1-20 (SB 1)

STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION		REVISION DATES	0010193 RICHMOND COUNTY
OFFICE: DISTRICT TWO DESIGN			
TYPICAL SECTIONS		05-001	
		NOT TO SCALE	