VALUE ENGINEERING
CONSTRUCTABILITY STUDY
OF THE

WIDENING AND RECONSTRUCTION OF US 19/ SR 3 FROM SOUTH OF CR 152/HALL ROAD

PROJECT NUMBER: EDS-19(44)

PI NUMBER: 462395

ATLANTA, GEORGIA

MAY 12, 2006

Prepared by:

VE GROUP, L.L.C.

In Association With:

Georgia Department of Transportation

VALUE ENGINEERING STUDY
TEAM LEADER

_____

William F. Ventry, P.E., C.V.S.
C.V.S. Registration No. 840603 (LIFE)

Date: _____

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I. INTRODUCTION

GENERAL

This Value Engineering report summarizes the results of the Value Engineering study performed by VE GROUP for the Georgia Department of Transportation. The study was performed on May 11, 2006.

VALUE ENGINEERING METHODOLOGY

The Value Engineering Team followed the basic Value Engineering procedure for conducting this type of analysis.

This process included the following phases:

1. Investigation
2. Speculation
3. Evaluation/Development
4. Report Preparation

I. INTRODUCTION

SUMMARY OF RECOMMENDATIONS

It is the recommendation of the Value Engineering Team that the following Value Engineering Alternatives be carried into the Project Development process for the final plans and specifications.

RECOMMENDATION NUMBER 1: CONSTRUCTABILITY

The Value Engineering Team recommends that the following Value Engineering Alternatives be implemented.

A. COLONIAL PIPELINE

Value Engineering Alternative: ***Insure that protection is provided at the two crossings of the pipeline.***

B. MEDIAN WIDTH

Value Engineering Alternative: ***Provide a design exception to use the 32' median.***

C. MEDIAN DRAINS AT BRIDGE

AFTER THE DEVELOPMENT PHASE THE VALUE ENGINEERING ALTERNATIVE – ELIMINATE SLOPE DRAINS AND CROSS DRAINS WAS DROPPED.

D. DRAINAGE CONFLICTS

Value Engineering Alternative: ***Eliminate any conflicts.***

E. SR 188/C.G. RAILROAD BRIDGE

Value Engineering Alternative: ***Use vertical abutments with MSE walls and reduce the length of the bridge.***

If this recommendation can be implemented, there is a possible savings of ***$ 321,827.***

F. BYPASS A AND B

Value Engineering Alternative: ***Eliminate the bypasses and utilize existing connections.***

If this recommendation can be implemented, there is a possible savings of ***$ 327,563.***

SUMMARY OF RECOMMENDATIONS *(continued)*

RECOMMENDATION NUMBER 2: MATERIALS

The Value Engineering Team recommends that the following Value Engineering Alternatives be implemented.

A. UNSUITABLE MATERIAL

Value Engineering Alternative: ***Remove the conflict between excavation/placement of fabric and eliminate the excavation of material between the railroad and roadway.***

If this recommendation can be implemented, there is a possible savings of ***$ 5,940.***

B. BARRIER FENCE

Value Engineering Alternative: ***Clarify bid item.***

C. CLASS 3-C EXCAVATION

Value Engineering Alternative: ***Eliminate in fill areas.***

RECOMMENDATION NUMBER 3: TRAFFIC CONTROL

The Value Engineering Team recommends that the following Value Engineering Alternatives be implemented.

A. TRAFFIC CONTROL FOR SIDE-ROAD DRAINAGE CONSTRUCTION

Value Engineering Alternative: ***Revise to insure that contractor knows what is required.***

B. RAILROAD RECONSTRUCTION

Value Engineering Alternative: ***Insure that coordination is proposed with railroad contractor.***

SUMMARY OF RECOMMENDATIONS *(continued)*

RECOMMENDATION NUMBER 4: STAGE CONSTRUCTION

The Value Engineering Team recommends that the following Value Engineering Alternatives be implemented.

A. Stage I Restriction

Value Engineering Alternative: ***Remove restriction that requires the contractor to proceed from south to north.***

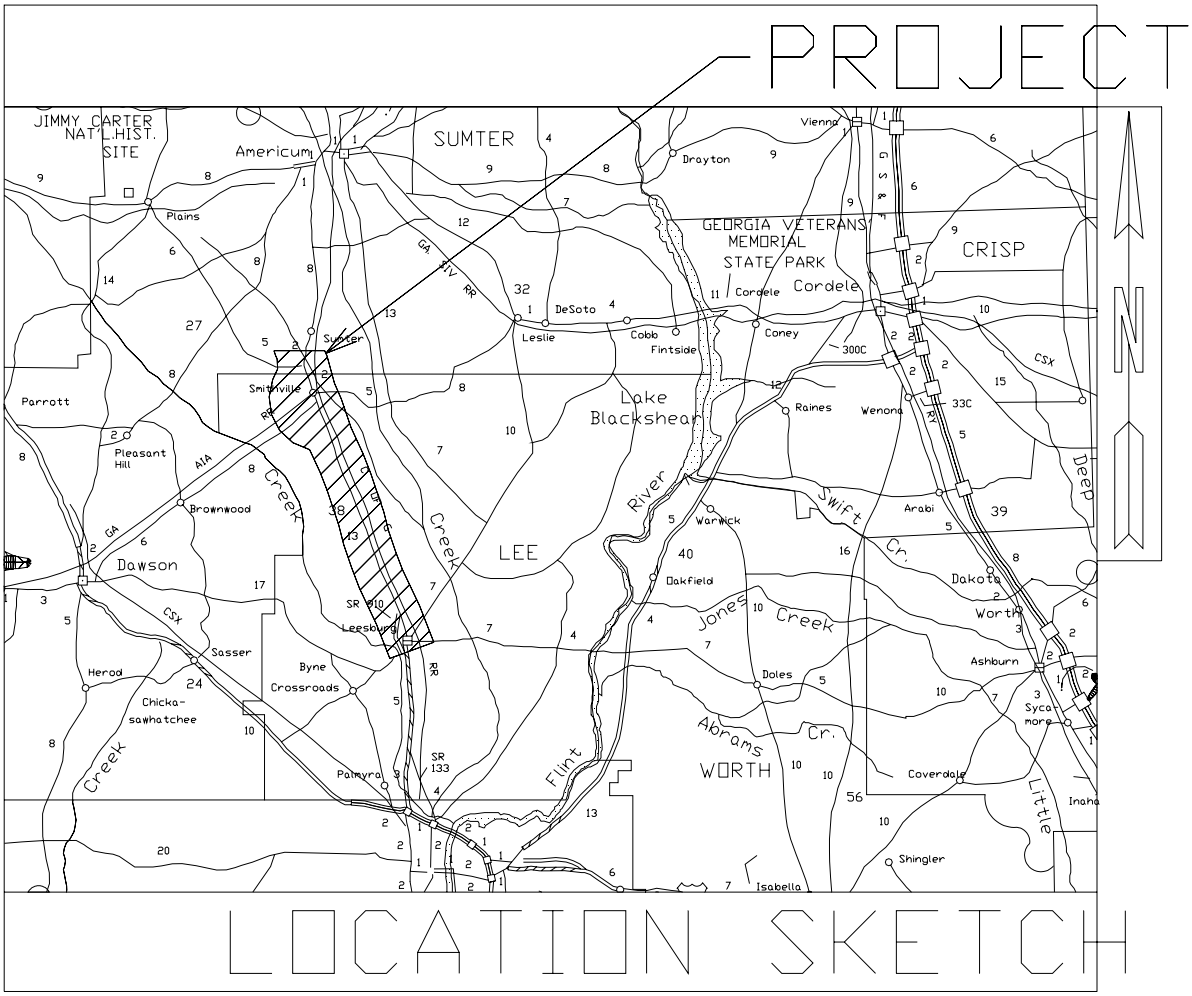
B. Pavement Marking

Value Engineering Alternative: ***Provide clarification for contractor to avoid removal of markings.***

C. Tie in at Ends of Project

Value Engineering Alternative: ***Construct sufficient amount of pavement to insure easy connection when next contract is let.***

II. LOCATION OF PROJECT



LOCATION SKETCH

III. TEAM MEMBERS AND PROJECT DESCRIPTION

TEAM MEMBERS

NAME	AFFILIATION	EXPERTISE	PHONE
William F. Ventry, P.E., C.V.S.	VE Group	Team Leader	850/627-3900
Dickey Forrester	VE Group	Construction	850-627-3900
Tom Hartley, P.E., C.V.S.	VE Group	Roadway Design/Traffic	850/627-3900
John Ledbetter, Jr., P.E., R.L.S.	VE Group	Structures	850/627-3900

PROJECT DESCRIPTION

This project consists of the widening and reconstruction of US 19/SR 3 from just south of CR 152/Hall road to approximately 1600' north of CR 41 in Sumter County for a total project length of 9.91 miles. This project will include the construction of parallel bridges over SR 118 and the Central of Georgia Railroad.

IV. INVESTIGATION PHASE

VALUE ENGINEERING STUDY BRIEFING

NAME	AFFILIATION	PHONE
William F. Ventry, P.E., C.V.S.	VE Group	850/627-3900
Dickey Forrester	VE Group	850/627-3900
Tom Hartley, P.E., C.V.S.	VE Group	850/627-3900
John Ledbetter, Jr., P.E., R.L.S.	VE Group	850/627-3900
Susan Eaton	Rochester & Associates	678/450-5137
Steve Carter	GDOT	404/651-7469
Paul Condit	GDOT	404/699-4413
Lyn Clements	GDOT	404/656-5289
Otis Clark	GDOT	404/463-6265
Nabil Raad	GDOT	404/635-8126
Lisa Meyers	GDOT	404/651-7468

STUDY RESOURCES

NAME	AFFILIATION	PHONE
Troy Paterson	GDOT	404/651-7460
David Hogue	GDOT	404/657-7460

IV. INVESTIGATION PHASE

The following areas have been identified by the Value Engineering Team as areas of focus and investigation for the Value Engineering process:

I. CONSTRUCTABILITY

- **A. COLONIAL PIPELINE**
- **B. MEDIAN WIDTH**
- **C. MEDIAN DRAINS AT BRIDGE**
- **D. DRAINAGE CONFLICTS**
- **E. SR 188/C.G. RAILROAD BRIDGE**
- **F. BYPASS A AND B**

II. MATERIALS

- **A. UNSUITABLE MATERIAL**
- **B. BARRIER FENCE**
- **C. CLASS 3-C EXCAVATION**

III. TRAFFIC CONTROL/MAINTENANCE OF TRAFFIC

- **A. TRAFFIC CONTROL FOR SIDE-ROAD DRAINAGE CONSTRUCTION**
- **B. RAILROAD RECONSTRUCTION**

IV. STAGE CONSTRUCTION

- **A. STAGE I RESTRICTION**
- **B. PAVEMENT MARKING**
- **C. TIE IN AT ENDS OF PROJECT**

V. SPECULATION/EVALUATION PHASE

A. ALTERNATIVES

Ideas were generated, utilizing the brainstorming method, for performing the functions of previously identified areas of focus and were formulated into the following alternatives during the "eliminate and combine" portion of the Speculation/Evaluation/Development Phase.

I. CONSTRUCTABILITY

A. COLONIAL PIPELINE

Value Engineering Alternative: ***Insure that protection is provided at the two crossings of the pipeline.***

B. MEDIAN WIDTH

Value Engineering Alternative: ***Provide a design exception to use the 32' median.***

C. MEDIAN DRAINS AT BRIDGE

Value Engineering Alternative: ***Eliminate slope drains and cross drains.***

D. DRAINAGE CONFLICTS

Value Engineering Alternative: ***Eliminate any conflicts.***

E. SR 188/C.G. RAILROAD BRIDGE

Value Engineering Alternative: ***Use vertical abutments with MSE walls and reduce the length of the bridge.***

F. BYPASS A AND B

Value Engineering Alternative: ***Eliminate the bypasses and utilize existing connections.***

A. ALTERNATIVES *(continued)*

II. MATERIALS

A. UNSUITABLE MATERIAL

Value Engineering Alternative: ***Remove the conflict between excavation/ placement of fabric and eliminate the excavation of material between the railroad and roadway.***

B. BARRIER FENCE

Value Engineering Alternative: ***Clarify bid item.***

C. CLASS 3-C EXCAVATION

Value Engineering Alternative: ***Eliminate in fill areas.***

III. TRAFFIC CONTROL/MAINTENANCE OF TRAFFIC

A. TRAFFIC CONTROL FOR SIDE-ROAD DRAINAGE CONSTRUCTION

Value Engineering Alternative: ***Revise to insure that contractor knows what is required.***

B. RAILROAD RECONSTRUCTION

Value Engineering Alternative: ***Insure that coordination is proposed with railroad contractor.***

IV. STAGE CONSTRUCTION

A. STAGE I RESTRICTION

Value Engineering Alternative: ***Remove restriction that requires the contractor to proceed from south to north.***

B. PAVEMENT MARKING

Value Engineering Alternative: ***Provide clarification for contractor to avoid removal of markings.***

C. TIE IN AT ENDS OF PROJECT

Value Engineering Alternative: ***Construct sufficient amount of pavement to insure easy connection when next contract is let.***

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

A. COLONIAL PIPELINE

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

B. MEDIAN WIDTH

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

C. MEDIAN DRAINS AT BRIDGE

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

D. DRAINAGE CONFLICTS

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

E. SR 188/C.G. RAILROAD BRIDGE

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

F. BYPASS A AND B

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

VI. DEVELOPMENT PHASE

II. MATERIALS

A. UNSUITABLE MATERIAL

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

B. BARRIER FENCE

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

C. CLASS 3-C EXCAVATION

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

III. TRAFFIC CONTROL

A. TRAFFIC CONTROL FOR SIDE-ROAD DRAINAGE CONSTRUCTION

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

B. RAILROAD RECONSTRUCTION

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

VI. DEVELOPMENT PHASE

IV. STAGE CONSTRUCTION

A. STAGE I RESTRICTION

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

B. PAVEMENT MARKING

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

C. TIE IN AT ENDS OF PROJECT

(1) AS PROPOSED
(2) VALUE ENGINEERING ALTERNATIVE

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

A. COLONIAL PIPELINE

1. "As Proposed"

The "as proposed" plans show two locations on the mainline of the US 19 relocation where the travel-way of US 19 passes over the existing Colonial Pipeline right-of-way.

The first crossing occurs between Station 85+00 to Station 94+00. The cross sections indicate a ditch cut along the east side of the north bound lanes that averages approximately six (6') feet in depth. This could indicate a potential conflict with the depth of the buried pipeline(s). The west side of the new location shows an approximate two (2') feet maximum ditch cut along the west side of the relocation.

The north end of the relocation passes over the pipeline(s) in a fill section. The fill section appears to average between six (6') and ten (10') feet in depth between Stations 105+00 and 111+50.

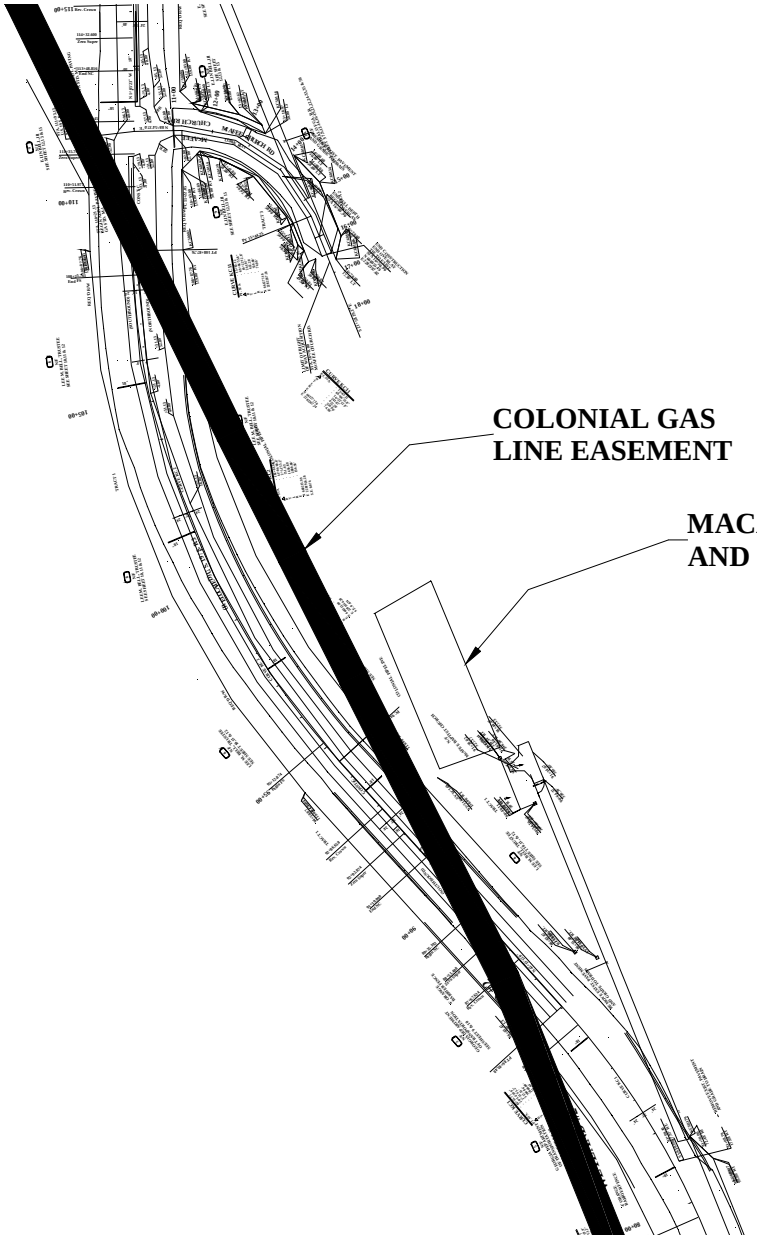
The utility agreement with Colonial Pipeline was not available for review at the time of the Value Engineering study.

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

A. COLONIAL PIPELINE

1. "As Proposed" *(continued)*



COLONIAL GAS LINE EASEMENT

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

A. COLONIAL PIPELINE

1. Value Engineering Alternative

The location, depth and number of pipelines at each crossing should be verified prior to letting the contract. If the need for relocation of the pipeline(s) at the south crossing is confirmed then a consideration for raising the profile grade may be the most cost effective method for proceeding or reduce the super-elevation rate to a minimum to reduce the depth of the ditch cut along the east side of the relocation. Colonial Pipeline should confirm that the depth of fill at the north crossing does not require encasement or a stress relief structure to support the weight of the fill section.

There is no direct way to quantify the cost savings associated with this alternative, but the benefit of not delaying the completion of the project must be considered.

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

B. MEDIAN WIDTH

1. "As Proposed"

The proposed typical sections call for a 44' Median and a 32' Median.

“As proposed” insert

“As proposed” insert

“As proposed” insert

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

B. MEDIAN WIDTH

2. Value Engineering Alternative

A Design Guidance Memo, dated January 7, 2003 from Frank L. Danchetz, P.E., Chief Engineer (Appendix A) outlines the desired typical sections for various types of highways. According to this memo, GRIP projects with a design speed greater than 50 mph require a 44'median. With this in mind, the Value Engineering Team recommends obtaining a Design Variance for the 32' median.

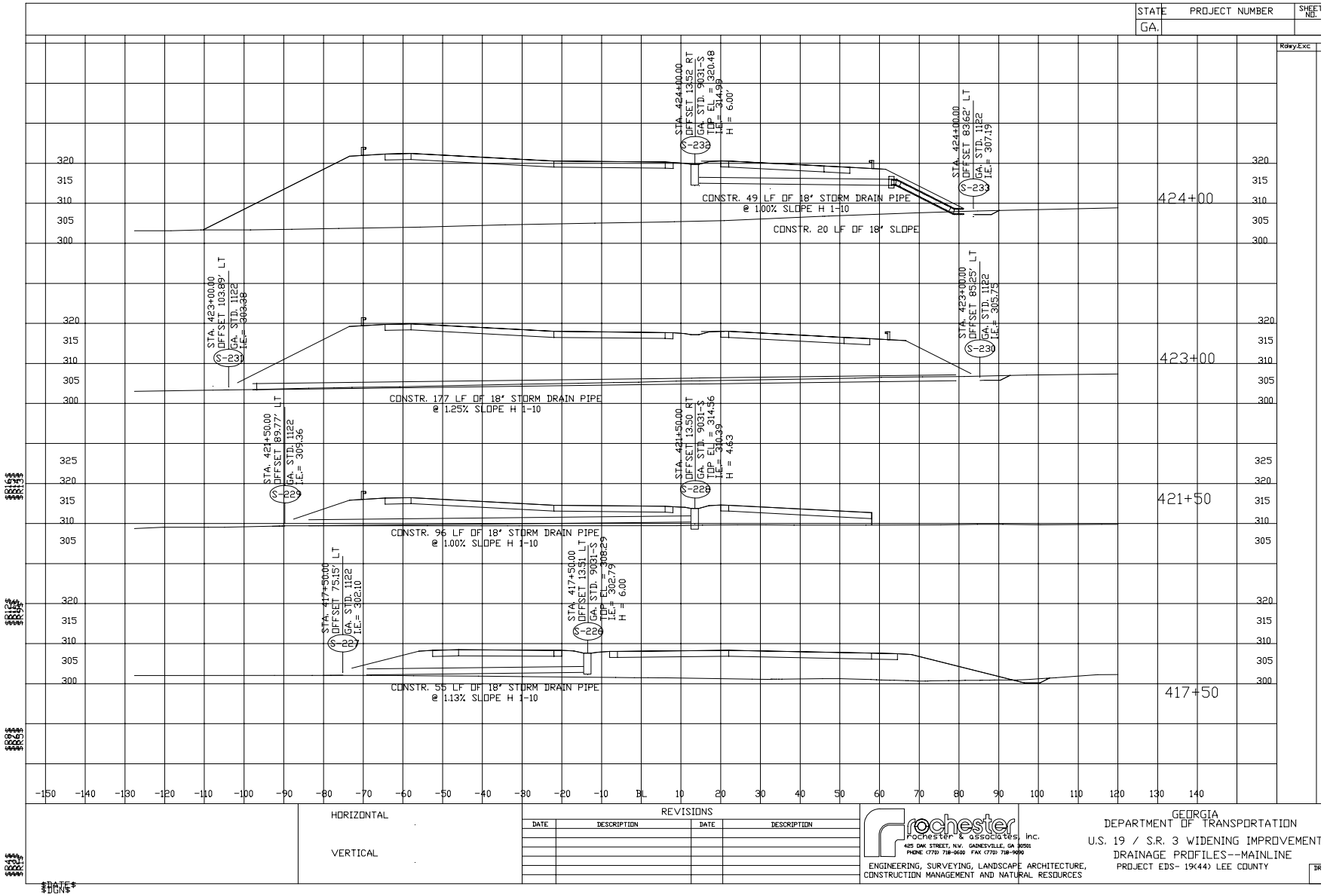
VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

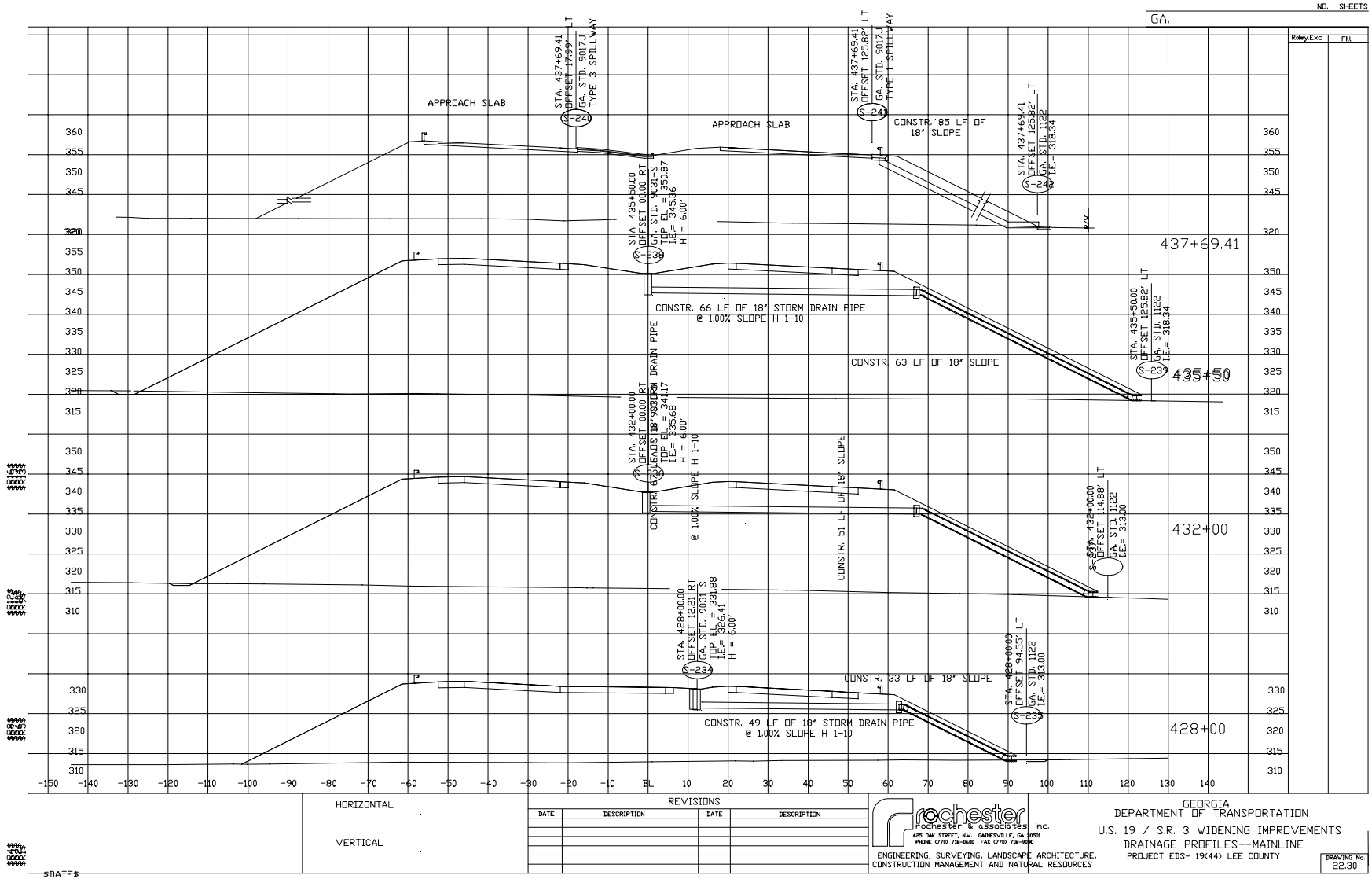
C. MEDIAN DRAINS AT BRIDGE

1. "As Proposed"

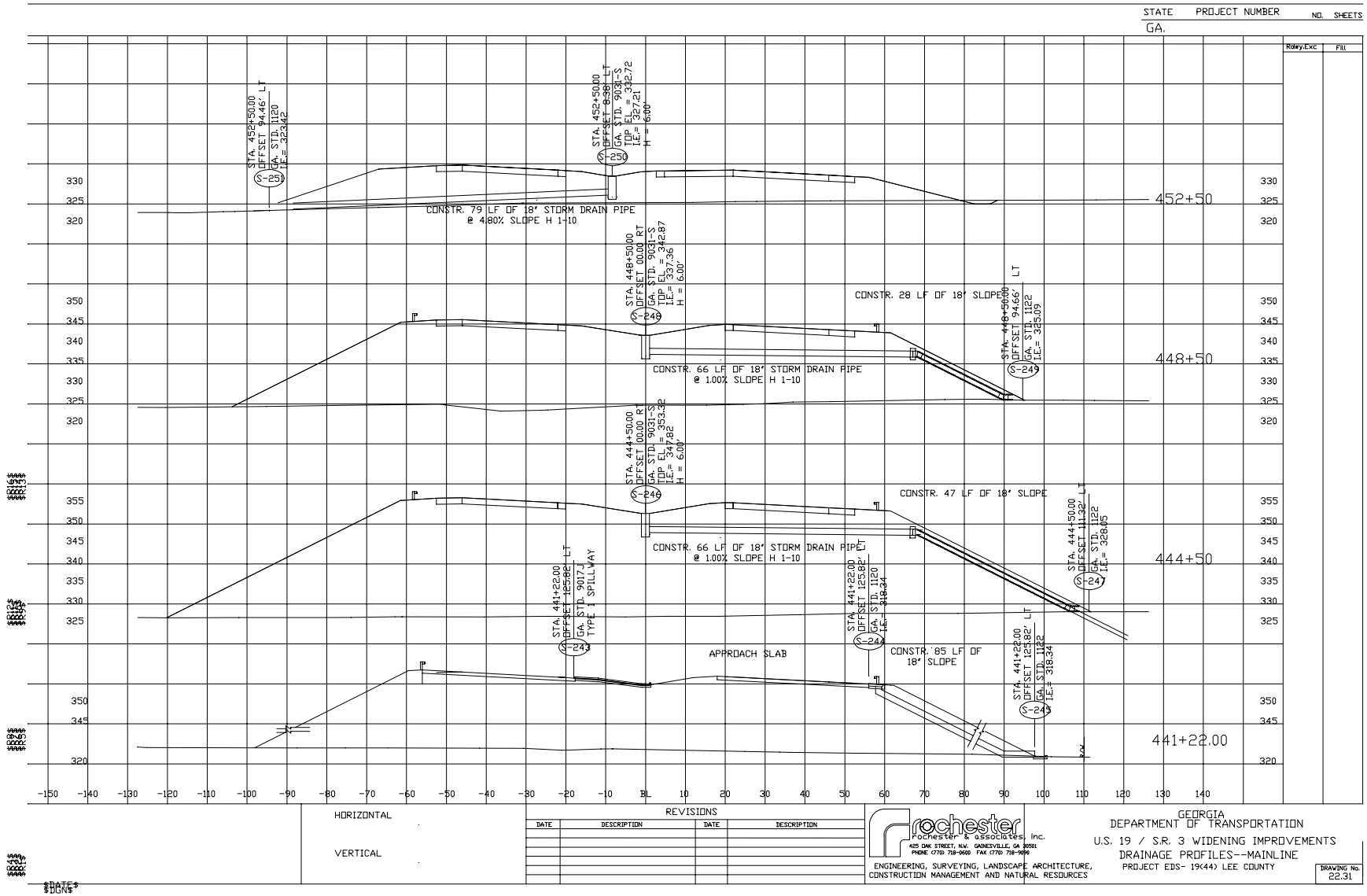
The approaches to the grade separation require slope drains to carry the water from the median to the toe of slope as shown on the following Drainage Structure Sheets.



VII. DEVELOPMENT SECTION
I. CONSTRUCTABILITY
C. MEDIAN DRAINS AT BRIDGE
1. "AS PROPOSED"



VII. DEVELOPMENT SECTION
I. CONSTRUCTABILITY
C. MEDIAN DRAINS AT BRIDGE
1. "AS PROPOSED"



VII. DEVELOPMENT SECTION
I. CONSTRUCTABILITY
C. MEDIAN DRAINS AT BRIDGE
1. "AS PROPOSED"

VI. DEVELOPMENT PHASE

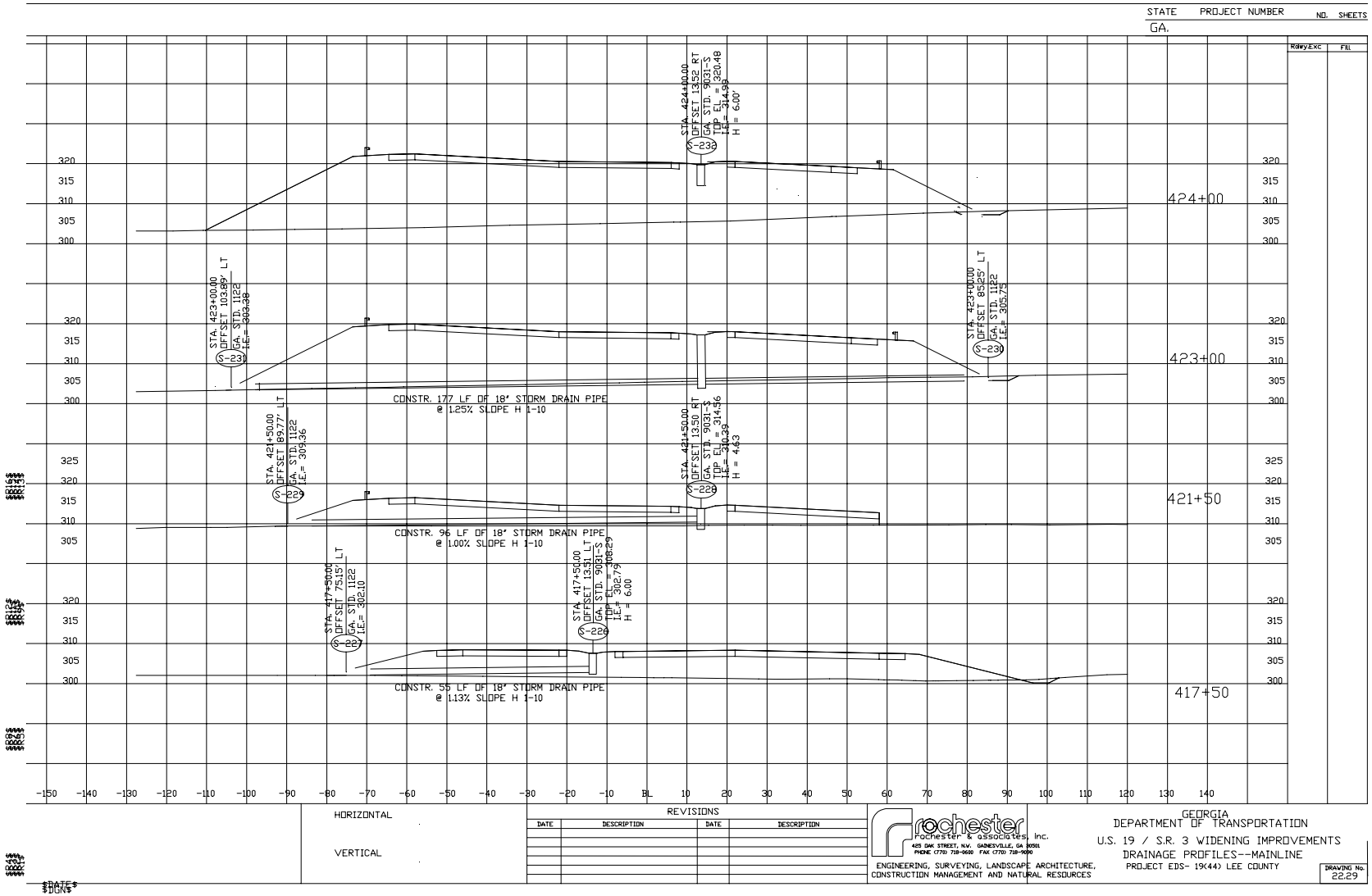
I. CONSTRUCTABILITY

C. MEDIAN DRAINS AT BRIDGE

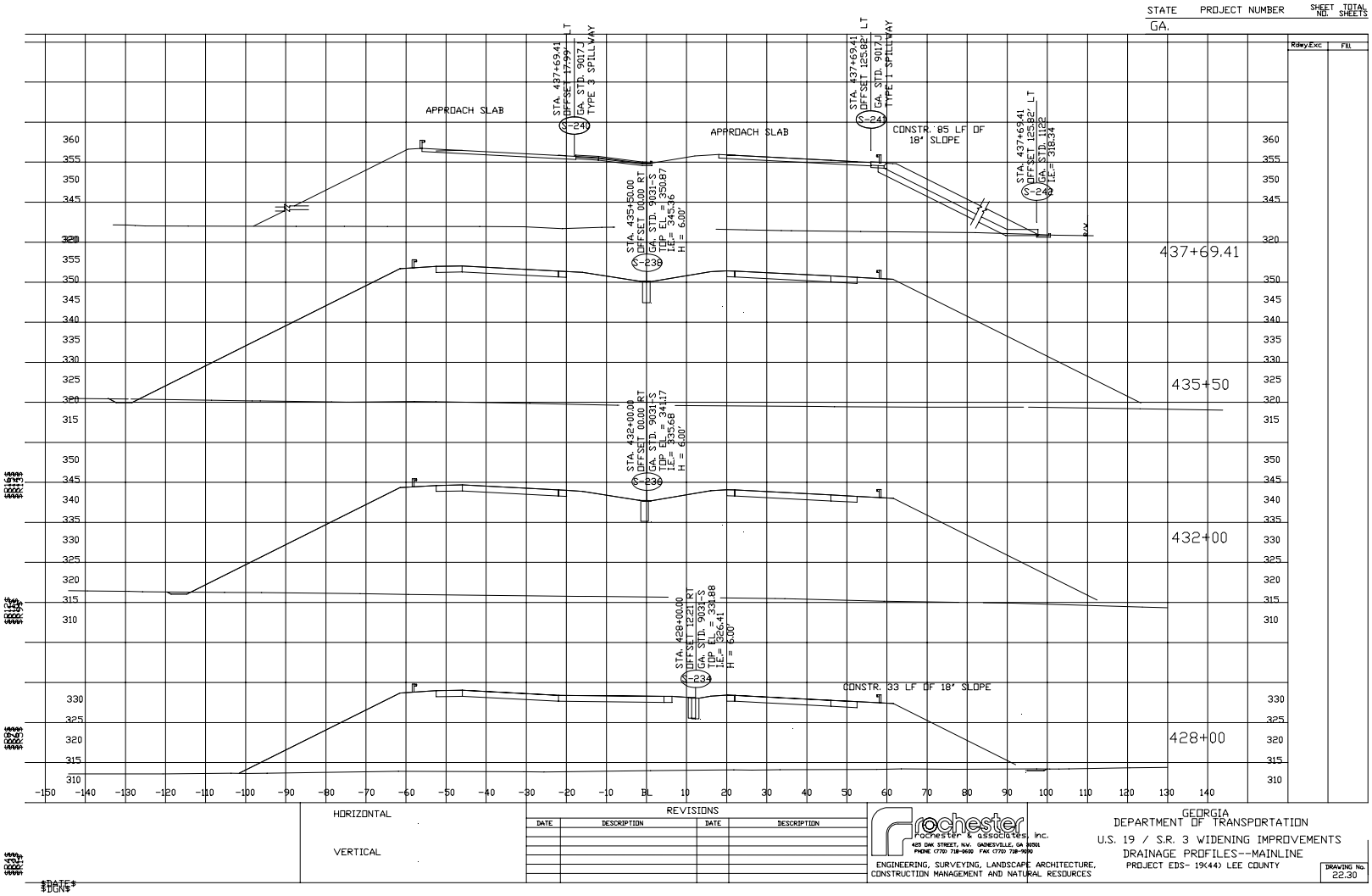
2. Value Engineering Alternative

The Value Engineering Team evaluated using Slope Drain as a trunk line in the median to carry the storm water from the bridge to the bottom of the grade. This Alternative would require the addition of a 13' deep inlet box at STA 423+00 and the removal of all the cross drains, slope drains and Safety End Section, as shown on the following sheets.

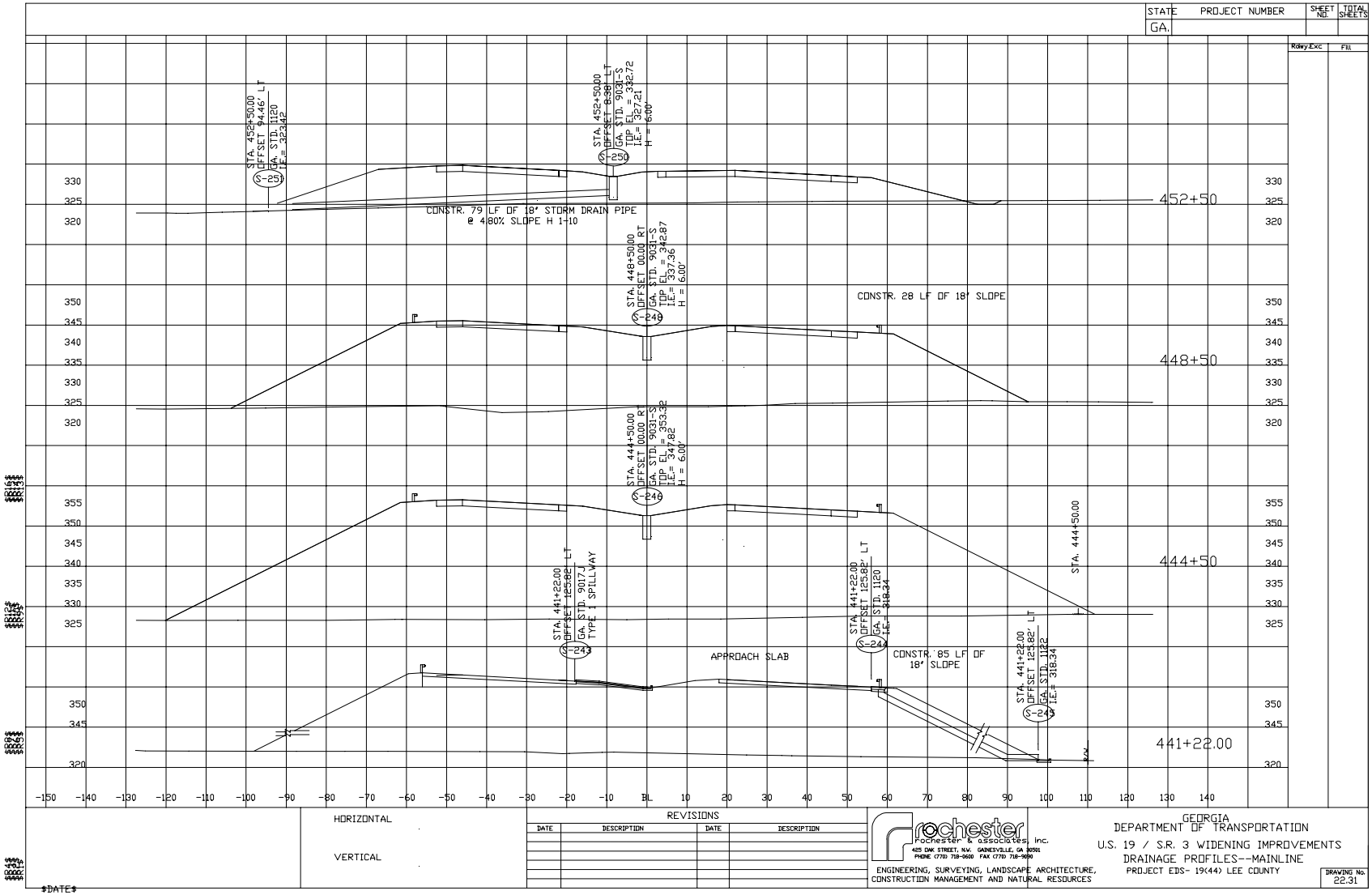
THIS ALTERNATIVE WAS FOUND TO BE ECONOMICALLY UNDESIRABLE AND IS DROPPED FROM FURTHER CONSIDERATION.



VII. DEVELOPMENT SECTION
I. CONSTRUCTABILITY
C. MEDIAN DRAINS AT BRIDGE
2. VALUE ENGINEERING ALTERNATIVE



VII. DEVELOPMENT SECTION
I. CONSTRUCTABILITY
C. MEDIAN DRAINS AT BRIDGE
2. VALUE ENGINEERING ALTERNATIVE



VII. DEVELOPMENT SECTION
I. CONSTRUCTABILITY
C. MEDIAN DRAINS AT BRIDGE
2. VALUE ENGINEERING ALTERNATIVE

I. CONSTRUCTABILITY
C. MEDIAN DRAINS AT BRIDGE
VALUE ENGINEERING ALTERNATIVE
COST COMPARISON SHEET

DESCRIPTION	UNITS	UNIT COST	PROP'D QTY.	PROP'D COST	V.E. QTY.	V.E. COST
18" STORM DRAIN PIPE	LF	$25.71	363.0	$9,333	0.0	$0
18" SLOPE DRAIN	LF	$20.68	223.0	$4,612	2,096	$43,345
SAFETY END SECTION 18"	EA	$697.79	6.0	$4,187	0.0	$0
DROP INLET, GP 1	EA	$1,448.00	0.0	$0	1.0	$1,448
DROP INLET, GP 1, ADDITIONAL DEPTH	LF	$179.61	0.0	$0	7.0	$1,257
SUBTOTAL				**$18,132**		**$46,050**
MOBILIZATION (THIS IS SUB+CONTIN. x %=)	0.0%			$0		$0
TRAFFIC CONTROL/MOT	0.4%			$76		$184
ENGINEERING AND CONTINGENCY	10%			$1,813		$4,605
GRAND TOTAL				**$20,021**		**$50,839**

POSSIBLE COST INCREASE: $30,818

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

D. DRAINAGE CONFLICTS

1. "As Proposed"

1. At Station 261+47.72 the plans and the summary of quantities show the use of a double line of eighteen (18") inch diameter crossdrain pipes. The drainage plans, Sheet #129, indicate the requirement of a double run of twenty-four (24") inch diameter pipes.

2. At Station 328+84.36 the roadway plans and the drainage plans indicate a new twenty-four (24") inch diameter crossdrain pipe flowing into an existing fifteen (15") inch diameter pipe that is located beneath the existing railroad tracks.

3. At Station 383+00 the roadway plans indicate the installation of a triple line of twenty-four (24") inch diameter pipes. The summary of quantities and the drainage plans on Sheet # 138 indicate only a single line of twenty-four (24") inch diameter pipe to be installed as a crossdrain.

4. At Station 486+00 the roadway plans indicate the installation of a double line of forty-eight (48") inch diameter pipes. The summary of quantities and the drainage plans on Sheet #146 indicate only a single line of forty-eight (48") inch diameter pipe to be installed as a crossdrain.

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

D. DRAINAGE CONFLICTS

2. Value Engineering Alternative

1. At Stations 261+47, 383+00 and 486+00 a drainage review needs to be performed to determine the correct drainage areas and the required number of pipes that need to be placed to meet the design requirements. If it is determined that double or triple lines of pipes are required, then consideration should be given to the construction of box culverts at these locations to reduce the cost of the drainage structures. The expense of the safety end sections and the slope paving between the safety end sections on double and triple lines of pipes could be reduced by the use of box culverts at these locations.

2. At Station 328+84 a drainage review needs of be performed to determine if there is a need for a new twenty-four (24”) inch diameter crossdrain pipe to be flowing into an existing fifteen (15”) inch diameter storm drain pipe that passes beneath the existing railroad tracks at this location. There appears to be the potential for storm water runoff to pond off the right-of-way onto private property or the potential for scour of the railroad’s pipe inlet and outlet due to the increased velocity of the storm water as the volume of water from the twenty-four (24”) inch pipe tries to pass through the fifteen (15”) inch pipe. This may be a location where a jack and bore may be required beneath the existing tracks for additional capacity, in which case this jack and bore operation will need to be added to the contract, or the pipes on the US 19 right-of-way may need to be reduced in size to match the existing fifteen pipe beneath the railroad. Only a drainage review can determine the proper actions to take at this location.

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

E. SR 188/C.G. RAILROAD BRIDGE

1. "As Proposed"

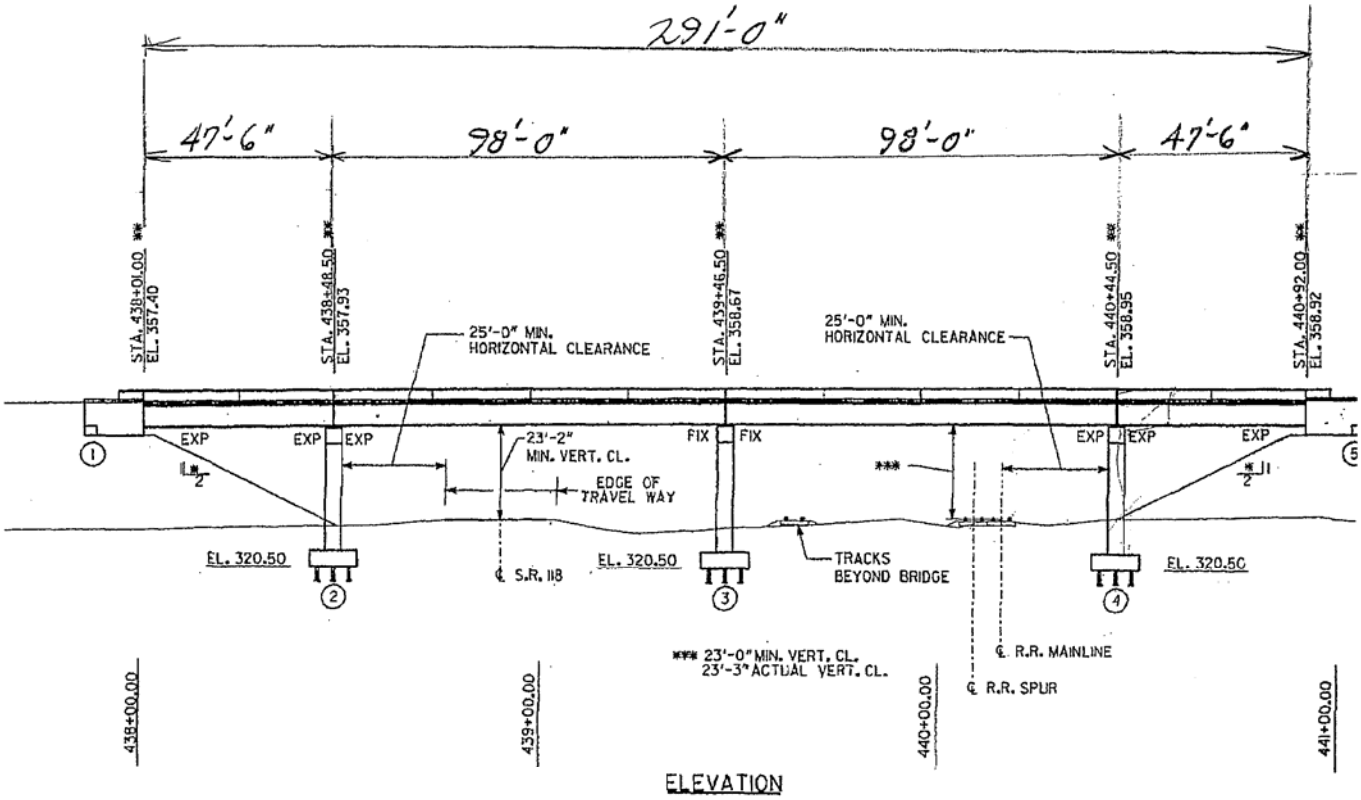
The as proposed design consists of dual bridges 291' in length and 41' in width. There are 4 spans at 47.5', 98', 98', and 47.5'. The superstructure is composed of 54" Bulb Tee beams in the center spans, and AASHTO Type II girders in the end spans with a Bulb Tee fascia beam. The abutments are spill through type on a 2:1 end slope. Span 2 is over SR 118 while span 3 is over the railroad with 23'-3" vertical clearance. The 3 interior bents for both bridges are post and beam on a pile footing.

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

E. SR 188/C.G. RAILROAD BRIDGE

1. "As Proposed"



VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

E. SR 188/C.G. RAILROAD BRIDGE

2. Value Engineering Alternative

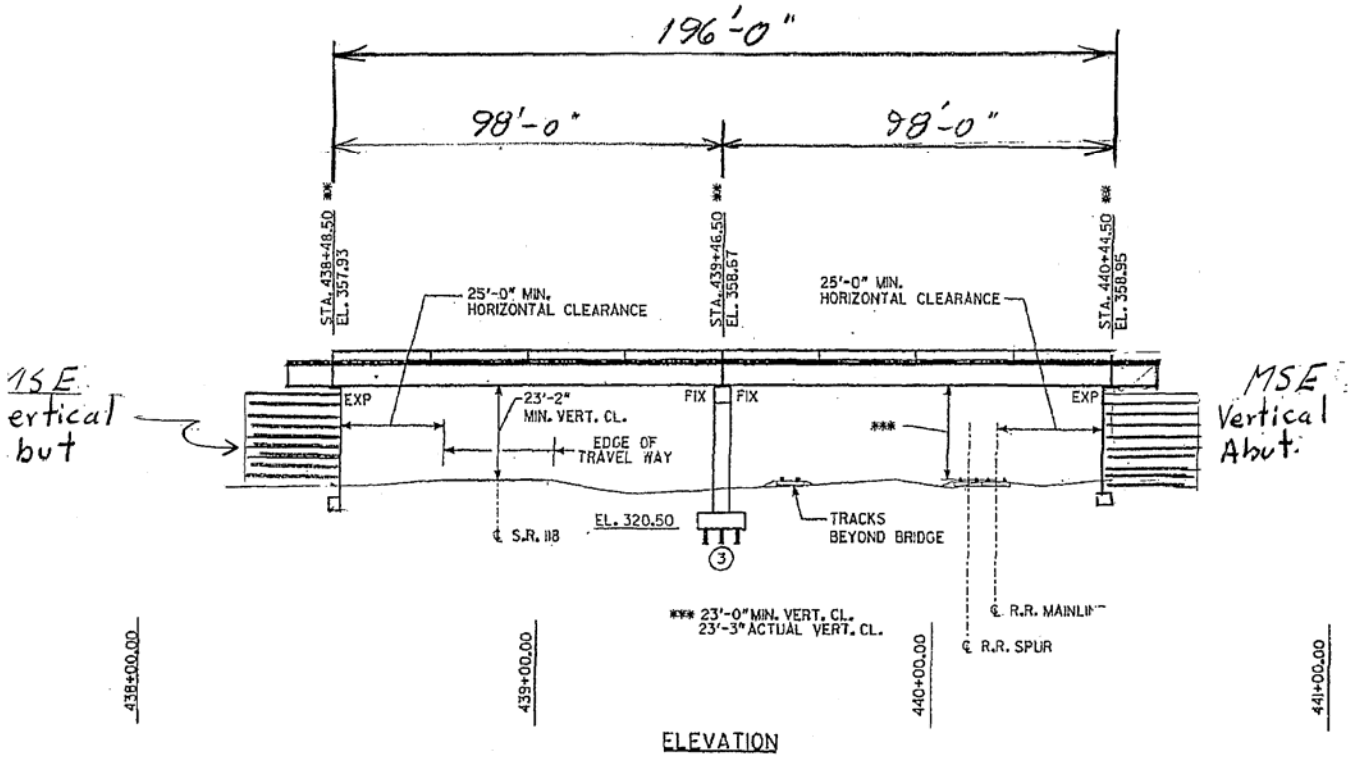
The Value Engineering Alternative consists of dual bridges 196’ in length and 41’ in width. The bridge has been shortened by using MSE vertical abutments, and two 98’ spans with 54” Bulb Tee beams. The 25’ minimum horizontal clearance between the railroad main line and the nearest foundation element has been maintained as well as the 23’ vertical clearance.

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

E. SR 188/C.G. RAILROAD BRIDGE

2. Value Engineering Alternative



I. CONSTRUCTABILITY
E. SR 188/C.G. RAILROAD BRIDGE
VALUE ENGINEERING ALTERNATIVE
COST COMPARISON SHEET

DESCRIPTION	UNITS	UNIT COST	PROP'D QTY.	PROP'D COST	V.E. QTY.	V.E. COST
DUAL BRIDGES ON US 19 OVER SR 118 AND CENTRAL GEORGIA RR	SF	$89.00	24,000	$2,136,000	16,170	$1,439,130
NORTH MSE VERTICAL ABUTMENTS	SF	$50.00	0.0	$0	3,726	$186,300
SOUTH MSE VERTICAL ABUTMENTS	SF	$50.00	0.0	$0	3,726	$186,300
BASE AND PAVEMENT	SY	$50.00	0.0	$0	634	$31,700
SUBTOTAL				**$2,136,000**		**$1,843,430**
ENGINEERING AND CONTINGENCY	10%			$213,600		$184,343
GRAND TOTAL				**$2,349,600**		**$2,027,773**

POSSIBLE SAVINGS: $321,827

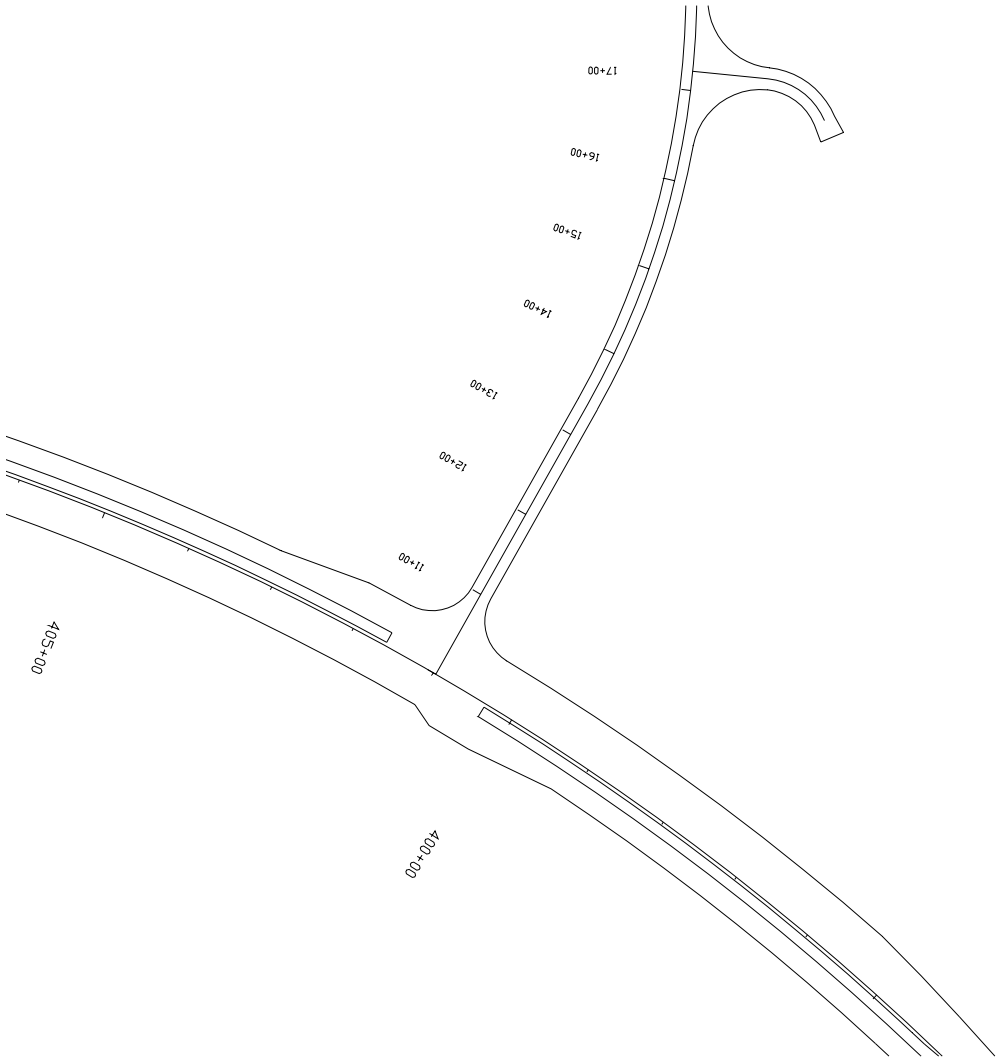
VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

F. BYPASS A AND B

1. "As Proposed"

The Smithville Bypass A begins approximately 5,600' south of the intersection with S.R. 118 and Bypass B begins approximately 6,000' north of the intersection with S.R. 118. These Bypasses provide direct access to the new US 19 alignment for the existing properties along the old US 19 that travels through Smithville. Bypass B will also be the main truck route for trucks traveling south on US 19 wanting to get on SR 118.



AS PROPOSED BYPASS A

VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

F. BYPASS A AND B

1. "As Proposed" *(continued)*

AS PROPOSED BYPASS B

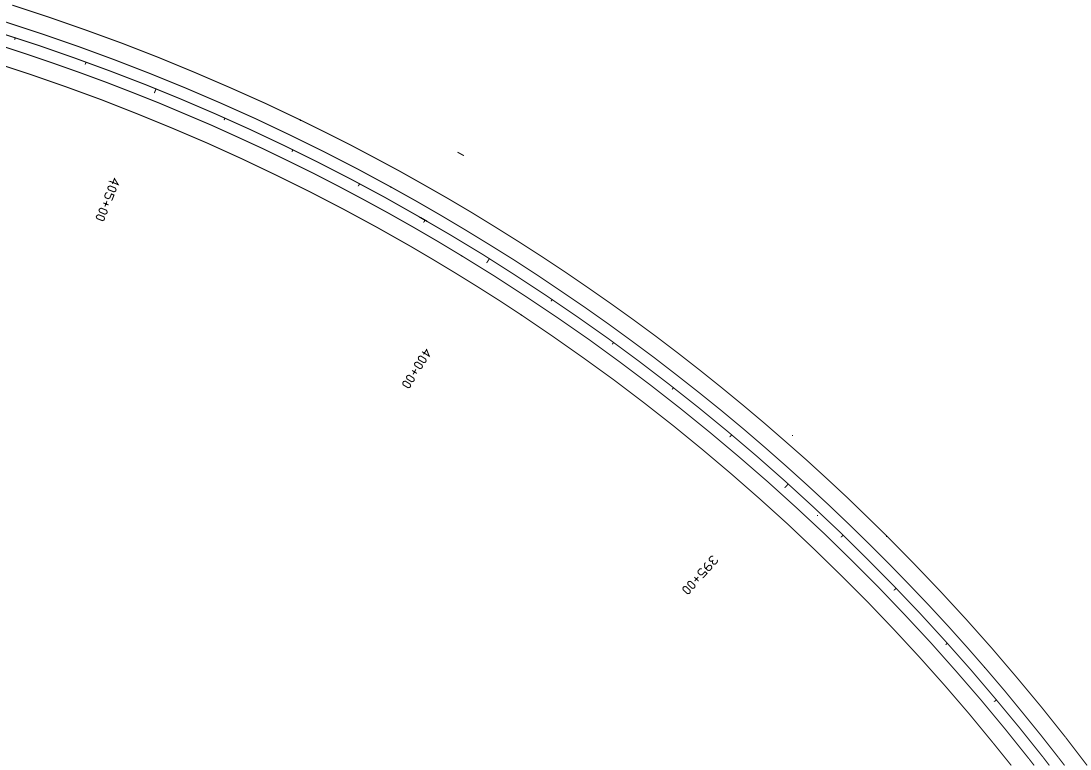
VI. DEVELOPMENT PHASE

I. CONSTRUCTABILITY

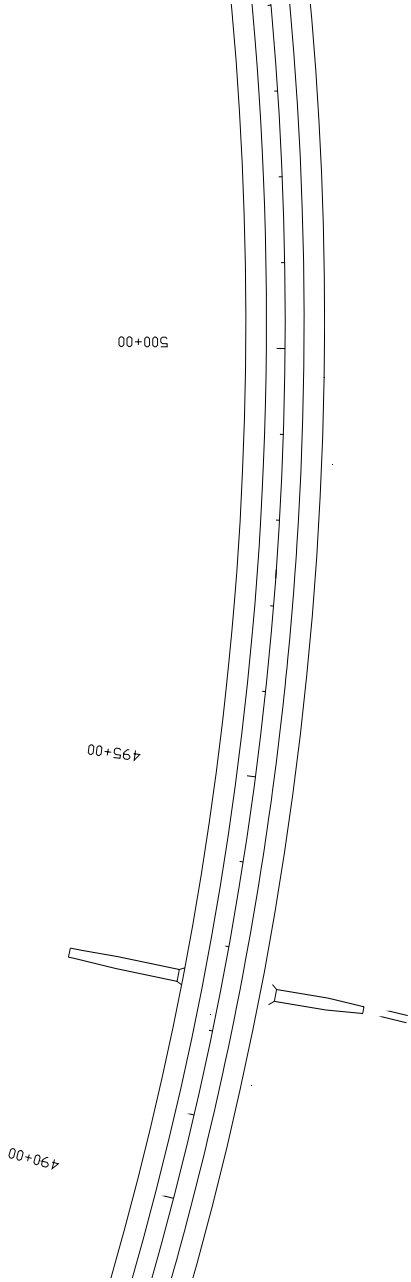
F. BYPASS A AND B

2. Value Engineering Alternative

The Value Engineering Team recommends eliminating Bypasses A & B. Access to and from Smithville can be easily accommodated through Livingston Road and Church Street. It will also force southbound truck traffic to use the Livingston Road to access SR 118. The cost comparison is based on not building any new roadway or rehabilitating any of the Old US 19 within Smithville. It was assumed that approximately 5 acres of land is required for new right-of-way for the bypasses.



VALUE ENGINEERING ALTERNATIVE BYPASS A



VALUE ENGINEERING ALTERNATIVE BYPASS B

I. CONSTRUCTABILITY
F. BYPASS A AND B
VALUE ENGINEERING ALTERNATIVE
COST COMPARISON SHEET

DESCRIPTION	UNITS	UNIT COST	PROP'D QTY.	PROP'D COST	V.E. QTY.	V.E. COST
RECYCLED ASPHALT 12.5 MM	TN	$36.84	495.0	$18,236	0.0	$0
RECYCLED ASPHALT 19 MM	TN	$36.19	660.0	$23,885	0.0	$0
RECYCLED ASPHALT 25 MM	TN	$39.12	1,650.0	$64,548	0.0	$0
GR AGGR BASE CRS 12”	SY	$13.19	6,500.0	$85,735	0.0	$0
REMOVE PAVEMENT	SY	$1.50	26,000.0	$39,000	0.0	$0
CLEAR & GRUB	AC	$3,500	5.2	$18,200	0.0	$0
SUBTOTAL				**$249,604**		**$0**
MOBILIZATION (THIS IS SUB+CONTIN. x %=)	0.0%			$0		$0
TRAFFIC CONTROL/MOT	0.4%			$999		$0
ENGINEERING AND CONTINGENCY	10%			$24,960		$0
RIGHT OF WAY	AC	$10,000.00	5.2	$52,000		
GRAND TOTAL				**$327,563**		**$0**

POSSIBLE SAVINGS: $327,563

VI. DEVELOPMENT PHASE

II. MATERIALS

A. UNSUITABLE MATERIAL

1. "As Proposed"

The as proposed design consists of removing 4' of unsuitable material underneath the new southbound lane and on the right side of the existing embankment (NBL) below the proposed 4:1 slope. The 4:1 slope falls on the railroad right-of-way and requires an easement from the railroad for construction of the new slope.

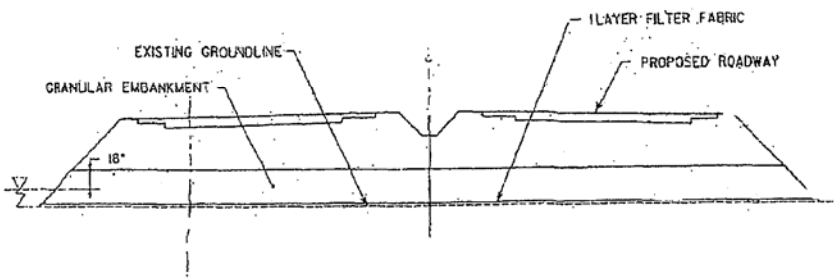
The proposed sketch in the plans shows two details. One labeled "Filter Fabric Detail" and one labeled "Removal Detail". Each Detail has a Table listing "Stations and Locations." The Filter Fabric Detail is directed to the case where the construction area is inundated and requires 18 inches of granular embankment over filter fabric. The Removal Detail requires the removal of soft clay and muck from 1' up to 5'. Apparently, their is a conflict between the Tables for the station intervals 53+00 to 61+00 and 360+00 to 364+00. Both intervals appear in both tables. This may be confusing to the contractor. Also, the terminology "soft clay and muck" should be more appropriately designated "Unsuitable Material" to agree with the Specifications and pay items.

VI. DEVELOPMENT PHASE

II. MATERIALS

A. UNSUITABLE MATERIAL

1. "As Proposed"



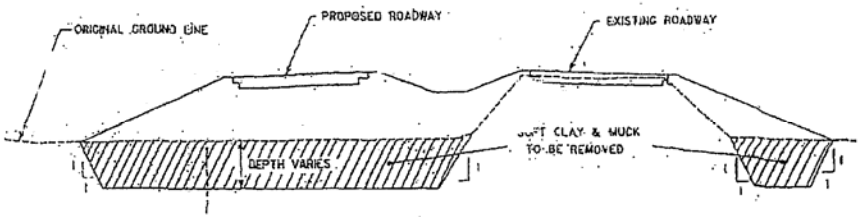
NOTE:

1. IF THIS AREA IS INUNDATED AT THE TIME OF CONSTRUCTION, A MAT OF GRANULAR EMBANKMENT SHOULD BE PLACED TO 18" ABOVE WATER LEVEL FOLLOWING THE PLACEMENT OF FILTER FABRIC.
2. THIS WORK SHOULD BE DONE AT THE DIRECTION OF THE ENGINEER.

APPLIES TO STATION TO STATION	LOCATION
53+00 ± TO 61+00 ±	LT. RT. & CL
360+00 ± TO 364+50 ±	LT. & CL
485+00 ± TO 487+00 ±	LT. & CL

FILTER FABRIC DETAIL

NO SCALE



APPLIES TO STATION TO STATION	LOCATION	MAX. DEPTH
53+00 ± TO 61+00 ±	LT. RT. & CL	4'
82+00 ± TO 87+50 ±	LT. RT. & CL	1'
155+00 ± TO 157+00 ±	CL	1'
216+00 ± TO 222+50 ±	LT.	1.5'
227+50 ± TO 229+50 ±	LT. & CL	1'
254+50 ± TO 264+00 ±	LT. & CL	5'
360+00 ± TO 364+50 ±	LT. & CL	1.5'
371+00 ± TO 373+00 ±	LT.	1'

NOTES:

1. REPLACEMENT MATERIAL SHOULD BE WITH GRANULAR EMBANKMENT.

REMOVAL DETAIL

NO SCALE

VI. DEVELOPMENT PHASE

II. MATERIALS

A. UNSUITABLE MATERIAL

2. Value Engineering Alternative

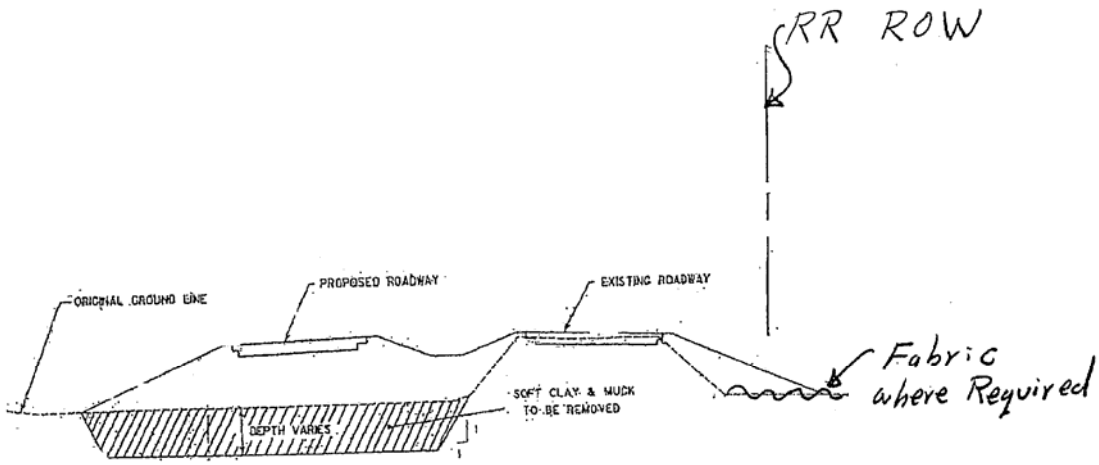
The Value Engineering Alternative consists of eliminating the 4’ of undercut on the right side of the existing embankment and using filter fabric to stabilize the new 4:1 slope. The existing embankment has been in-place for many years and the “soft clay and muck” under and adjacent to the existing toe of slope has undergone consolidation and strength gain. Because of this improved subsurface condition, the filter fabric should provide sufficient stability. By using filter fabric there will be no excavation on the railroad right-of-way; therefore, the impact of construction will be reduced.

VI. DEVELOPMENT PHASE

II. MATERIALS

A. UNSUITABLE MATERIAL

2. Value Engineering Alternative



Stations	Location	Comment
53+00 to 61+00	Rt	Use Fabric under Embankment

II. MATERIALS
A. UNSUITABLE MATERIAL
VALUE ENGINEERING ALTERNATIVE
COST COMPARISON SHEET

DESCRIPTION	UNITS	UNIT COST	PROP'D QTY.	PROP'D COST	V.E. QTY.	V.E. COST
4' OF UNDERCUT RIGHT SIDE STA. 53+00 TO 61+00	CY	$12.00	725.0	$8,700	0.0	$0
EMBANKMENT SLOPE ON RIGHT SIDE ON FILTER FABRIC	SY	$6.00	0.0	$0	550.0	$3,300
SUBTOTAL				**$8,700**		**$3,300**
ENGINEERING AND CONTINGENCY	10%			$870		$330
GRAND TOTAL				**$9,570**		**$3,630**

POSSIBLE SAVINGS: $5,940

VI. DEVELOPMENT PHASE

II. MATERIALS

B. BARRIER FENCE

1. "As Proposed"

The "as-proposed" plans require the installation of approximately 3,200 linear feet of barrier fence at the outer limits of the right-of-way at specific locations that are requirements of the environmental special provisions. The pay item for this fence is listed in the pavement marking section of the plans.

VI. DEVELOPMENT PHASE

II. MATERIALS

B. BARRIER FENCE

2. Value Engineering Alternative

The Value Engineering Team recommends that the orange barrier fence be listed with the temporary erosion control items to clearly indicate the intended use of this fence as an environmental item and not as traffic control item. It may be beneficial to change the pay item number in an effort to alert all parties on construction that the fence must be installed before any work begins.

VI. DEVELOPMENT PHASE

II. MATERIALS

C. CLASS 3-C EXCAVATION

1. "As Proposed"

Class III-C soils are shown in the special provisions under Section 205-Roadway Excavation to be removed along the mainline right from Station 255+00 to 262+00 and not to be placed in the upper three (3') feet of the subgrade. The plan cross-sections indicate that there is no unclassified excavation to be performed along this section of the mainline right.

VI. DEVELOPMENT PHASE

II. MATERIALS

C. CLASS 3-C EXCAVATION

2. Value Engineering Alternative

The Value Engineering Team recommends that the requirement for Class III-C soil be deleted from the special provision for Station 255+00 to 262+00 due to what appears to be a change in the profile grade that raised the elevation through this section of the mainline and eliminated the need for this provision.

VI. DEVELOPMENT PHASE

III. TRAFFIC CONTROL

A. TRAFFIC CONTROL FOR SIDE-ROAD DRAINAGE CONSTRUCTION

1. "As Proposed"

Maintenance of traffic for side road drainage installations:

As part of the staging plan general notes, the "as proposed" plans contain the statement "Driveways/side roads to remain open during construction." The plans show the installation of new side-drain pipes at several of the County Roads along the new south bound lanes. The plans do not indicate the preferred method of keeping the side roads open to traffic.

VI. DEVELOPMENT PHASE

III. TRAFFIC CONTROL

A. TRAFFIC CONTROL FOR SIDE-ROAD DRAINAGE CONSTRUCTION

2. Value Engineering Alternative

The Value Engineering Team recommends that the staging plan notes be revised to indicate that drainage installation work on side roads and driveways shall be performed on one-half of the travel way at a time to allow for the continuous movement of traffic. Delete the general note in Stage I that states: "Use flagmen on sideroads to help shift traffic during construction." This is covered under Section 150- Traffic Control.

VI. DEVELOPMENT PHASE

III. TRAFFIC CONTROL

B. RAILROAD RECONSTRUCTION

1. "As Proposed"

The "as-proposed" plans indicate work at CR 1/Gosa Road and the mainline right at Station 133+00 "to be constructed by others". This work appears to be the reconstruction of the railroad crossing on Gosa Road, but no clear definition or description of the work is given.

VI. DEVELOPMENT PHASE

III. TRAFFIC CONTROL

B. RAILROAD RECONSTRUCTION

2. Value Engineering Alternative

The Value Engineering Team recommends that the work "to be constructed by others" be clearly defined and the coordination issues be addressed. The plans indicate that the contractor must perform work on both sides of the crossing. If the railroad is to perform this work at the crossing and the contractor is to maintain traffic on all side roads, then the contractor must know if the grade and the tracks will be raised at this location. Plans need to show if the contractor can perform his work independent from the work done by the railroad or if the contractor must be present with his forces as the railroad reconstructs the crossing.

VI. DEVELOPMENT PHASE

VI. STAGE CONSTRUCTION

A. STAGE I RESTRICTION

1. "As Proposed"

Requirement that all work proceed from south to north.

Stage I, General note #2 states: "Remove or construct drainage structures, pipes etc. begin from south to north." There does not appear to be any apparent reason for this statement with regards to the proper staging of this project. The design consultant was unaware of the intent of this requirement.

VI. DEVELOPMENT PHASE

VI. STAGE CONSTRUCTION

A. STAGE I RESTRICTION

2. Value Engineering Alternative

"All work proceeds south to north."

Delete this general note due to the apparent lack of any reason to include this note in the staging. The endrows for the bridges on the north end of the project appears to be one of the first areas that work needs to start in order to allow the endbents for the bridges to be constructed in a timely manner. The staging requires the southbound lanes to be opened to traffic before proceeding to Stage II. The southbound bridge should be started first as part of any description to complete the work in the shortest time period. The deepest fill sections are on the north end of the project and will require the longest time period to construct.

VI. DEVELOPMENT PHASE

VI. STAGE CONSTRUCTION

B. PAVEMENT MARKING

1. "As Proposed"

Stage II, General note #1 states: "Shift traffic to new southbound lanes". This indicates that as soon as the new southbound lanes are completed in Stage I that traffic is to be shifted onto the new lanes. However, this does not indicate that the final topping should not be placed on the new southbound lanes or that only interim (temporary) pavement markings should be used to make this traffic shift. At no time should interim markings be placed on the final surface.

VI. DEVELOPMENT PHASE

VI. STAGE CONSTRUCTION

B. PAVEMENT MARKING

2. Value Engineering Alternative

Revise the Stage I notes to indicate that the south bound lanes shall be completed through the 19mm superpave asphaltic concrete and apply interim paint pavement markings that will allow the use of the new southbound lanes in a two-lane two-way traffic configuration. Show Stage II notes that will allow the northbound lanes to be completed through the 12.5 mm topping and place the permanent thermoplastic markings on the final surface.

VI. DEVELOPMENT PHASE

VI. STAGE CONSTRUCTION

C. TIE IN AT ENDS OF PROJECT

1. "As Proposed"

Stage I plans indicate a temporary median crossover to be constructed on the south end of the project to accommodate the traffic shift to the new southbound lanes in Stage II. No details are included in the plans to indicate the depth and type of the asphaltic concrete and stone base in the typical section to be used on this temporary median crossover. It also appears that the staging work and the final topping will be required to overlap onto the completed four-lane section on the south end in order to eliminate conflicting striping in the existing lane drop coming northbound.

VI. DEVELOPMENT PHASE

VI. STAGE CONSTRUCTION

C. TIE IN AT ENDS OF PROJECT

2. Value Engineering Alternative

Recommend that the south terminus of the project be revised to the south end of the northbound lane drop on the existing four-lane section. Also recommend that the quantities be revised to include the extra 12.5 mm topping required to completely overlap the lane drop area of the northbound lane drop. Recommend the inclusion of a typical section and quantities of the installation of the temporary median crossovers on the north and south ends of the project.

VII. APPENDICES

A. REVISED CONCEPT REPORT AND DESIGN GUIDANCE MEMO

B. SPECIAL PROVISIONS

VIII. APPENDICES

A. REVISED CONCEPT REPORT AND DESIGN GUIDANCE MEMO

ORIGINAL TO GENERAL FILES

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE EDS-19(44) Lee County
P. I. No. 462395

OFFICE Preconstruction

DATE April 3, 2001

FROM C. Wayne Hutto, Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT REVISED PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

CWH/cj

Attachment

DISTRIBUTION:

Tom Turner
David Mulling
Harvey Keepler
Jerry Hobbs
Herman Griffin
Michael Henry
Marion Waters
Marta Rosen
Jimmy Chambers (ATTN: Ted Cashin)
David Crim

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE

FILE EDS-19(44) Lee County
P.I. No. 462395

OFFICE Environment/Location

DATE March 16, 2001

RECEIVED
MAR 16 2001
OFFICE OF PLANNING

FROM Harvey D. Keepler, State Environmental/Location Engineer

TO C. Wayne Hutto, Assistant Director of Preconstruction

SUBJECT **Revised Project Concept Report – US 19 Improvements**

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

The proposed changes to the approved concept would be a revision to the speed design and an adjustment to the proposed right-of-way.

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

DATE 3-22-01

State Transportation Planning Administrator

Distribution:

David Mulling
Marion Waters
Marta Rosen
Herman Griffin
Jim Kennerly
David Crim
Paul Liles

REVISED PROJECT CONCEPT REPORT

Need and Purpose: The proposed project, EDS-19(44) consists of the widening of a 9.3 mile segment of US 19/SR 3 between CR 151 N/Goodman Road and the Lee/Sumter County line (also at/near the northern city limits of Smithville) from a two lane roadway to a four lane highway. US 19 is a major travel corridor serving south Georgia and the corridor (Griffin to Thomasville) has been officially designated as part of the Governor's Road Improvement Program (GRIP). The GRIP system of roadways is intended to provide multi-lane access to areas of the state not served by the Interstate System.

Widening the segment of US 19/SR 3 between Goodman Road and the Lee/Sumter County line to a multi–lane highway would also provide a positive influence on the economic development along the corridor. Traffic carrying capacity would be increased and safety and operational characteristics along this segment of US 19/SR 3 could be improved. Congestion resulting from a lack of passing opportunities would be eliminated.

Project Location: The proposed concept would be located along US 19/SR 3 beginning at mile post 12.42 and ending at mile post 21.4 in Lee County. The total length of the project would be 9.3 miles.

Description of the approved concept: The approved concept for EDS-19(44) in Lee County includes the widening of US 19/SR 3 from 2 to 4 lanes with a 32' grassed median on 168' of right-of-way northward from CR 151 N. to a point just north of CR 29. At that point, all four lanes would extend northwestward on new location around the McAfee Church and Cemetery located in Neyami on the west side of US 19 just north of CR 29. The proposed right-of-way would be 238'. This typical section would pass as tightly as possible to the west side boundary of the church and cemetery to minimize impacts to the endangered species (Canby's Dropwort) located just south of the church property. The proposed alignment would then turn back to the east just south of CR 24 and resume widening along the existing roadway on the west side. The proposed right –of-way would also return to 168'. West side widening would continue to just south of the Smithville city limits. At that point, the roadway would extend northward on new location and taper out to a 4 lane 44' grassed median typical section. It would intersect CR 26 at-grade approximately 0.4 mile south of SR 118. It would then proceed northwestward and bridge both SR 118 and the Central of Georgia Railroad approximately 0.6 mile west of existing US 19. Once the concept intersects Paul Street, it would shift slightly to the west and run parallel to Prather Street. The alignment would begin to turn toward the east, intersecting Church Street as it proceeds just west of town around the old Smithville Academy. This new location section would continue to the end of the project at CR 41 where it would resume as widening along existing US 19 and tie into EDS-19(50). The proposed right-of-way on the bypass would vary from 250' – 310'. The speed design is 55 mph, and access would be by permit along the existing roadway and partially controlled on new location. Existing right-of-way along US 19/SR 3 varies from 40' to 100' and is offset to the west due to the Central of Georgia Railway located on the east.

PDP Classification: Major/Construction on new location & Construction along existing roadway

Full Oversight ( ), Exempt (X), SF ( ), Other ( )

Functional Classification: Rural Principal Arterial

U. S. Route Number(s): 19 **State Route Number(s):** 3

Traffic (AADT) as shown in the approved concept:

Current Traffic		Design Traffic	
Year: 2004	AADT: 4100 - 6050	Year: 2024	AADT: 6200 - 9000

Proposed Features to be revised:

- In order to remain consistent with Department policy for GRIP Corridor roadways, the speed design is recommended for revision.

Revised feature(s) to be approved:

- The speed design would be 65 mph. To accommodate the new slopes, the proposed right-of-way would be 173' along the existing roadway and 238' around the McAfee Church and Cemetery located in Neyami. It would also vary from 250' – 310' along the Smithville Bypass.

Programmed/Schedule:

P.E. April 92 R/W 2002 Construction LR

Revised Cost Estimates:

1. Construction cost including inflation and E&C: $18,236,000
2. Right-of-way: $2,369,000

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

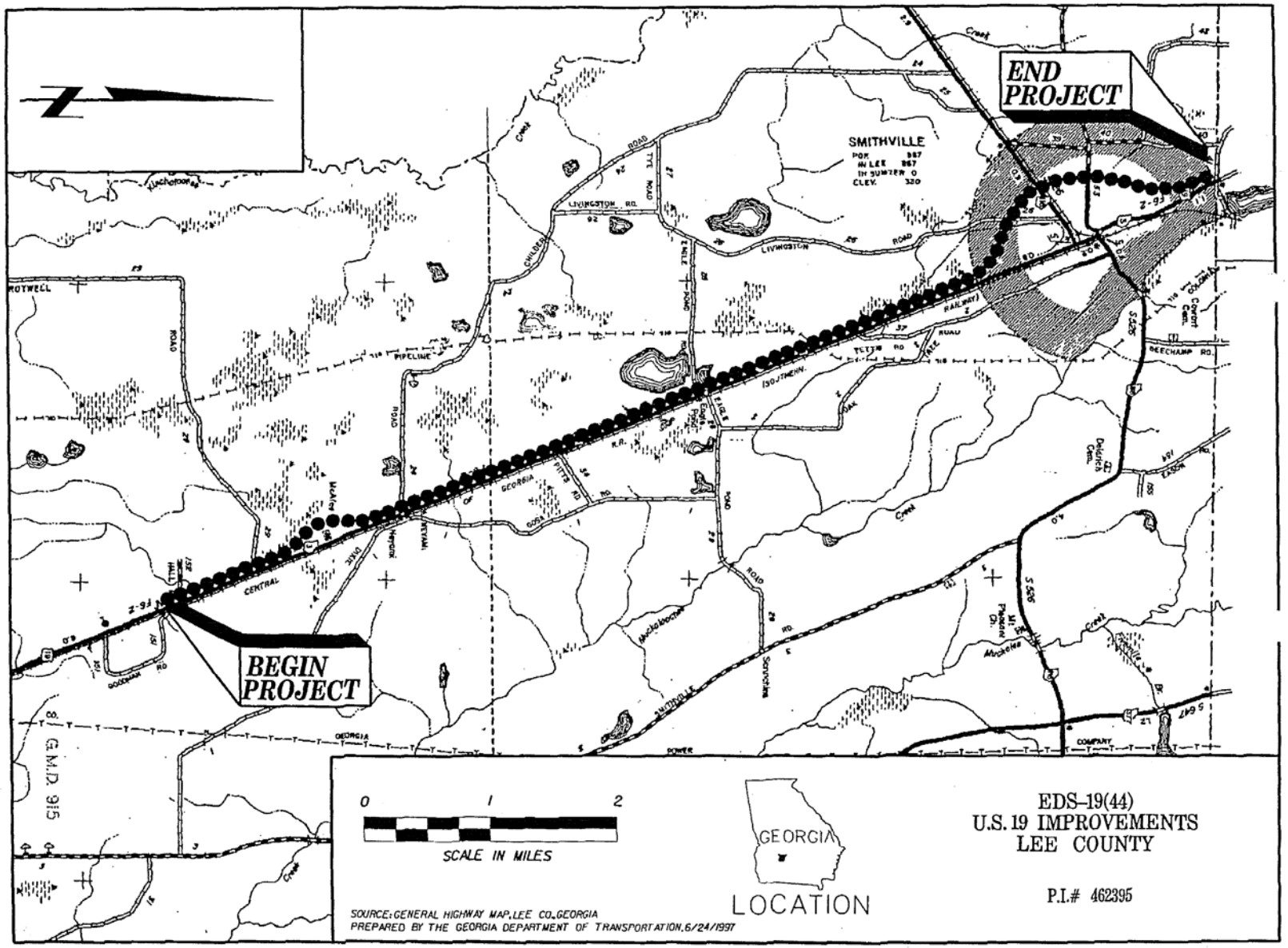
Recommendation: It is recommended that the proposed revision to this concept be approved for implementation.

HDK/ADS

Attachment:
Sketch Map

Concur: _____
Director of Preconstruction

Approve: _____
Chief Engineer


END PROJECT
BEGIN PROJECT
SMITHVILLE
POP. 387
IN LEE 367
IN SUMTER 0
ELEV. 320
LIVINGSTON RD.
LIVINGSTON ROAD
CHILDERS ROAD
PIPELINE
SOUTHERN RAILWAY
GEORGIA
CENTRAL
BEECHAMP RD.
GOODMAN RD
SMITHVILLE
POWER COMPANY
Muckalee Creek
Dougherty Cem.
Mt. Pleasant Ch.
Sandy Creek
0 1 2
SCALE IN MILES
GEORGIA
LOCATION
EDS-19(44)
U.S. 19 IMPROVEMENTS
LEE COUNTY
P.I.# 462395
SOURCE: GENERAL HIGHWAY MAP, LEE CO., GEORGIA
PREPARED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION, 6/24/1997

PALLADI ✓
BOWMAN ✓
ALEXANDER ✓
OTHER
GROUPS ✓ 3 copies each.
FILE

RECEIVED
JAN 15 2003
URBAN DESIGN

January 14, 2003

To: Planning, Preconstruction, Operations, District Engineers

RE: Design Guidance Memo and Median Crossover Recommendation Memo

Attached are two memorandums for your information and application: ***Design Guidance*** and ***Median Crossover Recommendation***.

Please distribute to your staff.

Tom Turner

cc: David Studstill, Ben Buchan, Joe Palladi, Gerald Ross, Marta Rosen
Preconstruction Engineers

D.O.T. 66

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE

OFFICE Operations Division

DATE October 16, 2002

FROM David Studstill, P.E., Director of Operations

TO Tom Turner, P.E., Director of Preconstruction

SUBJECT Median Crossover Recommendation

The Office of Traffic Safety and Design continues to receive inquiries from both the field districts and design units on recommendations for the use of the Type B Median Crossover. The Office of Traffic Safety and Design proposes that the Department adopt the following guidelines that support the Type B design for new and reconstructed facilities:

Recommend Type B in cases where drainage can be adequately designed and:

- Median widths are greater than or equal to 32 feet
- Design speeds are greater than or equal to 55 mph in a corridor

Consider use when:

- Engineering judgment dictates that the design is practical in median widths less than 32 feet
- The number of approach through lanes exceeds two

The Office of Traffic Safety has worked with the Office of Consultant Design to identify over 30 future and active projects to retrofit with Type B Crossovers. The Type B Crossover

- Provides enhanced sight distance
- Reduces interlocking left-turns
- Provides adequate pavement for u-turns
- Allows for easy transition to dual left turn lanes

I am submitting this recommendation to encourage and support the design of Type B Crossovers in all Department preconstruction activities.

Recommend: _____
Director of Preconstruction

Concur: _____
Chief Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: **OFFICE:** Atlanta, Georgia

DATE: January 7, 2003

FROM: Frank L. Danchetz, P.E., Chief Engineer

TO: Planning, Preconstruction, Operations, District Engineers

SUBJECT: **Design Guidance**

This guidance is provided to further clarify the application of the various interim and approved design guides currently in circulation and is to be used in applying Context Sensitive Solutions to the roadway typical section. It also reflects the Department's continuing effort to balance the transportation needs of our state with the desires of the local communities affected.

I. LANE WIDTHS

The Department's standard for lane widths is 12 feet, except as allowed herein.

In applying these lane width guidelines, two applications are defined; the confined, restricted right of way urban area, "Urban Area Type A" and the less confined "Urban Area Type B". Generally, no single defining criteria, such as speed limit or functional classification, determines lane widths. Instead, a combination of characteristics define the applicable areas. The characteristics below are representative of and define urban area types, and, in turn, determine the minimum allowable lane width:

Urban Area Type A

- ✓ Speed limit 35 mph or less
- ✓ Curb and sidewalk
- ✓ Central Business District (CBD)/historic districts/overlay streetscape zoning/corridor continuity characteristics
- ✓ Building face to curb typically ≤ 10'
- ✓ Low truck %

Lane widths may be reduced to no less than 11'-0".

Urban Area Type B

- ✓ Speed limit greater than 35 mph but not greater than 45 mph
- ✓ Curb and sidewalk
- ✓ Less confined, less urbanized area, generally automobile dependent, numerous driveways
- ✓ Building face to curb typically > 10'

Lane widths will be 12'-0". Design variances will be required for lane width reductions.

The above criteria shall be utilized in determining lane widths in urban areas.

II. RAISED/DEPRESSED/FLUSH MEDIANS

(By memo first issued by Chief Engineer Danchetz, July 20, 2000)

Several factors will be considered when determining the applicable median treatments, such as classification of roadway, number of lanes, base year traffic, design year traffic, posted speed limit, design speed limit and accident/crash data. Below are the roadway classifications and the median guidelines for those classifications.

A. Urban Interstates

1. All urban interstates will have positive barrier separation.
2. All urban multi-lane roadways interchanging with the interstate will have a raised median for a distance of 1,000 feet from the ramp termini or the first major intersection.

B. Rural Interstates

1. All rural interstates will require a depressed median as specified in the green book or positive barrier separation in areas of right-of-way restrictions.
2. All rural multi-lane roadways interchanging with the interstate will have a raised median for a distance of 1,000 feet from the ramp termini or the first major intersection.

C. Arterials

1. All arterials with design speeds or posted speeds ≤ 45 mph and base year traffic volumes ≤ 18,000 and design year traffic volumes ≤ 24,000 will require a five lane section (flush median).
2. All arterials with design speeds or posted speeds ≤ 45 mph and base year traffic volumes ≤ 18,000 and design year traffic volumes ≥ 24,000 will require a five lane section (flush median). The project will be designed to incorporate a future 20-foot raised median or preferably a 24-foot raised median depending on impacts. Right-of-way will be purchased for footprint determined by raised 20/24-foot median typical section. Monitoring of accidents and traffic volumes on a five year cycle by the Safety Engineer in the Office of Traffic Operations will determine the need and implementation of a raised median section.
3. All urban arterials with base year traffic volumes ≥ 18,000 ADT and design year traffic volumes ≥ 24,000 ADT and design speed ≤ of 45 mph will have a 20-foot raised median or preferably a 24-foot raised median depending on impacts.
4. Raised medians will be constructed on multi-lane facilities at intersections that include one of the following:
   a) High turning volumes relating to 18,000 ADT (base year) and 24,000 ADT (design year)
   b) Accident rate greater than the state average for its classification
   c) Excessive queue lengths (as determined by District Traffic Engineer) in conjunction with excessive number of driveways.
5. All arterials with posted speeds ≥ 55 mph or design speeds ≥ 50 mph will require the design of a 24-foot raised median, 44-foot depressed median or a positive barrier system depending upon functional classification, the type of development along the corridor, type of access management and right of way impacts.
6. All multi-lane facilities with three or more lanes in each direction shall include positive separation of opposing traffic using a median. Type of median shall depend on guidelines stated above.

D. GRIP Corridors

1. All GRIP corridors with design speeds ≤ 45 mph and base year traffic ≤ 18,000 and design year traffic ≤ 24,000 will require a five lane flush median.
2. All GRIP corridors with design speeds ≤ 45 mph and base year traffic ≥ 18,000 or design year traffic ≥ 24,000 will require a 20-foot raised median minimum or preferably a 24-foot raised median.
3. All GRIP corridors with design speeds ≥ 50 mph will be designed with a 44-foot depressed median.

E. Medians at Pedestrian Crossings

Locations where a significant number of pedestrians are likely to be crossing the roadway, especially at mid-block, may warrant positive separation of opposing traffic using a median for pedestrian refuge.

III. ROADSIDE

A. Sidewalks (By memo first issued by Tom Turner, September 20, 2001 and revised herein.)

Sidewalks will be provided wherever curb and gutter is utilized, i.e., urban sections.

Ga Std's 6050, 9031J, & 9031W are no longer available and their use should be discontinued immediately. These details are being revised to comply with ADA Guidelines. Until further notice, all persons preparing construction plans for the Department must use "Special Details" for Wheelchair Ramps, Sidewalks, Driveways and Detectable Warning Surfaces. These details may be obtained by contacting Eugene Hopkins at 404-656-5409 or by email: eugene.hopkins@dot.state.ga.us. All persons should verify that they have copies of the latest version of the details prior to submission of final plans.

The current interim details for Concrete Sidewalk and Curb Cut Ramps shows the section which has a 2' Typical, 6' Desirable dimension from the back of the curb to the sidewalk as the preferred section. A 16 foot shoulder is recommended when "space" permits the use of a 6 foot grass strip. This revision should also be reflected on Project Management Agreements as follows:

"The Local Government shall be responsible for all costs for the continual maintenance and operations of any and all sidewalks including the grass strip between the curb and gutter and the sidewalk."

B. Pedestrian and Streetscape

(*Pedestrian and Streetscape Guide* - Draft only at this time.)

These guidelines are to be used for designs that will incorporate pedestrian and streetscape features.

C. Rumble Strips (By memo first issued by Tom Turner, November 27, 2000.)

Rumble strips are to be used as follows:

- Rumble strips are to be the milled-in type
- Dimensions - 16" width, 7" length, ½" depth, 5" space between
- Skip Pattern – 28' of rumble strips, 12' clear space
- Placement
  1. Interstate/Freeways (where bicycles are NOT allowed) – continuous
  2. Multi-lane Rural (>50 mph) – Skip pattern
  3. Two-lane Rural Section (>400 ADT & >50 mph)
     a. 2' Shoulder – No rumble strip
     b. ≥ 4' Shoulder – Skip pattern

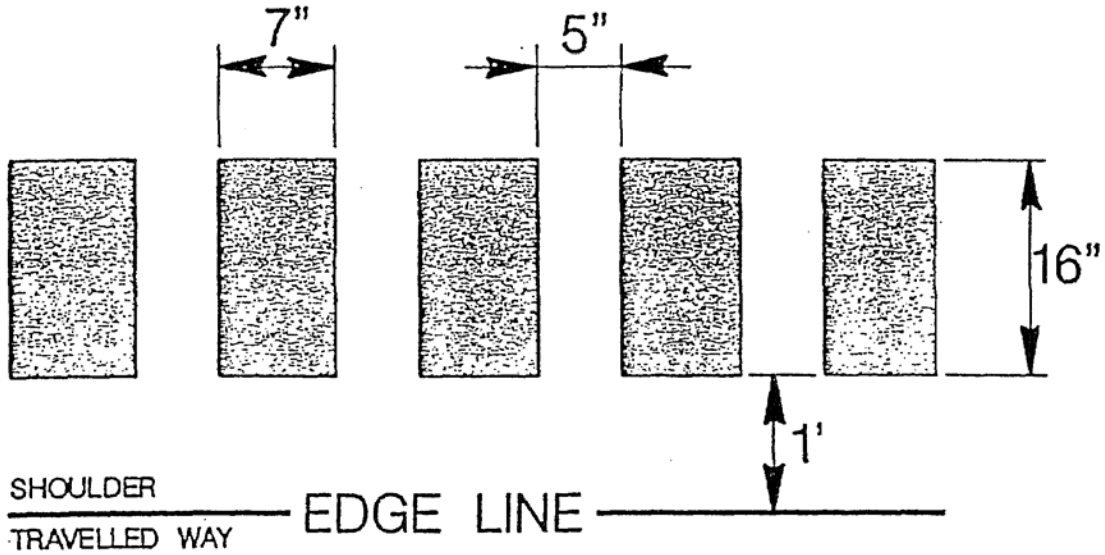
Attached is a drawing showing the dimensions of the proposed milled rumble strips. Also attached are drawings of a 4' and 6.5' shoulder each showing the placement of the rumble strip. The 6.5' shoulder is being proposed as a replacement to both the currently utilized 6' and 8' shoulders. The 6.5' shoulder will accommodate bicyclists based on the AASHTO Guidelines and will be the one shoulder consistently used on multi-lane widening and/or reconstruction projects with rural shoulders.

D. Bicycle Accommodation (By memo first issued Commissioner Wayne Shackelford, March 1, 2000.)

The Department will accommodate bicycling improvements into all widening and reconstruction projects when there is an existing bikeway or if the project is on an approved Bike Route.

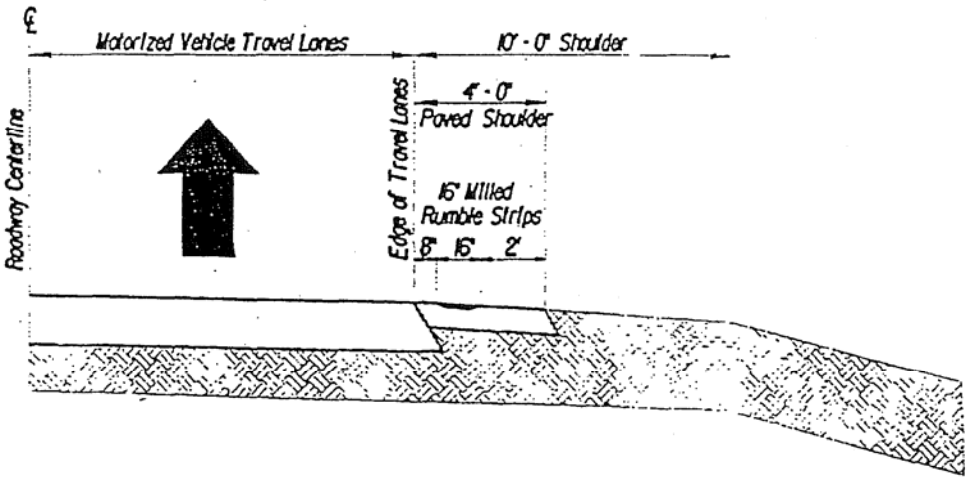
IV. Any variances to these guidelines will require the recommendation of the Director of Preconstruction and the approval of the Chief Engineer.

FLD:TLT:crm
Attachments



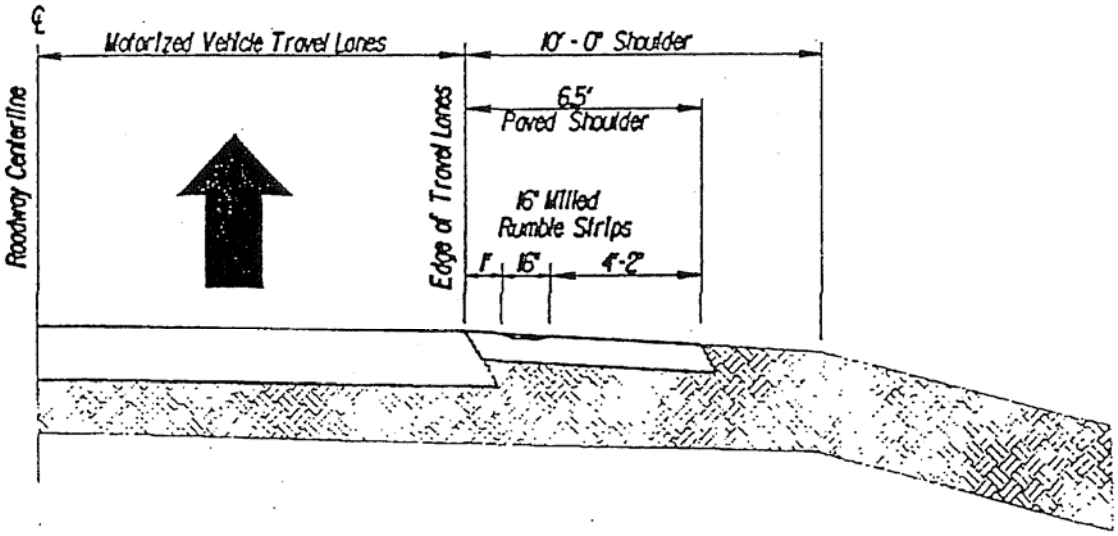
RUMBLE STRIP PLACEMENT

4' Paved Shoulder With 16" Milled Rumble Strips



6.5' Paved Shoulder With 16" Milled Rumble Strips

Routes Where Bikes Are Allowed



VIII. APPENDICES

B. SPECIAL PROVISIONS

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION

PROJECT: EDS-19(44) (50) (51), BHN-006-2(47), & BRN-006-3(11)
PI #'s 322310, 322193, 322195, 322190, 462395
Lee and Sumter Counties

Section 107 – Legal Regulations and Responsibility to the Public

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Add the following to Subsection 107.23:

G. Protection of Federally Threatened and/or Endangered Species

The following conditions are intended as a minimum to protect these species and its habitat during any activities that are in close proximity to the known location(s) of these species.

1. All personnel on the project shall be advised of the presence of the federally endangered plant, Canby's dropwort (*Oxypolis canbyi*), and the federally protected wood stork (*Myceteria americana*). The graphical and/or photographic representation of Canby's dropwort and wood stork shall be placed in the project trailer during construction. All personnel shall also be advised that there are civil and criminal penalties for harming, harassing, or killing wood storks or malicious damage or destruction of Canby's dropwort; the removal or digging up of, damage or destruction of Canby's dropwort in knowing violation of any law or regulation of the state of Georgia or in the course of any violation of State criminal trespass law. The following conditions are intended as a minimum to protect these species and their habitat during any activities that are in close proximity to the known location(s) of these species. These provisions are provided in addition to those criteria specified in Special Provisions Section 107.23F, Environmentally Sensitive Areas.

2. Prior to ANY construction activity, including clearing and grubbing, international orange temporary barrier fence shall be installed at the outer edge of right-of way as specified by Section 643 and maintained throughout project construction at the following areas: on EDS-19(44) Wetland #2, beginning at station 81+00 left and ending at station 90+00 left, and at Wetland #12, beginning at station 354+50 left and ending at station 373+00 left. Clearing and grubbing shall not occur during the months of June through October in these areas.

3. The contractor shall cease all construction activities upon the sighting of a wood stork within 300 feet of the project area. The Contractor shall only resume construction activities once the wood stork has not been observed in the project area or within 300 feet of the project area for at least 30 minutes.

4. Two rows of Type C silt fence, backed with baled straw, shall be installed as shown on the Erosion Control plans at all wetland and stream sites prior to any grading activity. These required erosion control measures are to be considered minimum erosion control requirements for this area. The Contractor shall install other erosion control measures as needed or directed by the Engineer to ensure effective erosion control and sedimentation containment.

5. Any construction activity, activity of personnel, and/or storage of equipment/materials shall be prohibited from occurring within areas designated on the plans as "Environmentally Sensitive Areas." If any activity within "Environmentally Sensitive Areas" is allowed and disturbance to Canby's dropwort occurs, the contractor will be considered to be in "knowing" violation of the Endangered Species Act of 1973.

6. No pesticides, herbicides, or fertilizers (including right-of-way maintenance) shall be used within 165 feet of areas designated on the plans as "Environmentally Sensitive Areas."

7. Grade all areas to completion once the area is disturbed to minimize the time that the area is exposed to potential erosive forces. All disturbed soil, excavation spoil, and stockpiled materials adjacent to those areas specified as "Environmentally Sensitive Areas" shall be covered with wheat straw mulch or an approved straw blanket at the following locations at the end of the day or whenever weather indicates that rain is imminent: on EDS-19(44) Wetland #2, beginning at station 81+00 left and ending at station 90+00 left, and at Wetland #12, beginning at station 354+50 left and ending at station 373+00 left.

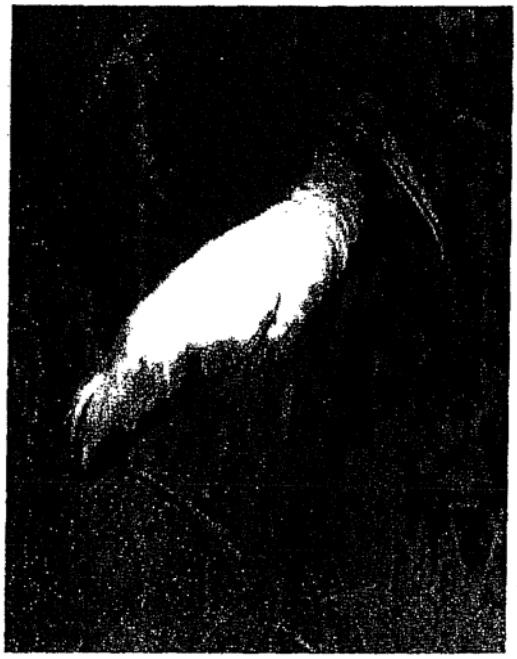
8. Grassing (Section 700 – Grassing) will be modified within project construction limits adjacent to those areas designated as "Environmentally Sensitive Areas" at the following locations: on EDS-19(44) Wetland #2, beginning at station 81+00 left and ending at station 90+00 left, and at Wetland #12, beginning at station 354+50 left and ending at station 373+00 left. No nitrogen, fertilizer, pesticides, lime, or herbicides shall be used during the establishment of either permanent or temporary grassing between these station numbers. No application of herbicides for weed control (Section 725 – Weed Control) shall be performed between these stations.

9. The Contractor shall keep a log detailing any sightings of wood storks in or adjacent to the project until such time that Final Acceptance of the project is made. Any sighting of wood storks shall be reported to: (1) the Project Engineer; (2) Harvey Keepler, Georgia Department of Transportation, Office of Environment/Location at (404) 699-4401; (3) Federal Highway Administration at (404) 562-3630; (4) U.S. Fish and Wildlife Service, Brunswick Field Office at (912) 265-9336; and (5) Georgia Department of Natural Resources at 1-800-241-4113.

10. In the event that any deviation from the specifications or from these special provisions occurs that causes disturbance to, or that could be detrimental to the continued existence of Canby's dropwort or wood storks along the project corridor, the Contractor shall immediately report the incident to the project engineer, who shall immediately contact: 1) Harvey Keepler, State Environmental/Location Engineer of the Georgia Department of Transportation, Office of Environment/Location at 404-699-4401 or 770-478-7268 in Atlanta, Georgia; 2) Katy Allen and Michele Hart, Federal Highway Administration (FHWA), Georgia Division at 404-562-3653; and 3) the U.S. Fish and Wildlife Service, Athens Field Office at 706-613-9493. In the event of possible disturbance to wood storks or Canby's dropwort, the above agencies shall be notified immediately and all activity shall cease pending Section 7 consultation by the Department with the United States Fish and Wildlife Service and the Federal Highway Administration.

11. Following project completion, a report summarizing any incidents and/or sightings with wood stork shall be submitted by the Contractor to the: (1) the Project Engineer; (2) U.S. Fish and Wildlife Service, 4270 Norwich St., Brunswick, GA 31520; (3) Federal Highway Administration, 61 Forsyth Street, S.W., Suite 17T100, Atlanta, Georgia 30303-3104; (4) Nongame/Endangered Wildlife Program, Georgia Department of Natural Resources, 1 Conservation Way, Brunswick, GA 31523; and (5) Georgia Department of Transportation, Office of Environment/Location, 3993 Aviation Circle, Atlanta, Georgia 30336-1593.

Federally Endangered Animal on the Project



Wood Stork

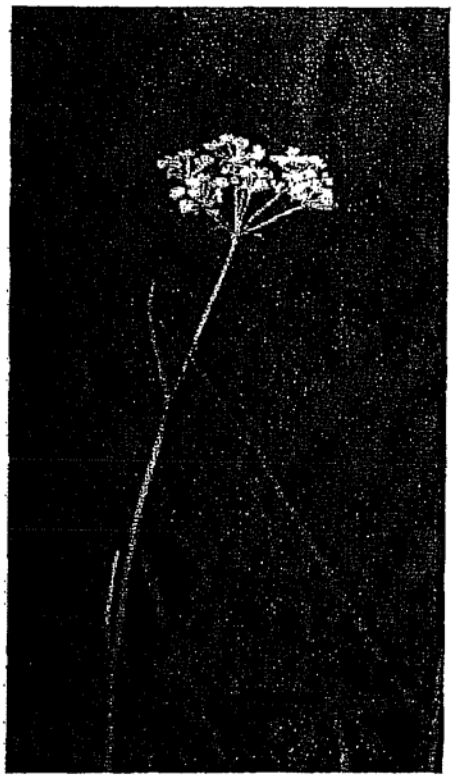
Description

- large wading bird
- dark featherless head
- stout bill
- white feathers on the body
- black wing feathers

Harming, harassing or killing this animal can lead to fines or jail time.

See Special Provision 107.23 G.

Federally Endangered Plant on the Project



Canby's Dropwort – *Oxypolis canbyi*

Description

- 2.5 – 4 feet tall
- Quill like leaves
- Slender stems
- Compound clusters of small white flowers
- Slight dill fragrance
- Flowering period – late June to mid August

Removal, malicious damage, destruction, or digging up of Canby's Dropwort can lead to fines or jail time. See Special Provisions 107.23

July 18, 2002

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION
EDS-19 (44) LEE COUNTY
PI No. 462395

SECTION 205 – ROADWAY EXCAVATION

Add the following to Sub-section 205.3.05.E:

The soils that will be excavated from the following cut sections are primarily Class IIIC soils with poor load carrying characteristics. Do not place these soils within 3 feet of the subgrade directly beneath the pavement in fill sections. These soils may be placed in the bottom of high fill sections, in the shoulders or in the median as directed by the Engineer.

Station to Station	Location
~~255+00± to 262+00±~~	~~Rt.~~ DELETE THIS SECTION PROFILE GRADE HAS BEEN CHA.
392+50± to 397+50±	Lt. & Rt.

Office of Materials and Research

July 18, 2002

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION

EDS-19 (44) LEE COUNTY
PI No. 462395

SECTION 208 – EMBANKMENTS

Modify Sub-Section 208.2A.1 to read as follows:

INUNDATED EMBANKMENTS: Construct embankments in inundated areas with granular embankment placed to a level of 18 inches above the water surface at the time of construction.

Retain Sub-Section 208.5 - PAYMENT – as written and add the following:

Costs for granular embankment construction will be included in the pay item provided in the contract for embankment construction.

July 18, 2002

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION

EDS-19 (44) LEE COUNTY
PI No. 462395

SECTION 209 – SUBGRADE CONSTRUCTION

Delete Sub-section 209.02.A and substitute the following:

209.02A SUBGRADE MATERIALS: Construct the top 12 inches of subgrade on this project, including crossroads and ramps, with Class IIB3 or better materials. If the existing soils at grade do not meet this requirement, undercut and replace these soils to provide 12 inches of IIB3 or better material at subgrade. Cost for this work will be included in the pay item provided in the contract for embankment construction.

Office of Materials and Research

Revised July 18, 2002

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION

EDS-19 (44) LEE COUNTY
P.I. NO. 462395

SECTION 881 – FABRICS

Add the following to Sub-Section 881.2.05A:

Use woven filter fabric for embankment stabilization. Sew fabric with a lock stitch using high strength polypropylene or nylon thread. Obtain approval of the stitch and sewing method from the Engineer prior to use.

Delete Sub-Section 881.2.05.A.4 as written and substitute the following:

Use filter fabric for embankment stabilization with the following minimum tensile strength requirements:

Fabric Type	Tensile Strengths in lb./in. width			
	Warp Direction		Fill Direction	
	5% Strain	Ultimate	5% Strain	Ultimate
Polyester	200	500	100	250
Polypropylene	200	800	100	400

Minimum Seam Strength = 100 lb./in. width

The ultimate strengths shown are based on reduction factors of 0.4 for polyester and 0.25 for polypropylene from the tensile strengths at 5% strain. The use of reduction factors other than those shown will be allowed only if verified by laboratory tests acceptable to the Department.

Delete Sub-Section 881.2.05.A.6. in its entirety.

Delete Sub-Section 881.2.05.C as written and substitute the following:

Test the filter fabric using the following methods:

Tensile Strength, Elongation	ASTM D-4594 Wide Strip Test
Seam Strength	ASTM D-4595 Wide Strip Test

Run the tests at a strain rate of 10% per minute. Use a pre-tensioning load of 10 pounds per inch or 3%, whichever is less.

Supply a certification from the manufacturer showing the physical properties of the fabric used and conformance with the Specification in accordance with Sub-Section 106.05 of the current Specifications.

Date: April 5, 2006

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

Project: **EDS-19(44) Lee County**
P.I. No. 462395

Construction of new overhead bridge on the realigned SR 3 / US 19 over S.R 118 and the tracks of Georgia Southwestern Railroad, Inc. located at 931.86 feet to railroad milepost 275, north of Smithville Georgia in Lee County, Georgia. This section of the railroad is owned by Central of Georgia Railroad Company and the operating railroad is Georgia Southwestern Railroad, Inc. Average train movement through this area is approximately 3 train per day at typical speeds of 10 mph. There are no passenger trains at this location.

1. AUTHORITY OF RAILROAD ENGINEER AND HIGHWAY ENGINEER:

   The authorized representative of the Railroad, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic and facilities including the adequacy of the foundations and structures supporting the railroad tracks and the necessity for flagging during construction.

   The authorized representative of the Chief Engineer, hereinafter referred to as the Highway Engineer, shall have authority over all other matters as prescribed herein and in the Department's Standard Specifications, current edition, as may be revised for this project.

2. NOTICE OF STARTING WORK:

   A. The Contractor shall not commence any work on Railroad rights-of-way until he has complied with the following conditions:

      (1) Given the Railroad written notice, with copy to the Department, at the addresses shown below and to the Highway Engineer who has been designated to be in charge of the work, at least 10 working days in advance of the date he proposes to begin work on Railroad rights-of-way. If flagging is required, it may take up to 30 days to obtain from the Railroad and no work shall be undertaken until flagging is present at the job site.

Notice to:

Mr. Dave Smoot
Corporate Secretary
Georgia Southwestern Railroad, Inc.
78 Pulpwood Road
Dawson, Georgia 39842
Ph # (229) 698-2018

Copy to:

State Utilities Engineer
Georgia Department of Transportation
935 E. Confederate Ave., Bldg. 24
Atlanta, Georgia 30316

(2) Obtained written authorization from the Railroad to begin work on Railroad rights-of-way, such authorization may include an outline of specific and general conditions with which he must comply.

(3) Obtained written approval from the Railroad of railroad protective and general liability insurance coverages as required by paragraph 11.

(4) Furnished a schedule for all work within the Railroad rights-of-way as required by paragraph 6 B (1).

B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, area of responsibility of each representative shall be specified.

3. INTERFERENCE WITH RAILROAD OPERATIONS AND PROPERTY:

A. The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, and communication services, or damage to the facilities or property of the Railroad or tenants on the right-of-way of the Railroad. Whenever work is liable to affect such operations, safety, facilities, or property, the method of doing such work shall first be submitted to the Railroad Engineer for review and approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging and inspection by the Railroad shall be deferred by the Contractor until the flagging and inspection required by the Railroad is available at the job site.

B. Whenever work within Railroad rights-of-way is of such a nature that impediment to Railroad operations such as use of runaround or detour tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.

C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations, facilities, and property of the Railroad, the Contractor shall make such provisions. If in the judgement of the Railroad Engineer, or in his absence, the Highway Engineer, such provision is insufficient, either may require or make such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the Department.

4. CONSTRUCTION PROCEDURES:

A. General:

Construction work and operations by the Contractor on Railroad rights-of-way, or property, shall be:

(1) Subject to the inspection and approval of the Railroad.

(2) In accord with the Railroad's written outline of specific conditions.

(3) In accord with the Railroad's general rules, regulations, and requirements including those relating to safety, fall protection, and personal protective equipment. Safety guidelines are given in paragraph 10.

(4) In accord with this special provision.

B. Track Clearances:

The minimum track clearances to be maintained by the Contractor during construction are shown on the highway project plans and included in project special provisions or other contract documents. Clearances less than these will not be permitted unless specifically authorized by the Railroad Engineer. If minimum clearances are not stated in project plans and or contract documents, then such clearances shall be specified by the Railroad Engineer.

C. Temporary Excavation:

The subgrade of an operated track shall be maintained with edge of berm at least 10 feet from centerline of track and not more than 24 inches below top of rail. Contractor will not be required to make existing section meet this specification if the existing section is substandard, in which case existing section will be maintained.

D. Excavation for Structures:

The Contractor will be required to take special precaution and care in connection with excavating and shoring pits for construction of bridges, walls, footings, drainage pipes or structures under or adjacent to tracks, and any other structures or construction, including the driving of piles or sheeting, adjacent to tracks to provide adequate lateral and vertical support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for excavation and shoring, shall first be approved by the Railroad Engineer, but such approval shall not relive the Contractor from liability. Before submission of plans to the Railroad Engineer for approval, such plans shall first be reviewed by the Department's Office of Bridge and Structural Design.

E. Blasting:

(1) The Contractor shall obtain advance approval of the Railroad Engineer and the Highway Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

(a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor.

(b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.

(c) No blasting shall be done without the presence of an authorized representative of the Railroad. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed (see paragraph 2B above) will be required to arrange for the presence of an authorized Railroad representative and such flagging the Railroad may require.

(d) Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains. Correction of any track misalignment or other damage to Railroad property resulting from the blasting shall be done as directed by the Railroad's authorized representative at the Contractor's expense. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.

(e) Storage of explosives on Railroad property will not be permitted.

(f) Furnish satisfactory evidence of XCU (explosion-collapse-underground damage) insurance coverage.

(2) The Railroad representative will:

(a) Determine the approximate location of trains and advise the Contractor the approximate amount of time available for the blasting operation and clean-up.

(b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with this special provision.

(3) Other Requirements:

Each Railroad has its own requirements for blasting which may include provisions in addition to the above. It is the contractor's responsibility to contact the Railroad before performing any blasting and determine and comply with these requirements. The Contractor shall handle all matters relating to blasting with the Railroad and pay for all costs involved.

F. Maintenance and Repair of Railroad Facilities:

(1) The Contractor will maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required by Highway Project plans and contract documents. The Contractor will promptly repair eroded areas within Railroad rights-of-way.

(2) The Contractor will also repair, or cause to be repaired, any other damage to the property or facilities of the Railroad or its tenants.

(3) All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

G. Storage of Materials and Equipment:

Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment. All grading or construction machinery that is left parked unattended near the track or on the Railroad rights-of-way shall be effectively immobilized so that it cannot be moved by unauthorized persons. Safety guidelines are given in paragraph 10.

H. Cleanup:

Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights-of-way, all machinery, equipment, surplus materials, falsework, temporary erosion measures, rubbish or temporary buildings of the Contractor, and leave said rights-of-way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative.

5. DAMAGES:

A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.

B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

6. FLAGGING SERVICES:

A. When Required

Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations and facilities. In general, the requirements for flagging will be whenever the Contractor's personnel or equipment are, or are likely to be, working on the Railroad's right-of-way, or within distances as may be specified by Railroad's authorized representative, or across, over, adjacent to, or under a

track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging. These requirements include situations where a crane, or other piece of equipment, is located such that its boom, or extremity, could move and pass within 20 feet of the centerline of a track or within a distance as may otherwise be specified by Railroad's authorized representative. Safety guidelines are given in paragraph 10. **Normally the Railroad will assign one flagman to a project, based on an 8 hour workday and 40 hour workweek, but in some cases more than one may be necessary.**

B. Scheduling and Notification

(1) Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad right-of-way.

(2) The Contractor will be required to give the Railroad representative at least 10 working days of advance notice of intent to begin work within Railroad right-of-way in accordance with paragraph 2.A.(1) of this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the contractor shall furnish the Highway Engineer a copy; if notice is given verbally it shall be confirmed in writing with copy to the Highway Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen, is present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad practices, in some cases it may be necessary to give 5 days notice before flagging service may be discontinued and payment stopped.

(3) If, after the flagman is assigned to the project site, unusual circumstances or conditions arise which require the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delays shall be done by the Contractor and not the Department or Railroad.

C. Payment

(1) The Contractor will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction. The Contractor shall not delegate this responsibility to any subcontractor or any other party. The Department will not reimburse the Railroad for any costs of the flagging which is required by the Contractor's work. The cost of flagging service is approximately $37.50 per hour or $300 per day based on an 8-hour work day and 40-hour work week. This cost includes the base pay for the flagman, overhead, and generally includes travel expenses, meals, lodging, equipment, etc. The charge to the Contractor by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required. Work by a flagman in excess of 8 hours per day and 40 hours per week may result in overtime pay at 1 ½ time the appropriate rate. Also, certain unusual conditions may arise which may result in overtime pay at 2 times the appropriate rate. Railroad work involved in preparing and handling bills may also be charged to the Contractor. Charges to the Contractor by the Railroad shall be in accordance with Federal-Aid Highway billing procedures and requirements as contained in applicable provisions of Part 140, Subpart I, and Part 646, Subpart B, of Title 23, Highways, of the Code of Federal Regulations, current edition, and shall further be on the same basis as the Department would be billed by the Railroad if the Department was paying for the charges.

(2) The contractor will be billed for flagging services on a periodic basis directly by the Railroad and Contractor will promptly pay such bills within 30 days after each bill is rendered. Should the Contractor fail to pay the Railroad within 60 days after any bill is rendered, the Department may pay directly to the railroad any amounts due and deduct the amount of such payments from any funds due the contractor. This provision does not affect the obligation of the Contractor under his bond or the rights of the Railroad or the Department under the bond.

D. Verification

(1) The Contractor will review and sign the Railroad flagman's semi-monthly time sheet, or other similar documentation, attesting that the flagman was present during the time recorded.

(2) The Railroad flagman assigned to the project will be responsible for notifying the Highway Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Highway Engineer will document such notification in the project records. When requested, the Highway Engineer will also sign the flagman's time sheets showing daily time spent at the project site.

7. TRANSPORTING MATERIALS AND EQUIPMENT ACROSS TRACKS:

Any temporary grade crossings, work mats, or other means needed during construction by the Contractor for transporting materials of any nature or equipment across railroad tracks or property of Railroad will be the responsibility of the Contractor to handle directly with the Railroad and to make all necessary arrangements and to obtain all required approvals. The Contractor may be required to execute a written agreement with the Railroad to cover such matters and appropriate time should be allowed for the preparation and handling of such agreement. The Contractor will be required to bear all costs incidental to such matters including watching and flagging services by Railroad personnel. Safety guidelines are given in paragraph 10.

8. WORK FOR THE BENEFIT OF THE CONTRACTOR:

A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Department and the Railroad; or will be covered by appropriate revisions to same which will be initiated and approved by the Department and the Railroad.

B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished, including any required flagging service, at the Contractor's expense.

9. COOPERATION AND DELAYS

A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.

B. No charge or claims of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railway traffic, any work performed or to be performed by the Railroad, or other delay incident to or necessary for safe maintenance of railway traffic and facilities, or for any delays due to compliance with this special provision.

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

10. SAFETY GUIDELINES:

A. Guidelines for Personnel on Railroad Right-of-Way

(1) All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Safety boots are strongly recommended.

(2) No one is allowed within 25 feet of the centerline of track without specific authorization from the flagman.

(3) All persons working near track while train is passing are to look out for dragging bands, chains and protruding or shifted cargo.

(4) No one is allowed to cross tracks without specific authorization from flagman.

(5) All welders and cutting torches working within 25 feet of the track must stop when train is passing.

(6) No steel tape or chain will be allowed to cross or touch rails without permission.

B. Guidelines for Equipment on Railroad Right-of-Way

(1) No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15 feet of the centerline of track without specific permission from railroad official and flagman.

(2) No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.

(3) All employees will stay with their machines when crane or boom equipment is pointed toward track.

(4) All cranes and boom equipment under load will stop work while train is passing (including pile driving).

(5) Swinging loads must be secured to prevent movement while train is passing.

(6) No loads will be suspended above a moving train.

(7) No equipment will be allowed within 25 feet of centerline of track without specific authorization of the flagman.

(8) Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.

(9) No equipment or load movement within 25 feet or above a standing train or railroad equipment without specific authorization of flagman.

(10) All operating equipment within 25 feet of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.

(11) All equipment, loads, and cables are prohibited from touching rails.

(12) While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.

(13) No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.

(14) All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.

(15) All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

11. INSURANCE:

A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Contractor will be required to carry insurance of the following kinds:

(1) Contractor's Public Liability and Property Damage Liability Insurance.

The Contractor shall furnish to the Railroad and copy to the Department the certificate of insurance in TRIPLICATE as evidence that with respect to the operations he performs he carries regular Contractor's Public Liability Insurance and regular Contractor's Property Damage Liability Insurance both providing for limits of not less than $2,000,000.00.

(2) Contractor's Protective Public Liability and Property Damage Liability Insurance.

The Contractor shall furnish the Railroad and copy to the Department the certificate of insurance in TRIPLICATE as evidence that with respect to the operations performed for him by any subcontractor, he carries in his own behalf regular Contractor's Protective Public Liability Insurance and regular Contractor's Protective Property Damage Liability Insurance both providing for limits of not less than $2,000,000.00.

CERTIFICATE HOLDER for (1) and (2) above is as follows:

Georgia Southwestern Railroad, Inc.
78 Pulpwood Road
Dawson, Georgia 39842

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

(3) Railroad Protective Liability Insurance.

The Contractor shall furnish to the Railroad and copy to the Department the ORIGINAL AND TWO (2) COPIES of Railroad Protective Insurance Policy with limits of liability as follows:

COVERAGE	MINIMUM COMBINED LIMITS OF LIABILITY
Bodily Injury Liability]	
	$2,000,000.00 per occurrence
Property Damage Liability]	$6,000,000.00 aggregate
Physical Damage to Property]	

The Standards for this protective insurance shall follow the requirements of Part 646, Subpart A, of Title 23, Highways, of the Code of Federal Regulations, current edition.

Railroad protective insurance shall be provided on "ISO-RIMA" (Insurance Services Office – Railroad Insurance Management Association) policy form No. CG 00 35 01 96. ISO Amendatory Endorsement No. CG 28 31 10 93 should also be included if a policy form number other than the foregoing is used. The equivalent of the foregoing will also be acceptable.

BINDERS ARE NOT ACCEPTABLE FOR THIS COVERAGE

NAMED INSURED for Railroad Protective Liability Insurance is as follows:

Georgia Southwestern Railroad, Inc.
78 Pulpwood Road
Dawson, Georgia 39842

B. Evidence of insurance as required in A. above shall be furnished to the address shown below for review and approval by the Railroad and copied to the Department:

NOTICE TO:	COPY NOTICE TO:
Mr. Dave Smoot Corporate Secretary Georgia Southwestern Railroad, Inc. 78 Pulpwood Road Dawson, Georgia 39842	State Utilities Engineer Georgia Department of Transportation 935 E. Confederate Ave., Bldg. 24 Atlanta, Georgia 30316

The project number, description of the work and designation of the job site to be shown on all insurance certificates and policies are as follows:
Project: EDS-19(44), P.I. No. 462395, Lee County,
Construction of new overhead bridge on the realigned SR 3 / US 19 over S.R 118 and the tracks of Georgia Southwestern Railroad, Inc. located at 931.86 feet to railroad milepost 275, north of Smithville Georgia in Lee County, Georgia. This section of the railroad is owned by Central of Georgia Railroad Company and the operating railroad is Georgia Southwestern Railroad, Inc.

C. If any part of the work is sublet, similar insurance and evidence thereof in the same amounts as required of the Prime Contractor, shall be provided by or in behalf of the subcontractor to cover his operations. Endorsements to the Prime Contractor's policies specifically naming subcontractors and describing their operations will be acceptable for this purpose.

D. All insurance hereinbefore specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the rights-of-way of the Railroad as evidenced by the formal acceptance by the Department and the Railroad. Insuring companies may cancel insurance by permission of the Department and Railroad or on THIRTY (30) days written notice to the Department and Railroad as follows:

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

NOTICE TO:	COPY NOTICE TO:
Mr. Dave Smoot Corporate Secretary Georgia Southwestern Railroad, Inc. 78 Pulpwood Road Dawson, Georgia 39842	State Utilities Engineer Georgia Department of Transportation 935 E. Confederate Ave., Bldg. 24 Atlanta, Georgia 30316

12. FAILURE TO COMPLY:

In the event the Contractor violates or fails to comply with any of the requirements of this special provision:

(1) The Railroad Engineer may require that the Contractor vacate Railroad property.

(2) The Highway Engineer may withhold all monies due the Contractor on monthly statements.

Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Highway Engineer.

13. PAYMENT FOR COST OF COMPLIANCE:

No separate payment will be made for any cost incurred on account of compliance with this special provision. All such cost shall be included in prices bid for other items of the work.

Date: April 5, 2006

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

Project: **EDS-19(44) Lee County**
P.I. No. 462395

Widening and reconstruction of existing at-grade crossings across the track Central of Georgia Railroad Company at four locations. **Location 1:** Gosa Road (CR 33) across the track Central of Georgia Railroad Company at railroad milepost J-280.01; railroad inventory number 733550B. **Location 2:** Pitts Road (CR 34) across the track Central of Georgia Railroad Company at railroad milepost J-278.80; railroad inventory number 733548A. **Location 3:** Eagle Pond Road (CR 28) across the track Central of Georgia Railroad Company at railroad milepost J-277.50; railroad inventory number 733546L. **Location 4:** Pettis Road (CR 37) across the track Central of Georgia Railroad Company at railroad milepost J-276.15; railroad inventory number 733544X; along SR 3 / US 19, north of Smithville in Lee County, Georgia. Average train movement through this area is approximately 5 trains per day at typical speeds of 50 mph. There are no passenger trains at these locations.

1. AUTHORITY OF RAILROAD ENGINEER AND HIGHWAY ENGINEER:

   The authorized representative of the Railroad, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic and facilities including the adequacy of the foundations and structures supporting the railroad tracks and the necessity for flagging during construction.

   The authorized representative of the Chief Engineer, hereinafter referred to as the Highway Engineer, shall have authority over all other matters as prescribed herein and in the Department's Standard Specifications, current edition, as may be revised for this project.

2. NOTICE OF STARTING WORK:

   A. The Contractor shall not commence any work on Railroad rights-of-way until he has complied with the following conditions:

      (1) Given the Railroad written notice, with copy to the Department, at the addresses shown below and to the Highway Engineer who has been designated to be in charge of the work, at least 10 working days in advance of the date he proposes to begin work on Railroad rights-of-way. If flagging is required, it may take up to 30 days to obtain from the Railroad and no work shall be undertaken until flagging is present at the job site.

Notice to:

Mr. J. N. Carter, Jr.
Chief Engineer Bridges & Structures
Norfolk Southern Corporation
1200 Peachtree Street, N.E., 7th Floor
Atlanta, Georgia 30309
(404) 582-5588

Copy to:

State Utilities Engineer
Georgia Department of Transportation
935 E. Confederate Ave., Bldg. 24
Atlanta, Georgia 30316

(2) Obtained written authorization from the Railroad to begin work on Railroad rights-of-way, such authorization may include an outline of specific and general conditions with which he must comply.

(3) Obtained written approval from the Railroad of railroad protective and general liability insurance coverages as required by paragraph 11.

(4) Furnished a schedule for all work within the Railroad rights-of-way as required by paragraph 6 B (1).

B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, area of responsibility of each representative shall be specified.

3. INTERFERENCE WITH RAILROAD OPERATIONS AND PROPERTY:

A. The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, and communication services, or damage to the facilities or property of the Railroad or tenants on the right-of-way of the Railroad. Whenever work is liable to affect such operations, safety, facilities, or property, the method of doing such work shall first be submitted to the Railroad Engineer for review and approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging and inspection by the Railroad shall be deferred by the Contractor until the flagging and inspection required by the Railroad is available at the job site.

B. Whenever work within Railroad rights-of-way is of such a nature that impediment to Railroad operations such as use of runaround or detour tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.

C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations, facilities, and property of the Railroad, the Contractor shall make such provisions. If in the judgement of the Railroad Engineer, or in his absence, the Highway Engineer, such provision is insufficient, either may require or make such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the Department.

4. CONSTRUCTION PROCEDURES:

A. General:

Construction work and operations by the Contractor on Railroad rights-of-way, or property, shall be:

(1) Subject to the inspection and approval of the Railroad.

(2) In accord with the Railroad's written outline of specific conditions.

(3) In accord with the Railroad's general rules, regulations, and requirements including those relating to safety, fall protection, and personal protective equipment. Safety guidelines are given in paragraph 10.

(4) In accord with this special provision.

B. Track Clearances:

The minimum track clearances to be maintained by the Contractor during construction are shown on the highway project plans and included in project special provisions or other contract documents. Clearances less than these will not be permitted unless specifically authorized by the Railroad Engineer. If minimum clearances are not stated in project plans and or contract documents, then such clearances shall be specified by the Railroad Engineer.

C. Temporary Excavation:

The subgrade of an operated track shall be maintained with edge of berm at least 10 feet from centerline of track and not more than 24 inches below top of rail. Contractor will not be required to make existing section meet this specification if the existing section is substandard, in which case existing section will be maintained.

D. Excavation for Structures:

The Contractor will be required to take special precaution and care in connection with excavating and shoring pits for construction of bridges, walls, footings, drainage pipes or structures under or adjacent to tracks, and any other structures or construction, including the driving of piles or sheeting, adjacent to tracks to provide adequate lateral and vertical support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for excavation and shoring, shall first be approved by the Railroad Engineer, but such approval shall not relive the Contractor from liability. Before submission of plans to the Railroad Engineer for approval, such plans shall first be reviewed by the Department's Office of Bridge and Structural Design.

E. Blasting:

(1) The Contractor shall obtain advance approval of the Railroad Engineer and the Highway Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

(a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor.

(b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.

(c) No blasting shall be done without the presence of an authorized representative of the Railroad. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed (see paragraph 2B above) will be required to arrange for the presence of an authorized Railroad representative and such flagging the Railroad may require.

(d) Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains. Correction of any track misalignment or other damage to Railroad property resulting from the blasting shall be done as directed by the Railroad's authorized representative at the Contractor's expense. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.

(e) Storage of explosives on Railroad property will not be permitted.

(f) Furnish satisfactory evidence of XCU (explosion-collapse-underground damage) insurance coverage.

(2) The Railroad representative will:

(a) Determine the approximate location of trains and advise the Contractor the approximate amount of time available for the blasting operation and clean-up.

(b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with this special provision.

(3) Other Requirements:

Each Railroad has its own requirements for blasting which may include provisions in addition to the above. It is the contractor's responsibility to contact the Railroad before performing any blasting and determine and comply with these requirements. The Contractor shall handle all matters relating to blasting with the Railroad and pay for all costs involved.

F. Maintenance and Repair of Railroad Facilities:

(1) The Contractor will maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required by Highway Project plans and contract documents. The Contractor will promptly repair eroded areas within Railroad rights-of-way.

(2) The Contractor will also repair, or cause to be repaired, any other damage to the property or facilities of the Railroad or its tenants.

(3) All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

G. Storage of Materials and Equipment:

Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment. All grading or construction machinery that is left parked unattended near the track or on the Railroad rights-of-way shall be effectively immobilized so that it cannot be moved by unauthorized persons. Safety guidelines are given in paragraph 10.

H. Cleanup:

Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights-of-way, all machinery, equipment, surplus materials, falsework, temporary erosion measures, rubbish or temporary buildings of the Contractor, and leave said rights-of-way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative.

5. DAMAGES:

A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.

B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

6. FLAGGING SERVICES:

A. When Required

Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations and facilities. In general, the requirements for flagging will be whenever the Contractor's personnel or equipment are, or are likely to be, working on the Railroad's right-of-way, or within distances as may be specified by Railroad's authorized representative, or across, over, adjacent to, or under a

track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging. These requirements include situations where a crane, or other piece of equipment, is located such that its boom, or extremity, could move and pass within 20 feet of the centerline of a track or within a distance as may otherwise be specified by Railroad's authorized representative. **Normally the Railroad will assign one flagman to a project, based on an 8 hour workday and 40 hour workweek, but in some cases more than one may be necessary.**

B. Scheduling and Notification

(1) Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad right-of-way.

(2) The Contractor will be required to give the Railroad representative at least 10 working days of advance notice of intent to begin work within Railroad right-of-way in accordance with paragraph 2.A.(1) of this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the contractor shall furnish the Highway Engineer a copy; if notice is given verbally it shall be confirmed in writing with copy to the Highway Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen, is present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad practices, in some cases it may be necessary to give 5 days notice before flagging service may be discontinued and payment stopped.

(3) If, after the flagman is assigned to the project site, unusual circumstances or conditions arise which require the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delays shall be done by the Contractor and not the Department or Railroad.

C. Payment

(1) The Contractor will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction. The Contractor shall not delegate this responsibility to any subcontractor or any other party. The Department will not reimburse the Railroad for any costs of the flagging which is required by the Contractor's work. The cost of flagging service is approximately $37.50 per hour or $300 per day based on an 8-hour work day and 40-hour work week. This cost includes the base pay for the flagman, overhead, and generally includes travel expenses, meals, lodging, equipment, etc. The charge to the Contractor by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required. Work by a flagman in excess of 8 hours per day and 40 hours per week may result in overtime pay at 1 ½ time the appropriate rate. Also, certain unusual conditions may arise which may result in overtime pay at 2 times the appropriate rate. Railroad work involved in preparing and handling bills may also be charged to the Contractor. Charges to the Contractor by the Railroad shall be in accordance with Federal-Aid Highway billing procedures and requirements as contained in applicable provisions of Part 140, Subpart I, and Part 646, Subpart B, of Title 23, Highways, of the Code of Federal Regulations, current edition, and shall further be on the same basis as the Department would be billed by the Railroad if the Department was paying for the charges.

(2) The contractor will be billed for flagging services on a periodic basis directly by the Railroad and Contractor will promptly pay such bills within 30 days after each bill is rendered. Should the Contractor fail to pay the Railroad within 60 days after any bill is rendered, the Department may pay directly to the railroad any amounts due and deduct the amount of such payments from any funds due the contractor. This provision does not affect the obligation of the Contractor under his bond or the rights of the Railroad or the Department under the bond.

D. Verification

(1) The Contractor will review and sign the Railroad flagman's semi-monthly time sheet, or other similar documentation, attesting that the flagman was present during the time recorded.

(2) The Railroad flagman assigned to the project will be responsible for notifying the Highway Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Highway Engineer will document such notification in the project records. When requested, the Highway Engineer will also sign the flagman's time sheets showing daily time spent at the project site.

7. TRANSPORTING MATERIALS AND EQUIPMENT ACROSS TRACKS:

Any temporary grade crossings, work mats, or other means needed during construction by the Contractor for transporting materials of any nature or equipment across railroad tracks or property of Railroad will be the responsibility of the Contractor to handle directly with the Railroad and to make all necessary arrangements and to obtain all required approvals. The Contractor may be required to execute a written agreement with the Railroad to cover such matters and appropriate time should be allowed for the preparation and handling of such agreement. The Contractor will be required to bear all costs incidental to such matters including watching and flagging services by Railroad personnel. Safety guidelines are given in paragraph 10.

8. WORK FOR THE BENEFIT OF THE CONTRACTOR:

A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Department and the Railroad; or will be covered by appropriate revisions to same which will be initiated and approved by the Department and the Railroad.

B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished, including any required flagging service, at the Contractor's expense.

9. COOPERATION AND DELAYS

A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.

B. No charge or claims of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railway traffic, any work performed or to be performed by the Railroad, or other delay incident to or necessary for safe maintenance of railway traffic and facilities, or for any delays due to compliance with this special provision.

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

10. SAFETY GUIDELINES:

A. Guidelines for Personnel on Railroad Right-of-Way

(1) All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Safety boots are strongly recommended.

(2) No one is allowed within 25 feet of the centerline of track without specific authorization from the flagman.

(3) All persons working near track while train is passing are to look out for dragging bands, chains and protruding or shifted cargo.

(4) No one is allowed to cross tracks without specific authorization from flagman.

(5) All welders and cutting torches working within 25 feet of the track must stop when train is passing.

(6) No steel tape or chain will be allowed to cross or touch rails without permission.

B. Guidelines for Equipment on Railroad Right-of-Way

(1) No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15 feet of the centerline of track without specific permission from railroad official and flagman.

(2) No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.

(3) All employees will stay with their machines when crane or boom equipment is pointed toward track.

(4) All cranes and boom equipment under load will stop work while train is passing (including pile driving).

(5) Swinging loads must be secured to prevent movement while train is passing.

(6) No loads will be suspended above a moving train.

(7) No equipment will be allowed within 25 feet of centerline of track without specific authorization of the flagman.

(8) Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.

(9) No equipment or load movement within 25 feet or above a standing train or railroad equipment without specific authorization of flagman.

(10) All operating equipment within 25 feet of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.

(11) All equipment, loads, and cables are prohibited from touching rails.

(12) While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.

(13) No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.

(14) All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.

(15) All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

11. INSURANCE:

A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Contractor will be required to carry insurance of the following kinds:

(1) Contractor's Public Liability and Property Damage Liability Insurance.

The Contractor shall furnish to the Railroad and copy to the Department the certificate of insurance in TRIPLICATE as evidence that with respect to the operations he performs he carries regular Contractor's Public Liability Insurance and regular Contractor's Property Damage Liability Insurance both providing for limits of not less than $2,000,000.00.

(2) Contractor's Protective Public Liability and Property Damage Liability Insurance.

The Contractor shall furnish the Railroad and copy to the Department the certificate of insurance in TRIPLICATE as evidence that with respect to the operations performed for him by any subcontractor, he carries in his own behalf regular Contractor's Protective Public Liability Insurance and regular Contractor's Protective Property Damage Liability Insurance both providing for limits of not less than $2,000,000.00.

CERTIFICATE HOLDER for (1) and (2) above is as follows:

Norfolk Southern Railway Company
Three Commercial Place
Norfolk, Virginia 23510-2191

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

(3) Railroad Protective Liability Insurance.

The Contractor shall furnish to the Railroad and copy to the Department the ORIGINAL AND TWO (2) COPIES of Railroad Protective Insurance Policy with limits of liability as follows:

COVERAGE	MINIMUM COMBINED LIMITS OF LIABILITY
Bodily Injury Liability]	
	$2,000,000.00 per occurrence
Property Damage Liability]	$6,000,000.00 aggregate
Physical Damage to Property]	

The Standards for this protective insurance shall follow the requirements of Part 646, Subpart A, of Title 23, Highways, of the Code of Federal Regulations, current edition.

Railroad protective insurance shall be provided on "ISO-RIMA" (Insurance Services Office – Railroad Insurance Management Association) policy form No. CG 00 35 01 96. ISO Amendatory Endorsement No. CG 28 31 10 93 should also be included if a policy form number other than the foregoing is used. The equivalent of the foregoing will also be acceptable.

BINDERS ARE NOT ACCEPTABLE FOR THIS COVERAGE

NAMED INSURED for Railroad Protective Liability Insurance is as follows:

Norfolk Southern Railway Company
Three Commercial Place
Norfolk, Virginia 23510-2191

B. Evidence of insurance as required in A. above shall be furnished to the address shown below for review and approval by the Railroad and copied to the Department:

NOTICE TO:	COPY NOTICE TO:
Mr. David W. Fries, ARM Risk Management Department Norfolk Southern Corporation Three Commercial Place Norfolk, Virginia 23510-2191	State Utilities Engineer Georgia Department of Transportation 935 E. Confederate Ave., Bldg. 24 Atlanta, Georgia 30316

The project number, description of the work and designation of the job site to be shown on all insurance certificates and policies are as follows:
Project: EDS-19(44), PI No. 462395, Lee County,
widening and reconstruction of existing at-grade crossings across the track Central of Georgia Railroad Company at four locations. **Location 1:** Gosa Road (CR 33) across the track Central of Georgia Railroad Company at railroad milepost J-280.01; railroad inventory number 733550B. **Location 2:** Pitts Road (CR 34) across the track Central of Georgia Railroad Company at railroad milepost J-278.80; railroad inventory number 733548A. **Location 3:** Eagle Pond Road (CR 28) across the track Central of Georgia Railroad Company at railroad milepost J-277.50; railroad inventory number 733546L. **Location 4:** Pettis Road (CR 37) across the track Central of Georgia Railroad Company at railroad milepost J-276.15; railroad inventory number 733544X; along SR 3 / US 19, north of Smithville in Lee County, Georgia.

C. If any part of the work is sublet, similar insurance and evidence thereof in the same amounts as required of the Prime Contractor, shall be provided by or in behalf of the subcontractor to cover his operations. Endorsements to the Prime Contractor's policies specifically naming subcontractors and describing their operations will be acceptable for this purpose.

D. All insurance hereinbefore specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the rights-of-way of the Railroad as evidenced by the formal acceptance by the Department and the Railroad. Insuring companies may cancel insurance by permission of the Department and Railroad or on THIRTY (30) days written notice to the Department and Railroad as follows:

SPECIAL PROVISION FOR PROTECTION OF RAILWAY INTERESTS

NOTICE TO:	COPY NOTICE TO:
Mr. David W. Fries, ARM Risk Management Department Norfolk Southern Corporation Three Commercial Place Norfolk, Virginia 23510-2191	State Utilities Engineer Georgia Department of Transportation 935 E. Confederate Ave., Bldg. 24 Atlanta, Georgia 30316

12. FAILURE TO COMPLY:

In the event the Contractor violates or fails to comply with any of the *requirements of this special provision:*

(1) The Railroad Engineer may require that the Contractor vacate Railroad property.

(2) The Highway Engineer may withhold all monies due the Contractor on monthly statements.

Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Highway Engineer.

13. PAYMENT FOR COST OF COMPLIANCE:

No separate payment will be made for any cost incurred on account of compliance with this special provision. All such cost shall be included in prices bid for other items of the work.