March 15, 2007

Lisa L. Myers
Design Review Engineer Manager
Georgia Department of Transportation
#2 Capitol Square, Room 266
Atlanta, GA 30334

RE: Submittal of Value Engineering Study Report
Project Task Order No. 7 – Contract TOOESESV060196
Project Jennings Mill Parkway
Project No. STP-F001-00(098) – P.I. Number: 0001098
County Oconee

Dear Ms. Myers:

We are pleased to submit this one (1) CD-ROM copy of the PDF version of the report and one (4) hard copies of the final value engineering report for the above noted project. This Value Engineering workshop was performed during the week of February 26 – March 1, 2007. The team fielded by PBS&J was able to identify forty-two creative ideas and, in the end produced twelve alternatives that have the potential for affecting the cost of constructing these new facilities. In addition, the team has provided three design suggestions that could help create an even stronger end product as the design moves to construction.

We trust that you will find this report to be in proper order. It should be noted that the results of this workshop are volatile in that they can be overcome by the events that accompany the expeditious continuance of the design process. Accordingly, we encourage an equally expeditious implementation meeting to design the disposition of the contents of this report.

Thank you very much for this opportunity to work with you and the hard working staff of the Georgia Department of Transportation.

Yours truly,

PBS&J

Charles R. McDuff, PE, CVS, CCE
Project Manager

Certified Value Specialist - Life
Certification No. 820102

Value Engineering Study Report

Project
Jennings Mill Parkway
SR 316 to Epps Bridge Road
State Aid Project

Oconee County

P.I. No. 0001098

STP-F001-00(098)

Value Management Team

Design Team:

Moreland Altobelli Associates, Inc
McGee Partners, Inc.

March 2007

Value Engineering Study Report

Jennings Mill Parkway
SR 316 to Epps Bridge Road
Oconee County, Georgia

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Executive Summary

Executive Summary

INTRODUCTION

This report summarizes the analysis and conclusions by the PBS&J Value Engineering workshop team as they performed a VE study during the period of February 26 – March 1, 2007 in Atlanta, at the office of the Georgia Department of Transportation. The subject of the Value Engineering study was the project for the construction of the new Jennings Mill Parkway Extension and related improvements, in Oconee County, Georgia. The design is being performed by McGee Partners, Inc. as a subcontractor to Moreland Altobelli Associates, Inc.

PROJECT DESCRIPTION

Georgia DOT Project STP-F001-00 (098), Jennings Mill Parkway Extension, is located in Oconee County approximately 5.3 miles southwest of downtown Athens and less than one-half mile south of the Clarke County line. The project would begin at the northern terminus of Georgia DOT Project STP-1267(8), SR 53 and Mars Hill Road, and it proposes to construct on new location the Jennings Mill Parkway Extension from Virgil Langford Road at the Oconee Connector east to the Jennings Mill Parkway at Epps Bridge Road. The proposed project consists of a 4-lane divided roadway with a 20-foot raised median from the Oconee Connector to Frontage Road East and consists of a 5-lane section with a footprint for a future 20-foot raised median from Frontage Road East to Epps Bridge Road. The proposed 5-lane section would include a 14-foot two-way left turn lane, two 12-foot inside and two 13-foot outside travel lanes, two 6-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The 4-lane divided section with the 20-foot median will also have 4-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The project would also include bridging Jennings Mill Parkway over SR 10 Loop/Paul Brown Parkway and constructing a half diamond interchange with northwest facing ramps. Additional proposed improvements include: the relocation of Jennings Mill Road on the south side of SR 10 Loop that would bend the roadways at the ramps of the new interchange and tie into Virgil Langford Road; a cul-de-sac that would be constructed at the end of the of the remaining portion of the Jennings Mill Road, southeast of the new interchange; and, a new frontage road that would be constructed on the northeast side of SR 10 Loop, connecting the Jennings Mill Parkway Extension to Jennings Mill Road.

This project is rather fully described in the documentation that follows. The current new estimate for the cost of construction totals $30,188,000. More information about this project may be found in the tabbed section of this report entitled ***Project Description***.

VALUE ENGINEERING PROCESS

The Value Engineering team followed the seven step Value Engineering job plan as promulgated by the Georgia Department of Transportation. This seven step job plan includes the following:

- Investigative
- Analysis
- Speculation
- Evaluation
- Development
- Recommendation
- Presentation

This report is a component of the Presentation Phase. As part of the VE workshop in Atlanta, the team made an informal presentation of their results on the last afternoon of the workshop. This report is intended to formalize the workshop results and set the stage for a formal implementation meeting in which alternatives and design suggestions will typically be accepted, accepted with modifications, or rejected for cause. The worksheet that follows, along with the formally developed alternatives and design suggestions can be used as "score sheet" for the implementation meeting. It is also included in this report to identify, on a summary basis, the results of the workshop. The reader is encouraged to visit the third tabbed section of this report for a review of the details of the study results. Tabbed section number four includes information about the project itself and tabbed section number five goes into more detail about the process of Value Engineering, as used in this workshop.

Again, as mentioned earlier, the enclosed Summary of Alternatives and Design Suggestions, coupled with the documentation of the developed alternatives in the tabbed section of the report entitled ***Study Results***, should provide the reader with the information required to fully evaluate the merits of the alternatives that the VE team documented during their work in the study.

SUMMARY OF ALTERNATIVES & DESIGN SUGGESTIONS

Georgia Department of Transportation
JENNINGS MILL ROAD -- STP-F001-00(098), Oconee County
P.I. No. 00011098

Alternative Number	Description of Alternative	Initial Cost Savings	COMMENTS	FINAL DISPOSITION
	(EW) EARTHWORK			
EW-3	Use guardrails to steepen side slopes	Design Suggestion		
	(SP)STORM PIPING AND RELATED TOPICS			
SP-2	Change Frontage Road East from Urban to Rural Design	$218,269		
	(CI) CONCRETE ITEMS			
CI-2	Reduce sidewalk runs	$95,161		
	(AP) ASPHALT PAVEMENT			
AP-1	Use asphalt concrete in lieu of PC concrete pavement on ramps	$290,169	Life cycle cost of ownership indicates a savings of $224,115	
AP-2	Selectively decrease pavement width	$152,304		
AP-3	Relocate bicycle lanes	$180,153		
AP-7	Reduce pavement width on Frontage Road	$198,548		
	(BI) BRIDGE ITEMS			
BI-1	Eliminate end spans and use walled abutments	$663,365		
BI-2	Eliminate 4' - 2" raised median	$107,756		
BI-5	Eliminate 2 degree skew on bridge	Design Suggestion		
BI-6	Combine shoulder and bike lane on bridge	$163,795		
	(MI) MISCELLANEOUS IDEAS			
MI-1A	Change concrete barrier wall type to MSE	$34,298		
MI-1B	Change concrete barrier wall type to modular block walls	$216,495		
MI-3	Mid-Point of Construction for Cost Estimate	Design Suggestion		
MI-5	Use roundabouts at ramp ends	$147,434	Total LCC = $460,325	

Study Results

Study Results

Introduction

This section includes the study results presented in the form of fully developed value engineering alternatives that include descriptions of the original design, description of the alternative design configurations, opportunities and risks associated with the alternatives, sketches, calculations and technical justification for these alternatives. For the most part, these fully developed alternatives represent an array of choices that clearly could have an impact on the eventual cost and performance of the finished project.

The documented alternatives also include three Design Suggestions. As their name implies, these are short write-ups making note of VE perspectives on technical issues and sharing some thoughts for consideration as the design moves forward.

This introductory sheet is followed by a ***Summary of Alternatives & Design Suggestions*** table which provides the reader with the listing of the developed alternatives and design suggestions and an indication of their potential cost impact on the project. This table may also be used as a "score sheet" during an implementation meeting if desired. It should be noted that the alternatives that are included, which have cost estimates attached are not necessarily representative of the final cost outcome for each alternative. Some of these alternatives have components that are mutually exclusive so they may not be added together.

The users of this report are asked to consider these alternatives and design suggestions as a smorgasbord of choices for selection and use as the project moves forward.

Cost Calculations

The cost calculations are intended only as a guide to the approximate results that might be expected from implementation of the alternatives. They should be helpful in making clear choices as to the pursuit of individual alternatives.

The composite mark-up of 10% for the construction cost comparisons was derived from the cost estimate for the project. This estimate can be found in the section of this report entitled ***Project Description.***

SUMMARY OF ALTERNATIVES & DESIGN SUGGESTIONS

Georgia Department of Transportation
JENNINGS MILL ROAD -- STP-F001-00(098), Oconee County
P.I. No. 00011098

Alternative Number	Description of Alternative	Initial Cost Savings	COMMENTS	FINAL DISPOSITION
	(EW) EARTHWORK			
EW-3	Use guardrails to steepen side slopes	Design Suggestion		
	(SP)STORM PIPING AND RELATED TOPICS			
SP-2	Change Frontage Road East from Urban to Rural Design	$218,269		
	(CI) CONCRETE ITEMS			
CI-2	Reduce sidewalk runs	$95,161		
	(AP) ASPHALT PAVEMENT			
AP-1	Use asphalt concrete in lieu of PC concrete pavement on ramps	$290,169	Life cycle cost of ownership indicates a savings of $224,115	
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AP-3	Relocate bicycle lanes	$180,153		
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	(BI) BRIDGE ITEMS			
BI-1	Eliminate end spans and use walled abutments	$663,365		
BI-2	Eliminate 4' - 2" raised median	$107,756		
BI-5	Eliminate 2 degree skew on bridge	Design Suggestion		
BI-6	Combine shoulder and bike lane on bridge	$163,795		
	(MI) MISCELLANEOUS IDEAS			
MI-1A	Change concrete barrier wall type to MSE	$34,298		
MI-1B	Change concrete barrier wall type to modular block walls	$216,495		
MI-3	Mid-Point of Construction for Cost Estimate	Design Suggestion		
MI-5	Use roundabouts at ramp ends	$147,434	Total LCC = $460,325	

Value Analysis Design Suggestion

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **EW-3**

DESCRIPTION: **USE GUARD RAILS TO STEEPEN SIDE SLOPES**

SHEET NO.: 1 of 1

Original Design:

The current project calls for approximately 328,000 cubic yards of borrow to be brought into the site.

Alternative:

Where permissible, guard rails might be used to permit the fill slopes to be steepened. This would be in effort to reduce the amount of borrow required to construct the fills.

Opportunities:

- Should help reduce the volume of truck traffic hauling fill into the site.
- There may be some initial cost savings

Risks:

- Some redesign required

Technical Discussion:

Often, it is desirable to do the opposite, i.e., flatten side slopes in order to eliminate guard rail. However, in this instance, guard rails could potentially make it possible to reduce the amount of borrow to build embankments. This is a two-edged sword. There are only limited opportunities for this application. Secondly, using the guard rails will increase the maintenance costs over the life of the project.

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No.STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **SP-2**

DESCRIPTION: **CHANGE FRONTAGE ROAD EAST FROM URBAN SECTION TO RURAL SECTION**

Original Design:

Frontage Road East is designed as an urban section with concrete curb and gutter, storm drain pipe and drainage structures for the entire roadway width.

Alternative:

Frontage Road East would be changed to a rural sectio thereby eliminating curb and gutter and all drainage items fo rthe roadway surface. Shoulders would be graded to slope away from the centerline at the same grade as the roadway.

Opportunities:

- Initial cost savings

Risks:

- Control of shoulder and slope erosion
- Some redesign required.

Technical Discussion:

This section of roadway has no development at this time and is similar to other rural sections in the area. As development begins, curb and gutter and drainage would be installed as part of the development.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 1,234,781	$	$ 1,234,781
ALTERNATIVE	$ 1,016,512	$	$ 1,016,512
SAVINGS	$ 218,269	$	$ 218,269

Illustrations

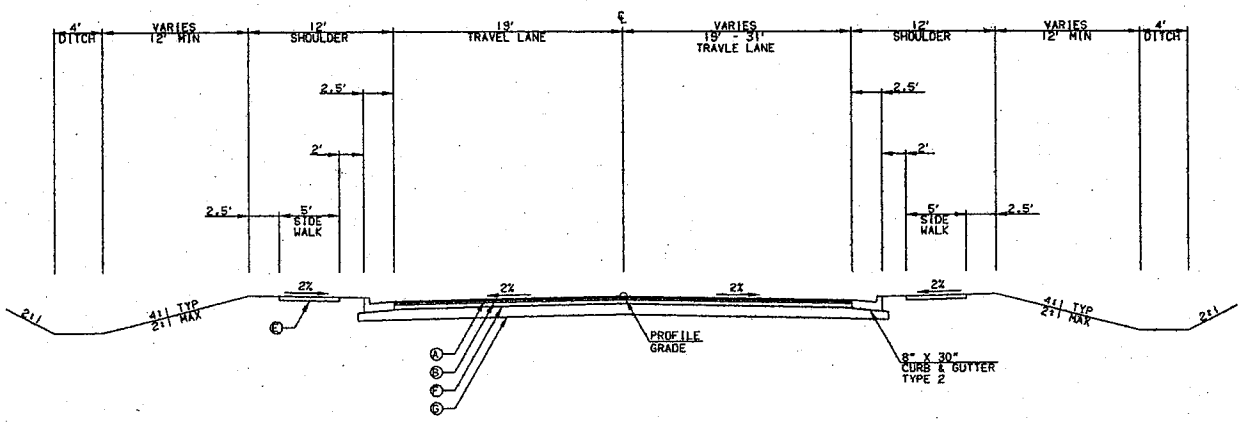
PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: SP-2

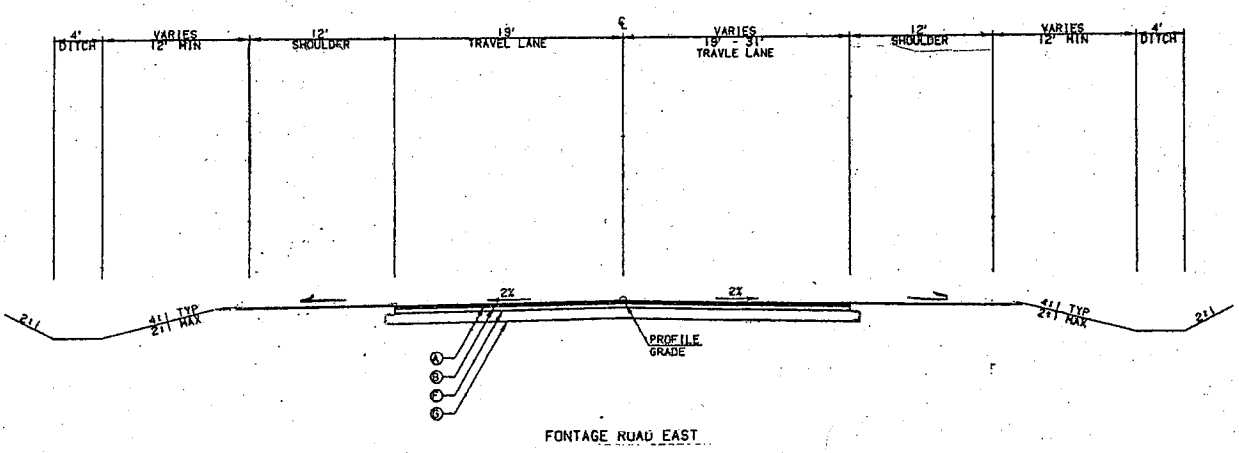
DESCRIPTION:

SHEET NO.: 2 of 4



FONTAGE ROAD EAST

ORIGINAL DESIGN – URBAN SECTION



FONTAGE ROAD EAST

ALTERNATE DESIGN – RURAL SECTION

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

ALTERNATIVE NO.: **SP-2**

DESCRIPTION: **CHANGE FRONTAGE ROAD EAST FROM URBAN SECTION TO RURAL SECTION**

Original Design – Frontage Road East

End of Radius @ Jennings Mill Road – STA 403+00
Begin of Radius @ Jennings Mill Pkwy – STA 428+50

Drainage System "U"	Total	11 Catch Basins 565 LF – 18"
Drainage System "V"	Total	7 Catch Basins 1 FES – 24" 312 LF – 18" 50 LF – 24"
Drainage System "Y"	Total	3 Catch Basins 1 FES – 18" 567 LF – 18"

STA 403+00 – STA 428+50
2550 LF x2 = 5100 LF

Concrete Curb & Gutter 5100 LF

Quantity Total

668-1100 Catch Basin GP1	21 EA
550-1180 Storm Drain Pipe, 18 in	1444 LF
550-1240 Storm Drain Pipe, 24 in	50 LF
550-4218 FES 18 in Storm Drain	1 EA
550-4224 FES 24 in Storm Drain	1 EA

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	SP-2
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Change Frontage Road East From Urban Section to Rural Section*	SHEET NO.:	4 of 4

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
441-6222 Concrete Curb & Gutter, 8 in. x 30 in, TP2	LF	26000	$ 17.08	$ 444,080.00	20900	$ 17.08	$ 356,972.00
550-1180 Storm Drain Pipe, 18 in.	LF	8000	$ 41.02	$ 328,160.00	6556	$ 41.02	$ 268,927.00
550-1240 Storm Drain Pipe, 24 in.	LF	3000	$ 53.78	$ 161,340.00	2950	$ 53.78	$ 158,651.00
550-4218 FES, 18 in., Storm Drain	EA	6	$ 678.07	$ 4,068.00	5	$ 678.07	$ 3,390.00
550-4224, FES, 24 in. Storm Drain	EA	3	$ 882.93	$ 2,648.00	2	$ 882.93	$ 1,765.00
668-1100 Catch Basin, GP1	EA	80	$ 2,277.92	$ 182,233.00	59	$ 2,277.92	$ 134,397.00
Sub-total				$ 1,122,529			$ 924,102
Mark-up at 10.00%				$ 112,253			$ 92,410
TOTAL				**$ 1,234,782**			**$ 1,016,512**

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **CI-2**

DESCRIPTION: **REDUCE SIDEWALK RUNS**

SHEET NO.: 1 of 3

Original Design:

The design calls for incorporation of 4" sidewalks. These sidewalks are a standard design feature for both sides of all roadways except for the on and off ramps at Paul Brown Parkway.

Alternative:

It is suggested that the sidewalks only be installed on the east side of Frontage Road East. Since this is a relatively undeveloped area of land, it might be many months before even one sidewalk will be routinely used.

Opportunities:

- Initial cost savings

Risks:

- Minimal redesign
- Will require developers to invest in sidewalks when they decide to make use of the land on the west side of Frontage Road East

Technical Discussion:

When sidewalks are installed on undeveloped land, often the developers have to tear out much of the sidewalks in order to reconfigure the property frontage to accommodate accel/decal lanes and utilities. Then they have to go to expense of replacing the sidewalks. This alternative could minimize this cost to developers, provide for a reasonable accommodation of the pedestrians with one sidewalk and reduce overall construction cost significantly.

There may be other instances for consideration.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 867,643	$	$ 867,643
ALTERNATIVE	$ 772,482	$	$ 772,482
SAVINGS	$ 95,161	$	$ 95,161

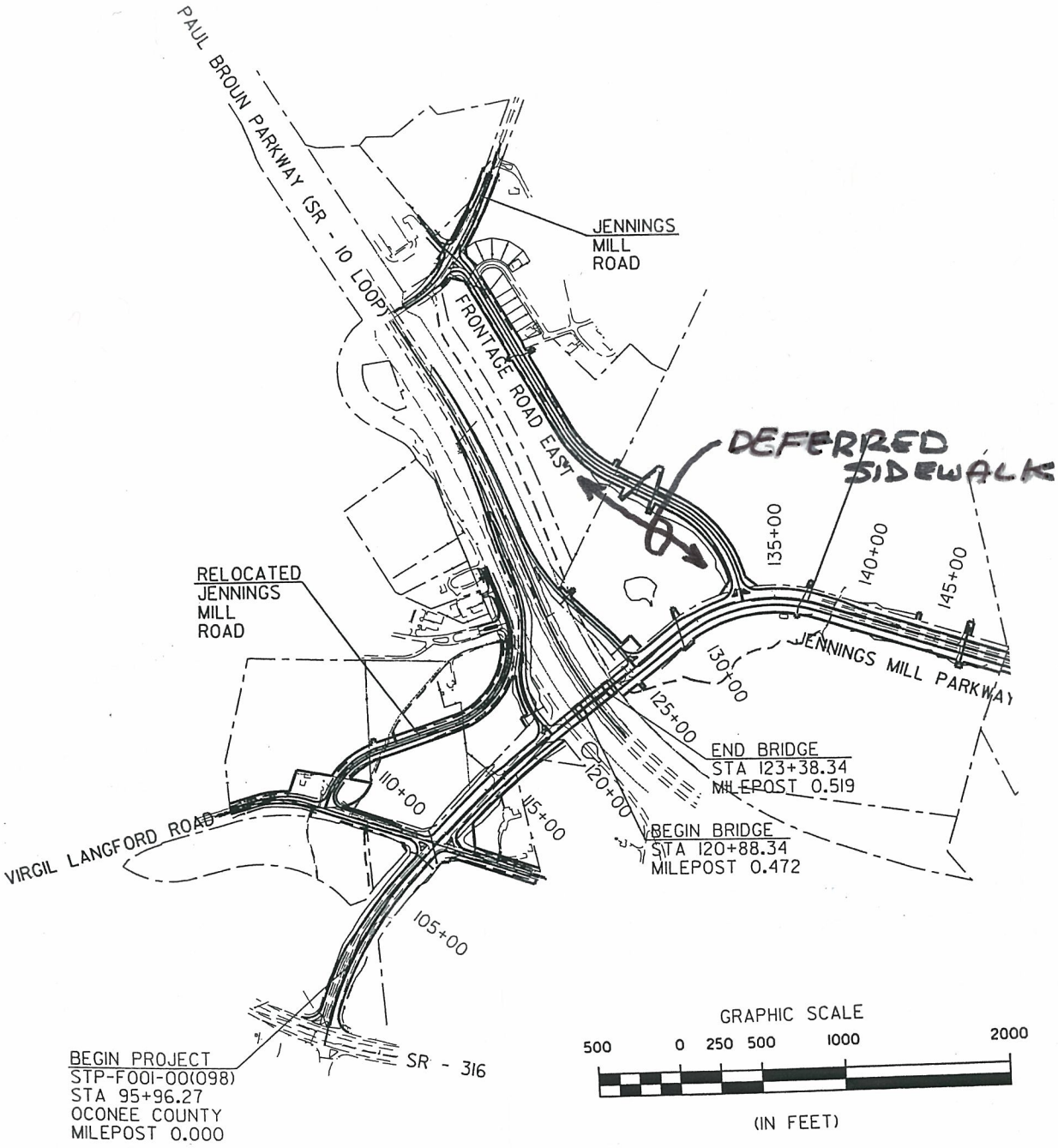
Illustrations

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: CI-2

DESCRIPTION: REDUCE SIDEWALK RUNS

SHEET NO.: 2 of 3



COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	CI-2
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Reduce Sidewalk Runs*	SHEET NO.:	3 of 3

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Concrete Sidewalk - 4"	SY	15500	$ 37.12	$ 575,360.00	13800	$ 37.12	$ 512,256.00
Assume that the sidewalk to be deferred is 5' wide and 3000' in length (approx. 1700 sy).							
Sub-total				$ 575,360			$ 512,256
Mark-up at 10.00%				$ 292,283			$ 260,226
TOTAL				**$ 867,643**			**$ 772,482**

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No.STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **AP-1**

DESCRIPTION: **USE ASPHALT CONCRETE IN LIEU OF PC CONCRETE PAVEMENT ON RAMPS**

SHEET NO.: 1 of 5

Original Design:

The original design specifies Portland Cement concrete pavement, 9 inches thick, for the on and off ramps.

Alternative:

The alternative suggests to use asphalt concrete pavement in lieu of PC concrete pavement in the following layers: an additional 3 in. 25 mm superpave, 2 in. 19 mm superpave, and 1.5 in. 12.5 mm superpave.

Opportunities:

- Initial cost savings
- Reduced live cylce cost

Risks:

- Minimal redesign

Technical Discussion:

The alternative accomplishes the same function as the original at a reduced cost. In addition, the original design proposes to resurface existing Paul Broun Pkwy/SR10 Loop with asphalt adjacent to the on and off ramps which are originally designed with PC concrete. Using the alternative design and constructing the on and off ramps with asphalt concrete pavement will provide a uniform riding surface.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 598,032	$ 159,708	$ 757,740
ALTERNATIVE	$ 278,913	$ 232,423	$ 511,336
SAVINGS	$ 319,119	$ (72,715)	$ 246,404

Illustrations

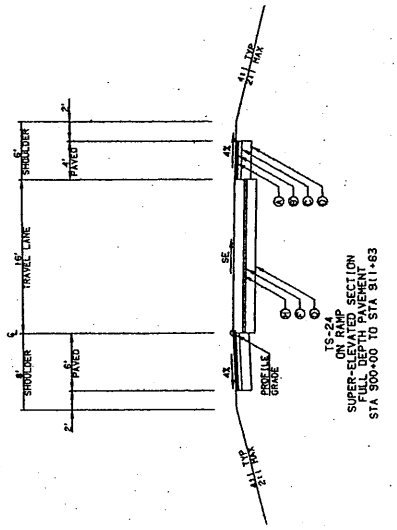
PBS&J

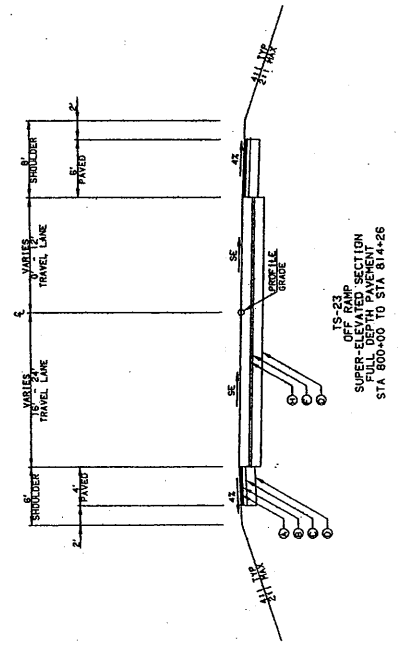
PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: AP-1

DESCRIPTION: USE ASPHALT CONCRETE IN LIEU OF PC CONCRETE PAVEMENT ON RAMPS

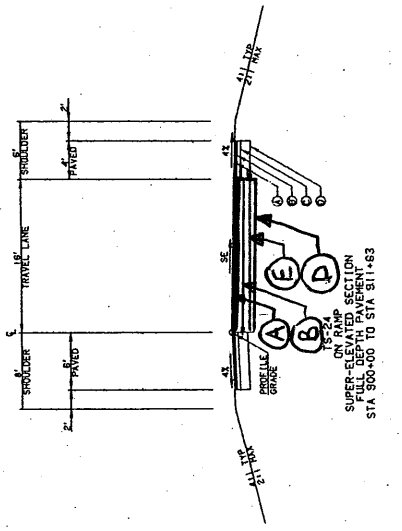
SHEET NO.: 2 of 5

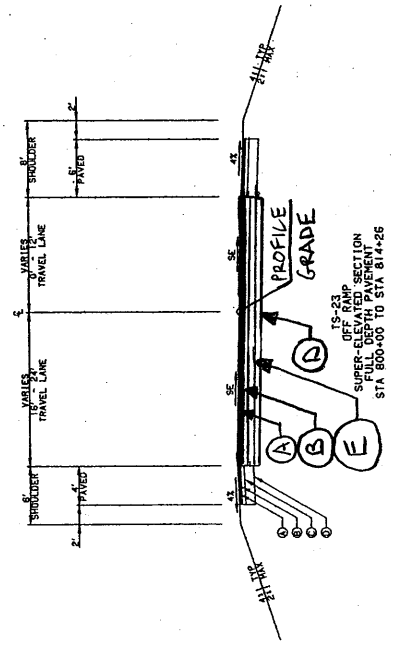




ORIGINAL DESIGN

PAVEMENT DESIGN
- (A) 185 #/SY ASPHALTIC CONCRETE 12.5 MM SUPERPAVE
- (B) 220 #/SY ASPHALTIC CONCRETE 19 MM SUPERPAVE
- (C) 440 #/SY ASPHALTIC CONCRETE 25 MM SUPERPAVE
- (D) 12" GRADED AGGREGATE BASE
- (E) PLAIN PC CONC. PAVEMENT CL 3 CONC, 9 INCH THICK
- (F) 330 #/SY ASPHALTIC CONCRETE 25 MM SUPERPAVE





ALTERNATIVE

PAVEMENT DESIGN
- (A) 185 #/SY ASPHALTIC CONCRETE 12.5 MM SUPERPAVE
- (B) 220 #/SY ASPHALTIC CONCRETE 19 MM SUPERPAVE
- (C) 440 #/SY ASPHALTIC CONCRETE 25 MM SUPERPAVE
- (D) 12" GRADED AGGREGATE BASE
- (E) 660 #/SY ASPHALTIC CONCRETE 25 MM SUPERPAVE

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

ALTERNATIVE NO.: **AP-1**

DESCRIPTION: **USE ASPHALT CONCRETE IN LIEU OF PC CONCRETE PAVEMENT ON RAMPS**

Alternative

12.5 MM SUPERPAVE → 9016 SY X 165 #/SY X 1 TN/2000 # = 744 TN

19 MM SUPERPAVE → 9016 SY X 220 #/SY X 1 TN/2000 # = 992 TN

25 MM SUPERPAVE → 9016 SY X *330 #/SY X 1 TN/2000 # = 1,488 TN

* Note: 330#/SY was used for calculation instead OF 660#/SY because original design already accounted for 3 inches OF 25 MM SUPERPAVE

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	AP-1
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION: *Use Asphalt concrete in lieu of PC concrete pavement on ramps*		SHEET NO.:	4 of 5

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Plain PC concrete pavement,	SY	9016	$ 60.30	$ 543,665.00	0	$ 60.30	$ -
CC3 concrete, 9 inches thick							
12.5 MM SUPERPAVE	TN	0	$ 77.05	$ -	744	$ 77.05	$ 57,325.00
19 MM SUPERPAVE	TN	0	$ 64.12	$ -	992	$ 64.12	$ 63,607.00
25 MM SUPERPAVE	TN	0	$ 89.13	$ -	1488	$ 89.13	$ 132,625.00
Sub-total				$ 543,665			$ 253,557
Mark-up at 10.00%				$ 54,367			$ 25,356
TOTAL				**$ 598,032**			**$ 278,913**

LIFE CYCLE COST WORKSHEET

PROJECT:	STP-F001-00(098), OCONEE COUNTY, PI No. 0001098 *Georgia Department of Transportation*	ALTERNATIVE NO.	**AP-1**
		SHEET NO.	5 of 5

							ORIGINAL	PROPOSED
LIFE CYCLE PERIOD:	20	**years**						
INTEREST RATE:	4.20%	**ESCALATION RATE:**	0.00%					
A.	**INITIAL COST**	**(Note - escalation shown as 0.0% since using**					598,032	278,913
	Useful Life (Years)	**constant dollar LCC analysis)**						
						INITIAL COST SAVINGS		319,119
B.	**RECURRENT COSTS (Annual Expenditures)**							
	1.	**Maintenance**	(Concrete -- 2% of first cost/year)				11,961	
	2.	**Maintenance**	(Asphalt -- 5% of first cost/year)					13,946
	3.	**Energy**						
	4.							
	5.							
	6.							
						Total Annual Costs	11,961	13,946
						Present Worth Factor	13.3528	13.3528
						Present Worth of RECURRENT COSTS	159,708	186,213

C.	**SINGLE EXPENDITURES**		**Year**	**Amount**	**PW factor**	**Present Worth**	**Present Worth**
ORIG	PROP	**< Put "x" in appropriate box (original design or proposed design)**					
	X	**1. Resurface (25% of 1st cost)**	10	69,728	0.6627	-	46,210
		2.			1.0000	-	-
		3.			1.0000	-	-
		4.			1.0000	-	-
		5.			1.0000	-	-
		6.			1.0000	-	-
		7.			1.0000	-	-
		8.			1.0000	-	-

D.	**SALVAGE VALUE**	**Year**	**Amount**	**PW factor**	**Present Worth**	**Present Worth**
	1.			1.0000	-	-
	2.			1.0000	-	-
				Present Worth of SINGLE EXPENDITURES	-	46,210
E.	**Total Recurrent Costs & Single Expenditures (B + C + D)**				159,708	232,423
				RECURRENT COSTS & SINGLE EXPENDITURES SAVINGS		(72,715)
				TOTAL PRESENT WORTH COST (A + E)	757,740	511,336
				TOTAL LIFE CYCLE SAVINGS		**246,404**

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No.STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **AP-2**

DESCRIPTION: **SELECTIVELY DECREASE PAVEMENT WIDTH**

SHEET NO.: 1 of 6

Original Design:

The original design of Jennings Mill Parkway from STA. 140+59 to STA.161+50 calls for a 38 ft. pavement width left and right f the design centerline for a total pavement width of 76 ft. This pavement width allows for four travel lanes (two 12-foot inside and two 13' outside) with a 14-foot two-way left turn lane, two 6-foot bike lanes.

Alternative:

The alternative design suggests to reduce the pavement width of Jennings Mill Parkway (STA 140+59 to STA 161+50) by 6 feet for a total pavement width of 70 feet (35 - ft. pavement width left and right of design centerline). This alternative pavement width allows for four travel lanes (two 12-foot inside, two 12-foot outside) with a 14-foot two-way left turn lane, two 4-foot bike lanes.

Opportunities:

- Initial cost savings

Risks:

- Very minimal redesign

Technical Discussion:

The alternative accomplishes the same function as the original at a reduced cost. In addition to reducing asphalt pavement quantities, the reduced pavement width in this section will also reduce the length of two - 6 ft by 5 ft. box culverts, the length of several cross drain pipes, and may reduce some right-of-way and easement areas.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 1,929,972	$	$ 1,929,972
ALTERNATIVE	$ 1,777,668	$	$ 1,777,668
SAVINGS	$ 152,304	$	$ 152,304

Illustrations

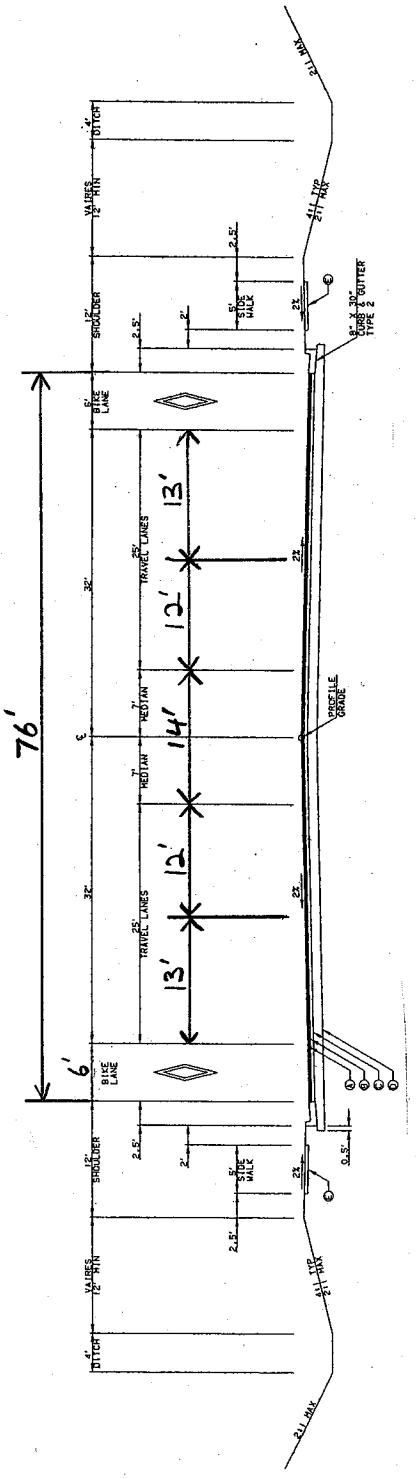
PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

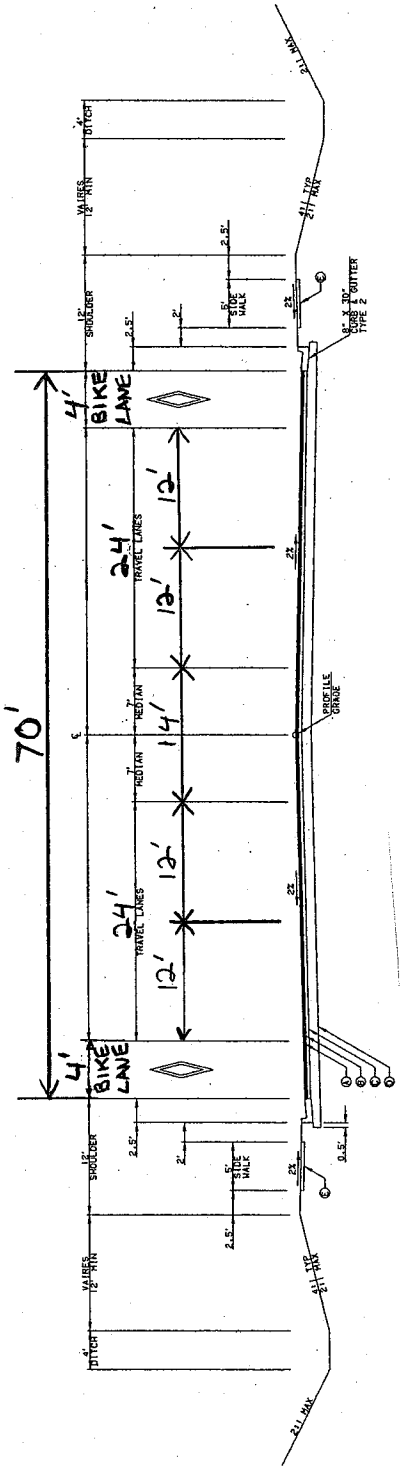
ALTERNATIVE NO.: AP-2

DESCRIPTION: SELECTIVELY DECREASE PAVEMENT WIDTH

SHEET NO.: 2 of 6



ORIGINAL DESIGN
JENNINGS MILL PARKWAY
STA 140+59 TO STA 161+50



ALTERNATIVE
JENNINGS MILL PARKWAY
STA 140+59 TO STA 161+50

ORIGINAL DESIGN

76' PAVEMENT WIDTH → STA. 140+59 TO STA. 161+50
L = 2, 091'
AREA = L x W = 2.091' x 76' = 158,916 SF
= 17, 657.33 SY

12.5 MM SUPERPAVE
17, 657.33 x 165#/SY x 1 TN/2000 # = 1457 TN

19 MM SUPERPAVE
17, 657.33 x 220#/SY x 1 TN/2000 # = 1942 TN

12.5 MM SUPERPAVE
17, 657.33 x 440#/SY x 1 TN/2000 # = 3885 TN

12" GRADED AGGREGATE BASE
17, 657 SY

EARTHWORK SUMMARY
JENNINGS MILL PARKWAY → STA. 95+96 TO STA. 167+99
2091'/7,203' = 0.29 → 29% ← Use this percentage to figure earthwork quantities.

UNCLASSIFIED EXCAVATION
40,708 CY x 0.29 = 11,805 CY

BORROW EXCAVATION
259,616 CY x 0.29 = 75,289 CY

CLASS A CONCRETE
6' X 5' BOX CULVERTS, SPECIAL DESIGN
STA 146+85 → 181 CY FROM PLANS
STA 152+22 → 198 CY FROM PLANS
> TOTAL = 379 CY

BAR REINFORCING STEEL
6' X 5' BOX CULVERTS, SPECIAL DESIGN
STA 146+85 → 24, 646 LBS FROM PLANS
STA 152+22 → 27, 023 LBS FROM PLANS
> TOTAL = 51,669 LBS

STORM DRAIN PIPE, 18 IN.

STA 142+00 → 84’
STA 147+17 → 84’
STA 149+67 → 84’
STA 151+37 → 85’

TOTAL = 337’

STORM DRAIN PIPE, 18 IN.

STA 143+69 → 84’ → TOTAL – 84’

ALTERNATIVE DESIGN

70’ PAVEMENT WIDTH → STA. 140+59 TO STA. 161+50
L = 2, 091’
AREA = L x W = 2.091’ x 70’ = 146,370 SF
= 16,263.33 SY

12.5 MM SUPERPAVE
16,263.33 x 165#/SY x 1 TN/2000 # = 1342 TN

19 MM SUPERPAVE
16,263.33 x 220#/SY x 1 TN/2000 # = 1789 TN

12.5 MM SUPERPAVE
16,263.33 x 440#/SY x 1 TN/2000 # = 3578 TN

12” GRADED AGGREGATE BASE
16,263 SY

EARTHWORK SUMMARY
PAVEMENT WIDTH IS REDUCED BY 7.9% → 76’ – 70’/76’ = 0.0789 = 7.89%.
REDUCE ORIGINAL EARTHWORK QUANTITIES BY THE SAME

UNCLASSIFIED EXCAVATION
11,805 CY – 7.9% = 10,872 CY

BORROW EXCAVATION
75,289 CY – 7.9% = 69,341 CY

CLASS A CONCRETE
6' X 5' BOX CULVERTS, SPECIAL DESIGN
REDUCE ORIGINAL QUANTITY BY 7.9%

STA 146+85 → 181 CY – 7.9% = 167 CY
STA 152+22 → 198 CY – 7.9% = 182 CY

TOTAL = 349 CY

BAR REINFORCING STEEL
6' X 5' BOX CULVERTS, SPECIAL DESIGN
REDUCE ORIGINAL QUANTITY BY 7.9%

51,669 LBS – 7.9% = 47,587 LB →

STORM DRAIN PIPE, 18 IN.

STA 142+00 → 78'
STA 147+17 → 78'
STA 149+67 → 78'
STA 151+37 → 79'

TOTAL = 313 LF

STORM DRAIN PIPE, 18 IN.

STA 143+69 → 78' → TOTAL – 78 LF

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	AP-2
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION: ***Selectively Decrease Pavement Width***		SHEET NO.:	6 of 6

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
12.5 MM SUPERPAVE	TN	1457	$ 77.05	$ 112,262.00	1342	$ 77.05	$ 103,401.00
19.0 MM SUPERPAVE	TN	1942	$ 64.12	$ 124,521.00	1789	$ 64.12	$ 114,711.00
25.0 MM SUPERPAVE	TN	3885	$ 89.13	$ 346,270.00	3578	$ 89.13	$ 318,907.00
12" GRADED AGG. BASE	SY	17,657	$ 19.45	$ 343,428.00	16,263	$ 19.45	$ 316,315.00
UNCLASSIFIED EXCAVATION	CY	11,805	$ 5.61	$ 66,226.00	10,872	$ 5.61	$ 60,992.00
BORROW EXCAVATION	CY	75,289	$ 6.31	$ 475,073.00	69,341	$ 6.31	$ 437,542.00
CLASS A CONCRETE	CY	379	$ 578.66	$ 219,312.00	349	$ 578.66	$ 201,952.00
BAR REINF. STEEL	LB	51,669	$ 0.95	$ 49,086.00	47,587	$ 0.95	$ 45,208.00
STORM DRAIN PIPE, 18 IN	LF	337	$ 41.02	$ 13,824.00	313	$ 41.02	$ 12,839.00
STORM DRAIN PIPE, 24 IN	LF	84	$ 53.78	$ 4,518.00	78	$ 53.78	$ 4,195.00
Sub-total				$ 1,754,520			$ 1,616,062
Mark-up at 10.00%				$ 175,452			$ 161,606
TOTAL				**$ 1,929,972**			**$ 1,777,668**

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No.STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **AP-3**

DESCRIPTION: **RELOCATE BICYLE LANES**

SHEET NO.: 1 of 5

Original Design:

Specified 4' - 6' bicycle lanes on both directions of travel on Jennings Mill Parkway. The bicycle lanes were specified as extra width pavement with the same pavement depth as the travel lanes.

Alternative:

Relocate the bicycle lanes form the roadway allowing the pavement widths to be reduced 8' - 12' in specified locations. The bicycle access would be allowed on 8' wide multi use trails located on the shoulders.

Opportunities:

- Initial cost savings
- Reduced live cylce cost
- Separate bicycle and vehicular traffic

Risks:

- Some redesign required

Technical Discussion:

Acces for alternative transportation (bicycles, pedestrians, etc.) is beneficial. Utilization of a multi use trail allows safer and varied usage. Trails can be constructed away from the roadway and become part of a larger system.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 6,026,892	$	$ 6,026,892
ALTERNATIVE	$ 5,846,739	$	$ 5,846,739
SAVINGS	$ 180,153	$	$ 180,153

Illustrations

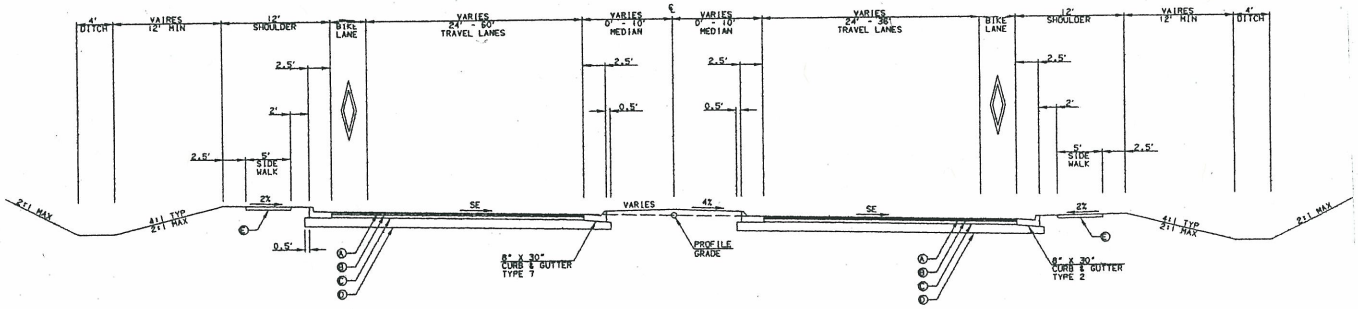
PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: AP-3

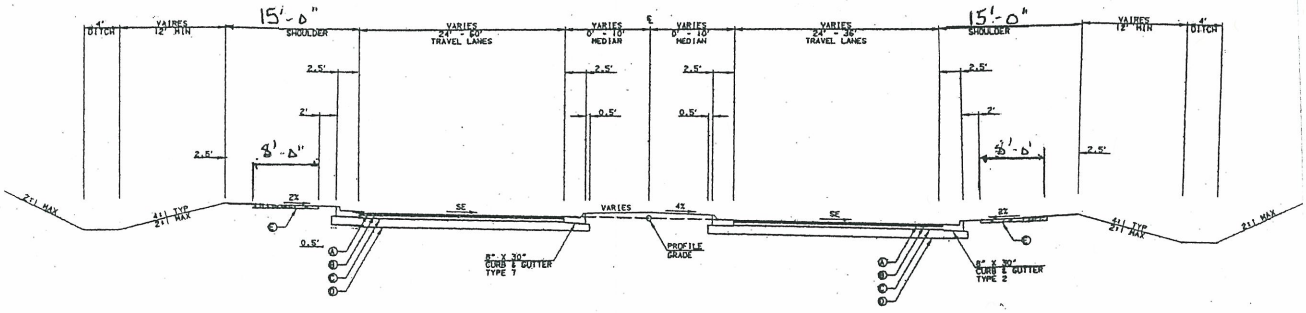
DESCRIPTION: RELOCATE BICYCLE LANES

SHEET NO.: 2 of 5



ORIGINAL DESIGN

BIKE LANE AS PART OF PAVED TRAVELWAY



ALTERNATE DESIGN

MULTI-USE TRAIL ON SHOULDER

Calculations

PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: AP-3
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

DESCRIPTION: RELOCATE BICYCLE LANES SHEET NO.: 3 of 5

ORIGINAL DESIGN

4' BIKE LANES

STA 95+96 - STA 120+88	2492 lf
STA 123+38 - STA 140+59	1721 lf
STA 161+50 - STA 167+99	649 lf

VARIABLE 4'-6' BIKE LANES

STA 140+59 - STA 141+67	108 lf
STA 153+31 - STA 161+50	819 lf

6' BIKE LANES

STA 141+67 - STA 153+31	1164 lf

AREA OF BIKE LANE PAVEMENT

2492 lf x 2 x 4 lf	19936 sf
1721 lf x 2 x 4 lf	13768 sf
649 lf x 2 x 4 lf	5192 sf
108 lf x 2 x 5 lf	1080 sf
819 lf x 2 x 5 lf	8190 sf
1164 lf x 2 x 6 lf	13968 sf
TOTAL	62134 sf

PAVEMENT SECTION

165#/SY 12.5mm SUPERPAVE
220#/SY 19 mm SUPERPAVE
440#/SY 25 mm SUPERPAVE
12" DEPTH GAB

Calculations

PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: AP-3
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

DESCRIPTION: RELOCATE BICYCLE LANES SHEET NO.: 4 of 5

PAVEMENT QUANTITY CALCULATIONS

12.5 mm	165#/SY x 62134 sf ÷ 9 ÷ 2000 =		569 T
19 mm	220#/SY x 62134 sf ÷ 9 ÷ 2000 =		759 T
25 mm	440#/SY x 62134 sf ÷ 9 ÷ 2000 =		1518 T
GAB	62134 sf ÷ 9 =		6903 SY

REDUCED PAVEMENT WIDTH WOULD RESULT IN DECREASED QUANTITIES AS SHOWN ABOVE

SIDEWALK LOCATIONS – ORIGINAL

STA 90+96 – STA 120+88	2492 lf
STA 123+36 – STA 179+00	5562 lf
	8054 lf

8054 lf x 2 x 5 ft = 80540 sf
80540 sf ÷ 9 = 8948 SY

MULTI USE TRAIL LOCATIONS – ALTERNATIVE
INCREASE WIDTH OF SIDEWALK 3 lf TO PROVIDE 8 FT WIDE TRAIL

8054 lf x 2 x 3 ft = 48324 sf
48324 sf ÷ 9 = 5369 SY

INCREASED QUANTITY OF SIDEWALK USED AS MULTI USE TRAIL AS SHOWN ABOVE

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	AP-3
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION: ***Relocate Bicyle Lanes***		SHEET NO.:	5 of 5

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
310-5120 GR AGGR BASE	SY	85,700	$ 19.45	$ 1,666,865.00	78,797,	$ 19.45	$ 1,532,601.00
CRS 12 IN							
402-3113 RECYCLED ASPH	TN	8,807	$ 77.05	$ 678,579.00	8,238	$ 77.05	$ 634,737.00
CONCRETE, 12.5 MM							
SUPERPAVE							
402-3143 RECYCLED ASPH	TN	22,038	$ 89.13	$ 1,964,246.00	20,520	$ 89.13	$ 1,828,947.00
CONCRETE, 25 MM							
SUPERPAVE							
402-3190 RECYCLED ASPH	TN	9,263	$ 64.12	$ 593,943.00	8,504	$ 64.12	$ 545,276.00
CONCRETE, 19 MM							
SUPERPAVE							
441-0104 CONCRETE	SY	15,500	$ 37.12	$ 575,360.00	20,869	$ 37.12	$ 774,657.00
SIDWALK, 4 IN.							
Sub-total				$ 5,478,993			$ 5,316,218
Mark-up at 10.00%				$ 547,899			$ 531,622
TOTAL				**$ 6,026,892**			**$ 5,847,840**

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No.STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **AP-7**

DESCRIPTION: **REDUCE PAVEMENT WIDTH ON FRONTAGE ROAD**

SHEET NO.: 1 of 5

Original Design:

Frontage Road East is shown as two 12 foot lanes with a 14 foot flush median.

Alternative:

Retainthe design width of Frontage Road East at the intersections of Jennings Mill Road an Jennings Mill Parkway. Transition the roadway from 38 feet to 24 feet between Station 404+00 and Station 406+45 and Station 422+10 and Station 424+55. The roadway will be 24 feet between Station 406+45 and Station 422+10.

Opportunities:

- Initial cost savings

Risks:

- Moderate redesign

Technical Discussion:

The roadway width of 24 feet will be satisfactory without the middle/turn lane. There are no developments along this road therefore no turn lanes are currently required.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 8,214,750	$	$ 8,214,750
ALTERNATIVE	$ 8,016,202	$	$ 8,016,202
SAVINGS	$ 198,548	$	$ 198,548

Illustrations

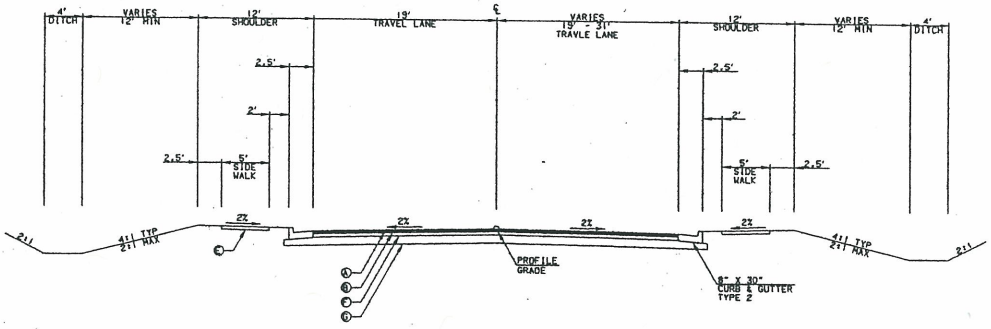
PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

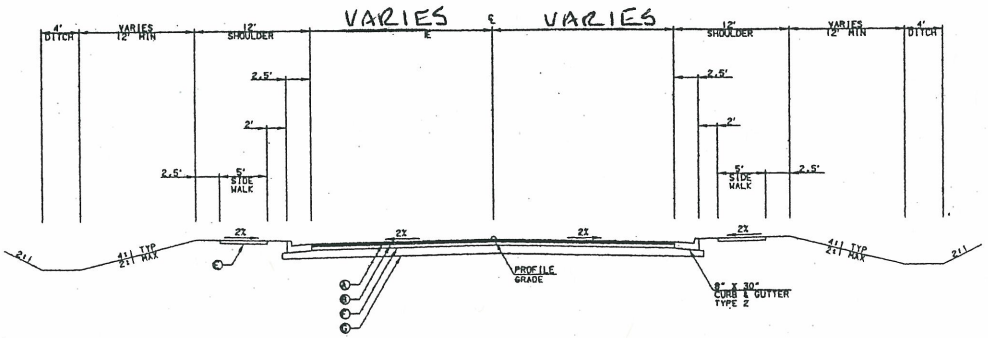
ALTERNATIVE NO.: AR-1

DESCRIPTION: REDUCE PAVEMENT WIDTH ON FRONTAGE ROAD EAST

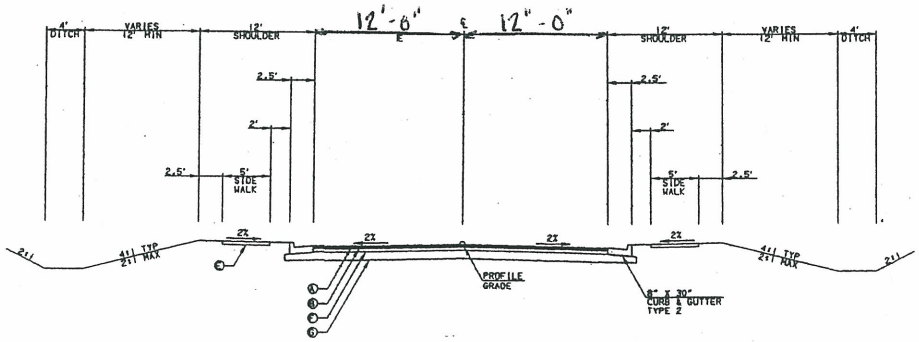
SHEET NO.: 2 of 5



ORIGINAL DESIGN - FRONTAGE ROAD EAST



ALTERNATE DESIGN - FRONTAGE ROAD EAST
STA 400+00 - STA 406+45
STA 424+55 - STA 430+00



ALTERNATE DESIGN - FRONTAGE ROAD EAST
STA 406+45 - STA 424+55

Calculations

PBS&J

PROJECT: GEORGIA DEPARTMENT OF TRANSPORTATION
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: AP-1

DESCRIPTION: REDUCE PAVEMENT WIDTH ON FRONTAGE ROAD EAST

SHEET NO.: 3 of 5

DESIGN PAVEMENT WIDTH IS 38 FT.
NEW PAVEMENT WIDTHS AS FOLLOWS:

STA 404+00 - 38 FT
STA 406+45 - 24 FT
STA 422+10 - 24 FT
STA 424+55 - 38 FT

REDUCED PAVEMENT WIDTH CALCULATION

STA 404+00 - STA 406+45	245 LF x $\frac{14+0}{2}$ =	1715 sf
STA 406+45 - STA 422+10	1565 LF x 14 F =	21910 sf
STA 422+10 - STA 424+55	245 x $\frac{14+0}{2}$ =	1715 sf
		25340 sf
		2815 sy

* GAB - 2815 x 0.83 = 2336 SY
(TYPICAL SECTION SPECIFIES 10" DEPTH - ESTIMATE REPORT SPECIFIES 12" DEPTH - MODIFY QUANTITY BY 0.83)

12.5 mm	165 #/SY x 2815 ÷ 2000 =	232 T
19 mm	220 #/SY x 2815 ÷ 2000 =	309 T
25 mm	440 #/SY x 2815 ÷ 2000 =	619 T

EARTHWORK QUANTITIES – REDUCED

CUT	2491 CY
FILL	6454 CY
BORROW	3963 CY

Calculations

PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: AP-1

DESCRIPTION:

SHEET NO.: 4 of 5

REDUCED EARTHWORK CALCULATIONS

STA 406+50 – STA 422+10 – 14 FT REDUCED WIDTH

		CUT	FILL
STA 406+50	12 FT C		
STA 407+00	9 FT C	272 CY	
+50	5 FT C	103 CY	
STA 408+00	0	104 CY	
+50	6 FT F		77 CY
STA 409+00	10 FT F		207 CY
+50	6 FT F		207 CY
STA 410+00	0		77 CY
+50	3 FT C	38 CY	
STA 411+00	6 FT C	116 CY	
+50	8 FT C	181 CY	
STA 412+00	9 FT C	220 CY	
+50	10 FT C	246 CY	
STA 413+00	9 FT C	246 CY	
+50	6 FT C	194 CY	
STA 414+00	5 FT C	142 CY	
+50	4 FT C	116 CY	
STA 415+00	6 FT C	129 CY	
+50	6 FT C	175 CY	
STA 416+00	4 FT C	129 CY	
+50	1 FT C	104 CY	
STA 417+00	1 FT F	6 CY	6 CY
+50	7 FT F		103 CY
STA 418+00	12 FT F		246 CY
+50	14 FT F		331 CY
STA 419+00	19 FT F		427 CY
+50	24 FT F		557 CY
STA 420+00	32 FT F		725 CY
+50	31 FT F		816 CY
STA 421+00	32 FT F		816 CY
+50	38 FT F		907 CY
STA 422+00	35 FT F		946 CY

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	AP-7
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION: ***Reduce Pavement Width on Frontage Road***		SHEET NO.:	5 of 5

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
205-0001 Unclassified Excav.	CY	252,500	$ 5.61	$ 1,416,525.00	250,009	$ 5.61	$ 1,402,550.00
206-0002 Borrow Excav.	CY	173,700	$ 6.31	$ 1,096,047.00	169,737	$ 6.31	$ 1,071,040.00
310-5120 Gr Agggr Base CRS	SY	85,700	$ 19.45	$ 1,666,865.00	83,364	$ 19.45	$ 1,621,429.00
402-3113 Recycled Asph	TN	8,807	$ 77.05	$ 678,579.00	8,575	$ 77.05	$ 660,703.00
Concrete, 12.5 MM							
402-3143 Recycled Asph	TN	22,038	$ 89.13	$ 1,964,246.00	21,419	$ 89.13	$ 1,909,075.00
Concrete, 25 MM							
402-3190 Recycled Asph	TN	9,263	$ 64.12	$ 593,943.00	8,954	$ 64.12	$ 574,130.00
Concrete, 19 MM							
550-1423 Storm Drain Pipe,	LF	450	$ 115.00	$ 51,750.00	422	$ 115.00	$ 48,530.00
42 in.							
Sub-total				$ 7,467,955			$ 7,287,457
Mark-up at 10.00%				$ 746,796			$ 728,746
TOTAL				**$ 8,214,751**			**$ 8,016,203**

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

ALTERNATIVE NO.: **BI-1**

DESCRIPTION: **ELIMINATE END SPANS AND USE WALLED ABUTMENTS**

Original Design:

The original 4-span bridge is 250’ long with 40’ end spans and 85’ intermediate spans. The bridge is on a vertical curve. End spans 1 and 4 consist of nine 40’ Modified Type I PSC beams with Type III PSC Fascia beams evenly spaced. Spans 2 and 3 consist of sixteen Type III PSC beams evenly spaced. The out-to-out width of the bridge is 94’-5”. The bridge accommodates a 6’ raised sidewalk, 2’ buffer and 4’ Bike Lane on both sides of the bridge, two 12’ travel lanes in each direction, a 12’ turn lane on the south side of the bridge, a 4’ raised median with a 2’ buffer on either side. The bents are made up of concrete caps and columns. The end bents and intermediate bents are founded on PSC Piles.

Alternative:

The proposed alternative eliminates the 40’ end spans and reduces the bridge length to 170’. This can be accomplished by providing a walled abutment at the current Bent 2 and Bent 4 locations.

The alternative maintains a 17-5” vertical clearance to US 78 and other current geometry.

Opportunities:

- Cost savings by reducing bridge length
- Cost savings on slope paving
- Reduced construction time
- Provides better separation between ramps and bridge ends

Risks:

- This configuration is typically used in Urban areas where Right-Of-Way is not available.

Technical Discussion:

Special design for MSE walls will be required. The horizontal clearance between edge of existing pavement of US 78 and the bridge abutment wall is 39’ which is sufficient for two future additional lanes. The same beam depth and configuration as in the original design can be used for the alternate. Additionally, less expensive Steel Piles can be used in lieu of PSC Piles used in the current design.

See the next sheet for the calculation of the savings noted below.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 2,359,003	$	$ 2,359,003
ALTERNATIVE	$ 1,695,638	$	$ 1,695,638
SAVINGS	$ 663,365	$	$ 663,365

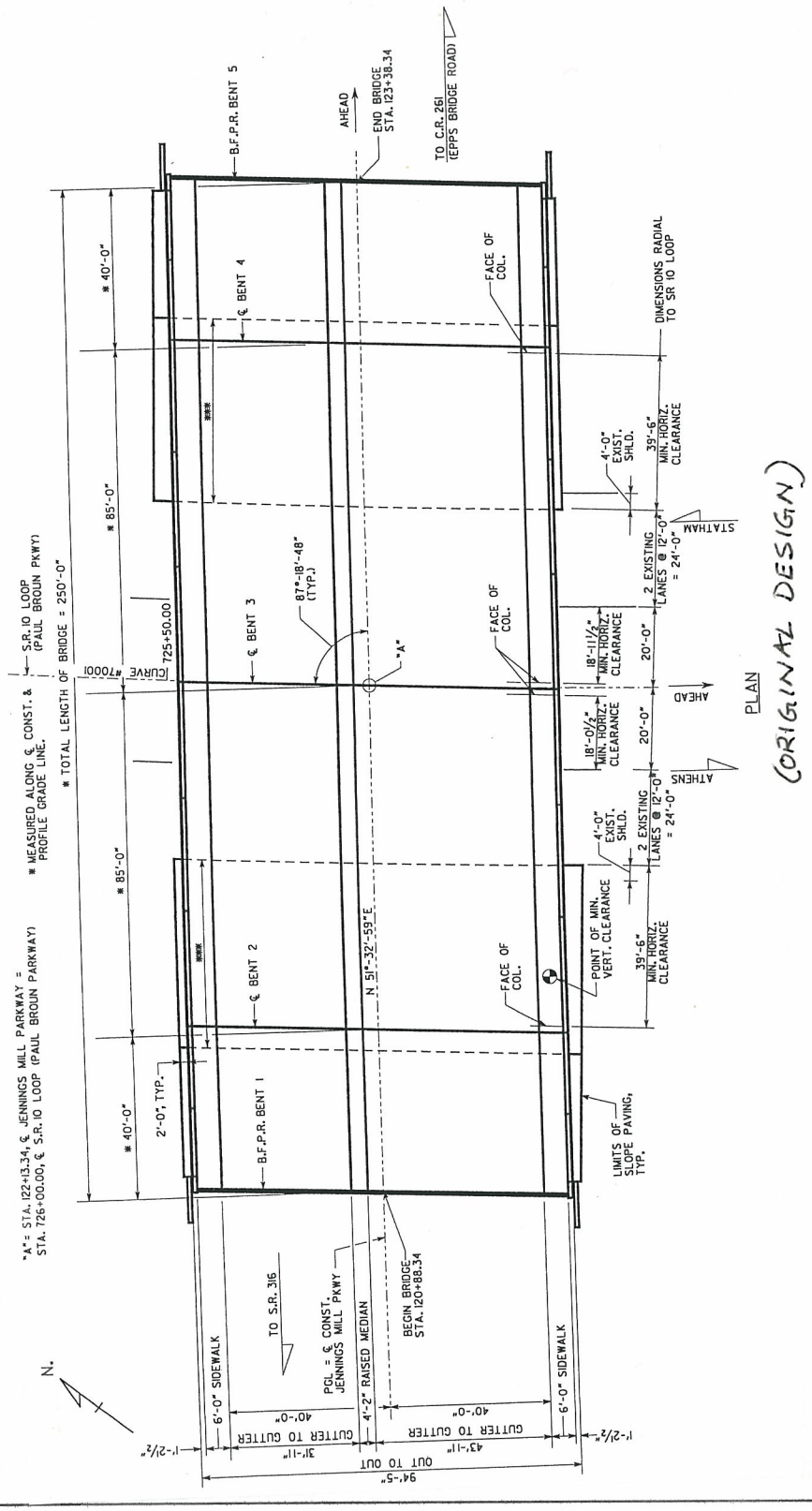
Illustrations

PBS&J

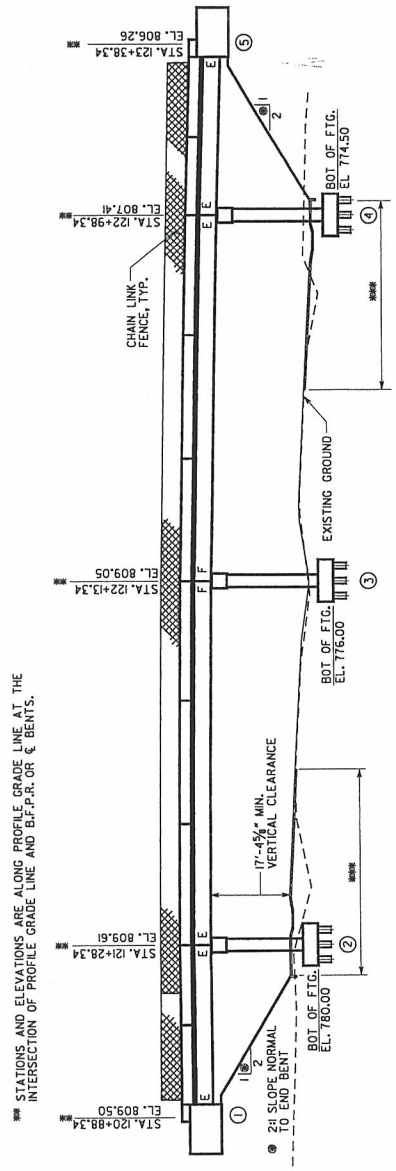
PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: BI-1

Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

DESCRIPTION: ELIMINATE END SPANS & USE WALLED ABUTMENTS SHEET NO.: 2 of 6



PLAN (ORIGINAL DESIGN)



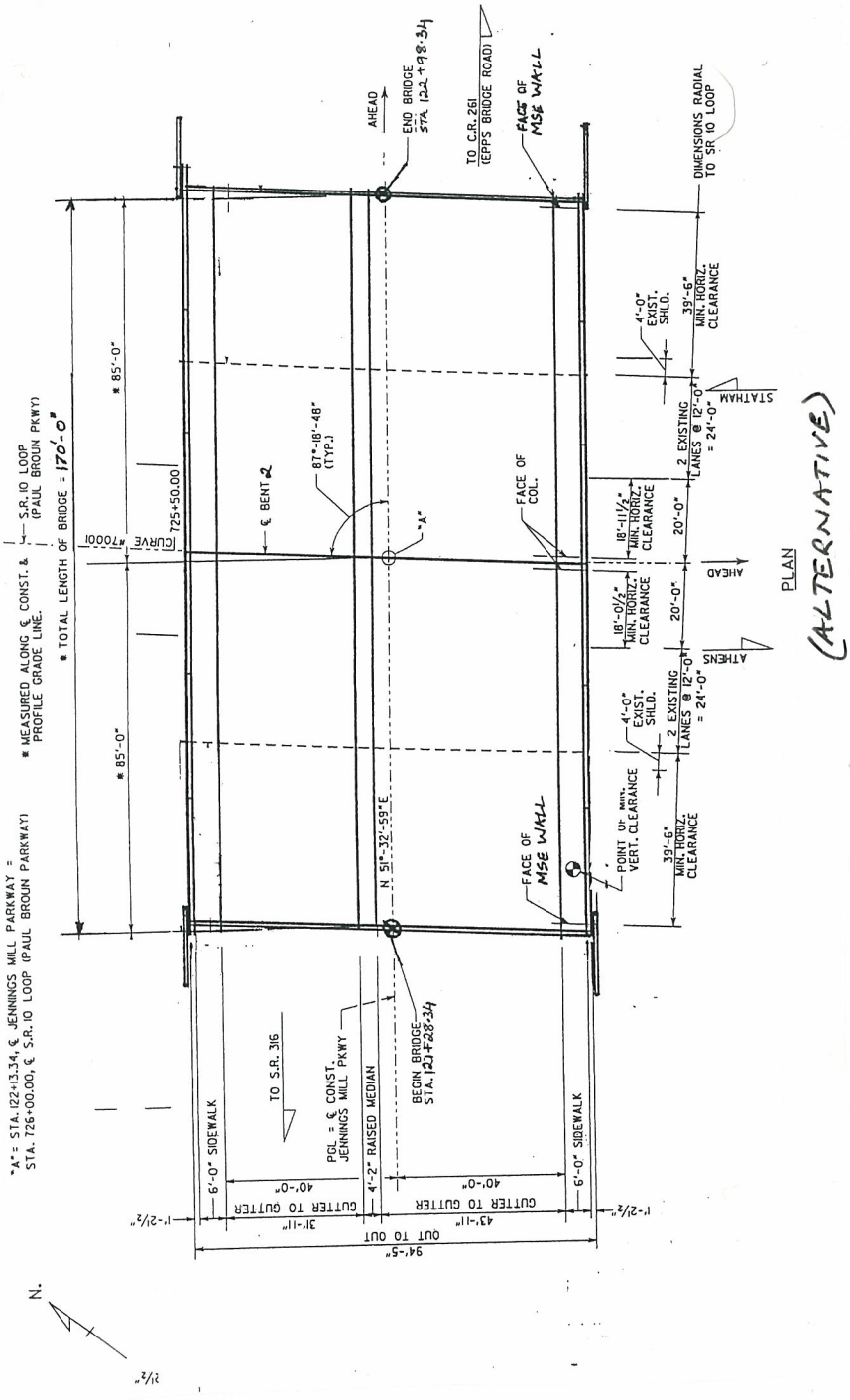
ELEVATION (ORIGINAL DESIGN)

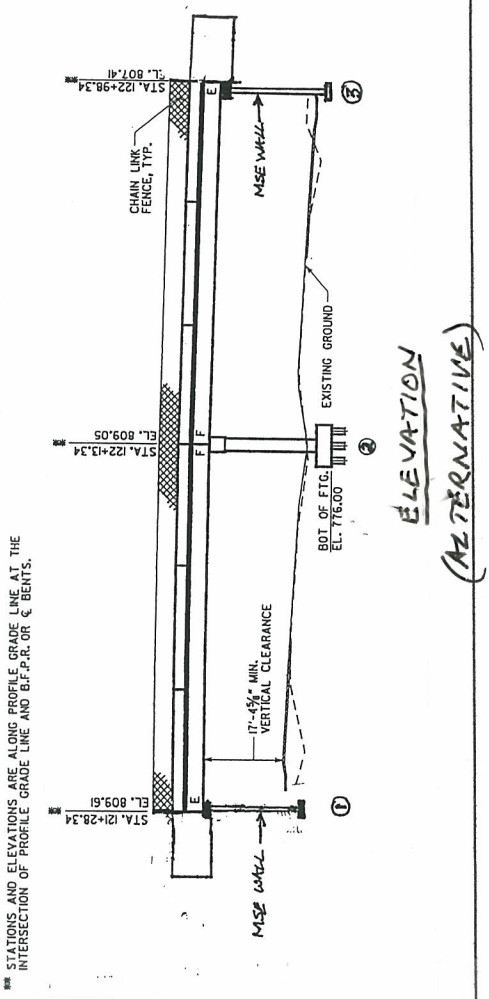
Illustrations

PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: BI-1
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

DESCRIPTION: ELIMINATE END SPANS + USE WALLED ABUTMENTS SHEET NO.: 3 of 6





Current Design (4 Span – 250' Long)

Superstructure:

Deck Area = 250' * 94.42 (avg.) = 23,605 SF

Sidewalk Area = 250'*6' = 1,500 SF

Volume of 9" thick Class AA Superstructure Deck concrete = [23605*(9/12) + 2*1500*(6/12)]/27= 711.46 CY

Area of Raised Median (avg.) = (250'*4')/9 = 111.11 SF

Volume of 6" thick Class A Cast-in-place Median concrete = (6/12)*(1000.00)/27 = 18.52 CY

Area of Grooved concrete (approx.) = 250'*87'/9 = 2416.67 SY

Total length of Type III PPC Girders (approx.) = (2*85'*16) + (2*2'*40') = 2,880'

Total length of Modified Type I PPC Girders (approx.) = 2*9*40' = 720'

Total length of Bridge Parapet and Fence = 2*250 = 500'

Area of Sloped Paving (approx.) = 2*{[(17.5^2 + 35^2)^0.5 + 2 + 1.5]*(94.5+2+2)]}/9 = 933 SY

Substructure:

Volume of Class A concrete (average dimensions of Caps, Columns & Pile Caps):

Intermediate Bents: 3*{[50.75'*3.5'*3.5') + (3*3'*3'*16') + (9'*9'*3.5')] + [(38.75*3.5'*3.5') + (2*3'*3'*16') + (10'*10'*3.5')] }/27= 272.21 CY

End Bents: 2*{[95'*4'*3'] + [2*7.5'*11.5']}/27 = 97.22 CY

Total Volume of Class A concrete = 369.43 CY

Length of 14" PSC Piling = 1,155 LF

Length of 18" PSC Piling = 3,645 LF

Alternative (2 Span – 170' Long)

Superstructure:
Deck Area = 170' * 94.42 (avg.) = 16,051 SF

Sidewalk Area = 170'*6' = 1,020 SF

Volume of 9" thick Class AA Superstructure Deck concrete = [16051*(9/12) + 2*1020*(6/12)]/27= 483.63 CY

Area of Raised Median (avg.) = (170'*4')/9 = 75.56 SY

Volume of 6" thick Class A Cast-in-place Median concrete = (6/12)*(680)/27 = 12.6 CY

Area of Grooved concrete (approx.) = 170'*87' = 1643.33 SF

Total length of Type III PPC Girders (approx.) = (2*85'*16) = 2,720'

Total length of Bridge Parapet and Fence = 2*170 = 340'

Substructure:
Volume of Class A concrete (average dimensions of Caps, Columns & Pile Caps):

Intermediate Bents: 1*{[50.75'*3.5'*3.5') + (3*3'*3'*16') + (9'*9'*3.5')] + [(38.75*3.5'*3.5') + (2*3'*3'*16') + (10'*10'*3.5')] }/27= 90.74 CY

End Bents: 2*{[95'*4'*3'] + [2*7.5'*11.5']}/27 = 97.22 CY

Total Volume of Class A concrete = 187.96 CY

Length of 14" PSC Piling = 1,155 LF

Length of 18" PSC Piling = 1,215 LF

Area of MSE Walls (assume 16' high in front of abutments and 10' wrap around on each side of abutment at an average height of 10') = 2*[(16'*97') + (2*10'*10')] = 3504 SF

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	BI-1
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Eliminate End Spans & Used Walled Abutments*	SHEET NO.:	6 of 6

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Type III PSC Beams	LF	2880	$ 145.81	$ 419,932.80	2720	$ 145.81	$ 396,603.20
Type I PSC Beams	LF	720	$ 110.00	$ 79,200.00	0	$ 145.81	$ -
Class "AA" Concrete (Sup)	CY	711.46	$ 1,122.40	$ 798,542.70	483.63	$ 1,122.40	$ 542,826.31
Class "A" Concrete (Sub)	CY	369.43	$ 884.14	$ 326,627.84	187.96	$ 884.14	$ 166,182.95
Concrete Deck Grooving	SY	2416.7	$ 4.17	$ 10,077.51	1643.33	$ 4.17	$ 6,852.69
Conc Barrier (Spcl Design)	LF	500	$ 340.74	$ 170,370.00	340	$ 340.74	$ 115,851.60
Chain Link Fence	LF	500	$ 34.27	$ 17,135.00	340	$ 34.27	$ 11,651.80
MSE Walls	SF	0	$ 52.00	$ -	3285	$ 52.00	$ 170,820.00
6" Concrete Median	SY	111.11	$ 40.49	$ 4,498.84	75.56	$ 40.49	$ 3,059.42
14" SQ PSC Piles	LF	1155	$ 49.32	$ 56,964.60	1155	$ 49.32	$ 56,964.60
18" SQ PSC Piles	LF	3645	$ 58.17	$ 212,029.65	1215	$ 58.17	$ 70,676.55
Sloped Paving	SY	933	$ 52.70	$ 49,169.10	0	$ 52.70	$ -
Sub-total				$ 2,144,548			$ 1,541,489
Mark-up at 10.00%				$ 214,455			$ 154,149
TOTAL				**$ 2,359,003**			**$ 1,695,638**

$ 663,365

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: **BI-2**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

DESCRIPTION: **ELIMINATE 4'-2" RAISED MEDIAN** SHEET NO.: **1** of 5

Original Design:

The original 4-span bridge is 250' long with 40' end spans and 85' intermediate spans. The bridge is on a vertical curve. End spans 1 and 4 consist of nine 40' Modified Type I PSC beams with Type III PSC Fascia beams evenly spaced. Spans 2 and 3 consist of sixteen Type III PSC beams evenly spaced. The out-to-out width of the bridge is 94'-5". The bridge accommodates a 6' raised sidewalk, 2' buffer and 4' Bike Lane on both sides of the bridge, two 12' travel lanes in each direction, a 12' turn lane on the south side of the bridge, a 4'-2" raised median with a 2' buffer on either side. The bents are made up of concrete caps and columns. The end bents and intermediate bents are founded on PSC Piles.

Alternative:

The proposed alternative retains the existing configuration of the bridge but proposes to eliminate the 4'-2" median and use striping to demarcate the turn lanes.

The alternative maintains a 17-5" vertical clearance to US 78 and other current geometry.

Opportunities:

- Cost savings by reducing bridge width
- Reduction of one beam line (4 beams eliminated)
- Better drainage across bridge section
- Reduced construction time

Risks:

- This configuration is typically used in an Urban environment

Technical Discussion:

Removing the median reduces the bridge width by approximately 8'-2" (4'-2" median + 2*2' buffer on either side of the median). The resulting bridge cross section will comprise of eight 40' Modified Type I PSC beams with Type III PSC Fascia beams evenly spaced for end spans 1 and 2 and fifteen Type III PSC beams evenly spaced for intermediate spans 2 and 3. The out-to-out width of the bridge will be 86'-3". Additionally, the substructure will be comprised of reduced cap lengths.

See the next sheet for the calculation of the savings noted below.

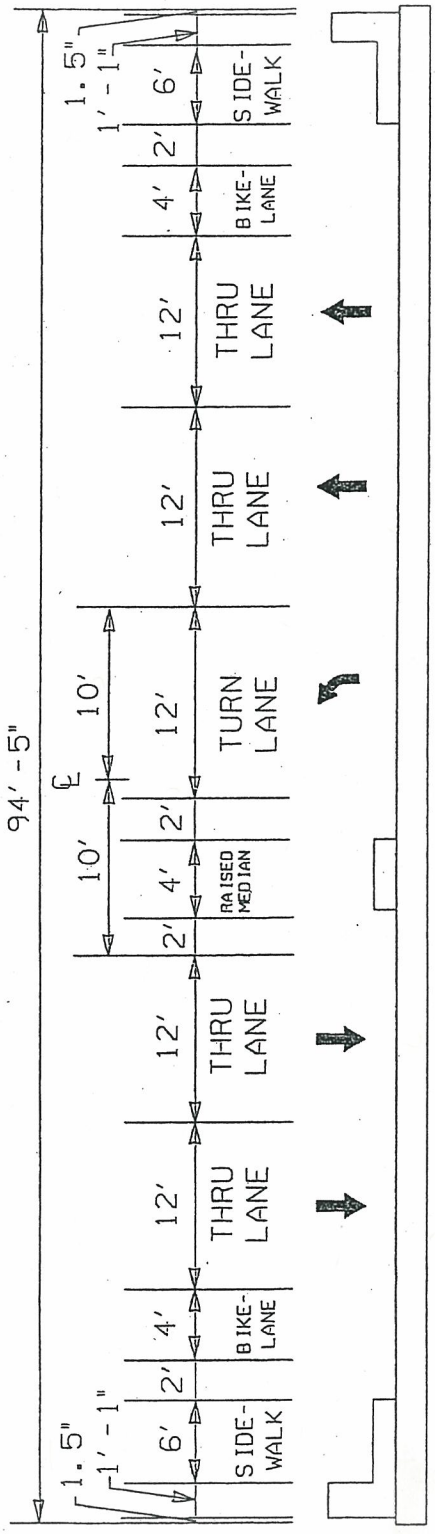
COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 2,359,003	$	$ 2,359,003
ALTERNATIVE	$ 2,251,247	$	$ 2,251,247
SAVINGS	$ 107,756	$	$ 107,756

Illustrations

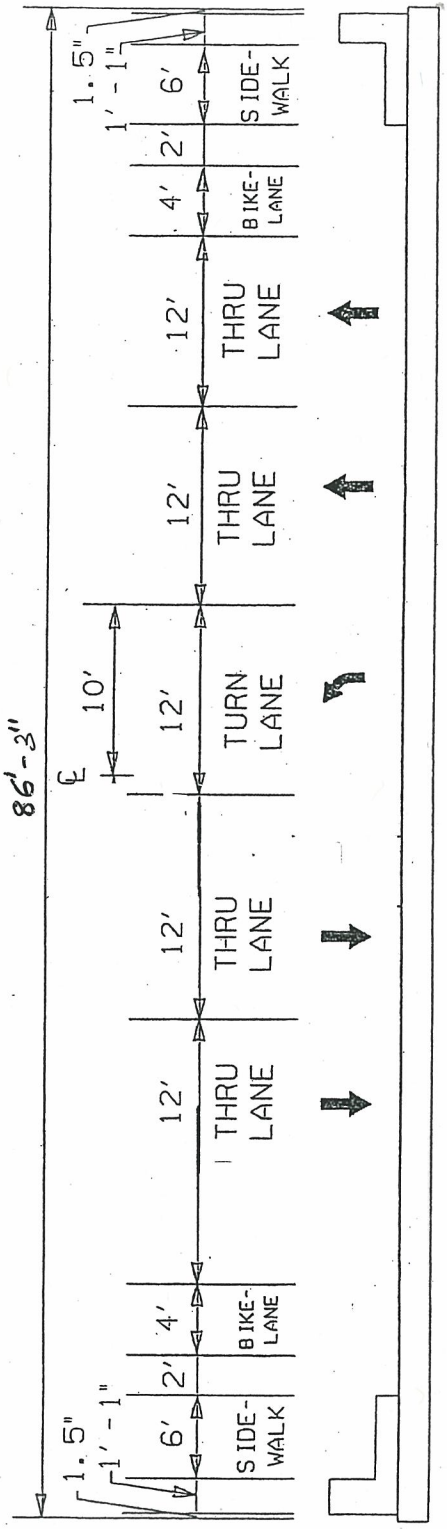
PBS&J

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: BI-2
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

DESCRIPTION: ELIMINATE 4'-2" RAISED MEDIAN SHEET NO.: 2 of 5



ORIGINAL



ALTERNATIVE

Current Design (4 Span – 250' Long, 94'-5" Out-to-Out)

Superstructure:

Deck Area = 250' * 94.42 (avg.) = 23,605 SF

Sidewalk Area = 250'*6' = 1,500 SF

Volume of 9" thick Class AA Superstructure Deck concrete = [23605*(9/12) + 2*1500*(6/12)]/27= 711.46 CY

Area of Raised Median (avg.) = (250'*4')/9 = 111.11 SF

Volume of 6" thick Class A Cast-in-place Median concrete = (6/12)*(1000.00)/27 = 18.52 CY

Area of Grooved concrete (approx.) = 250'*87'/9 = 2416.67 SY

Total length of Type III PPC Girders (approx.) = (2*85'*16) + (2*2'*40') = 2,880'

Total length of Modified Type I PPC Girders (approx.) = 2*9*40' = 720'

Total length of Bridge Parapet and Fence = 2*250 = 500'

Area of Sloped Paving (approx.) = 2*{[(17.5^2 + 35^2)^0.5 + 2 + 1.5]*(94.5+2+2)]}/9 = 933 SY

Substructure:

Volume of Class A concrete (average dimensions of Caps, Columns & Pile Caps):

Intermediate Bents: 3*{[50.75'*3.5'*3.5') + (3*3'*3'*16') + (9'*9'*3.5')] + [(38.75*3.5'*3.5') + (2*3'*3'*16') + (10'*10'*3.5')] }/27= 272.21 CY

End Bents: 2*{[95'*4'*3'] + [2*7.5'*11.5']}/27 = 97.22 CY

Total Volume of Class A concrete = 369.43 CY

Length of 14" PSC Piling = 1,155 LF

Length of 18" PSC Piling = 3,645 LF

Alternative (4 Span – 250' Long, 84'-3" Out-to-Out)

Superstructure:

Deck Area = 250' * 84.25 (avg.) = 21,062.5 SF

Sidewalk Area = 250'*6' = 1,500 SF

Volume of 9" thk Class AA Superstructure Deck concrete = [21062.5*(9/12) + 2*1500*(6/12)]/27= 640.63 CY

Area of Grooved concrete (approx.) = 250'*80'/9 = 2222.22 SY

Total length of Type III PPC Girders (approx.) = (2*85'*15) + (2*2'*40') = 2,710'

Total length of Modified Type I PPC Girders (approx.) = 2*8*40' = 640'

Total length of Bridge Parapet and Fence = 2*250 = 500'

Area of Sloped Paving (approx.) = 2*{[(17.5^2 + 35^2)^0.5 + 2 + 1.5]*(94.5+2+2)]}/9 = 933 SY

Substructure:

Volume of Class A concrete (average dimensions of Caps, Columns & Pile Caps):

Intermediate Bents: 3*{[48'*3.5'*3.5') + (3*3'*3'*16') + (9'*9'*3.5')] + [(36*3.5'*3.5') + (2*3'*3'*16') + (10'*10'*3.5')] }/27= 264.75 CY

End Bents: 2*{[95'*4'*3'] + [2*7.5'*11.5']}/27 = 90.11 CY

Total Volume of Class A concrete = 314.86 CY

Length of 14" PSC Piling = 1,050 LF

Length of 18" PSC Piling = 3,645 LF

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	BI-2
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Eliminate Raised Median*	SHEET NO.:	5 of 5

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Type III PSC Beams	LF	2880	$ 145.81	$ 419,932.80	2710	$ 145.81	$ 395,145.10
Type I PSC Beams	LF	720	$ 110.00	$ 79,200.00	640	$ 145.81	$ 93,318.40
Class "AA" Concrete (Sup)	CY	711.46	$ 1,122.40	$ 798,542.70	654.51	$ 1,122.40	$ 734,622.02
Class "A" Concrete (Sub)	CY	369.43	$ 884.14	$ 326,627.84	354.86	$ 884.14	$ 313,745.92
Concrete Deck Grooving	SY	2416.7	$ 4.17	$ 10,077.51	2222.22	$ 4.17	$ 9,266.66
Conc Barrier (Spcl Design)	LF	500	$ 340.74	$ 170,370.00	500	$ 340.74	$ 170,370.00
Chain Link Fence	LF	500	$ 34.27	$ 17,135.00	500	$ 34.27	$ 17,135.00
MSE Walls	SF	0	$ 52.00	$ -	0	$ 52.00	$ -
6" Concrete Median	SY	111.11	$ 40.49	$ 4,498.84	0	$ 40.49	$ -
14" SQ PSC Piles	LF	1155	$ 49.32	$ 56,964.60	1050	$ 49.32	$ 51,786.00
18" SQ PSC Piles	LF	3645	$ 58.17	$ 212,029.65	3645	$ 58.17	$ 212,029.65
Sloped Paving	SY	933	$ 52.70	$ 49,169.10	933	$ 52.70	$ 49,169.10
Sub-total				$2,144,548			$2,046,588
Mark-up at 10.00%				$214,455			$204,659
TOTAL				**$2,359,003**			**$2,251,247**

$107,756

Value Analysis Design Suggestion

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **BI-5**

DESCRIPTION: **ELIMINATE SKEW FROM BRIDGE GEOMETRY**

SHEET NO.: **1** of **1**

Original Design:

The original Bridge Geometry calls for a 2^{o} (approx.) skew from the normal to SR 10.

Alternative:

The proposed Design Suggestion is to elimination of the skew and allow the bridge to be perpendicular to the centerline of SR 10.

Opportunities:

- Ease of construction
- Less errors in fabrication of Beams
- Easier placement of diaphragms

Risks:

- Some redesign required

Technical Discussion:

The elimination of the skew would require the re-design of horizontal geometry of the roadway along either side of the bridge approach. This may have minimal impact due to the minor skew angle.

Typically, skewed bridges require higher tolerances at the treatments to beam ends which would need to be chamfered. Geometry of diaphragms is another area of difficulty in construction. Perpendicular crossings eliminate these difficulties and leave less room for faulty construction.

Although SR-10 is on a curve, a perpendicular crossing would not adversely impact the visual aspects of the bridge for traffic on the highway.

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: **BI-6**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

DESCRIPTION: **COMBINE SHOULDER AND BIKE LANE ON BRIDGE** SHEET NO.: **1** of 5

Original Design:

The original 4-span bridge is 250’ long with 40’ end spans and 85’ intermediate spans. The bridge is on a vertical curve. End spans 1 and 4 consist of nine 40’ Modified Type I PSC beams with Type III PSC Fascia beams evenly spaced. Spans 2 and 3 consist of sixteen Type III PSC beams evenly spaced. The out-to-out width of the bridge is 94’-5”. The bridge accommodates a 6’ raised sidewalk, 2’ buffer and 4’ Bike Lane on both sides of the bridge, two 12’ travel lanes in each direction, a 12’ turn lane on the south side of the bridge, a 4’-2” raised median with a 2’ buffer on either side. The bents are made up of concrete caps and columns. The end bents and intermediate bents are founded on PSC Piles.

Alternative:

The proposed alternative retains the existing configuration of the bridge but proposes to combine the sidewalk and bike lane across the bridge for a combined width of 8’ on either side. The sidewalk/bike lane may be flush with the travel lanes (no raised sidewalk).

The alternative maintains a 17-5” vertical clearance to US 78 and other current geometry.

Opportunities:

- Cost savings by reducing bridge width
- Reduction of one beam line (4 beams eliminated)
- Better drainage across bridge section
- With some planters along the sidewalk provides for aesthetic appeal
- Reduced construction time

Risks:

- This configuration is typically used in an Urban environment

Technical Discussion:

A 6” safety curb may be provided between the edge of travel lane and sidewalk/bike lane. Combining the Sidewalk and Bike Lane for a width of 8’-6” (8’ combined sidewalk and bike lane + 6” curb) on each side of the bridge reduces the total bridge width by approximately 7’. The resulting bridge cross section will comprise of eight 40’ Modified Type I PSC beams with Type III PSC Fascia beams evenly spaced for end spans 1 and 2 and fifteen Type III PSC beams evenly spaced for intermediate spans 2 and 3. The out-to-out width of the bridge will be 87’-5”. Additionally, the substructure will be comprised of reduced cap lengths.
See the next sheet for the calculation of the savings noted below.

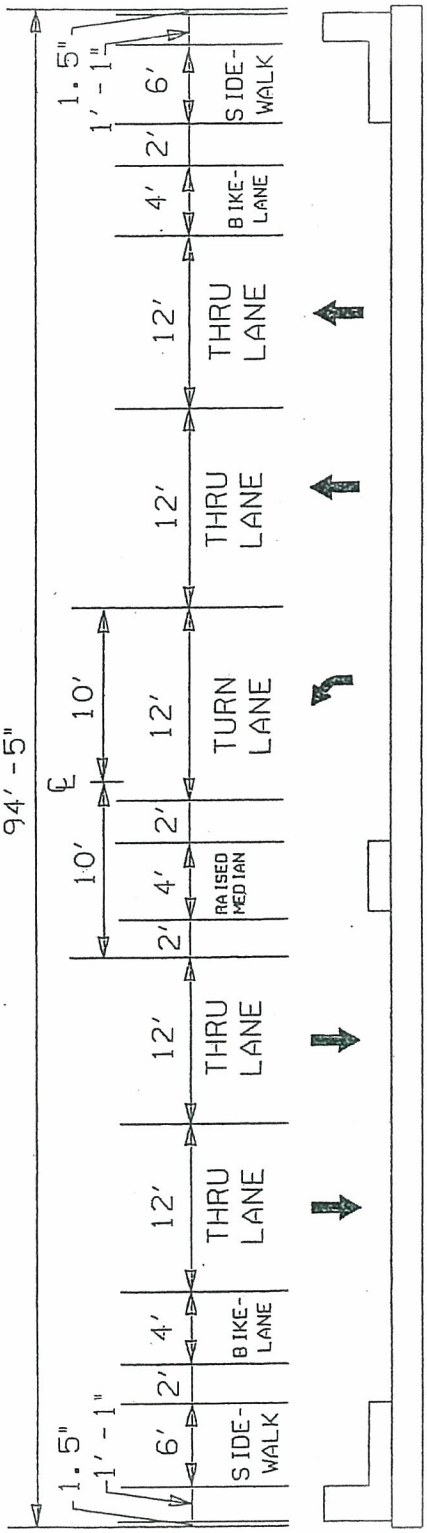
COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 2,359,003	$	$ 2,359,003
ALTERNATIVE	$ 2,195,208	$	$ 2,195,208
SAVINGS	$ 163,795	$	$ 163,795

Illustrations

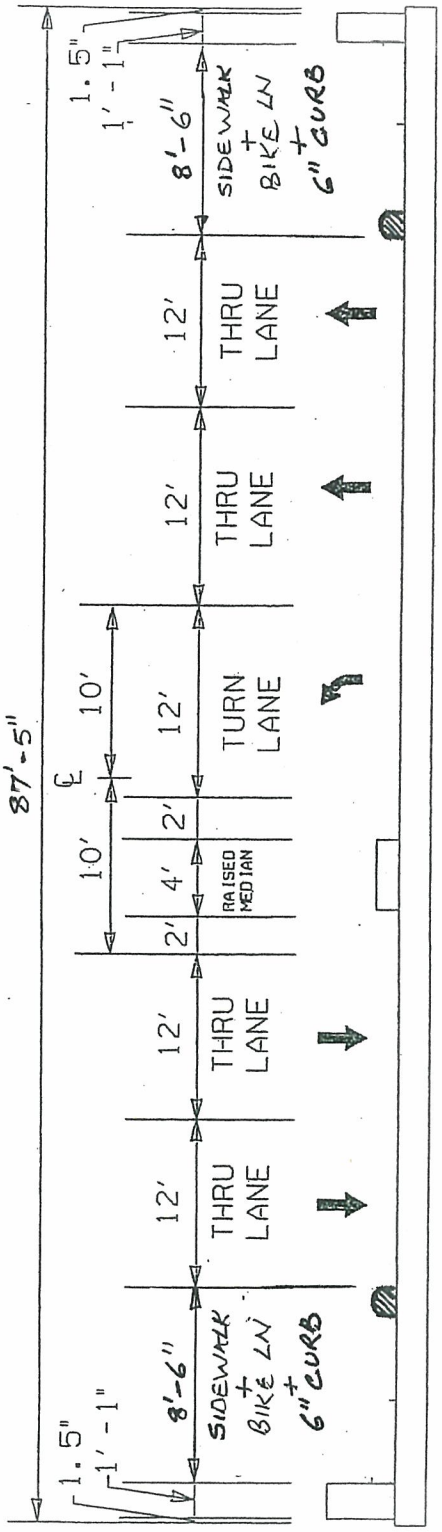
PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: BI-6
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

DESCRIPTION: COMBINE SHOULDER + BIKE LANE ON BRIDGE SHEET NO.: 2 of 5

JENNINGS MILL PKWY
BRIDGE TYPICAL SECTION
(ORIGINAL)



JENNINGS MILL PKWY
BRIDGE TYPICAL SECTION
(ALTERNATIVE)



Current Design (4 Span – 250' Long, 94'-5" Out-to-Out)

Superstructure:

Deck Area = 250' * 94.42 (avg.) = 23,605 SF

Sidewalk Area = 250'*6' = 1,500 SF

Volume of 9" thick Class AA Superstructure Deck concrete = [23605*(9/12) + 2*1500*(6/12)]/27= 711.46 CY

Area of Raised Median (avg.) = (250'*4')/9 = 111.11 SF

Volume of 6" thick Class A Cast-in-place Median concrete = (6/12)*(1000.00)/27 = 18.52 CY

Area of Grooved concrete (approx.) = 250'*87'/9 = 2416.67 SY

Total length of Type III PPC Girders (approx.) = (2*85'*16) + (2*2'*40') = 2,880'

Total length of Modified Type I PPC Girders (approx.) = 2*9*40' = 720'

Total length of Bridge Parapet and Fence = 2*250 = 500'

Area of Sloped Paving (approx.) = 2*{[(17.5^2 + 35^2)^0.5 + 2 + 1.5]*(94.5+2+2)]}/9 = 933 SY

Substructure:

Volume of Class A concrete (average dimensions of Caps, Columns & Pile Caps):

Intermediate Bents: 3*{[50.75'*3.5'*3.5') + (3*3'*3'*16') + (9'*9'*3.5')] + [(38.75*3.5'*3.5') + (2*3'*3'*16') + (10'*10'*3.5')] }/27= 272.21 CY

End Bents: 2*{[95'*4'*3'] + [2*7.5'*11.5']}/27 = 97.22 CY

Total Volume of Class A concrete = 369.43 CY

Length of 14" PSC Piling = 1,155 LF

Length of 18" PSC Piling = 3,645 LF

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: **BI-6**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

DESCRIPTION: **COMBINE SHOULDER AND BIKE LANE ON BRIDGE** SHEET NO.: **4** of 5

Alternative (4 Span – 250' Long, 87'-5" Out-to-Out)

Superstructure:
Deck Area = 250' * 87.42 (avg.) = 21,855 SF

Volume of 9" thick Class AA Superstructure Deck concrete = [21855*(9/12)]/27= 607.08 CY

Area of Raised Median (avg.) = (250'*4')/9 = 111.11 SY

Length of 6" Concrete Doweled Integral Safety Curb (avg.) = 2*(250') = 500 LF

Volume of 6" thick Class A Cast-in-place Median concrete = (6/12)*(1000.00)/27 = 18.52 CY

Area of Grooved concrete (approx.) = 250'*80'/9 = 2222.22 SY

Total length of Type III PPC Girders (approx.) = (2*85'*15) + (2*2'*40') = 2,710'

Total length of Modified Type I PPC Girders (approx.) = 2*8*40' = 640'

Total length of Bridge Parapet and Fence = 2*250 = 500'

Area of Sloped Paving (approx.) = 2*{[(17.5^2 + 35^2)^0.5 + 2 + 1.5]*(94.5+2+2)]}/9 = 933 SY

Substructure:
Volume of Class A concrete (average dimensions of Caps, Columns & Pile Caps):

Intermediate Bents: 3*{[48'*3.5'*3.5') + (3*3'*3'*16') + (9'*9'*3.5')] + [(36*3.5'*3.5') + (2*3'*3'*16') + (10'*10'*3.5')] }/27= 264.75 CY

End Bents: 2*{[88'*4'*3'] + [2*7.5'*11.5']}/27 = 91 CY

Total Volume of Class A concrete = 355.75 CY

Length of 14" PSC Piling = 1,050 LF

Length of 18" PSC Piling = 3,645 LF

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	BI-6
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Combine Shoullder And Bike Lane On Bridge*	SHEET NO.:	5 of 5

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Type III PSC Beams	LF	2880	$ 145.81	$ 419,932.80	2710	$ 145.81	$ 395,145.10
Type I PSC Beams	LF	720	$ 110.00	$ 79,200.00	640	$ 145.81	$ 93,318.40
Class "AA" Concrete (Sup)	CY	711.46	$ 1,122.40	$ 798,542.70	607.08	$ 1,122.40	$ 681,386.59
Class "A" Concrete (Sub)	CY	369.43	$ 884.14	$ 326,627.84	355.75	$ 884.14	$ 314,532.81
Concrete Deck Grooving	SY	2416.7	$ 4.17	$ 10,077.51	2222.22	$ 4.17	$ 9,266.66
Conc Barrier (Spcl Design)	LF	500	$ 340.74	$ 170,370.00	500	$ 340.74	$ 170,370.00
Chain Link Fence	LF	500	$ 34.27	$ 17,135.00	500	$ 34.27	$ 17,135.00
6" Concrete Median	SY	111.11	$ 40.49	$ 4,498.84	111.11	$ 40.49	$ 4,498.84
6" Conc. Doweled Intgl. Curb	LF	0	$ 6.10	$ -	500	$ 6.10	$ 3,050.00
14" SQ PSC Piles	LF	1155	$ 49.32	$ 56,964.60	1050	$ 49.32	$ 51,786.00
18" SQ PSC Piles	LF	3645	$ 58.17	$ 212,029.65	3645	$ 58.17	$ 212,029.65
Sloped Paving	SY	933	$ 52.70	$ 49,169.10	933	$ 52.70	$ 49,169.10
Sub-total				$ 2,144,548			$ 2,001,688
Mark-up at 10.00%				$ 214,455			$ 200,169
TOTAL				**$ 2,359,003**			**$ 2,201,857**

$ 157,146

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: **MI-1A**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

DESCRIPTION: **CHANGE CONCRETE BARRIER WALL TYPE TO MSE** SHEET NO.: **1** of 3

Original Design:

The original design calls for cast-in-place concrete barrier walls on the right side of the roadway from station 162+92 to 165+17 and 166+13 to 167+99 and on the left side of the roadway from station 169+82 to 171+87 and 172+76 to 173+62.

Alternative:

The alternative proposes the use of MSE walls in lieu of the cast-in-place concrete barrier walls.

The alternative maintains the original design geometry.

Opportunities:

- Cost savings
- Reduced construction time
- Improved aesthetics

Risks:

- None

Technical Discussion:

MSE walls are standard GDOT wall types and have demonstrated acceptable performance.

See the next sheet for the calculation of the savings noted below.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 373,265	$	$ 373,265
ALTERNATIVE	$ 338,967	$	$ 338,967
SAVINGS	$ 34,298	$	$ 34,298

Current Design (Cast-in-Place Concrete Side Barriers (Retaining Walls))

GA STD 4948B Type 2-A Wall (Assume average height of 7.5'):
Station 162+92 to Station 165+17 = 225 LF
Station 166+13 to Station 167+99 = 186 LF
Station 169+82 to Station 170+70 = 88 LF
Station 171+60 to Station 171+87 = 27 LF
Station 172+76 to Station 173+62 = 86 LF

Total Type 2-A = 612 LF

GA STD 4948B Type 2-B Wall (Assume average height of 10'):
Station 170+70 to Station 171+60 = 90 LF

Total Type 2-B = 90 LF

Alternate (MSE Walls with Coping)

Length of Coping = 612 + 90 = 702 LF

Wall area = 612'*7.5' + 90'*10' = 5490 SF

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	MI-1A
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Change Concrete Barrier Wall To MSE*	SHEET NO.:	3 of 3

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Conc. Barrier Walls Type 2-A	LF	612	$ 485.72	$ 297,260.64	0	$ 485.72	$ -
Conc. Barrier Walls Type 2-B	LF	90	$ 467.46	$ 42,071.40	0	$ 467.46	$ -
MSE Walls	SF	0	$ 45.17	$ -	5490	$ 45.17	$ 247,983.30
Coping	LF	0	$ 85.71	$ -	702	$ 85.71	$ 60,168.42
Sub-total				$ 339,332			$ 308,152
Mark-up at 10.00%				$ 33,933			$ 30,815
TOTAL				**$ 373,265**			**$ 338,967**

$ 34,298

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: **MI-1B**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

DESCRIPTION: **CHANGE CONCRETE BARRIER WALL TYPE TO MODULAR BLOCK WALLS** SHEET NO.: **1** of 3

Original Design:

The original design calls for cast-in-place concrete barrier walls on the right side of the roadway from station 162+92 to 165+17 and 166+13 to 167+99 and on the left side of the roadway from station 169+82 to 171+87 and 172+76 to 173+62.

Alternative:

The alternative proposes the use of Modular Block walls in lieu of the cast-in-place concrete barrier walls.

The alternative maintains the original design geometry.

Opportunities:

- Cost savings
- Reduced construction time
- Improved aesthetics

Risks:

- None

Technical Discussion:

Modular Block walls are easy to construct demonstrated acceptable performance and durability. It is not uncommon to use these types of walls in an Urban Commercial environment.

See the next sheet for the calculation of the savings noted below.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 373,265	$	$ 373,265
ALTERNATIVE	$ 156,770	$	$ 156,770
SAVINGS	$ 216,495	$	$ 216,495

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** ALTERNATIVE NO.: **MI-1B**
Proj. No. STP-F001-00(098) – Oconee County - P.I. Number: 0001098

DESCRIPTION: **CHANGE CONCRETE BARRIER WALL TYPE TO MODULAR BLOCK WALLS** SHEET NO.: **2** of 3

Current Design (Cast-in-Place Concrete Side Barriers (Retaining Walls))

GA STD 4948B Type 2-A Wall (Assume average height of 7.5'):
Station 162+92 to Station 165+17 = 225 LF
Station 166+13 to Station 167+99 = 186 LF
Station 169+82 to Station 170+70 = 88 LF
Station 171+60 to Station 171+87 = 27 LF
Station 172+76 to Station 173+62 = 86 LF

Total Type 2-A = 612 LF

GA STD 4948B Type 2-B Wall (Assume average height of 10'):
Station 170+70 to Station 171+60 = 90 LF

Total Type 2-B = 90 LF

Alternate (Modular Block Walls with Coping)

Length of Coping = 612 + 90 = 702 LF

Wall area = 612'*7.5' + 90'*10' = 5490 SF

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	MI-1B
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Change Concrete Barrier Wall To Modular Block Wall*	SHEET NO.:	3 of 3

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Conc. Barrier Walls Type 2-A	LF	612	$ 485.72	$ 297,260.64	0	$ 485.72	$ -
Conc. Barrier Walls Type 2-B	LF	90	$ 467.46	$ 42,071.40	0	$ 467.46	$ -
Modular Block Wall	SF	0	$ 15.00	$ -	5490	$ 15.00	$ 82,350.00
Coping	LF	0	$ 85.71	$ -	702	$ 85.71	$ 60,168.42
Sub-total				$ 339,332			$ 142,518
Mark-up at 10.00%				$ 33,933			$ 14,252
TOTAL				**$ 373,265**			**$ 156,770**

$ 216,495

Value Analysis Design Suggestion

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **MI-3**

DESCRIPTION: **MID-POINT OF CONSTRUCTION FOR COST ESTIMATE**

SHEET NO.: 1 of 1

Original Design:

The current estimate shows 5.00 percent for one year to the mid-point of construction.

Alternative:

May want to consider changing this to 5.00 percent for one and a half years.

Opportunities:

- Will provide more accurate cost picture

Risks:

- Overall cost will be higher

Technical Discussion:

During the kick-off meeting, it sounded like the mid-point was going to reaching out an extra six months.

Value Analysis Design Alternative

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

ALTERNATIVE NO.: **MI-5**

DESCRIPTION: **USE ROUNDABOUTS AT THE RAMP ENDS NEAR BRIDGE**

Original Design:

The current intersections where the ramps meet the Jennings Mill Parkway Extension are slated to be signalized intersections. (See Sketch)

Alternative:

These two intersections will be converted into roundabouts with no signalization. (See Sketch).

Opportunities:

- Initial and life cycle cost savings
- Will enhance traffic capacity at the these two locations

Risks:

- Moderate redesign required at these two locations
- May complicate acquisition of needed right-of-way at the roundabout locations

Technical Discussion:

This is likely to be a good location for the application of the roundabout design. This is due to the fact that there is no cross-over traffic as one would experience if this was a full-diamond interchange.

Some would argue that the roundabout is an unexpected encounter for many motorists and can cause orientation problems. However, these roundabouts are now being employed in many states, very successfully. Attached is a print-out from MAPQUEST that includes the air photo of a recently installed roundabout in a high volume area serving MD State Highway 2 connections off the Capital Beltway (I-495/I-95). This roundabout works well. Its use was embraced the Maryland State Highway Administration and FHWA.

COST SUMMARY	INITIAL COST	PRESENT WORTH RECURRING COSTS	PRESENT WORTH LIFE-CYCLE COST
ORIGINAL DESIGN	$ 682,798	$ 455,863	$ 1,138,661
ALTERNATIVE	$ 535,364	$ 142,972	$ 678,336
SAVINGS	$ 147,434	$ 312,891	$ 460,325

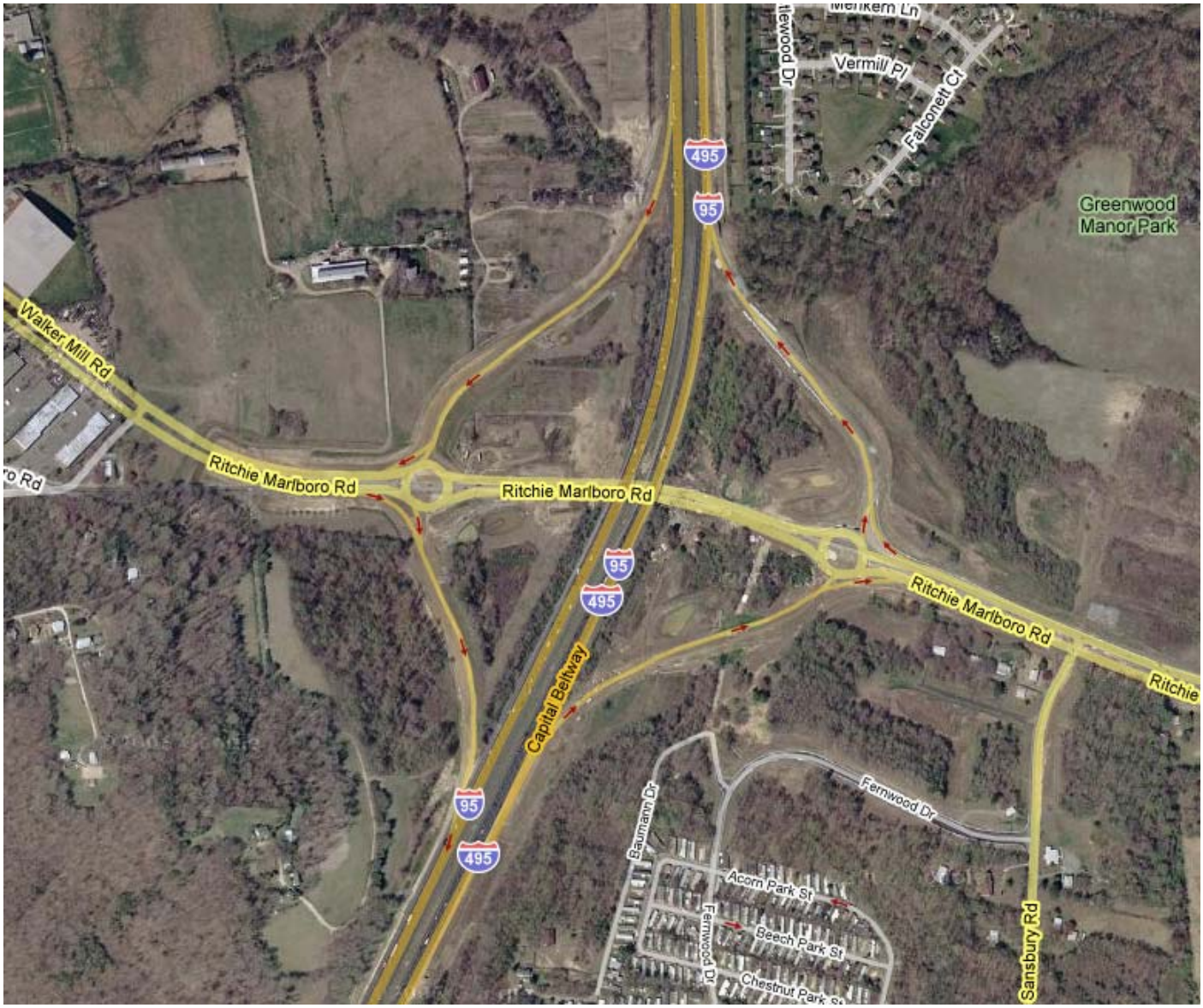
Illustrations

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION**
Proj. No. STP-F001-00(098)– Oconee County - P.I. Number: 0001098

ALTERNATIVE NO.: **MI - 5**

DESCRIPTION: **USE ROUNDABOUTS AT THE RAMP ENDS NEAR BRIDGE**

SHEET NO.: **2** of 5



*Map printed on March 6, 2007 (Google Maps)

PBS&J

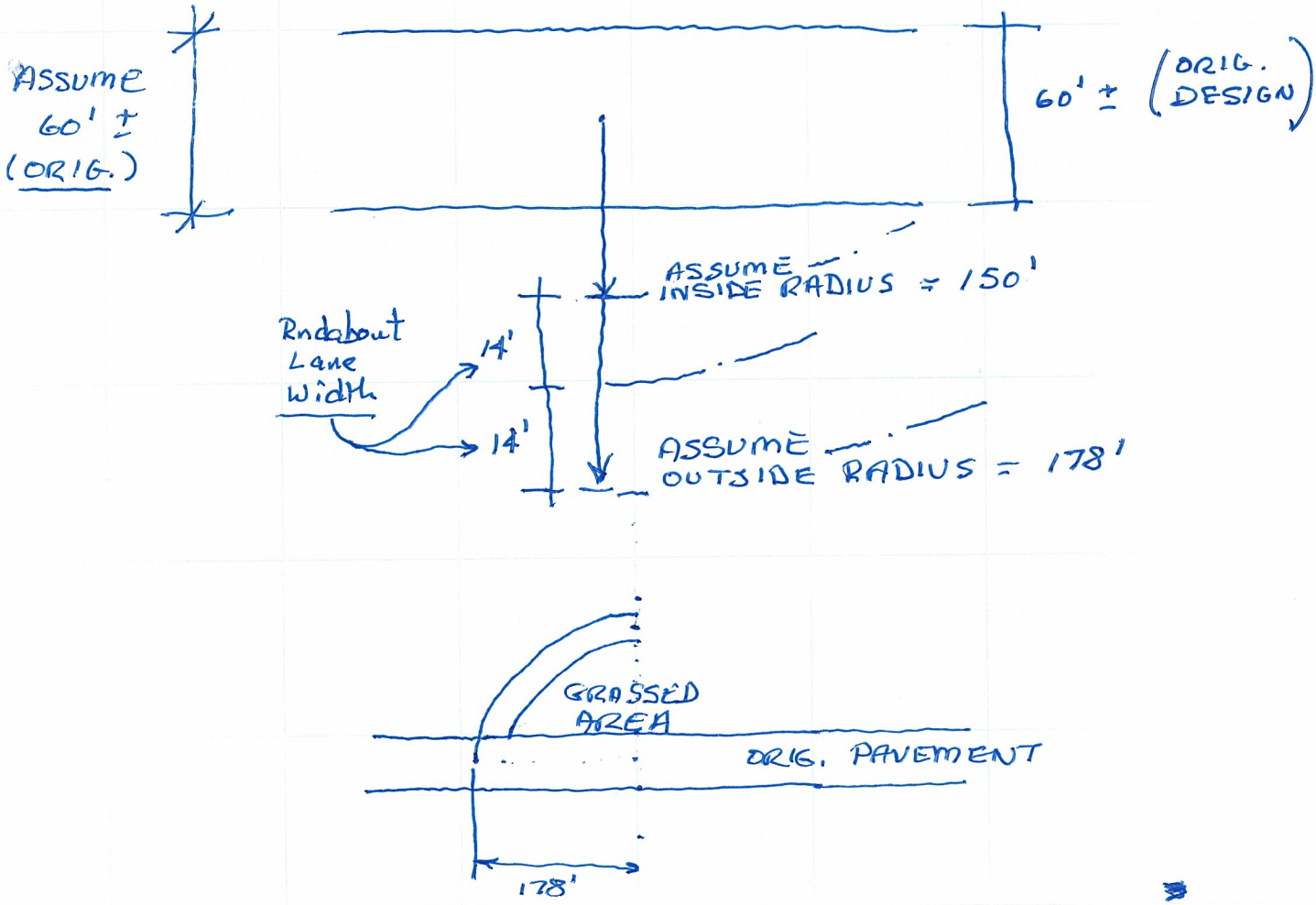
Subject: MI-5

Comp by: Date: Sheet Number: 3 of 5

Check by: Job Number:

CALC PAVEMENT ADDITION TO BUILD ROUNDABOUTS:

12.5 mm SP -	6 35/SY
19 mm SP -	7 05/SY
25 mm SP -	19 61/SY



ORIG PAVEMENT IN AREA ≈ (178' × 2) × 60' ÷ 9 = 2,373 SY

ROUNDABOUT PAVEMENT ≈ π (328' ~~164~~) × 28' ÷ 9

= 3,204 SY

COST WORKSHEET

PROJECT:	GEORGIA DEPARTMENT OF TRANSPORTATION	ALTERNATIVE NO.:	MI-5
Jennings Mill Parkway -- STP-F001-00(098), Oconee County, PI No. 0001098			
DESCRIPTION:	*Use Roundabouts*	SHEET NO.:	4 of 5

CONSTRUCTION ITEM		ORIGINAL ESTIMATE			PROPOSED ESTIMATE		
ITEM	UNITS	NO. OF UNITS	COST/ UNIT	TOTAL	NO. OF UNITS	COST/ UNIT	TOTAL
Crushed Stone Base 12"	SY	4746	$ 19.45	$ 92,310.00	6408	$ 19.45	$ 124,636.00
12.5 MM SP	SY	4746	$ 6.36	$ 30,185.00	6408	$ 6.36	$ 40,755.00
19 MM SP	SY	4746	$ 7.05	$ 33,459.00	6408	$ 7.05	$ 45,176.00
25 MM SP	SY	4746	$ 19.61	$ 93,069.00	6408	$ 19.61	$ 125,661.00
Curb and Gutter	LF	712	$ 17.08	$ 12,161.00	1100	$ 17.08	$ 18,788.00
Signals	EA	2	$95,800.00	$ 191,600.00			
Notes:							
1. Traffic signal unit cost derived by dividing cost for five signalized intersections ($479,000) by five.							
2. Pavement quantities doubled from calculation sheet to provide for two roundabout locations.							
Sub-total				$ 452,784			$ 355,016
Mark-up at 10.00%				$ 230,014			$ 180,348
TOTAL				**$ 682,798**			**$ 535,364**

LIFE CYCLE COST WORKSHEET

PROJECT:	**STP-F001-00(098), OCONEE COUNTY, PI No. 0001098** ***Georgia Department of Transportation***	ALTERNATIVE NO.	**MI-5**
		SHEET NO.	5 of 5

LIFE CYCLE PERIOD:	20	**years**					**Guard Rails**	**Conc Barriers**
INTEREST RATE:	4.20%	**ESCALATION RATE:**	0.00%				**ORIGINAL**	**PROPOSED**
A.	**INITIAL COST**	**(Note - escalation shown as 0.0% since using**					682,798	535,364
	Useful Life (Years)	**constant dollar LCC analysis)**						
						INITIAL COST SAVINGS		147,434
B.	**RECURRENT COSTS (Annual Expenditures)**							
	1.	**Maintenance** (on signals)	(5% of Initial Cost -- Spent per year)				34,140	
	2.	**Operating** (on signals)	(2% of Initial Cost -- Spent per Year)	Energy cost				10,707
	3.							
	4.							
	5.							
	6.							
						Total Annual Costs	34,140	10,707
						Present Worth Factor	13.3528	13.3528
						Present Worth of RECURRENT COSTS	455,863	142,972

C.	**SINGLE EXPENDITURES**		**Year**	**Amount**	**PW factor**	**Present Worth**	**Present Worth**
ORIG	PROP	**< Put "x" in appropriate box (original design or proposed design)**					
		1.			1.0000	-	-
		2.			1.0000	-	-
		3.			1.0000	-	-
		4.			1.0000	-	-
		5.			1.0000	-	-
		6.			1.0000	-	-
		7.			1.0000	-	-
		8.			1.0000	-	-
D.	**SALVAGE VALUE**		**Year**	**Amount**	**PW factor**	**Present Worth**	**Present Worth**
		1.			1.0000	-	-
		2.			1.0000	-	-
					Present Worth of SINGLE EXPENDITURES	-	-
E.	**Total Recurrent Costs & Single Expenditures (B + C + D)**					455,863	142,972
					RECURRENT COSTS & SINGLE EXPENDITURES SAVINGS		312,891
					TOTAL PRESENT WORTH COST (A + E)	1,138,661	678,336
					TOTAL LIFE CYCLE SAVINGS		**460,325**

Project Description

Project Description

Introduction

Georgia DOT Project STP-F001-00 (098), Jennings Mill Parkway Extension, is located in Oconee County approximately 5.3 miles southwest of downtown Athens and less than one-half mile south of the Clarke County line. The project would begin at the northern terminus of Georgia DOT Project STP-1267(8), SR 53 and Mars Hill Road, and it proposes to construct on new location the Jennings Mill Parkway Extension from Virgil Langford Road at the Oconee Connector east to the Jennings Mill Parkway at Epps Bridge Road. The proposed project consists of a 4-lane divided roadway with a 20-foot raised median from the Oconee Connector to Frontage Road East and consists of a 5-lane section with a footprint for a future 20-foot raised median from Frontage Road East to Epps Bridge Road. The proposed 5-lane section would include a 14-foot two-way left turn lane, two 12-foot inside and two 13-foot outside travel lanes, two 6-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The 4-lane divided section with the 20-foot median will also have 4-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The project would also include bridging Jennings Mill Parkway over SR 10 Loop/Paul Brown Parkway and constructing a half diamond interchange with northwest facing ramps. Additional proposed improvements include: the relocation of Jennings Mill Road on the south side of SR 10 Loop that would bend the roadways at the ramps of the new interchange and tie into Virgil Langford Road; a cul-de-sac that would be constructed at the end of the of the remaining portion of the Jennings Mill Road, southeast of the new interchange; and, a new frontage road that would be constructed on the northeast side of SR 10 Loop, connecting the Jennings Mill Parkway Extension to Jennings Mill Road.

This project is rather fully described in the documentation that follows. The current new estimate for the cost of construction totals $30,188,000

Please see the following enclosed documents

- McGee Partners – Summary of Earthwork Quantities (Important Cost Item)
- Georgia Department of Transportation
    - Preconstruction Status Report (Reflects the Inclusive Cost noted above)
    - Earlier Construction Estimate (11 December 2006)
    - Project Concept Report

The VE team utilized the supplied project materials noted above, along with the design products from **McGee Partners**, and the current standard drawings, details and specifications during the conduct of their work in the VE Study effort.

STP-F001-00(098) Oconee
Jennings Mill Parkway

	Cut (cu yds)	Fill (cu yds)	Borrow (cu yds)	Cut + Fill (cu yds)
Jennings Mill Parkway	40708	300324	259616	341032
Virgil Langford Road	14568	2475	-12093	17043
Relocated Jennings Mill Road	14188	4471	-9717	18659
Frontage Road East	57524	125777	68253	183301
Jennings Mill Road	15358	1827	-13531	17185
Epps Bridge Road	65	1393	1328	1458
US 78 Loop	6539	1061	-5478	7600
Off Ramp	12490	14036	1546	26526
On Ramp	1766	39464	37698	41230
	163206	490828	327622	654034

THE MOST CURRENT EARTHWORK QUANTITIES PROVIDED BY KEN TIMPSON OF McGee PARTNERS -- 26 FEB 07

PRECONSTRUCTION STATUS REPORT

PROJ ID	COUNTY	DESCRIPTION	MGMT. ROW DATE	SCHED DATE	MGMT. LET DATE
0001098	Oconee	JENNINGS MILL PKWY EXT FROM EPPS BRIDGE ROAD TO SR 316	Jan-07	Jan-09	Dec-07

STP-F001-00(098) *FIELD DIST:* 1
TIP #: R-45 *TWIN:* *US:*
MPO: Athens *EST DATE:* 2/7/07
MODEL YR:
PROJ MGR: McManus, Brad *PROJ LENGTH:* 1.40
PROG TYPE: New Construction *TYPE WORK:* Roadway Project
CONCEPT: NL/A4U(MED 20) *LET RESP:* DOT

Phase	Approved	Proposed	Cost	Fund	Status
PE	2002	2002	110,000.00	Q25	AUTHORIZED
ROW	2007	2007	8,500,000.00	L200	AUTHORIZED
CST	2007	2009	21,578,000.00	L200	PRECST

TOTAL COST # 30,188,000 PE, R/W, UTI, CONST

Congressional Districts: 10

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACT/EST FINISH	PCT	DISTRICT COMMENTS
		Define Project Concept	3/25/02	6/13/02	100	PHOH TO BE HELD ON 2-24-04 AT THE OCONEE COUNTY CIVIC CENTER (2-3-04). Plans submitted to ENGR SERV. PFPR to be held on 8-24-05.
		Concept Meeting	12/12/02	12/12/02	100	
		Concept Submittal and Review	3/3/03	3/3/03	100	
		Receive Preconstruction Concept Approval	3/19/03	4/22/03	100	
		Management Concept Approval Complet	**4/24/03**	**5/2/03**	**100**	
4/10/07	4/16/07	Value Engineering Study	12/19/06		32	
		Public Information Open House Held	6/13/02	6/13/02	100	
		Environmental Approval	10/31/01	7/20/04	94	
		Public Hearing Held	2/24/04	2/24/04	100	
		Mapping	4/4/02	6/5/02	100	
		Field Surveys/SDE	4/4/02	10/2/02	100	
		Preliminary Plans	**1/3/03**	**11/15/04**	**100**	
		Preliminary Bridge Design	12/30/02	3/6/03	100	
3/2/07	3/8/07	Underground Storage Tanks	7/10/05		40	
3/2/07	7/20/07	404 Permit Obtainment			0	
		PFPR Inspection	8/24/05	8/24/05	100	
		R/W Plans Preparation	8/30/05	11/8/05	100	
		R/W Plans Final Approval	**11/8/05**	**12/14/05**	**100**	
		L & D Report Development and Approval	9/16/05	9/26/05	100	
3/2/07	11/25/08	R/W Acquisition			14	
6/8/07	6/21/07	Stake R/W			0	
		Soil Survey	11/3/03	3/8/04	100	
		Bridge Foundation Investigation	10/1/03	2/24/06	100	
3/2/07	**11/9/07**	**Final Design**	**8/24/05**		**9**	
		Final Bridge Plans Preparation	1/4/06	4/25/06	100	
12/3/07	12/4/07	FFPR Inspection			0	
12/18/07	12/31/07	FFPR Response			0	

BIKE PROVISIONS INCLUDED?: N ***MEASUREMENT*** E ***CONSULTANT:*** L ***UT EST:***

PDD: AUG2000 LR: ASSIGNED TO ROAD DESIGN
Bridge: PSR 02/01/07 - CONSUL MA&A - (FINAL PLANS SENT 1/08/07)
Design: SH|VP WORKING ON FINAL PLANS (MAAI)Locals
EIS: EA 12-18-03 FONSI 7-20-04 | RISH R11-27-06
LGPA: REV PMA SGN OCONEE DO PE & UTIL|ROW & CST TO BE DONE BY FUTURE AGREEMENTS 8-10-06.
Prog. Develop: PRECON SHIFT CHG ROW FRM LOC TO 06 2/06
Programming: #1 2-05|TEMP SR 1143; 1143TA; SR 1144
ROW: r/w acq. contract executed: County 1/30/07- GDOT 2/7/07
Traffic Op: SEND PLANS FOR REVIEW WHEN FFPR IS SCHED_?PFPR sent 8/17/05
Utility: NEED 2ND SUBMISSION PLANS 11/08/04
EMG: PE BY COUNTY; C=M/S/D (MAAI)

R/W INFORMATION:

PREL PARCEL CT: 18 ***TOTAL PARCEL CT:*** 40 ***ACQUIRED BY:*** LOC ***ACQ MGR:*** Byers, Kim (LOC)
UNDER-REVIEW CT: 9 ***RELEASED*** 20 ***OPT-PEND CT:*** 0 ***DEEDS CT:*** 0 ***COND-PEND CT:*** 0 ***COND-FILED CT:*** 0
RW CERT DT: ***ACQUIRED CT:*** 0 ***RELOCATION CT:*** 0

Estimate Report for file "0001098"

Section ROADWAY ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
150-1000	1	LS	500000.00	TRAFFIC CONTROL -	500000.00
153-1300	1	EA	53000.00	FIELD ENGINEERS OFFICE TP 3	53000.00
201-1500	1	LS	500000.00	CLEARING & GRUBBING -	500000.00
205-0001	252500	CY	5.61	UNCLASS EXCAV	1416525.00
206-0002	173700	CY	6.31	BORROW EXCAV, INCL MATL	1096047.00
207-0203	3400	CY	50.55	FOUND BKFILL MATL, TP II	171870.00
310-5120	85700	SY	19.45	GR AGGR BASE CRS, 12 INCH, INCL MATL	1666865.00
402-1812	250	TN	58.91	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	14727.50
402-3132	8807	TN	79.18	RECYCLED ASPH CONC 4.75 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL	697338.26
402-3143	22038	TN	89.13	RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL	1964246.94
402-3190	9263	TN	64.12	RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2,INCL BITUM MATL & H LIME	593943.56
413-1000	6379	GL	1.84	BITUM TACK COAT	11737.36
432-5010	1000	SY	2.43	MILL ASPH CONC PVMT, VARIABLE DEPTH	2430.00
433-1100	1060	SY	164.45	REINF CONC APPROACH SLAB, INCL CURB	174317.00
439-0020	9016	SY	60.30	PLAIN PC CONC PVMT, CL 3 CONC, 9 INCH THK	543664.80
441-0016	500	SY	39.88	DRIVEWAY CONCRETE, 6 IN TK	19940.00
441-0104	15500	SY	37.12	CONC SIDEWALK, 4 IN	575360.00
441-0301	2	EA	1876.27	CONC SPILLWAY, TP 1	3752.54
441-0740	1250	SY	30.26	CONCRETE MEDIAN, 4 IN	37825.00
441-4030	815	SY	45.27	CONC VALLEY GUTTER, 8 IN	36895.05
441-6222	26000	LF	17.08	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	444080.00
441-6740	5000	LF	15.62	CONC CURB & GUTTER, 8 IN X 30 IN, TP 7	78100.00
500-0100	1060	SY	4.21	GROOVED CONCRETE	4462.60
500-3101	380	CY	578.66	CLASS A CONCRETE	219890.80
500-3800	25	CY	896.15	CLASS A CONCRETE, INCL REINF STEEL	22403.75
511-1000	62900	LB	0.95	BAR REINF STEEL	59755.00
550-1180	8000	LF	41.02	STORM DRAIN PIPE, 18 IN, H 1-10	328160.00
550-1240	3000	LF	53.78	STORM DRAIN PIPE, 24 IN, H 1-10	161340.00
550-1361	800	LF	93.97	STORM DRAIN PIPE, 36 IN, H 10-15	75176.00
550-1541	600	LF	204.58	STORM DRAIN PIPE, 54 IN, H 10-15	122748.00
550-4218	6	EA	678.07	FLARED END SECTION 18 IN, STORM DRAIN	4068.42
550-4224	3	EA	882.93	FLARED END SECTION 24 IN, STORM DRAIN	2648.79
550-4230	1	EA	909.32	FLARED END SECTION 30 IN, STORM DRAIN	909.32
550-4236	1	EA	1202.05	FLARED END SECTION 36 IN, STORM DRAIN	1202.05
603-2182	500	SY	48.61	STN DUMPED RIP RAP, TP 3, 24 IN	24305.00
603-7000	500	SY	4.83	PLASTIC FILTER FABRIC	2415.00
634-1200	60	EA	104.82	RIGHT OF WAY MARKERS	6289.20
641-1100	100	LF	51.47	GUARDRAIL, TP T	5147.00
641-1200	3800	LF	18.54	GUARDRAIL, TP W	70452.00
641-5001	2	EA	617.35	GUARDRAIL ANCHORAGE, TP 1	1234.70
641-5012	10	EA	1871.80	GUARDRAIL ANCHORAGE, TP 12	18718.00
668-1100	80	EA	2277.92	CATCH BASIN, GP 1	182233.60
668-1110	40	LF	234.95	CATCH BASIN, GP 1, ADDL DEPTH	9398.00
668-1200	2	EA	2457.90	CATCH BASIN, GP 2	4915.80
668-1210	10	LF	312.22	CATCH BASIN, GP 2, ADDL DEPTH	3122.20
668-2100	2	EA	4470.97	DROP INLET, GP 1	8941.94
668-2110	10	LF	267.06	DROP INLET, GP 1, ADDL DEPTH	2670.60
668-2200	2	EA	3725.62	DROP INLET, GP 2	7451.24
668-2210	10	LF	337.50	DROP INLET, GP 2, ADDL DEPTH	3375.00
668-4300	3	EA	2213.53	STORM SEWER MANHOLE, TP 1	6640.59
668-5000	1	EA	1936.87	JUNCTION BOX	1936.87
				Section Sub Total:	**$11,964,676.48**

Section EROSION CONTROL ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
163-0232	7	AC	571.97	TEMPORARY GRASSING	4003.79
163-0240	40	TN	183.84	MULCH	7353.60
163-0300	10	EA	2872.37	CONSTRUCTION EXIT	28723.70

163-0501	1	EA	924.07	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 1	924.07
163-0503	2	EA	549.25	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	1098.50
163-0504	14	EA	435.00	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 4	6090.00
163-0521	12	EA	198.82	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS	2385.84
163-0530	5300	LF	3.67	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	19451.00
163-0531	2	EA	8070.58	CONSTRUCT AND REMOVE SEDIMENT BASIN, TP 1, STA NO -	16141.16
165-0010	5100	LF	0.93	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	4743.00
165-0030	11900	LF	1.83	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	21777.00
165-0040	12	EA	79.16	MAINTENANCE OF EROSION CONTROL CHECKDAMS/DITCH CHECKS	949.92
165-0060	2	EA	1213.72	MAINTENANCE OF TEMPORARY SEDIMENT BASIN, STA NO -	2427.44
165-0070	5300	LF	2.29	MAINTENANCE OF BALED STRAW EROSION CHECK	12137.00
165-0085	1	EA	313.22	MAINTENANCE OF SILT CONTROL GATE, TP 1	313.22
165-0087	2	EA	178.48	MAINTENANCE OF SILT CONTROL GATE, TP 3	356.96
165-0088	14	EA	80.00	MAINTENANCE OF SILT CONTROL GATE, TP 4	1120.00
165-0101	10	EA	660.01	MAINTENANCE OF CONSTRUCTION EXIT	6600.10
167-1000	84	EA	1349.35	WATER QUALITY MONITORING AND SAMPLING	113345.40
167-1500	42	MO	1035.76	WATER QUALITY INSPECTIONS	43501.92
171-0010	5100	LF	1.80	TEMPORARY SILT FENCE, TYPE A	9180.00
171-0030	11900	LF	3.84	TEMPORARY SILT FENCE, TYPE C	45696.00
603-2012	700	SY	45.00	STN DUMPED RIP RAP, TP 1, 12 IN	31500.00
603-7000	700	SY	4.83	PLASTIC FILTER FABRIC	3381.00
700-6910	14	AC	906.91	PERMANENT GRASSING	12696.74
700-7000	42	TN	58.05	AGRICULTURAL LIME	2438.10
700-7010	35	GL	19.30	LIQUID LIME	675.50
700-8000	14	TN	348.14	FERTILIZER MIXED GRADE	4873.96
700-8100	135	LB	2.04	FERTILIZER NITROGEN CONTENT	275.40
710-9000	1750	SY	3.65	PERMANENT SOIL REINFORCING MAT	6387.50
715-2100	110000	SY	2.50	BITUMINOUS TREATED ROVING, SLOPES	275000.00
				Section Sub Total:	**$685,547.82**

Section SIGNING & MARKING ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
500-3101	10	CY	578.66	CLASS A CONCRETE	5786.60
636-1020	150	SF	15.31	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	2296.50
636-1029	60	SF	18.64	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 3	1118.40
636-1031	65	SF	26.99	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING TP 6	1754.35
636-1032	160	SF	19.45	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING TP 6	3112.00
636-1072	700	SF	21.83	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING, TP 3	15281.00
636-2070	55	LF	8.75	GALV STEEL POSTS, TP 7	481.25
636-2080	285	LF	11.30	GALV STEEL POSTS, TP 8	3220.50
636-3000	2700	LB	4.97	GALV STEEL STR SHAPE POST	13419.00
636-5010	25	EA	43.62	DELINEATOR, TP 1	1090.50
636-9094	18	LF	144.65	PILING IN PLACE, SIGNS, STEEL H, HP 12 X 53	2603.70
638-1001	1	LS	81264.01	STR SUPPORT FOR OVERHEAD SIGN, TP I , STA -	81264.01
652-0094	16	EA	47.66	PAVEMENT MARKING, SYMBOL, TP 4	762.56
652-0110	16	EA	43.56	PAVEMENT MARKING, ARROW, TP 1	696.96
652-5301	12000	LF	0.52	SOLID TRAF STRIPE, 6 IN, WHITE	6240.00
652-5451	12000	LF	0.26	SOLID TRAFFIC STRIPE, 5 IN, WHITE	3120.00
652-6301	1000	GLF	0.26	SKIP TRAF STRIPE, 6 IN, WHITE	260.00
652-6501	1000	GLF	0.28	SKIP TRAFFIC STRIPE, 5 IN, WHITE	280.00
653-0120	40	EA	72.67	THERMOPLASTIC PVMT MARKING, ARROW, TP	2906.80

				2	
653-0210	6	EA	108.18	THERMOPLASTIC PVMT MARKING, WORD, TP 1	649.08
653-1501	27900	LF	0.63	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	17577.00
653-1502	34700	LF	0.69	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	23943.00
653-1704	575	LF	5.02	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	2886.50
653-1804	4000	LF	1.99	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	7960.00
653-3501	12000	GLF	0.48	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	5760.00
653-3502	12000	GLF	0.36	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, YELLOW	4320.00
653-6004	730	SY	2.79	THERMOPLASTIC TRAF STRIPING, WHITE	2036.70
654-1001	180	EA	3.64	RAISED PVMT MARKERS TP 1	655.20
654-1003	300	EA	3.78	RAISED PVMT MARKERS TP 3	1134.00
				Section Sub Total:	**$212,615.61**

Section TRAFFIC SIGNAL ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
639-4004	20	EA	6299.44	STRAIN POLE, TP IV	125988.80
647-1000	5	LS	47667.90	TRAFFIC SIGNAL INSTALLATION NO -	238339.50
647-2140	3	EA	1836.24	PULL BOX, PB-4	5508.72
647-2150	5	EA	2395.08	PULL BOX, PB-5	11975.40
682-6120	2710	LF	16.33	CONDUIT, RIGID, 2 IN	44254.30
682-6222	2000	LF	11.36	CONDUIT, NONMETL, TP 2, 2 IN	22720.00
935-1113	3640	LF	2.96	OUTSIDE PLANT FIBER OPTIC CABLE, LOOSE TUBE, SINGLE MODE, 24 FIBER	10774.40
935-1511	250	LF	3.23	OUTSIDE PLANT FIBER OPTIC CABLE, DROP, SINGLE MODE, 6 FIBER	807.50
935-3103	5	EA	708.34	FIBER OPTIC CLOSURE, UNDERGROUND, 24 FIBER	3541.70
935-4010	18	EA	40.96	FIBER OPTIC SPLICE, FUSION	737.28
935-6562	5	EA	1701.04	EXTERNAL TRANSCEIVER, DROP AND REPEAT, 1310 SINGLE MODE, (SIGNAL JOBS)	8505.20
935-8000	1	LS	6123.90	TESTING	6123.90
				Section Sub Total:	**$479,276.70**

Section BRIDGE ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
500-0100	2461	SY	4.21	GROOVED CONCRETE	10360.81
500-1006	711	LS	1112.31	SUPERSTR CONCRETE, CL AA, BR NO -	790852.41
500-3101	186	CY	578.66	CLASS A CONCRETE	107630.76
507-9032	5022	LF	227.54	PSC BEAMS, AASHTO, BULB TEE, 72 IN, BR NO -	1142705.88
511-1000	34668	LB	0.95	BAR REINF STEEL	32934.60
511-3000	135100	LS	0.95	SUPERSTR REINF STEEL, BR NO -	128345.00
520-1125	1080	LF	49.30	PILING IN PLACE, STEEL H, HP 12 X 53	53244.00
520-1147	1350	LF	57.17	PILING IN PLACE, STEEL H, HP 14 X 73	77179.50
				Section Sub Total:	**$2,343,252.96**

Section WALL NO 1 ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
627-1000	235	SF	45.48	MSE WALL FACE, 0 - 10 FT HT, WALL NO -	10687.80
627-1010	2996	SF	51.97	MSE WALL FACE, 10 - 20 FT HT, WALL NO -	155702.12
627-1100	200	LF	84.18	COPING A, WALL NO -	16836.00
				Section Sub Total:	**$183,225.92**

Section WALL NO 2 ITEMS

Item Number	Quantity	Units	Unit Price	Item Description	Cost
627-1000	356	SF	45.48	MSE WALL FACE, 0 - 10 FT HT, WALL NO -	16190.88
627-1010	3886	SF	51.97	MSE WALL FACE, 10 - 20 FT HT, WALL NO -	201955.42
627-1100	225	LF	84.18	COPING A, WALL NO -	18940.50

Section Sub Total: $237,086.80

Total Estimated Cost: $16,105,682.29

Subtotal Construction Cost	**$16,105,682.29**
E&C Rate 10.0 %	$1,610,568.23
Inflation Rate 5.0 % @ 1.0 Years	$885,812.53
Total Construction Cost	**$18,602,063.04**
Right Of Way	$5,169,490.00
ReImb. Utilities	$192,500.00
Grand Total Project Cost	**$23,964,053.04**

Status Report Update
Moreland Altobelli
Right of Way
Oconee County
11/16/2006

STP-F001-00(098) Jennings Mill Parkway

Parcel No.	Property Owner Name	Date of Title Report	Appraisal Received	Appraisal To GDOT	Appraisal Released	($) Offer	First Owner Contact	Option Signed	Package to MA Legal	Right of Entry	Condemn to County	Closing Pkg. To County	Date of Closing	Actual Cost	Agent	Remarks
1	Paul A. Keller, Jr.		N/A		N/A	$0.00										
1A	Linda S. Abney	10/27/05	02/28/06	02/28/06	04/19/06	$11,515.00									MRS	DWE Only.
2	James M. Lance, as Executor under the Last Will & Testament of L. Coleman Norris	10/27/05	03/31/06	03/31/06	06/29/06	$100,855.00									MRS MRS	
3	Briter Ventures, LLC	10/28/05	02/10/06	02/10/06	06/29/06	$358,770.00									MRS	
4	Briter Ventures, LLC	10/28/05	02/10/06	02/10/06	06/29/06	$23,225.00									MRS	
5	Gwen W. Griffin & Elbert N. Whitmire, III	10/27/05	02/10/06	02/10/06	06/29/06	$93,625.00									MRS	
6	Briter Ventures, LLC	10/28/05	02/10/06	02/10/06	04/01/06	$307,380.00									MRS	
7	Emily Janice & Alan T. Burrell	10/27/05	02/10/06	02/10/06	06/29/06	$34,630.00									MRS	
8	Briter Ventures, LLC	10/28/05	02/10/06	02/10/06	06/29/06	$35,050.00									MRS	
9	Evelyn & Frank Gordy Family, L.P.	10/27/05	02/28/06	02/28/06	04/01/06	$785,845.00									MRS	
10	Wright Land Company	10/28/05	02/28/06	02/28/06	04/03/06	$128,930.00									MRS	
11	Oconee 316 Associates, LLC	10/27/05	02/28/06	02/28/06	04/03/06	$486,710.00									MRS	
12	Wright Land Company	10/28/05	02/28/06	02/28/06	04/03/06	$194,935.00									MRS	
12A	Wright Land Company	10/28/05	02/28/06	02/28/06	04/17/06	$104,000.00									MRS	
13	Lowe's Home Centers, Inc.	10/27/05	02/28/06	02/28/06	06/29/06	$66,740.00									MRS	
14	WB Epps Bridge, LLC	11/29/05	N/A		N/A	$0.00									MRS	
15	Dartha B. & C. Scott Ferguson, as Trustees of the Trust Created Under Items 8 & 9 of the Last Will & Testament of W.H. Ferguson, Jr.	12/01/05	03/16/06	03/20/06	04/17/06	$145,055.00									MRS MRS	DWE Only.
16	Zaxby's Holdings, LLC	12/01/05	03/16/06	03/20/06	06/29/06	$122,415.00									MRS	
17	The Markets at Epps Bridge, LLC	12/01/05	03/16/06	03/20/06	06/29/06	$106,360.00									MRS	
18	WB Epps Bridge, LLC	11/29/05	03/16/06	03/20/06	04/17/06	$36,315.00									MRS	
19	Jimmy M. Britt	12/01/05	03/16/06	03/20/06	06/29/06	$97,530.00									MRS	
20	HD Development of Maryland, Inc.	12/01/05	03/16/06	03/20/06	04/03/06	$47,195.00									MRS	
21	Glenda L. Mitchell	10/27/05	02/28/06	02/28/06	04/03/06	$87,890.00									MRS	
22	Silver Mill Farms, LLC	10/27/05	02/10/06	02/10/06	04/17/06	$170,420.00									MRS	
23	Jennings Mill HOA	10/27/05	N/A		N/A	$0.00									MRS	
24	Oconee 316 Associates, LLC	10/27/05	03/16/06	03/20/06	04/03/06	$1,228,865.00									MRS	DWE Only.
25	William Edward, Sr. & Faye S. Chambers	12/01/05	02/28/06	02/28/06	04/03/06	$53,840.00									MRS	
26	William Edward, Sr. & Faye S. Chambers	12/01/05	02/28/06	02/28/06	04/03/06	$30,800.00									MRS	
27	St. Mary's Highland Hills, Inc.	10/27/05	03/31/06	03/31/06	04/19/06	$260,835.00									MRS	
28	St. Mary's Highland Hills, Inc.	10/27/05	02/28/06	02/28/06	04/13/06	$9,770.00									MRS	
29	St. Mary's Highland Hills, Inc.	10/27/05	02/28/06	02/28/06	04/13/06	$11,515.00									MRS	
30	St. Mary's Highland Hills, Inc.	10/27/05	02/28/06	02/28/06	04/19/06	$2,625.00									MRS	
31	St. Mary's Highland Hills, Inc.	10/27/05	03/20/06	N/A	04/19/06	$10,500.00									MRS	
32	St. Mary's Highland Hills, Inc.	12/01/05	03/20/06	N/A	04/19/06	$5,300.00									MRS	

Status Report Update
Moreland Altobelli
Right of Way
Oconee County
11/16/2006

STP-F001-00(098) Jennings Mill Parkway

Parcel No.	Property Owner Name	Date of Title Report	Appraisal Received	Appraisal To GDOT	Appraisal Released	($) Offer	First Owner Contact	Option Signed	Package to MA Legal	Right of Entry	Condemn to County	Closing Pkg. To County	Date of Closing	Actual Cost	Agent	Remarks
33	St. Mary's Highland Hills, Inc.	12/01/05	03/20/06	N/A	04/19/06	$500.00									MRS	
34	St. Mary's Highland Hills, Inc.	12/01/05	03/20/06	N/A	04/19/06	$500.00									MRS	
35	St. Mary's Highland Hills, Inc.	12/01/05	03/20/06	N/A	04/19/06	$500.00									MRS	
36	St. Mary's Highland Hills, Inc.	12/01/05	03/20/06	N/A	04/19/06	$500.00									MRS	
37	St. Mary's Highland Hills, Inc.	12/01/05	03/20/06	N/A	04/19/06	$500.00									MRS	
38	Joan L. Stapelkamp	12/01/05	03/20/06	N/A	04/19/06	$500.00									MRS	
39	St. Mary's Highland Hills, Inc.	01/24/06	03/20/06	N/A	04/19/06	$6,950.00									MRS	
42		40	38	29	38	$5,169,490.00	0	0	0	0	0	0	0	$0.00		

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-F001-00 (098)
County: Oconee
P. I. Number: 0001098

Federal Route Number: None
State Route Number: None

Date of Report: March 21, 2003

Recommendation for approval:

DATE _____ _____
Project Manager

DATE _____ _____
State Road & Airport Design Engineer

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

DATE _____ _____
State Transportation Planning Administrator

DATE _____ _____
Office of Financial Management Administrator

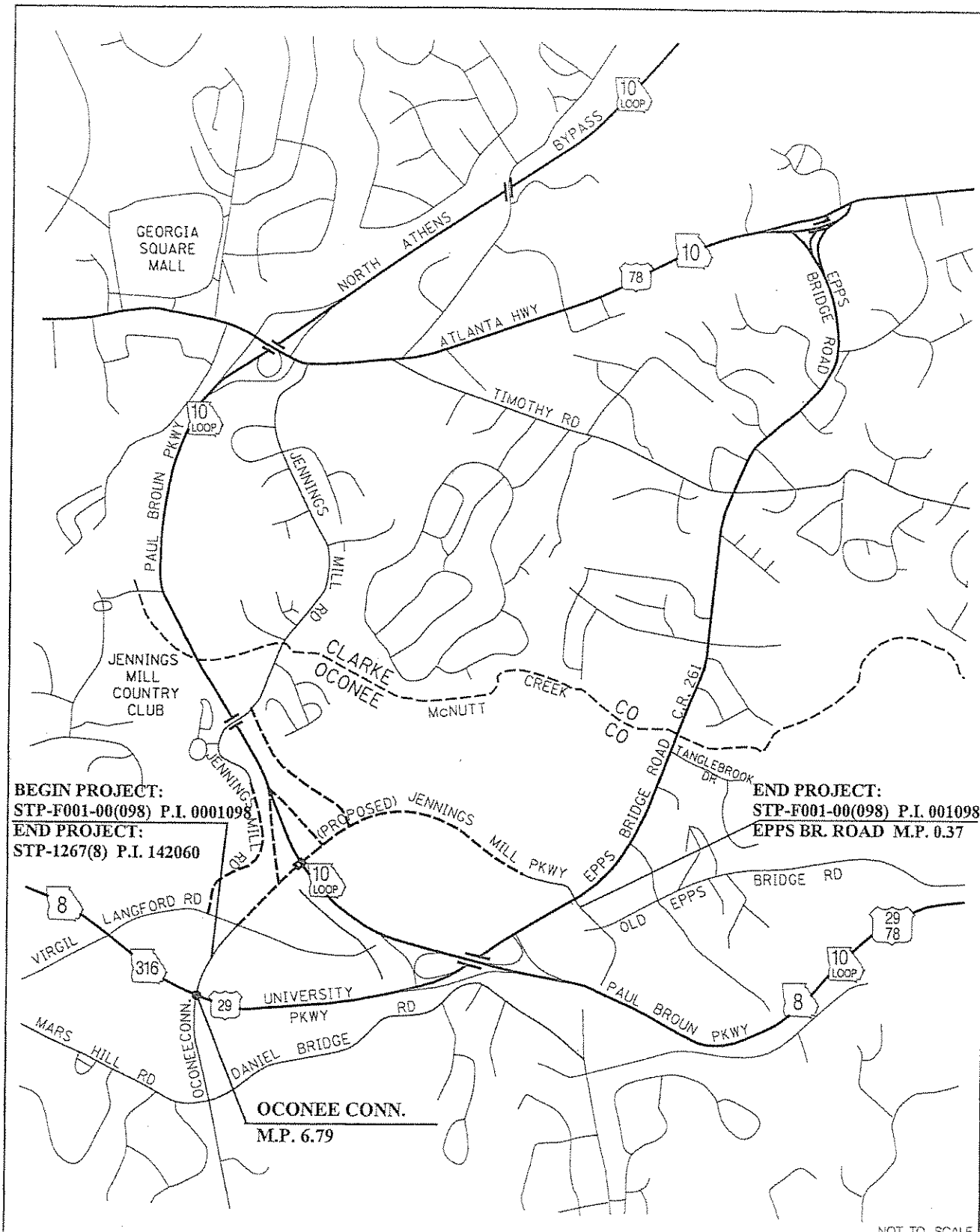
DATE _____ _____
State Environmental/Location Engineer

DATE _____ _____
State Traffic Safety & Design Engineer

DATE _____ _____
District Engineer

DATE _____ _____
Project Review Engineer

DATE _____ _____
Bridge Design Engineer



PROJECT LOCATION SKETCH

JENNINGS MILL PKWY

GDOT PROJECT STP-F001-00(098) P.I. 0001098

...\traffic diagrams\locmap.dgn Dec. 27, 2002 17:04:06

Need and Purpose: The existing CR 512/Jennings Mill Parkway extends only 900 feet west of CR 261/Epps Bridge Road and serves as a local roadway for a home improvement superstore. The proposed project is needed to improve connectivity within the area by providing alternative access routes for local traffic originating from south of SR 316/Univeristy Parkway and SR 10 Loop/Paul Broun Parkway to reach Epps Bridge Road to the north of SR 10 Loop. The purpose of the project is to improve connectivity by utilizing the newly constructed Oconee Connector, beginning at CR 37/Virgil Langford Road, to replace CR 26/Jennings Mill Road as the primary roadway to cross over SR 10 Loop from the southwest. By connecting to Epps Bridge Road on the northeast side of SR 10 Loop, the new roadway would provide an alternative route for local traffic to cross SR 10 Loop, other than SR 316 and the existing interchange with SR 10 Loop. Construction of a new interchange on SR 10 Loop at the newly constructed Jennings Mill Parkway would relieve existing congestion at the SR 316/SR 10 Loop interchange and provide additional capacity for increased access to Clarke County and planned local development within the area. The new roadway will provide a more direct connection between the two facilities for traffic originating to the north on SR 10 Loop and to the west on SR 316.

As a result of recent improvements within the immediate vicinity of SR 316, the intersection of Jennings Mill Road and SR 316 has been replaced by the construction of the Oconee Connector. Currently, all traffic wishing to reach areas on either side of the SR 10 Loop must use either Jennings Mill Road, via the Oconee Connector, or use SR 316 to then cross over SR 10 Loop. The limited access nature of SR 10 Loop has severed all other local roadways that formerly connected areas to the north and to the south of the freeway. In addition, as part of its transportation master plan, Oconee County plans to transform SR 316 into a limited access facility, requiring the further consolidation of all remaining intersections with SR 316 into grade-separated interchanges. Departing its intersection with SR 316 to the north, the newly constructed Oconee Connector is a four-lane roadway that quickly tapers into two lanes prior to terminating into Jennings Mill Road at the intersection with Virgil Langford Road. Jennings Mill Road consists of a two-lane typical section and currently carries an average daily traffic (ADT) volume of 5,800 vehicles over its SR 10 Loop Bridge. Under a No-Build scenario, it is anticipated that the traffic demand caused by future planned commercial/retail development on the opposite side of SR 10 Loop would result in Jennings Mill Road carrying an ADT of over 23,000 vehicles over the existing SR 10 Loop Bridge. The existing roadway network consisting of Jennings Mill Road, Epps Bridge Road and Jennings Mill Parkway (existing street) would not be able to accommodate these volumes.

The planned commercial/retail development is located in the northwest quadrant of the SR 316/ SR 10 Loop interchange immediately to the west of Jennings Mill Parkway, and would extend from the existing roadway terminus across SR 10 Loop to Virgil Langford Road approaching SR 316. The development would consist of approximately 1.7 million square feet of gross floor area of commercial/retail space with additional outparcels, occupying a total area of 180 acres depending on the final land use determinations associated with each parcel.

The logical western terminus of the proposed Jennings Mill Parkway Extension occurs where the roadway would tie into the existing Oconee Connector approximately 700 feet north of MP 6.79 where it intersects SR 316. The logical eastern terminus occurs at MP 0.37 on Epps Bridge Road where it intersects the existing Jennings Mill Parkway. Total length of the project is

approximately 1.36 miles. Associated with the construction of the interchange, Jennings Mill Road south of SR 10 Loop would be relocated to provide room for the eastbound off-ramp from SR 10 Loop to Jennings Mill Parkway. Jennings Mill Road would be relocated to intersect Virgil Langford Road, approximately 700 feet to the west of Jennings Mill Parkway. On the east side of SR 10 Loop, a frontage road would be constructed on the northwest side of and parallel to SR 10 Loop that would connect Jennings Mill Road to the Jennings Mill Parkway Extension. This roadway would be approximately 0.53 miles long and consist of a three-lane urban section.

The proposed project should not result in any disproportionate effect to minority and low-income populations. As of the 2000 U.S. Census, Oconee County has a total population of 26,225, of which 22,612 or 86% live in unincorporated areas. Of the total population, approximately 11.9% are minorities. There is one anticipated displacement as a result of the project; however, this individual does not belong to a minority population.

Two wetlands and three stream crossings were identified within the project survey area during preliminary field surveys; however, the proposed project would result in only one wetland and open water impact within the proposed construction limits. The proposed project would be expected to produce some increased siltation within wetland and stream crossings during the construction phase. Adverse impacts to jurisdictional waters in and around the project area would be minimized through the implementation of standard soil erosion and hydrological control measures. During continued project development, if it is determined that impact to Jurisdictional Waters are unavoidable, these impacts would be mitigated in accordance with the ACOE Standard Operating Procedures for Compensatory Mitigation. For detailed descriptions and an analysis of each jurisdictional waters site see the ecology discussion in the Environmental Assessment.

This project is listed in the State Transportation Improvement Program (STIP) as a long range project, and in the Georgia DOT 6-year Construction Work Program (CWP), and is intended to be coordinated with other recently constructed and planned projects to upgrade the existing transportation infrastructure for this part of Oconee County, including the adjoining regional area surrounding Athens within neighboring Clarke County. This project follows and is consistent with the recent construction of the Oconee Connector, and the planned widening of SR 53/Mars Hill Road from Watkinsville to the southern terminus of this project. All three of these projects are intended to provide sustainable traffic capacity and connectivity to accommodate significant historical and anticipated growth associated with the northeastern portions of Oconee County and the SR 316 corridor, including the City of Watkinsville and the adjoining areas on the southern edge of the Athens metropolitan area. Construction of the Jennings Mill Parkway Extension/Interchange will be a significant part of the county transportation master plan, including the transition of SR 316 into a limited access facility within and beyond Oconee County.

Description of the proposed project: Georgia DOT Project STP-F001-00 (098), Jennings Mill Parkway Extension, is located in Oconee County approximately 5.3 miles southwest of downtown Athens and less than one-half mile south of the Clarke County line. The project would begin at the northern terminus of Georgia DOT Project STP-1267(8), SR 53 & Mars Hill Road, and it proposes to construct on new location the Jennings Mill Parkway Extension from

Virgil Langford Road at the Oconee Connector east to the existing Jennings Mill Parkway at Epps Bridge Road. The proposed project consists of a 4-lane divided roadway with a 20-foot raised median from the Oconee Connector to Frontage Road East and consists of a 5-lane section with a footprint for a future 20-foot raised median from Frontage Road East to Epps Bridge Road. The proposed 5-lane section would include a 14-foot two-way left turn lane, two 12-foot inside and two 13-foot outside travel lanes, two 6-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The 4-lane divided section with the 20-foot median will also have 4-foot bike lanes, with curb and gutter and 5-foot sidewalks on both sides. The project would also include bridging Jennings Mill Parkway over SR 10 Loop/Paul Broun Parkway and constructing a half-diamond interchange with northwest facing ramps. Additional proposed improvements include: the relocation of Jennings Mill Road on the south side of SR 10 Loop that would bend the roadway at the ramps of the new interchange and tie into Virgil Langford Road; a cul-de-sac that would be constructed at the end of the remaining portion of the Jennings Mill Road, southeast of the new interchange; and, a new frontage road that would be constructed on the northeast side of SR 10 Loop, connecting the Jennings Mill Parkway Extension to Jennings Mill Road.

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

PDP Classification: Major – New Location

Federal Oversight: Full Oversight ( ), Exempt(X), State Funded( ), or Other ( )

Functional Classification:

S.R. 10 Loop/Paul Broun Pkwy:	Rural Principal Arterial
Jennings Mill Parkway:	Rural Major Collector
Jennings Mill Road:	Rural Major Collector
Virgil Langford Road:	Rural Major Collector

U. S. Route Number(s): None **State Route Number(s):** None

Traffic (AADT):

Roadway	Base Year 2005	Design Year 2025
Jennings Mill Parkway (proposed)	15,800	26,000
SR 10 Loop/Paul Broun Parkway	28,000	43,700
Jennings Mill Road	9,200	15,200
Virgil Langford Road	6,000	9,600

Existing Design Features:

- Typical Section: Jennings Mill Parkway (C.R. 512) – [Existing roadway in front of Lowes] Four 12-foot urban lanes, 14-foot center turn lane, curb and gutter on both sides.

  Jennings Mill Road (C.R. 26) – Two 12-foot rural lanes, grass shoulders.

  Virgil Langford Road (C.R. 37) – Two 12-foot rural lanes, grass shoulders.

	Posted Speed	Max degree of curve	Max grade
• Jennings Mill Parkway	25 mph	14°	5.5%
• Jennings Mill Road	35 mph	12°	8.4%
• Virgil Langford Road	25 mph	20°	6%

- Width of right of way:

Jennings Mill Parkway:	80 ft.
Jennings Mill Road:	80 ft.
Virgil Langford Road:	40 ft.

- Major Structures: None
- Major Interchanges or Intersections along Project: None
- Existing Length of Roadway Segment: The existing Jennings Mill Parkway is approximately 0.10 miles long and serves as an access road for a Lows Home Improvement Warehouse. It intersects with Epps Bridge Road at MP 0.37 along Epps Bridge Road.

Proposed Design Features:

- Typical Section: Jennings Mill Parkway (C.R. 512) – [Proposed roadway from Frontage Rd to Epps Bridge Rd] Five-lane section: four (two 12-foot inside, two 13-foot outside) travel lanes with 14-foot two-way left turn lane, two 6-foot bike lanes with curb and gutter, and 5-foot sidewalks on both sides.

  Jennings Mill Parkway (C.R. 512) – [Proposed roadway from Virgil Langford Rd to Frontage Rd] Four 12-foot lanes divided with a 20-foot raised median, two 4-foot bike lanes with curb and gutter, and 5-foot sidewalks on both sides.

  Jennings Mill Road (C.R. 26) – Two 12-foot urban lanes with curb and gutter, 5-foot sidewalks on both sides, and a left turn lane at its intersection with the Frontage Road.

  Relocated Jennings Mill Road (C.R. 26) – Two 12-foot urban lanes with curb and gutter, 5-foot sidewalks on both sides.

  Frontage Road East (C.R. 337) – Two 12-foot urban lanes, 14-foot two-way left turn lane, with curb and gutter and 5-foot sidewalks on both sides.

  Virgil Langford Road (C.R. 37) –Two 12-foot urban lanes with curb and gutter, 5-foot sidewalks on both sides, and left turn lanes at its intersection with Jennings Mill Road and Jennings Mill Parkway. Additionally, there will be a right turn lane at its intersection with Relocated Jennings Mill Road.

Ramps – One 16' lane with 12' paved and 2' grass outside shoulder; and 4' paved and 2' grass inside shoulder. Exit Ramp widens to include two left turn lanes and one right turn lane at its intersection with Jennings Mill Parkway.

- Jennings Mill Parkway

Proposed Design Speed	45 mph		
Proposed Maximum grade	6.02%	Maximum grade allowable	7%.
Proposed Maximum Degree of Curve	7° 45'	Max. allowable Degree of Curve	7° 51'

- Jennings Mill Road

Proposed Design Speed	35 mph		
Proposed Maximum grade	8.4%	Maximum grade allowable	10%.
Proposed Maximum Degree of Curve	9°	Max. allowable Degree of Curve	13° 39'

- Relocated Jennings Mill Road

Proposed Design Speed	35 mph		
Proposed Maximum grade	2.6%	Maximum grade allowable	10%.
Proposed Maximum Degree of Curve	11°30'	Max. allowable Degree of Curve	13° 39'

- Frontage Road East

Proposed Design Speed	35 mph		
Proposed Maximum grade	6%	Maximum grade allowable	10%.
Proposed Maximum Degree of Curve	8°	Max. allowable Degree of Curve	13° 39'

- Virgil Langford Road

Proposed Design Speed	35 mph		
Proposed Maximum grade	6.05%	Maximum grade allowable	10%.
Proposed Maximum Degree of Curve	11°30'	Max. allowable Degree of Curve	13° 39'

- Ramp – Exit from SR 10 Loop

Proposed Design Speed	35 mph		
Proposed Maximum grade	6%	Maximum grade allowable	6%.
Proposed Maximum Degree of Curve	11°	Max. allowable Degree of Curve	13° 39'

- Ramp – Entrance from SR 10 Loop

Proposed Design Speed	45 mph		
Proposed Maximum grade	6%	Maximum grade allowable	6%.
Proposed Maximum Degree of Curve	5°	Max. allowable Degree of Curve	7° 51'

- Right of Way:
  - Width:

Jennings Mill Parkway:	112 –124 feet
Jennings Mill Road:	80 feet
Frontage Road East:	100 feet
Virgil Langford Road:	60 feet

  - Easements: Temporary and Permanent easements for slopes and drainage structures

  - Type access control:

Jennings Mill Parkway:	By County Permit
Jennings Mill Road:	By County Permit
Frontage Road East:	By County Permit
Virgil Langford Road:	By County Permit

  - Number of parcels impacted: 18 parcels Number of displacements: 1

- Structures:
  - Bridge: A new bridge over SR 10 Loop/Paul Broun Parkway is proposed to accommodate the new roadway, and tie into the proposed configurations at the cross-street intersections. (See Typical Section.)

Bridge Type	PSC Beams
No. of spans	2
Length	166'
Maximum Span	83'
NOTE: MSE walls are proposed at the end bents of the bridge.	
Deck Structure Width	94'-5"
Roadway Width	80'
Minimum Vertical Clearance	17.0'
Total Horizontal Clearance	39'

- Major Intersections and Interchanges: A new half-diamond interchange is proposed at the new bridge over SR 10 Loop with northwest facing ramps. Other major intersections along the new constructed Jennings Mill Parkway Extension would occur at Frontage Road East, just north of the proposed SR 10 Loop westbound on-ramp, and at Epps Bridge Road at the eastern terminus of the project.

- Traffic control during construction: Traffic will be maintained during construction.

- Design Exceptions to controlling criteria anticipated:

	UNDETERMINED	YES	NO
HORIZONTAL ALIGNMENT:	( )	( )	(X)
ROADWAY WIDTH:	( )	( )	(X)
SHOULDER WIDTH:	( )	( )	(X)
VERTICAL GRADES:	( )	( )	(X)
CROSS SLOPES:	( )	( )	(X)
STOPPING SIGHT DISTANCE:	( )	( )	(X)
SUPERELEVATION RATES:	( )	( )	(X)
HORIZONTAL CLEARANCE:	( )	( )	(X)
SPEED DESIGN:	( )	( )	(X)
VERTICAL CLEARANCE:	( )	( )	(X)
BRIDGE WIDTH:	( )	( )	(X)
BRIDGE STRUCTURAL CAPACITY:	( )	( )	(X)

- Design Variances: This project does not meet the 1,000-foot minimum spacing requirements between ramps and intersections. Therefore, a design variance of median spacing would be required. The spacing between the two ramp intersections is 660 feet and the spacing between the ramps and Frontage Road East is 720 feet. A traffic queue analysis was conducted to determine if this design variance would have a negative impact on the traffic operations of the intersections and roadway. The queue length analysis results showed that the queue length of traffic between the intersections of the interchange area would not exceed the spacing requirements. Also, the levels of service determined by the traffic network analysis showed that the intersections would operate a level of service "D" or better. Therefore, it was concluded that the reduced spacing of intersections would not negatively impact the operational level of service of Jennings Mill Parkway or the interchange with SR 10 Loop. (See Traffic Analysis Section)
- Environmental concerns: Nationwide Permit 14 will be required for crossing jurisdictional waters. There are no known possible hazardous waste sites and one UST site within the project construction limits.
- Level of environmental analysis:
  - Are Time Savings Procedures appropriate? Yes ( ), No (X)
  - Categorical exclusion ( ),
  - Environmental Assessment (X), or
  - Environmental Impact Statement ( ).
- Utility Involvements: Oconee County will be responsible for all reimbursable utility relocations. Possible affected utilities include:

  Georgia Power – Distribution & Transmission
  Walton EMC
  BellSouth
  AT&T
  Charter Communications
  Atlanta Gas Light
  Oconee County Utilities

- **Project responsibilities:**
  - Design – *Oconee County, GA*
  - Right-of-Way Acquisition – *Oconee County, GA*
  - Relocation of Utilities – *Oconee County, GA*
  - Letting to contract – *Georgia DOT*
  - Providing material pits – *Construction Contractor*
  - Providing detours - *Construction Contractor*

Coordination:

- Initial Concept Team meeting was held at 10:00 A.M. on May 23, 2002 in the GDOT Road Design Conference Room. Minutes of the meeting are included in the Attachments.
- Concept Team Meeting was held at 10:00 A.M. on December 12, 2002 in the GDOT Road Design Conference Room. Minutes of the meeting are included in the Attachments.
- Public Involvement. A public information meeting was held June 13, 2002 at the Oconee County Civic Center to present the project to the public for their review and input. A summary of the comments received at that meeting is also included in the Appendix.
- Local Government Project Agreement. Oconee County will be responsible for the preconstruction engineering (design), right-of-way acquisition and utility relocation costs necessary for the construction of the project. (See attached document.)

Other projects in the area:

1. Project NH-003-2 (76), P.I. No. 122870 – SR 316 Barrow/Oconee Counties – 26 Interchanges
2. Project STP-1267 (8), P.I. No. 142060 – SR 53/Mars Hill Rd FM SR 15 to SR 316/Oconee Connector

Scheduling – Responsible Parties' Estimate

• Time to complete the environmental process:	6 months.
• Time to complete preliminary construction plans:	9 months.
• Time to complete right-of-way plans:	6 months
• Time to complete final construction plans:	8 months.
• Time to purchase right-of-way:	10 months.

Other alternates considered:

1. No Build: No action would be taken to construct the Jennings Mill Parkway Extension as it is currently planned; however, some access roadway would have to be constructed in order to access the development. This alternative would significantly hinder mobility in the area.

2. Jennings Mill Parkway Extension – No Interchange: The proposed project would construct the Jennings Mill Parkway Extension from the Oconee Connector to Epps Bridge Road. The facility would bridge over SR 10 Loop, but no interchange would be constructed. This project would provide access to both sides of the development; however, the lack of an interchange with SR 10 Loop would significantly overburden the project intersections of Jennings Mill Parkway and Epps Bridge Road, and Jennings Mill Parkway at Frontage Road East, as well as the SR 316/SR 10 Loop interchange. This alternative would also not satisfy the stated Need and Purpose of project in that it would not provide necessary connectivity

between SR 10 Loop traffic and the proposed developments located along Jennings Mill Parkway and remove local trips from traveling on SR 316.

3. Full Build Condition: This alternative would include construction of the Jennings Mill Parkway Extension, and would also include construction of an interchange where the newly constructed Jennings Mill Parkway crosses over SR 10 Loop. Associated with the interchange construction, Jennings Mill Road would be relocated and a Frontage Road would be constructed on the northeast side of SR 10 Loop that would connect Jennings Mill Road to Jennings Mill Parkway within the new development.

Comments:

- No accident information is available as this is a new location construction project.
- An additional 12 feet of right-of-way along Jennings Mill Parkway is to be acquired from the SR 10 Loop Westbound On-Ramp to the property line of the Wright Land Company, to be used for purposes of providing a future additional left turn lane at Frontage Road East and at a proposed new development roadway into the Gordy Property.
- Frontage Road East is to be constructed centered about the proposed 100-foot right-of-way.
- Existing Jennings Mill Parkway on the east side of Epps Bridge Road is proposed to be modified by removing the raised median, resurfacing and restriping the roadway to provide the following lane configuration: one eastbound through lane, two westbound left turn lanes, one westbound through lane and one westbound right turn lane. Additionally, Jennings Mill Parkway on the west side of Epps Bridge Road is to be designed with two westbound 15-foot lanes plus the 4-foot bike lane; this would provide the required width to accept possible future double left turns from northbound Epps Bridge Road if the need arises beyond the 20-year design horizon. All other lanes are to be 12-foot lanes. A concept sketch of this intersection is attached.
- There is a proposal to extend the existing Jennings Mill Parkway on the east side of Epps Bridge Road across US 78/SR 10 Loop to connect with Daniels Bridge Road. When and if that project is constructed, the east leg of Jennings Mill Parkway would be restriped to allow for two eastbound through lanes, two westbound left turn lanes and one westbound through lane. An additional through and/or right turn lane would require construction on the north side of Jennings Mill Parkway. The newly constructed lane would already align with the westbound outside lane of Jennings Mill Parkway being constructed in this project. A concept sketch of this intersection is attached.
- A right turn lane on Virgil Langford Road at its intersection with Relocated Jennings Mill Road was added because of the high volume of right turning vehicles. However, by separating the right turning traffic from the westbound through traffic creates the additional benefit of reducing conflict for left turning vehicles exiting from Relocated Jennings Mill Road.
- See Minutes of Concept Team Meeting (attached) for additional comments.

Attachments:

1. Cost Estimates
2. Typical sections
3. Traffic Analysis, Traffic Flow Diagrams, Capacity Analysis Worksheets
4. Intersection Concepts of Jennings Mill Parkway at Epps Bridge Road
5. Minutes of Initial Concept Team Meeting
6. Minutes of Concept Team Meeting
7. Summary of PIM Comments
8. LGPA's or PMA's
9. Project Concept Layout
10. IJR Waiver

Jennings Mill Parkway Project
STP-F001-00 (098)
COST ESTIMATE

ITEM #	ITEM DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	TOTAL COST
	ROADWAY ITEMS				
150-1000	TRAFFIC CONTROL - PROJECT STP-F001-00 (098)	LUMP	LUMP	LUMP	$90,000
153-1300	FIELD ENGINEERS OFFICE TP 3	EA	$57,678.73	1	$57,679
201-1500	CLEARING AND GRUBBING	LUMP	LUMP	LUMP	$500,000
207-0203	FOUND BKFILL MATL, TP II	CY	$33.30	3400	$113,220
205-0001	UNCLASSIFIED EXCAVATION	CY	$1.79	252500	$451,975
206-0001	BORROW EXCAVATION	CY	$4.40	173700	$764,280
310-5120	GR AGGR BASE CRS, 12" INCL MATL	SY	$12.10	85700	$1,036,970
402-1812	RECYCLED ASPH CONC LEVELING, INCL BITUM MATL & H LIME	TONS	$35.53	250	$8,883
402-3130	RECYCLED ASPH CONC 12.5 MM SUPERPAVE,	TONS	$34.32	8807	$302,256
	GP 2 ONLY, INCL BITUM MATL & H LIME				
402-3190	RECYCLED ASPH CONC 19 MM SUPERPAVE,	TONS	$36.18	9263	$335,135
	GP 1 OR 2, INCL BITUM MATL & H LIME				
402-3143	RECYCLED ASPH CONC 25 MM SUPERPAVE,	TONS	$35.76	22038	$788,079
	GP 1 OR 2, INCL BITUM MATL & H LIME				
413-1000	BITUM TACK COAT	GAL	$0.91	6379	$5,805
432-5010	MILL ASPH CONC PVMT, VARIABLE DEPTH	SY	$1.20	1000	$1,200
433-1100	REINF CONC APPROACH SLAB, INCL CURB	SY	$98.05	1060	$103,933
439-0020	PLAIN PC CONC PVMT, CL 3 CONC, 9 INCH THK	SY	$46.00	9016	$414,736
441-0016	DRIVEWAY CONCRETE, 6"	SY	$25.60	500	$12,800
441-0104	CONC SIDEWALK, 4 IN	SY	$20.12	15500	$311,860
441-0301	CONCRETE SPILLWAY, TP 1	EA	$1,184.64	2	$2,369
441-0740	CONCRETE MEDIAN, 4 IN	SY	$24.90	1250	$31,125
441-4030	CONCRETE VALLEY GUTTER, 8"	SY	$34.63	815	$28,223
441-6222	CONC CURB & GUTTER, 8 IN X 30 IN, TP 2	LF	$9.61	26000	$249,860
441-6740	CONC CURB & GUTTER, 8 IN X 30 IN, TP 7	LF	$9.24	5000	$46,200
500-0100	GROOVED CONCRETE APPROACH SLABS	SY	$3.37	1060	$3,572
500-3101	CLASS A CONCRETE - CULVERTS	CY	$379.40	380	$144,172
500-3800	CLASS A CONCRETE, INCL REINF STEEL	CY	$617.13	25	$15,428
511-1000	BAR REINF STEEL	LB	$0.51	62900	$32,079
550-1180	STORM DRAIN PIPE, 18 IN, H 1-10	LF	$22.81	8000	$182,480
550-1240	STORM DRAIN PIPE, 24 IN, H 1-10	LF	$27.77	3000	$83,310
550-1361	STORM DRAIN PIPE, 36 IN, H 10-15	LF	$50.00	800	$40,000
550-1541	STORM DRAIN PIPE, 54 IN, H 10-15	LF	$69.00	600	$41,400
550-4218	FLARED END SECTION 18 IN, STORM DRAIN	EA	$384.55	6	$2,307
550-4224	FLARED END SECTION 24 IN, STORM DRAIN	EA	$412.78	3	$1,238
550-4230	FLARED END SECTION 30 IN, STORM DRAIN	EA	$521.89	1	$522
550-4236	FLARED END SECTION 36 IN, STORM DRAIN	EA	$683.90	1	$684
634-1200	RIGHT OF WAY MARKER	EA	$74.09	60	$4,445
641-1100	GUARDRAIL, TP T	LF	$24.29	100	$2,429
641-1200	GUARDRAIL, TP W	LF	$8.78	3800	$33,364
641-5001	GUARDRAIL ANCHORAGE, TP1	EA	$375.03	2	$750
641-5012	GUARDRAIL ANCHORAGE, TP12	EA	$1,250.05	10	$12,501
668-1100	CATCH BASIN, GP 1	EA	$1,598.08	80	$127,846
668-1110	CATCH BASIN, GP1 ADDL DEPTH	LF	$151.04	40	$6,042
668-1200	CATCH BASIN, GP 2	EA	$1,522.71	2	$3,045
668-1210	CATCH BASIN, GP2, ADDL DEPTH	LF	$175.03	10	$1,750
668-2100	DROP INLET, GP 1	EA	$1,362.62	2	$2,725
668-2110	DROP INLET, GP1, ADDL DEPTH	LF	$141.55	10	$1,416
668-2200	DROP INLET, GP 2	EA	$2,106.67	2	$4,213
668-2210	DROP INLET, GP2, ADDL DEPTH	LF	$174.79	10	$1,748
668-4300	STORM SEWER MANHOLE, TP 1	EA	$1,589.84	3	$4,770
668-5000	JUNCTION BOX	EA	$1,132.25	1	$1,132

Jennings Mill Parkway Project
STP-F001-00 (098)
COST ESTIMATE

ITEM #	ITEM DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	TOTAL COST
	EROSION CONTROL ITEMS				
163-0232	TEMPORARY GRASSING	AC	$417.47	7	$2,922
163-0240	MULCH	TONS	$286.30	40	$11,452
163-0300	CONSTRUCTION EXIT	EA	$1,160.17	10	$11,602
163-0501	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 1	EA	$800.21	1	$800
163-0503	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 3	EA	$264.98	2	$530
163-0504	CONSTRUCT AND REMOVE SILT CONTROL GATE, TP 4	EA	$536.42	14	$7,510
163-0521	CONSTRUCT AND REMOVE TEMPORARY DITCH CHECKS	EA	$144.74	12	$1,737
163-0530	CONSTRUCT AND REMOVE BALED STRAW EROSION CHECK	LF	$1.42	5300	$7,526
163-0531	CONSTRUCT AND REMOVE SEDIMENT BASIN, TP 1, STA NO	EA	$4,853.12	2	$9,706
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TP A	LF	$0.90	5100	$4,590
165-0030	MAINTENANCE OF TEMPORARY SILT FENCE, TP C	LF	$1.19	11900	$14,161
165-0040	MAINTENANCE OF EROSION CONTROL CHECKDAMS / DITCH CHECKS	EA	$53.93	12	$647
165-0060	MAINTENANCE OF TEMPORARY SEDIMENT BASIN, STA NO	EA	$714.94	2	$1,430
165-0070	MAINTENANCE OF BALED STRAW EROSION CHECK	LF	$1.07	5300	$5,671
165-0085	MAINTENANCE OF SILT CONTROL GATE, TP 1	EA	$235.52	1	$236
165-0087	MAINTENANCE OF SILT CONTROL GATE, TP 3	EA	$89.36	2	$179
165-0088	MAINTENANCE OF SILT CONTROL GATE, TP 4	EA	$145.00	14	$2,030
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	EA	$368.55	10	$3,686
167-0100	WATER QUALITY MONITORING	MO	$1,159.61	42	$48,704
167-0200	WATER QUALITY SAMPLING	EA	$88.55	126	$11,157
171-0010	TEMPORARY SILT FENCE, TYPE A	LF	$1.84	5100	$9,384
171-0030	TEMPORARY SILT FENCE, TYPE C	LF	$2.66	11900	$31,654
603-2012	STN DUMPED RIP RAP, TP 1, 12 IN	SY	$45.00	700	$31,500
603-2182	STN DUMPED RIP RAP, TP 3, 24 IN	SY	$29.50	500	$14,750
603-7000	PLASTIC FILTER FABRIC	SY	$2.57	1200	$3,084
700-6910	PERMANENT GRASSING	AC	$833.49	14	$11,669
700-7000	AGRICULTURAL LIME	TONS	$47.27	42	$1,985
700-7010	LIQUID LIME	GL	$21.74	35	$761
700-8000	FERTILIZER MIXED GRADE	TONS	$232.80	14	$3,259
700-8100	FERTILIZER NITROGEN CONTENT	LB	$1.39	135	$188
710-9000	PERMANENT SOIL REINFORCING MAT	SY	$5.09	1750	$8,908
715-2100	BITUMINOUS TREATED ROVING, SLOPES	SY	$2.41	110000	$265,100
	SIGNING & MARKING				
500-3101	CLASS A CONCRETE	CY	$379.40	10	$3,794
636-1020	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 3	SF	$16.17	150	$2,426
636-1029	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 3	SF	$17.28	60	$1,037
636-1031	HIGHWAY SIGNS, TP 1 MATL, REFL SHEETING, TP 6	SF	$18.56	65	$1,206
636-1032	HIGHWAY SIGNS, TP 2 MATL, REFL SHEETING, TP 6	SF	$13.87	160	$2,219
636-1072	HIGHWAY SIGNS, ALUM EXTRUDED PANELS, REFL SHEETING TP 3	SF	$30.08	700	$21,056
636-2070	GALV STEEL POST, TP 7	LF	$11.52	55	$634
636-2080	GALV STEEL POST, TP 8	LF	$11.52	285	$3,283
636-3000	GALV STEEL STR SHAPE POST	LB	$2.60	2700	$7,020
636-5010	DELINEATORS, TP 1	EA	$30.78	25	$770
636-9094	PILING IN PLACE, SIGNS, STEEL H, HP 12 X 53	LF	$53.07	18	$955
638-1001	STR SUPPORT FOR OVERHEAD SIGN, TP I, STA.--	LUMP	LUMP	LUMP	$37,841
652-0094	PAVEMENT MARKING, SYMBOL, TP 4	EA	$33.17	16	$531
652-0110	PAVEMENT MARKING, ARROW, TP1	EA	$37.25	16	$596
652-5451	SOLID TRAF STRIPE, 5 IN, WHITE	LF	$0.26	12000	$3,120
652-5301	SOLID TRAF STRIPE, 6 IN, WHITE	LF	$0.13	12000	$1,560
652-6301	SKIP TRAF STRIPE, 6 IN, WHITE	GLF	$0.13	1000	$130
652-6501	SKIP TRAF STRIPE, 5 IN, WHITE	GLF	$0.41	1000	$410
653-0120	THERMOPLASTIC PVMT MARKING, ARROW, TP 2	EA	$64.87	40	$2,595
653-0210	THERMOPLASTIC PVMT MARKING, WORD, TP 1	EA	$91.26	6	$548

Jennings Mill Parkway Project
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COST ESTIMATE

ITEM #	ITEM DESCRIPTION	UNITS	UNIT PRICE	QUANTITY	TOTAL COST
653-1501	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, WHITE	LF	$0.26	27900	$7,254
653-1502	THERMOPLASTIC SOLID TRAF STRIPE, 5 IN, YELLOW	LF	$0.25	34700	$8,675
653-1704	THERMOPLASTIC SOLID TRAF STRIPE, 24 IN, WHITE	LF	$4.16	575	$2,392
653-1804	THERMOPLASTIC SOLID TRAF STRIPE, 8 IN, WHITE	LF	$1.58	4000	$6,320
653-3501	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, WHITE	GLF	$0.19	12000	$2,280
653-3502	THERMOPLASTIC SKIP TRAF STRIPE, 5 IN, YELLOW	GLF	$0.19	12000	$2,280
653-6004	THERMOPLASTIC TRAF STRIPING, WHITE	SY	$2.32	730	$1,694
654-1001	RAISED PVMT MARKERS TP 1	EA	$3.56	180	$641
654-1003	RAISED PVMT MARKERS TP 3	EA	$3.57	300	$1,071
	TRAFFIC SIGNALS				
639-4004	STRAIN POLE TYPE IV	EA	$3,904.78	20	$78,096
647-1000	TRAFFIC SIGNAL INSTALLATION	LUMP	$50,000.00	5	$250,000
647-2140	PULL BOX, PB - 4	EA	$1,443.29	3	$4,330
647-2150	PULL BOX, PB - 5	EA	$1,751.58	5	$8,758
682-6120	CONDUIT, RIGID, 2 IN	LF	$10.57	2710	$28,645
682-6222	CONDUIT, NONMETAL, TP 2, 2 IN	LF	$4.36	2000	$8,720
935-1113	OUTSIDE PLANT FIBER OPTIC CABLE, LOOSE TUBE, SM 24 FIBER	LF	$1.82	3640	$6,625
935-1511	OUTSIDE PLANT FIBER OPTIC CABLE, DROP, SINGLE MODE, 6 FIBER	LF	$0.98	250	$245
935-3103	FIBER OPTIC CLOSURE, UNDERGROUND, 24 FIBER	EA	$551.86	5	$2,759
935-4010	FIBER OPTIC SPLICE, FUSION	EA	$34.24	18	$616
935-6562	EXTERNAL TRANSCEIVER, DROP AND REPEAT, 1310 SM (SIGNAL JOBS)	EA	$1,408.00	5	$7,040
935-8000	TESTING	LS	$3,887.50	1	$3,888
	BRIDGE ITEMS				
500-0100	GROOVED CONCRETE	SY	$3.37	2461	$8,294
500-1006	SUPERSTR CONCRETE, CL AA, BR NO - 1 (711 CY)	LS	$600.79	711	$427,162
500-3101	CLASS A CONCRETE	CY	$379.40	185.4	$70,341
507-9032	PSC BEAMS, AASHTO BULB TEE, 72 IN, BR NO - 1	LF	$136.86	5022	$687,311
511-1000	BAR REINF STEEL	LB	$0.53	34668	$18,374
511-3000	SUPERSTR REINF STEEL, BR NO - 1 (135100 LB)	LS	$0.51	135100	$68,901
520-1125	PILING IN PLACE, STEEL H, HP 12 X 53	LF	$35.36	1080	$38,189
520-1147	PILING IN PLACE, STEEL H, HP 14 X 73	LF	$37.53	1350	$50,666
	WALL NO - 1 ITEMS				
627-1000	MSE WALL FACE, 0 - 10 FT HT, WALL NO - 1	SF	$34.62	235	$8,136
627-1010	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 1	SF	$39.56	2996	$118,522
627-1100	COPING A, WALL NO - 1	FT	$48.80	200	$9,760
	WALL NO - 2 ITEMS				
627-1000	MSE WALL FACE, 0 - 10 FT HT, WALL NO - 2	SF	$34.62	356	$12,325
627-1010	MSE WALL FACE, 10 - 20 FT HT, WALL NO - 2	SF	$39.56	3886	$153,730
627-1100	COPING A, WALL NO - 2	FT	$48.80	225	$10,980

SUBTOTAL CONSTRUCTION =	$9,147,219

Preliminary Right of Way Cost Estimate

Harvey P. Booker
Right of Way Administrator
By Rick Ford

Date: October 30, 2002
Project: STP-F001-00 (098) Oconee
P.I. Number: 0001098
Existing/Required R/W: Varies/Varies
No.Parcels: 18
Project Termini: Jennings Mill Parkway Extension
Project Description: Jennings Mill Parkway Extension

Land:			
Residential / Agricultural			
385,934 SF x $ 0.50 / SF = $ 192,967			
Commercial			
20,422 SF x $ 3.00 / SF = $ 61,266			
		$ 254,233	
Improvements:			
1 SFR, , signs & misc. site improvements		$ 100,000	
Relocation			
Residential - 1 Parcels		$ 20,000	
Damages:			
None		$ - 0 -	
			$ 422,166
Net Cost		$ 422,166	
Scheduling Contingency	55 %	$ 243,191	
Adm/Court Cost	60 %	$ 399,214	
Inflation Factor	40 %	$ 425,828	
		$ 1,490,399	

Total Cost $ 1,490,400

For your use as requested is the following utility cost estimate for the subject project:

UTILITY OWNERS	ESTIMATE
Ga Power-Distribution	30,000.00
Ga Power-Transmission	0.00
Walton EMC	18,000.00
Bellsouth	80,000.00
AT&T	0.00
Charter Communications	14,500.00
Atlanta Gas Light	0.00
Oconee County Utilities	50,000.00
TOTAL	$192,500.00

Please advise if any additional info is needed.

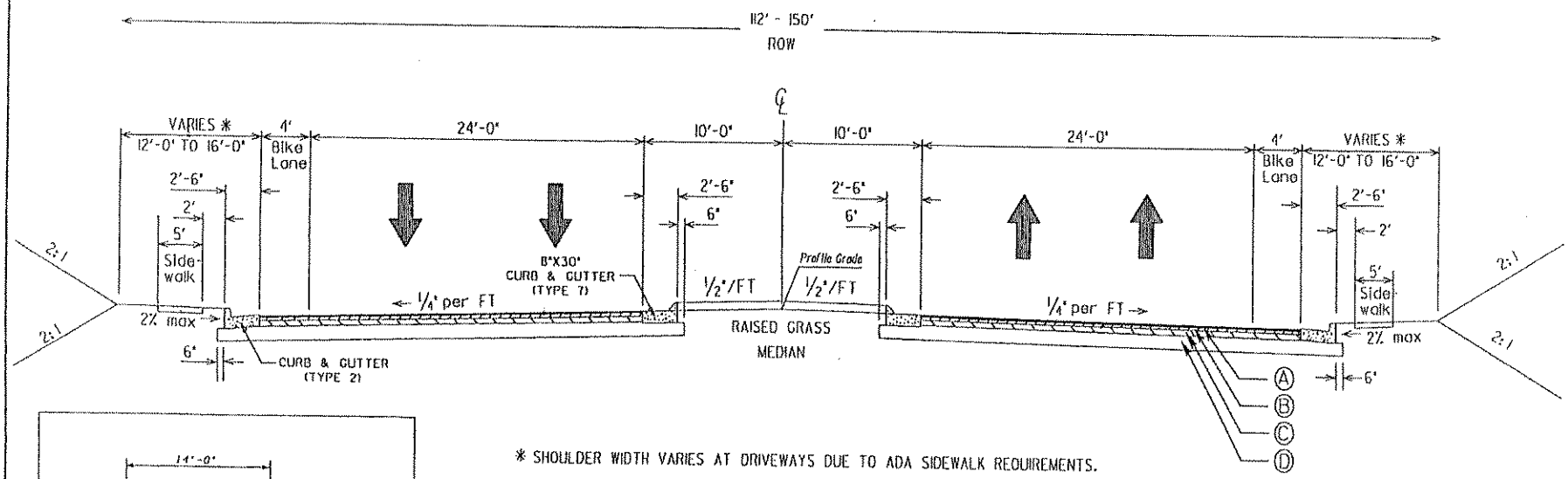
Thanks,

Thomas E. Davis
Georgia Department of Transportation
District Utilities Engineer
Gainesville District Office
P.O. Box 1057
Gainesville, GA 30503
Phone——(770) 532-5510
Fax———(770) 532-5581
Southern Linc # 21005

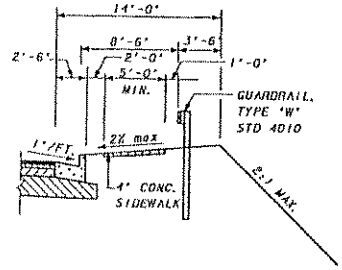
Project Number: STP-F001-00(098)
P. I. Number: 00001098
Oconee County

SUMMARY OF PROJECT COSTS

A.	Right-of-Way	$1,490,400
B.	Reimbursable Utilities	$192,500
Local Funds	Total Non-Construction Cost	$1,682,900
C.	Construction	
	1. Major Structures	$1,682,689
	2. Roadway Items: Including Grading and Drainage Base and Paving, Concrete Work, Guardrail	$6,411,958
	3. Erosion Control Items	$528,516
	4. Signing & Marking	$124,336
	5. Traffic Signals & Interconnect	$399,721
	Construction Cost Subtotal	$9,147,219
	Four years of inflation @ 5%	$1,971,283
	Engineering & Construction; 10%	$914,722
	Total Construction Cost	$12,033,224



* SHOULDER WIDTH VARIES AT DRIVEWAYS DUE TO ADA SIDEWALK REQUIREMENTS.



GUARDRAIL DETAIL

SEE GA STD 4280

SLOPE CONTROLS		
SLOPE	CUT	FILL
4:1	0-6'	0-10'
2:1	OVER 10'	*OVER 10'

* GUARDRAIL IS REQUIRED

PROPOSED PAVEMENT

Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY) LEVEL C
Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY) LEVEL B
Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (440 lbs/SY) LEVEL B
Ⓓ GRADED AGGREGATE BASE, 12 IN.

NOT TO SCALE

TYPICAL SECTION DIAGRAM

JENNINGS MILL PARKWAY EXTENSION – VIRGIL LANGFORD ROAD TO FRONTAGE ROAD

STP-F001-00 (098) OCONEE COUNTY

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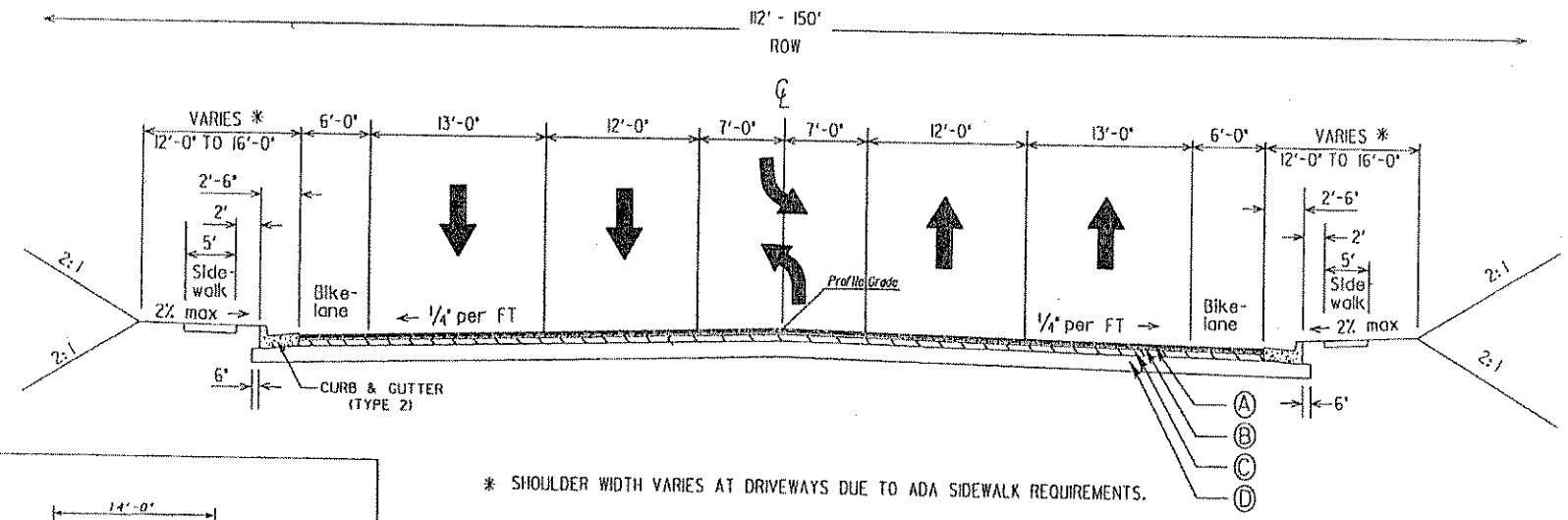
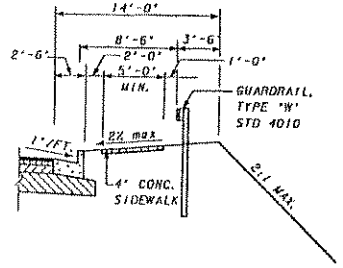


* SHOULDER WIDTH VARIES AT DRIVEWAYS DUE TO ADA SIDEWALK REQUIREMENTS.



GUARDRAIL DETAIL

SEE GA STD 4280

SLOPE CONTROLS		
SLOPE	CUT	FILL
4:1	0-6'	0-10'
2:1	OVER 10'	*OVER 10'

* GUARDRAIL IS REQUIRED

PROPOSED PAVEMENT

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Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY) LEVEL B
Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (440 lbs/SY) LEVEL B
Ⓓ GRADED AGGREGATE BASE, 12 IN.

NOT TO SCALE

TYPICAL SECTION DIAGRAM

JENNINGS MILL PARKWAY EXTENSION – FRONTAGE ROAD TO EPPS BRIDGE ROAD

STP-F001-00 (098) OCONEE COUNTY

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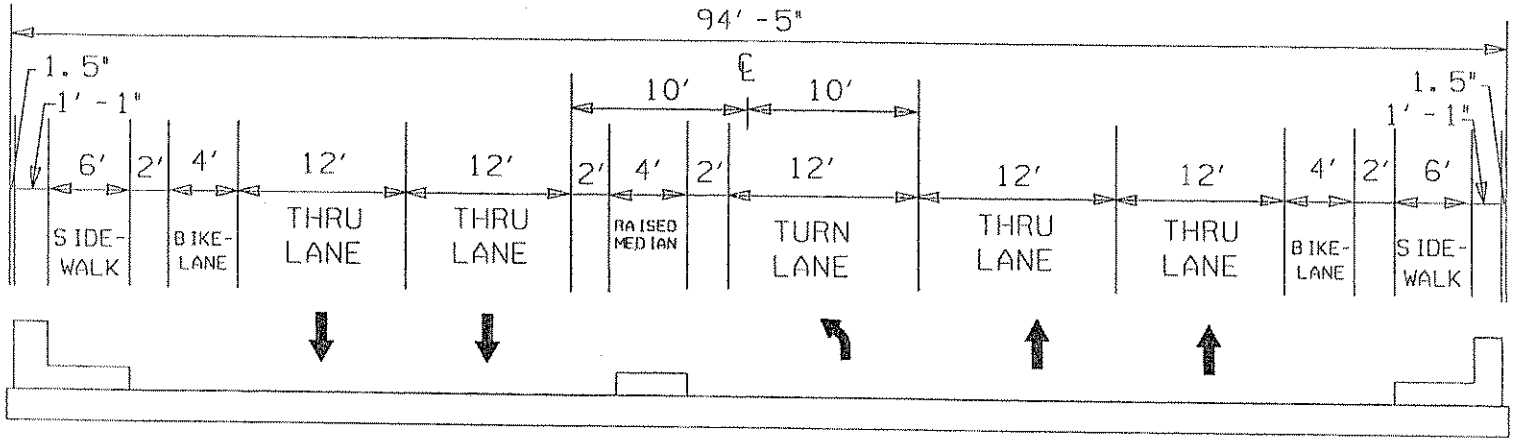
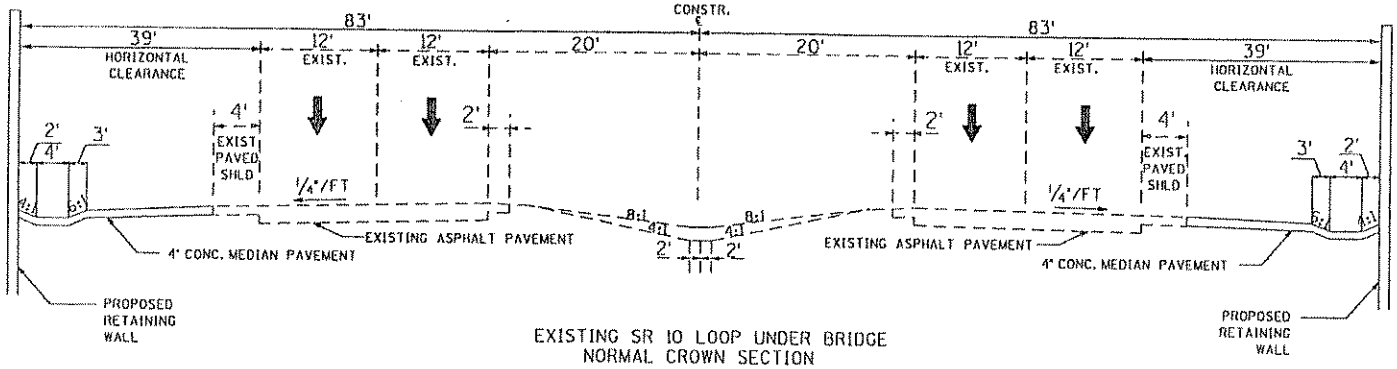
STATE	PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
GEORGIA			

JENNINGS MILL PKWY
BRIDGE TYPICAL SECTION





EXISTING SR 10 LOOP UNDER BRIDGE
NORMAL CROWN SECTION
N.T.S.

REVISIONS						
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	

Moreland Altobelli Associates, Inc.

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
SUPERVISED BY					

Department of Transportation
State of Georgia

JENNINGS MILL PKWY EXT. AND INTERCHANGE
TYPICAL SECTION
JENNINGS MILL PKWY BRIDGE OVER SR 10 LOOP

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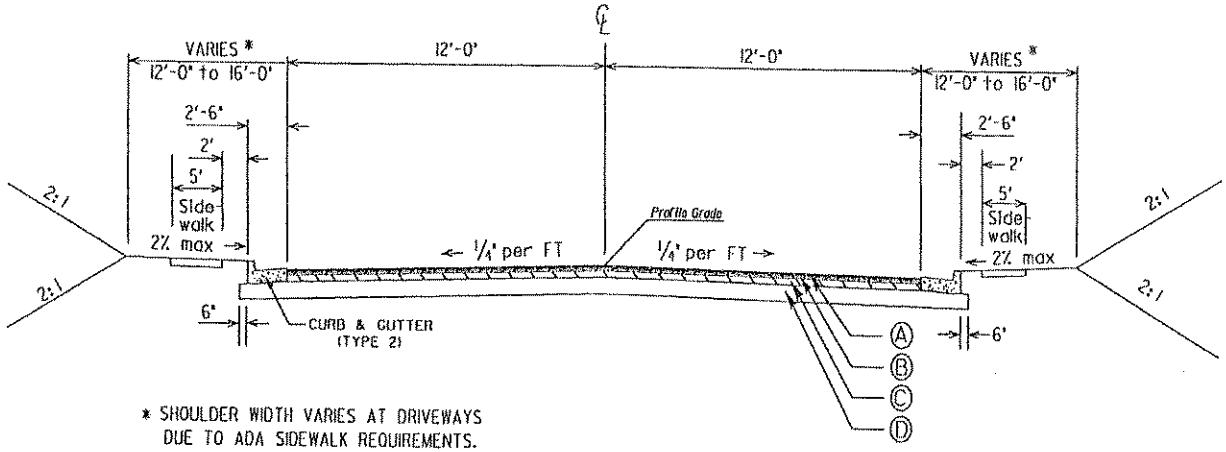

* SHOULDER WIDTH VARIES AT DRIVEWAYS DUE TO ADA SIDEWALK REQUIREMENTS.

PROPOSED PAVEMENT

Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY) LEVEL B
Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY) LEVEL A
Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (440 lbs/SY) LEVEL A
Ⓓ GRADED AGGREGATE BASE, 12 IN.

NOT TO SCALE

TYPICAL SECTION DIAGRAM

RELOCATED JENNINGS MILL ROAD

STP-F001-00 (098) OCONEE COUNTY

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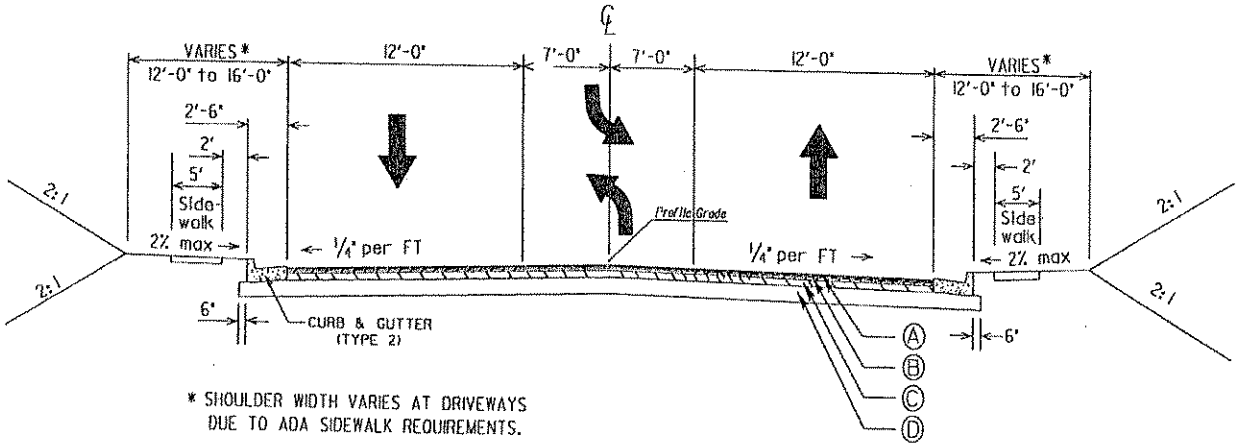

* SHOULDER WIDTH VARIES AT DRIVEWAYS DUE TO ADA SIDEWALK REQUIREMENTS.

PROPOSED PAVEMENT

Ⓐ ASPHALTIC CONC. 12.5 mm SUPERPAVE (165 lbs/SY) LEVEL B
Ⓑ ASPHALTIC CONC. 19 mm SUPERPAVE (220 lbs/SY) LEVEL A
Ⓒ ASPHALTIC CONC. 25 mm SUPERPAVE (440 lbs/SY) LEVEL A
Ⓓ GRADED AGGREGATE BASE, 12 IN.

NOT TO SCALE

TYPICAL SECTION DIAGRAM

FRONTAGE ROAD

STP-F001-00 (098) OCONEE COUNTY

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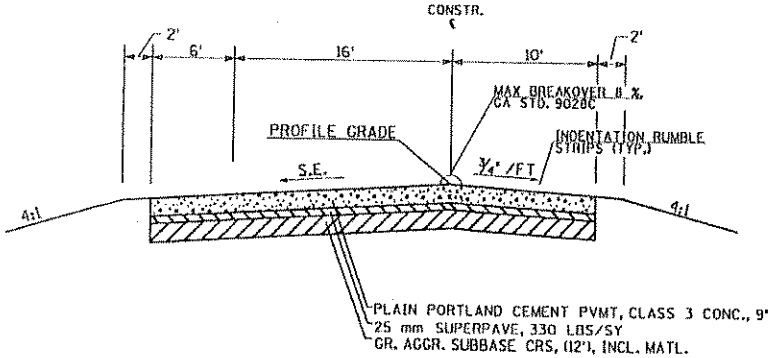
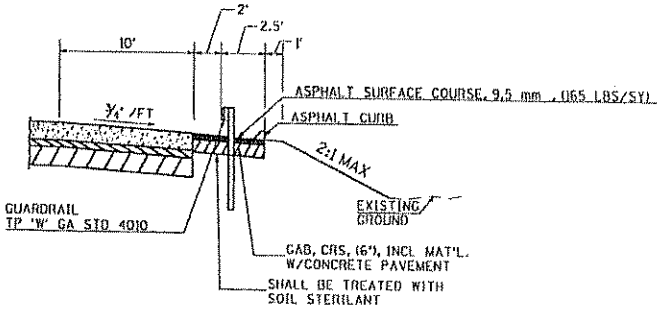
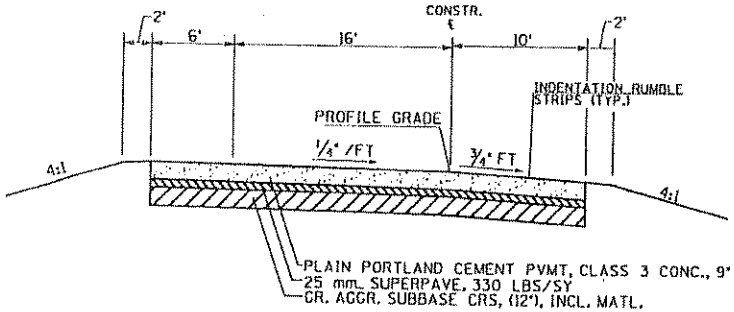


SUPER ELEVATION SECTION



SHOULDER DETAIL FOR GUARDRAIL W/CONCRETE PAVEMENT

(SEE PLANS FOR LOCATION)
(SEE GA. STD. 4051 FOR DETAILS)
N.T.S.



NORMAL CROWN SECTION

REVISIONS

Moreland Altobelli Associates, Inc.

Department of Transportation
State of Georgia

JENNINGS MILL PKWY EXT. AND INTERCHANGE
TYPICAL SECTION
SR 10 LOOP RAMPS

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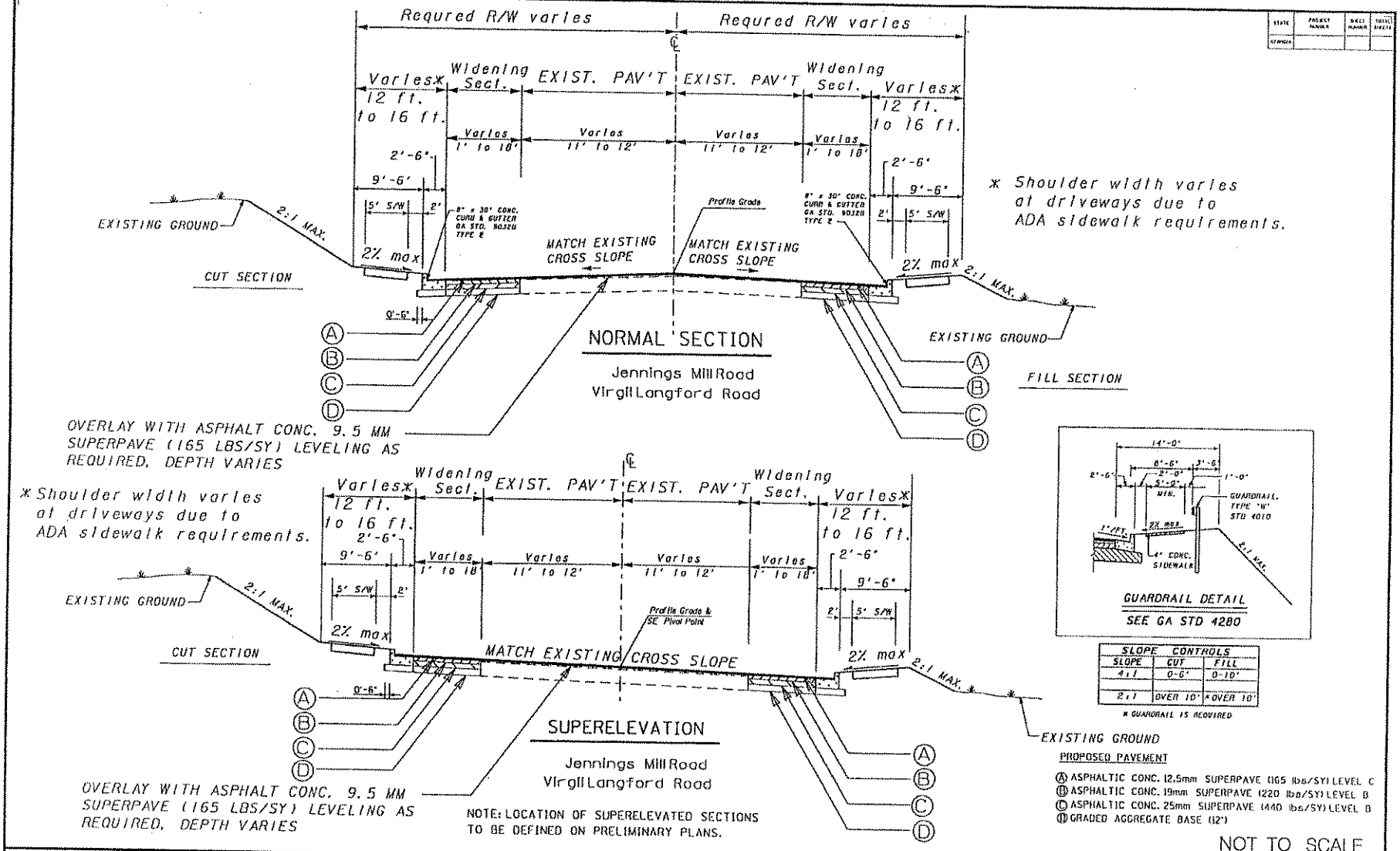

REVISIONS

DATE	BY	REMARKS	DATE	BY	DESCRIPTION

Moreland Altobelli Associates, Inc.

DESIGNED | DRAWN | CHECKED | SUPERVISED BY | APPROVED BY

JENNINGS MILL PKWY EXT. AND INTERCHANGE
TYPICAL SECTIONS
JENNINGS MILL ROAD AND VIRGIL LANGFORD ROAD

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TRAFFIC ANALYSIS & TRAFFIC FLOW DIAGRAMS

Intersection capacity analysis for the future 2025 design year peak hour traffic conditions was performed at major intersections along the proposed project, including the proposed interchange with SR 10 Loop. This analysis was performed using the Highway Capacity Software (HCS), Version 4.1b, which employs the procedures outlined in the *2000 Highway Capacity Manual (HCM)*. These procedures measure intersection operations using Level of Service (LOS), which bases its evaluation on the intersection's turning movement (hourly) volume, lane configuration and traffic control operations according to threshold values defined in the HCM. The proposed lane configurations as analyzed using HCS were a result of the proposed trip generation and trip distribution associated with the proposed development and traffic characteristics as a result of construction of the project. Details with respect to these configurations are shown in the attached concept layout.

The results of the analysis are provided below in Figure 1 for the future 2025 design year build condition. Because it is anticipated that all proposed traffic signals along the project corridor would be coordinated to optimize traffic flow, a consistent 110-second cycle length was used for each intersection.

Figure 1; HCS Analysis Results

Intersection	Type	A.M.		P.M.	
		Delay	LOS	Delay	LOS
1; Jennings Mill Pkwy at Virgil Langford Road	Signalized	19.7	B	31.9	C
2; Jennings Mill Pkwy at SR 10 Loop EB Off-Ramp	Unsignalized	16.1	C	N/A	F
	Signalized	16.0	B	29.9	C
3; Jennings Mill Pkwy at SR 10 Loop WB On-Ramp	Unsignalized	9.5	A	29.3	D
	Signalized	3.6	A	7.8	A
4; Jennings Mill Pkwy at Frontage Road East	Signalized	18.5	B	38.6	D
5; Jennings Mill Road at Frontage Road East	Unsignalized	19.3	C	N/A	F
	Signalized	14.5	B	16.2	B
6; Jennings Mill Pkwy at Epps Bridge Road	Signalized	34.2	C	50.9	D
7; Virgil Landford Rd at Relocated Jennings Mill Road	Unsignalized	13.1	B	19.8	C

The results of the HCS analysis indicate that each of the major intersections of the project would independently operate at an acceptable level of service for both morning and evening peak time periods. The intersections of Jennings Mill Parkway with the SR 10 Loop ramps, and the intersection of Jennings Mill Road at Frontage Road East were analyzed as both unsignalized and signalized intersections. The results indicate that for the 2025 PM Peak Hour, two-way stop control will not adequately accommodate the projected turning movements at these intersections. In addition, it is recommended that the two ramp intersections at SR 10 Loop be signalized as part of a coordinated system of traffic signals along Jennings Mill Parkway so as to maintain proper gaps in through traffic.

A TRAF-CORSIM analysis was also conducted along Jennings Mill Parkway to determine the queue lengths at the intersections through the interchange area. TRAF-CORSIM is a network oriented analysis tool where traffic at any point in the network is a function of the upstream and downstream operations. The results of the TRAF-CORSIM analysis are attached along with the output data sheets.

The TRAF-CORSIM analysis indicates that the intersections along the interchange area would operate at acceptable levels of service. The A.M. and P.M. maximum queue lengths for each turning movement at each intersection were determined and shown in the attached table.

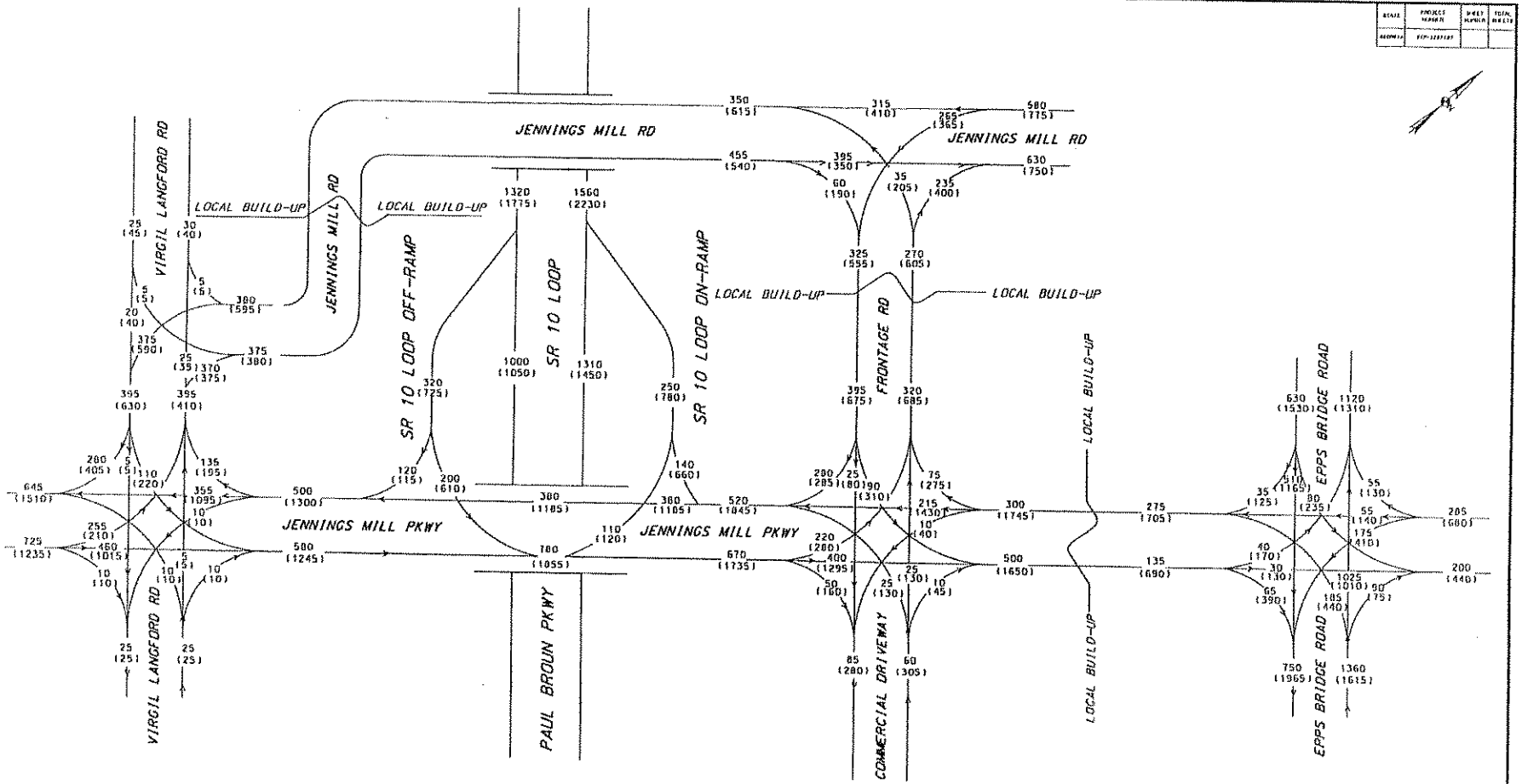
A design variance for this project is required because the intersection spacing requirements of 1,000 feet are not met through the interchange area of Jennings Mill Parkway. However, the TRAF-CORSIM results indicate that the highest maximum queue length that occurs between any of the intersections in the interchange area is 450 feet. This is the maximum queue length for the northbound left turn lane on Jennings Mill Parkway at Frontage Road East during the P.M. peak hour. This queue length does not exceed the intersection spacing between the ramps and Frontage Road East, which is 720 feet. Therefore, the queue of left turning traffic should not negatively impact the operations of the upstream ramp intersection.

SUMMARY OF TRAF-CORSIM RESULTS
Jennings Mill Parkway Extension
Year 2025 Peak Hours Intersection Analysis

	Link	AM Peak Hour	PM Peak Hour
Jennings Mill Pkwy @ Virgil Langford Rd		Delay Time (s/v)	Delay Time (s/v)
Northbound Approach	6-4	16.3	12.8
Southbound Approach	3-4	40.0	44.6
Westbound Approach	8-4	17.4	22.3
Eastbound Approach	7-4	25.2	37.4
Average Intersection Delay		**24.7**	**29.3**
Level of Service		C	C
Jennings Mill Pkwy @ SR 10 Loop EB Off-Ramp		Delay Time (s/v)	Delay Time (s/v)
Northbound Approach	4-3	26.8	38.5
Southbound Approach	1-3	18.1	21.2
Eastbound Approach	9-3	32.9	35.3
Average Intersection Delay		**25.9**	**31.7**
Level of Service		C	C
Jennings Mill Pkwy @ SR 10 Loop WB On-Ramp		Delay Time (s/v)	Delay Time (s/v)
Northbound Approach	3-1	17.2	19.5
Southbound Approach	2-1	20.9	24.6
Average Intersection Delay		**19.1**	**22.1**
Level of Service		B	C
Jennings Mill Pkwy @ Frontage Road East		Delay Time (s/v)	Delay Time (s/v)
Northbound Approach	1-2	37.4	42.6
Southbound Approach	5-2	41.4	48.5
Westbound Approach	12-2	36.1	47.8
Eastbound Approach	11-2	17.7	28.3
Average Intersection Delay		**33.2**	**41.8**
Level of Service		C	D
Jennings Mill Pkwy @ Epps Bridge Road		Delay Time (s/v)	Delay Time (s/v)
Eastbound Approach	22-14	35.8	30.0
Westbound Approach	15-14	49.3	48.5
Northbound Approach	21-14	27.8	48.4
Southbound Approach	20-14	28.7	37.0
Average Intersection Delay		**35.4**	**41.0**
Level of Service		C	D

Jennings Mill Parkway Ext. - 2025 Maximum Queue Lengths (ft)

Approach Location	Link	Left		Through		Right	
Jennings Mill Pkwy @ Virgil Langford Rd		AM	PM	AM	PM	AM	PM
Northbound Approach	6-4	150	150	75(TR)	125(TR)	---	---
Southbound Approach	3-4	25	50	150	425	25	50
Westbound Approach	8-4	25	25	25(TR)	25(TR)	---	---
Eastbound Approach	7-4	175	250	50(TR)	200(TR)	---	---
Jennings Mill Pkwy @ SR 10 Loop EB Off-Ramp		AM	PM	AM	PM	AM	PM
Northbound Approach	4-3	---	---	125	350	---	---
Southbound Approach	1-3	---	---	25	125	---	---
Eastbound Approach	9-3	75	175	---	---	50	150
Jennings Mill Pkwy @ SR 10 Loop WB On-Ramp		AM	PM	AM	PM	AM	PM
Northbound Approach	3-1	100	100	25	125	---	---
Southbound Approach	2-1	---	---	50	150	25	75
Jennings Mill Pkwy @ Frontage Road East		AM	PM	AM	PM	AM	PM
Northbound Approach	1-2	175	450	125	325	50	50
Southbound Approach	5-2	25	75	75	550	25	200
Westbound Approach	12-2	25	150	25	125	25	50
Eastbound Approach	11-2	50	200	75	175	25	50
Jennings Mill Pkwy @ Epps Bridge Road		AM	PM	AM	PM	AM	PM
Eastbound Approach	22-14	50	125	50	100	50	175
Westbound Approach	15-14	75	150	100	175	50	150
Northbound Approach	21-14	125	400	300	300	50	50
Southbound Approach	20-14	100	225	125	325	25	25



YEAR 2025
00 AM PEAK HOUR
(00) PM PEAK HOUR

REVISIONS						
NO.	DATE	BY	DESCRIPTION	NO.	DATE	BY

Maryland Aljabelli Associates, Inc.
2211 Bonner Mills Road
Suite 190
Norcross, Georgia 30071
Telephone (770) 263-7145

DESIGNED BY	NAME	DATE
DRAWN BY		
CHECKED BY		
SUPERVISED BY		

Department of Transportation
State of Georgia

JENNINGS MILL PARKWAY
YEAR 2025 AM(PM) PEAK HOUR VOLUME
TRAFFIC FLOW DIAGRAM

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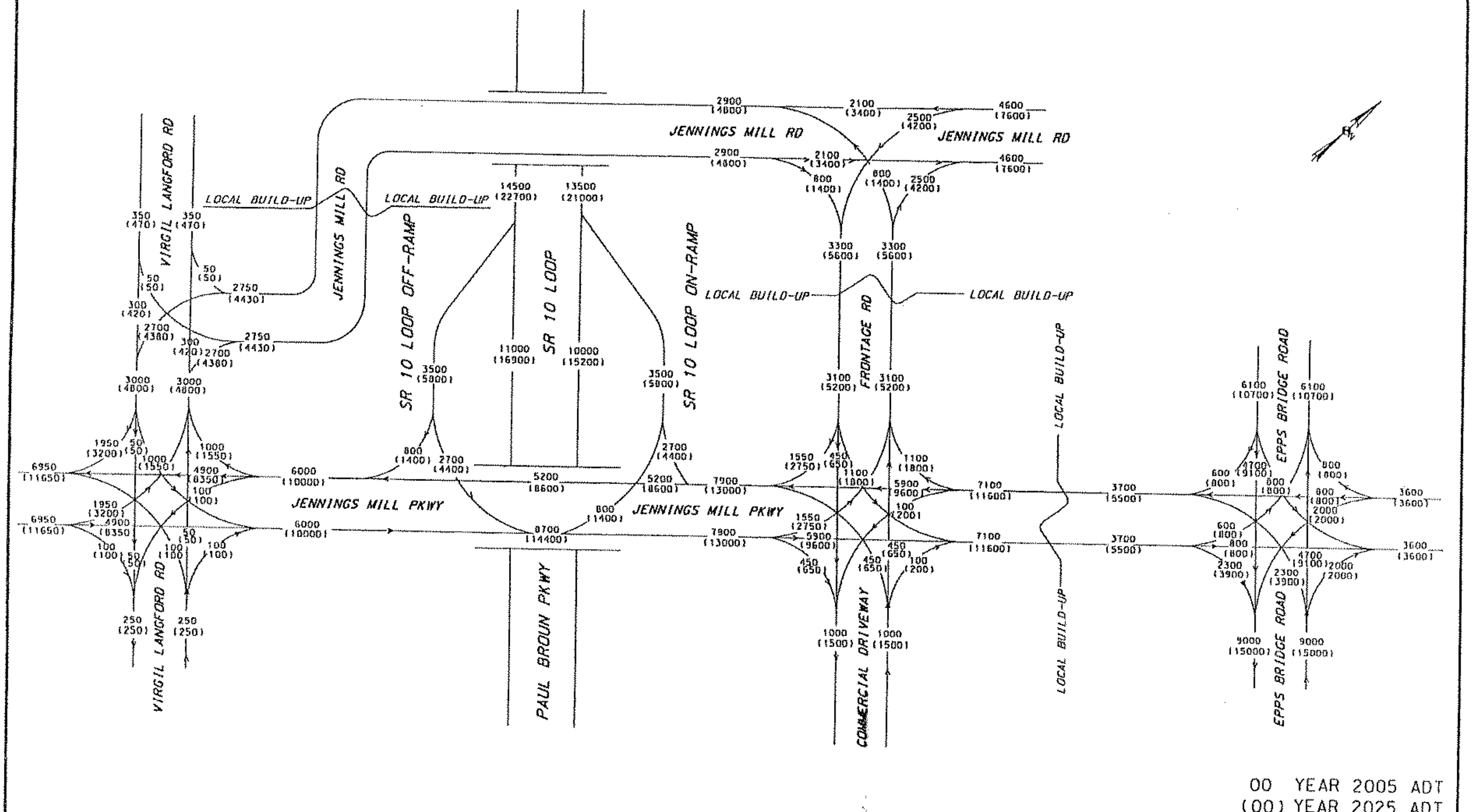

Department of Transportation
State of Georgia

JENNINGS MILL PARKWAY
YEAR 2005/2025 AVERAGE DAILY TRAFFIC
TRAFFIC FLOW DIAGRAM

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HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/30/02
Period: AM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extension
E/W St: Virgil Langford Road

Inter.: Jennings Mill Pkwy @ Virg Lang Rd
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Jennings Mill Pkwy/Oconee Conn

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	2	0	1	2	1
LGConfig	L	TR		L	TR		L	TR		L	T	R
Volume	110	5	280	10	5	10	255	460	10	10	355	135
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P				NB	Left	P	P		
	Thru	P					Thru	P	P		
	Right	P					Right	P	P		
	Peds						Peds				
WB	Left	P				SB	Left		P		
	Thru	P					Thru		P		
	Right	P					Right		P		
	Peds						Peds				
NB	Right					EB	Right	P			
SB	Right					WB	Right				
Green		30.0						10.0	55.0		
Yellow		4.0						4.0	4.0		
All Red		1.0						1.0	1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	387	1418	0.32	0.27	34.0	C		
TR	442	1620	0.72	0.27	45.8	D	42.5	D
Westbound								
L	176	644	0.06	0.27	30.3	C		
TR	468	1716	0.04	0.27	29.5	C	29.8	C
Northbound								
L	646	1805	0.44	0.64	11.1	B		
TR	2246	3529	0.23	0.64	8.8	A	9.6	A
Southbound								
L	436	872	0.03	0.50	14.0	B		
T	1770	3539	0.22	0.50	15.8	B	15.7	B
R	808	1615	0.19	0.50	15.7	B		

Intersection Delay = 19.7 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/30/02
Period: PM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extension
E/W St: Virgil Langford Road

Inter.:Jennings Mill Pkwy @ Virg Lang Rd
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Jennings Mill Pkwy/Oconee Conn

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	0	1	1	0	1	2	0	1	2	1
LGConfig	L	TR		L	TR		L	TR		L	T	R
Volume	220	5	405	10	5	10	210	1015	10	10	1095	195
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	P				NB	Left	P	P		
Thru	P					Thru	P	P		
Right	P					Right	P	P		
Peds						Peds				
WB Left	P				SB	Left		P		
Thru	P					Thru		P		
Right	P					Right		P		
Peds						Peds				
NB Right					EB	Right	P			
SB Right					WB	Right				
Green	30.0						15.0	50.0		
Yellow	4.0						4.0	4.0		
All Red	1.0						1.0	1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	387	1418	0.63	0.27	42.7	D		
TR	442	1619	1.03	0.27	91.2	F	74.3	E
Westbound								
L	69	253	0.16	0.27	35.3	D		
TR	468	1716	0.04	0.27	29.5	C	31.8	C
Northbound								
L	346	1805	0.67	0.64	34.3	C		
TR	2250	3535	0.51	0.64	11.5	B	15.4	B
Southbound								
L	215	474	0.05	0.45	17.2	B		
T	1609	3539	0.76	0.45	28.3	C	27.0	C
R	734	1615	0.30	0.45	19.9	B		

Intersection Delay = 31.9 (sec/veh) Intersection LOS = C

HCS2000: Unsignalized Intersections Release 4.1c

TWO-WAY STOP CONTROL SUMMARY

Analyst:	MAAI
Agency/Co.:	GDOT
Date Performed:	4/4/02
Analysis Time Period:	AM Peak Hour
Intersection:	Jennings Mill Pkwy @ SR 10 LOOP EB Off-Ramp
Jurisdiction:	Oconee County
Units: U. S. Customary	
Analysis Year:	2025 Build Conditions
Project ID:	Jennings Mill Parkway Extension/Interchange
East/West Street:	SR 10 LOOP EB Off-Ramp
North/South Street:	Jennings Mill Parkway
Intersection Orientation: NS	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		580			380	
Peak-Hour Factor, PHF		0.90			0.90	
Hourly Flow Rate, HFR		644			422	
Percent Heavy Vehicles		--	--		--	--
Median Type	TWLTL					
RT Channelized?						
Lanes		2			2	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				200		120
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				222		133
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Median Storage	1					
Flared Approach: Exists?						
Storage						
RT Channelized?						No
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config						L		R
v (vph)						222		133
C(m) (vph)						467		801
v/c						0.48		0.17
95% queue length						2.51		0.59
Control Delay						19.5		10.4
LOS						C		B
Approach Delay							16.1	
Approach LOS							C	

HCS2000: Unsignalized Intersections Release 4.1c

TWO-WAY STOP CONTROL SUMMARY

Analyst:	MAAI
Agency/Co.:	GDOT
Date Performed:	4/4/02
Analysis Time Period:	PM Peak Hour
Intersection:	Jennings Mill Pkwy @ SR 10 Loop EB Off-Ramp
Jurisdiction:	Oconee County
Units: U. S. Customary	
Analysis Year:	2025 Build Conditions
Project ID:	Jennings Mill Parkway Extension/Interchange
East/West Street:	SR 10 Loop EB Off-Ramp
North/South Street:	Jennings Mill Parkway
Intersection Orientation: NS	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1245			1185	
Peak-Hour Factor, PHF		0.90			0.90	
Hourly Flow Rate, HFR		1383			1316	
Percent Heavy Vehicles		--	--		--	--
Median Type	TWLTL					
RT Channelized?						
Lanes		2			2	
Configuration		T			T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				610		115
Peak Hour Factor, PHF				0.90		0.90
Hourly Flow Rate, HFR				677		127
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Median Storage	1					
Flared Approach: Exists?						No
Storage				1		1
RT Channelized?						
Lanes				L		R
Configuration						

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config						L		R
v (vph)						677		127
C(m) (vph)						156		412
v/c						4.34		0.31
95% queue length						68.81		1.29
Control Delay								17.6
LOS						F		C
Approach Delay								
Approach LOS							F	

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/30/02
Period: AM Peak Hour
Inter.: Jen Mill Pkwy @ SR 10 Loop EB Ramp
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
Project ID: 97981d1 - Jennings Mill Parkway Extension/Interchange
E/W St: SR 10 Loop Eastbound Off-Ramp N/S St: Jennings Mill Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	0	2	0	0	2	0
LGConfig	L		R					T			T	
Volume	200		120					580			380	
Lane Width	12.0		12.0					12.0			12.0	
RTOR Vol			0									

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		P			NB Left			
Thru					Thru	P		
Right		P			Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru	P		
Right					Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green		35.0				65.0		
Yellow		4.0				4.0		
All Red		1.0				1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	574	1805	0.39	0.32	31.1	C		
							30.4	C
R	514	1615	0.26	0.32	29.1	C		
Westbound								
Northbound								
T	2091	3539	0.31	0.59	11.6	B	11.6	B
Southbound								
T	2091	3539	0.20	0.59	10.7	B	10.7	B

Intersection Delay = 16.0 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/30/02
Period: PM Peak Hour
Inter.: Jen Mill Pkwy @ SR 10 Loop EB Ramp
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
Project ID: 97981d1 - Jennings Mill Parkway Extension/Interchange
E/W St: SR 10 Loop Eastbound Off-Ramp N/S St: Jennings Mill Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	0	1	0	0	0	0	2	0	0	2	0
LGConfig	L		R					T			T	
Volume	610		115					1245			1185	
Lane Width	12.0		12.0					12.0			12.0	
RTOR Vol			0									

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left		P			NB	Left				
	Thru						Thru	P			
	Right		P				Right				
	Peds						Peds				
WB	Left					SB	Left				
	Thru						Thru	P			
	Right						Right				
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green			45.0						55.0		
Yellow			4.0						4.0		
All Red			1.0						1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	738	1805	0.92	0.41	49.1	D		
							44.7	D
R	661	1615	0.19	0.41	21.5	C		
Westbound								
Northbound								
T	1770	3539	0.78	0.50	26.1	C	26.1	C
Southbound								
T	1770	3539	0.74	0.50	24.8	C	24.8	C

Intersection Delay = 29.9 (sec/veh) Intersection LOS = C

HCS2000: Unsignalized Intersections Release 4.1c

TWO-WAY STOP CONTROL SUMMARY

Analyst:	MAAI
Agency/Co.:	GDOT
Date Performed:	4/4/02
Analysis Time Period:	AM Peak Hour
Intersection:	Jenning Mill Pkwy @ SR 10 Loop WB-On Ramp
Jurisdiction:	Oconee County
Units: U. S. Customary	
Analysis Year:	2025 Build Conditions
Project ID:	Jennings Mill Parkway Extension/Interchange
East/West Street:	SR 10 Loop WB On-Ramp
North/South Street:	Jennings Mill Parkway
Intersection Orientation: NS	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	130	650			380	215
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	144	722			422	238
Percent Heavy Vehicles	0	--	--		--	--
Median Type	TWLTL					
RT Channelized?						No
Lanes	1	2			2	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						
Peak Hour Factor, PHF						
Hourly Flow Rate, HFR						
Percent Heavy Vehicles						
Percent Grade (%)		0			0	
Median Storage	1					
Flared Approach: Exists?						
Storage						
RT Channelized?						
Lanes						
Configuration						

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L							
v (vph)	144							
C(m) (vph)	938							
v/c	0.15							
95% queue length	0.54							
Control Delay	9.5							
LOS	A							
Approach Delay								
Approach LOS								

HCS2000: Unsignalized Intersections Release 4.1c

TWO-WAY STOP CONTROL SUMMARY

Analyst:	MAAI
Agency/Co.:	GDOT
Date Performed:	4/4/02
Analysis Time Period:	PM Peak Hour
Intersection:	Jennings Mill Pkwy @ SR 10 Loop WB On-Ramp
Jurisdiction:	Oconee County
Units: U. S. Customary	
Analysis Year:	2025 Build Conditions
Project ID:	Jennings Mill Parkway Extension/Interchange
East/West Street:	SR 10 Loop WB On-Ramp
North/South Street:	Jennings Mill Parkway
Intersection Orientation: NS	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	120	1735			1185	660
Peak-Hour Factor, PHF	0.90	0.90			0.90	0.90
Hourly Flow Rate, HFR	133	1927			1316	733
Percent Heavy Vehicles	0	--	--		--	--
Median Type	TWLTL					
RT Channelized?						No
Lanes	1	2			2	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						
Peak Hour Factor, PHF						
Hourly Flow Rate, HFR						
Percent Heavy Vehicles						
Percent Grade (%)		0			0	
Median Storage	1					
Flared Approach: Exists?						
Storage						
RT Channelized?						
Lanes						
Configuration						

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L							
v (vph)	133							
C(m) (vph)	278							
v/c	0.48							
95% queue length	2.43							
Control Delay	29.3							
LOS	D							
Approach Delay								
Approach LOS								

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/30/02
Period: AM Peak Hour
Inter.: Jen Mill Pkwy @ SR 10 Loop WB Ramp
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
Project ID: 97981d1 - Jennings Mill Parkway Extension/Interchange
E/W St: SR 10 Loop Westbound On-Ramp
N/S St: Jennings Mill Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	0	0	1	2	0	0	2	1
LGConfig							L	T			T	R
Volume							110	670			380	140
Lane Width							12.0	12.0			12.0	12.0
RTOR Vol												0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P	P	
Thru					Thru	P	P	
Right					Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		P	
Right					Right		P	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green						30.0	70.0	
Yellow						4.0	4.0	
All Red						1.0	1.0	

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
Northbound								
L	1106	1805	0.11	0.95	0.5	A		
T	3378	3539	0.22	0.95	0.3	A	0.3	A
Southbound								
T	2252	3539	0.19	0.64	8.4	A	8.4	A
R	1028	1615	0.15	0.64	8.4	A		

Intersection Delay = 3.6 (sec/veh) Intersection LOS = A

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/30/02
Period: PM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extension/Interchange
E/W St: SR 10 Loop Westbound On-Ramp

Inter.: Jen Mill Pkwy @ SR 10 Loop WB Ramp
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Jennings Mill Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	0	0	1	2	0	0	2	1
LGConfig							L	T			T	R
Volume							120	1735			1185	660
Lane Width							12.0	12.0			12.0	12.0
RTOR Vol												0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	P	P	
Thru					Thru	P	P	
Right					Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		P	
Right					Right		P	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green						30.0	70.0	
Yellow						4.0	4.0	
All Red						1.0	1.0	

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
Northbound								
L	685	1805	0.19	0.95	5.5	A		
T	3378	3539	0.57	0.95	1.0	A	1.3	A
Southbound								
T	2252	3539	0.58	0.64	12.7	B	14.4	B
R	1028	1615	0.71	0.64	17.5	B		

Intersection Delay = 7.8 (sec/veh) Intersection LOS = A

Analyst: MAAI
Agency: Georgia DOT
Date: 10/10/02
Period: AM Peak Hour
Project ID: 97981dl - Jennings Mill Parkway Extension/Interchange
E/W St: Frontage Road East

Inter.: Jennings Mill Pkwy@ Front Rd E
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Jennings Mill Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	90	25	280	25	25	10	220	400	50	10	215	75
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P	P			NB	Left	P	P		
	Thru	P	P				Thru	P	P		
	Right	P	P				Right	P	P		
	Peds						Peds				
WB	Left		P			SB	Left		P		
	Thru		P				Thru		P		
	Right		P				Right		P		
	Peds						Peds				
NB	Right					EB	Right	P			
SB	Right	P				WB	Right				
Green		15.0	25.0					15.0	35.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	565	1805	0.18	0.41	21.1	C		
T	777	1900	0.04	0.41	19.6	B	14.8	B
R	954	1615	0.33	0.59	12.3	B		
Westbound								
L	319	1404	0.09	0.23	34.1	C		
T	432	1900	0.06	0.23	33.6	C	33.7	C
R	367	1615	0.03	0.23	33.2	C		
Northbound								
L	604	1805	0.40	0.50	18.1	B		
T	1770	3539	0.25	0.50	16.1	B	16.6	B
R	808	1615	0.07	0.50	14.4	B		
Southbound								
L	299	940	0.04	0.32	26.1	C		
T	1126	3539	0.21	0.32	27.9	C	24.5	C
R	808	1615	0.10	0.50	14.7	B		

Intersection Delay = 18.5 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1c

Analyst: MAAI
Agency: Georgia DOT
Date: 10/10/02
Period: PM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extension/Interchange
E/W St: Frontage Road East

Inter.: Jennings Mill Pkwy@ Front Rd E
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Jennings Mill Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	310	80	285	130	130	45	280	1295	160	40	1430	275
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			50			0			30			50

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P	P			NB	Left	P	P		
	Thru	P	P				Thru	P	P		
	Right	P	P				Right	P	P		
	Peds						Peds				
WB	Left		P			SB	Left		P		
	Thru		P				Thru		P		
	Right		P				Right		P		
	Peds						Peds				
NB	Right					EB	Right	P			
SB	Right	P				WB	Right				
Green		13.0	15.0					15.0	47.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	354	1805	0.92	0.30	69.8	E		
T	570	1900	0.15	0.30	28.7	C	45.3	D
R	778	1615	0.32	0.48	18.5	B		
Westbound								
L	182	1335	0.75	0.14	70.4	E		
T	259	1900	0.53	0.14	51.7	D	58.6	E
R	220	1615	0.21	0.14	44.5	D		
Northbound								
L	315	1805	0.94	0.61	71.6	E		
T	2156	3539	0.63	0.61	15.1	B	23.9	C
R	984	1615	0.14	0.61	9.5	A		
Southbound								
L	150	350	0.28	0.43	25.1	C		
T	1512	3539	1.00	0.43	53.5	D	47.2	D
R	954	1615	0.25	0.59	11.4	B		

Intersection Delay = 38.6 (sec/veh) Intersection LOS = D

HCS2000: Unsignalized Intersections Release 4.1b

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI
Agency/Co.: GDOT
Date Performed: 4/4/02
Analysis Time Period: AM Peak Hour
Intersection: Jennings Mill Road @ Frontage Rd East
Jurisdiction: Oconee County
Units: U. S. Customary
Analysis Year: 2025 Build Conditions
Project ID: Jennings Mill Parkway Extension/Interchange
East/West Street: Frontage Road East
North/South Street: Jennings Mill Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		395	60	265	315	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		438	66	294	350	
Percent Heavy Vehicles		--	--	0	--	--
Median Type	Undivided					
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	35		235			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	38		261			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
RT Channelized?			No			
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		294	38		261			
C(m) (vph)		1071	118		623			
v/c		0.27	0.32		0.42			
95% queue length		1.12	1.26		2.07			
Control Delay		9.6	49.4		14.9			
LOS		A	E		B			
Approach Delay			19.3					
Approach LOS			C					

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI
Agency/Co.: GDOT
Date Performed: 4/4/02
Analysis Time Period: PM Peak Hour
Intersection: Jennings Mill Road @ Frontage Road East
Jurisdiction: Oconee County
Units: U. S. Customary
Analysis Year: 2025 Build Conditions
Project ID: Jennings Mill Parkway Extension/Interchange
East/West Street: Frontage Road East
North/South Street: Jennings Mill Road
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		350	190	365	410	
Peak-Hour Factor, PHF		0.90	0.90	0.90	0.90	
Hourly Flow Rate, HFR		388	211	405	455	
Percent Heavy Vehicles		--	--	0	--	--
Median Type	Undivided					
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	205		400			
Peak Hour Factor, PHF	0.90		0.90			
Hourly Flow Rate, HFR	227		444			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
RT Channelized?			No			
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		405	227		444			
C(m) (vph)		988	64		665			
v/c		0.41	3.55		0.67			
95% queue length		2.03	23.93		5.09			
Control Delay		11.2			20.6			
LOS		B	F		C			
Approach Delay				447.0				
Approach LOS				F				

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/01/02
Period: AM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extention
E/W St: Frontage Road East

Inter.: JM Road @ FR East
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Jennings Mill Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	1	1	1	1	0
LGConfig				L		R		T	R	L	T	
Volume				35		235		395	60	265	315	
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left				
Thru					Thru		P		
Right					Right		P		
Peds					Peds				
WB Left	P				SB Left	P	P		
Thru					Thru	P	P		
Right	P				Right				
Peds					Peds				
NB Right	P				EB Right				
SB Right					WB Right	P			
Green	20.0					10.0	30.0		
Yellow	4.0					4.0	4.0		
All Red	1.0					1.0	1.0		

Cycle Length: 75.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	481	1805	0.08	0.27	20.9	C		
							14.9	B
R	754	1615	0.35	0.47	14.0	B		
Northbound								
T	745	1863	0.59	0.40	21.1	C	18.7	B
R	1184	1615	0.06	0.73	2.9	A		
Southbound								
L	503	1805	0.58	0.60	14.4	B		
T	1118	1863	0.31	0.60	8.1	A	11.0	B

Intersection Delay = 14.5 (sec/veh) Intersection LOS = B

H HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 4/01/02
Period: PM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extention
E/W St: Frontage Road East

Inter.: JM Road @ FR East
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Jennings Mill Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	0	1	1	1	1	0
LGConfig				L		R		T	R	L	T	
Volume				205		400		350	190	365	410	
Lane Width				12.0		12.0		12.0	12.0	12.0	12.0	
RTOR Vol						0			0			

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	P		
Right					Right	P		
Peds					Peds			
WB Left	P				SB Left	P	P	
Thru					Thru	P	P	
Right	P				Right			
Peds					Peds			
NB Right	P				EB Right			
SB Right					WB Right	P		
Green	20.0					10.0	30.0	
Yellow	4.0					4.0	4.0	
All Red	1.0					1.0	1.0	

Cycle Length: 75.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
Westbound								
L	481	1805	0.47	0.27	26.4	C		
							20.9	C
R	754	1615	0.59	0.47	18.1	B		
Northbound								
T	745	1863	0.52	0.40	19.7	B	13.9	B
R	1184	1615	0.18	0.73	3.4	A		
Southbound								
L	532	1805	0.76	0.60	19.9	B		
T	1118	1863	0.41	0.60	9.0	A	14.2	B

Intersection Delay = 16.2 (sec/veh) Intersection LOS = B

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 7/10/02
Period: AM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extension/Interchange
E/W St: Jennings Mill Parkway

Inter.: Jen Mill Pkwy @ Epp Bridge Pkwy
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Epps Bridge Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	2	1	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	40	30	65	175	55	55	185	1025	90	80	510	35
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			25			15			25

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P	P			NB	Left	P			
	Thru		P				Thru		P		
	Right		P				Right		P		
	Peds						Peds				
WB	Left	P				SB	Left	P			
	Thru		P				Thru		P		
	Right		P				Right		P		
	Peds						Peds				
NB	Right	P				EB	Right	P			
SB	Right	P				WB	Right	P			
Green		12.0	15.0					13.0	50.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	386	1805	0.11	0.29	29.1	C		
T	259	1900	0.13	0.14	42.8	D	32.0	C
R	485	1615	0.15	0.30	28.9	C		
Westbound								
L	382	3502	0.51	0.11	51.0	D		
T	259	1900	0.24	0.14	44.5	D	46.9	D
R	485	1615	0.07	0.30	27.8	C		
Northbound								
L	213	1805	0.97	0.12	102.0	F		
T	1609	3539	0.71	0.45	26.8	C	36.6	D
R	984	1615	0.08	0.61	9.0	A		
Southbound								
L	213	1805	0.42	0.12	50.9	D		
T	1609	3539	0.35	0.45	20.1	C	24.0	C
R	984	1615	0.01	0.61	8.5	A		

Intersection Delay = 34.2 (sec/veh) Intersection LOS = C

HCS2000: Signalized Intersections Release 4.1b

Analyst: MAAI
Agency: Georgia DOT
Date: 7/10/02
Period: PM Peak Hour
Project ID: 97981d1 - Jennings Mill Parkway Extension/Interchange
E/W St: Jennings Mill Parkway

Inter.: Jen Mill Pkwy @ Epp Bridge Pkwy
Area Type: All other areas
Jurisd: Oconee County
Year : 2025 Build Conditions
N/S St: Epps Bridge Parkway

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	2	1	1	1	2	1	1	2	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Volume	170	130	390	410	140	130	440	1010	75	235	1165	125
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			100			25			15			25

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	P	P			NB	Left	P	P		
	Thru		P				Thru		P		
	Right		P				Right		P		
	Peds						Peds				
WB	Left	P				SB	Left	P	P		
	Thru		P				Thru		P		
	Right		P				Right		P		
	Peds						Peds				
NB	Right	P				EB	Right	P			
SB	Right	P				WB	Right	P			
Green		15.0	15.0					20.0	40.0		
Yellow		4.0	4.0					4.0	4.0		
All Red		1.0	1.0					1.0	1.0		

Cycle Length: 110.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	384	1805	0.47	0.32	32.8	C		
T	259	1900	0.53	0.14	51.7	D	36.0	D
R	587	1615	0.52	0.36	30.7	C		
Westbound								
L	478	3502	0.90	0.14	69.9	E		
T	259	1900	0.57	0.14	53.2	D	59.0	E
R	587	1615	0.19	0.36	24.6	C		
Northbound								
L	414	1805	1.12	0.59	115.3	F		
T	1287	3539	0.83	0.36	38.0	D	59.5	E
R	881	1615	0.07	0.55	12.0	B		
Southbound								
L	414	1805	0.60	0.59	30.3	C		
T	1287	3539	0.95	0.36	50.1	D	44.5	D
R	881	1615	0.12	0.55	12.4	B		

Intersection Delay = 50.9 (sec/veh) Intersection LOS = D

HCS2000: Unsignalized Intersections Release 4.1c

TWO-WAY STOP CONTROL SUMMARY

Analyst: MAAI
Agency/Co.: GDOT
Date Performed: 12/17/2002
Analysis Time Period: AM Peak Hour
Intersection: Virgil Langford @ Jenn Mill Rd
Jurisdiction: Oconee County
Units: U. S. Customary
Analysis Year: Year 2025 Build Conditions
Project ID: Jennings Mill Parkway Extension/Interchange
East/West Street: Virgil Langford Rd
North/South Street: Jennings Mill Road
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	20			25	370
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	5	20			25	370
Percent Heavy Vehicles	0	--	--		--	--
Median Type	Undivided					
RT Channelized?						Yes
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				375		5
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				375		5
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?					No	
Storage						
RT Channelized?						
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L						LR	
v (vph)	5						380	
C(m) (vph)	1308						821	
v/c	0.00						0.46	
95% queue length	0.01						2.47	
Control Delay	7.8						13.1	
LOS	A						B	
Approach Delay							13.1	
Approach LOS							B	

HCS2000: Unsignalized Intersections Release 4.1c

TWO-WAY STOP CONTROL SUMMARY

Analyst:	MAAI
Agency/Co.:	GDOT
Date Performed:	12/17/2002
Analysis Time Period:	PM Peak Hour
Intersection:	Virgil Langford @ Jenn Mill Rd
Jurisdiction:	Oconee County
Units: U. S. Customary	
Analysis Year:	Year 2025 Build Conditions
Project ID:	Jennings Mill Parkway Extension/Interchange
East/West Street:	Virgil Langford Rd
North/South Street:	Jennings Mill Road
Intersection Orientation: EW	Study period (hrs): 0.25

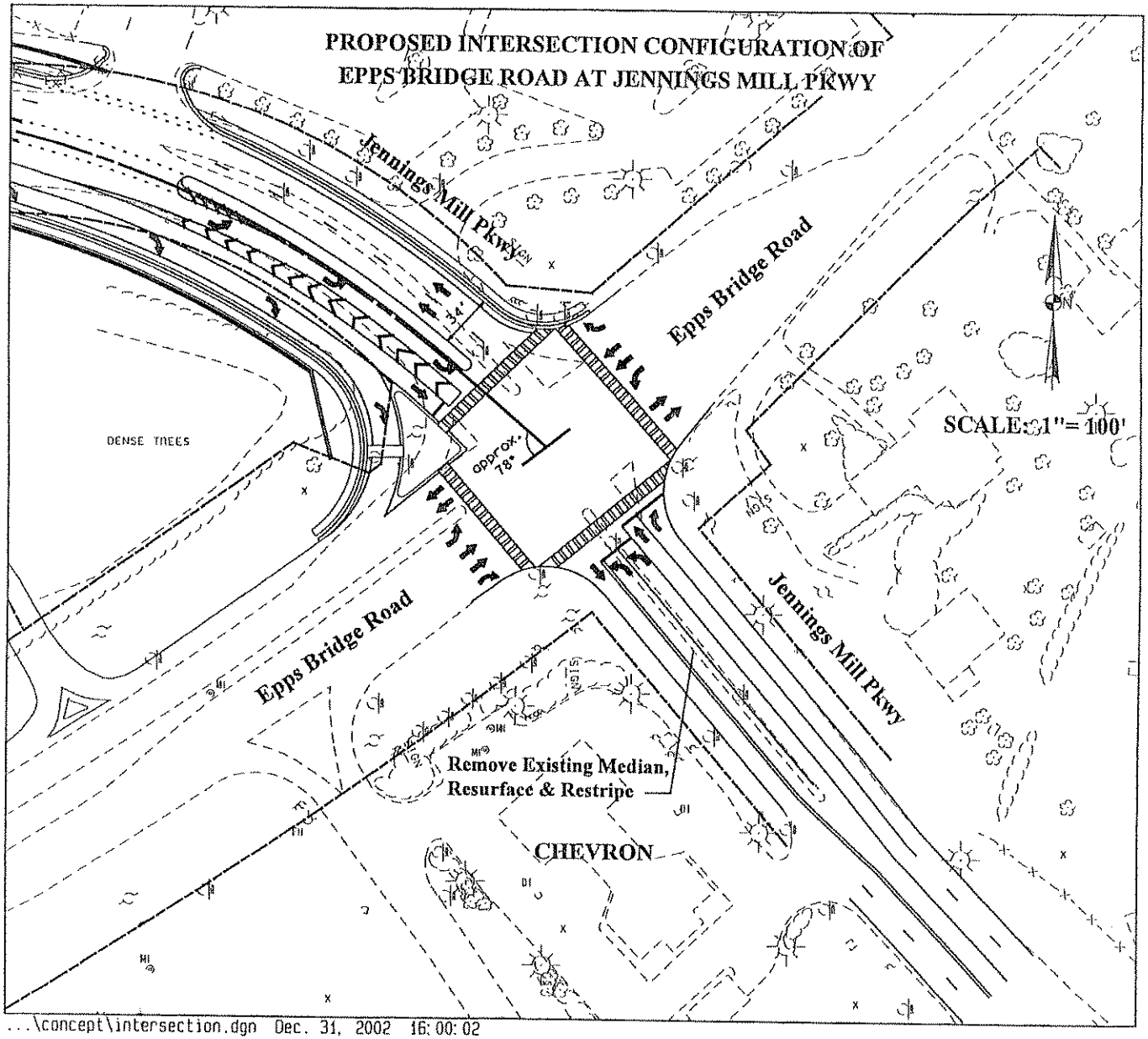
Vehicle Volumes and Adjustments

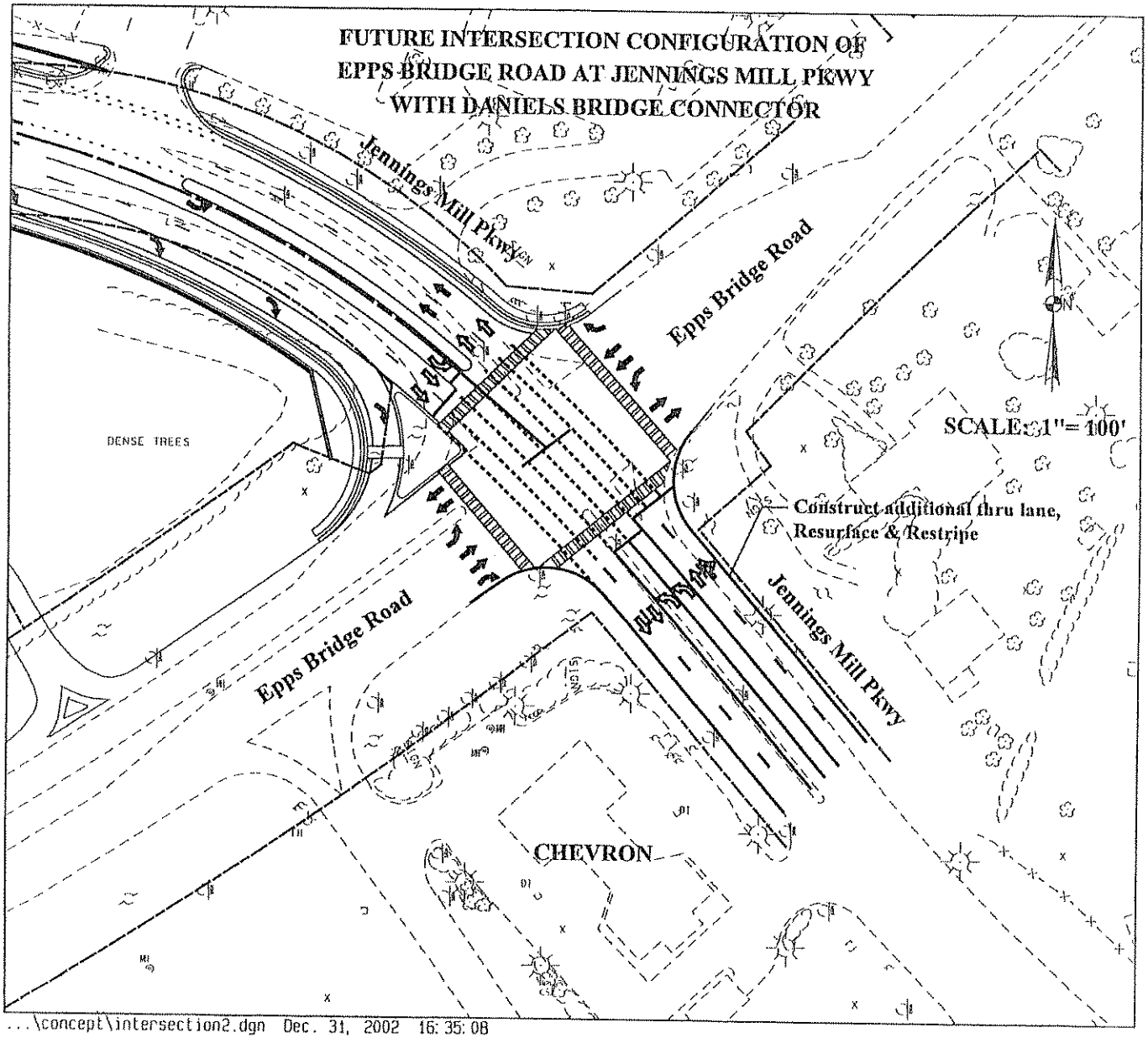
Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	40			35	375
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	5	40			35	375
Percent Heavy Vehicles	0	--	--		--	--
Median Type	Undivided					
RT Channelized?						Yes
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		No			Yes	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				590		5
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				590		5
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?					No	
Storage						
RT Channelized?						
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L						LR	
v (vph)	5						595	
C(m) (vph)	1317						825	
v/c	0.00						0.72	
95% queue length	0.01						6.36	
Control Delay	7.7						19.8	
LOS	A						C	
Approach Delay							19.8	
Approach LOS							C	


PROPOSED INTERSECTION CONFIGURATION OF
EPPS BRIDGE ROAD AT JENNINGS MILL PKWY
Jennings Mill Pkwy
Epps Bridge Road
DENSE TREES
approx. 78°
SCALE: 1"= 100'
Epps Bridge Road
Jennings Mill Pkwy
Remove Existing Median,
Resurface & Restripe
CHEVRON
...\concept\intersection.dgn Dec. 31, 2002 16:00:02


FUTURE INTERSECTION CONFIGURATION OF
EPPS BRIDGE ROAD AT JENNINGS MILL PKWY
WITH DANIELS BRIDGE CONNECTOR
Jennings Mill Pkwy
Epps Bridge Road
DENSE TREES
SCALE: 1"= 100'
Construct additional thru lane,
Resurface & Restripe
Epps Bridge Road
Jennings Mill Pkwy
CHEVRON
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Minutes of Initial Concept Team Meeting
May 23, 2002, 10:00 A.M., GDOT Road Design Conference Room
Jennings Mill Parkway Extension
Project Number: STP-F001-00 (098)
P.I. No. 0001098
Oconee County

A list of the attendees is attached.

Mr. Stanley Hill began the meeting by asking everyone to introduce him or herself and to sign the attendance sheet. Mr. Hill then stated that the project is an interchange project at U.S 78/Paul Broun Parkway. He then called on the GDOT Programming Office. Ms. Windy Bickers stated that the project is listed as a long-range project. The right-of-way and utility relocation costs is to be funded by the local government. The Local Government Project Agreement was signed in December 2000.

Mr. Stanley Hill then called on the GDOT Planning Office to comment on the need and purpose. The GDOT Planning Office spokesman stated that the need and purpose of the project was reviewed and all information was covered clearly. Mr. Hill then questioned the need for the design exception at Epps Bridge Road. Mr. Bill Moskal further commented that there was a problem with the horizontal curve in front of the Lowe's and that GDOT Road Design would not want to accept the proposed substandard curvature.

Mr. Stanley Hill then asked if right-of-way costs for this project have been estimated. Mr. Mike Leonas commented that most of the north side of the Jennings Mill Parkway would be donated. The County will identify the required areas of right-of-way and which areas would be donated. GDOT right-of-way stated that they would assist in the right-of-way estimate if MA could provide the total area to be acquired.

Mr. Stanley Hill then called on Ms. Karla Poshedly to present the project. Ms. Poshedly noted that the termini of the Mars Hill Road/Oconee Connector Project [STP-1267 (8), P.I. 142060] would need to be modified to include bike lanes so as to match the beginning of the Jennings Mill Parkway Project. She said the typical section of Jennings Mill Parkway is basically a four-lane undivided roadway with a 14-foot flush median, two 12-foot inside through lanes, two 13-foot outside through lanes and two 6-foot bike lanes with curb and gutter and 5-foot sidewalks on both sides.

Ms. Poshedly continued to discuss the project by stating that the Frontage Road that connects Jennings Mill Parkway with Jennings Mill Road will serve to provide an improved route to Jennings Mill Road. Currently, motorists have to execute a series of turns and bends to travel north over U.S. 78 to access areas on Jennings Mill Road north of U.S. 78.

Mr. Stanley Hill then noted that the concept report should be corrected to show this project as an exempt project.

Mr. Joe Garland commented that the concept report should be changed to show 18 months would be required to purchase right-of-way, instead of 6 months. Mr. Mike Leonas discussed the potential to shorten the construction schedule of Jennings Mill Parkway Extension by building the north side of Jennings Mill Parkway first. He stated that Jenning Mill Parkway Extension is one of the projects identified as part of the overall improvement of the S.R. 316 corridor. Ms. Karla Poshedly then mentioned the proposed GDOT project to improve the S.R. 316/U.S. 78 Interchange with associated frontage roads.

Mr. Stanley Hill then opened discussion and comments about the design exception and the intersection of Jennings Mill Parkway at Epps Bridge Road. Mr. Hill stated that the intersection should be realigned, perhaps with a slight skew. Mr. Mike Leonas noted that grade change problems at Lowe's would require significant slope easements onto Lowe's. Ms. Poshedly stated that GDOT would be revising the intersection in the future as part of the S.R. 316/U.S. 78 Interchange reconstruction and that this intersection could be modified later as part of that project. Mr. Hill noted that instead GDOT could match the intersection grades that are used in this project.

MA was asked to study options for revising the intersection at this time to avoid a design exception. Mr. Mike Leonas noted that property in this area could cost up to ¾ of a million dollars per acre. Mr. Stanley Hill stated again that the Department wants to avoid a substandard alignment. Mr. Bill Moskal suggested that MA try to do a centerline alignment break at the intersection and skew the Jennings Mill Parkway side to accommodate the horizontal curve needed to meet speed design.

Mr. Scott Zehngraff asked how much more traffic was on Jennings Mill Road then on Virgil Langford Road. Ms. Poshedly said that there is a much greater traffic demand on Jennings Mill Road but that changing the alignment did not result in a good design because of the location and parallel direction of Relocated Jennings Mill Road. Mr. Zehngraff said that GDOT would like to see the alternate with Relocated Jennings Mill Road tying directly into the Oconee Connector and Virgil Langford Road tying into the Relocated Jennings Mill Road. It was noted that Virgil Langford Road cannot be moved south because it would interfere with the future interchange at S.R. 316/Oconee Connector.

Mr. Mike Reynolds joined the meeting and stated that the ramps onto U.S. 78 looked a little short and needed to be tied into future collector-distributor roads.

Each of the representatives of the utility companies present was called upon to comment about possible utility conflicts. Georgia Power noted that they have some underground and distribution facility near the intersection of Jennings Mill Road and Epps Bridge Road. Intersection changes could affect electric power lines because there is a major underground transmission line. Georgia Power also commented that they would prefer that the County jointly use their corner power poles to attach the traffic signal spanwire.

Mr. Joe Garland commented that minimum spacing between traffic signals should be 1,000 feet. He stated that he is concerned about vehicle queuing between each traffic signal. Ms. Karla

Poshedly commented that MA would conduct a Traf-CORSIM analysis to ensure that traffic from one intersection would not queue into the adjacent intersections.

Mr. Scott Zehngraff asked, "Why did we not just include the median on the project." Ms. Poshedly explained that GDOT's policy is such that if the projected traffic does not reach a certain threshold volume in twenty years then the roadway is to be designed with a center turn lane and not a median. However, the policy requires that the curb and gutter placement should be set so that a future median could easily be accommodated.

GDOT mentioned that a concrete median could be placed through the interchange area because it is a limited access area. After further discussion, it was decided to include a median along the project from the Oconee Connector to approximately 300 feet east of the Frontage Road. Mr. Stanley Hill stated that in light of the median being placed on the project, a separate typical section showing the median would need to be added to the concept report.

GDOT Traffic Department expressed a concern that the Frontage Road may need to be a 5-lane based on traffic. MA said that they would check this concern and respond accordingly.

Mr. Bill Moskal stated that the limited access should be extended to the Frontage Road on the east side of the interchange with U.S. 78 and that the median should extend approximately 300 feet east of the Frontage Road.

Mr. Stanley Hill stated that GDOT would like to obtain a copy of the master plan of the development along Jennings Mill Parkway. Mr. Mike Leonas noted that he would have the consultant representing the developer send a copy of the master plan to GDOT. He also said that he would have the consultant meet with MA to coordinate driveway locations with the construction plans.

Commission Chairman Melvin Davis stated that there are opportunities for development along this roadway that need to be considered and that the County would like to move up the project on the programming schedule. Mr. Robert Mahoney said that the County would need to work through the District Office to try and move the project up, but that the County must remember that the District has to keep a balanced program throughout the District.

Mr. Mike Leonas reiterated the County's appreciation for the Georgia Department of Transportation's time working on this project with them.

The County announced that the dry run scheduled for May 29, 2002 prior to the PIM was cancelled so that the GDOT and County could have a joint dry run to discuss the alternates and layout that would be presented to the public at the June 13, 2002 PIM.

The GDOT stated that MA needs to coordinate the interchange design with GDOT and that MA needs to send GDOT the concepts that included the interchange at S.R. 316 and U.S. 78.

SIGN IN

NAME	OFFICE	PHONE #	EMAIL ADD.
Jerry Milligan	West Annex	404 463 2564	
Rick Ford	DOT R/W	404 463-2575	Richard.Ford@
Michelle Caldwell	DOT Planning	404-651-5327	
Windy Bickers	Financial Mtg.	404-463-5023	
MIKE LEONAS	Oconee FWD	706-769-3937	
DAN WILSON	"	"	"
Rodney Copeland	GEORGIA Power	770/947-4272	rcopeland@UtilitySys.com
KELVIN H. MULLINS	D.O.T. CONST.	706/369/5627	
KEVIN L. DEWITT	DOT- Const	706/369/5627	
Henry N. O'Kelley	GDOT Utilities	(770)532-5510	
TERRY ALLGOOD	WALTON EMC	(770)267-2505	tallgood@waltonemc.c
MARK TILDEN	GEORGIA POWER	404-506-4203	MATILDEN@SOUTHERNCO.com
Bill Moskal	GDOT-ROAD DES.	4-656-5386	
STANLEY Hill	GDOT- ROAD. DES	4-656-5180	
Cynthia CLEMENTS	GDOT ROAD DES	4-656-5180	
Todd Hill	Moreland Altobelli	7 263-5945	Thill@moreland-altobelli.c
Karla Pashedly	"	"	Kpashedly " "
SCOTT ZEHNGRAFF	GADOT, TS&D	404-635-8127	
David Mullins	GADOT Eng Serv.	4)6566846	david.mullins@dot.ga.stat
Melvin Davis	Chair - Co. Comm.	Oconee 706-769-5120	
ROBERT W. MAHONEY	GADOT DIST 1	770-532-5526	mdavis@oconee.ga.us
Joe Garland	GA DOT DIST 1	770.532.5563	joe.garland@dot.ga.sh
Benique Jones	GADOT Road Design		
Mark G. Reynolds	GDOT Road Design	(404) 656-5407	
LASHARON ROGERS	GDOT	ROAD DESIGN	(404) 656-9756

Minutes of Concept Team Meeting
December 12, 2002 10:00 A.M., GDOT Road & Airport Design Conference Room
Jennings Mill Parkway Project
Project Number: STP-F001-00 (098)
P.I. Number: 0001098
Oconee County

I. WELCOME - Mr. Stanley Hill

Mr. Hill welcomed attendees to the concept team meeting of the Jennings Mill Parkway Extension from Paul Broun Parkway to SR 316, which includes an interchange with SR 10 Loop. He then requested that everyone sign the attendance sheet that is being circulated in the room.

II. INTRODUCTION OF EACH ATTENDEE

Mr. Hill then requested that everyone introduce themselves.

III. PROJECT IDENTIFICATION

The project was identified by Mr. Stanley Hill as Project Number STP-F001-00 (098), P.I. Number 001098. He stated that the project is located in Oconee County.

IV. FUNCTIONAL CLASSIFICATION

Mr. Hill stated that Jennings Mill Parkway, Jennings Mill Road and Virgil Langford Road are classified as rural major collectors and Paul Broun Parkway/SR 10 Loop is classified as a rural principal arterial.

V. NEED AND PURPOSE STATEMENT - Moreland Altobelli and Associates, Inc. (Karla Poshedly)

Ms. Karla Poshedly of Moreland Altobelli and Associates then presented the project need and purpose, design features of the project, project layout and typical sections. Ms. Poshedly also addressed the environmental approval process, emphasizing that the need and purpose of the project was to provide access within the project area and not to relieve congestion at the SR 316 / US 78 interchange. She stated that there is a separate GDOT project that will address this interchange, and that this project would assume that those improvements would occur; however, this project would not preclude any reconstruction of that interchange. In response to this, Ms. Michelle Caldwell from the Office of Planning indicated that her office had reviewed the document and finds no problem with the Need & Purpose at this time.

V. TRAFFIC PROJECTIONS

Mr. Hill stated the projected traffic for each roadway in the project, as found on page 5 of the concept report.

VI. EXISTING TYPICAL SECTION

Mr. Hill stated the typical sections for Jennings Mill Parkway previously described by Ms. Poshedly are shown on the wall displays. He stated that the typical sections of Jennings Mill Road and Virgil Langford Road consist of two 12-foot urban lanes with curb and gutter and 5-foot sidewalks on both sides. Mr. Hill then described the Frontage Road East as consisting of two 12-foot urban lanes with a 14-foot two-way left turn lane, curb and gutter and 5-foot sidewalks on both sides. He stated that the typical section descriptions are shown on page 6 of the concept report.

VIII. DESIGN CRITERIA

Mr. Hill then stated the proposed design speed, maximum grade and proposed maximum degree of curve for each roadway in the project as shown on page 7 of the concept report.

IX. PROPOSED PROJECT DESCRIPTION - Moreland Altobelli and Associates, Inc. (Karla Poshedly)

Ms. Poshedly then described the project as contained in the concept report on pages 4 and 5. Ms. Poshedly stressed that the proposed developments that are displayed on the concept plan presented are only possible development layouts that may take place in the future. Mr. Rick Ford inquired about potential wetland impacts. Mr. Robert Whitesides of Moreland Altobelli responded that there were three wetland sites that were identified; however, all are located outside of the construction limits and should not be impacted by the project. *(However, this was found not to be the case. The concept report has been corrected as follows: Two wetlands and three stream crossings were identified within the project survey area during preliminary field surveys; however, the proposed project would result in only one wetland and open water impact within the proposed construction limits.)*

X. MAJOR STRUCTURES

Mr. Hill stated there is one major structure listed in the concept report, the bridge over SR 10 Loop.

XI. DESIGN VARIANCES/EXCEPTIONS

Mr. Hill stated that there are no design exceptions required for this project as indicated by the concept report. However, there is a design variance required for the median spacing on Jennings Mill Parkway Extension. Mr. Hill stated that Ms. Poshedly conducted a traffic analysis and determined that the median spacing proposed would not negatively impact the traffic operations of the roadway. He referred to page 9 of the concept report and the traffic analysis attachment for more details concerning the design variance.

Mr. Hill then stated that there are proposed commercial access driveways/intersections shown on the concept along the new Jennings Mill Parkway would not meet the State policy of locating major driveways/intersections. However, he then stated that access permits for driveways would remain the responsibility of the county since Jennings Mill Parkway is a county road.

XII. RIGHT-OF-WAY DISPLACEMENTS/RELOCATIONS – Mr. Rick Ford

Mr. Hill asked Mr. Rick Ford of the GDOT Right-of-way Department for comments on the right-of-way for the project. Mr. Ford stated that the cost estimate was not accurate. He indicated that his cost estimate was $1,490,400 with one displacement and 17 parcels impacted. He stated that he revised the right-of-way estimate using the GDOT multipliers that take into consideration historic increases in right-of-way costs of long-range projects. Ms. Poshedly said that she would adjust the right-of-way cost estimate with the new multipliers that Mr. Ford provided.

XIII. UTILITIES

Mr. Todd Long, District Preconstruction Engineer, stated that Mr. Thomas E. Davis of the District Utilities Office could not attend but he provided the following estimates: $30K from Georgia Power (both their Distribution Division and Transmission Division), $14K from Charter Communications, $50K from Oconee County, and $80K from Walton EMC. He stated that he did not have estimates for other affected utilities, which include Bell South (formerly with AT&T) and Atlanta Gas Light. He stated that MA's estimation of $100K for utilities needed to be revised accordingly.

XIV. ALTERNATES CONSIDERED AND REASONS FOR REJECTION

Mr. Hill also asked Ms. Poshedly if there were any other alternatives that were evaluated? Ms. Poshedly stated that there were three alternatives: A no-build alternative, an alternative that included the extension of Jennings Mill Parkway with no interchange with SR 10 Loop, and the preferred alternative. *Ms. Poshedly stated that both the no-build alternative and the no interchange alternative would not satisfy the stated Need and Purpose of the project in that it would not provide necessary roadway connectivity and access to proposed developments which are to be located on Jennings Mill Parkway. Without the Jennings Mill Parkway, Oconee County residential traffic primarily located south of SR 316 would have to travel onto SR 316 and then turn left onto Jennings Mill Parkway to access developments. This traffic pattern would create many undesirable local trips on SR 316.*

XV. LEVEL OF ENVIRONMENTAL ANALYSIS & ENVIRONMENTAL CONCERNS

- **a. HISTORIC AREAS**
- **b. HAZARDOUS WASTES**
- **c. UNDERGROUND STORAGE TANKS**

Mr. Robert Whitesides stated that there are no historic properties in the area impacted by the project. There are no known possible hazardous wastes sites. There is one UST site in the project area at the southwest corner of the Jennings Mill Parkway at Epps Bridge Road.

XVI. PROJECT DEVELOPMENT SCHEDULE – Ms. Windy Bickers

Ms. Windy Bickers indicated that the project was programmed as follows: PE is programmed for year 2003; right-of-way is to be purchased by the local government; and construction is programmed for long range at this time.

XVI. PUBLIC HEARING

Ms. Poshedly indicated that a Public Information Meeting has been held and that a Public Hearing was required under the NEPA environmental process.

XVIII. OTHER PROJECTS IN AREA

Mr. Hill listed four other projects in the area of this project as reported in the concept report: Twenty-six interchanges along SR 316 in Barrow/Oconee counties, the Mars Hill Road widening and improvement project, and two commuter rail projects. Mr. Todd Long indicated that the two commuter rail projects were not directly related to this project and should be removed from the report. Mr. Hill asked Ms. Poshedly to remove them from the concept report.

XIX. COMMENTS FROM ATTENDEES

Mr. Hill then opened up the meeting for questions/comments:

a. LOCAL GOVERNMENT REPRESENTATIVES

1. OCONEE COUNTY

Mr. Mike Leonas, the Oconee County engineer, thanked the Department for all of their efforts and stressed that the project area is considered a major node for commercial development for the county, and indicated if possible that the project be moved up in the Department's construction schedule.

b. ENGINEERING SERVICES

Mr. Ron Wishon indicated that the square footage listed in the concept report for the bridge over SR 10 Loop was incorrect. He asked that it be recalculated and that the cost estimate would likewise be updated. *This is an action item that MA will complete.*

Mr. Wishon also raised the question about whether or not the consultant reviewed possible alternatives planned for the reconstruction of the SR 316/US 78 Interchange when determining the proposed configuration of the interchange of Jennings Mill Parkway at SR 10 Loop. *Ms. Poshedly responded that the improvement of SR316/US 78 Interchange is a separate project and is independent of this project. In other words, she stated that it was assumed that SR 316/US 78 Interchange would be built to handle traffic with or without this project.*

c. OFFICE OF FINANCIAL MANAGEMENT

Ms. Windy Bickers stated that she had no further comments or concerns.

d. TRAFFIC SAFETY AND DESIGN

Scott Zehngraff of the Office of Traffic Safety and Design asked why relocated Jennings Mill Road was shown to terminate into Virgil Langford Road and not simply terminate into the new Jennings Mill Parkway (due to the traffic on Jennings Mill Road being much greater than traffic on Virgil Langford Road). *Ms. Poshedly responded by saying that a meeting was previously held where an alignment as Mr. Zehngraff described was presented. In attendance at this meeting were as follows: Mr. Todd Long and Mr. Joe Garland of the GDOT District Office; Mr. Stanley Hill and Ms. Cynthia Clements of GDOT Road & Airport Design Office; and Mr. Mike Leonas and Mr. Dan Wilson of Oconee County Public Works Department. However, that alternative was eliminated from consideration because of the following undesirable geometric design features: 1) The relocated Jennings Mill Road would have to bend at a 300-foot radius in order to tie into Jennings Mill Parkway, 2) Virgil Langford Road would have to intersect the relocated Jennings Mill Road at the 300-foot radius bend, and 3) the intersection would be located too close to Jennings Mill Parkway to allow signalization.*

Although not anticipated at this time, redevelopment along Virgil Langford Road is possible and could occur within the 20-year design horizon for this project. This would increase traffic on Virgil Langford Road beyond what is projected in this study, resulting in more balanced traffic at its intersection with Jennings Mill Road. Should traffic volumes require signalization at this intersection, under the proposed concept layout there would be adequate distance along Virgil Langford Road between the relocated Jennings Mill Road and Jennings Mill Parkway to provide a traffic signal at the intersection of relocated Jennings Mill Road and Virgil Langford Road. Mr. Zehngraff then pointed out that the intersection of Virgil Langford Road with Jennings Mill Road as shown on the current concept layout would have failing levels of service under the present design, and that he wanted to see an HCS analysis of this intersection to verify its operation. *Ms. Poshedly said that MA would produce an analysis of the intersection, and would also review the concept again to determine if all viable alternatives have been considered.*

Mr. Zehngraff asked if a through lane on Frontage Road East was going to be provided at its intersection with Jenning Mill Parkway. *Ms. Poshedly stated that the lane configuration on the display shows that a 300-foot through lane is being provided for through traffic.*

e. ENVIRONMENTAL/LOCATION

There was no one from this Office present to comment.

f. PLANNING

There were no further comments from this office.

g. **DISTRICT**

Mr. Todd Long raised concerns about the geometry conditions at the intersection of Epps Bridge Road and Jennings Mill Parkway. In particular, concern was raised as to whether the current lane configuration would work operationally and whether it would present an unsafe transition for through traffic traveling across Epps Bridge Parkway on Jennings Mill Parkway due to the slight skew and proposed striping plan. *Ms. Poshedly stated that the proposed lane configuration and design is sufficient to handle the projected traffic and that Jennings Mill Parkway on the other side of Epps Bridge Road would be modified by removing a median, resurfacing and restriping the roadway. Ms. Poshedly then stated that in the future, when Jennings Mill Parkway is extended over to Daniel Bridge Road, an additional lane would be constructed in order to accommodate double left turn lanes and two through lanes in each direction on Jennings Mill Parkway.* It was determined however, that the concept needed to show better striping and to include the yellow concept layout color through this intersection. *This is an action item that MA will complete.*

Mr. Garland pointed out that Paul Broun Parkway north of the SR 316 interchange did not carry the designation of US 78 and that "SR 10-Loop" be added in all references to this roadway. He stated that US 78 only pertains to the segment south of the SR 316 interchange where it is an additional designation to the SR 10-Loop. *This is an action item that MA will complete.*

Mr. Long made a comment about the STP designation in the project number and said that he understood this project was to have a BR designation. However, Mr. Hill pointed out that the original BR designation was changed and MA was asked to revise the designation to STP as currently shown.

Mr. Long, upon further review of the long-term use of the project, recommended that limited access rights be purchased along Jennings Mill Parkway from Virgil Langford Road through the interchange area to Frontage Road East. After some discussion with the County, it was agreed that this would be desirable.

Mr. Long suggested that at the intersection of Virgil Langford Road and Jennings Mill Road, which was previously discussed, that "around-about" should be considered. *Ms. Poshedly stated that MA would evaluate the intersection capacity of the proposed intersection concept and would also review the concept again to determine if all viable alternatives have been considered.*

Mr. Long raised the question as to whether an Interchange Justification Report (IJR) is required for this project to move forward. *Ms. Michele Caldwell, GDOT Planning Office, said that she would have to check into whether an IJR is required. Ms. Caldwell said that she was not aware as to when the new GDOT policy on IJR's became effective and whether it would apply to this project, which was not in the planning stage anymore. Ms. Caldwell said she would let Mr. Hill know the answer to this question.*

Mr. Long opened a discussion about providing a median throughout the entire length of Jennings Mill Parkway. Mr. Long indicated that with a median, the County would then specify the spacing of openings when developers request access driveways. The County, however, stated that they would prefer to keep a five-lane flush median section from Frontage Road East to Epps Bridge Road in order to allow for flexibility with the final development of site plans.

Mr. Long commented that there are so many different street names for roadways that are continuous for miles in this area of the County. He suggested that one street name be designated throughout the entire length of this project and beyond. *Mr. Mike Leonas stated that Oconee County is reviewing this issue and is internally discussing some roadway name changes.*

h. RIGHT-OF-WAY
There were no further comments from this office.

i. UTILITIES

1. **ELECTRICAL** – Mr. Hal Peters of Georgia Power asked about whether there are any plans yet on the SR 316/US 78 Interchange Reconstruction Project. *Mr. Hill stated that the project is being managed under a different road design squad. Mr. Long said that there is concept plans that show additional loop ramps. However, Ms. Poshedly stated that the early concept plans that Mr. Long is referring to might have changed.*
2. **TELEPHONE** – No representative present at meeting.
3. **WATER/SEWER** – No representative present at meeting.
4. **GAS** – No representative present at meeting.
5. **CABLE** – No representative present at meeting.

XX. OTHER COMMENTS OR CONCERNS – OPEN DISCUSSION
With no additional comments Mr. Hill indicated that a final report will be sent to him in three weeks time, and that a copy of the concept layout without the proposed reconfiguration of the SR 316/US 78 interchange be submitted with that report.

With no further comments, Mr. Hill adjourned the meeting.

ATTENDANCE SIGN IN SHEET FOR CONCEPT TEAM MEETING

PROJECT NO. *STP-F001-00(098), P.I. NO. 0001098*

COUNTY/COUNTIES *Oconee*

DATE *December 12, 2002*

NOTE: Everyone attending this meeting is requested to sign below. Attendees representing agencies or companies outside DOT and desiring a copy of the minutes of this meeting are requested to print their name, mailing address, organization, and telephone number below.

NAME	ORGANIZATION	MAILING ADDRESS	EMAIL ADDRESS	PHONE NUMBER
Stanley Hill	GDOT	2 Capitol Square	Stanley.Hill@DOT.state.ga.us	(404)656-5180
Cynthia Clements	GDOT / Road Design	" "	Cynthia.Clements@dot.state.ga.us	404-656-5180
Rick Ford	GDOT R/W	" "	Richard.Ford@dot.state.ga.us	404.463.2576
Windy Bickers	GDOT OFM	" "	Windy.Bickers@dot.state.ga.us	404-463-5023
Kevin DeWitt	GDOT District 1	450 old Hull Rd Athens GA 30601	Kevin.Dewitt@dot.state.GA.US	706 369-5627
Kelvin H. Mullins	GDOT Dist 1 Const	450 Old Hull Rd Athens GA 30601	KELVIN.MULLINS@dot.state.GA.US	706-369-5627
Jerry Milligan	GDOT R/W	2 Capitol Square	Jmilligan@dot.state.ga.us	404 463 2575
Michael L. Leonas	Oconee Public Works	PO Box 145 Watkinsville GA 30677	mleonas@oconee.ga.us	706-769-2937
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DICK WOHLWEND	GPCo.	241 RALPH McGILL BLVD ATL	N/A	706-268-1045
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Karla Poshedly	MARI	2211 Beaver Ruin Rd St 190	kposhedly@moreland-altobelli.com	770-263-5945
Todd Long	GADOT	No 2 Capitol Sqare	Todd.Long@dot.state.ga.us	770-532-5520
GERAD ROSS	GDOT	"	gerald.ross@dot.state.ga.us	404-656-5386
Tommy Crochet	McGee Partners	2799 Lawrenceville Hwy Decatur	Tcrochet@mcgeepartners.com	770-938-6400

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. No.141880 **OFFICE** Environment/Location

DATE July 12, 2002

FROM Harvey D. Keepler, State Environmental/Location Engineer

TO DISTRIBUTION BELOW

Subject: Project BR-F001-00(098), Oconee County, Summary of Comment recieved during the Public Comment Period- Improvments

COMMENT TOTALS:

A total of 43 people attended the June 13, 2002 public information meeting held for the subject project. From those attending, 6 comment forms, 1 letter and 1 verbal statement was received. The verbal statement was a duplicate of the letter and was therefore only counted once. No additional comments were received during the ten day comment period following the meeting, therefore, the total number of comments received is 7. They are summarized as follows:

No. Opposed	No. In Support	Uncommitted	Conditional
2	5	0	0

MAJOR CONCERNS:

1. Want the proposed Jennings Mill Parkway Extension over US 78 to be a full interchange, having access to the northbound and southbound US 78.(2)
2. The project comes to close to Highland Hills Retierment Vilage. (1)
3. Opposes any Federal money being spent in Clark or Oconee County. (1)
4. Requests that the GA 316 Limited access project be included in this project. (1)
5. Requests that Jennings Mill and Virgil Langford be realigned to allow Jennings Mill Road to intersect directly with theOconee Connector. (1)

OFFICIALS:
Officials attending included the following:

Mr.Melvin Davis, Chairman Oconee County Board of Commissioners
Mr. Don Norris, Oconee County Commissioner- Post 2

Oconee County Engineer- Dan Wilson
Oconee Public Works – Jeff Maddox
Oconee County Planning Wayne Provost, Matt Forshee
Oconee County

DISPOSITION OF COMMENTS:

The consultant will respond to all comments.

Attached is a complete transcript of the comments received during the comment period and a copy of the public information meeting handout.

If you have any questions about the comments, please call Mary Mitchell at (404) 699-4408.

HDK/mm/gth

Attachments

DISTRIBUTION: Thomas L. Turner, P. E.; Larry Dent

11-20 11/18/00 copy BOC Finance Engineering C/C Lu Fri

Department of Transportation

J. TOM COLEMAN, JR.
COMMISSIONER
(404) 656-5206

FRANK L. DANCHETZ
CHIEF ENGINEER
(404) 656-5277

State of Georgia
#2 Capitol Square, S.W.
Atlanta, Georgia 30334-1002

HAROLD E. LINNENKOHL
DEPUTY COMMISSIONER
(404) 656-5212

BILLY F. SHARP
TREASURER
(404) 656-5224

November 16, 2000

Gina, Agent for 11/28/00

The Honorable Wendell T. Dawson, Commission Chairman
Oconee County Commissioner
P.O. Box 145
Watkinsville, GA 30677

Dear Chairman Dawson:

I am pleased to notify you that the Georgia Department of Transportation is agreeable to participate in the improvement of the following project.

STP-0001-00(098) Oconee County,P.I.#0001098
For Jennings Mill Parkway Extension From Paul Broun Parkway to SR316 and Interchange

Please review the attached agreement and if satisfactory, then you will need to execute all three (3) originals and return them to this office. Once all parties have signed the agreement, I will return a copy of the agreement to you for your file.

Should you have any questions please call me at (404) 656-5320.

Sincerely yours,

Herman T.Griffin, P.E.
State Transportation Programming Engineer

HTG:as
attachments(3)
c: Percy Middlebrooks w/attachment
James Kennerly
Larry Dent – District 1

COPY

6 ina

Zilo

Department of Transportation

J. TOM COLEMAN, JR.
COMMISSIONER
(404) 656-5206

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CHIEF ENGINEER
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State of Georgia
#2 Capitol Square, S.W.
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HAROLD E. LINNENKOHL
DEPUTY COMMISSIONER
(404) 656-5212

BILLY F. SHARP
TREASURER
(404) 656-5224

December 21, 2000

The Honorable Wendell T. Dawson, Commission Chairman
Oconnee County Commission
P.O. Box 145
Watkinsville, GA 30677

Dear Chairman Dawson:

I am returning for your files an executed agreement between the Georgia Department of Transportation and Oconee County for the following project:

PROJECT#: STP-0001-00(098) Oconee County, P.I.#0001098
Jennings Mill Parkway Extension From Paul Broun Parkway To SR316 And Interchange

We look forward to working with you on the successful completion of this joint Project. Should you have any questions, please contact me at (404) 656-5320.

Sincerely,

Herman T. Griffin, P.E.
State Transportation Programming Engineer

HTG:as
Enclosure

c: Percy Middlebrooks, w/attachment
Larry Dent – District 1
James Kennerly

File in Contract Fi
97981D

AGREEMENT

BETWEEN

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

AND

OCONEE COUNTY, GEORGIA

for

JENNINGS MILL PARKWAY EXTENSION FROM PAUL BROUN PARKWAY TO S. R. 316 AND INTERCHANGE

This AGREEMENT is made and entered into this 19th day of December, 2000, by and between the DEPARTMENT OF TRANSPORTATION, an agency of the State of Georgia, hereinafter called the "DEPARTMENT", and OCONEE COUNTY, GEORGIA, acting by and through its Chairman and Board of Commissioners, hereinafter called the "COUNTY".

WHEREAS, the COUNTY has represented to the DEPARTMENT a desire to construct a new roadway facility described as Jennings Mill Parkway Extension from a point near Epps Bridge Parkway and extending across Paul Broun Parkway to the Oconee Connector and including a partial interchange at the Paul Broun Parkway in Oconee County, Georgia, currently described as Georgia Department of Transportation Project Number STP-0001-00 (098) P. I. Number 0001098, hereinafter referred to as the "PROJECT"; and

WHEREAS, the COUNTY has represented to the DEPARTMENT a desire to participate in providing the preconstruction engineering activities needed for the improvements, relocating the utilities, purchasing the right of way, and other costs as specified in the AGREEMENT, and the DEPARTMENT has relied upon such representations; and

WHEREAS, the DEPARTMENT has expressed a willingness to participate in the funding of the construction of the PROJECT with funds of the DEPARTMENT, funds apportioned to the DEPARTMENT by the Federal Highway Administration, hereinafter referred to as the "FHWA", under Title 23, United States Code, Section 104, or a combination of funds from any of the above sources; subject to those certain conditions set forth in the AGREEMENT.

THEREFORE in consideration of the mutual promises made and of the benefits to flow from one to the other, the DEPARTMENT and the COUNTY hereby agree each with the other as follows:

1. All Primary Consultant firms hired by the COUNTY to provide services on the PROJECT shall be prequalified with the DEPARTMENT in the appropriate area-classes. The DEPARTMENT shall, on request, furnish the COUNTY with a list of prequalified consultant firms in the appropriate area-classes.

2. The PROJECT construction and right of way plans shall be prepared in English units.

3. Both the COUNTY and the DEPARTMENT hereby acknowledge that time is of the essence and both parties shall adhere to the priorities established in the

approved STIP or earlier. Furthermore, all parties shall adhere to the detailed project schedule, as approved by the DEPARTMENT. In the completion of respective commitments contained herein, if a change in the schedule is needed, the DEPARTMENT shall have final authority. If, for any reason, the COUNTY does not produce acceptable deliverables at the milestone dates defined in the STIP, or in the approved schedule, the DEPARTMENT reserves the right to delay the project's implementation until funds can be re-identified for construction or right of way, as applicable.

4. All drafting and design work performed on the project shall be done utilizing Microstation and CAiCE software respectively, and shall be organized as per the Department's guidelines on electronic file management.

5. The COUNTY shall contribute to the PROJECT by funding all costs for the preconstruction engineering (design). The preconstruction engineering activities shall be accomplished in accordance with the DEPARTMENT's Plan Development Process, the applicable guidelines of the American Association of State Highway and Transportation Officials, hereinafter referred to as "AASHTO", the DEPARTMENT's Standard Specifications Construction of Roads and Bridges, PROJECT schedules, and applicable guidelines of the DEPARTMENT. The COUNTY's responsibility for design shall include, but is not limited to the following items:

a. Prepare the PROJECT concept report in accordance with the format used by the DEPARTMENT. The concept for the PROJECT shall be developed to accommodate the future traffic volumes as generated by the COUNTY as provided for in paragraph 5b and approved by the DEPARTMENT. The concept report shall be approved by the DEPARTMENT prior to the COUNTY beginning further development of the PROJECT plans. It is recognized by the parties that

the approved concept may be modified by the COUNTY as required by the DEPARTMENT and reapproved by the DEPARTMENT during the course of design due to public input, environmental requirements, or right of way considerations.

b. Develop the PROJECT's base year (year facility is expected to be open to traffic) and design year (base year plus 20 years) traffic volumes. This shall include average daily traffic (ADT) and morning (am) and evening (pm) peak hour volumes. The traffic shall show all through and turning movement volumes at intersections for the ADT and peak hour volumes and shall indicate the percentage of trucks expected on the facility.

c. Validate (check and update) the approved PROJECT concept and prepare a PROJECT Design Book for approval by the DEPARTMENT prior to the beginning of preliminary plans.

d. Prepare environmental studies, documentation, and reports for the PROJECT that show the PROJECT is in compliance with the provisions of the National Environmental Protection Act and Georgia Environmental Protection Act, as appropriate to the PROJECT funding. This shall include any and all archaeological, historical, ecological, air, noise, underground storage tanks (UST), and hazardous waste site studies required. The COUNTY shall submit to the DEPARTMENT all environmental documents and reports for review and approval by the DEPARTMENT and the FHWA.

e. Prepare all public hearing and public information displays and conduct all required public hearings and public information meetings in accordance with DEPARTMENT practice.

f. Perform all surveys, mapping, and soil investigation studies needed for design of the PROJECT.

g. Perform all work required to obtain project permits, including, but not limited to, US Army Corps of Engineers 404 and Federal Emergency Management Agency (FEMA) approvals. These efforts shall be coordinated with the DEPARTMENT.

h. Prepare the PROJECT's drainage design including erosion control plans and the development of the hydraulic studies for the Federal Emergency Management Agency Floodways and acquisition of all necessary permits associated with the drainage design.

i. Prepare traffic studies, preliminary construction plans including a cost estimate for the Preliminary Field Plan Review, preliminary and final utility plans, preliminary and final right of way plans, staking of the required right of way, and final construction plans including a cost estimate for the Final Field Plan Review, erosion control plans, traffic handling plans, and construction sequence plans and specifications including special provisions for the PROJECT.

j. Provide certification, by a Georgia Registered Professional Engineer, that the construction plans have been prepared under the guidance of the professional engineer and are in accordance with AASHTO and DEPARTMENT guidelines

k. Failure of the COUNTY to follow the DEPARTMENT's Plan Development Process will jeopardize the use of Federal funds and the COUNTY shall then provide full funding for construction.

6. The DEPARTMENT shall review and has approval authority for all aspects of the PROJECT. The DEPARTMENT will work with the FHWA to obtain all needed approvals with information furnished by the COUNTY.

7. Upon the COUNTY's determination of the rights of way required for the PROJECT and the approval of the right-of-way plans by the DEPARTMENT, the COUNTY shall fund the acquisition and acquire the necessary rights of way for the PROJECT. Right of way acquisition shall be in accordance with the law and the rules and regulations of the FHWA including, but not limited to, Title 23, United States Code; 23 CFR 710, et. seq., and 49 CFR Part 24, and the rules and regulations of the DEPARTMENT. Failure to follow these requirements will result in loss of Federal funding for the PROJECT and it will be the responsibility of the COUNTY to make up the loss of that funding. All required right of way shall be obtained and cleared of obstructions, including underground storage tanks, prior to the DEPARTMENT's advertising the PROJECT for bids. The COUNTY shall further be responsible for making all changes to the approved right-of-way plans, as deemed necessary by the DEPARTMENT, for whatever reason, as needed to purchase the right of way or to match actual conditions encountered.

8. The COUNTY shall be responsible for the design of all bridge(s) within the limits of this PROJECT. The COUNTY shall be responsible for providing all necessary survey information for the completion of all required hydraulic study report(s). The COUNTY shall perform all necessary survey efforts regarding the design of the bridge(s) and shall incorporate these plans into this PROJECT as a part of this Agreement.

9. The COUNTY shall be responsible for all utility relocation costs necessary for the construction of the PROJECT.

10. The COUNTY shall be responsible for all costs for providing energy, maintenance, and operational costs of any roadway and interchange lighting within the PROJECT limits.

11. The COUNTY shall be responsible for all costs for the continual maintenance and the continual operations of any and all sidewalks within the PROJECT limits. Whenever necessary, the COUNTY shall provide 20% of the construction costs to match the 80% Federal funding of the construction costs of any sidewalk proposed within the PROJECT limits.

12. The COUNTY shall follow the DEPARTMENT's procedures for identification of existing and proposed utility facilities on the PROJECT. These procedures, in part, require all requests for existing, proposed, or relocated facilities to flow through the DEPARTMENT's Project Liaison and the District Utilities Engineer.

13. The COUNTY shall address all railroad concerns, comments, and requirements to the satisfaction of the DEPARTMENT.

14. Upon completion and approval of the PROJECT plans, certification that all needed rights of way have been obtained and cleared of obstructions, and that certification that all needed permits for the PROJECT have been obtained by the COUNTY, the DEPARTMENT shall let the PROJECT for construction. Except as provided herein and upon receipt of an acceptable bid, the DEPARTMENT shall bear all costs for construction, including all costs associated with inspection and materials testing during construction. The DEPARTMENT shall be solely responsible for securing and awarding the construction contract for the PROJECT.

15. The COUNTY agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer diskettes and printouts, and any other data prepared under the terms of this agreement shall become the property of the DEPARTMENT. This data shall be organized, indexed, bound, and delivered to the DEPARTMENT no later than the advertisement of the PROJECT for letting. The DEPARTMENT shall have the right to use this material without restriction or limitation and without compensation to the COUNTY.

16. The COUNTY shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by or on behalf of the COUNTY pursuant to this AGREEMENT. The COUNTY shall correct or revise, or cause to be corrected or revised, any errors or deficiencies in the designs, drawings, specifications, and other services furnished for this PROJECT. Failure by the COUNTY to address the errors or deficiencies within 30 days shall cause the COUNTY to assume all responsibility for construction delays caused by the errors and deficiencies. All revisions shall be coordinated with the DEPARTMENT prior to issuance. The COUNTY shall also be responsible for any claim, damage, loss or expense that is attributable to negligent acts, errors, or omissions related to the designs, drawings, specifications, and other services furnished by or on behalf of the COUNTY pursuant to this AGREEMENT.

17. The COUNTY shall review and approve all shop drawings prior to submission to the DEPARTMENT.

18. This AGREEMENT is made and entered into in Fulton County, Georgia, and shall be governed and construed under the laws of the State of Georgia. The

covenants herein contained shall, except as otherwise provided, accrue to the benefit of and be binding upon the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the DEPARTMENT and the COUNTY have caused these presents to be executed under seal by their duly authorized representatives.

RECOMMENDED:

State Road and Airport Design Engineer

Director of Preconstruction

Chief Engineer

DEPARTMENT OF TRANSPORTATION

BY: _____
Deputy Commissioner

ATTEST:

Treasurer

REVIEWED AS TO LEGAL FORM:

12-6-00
Office of Legal Services

BOARD OF COMMISSIONERS
Oconee County, Georgia

BY: _____
Chairman

Signed, sealed and delivered this 28th day of November 2000, in the presence of:

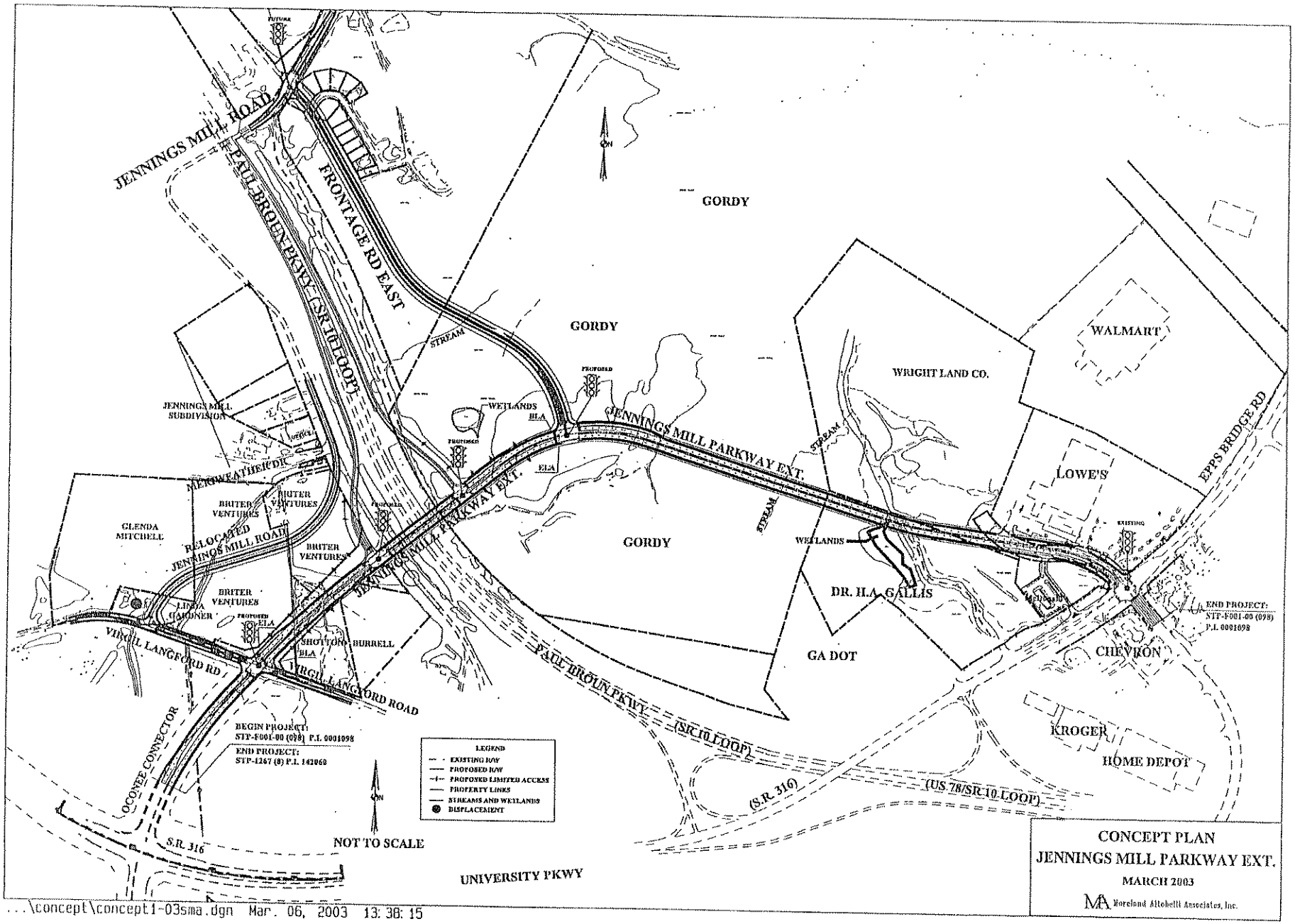
Witness

Notary Public

Notary Public, Athens-Clarke County, Georgia
My Commission Expires November 2, 2003

This Agreement approved by the Oconee County Commission at a meeting held at Oconee County Courthouse this 28th day of November, 2000.

County Clerk



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Department of Transportation

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January 7, 2003

G. Melvin Davis, Chairman
Oconee County Board of Commissioners
P.O. Box 145
Watkinsville, Georgia 30677

RE: STP-F001-00 (098), P.I. 0001098, Oconee County
Jennings Mill Parkway Extension & Interchange with SR 10 Loop/Paul Broun Parkway

Dear Mr. Davis:

Thank you for your letter dated December 23, 2002 regarding the Jennings Mill Parkway Extension and Interchange with State Route 10 Loop/Paul Broun Parkway project. Your concerns were regarding the requirement of the completion of an Interchange Justification Report for this particular project.

As stated in your letter, the Department adopted a new policy for allowing access to Interstate and non-interstate limited access facilities. This policy was adopted on May 24, 2002, which outlines the new procedures for this type of request. However, since the Local Government Project Agreement (LGPA) was executed between the Department and Oconee County on December 18, 2000, the Department will waive the Interchange Justification Report requirement for the above mentioned project.

The Department looks forward to working with Oconee County. If you have questions or concerns, please contact Michelle Caldwell at 404-651-5327.

Sincerely,

Paul V. Mullins, P.E.
Director, Planning, Data & Intermodal Development

PVM:MAC

cc: J. Tom Coleman, GDOT Commissioner
Gerald Ross, GDOT, Road Design & Airports
Marta V. Rosen, GDOT, State Transportation Planning Administrator
Larry Dent, GDOT, District Engineer
Carla Poshedly, Moreland-Altobelli
Alva Byron, Moreland-Altobelli
Jeff Maddox, Public Works Director
Dan Wilson, Assist County Engineer
Wayne Provost, Planning Director

Value Engineering Process

Value Engineering Process

Introduction

This report summarizes the analysis and conclusions by the PBS&J Value Engineering workshop team as they performed a VE study during the period of February 26 – March 1, 2007 in Atlanta, Georgia for the Georgia Department of Transportation. The subject of the Value Engineering study was the project for a new Interchange at the Paul Brown Parkway, and the creation of the proposed new Jennings Mill Parkway in Oconee County, Georgia. The design is being performed by McGee Partners, Inc., as a subcontractor to Moreland Altobelli Associates, Inc.

The Value Engineering workshop team and its leadership were provided by PBS&J. This team consisted of the following:

Charles McDuff	PBS&J	CVS/Civil Engineer/VE Team Leader
Chris Carbuto	PBS&J	Highway Design Engineer
Ramesh Kalvakaalva	CSI	Structures Engineer
Gary King	PBS&J	Highway Construction Specialist

The Value Engineering team followed the seven step Value Engineering job plan as promulgated by the Georgia Department of Transportation. This seven step job plan includes the following:

- **Investigative** – during this phase of the team's work, the team received a briefing from the project delivery team representatives of the Georgia Department of Transportation (GDOT). This briefing included discussions of the design intent behind the project, the cost concerns, design constraints and right-of-way issues. In the working session that followed, the VE team developed cost models from the cost data provided by the designers and familiarized themselves with the construction drawings and other data that was available to the team. Some of the representative project information may be found in the tabbed section of this report entitled ***Project Description***. Following this current narrative the reader will also find a cost model done in the Pareto fashion, i.e., identifying the highest costs down to the lowest costs for the larger construction cost elements. This cost model, developed by the VE team, was used by the VE team to help focus their week of work. The headings on the Pareto Chart also were used as headings for creative phase activities.

- **Analysis** – during this phase the team reviewed the project from the simplest format in asking the questions of "What is the project supposed to do?", and "How is it supposed to accomplish this purpose?". In the Value Engineering vernacular, the answers to these questions are cast in the form of active verbs and measurable nouns. These verb/noun pairs form the basis of the function analysis which distinguishes a Value Engineering effort from a potentially damaging cost

cutting exercise. The important functions of the new project were identified as follows:

- **Project Objective/Goals**
  - **Enhance Traffic Distribution/Flows**
  - **Enhance Commerce and Development**
- **Project Basic Function**
  - **Connect Alignments (Use Bridge and Roadways)**
  - **Link Key Roadways**
  - **Comply With Regulations**
  - **Increase Load Capacity**
- **Other Key Functions**
  - **Build Bridge**
  - **Protect Wetlands**
  - **Improve Operations**
  - **Control Access**

This function analysis is documented further through the inclusion of the Function Analysis and Cost-Worth worksheets. The Cost-Worth Ratios that are included helped the VE team to identify areas of interest for the brainstorming session. When a function has a current cost-worth ratio of greater than 1.00 it is often found that there are opportunities for reducing the cost, thereby better matching its actual worth for the project.

- **Speculation** – The VE team performed a brainstorming session to identify ideas that might offer opportunities to help meet the VE team objectives for this workshop:
  - Reduce construction and life cycle costs
  - Improve roadway operations
  - Reduce the time of construction
  - Clarify risks and opportunities associated with the project and acts to mitigate risks and to act on opportunities.\

  This brainstorming session initially identified numerous ideas that were then evaluated in the next phase. The reader will find the creative worksheets enclosed. These same work sheets were also used to record the results of the Evaluation of these creative ideas.

- **Evaluation –** Once the team identified the creative ideas, it was necessary to decide which alternatives should be carried forward. This is the work of the Judgment or Evaluation Phase. The team reflected back on the project constraints and objectives shared with the team by the owner's representatives, in the kick-off meeting on the first day of the workshop. From that guidance, the team settled on the following values as measures of whether or not an alternative had enough merit to be carried forward in the VE process:
  - Construction Cost Savings

- Maintainability
- Ability to Implement the Idea
- General Acceptability of the Alternatives
- Constructability

Based on these measurement sticks, the VE team evaluated the alternatives and graded them from 5 (Excellent) down to 1 (Poor). Other notes about the alternatives are annotated at the bottom of the enclosed creative and evaluation sheets.

- **Development** – This is the section of the report (see tabbed section number three – Study Results) in which the alternatives are explained, sketched, documented and put to cost and technical tests to determine their suitability for implementation and for their impact on the project.

- **Recommendation** – As noted earlier, the team made a final, informal out-briefing on the last day of the workshop, designed to inform the stakeholders of the initial findings of the VE workshop. The purpose of that recommendation section of the workshop is to make sure that the stakeholders have a clear understanding of the work products of the VE team and to make sure that each of the alternatives brought forward have been developed in good context with the project facts.

- **Presentation –** This final report of the findings of the workshop represents the primary presentation to the client of the expected results from the workshop.

The VE team is enclosing a copy of the attendance sheets so that the reader can be informed about who participated in the workshop proceedings. The cost model developed in the information phase is also enclosed. These cost models are done in Pareto Fashion. This means that they are intended to highlight the high cost items in the current working estimate for the construction of the project. The high cost items were then evaluated by the VE team as to whether the team might be able to have an effect on these line items. Where it was felt that the team might affect the line items, they were typically used as the topics for the creative phase.

FUNCTION ANALYSIS AND COST-WORTH

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** SHEET NO.: **1** of **3**

Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

NO.	ELEMENT	*FUNCTION* VERB	NOUN	KIND	COST (000)	WORTH (000)	COMMENTS
	(EW) EARTHWORK	**Prepare**	**Vertical Alignment**	**B**	**$2,750**	**$2,500**	**C/W Ratio = 1.10**
		Support	Alignment	B			
		Level	Ground	S			
		Avoid	Flooding	RS			
		Connect	Points	B			
		Disturb	Land	U			
		Enhance	**Development and Commerce**	**HO**			
	(SP) Storm Piping and Related	**Protect**	**Traffic**	**RS**	**$1,030**	**$900**	**C/W Ratio = 1.14**
		Divert	Runoff	RS			
		Control	Flows	RS			
		Protect	Land Owners	RS			Avoid flooding, erosion and concentration of flows
		Minimize	Erosion	RS			
		Facilitate	Construction	S			

Function defined as: **Action Verb** **Measurable Noun**

Kind: B = Basic; S = Secondary; RS = Required Secondary; HO = Higher Order; LO = Lower Order; U = Unwanted

FUNCTION ANALYSIS AND COST-WORTH

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** SHEET NO.: **2** of **3**

Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

NO.	ELEMENT	*FUNCTION*			COST (000)	WORTH (000)	COMMENTS
		VERB	NOUN	KIND			
	(CI) CONCRETE ITEMS	**Channelize**	**Traffic & Flows**	**S**	**$1,100**	**$900**	**C/W Ratio = 1.22**
		Facilitate	Driveway Access	RS			
		Accommodate	Pedestrians	RS			
		Contain	Traffic	S			Curb and Gutter
		Contain	Drainage	S			Curb and Gutter
	(AP) ASPHALT PAVEMENT	**Distibute**	**Traffic Loads**	**B**	**$5,000**	**$4,000**	**C/W Ratio = 1.25**
		Support	Traffic	B			
		Shed	Water	RS			
		Expedite	Commerce	HO			
		Enhance	Access	HO			
		Improve	Connectivity	HO			
		Enhance	Safety	RS			
		Distribute	Traffic	S			

Function defined as: **Action Verb** **Measurable Noun**

Kind: B = Basic S = Secondary RS = Required Secondary HO = Higher Order LO = Lower Order

Cost/Worth Ratio = (Total Cost ÷ Basic Worth)

FUNCTION ANALYSIS AND COST-WORTH

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** SHEET NO.: **3** of **3**

Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

NO.	ELEMENT	*FUNCTION*			COST (000)	WORTH (000)	COMMENTS
		VERB	NOUN	KIND			
	(BI) BRIDGE ITEMS	**Connect**	**Alignments**	**B**	**$2,500**	**$1,800**	**C/W Ratio = 1.39**
		Link	Ends	B			
		Enhance	Access	HO			
		Meet	Vertical Clearances	RS			Clearance over Paul Brown
		Separate	Traffic	B			Vertical Separation
		Expedite	Commerce	HO			

Function defined as: **Action Verb** **Measurable Noun**

Kind: B = Basic S = Secondary RS = Required Secondary HO = Higher Order LO = Lower Order

Cost/Worth Ratio = (Total Cost ÷ Basic Worth)

PARETO CHART - COST HISTOGRAM

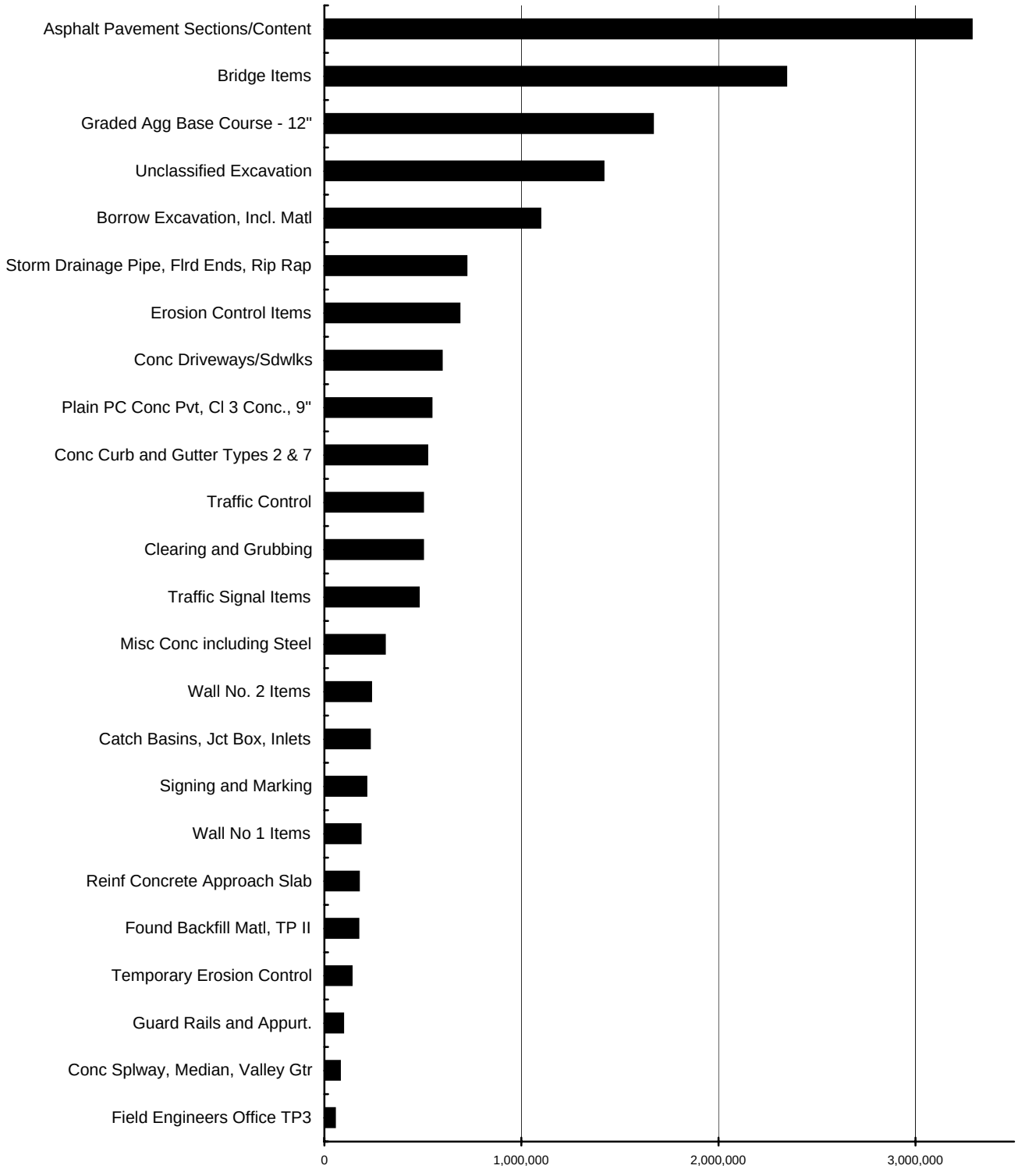
PROJECT: Jennings Mill Parkway - STP-F001-00(098), P.I. No. 0001098

Oconee County, Georgia

PROJECT ELEMENT	COST	PERCENT	CUM. PERCENT
Asphalt Pavement Sections/Content	3,284,423	20.23%	20.23%
Bridge Items	2,343,253	14.43%	34.66%
Graded Agg Base Course - 12"	1,666,865	10.27%	44.93%
Unclassified Excavation	1,416,525	8.72%	53.65%
Borrow Excavation, Incl. Matl	1,096,047	6.75%	60.40%
Storm Drainage Pipe, Flrd Ends, Rip Rap	720,556	4.44%	64.84%
Erosion Control Items	685,548	4.22%	69.07%
Conc Driveways/Sdwlks	595,300	3.67%	72.73%
Plain PC Conc Pvt, Cl 3 Conc., 9"	543,665	3.35%	76.08%
Conc Curb and Gutter Types 2 & 7	522,180	3.22%	79.30%
Traffic Control	500,000	3.08%	82.38%
Clearing and Grubbing	500,000	3.08%	85.46%
Traffic Signal Items	479,277	2.95%	88.41%
Misc Conc including Steel	306,511	1.89%	90.30%
Wall No. 2 Items	237,087	1.46%	91.76%
Catch Basins, Jct Box, Inlets	230,682	1.42%	93.18%
Signing and Marking	212,616	1.31%	94.49%
Wall No 1 Items	183,226	1.13%	95.62%
Reinf Concrete Approach Slab	174,317	1.07%	96.69%
Found Backfill Matl, TP II	171,870	1.06%	97.75%
Temporary Erosion Control	138,661	0.85%	98.60%
Guard Rails and Appurt.	95,552	0.59%	99.19%
Conc Splway, Median, Valley Gtr	78,472	0.48%	99.67%
Field Engineers Office TP3	53,000	0.33%	100.00%
Subtotal	**$ 16,235,633**	**100.00%**	
E & C Rate @ 10% **INCL**	**$ 1,623,563**		
Subtotal =	**$ 17,859,196**		
Inflation Rate 5.0% @ 1.0 Years	**$ 892,960**		
Total Construction Cost =	**$ 18,752,156**		
Right-of-Way =	**$ 5,169,490**		
Reimb. Utilities =	**$ 192,500**		
TOTAL	**$ 24,114,146**	**Comp Mark-up:**	49%

PARETO CHART - COST HISTOGRAM

PROJECT: Jennings Mill Parkway - STP-F001-00(098), P.I. No. 0001098



Costs in graph include mark-ups.

CREATIVE IDEA LISTING

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** SHEET NO.: **1** of **2**

Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

NO.	IDEA DESCRIPTION	RATING
	(EW) EARTHWORK	
EW-1	"Tweak" vertical alignment to reduce borrow	DS
EW-2	Position ramps to minimize earthwork	DS
EW-3	Use guardrails to steepen sideslopes and reduce borrow requirement	DS
EW-4	Use maximum grades and minimum K values to reduce earthwork	2
EW-5	Let early contract to facilitate clearing and grubbing and prepare the larger fills	3
EW-6	Use retaining walls to reduce right-of-way and earthwork	2
	(SP) STORM PIPING AND RELATED TOPICS	
SP-1	Combine pipes on Frontage Road East **(Note – proved to be not cost effective)**	5
SP-2	Change Frontage Road East from Urban to Rural Design	5
SP-3	Shorten cross-drains	4
SP-4	Use ConSpan-type structure **(Discussion with vendor indicates that this not cost effective)**	3
SP-5	Use pipe arch	3
SP-6	Review pipe "short-circuit" opportunities (direct drop into cross-drains – reduce small pipe runs	3
SP-7	Use improved inlet conditions to reduce pipe sizes	DS
SP-8	Check pipe installation at Sta 129+00 on Jennings Mill Parkway	1
	(CI) CONCRETE ITEMS	
CI-1	Use raised median with Type 7 face	2
CI-2	Selectively reduce sidewalk runs	4
CI-3	Stripe out "porkchop" islands	2
CI-4	Eliminate raised medians – pave these areas	4
CI-5	Reduce curb and gutter size	2
CI-6	Install sidewalk on one side of roadway only	See CI-2

Rating: 1→2 = Not to be Developed; 3 = Varying Degrees of Development Potential;
4→5 = Most likely to be Developed; DS = Design Suggestion; ABD = Already Being Done

CREATIVE IDEA LISTING

PROJECT: **GEORGIA DEPARTMENT OF TRANSPORTATION** SHEET NO.: **2** of **2**

Proj. No. STP-F001-00(098) – Oconee County – P.I. Number: 0001098

NO.	IDEA DESCRIPTION	RATING
	(AP) ASPHALT PAVEMENT	
AP-1	Selectively use asphalt in lieu of concrete on ramps	4
AP-2	Selectively decrease pavement width	5
AP-3	Relocate bicycle lanes	5
AP-4	Route existing Jennings Mill Road under the new Parkway	2
AP-5	Flatten horizontal curve on where Frontage Road East meets the new Parkway	2
AP-6	Make mainline (the New Parkway) connection at existing Jennings Mill Road (on north)	1
AP-7	Reduce pavement width (Station 415+00 to 425+00)	4
AP-8	Optimize median width	See CI-4
AP-9	Remove medians **(Note – this represents a break even – no cost impact)**	See CI-4
	(BR) BRIDGE ITEMS	
BI-1	Use MSE walls – shorten bridge length	5
BI-2	Eliminate raised median – reduce width	5
BI-3	Reduce width of bicycle lanes	1
BI-4	Use concrete in lieu of steel piles	1
BI-5	Eliminate 2% bridge skew	DS
BI-6	Use 8’ (shoulder and bike lane) with protective curb in lieu of 6’ raised shoulder + 4’ bike lane	4
BI-7	Eliminate concrete wall and chain link fence – use 3-Bar metal rail	1
	(MI) MISCELLANEOUS IDEAS	
MI-1	Change retaining wall type	4
MI-2	Review cost of signalization	DS
MI-3	Comment on cost estimate – mid-point of construction	DS
MI-4	Review utility accommodations/coordination	DS
MI-5	Use roundabouts at ramp ends	4
MI-6	Retain existing alignment of Jennings Mill Road under ramp at the new Parkway	5

Rating: 1→2 = Not to be Developed; 3 = Varying Degrees of Development Potential;
4→5 = Most likely to be Developed; DS = Design Suggestion; ABD = Already Being Done

DESIGNER'S PRESENTATION

MEETING PARTICIPANTS

Project: Georgia Department of Transportation

Date: 26 February 2007

STP-F001-00(098) **Oconee County** **PI No. : 0001098**

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VE TEAM PRESENTATION

MEETING PARTICIPANTS

Project: Georgia Department of Transportation

Date: 1 March 2007

STP-F001-00(098) **Oconee County** **PI No. : 0001098**

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