

D.O.T. 66

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE P. I. Nos. 322470 / 0007251, Twiggs County **OFFICE** Preconstruction
STP-155-1(23) / NHS-0007-00(251)
SR 96 Widening from SR 87 to I-16 **DATE** December 22, 2005

FROM *Margaret B. Pirkle*
Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT APPROVED PROJECT CONCEPT REPORT

Attached for your files is the approval for subject project.

MBP/cj

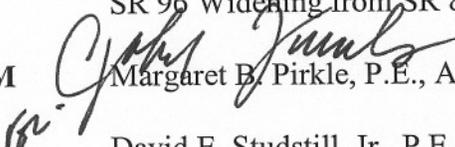
Attachment

DISTRIBUTION:

Brian Summers
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Ken Thompson
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Michael Henry
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Paul Liles
Babs Abubakari
Brent Story
Thomas Howell
BOARD MEMBER
FHWA

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE	P.I. Nos. 322470, 0007251 / Twiggs County STP-155-1(23), NHS-007-00(251) SR 96 Widening from SR 87 to I-16	OFFICE	Preconstruction
		DATE	March 31, 2005
FROM	 Margaret B. Pirkle, P.E., Assistant Director of Preconstruction		
TO	 David E. Studstill, Jr., P.E., Chief Engineer		

SUBJECT PROJECT CONCEPT REPORT

These combined projects are the widening and reconstruction of SR 96 from SR 87 to just north of I-16 for a total of 8.32 miles. State Route 96 is a primary east-west corridor in central Georgia which connects I-75 on the west and I-16 to the east. A portion of SR 96 is included on the Georgia Bike Route "40" corridor from SR 87 to SR 358. From this point, the bike route continues on SR 358 as part of the TransGeorgia route from Columbus to Savannah. The accident rates in the corridor are higher than the statewide averages for similar facilities and the injury rate far exceeds the statewide averages. The 2002 average annual daily traffic (AADT) on SR 96 is 4,175 VPD. The design year (2010) traffic ranges from 5,900 to 10,500 VPD and the projected (2030) traffic volumes on SR 96 range from 9,700 to 17,300 VPD, providing for level of service (LOS) in the "E" to "F" range. The proposed improvements will increase the capacity and LOS on SR 96.

STP-155-1(23) Twiggs

This project proposes to widen SR 96 to four lanes with a 44' wide depressed grassed median from 2580' west of the SR 96/SR 87 intersection to just south of I-16. A raised 24' median section will extend from the on/off ramp termini to 1300'± south of the SR 96/I-16 interchange and approximately 1300' towards the north of the interchange. Bike lanes will be added throughout the length of the project. A frontage road near the south side of SR 96/I-16 interchange and CR 100 located to the north of this interchange will be relocated.

NHS-0007-00(251) Twiggs

This project is the widening of the existing SR 96 bridge over I-16 from two lanes to six lanes with a 12' shoulder, a 4' raised median, 4' bike lanes, 6' sidewalks, and one dedicated turn lane in each direction. The existing bridge will be widened 57' to the right side of the alignment. For staging purposes, the existing bridge can be utilized while the bridge is widened.

Environmental concerns include requiring a COE 404 Permit; an Environmental Assessment will be prepared; a public hearing open house will be held; time saving procedures are not appropriate.

David Studstill

Page 2

P.I. Nos. 322470, 0007251 / Twiggs
March 31, 2005

The estimated costs for these projects are:

STP-155-1(23)

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$23,008,000	\$22,227,000	Q25	LR
Right-of-Way	\$ 5,087,000	\$ 5,087,000	Q25	
Utilities*	\$ 688,000	-----		

*LGPA to be sent

NHS-007-00(251)

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>FUNDING</u>	<u>PROG DATE</u>
Construction (includes E&C and inflation)	\$ 9,100,000	\$ 8,791,000	Q05	LR
Right-of-Way	\$15,000,000	\$15,000,000	Q05	
Utilities*	-0-	-0-		

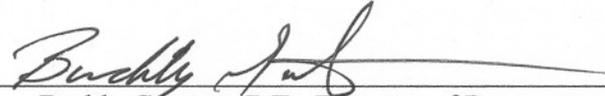
*Full oversight for NHS-0007-00(251)

I recommend this project concept be approved.

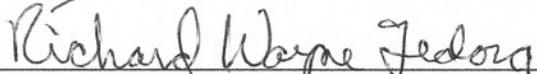
MBP:JDQ/cj

Attachment

CONCUR


Buddy Gratton, P.E., Director of Preconstruction

*APPROVE


for Robert M. Callan, Administrator, FHWA

(SUBJECT TO CHANGES
AGREED TO IN EMAIL STRING)

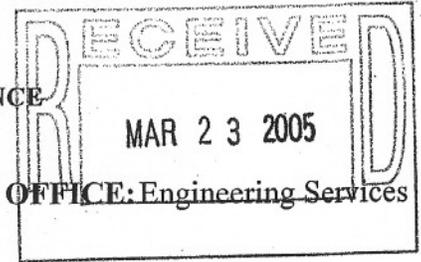
APPROVE


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

*Full oversight for project NHS-007-00(251)

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENTAL CORRESPONDENCE



FILE: STP-155-1(23) & NHS-007-00(251) Twiggs
P.I. Nos. 322470 & 0007251
S.R. 1/U.S. 27 Widening/Reconstruction

DATE: March 21, 2005

FROM: David Mulling, Project Review Engineer *DMW*

TO: Meg Pirkle, Assistant Director of Preconstruction

SUBJECT: CONCEPT REPORT

We have reviewed the Concept Report from Brent Story dated March 1, 2005 and have no comments.

The costs for these projects are:

	<u>STP-155-1(23)</u>	<u>NHS-0007-00(251)</u>
Construction	\$17,429,920	\$6,893,715
Inflation*	\$3,485,984	\$1,378,743
E&C	\$2,091,590	\$827,246
Reimbursable Utilities	\$687,400	\$0.00
Right of Way	\$5,086,500	\$15,000,000

* Used 20%

REW

c: Brent Story, Attn.: Jim Simpson

SCORING RESULTS AS PER MOG 2440-2

Project Number: STP-155-1(23) & NHS-0007-00(251)		County: Twiggs		PI No.: 322470 & 0007251	
Report Date: March 1, 2005		Concept By: DOT Office: Road Design			
<input checked="" type="checkbox"/> Concept Stage		Consultant: N/A			
Project Type: Choose One From Each Column		<input checked="" type="checkbox"/> Major <input type="checkbox"/> Minor	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural	<input type="checkbox"/> ATMS <input type="checkbox"/> Bridge Replacement <input type="checkbox"/> Building <input type="checkbox"/> Interchange Reconstruction <input type="checkbox"/> Intersection Improvement <input type="checkbox"/> Interstate <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Widening & Reconstruction <input type="checkbox"/> Miscellaneous	
FOCUS AREAS	SCORE	RESULTS			
Presentation	100				
Judgement	100				
Environmental	100				
Right of Way	100				
Utility	100				
Constructability	100				
Schedule	100				

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE



FILE: STP-155-1(23), NHS-0007-00(251) Twiggs County
P.I. # 322470, 0007251

FROM: *Brent A. Story*
Brent A. Story, P.E., State Road and Airport Design Engineer

TO: Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

SUBJECT Project Concept Report

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

BAS:JSS:JMB:ss

Attachments

- cc: David Mulling, w/att.
- Harvey Keepler, w/att.
- Keith Golden, w/att.
- Joe Palladi, w/att.
- Jamie Simpson, w/att.
- Thomas Howell, w/att.
- Paul Liles, w/att.

*Full oversight
for BRIDGE
over T-116*



**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-155-1(23), NHS-0007-00(251)

County: TWIGGS

P. I. Number: 322470, 0007251

Federal Route Number: None

State Route Number: 96

Recommendation for approval:

DATE March 1, 2005

DATE March 1, 2005

James S. Simpson Jr.

Project Manager

Robert H. Hays

Office Head/District 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 _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety and Design Engineer

DATE _____

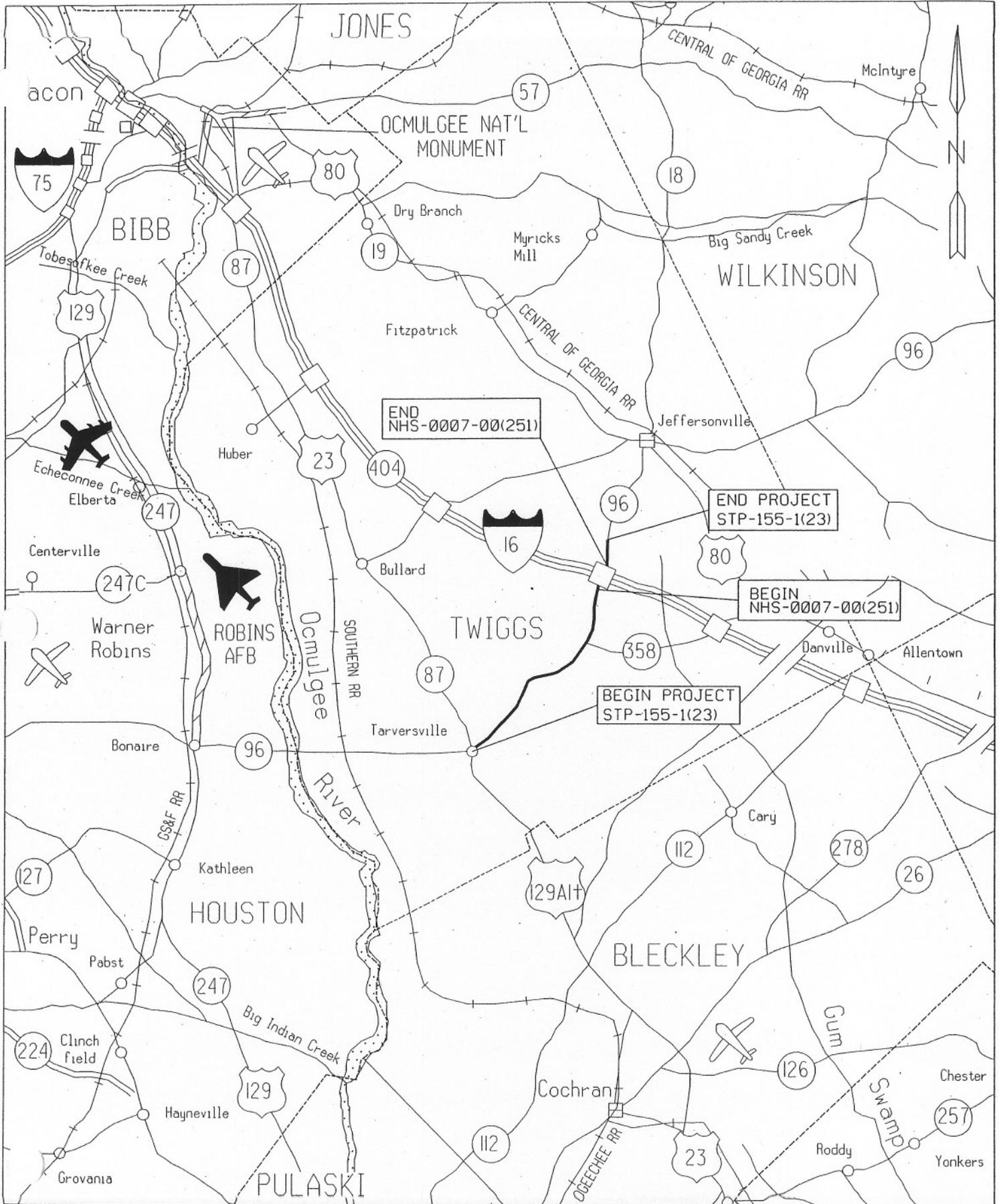
District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge / Structural Design Engineer.



LOCATION MAP

Need and Purpose: see attachment

Project Description: This project is one of several projects that have been programmed to widen the S.R. 96 corridor from the existing two lanes to the proposed four lanes, from I-75 to I-16, in Peach, Houston, and Twiggs Counties. This project in Twiggs County, begins at the S.R. 96 / S.R. 87 intersection at Mile Marker 5.7 and proceeds northeasterly, ending at Mile Marker 14.02, just north of the S.R. 96 / I-16 interchange. During the Concept stage, an exception has been programmed and will be included into this concept report, which will be the SR 96 / I-16 Interchange reconstruction project. The overall length of this project, including the interchange project, is 8.32 miles.

Project STP-155-1(23), PI number 322470, Twiggs County is the widening of the existing two lane road, S.R. 96, to four lanes with a forty-four foot wide depressed median. The project is proposed to begin widening at the S.R. 96 / S.R. 87 intersection; a typical lane transition from 2 to 4 lanes will begin approximately 2580 feet west of the S.R. 96 / S.R. 87 intersection. The typical right of way that has been set is 250 feet. This project is located on Georgia Bike Route 40, from SR 87 to SR 358, which requires a 4 foot 2 inch bike shoulder to be added to the typical section. During concept development it was decided that the bike shoulder will continue along SR 96 throughout the length of the project. A frontage road near the south side of S.R. 96 / I-16 Interchange and C.R.100 located to the north of the S.R. 96 / I-16 Interchange will be relocated. CR 100 from S.R. 96 will be relocated south of the electrical transmission line, and will run parallel to it for approximately 300 feet to a horizontal curve, and then run 1200 feet to intersect with the existing CR 100 which connects to Missile Base road. A raised twenty four foot median will extend from the on/off ramp termini to approximately 1300 feet towards the south of the SR 96 / I-16 interchange and approximately 1300 feet towards the north of the interchange.

The existing S.R. 96 / S.R. 87 intersection is an all-way-stop-controlled intersection and the existing S.R. 96 / S.R. 358 intersection is a one-way-stop-controlled intersection; if the existing conditions are maintained the S.R. 96 / S.R. 87 intersection will operate at a LOS E, and the S.R. 96 / S.R. 358 intersection will operate at a LOS D for the design year traffic. Because of the high traffic numbers at these intersections, the heavy truck traffic, and the accident history, a signal warrant analysis should be conducted. The Office of Road Design will request the analysis through District 3. Furthermore, the Office of Traffic Safety and Design recommended that an additional left turn lane from Northbound S.R. 87 to Westbound S.R. 96 be included in the S.R. 96 / S.R. 87 intersection design.

The exception for this project is, project number NHS-0007-00(251) PI number 0007251, which is the widening of the existing SR 96 bridge over I-16 from two lanes to six lanes with a 12 foot shoulder, a 4 foot raised median, and one dedicated turn lane in each direction. The existing bridge that crosses over I-16 is a two lane, 50 foot width, with a normal crown and is in good condition with a bridge sufficiency rating of 92.09. The existing bridge will be widened 57 feet to the right side of the alignment; See the S.R. 96 Proposed Bridge Typical. The reason the bridge is being widened to one side only, is to avoid impacting the utility sub-station along the west side of the alignment. Sidewalks and the bike lane will be added and carried over the bridge. The proposed bridge length will be approximately 290 feet. The Crown Point will need to be shifted an approximate 28 feet from the existing location to the proposed location and part of the existing deck will need to be removed and reconstructed for the new cross slope. For staging purposes, the existing bridge can be utilized while the bridge is widened. Once the widening is complete the mainline traffic can be shifted to the

widened part of the bridge and the existing bridge can be reconstructed. The on/off ramps for I-16 will be upgraded for the widening of SR 96; each on-ramp to I-16 will have an additional 16 foot lane; if the bridge length is extended then the ramps will need to be relocated.

Access rights along SR 96 are proposed to be acquired north and south of the interchange and will extend for 1000 feet in each direction. There are two existing passing lane sites on this project beginning at mile marker 7.94 and ending at mile marker 9.53, on the eastbound and on the westbound, beginning at mile marker 10.57 and ending at mile marker 11.92. Where it is possible the existing pavement from these lanes will be utilized.

A Value Engineering Study was October 12-14, 2004. All of the approved recommendations have been implemented into this concept report, and the implementation of value engineering study alternatives report has been added as an attachment.

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

PDP Classification: Major

Federal Oversight: Full Oversight (X), Exempt(X), State Funded (), or other ()
(for NHS-0007-00(251) (for STP-155-1(23))

Functional Classification: S.R. 96 is classified as a RURAL MINOR ARTERIAL from SR 87 to SR 358, and is classified as a RURAL MAJOR COLLECTOR from SR 358 to I-16.

U. S. Route Number(s): None **State Route Number(s):** 96

Traffic (AADT): Current Year: 5900 (2010) Design Year: 9700 (2030)

Existing design features: The Existing S.R. 96 roadway is a two-lane rural highway.

- Typical Section: The typical section of S.R. 96 has two-lanes; the graded shoulders vary from 4' to 10', with an open drainage system throughout the project limits.
- Posted speed: The posted speed limit is 55 mph throughout the project limits.
- Maximum degree of curvature: The maximum degree of curvature occurs near mile-marker 8.82 to 8.95, at the east bound passing site. The horizontal curve data gathered from the passing site project plans, STP-155-1(16) P.I. No. 321990, show the degree of curvature to be 5 ° 00'.
- Maximum grade: The maximum grade has not been determined, but based upon a review of old plans and field observations; it appears to be 3 to 4%.
- Width of right of way: The existing Right-of-way is a constant 100 feet for the corridor, except at mile-marker 12.80 to 13.24 the Right-of-way is 120 ft.
- Drainage Structures: The existing drainage system within the project limits consists of open drainage ditches outside the roadway shoulder. An existing double 9 x 5 box culvert has been identified at mile marker 12.2.

- Major structures: SR 96 / I-16 Bridge, Sufficiency rating = 92.09.
- Major interchanges or intersections along the project: US 23/ SR 87, SR 358, I-16/ SR 404.
- Existing length of roadway segment and the beginning mile logs for each county segment:
 Twiggs county 8.32 Miles; mile log 5.7 – 14.02.

Proposed Design Features:

- Proposed typical section(s):
 - 4-12 ft Lanes
 - 44 ft Rural Depressed Median, 24 ft Rural Raised Median, and 4 ft Rural Raised Median with one dedicated turn lane in each direction at interchange.
 - 6.5 ft Paved Shoulder
 - 30 ft Clear Zone
- Proposed Design Speed Mainline: 65 mph, 45 mph at interchange.
- Proposed Maximum grade Mainline 4 % Maximum grade allowable 4 %.
- Proposed Maximum grade Side Street N/A Maximum grade allowable 4 %.
- Proposed Maximum grade driveway N/A
- Proposed Maximum degree of curve 2° 00' Maximum degree allowable 3° 30'.
- Proposed Maximum Superelevation 8.0 %
- Right of way
 - Width 250' estimated
 - Easements: Temporary (), Permanent (), Utility (), Other ().
 - Type of access control: Full (), Partial (), By Permit (X), other ().
 - Number of parcels: 102 Number of displacements:
 - Business: 5
 - Residences: 8
 - Mobile homes: _____
 - Other: _____
- Structures: SR 96 / I-16 Bridge.
- Major intersections and interchanges: US 23/ SR 87, SR 358, I-16/ SR 404
- Traffic control during construction: Traffic to be maintained on existing roadways during construction.
- Design Exceptions to controlling criteria anticipated: none anticipated

	<u>UNDETERMINED</u>	<u>YES</u>	<u>NO</u>
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)

6 Project Concept Report page
Project Number: STP-155-1(23)
P. I. Number: 322470
County: TWIGGS

- Categorical exclusion (),
- Environmental Assessment/Finding of No Significant Impact (FONSI) (X), or Environmental Impact Statement (EIS) ().

Utility involvements: (*Alltel, Oconee EMC, Georgia Power (Transmission), Georgia Transmission, Bell South, Georgia Power (Distribution), Municipal Electric Authority of GA, and WilTel.*)

Project responsibilities:

- Design, GDOT- Office of Road and Airport Design
- Right of Way Acquisition, - GDOT
- Relocation of Utilities, -to be determined
- Letting to contract, GDOT
- Supervision of construction, -GDOT
- Providing material pits, -contractor
- Providing detours, -to be determined

Coordination

- Initial Concept Meeting: November 12, 2003, 10:00 am, Office of Road and Airport Design, Conference Room.
- Concept Team Meeting: July 29, 2004, Office of Road and Airport Design Conference Room.
- P. A. R. meetings, dates and results: To be coordinated during project development.
- FEMA, USCG, and/or TVA: To be coordinated during project development.
- Public involvement: None to date.
- Local government comments: See concept team meeting minutes
- Other projects in the area: STP-0000-00(813) PI No. 0000813, STP-155-1(22) PI No. 322460
- Railroads: None.
- Other coordination to date: None.

Scheduling – Responsible Parties' Estimate

- Time to complete the environmental process: 12 Months.
- Time to complete preliminary construction plans: 12 Months.
- Time to complete right of way plans: 6 Months.
- Time to complete the Section 404 Permit: 12 Months.
- Time to complete final construction plans: 8 Months.
- Time to complete to purchase right of way: 18-24 Months.

Other alternates considered:

Comments:

7 Project Concept Report page
Project Number: STP-155-1(23)
P. I. Number: 322470
County: TWIGGS

Attachments:

1. Need and Purpose Statement
2. Cost Estimates:
 - a. Construction including E&C
 - b. Right of Way
 - c. Utilities.
3. Typical sections
4. Accident summaries
5. Capacity analysis
6. Bridge inventory
7. Minutes of Initial Concept and Concept meetings
8. Value Engineering Study Implementation Report

Need and Purpose
STP-155-1(23), Twiggs County
PI NO. 322470
SR 96

Background

SR-96, is classified as a rural minor arterial from SR 87 to SR 358 and from SR 358 to I-16 it is classified as a rural major collector. SR 96 is a primary east-west corridor in central Georgia which connects to I-75 on the west and I-16 to the east. The proposed project involves the widening and reconstruction of SR-96 from SR-87 to I-16 for a total of 8.32 miles. SR 96 is one of three state routes, two federal routes and one interstate principal arterial which traverse through Twiggs County. State Route 96 is a school bus route. A portion of SR 96 is included on the Georgia Bike Route 40 corridor from SR 87 to SR 358. From this point, the bike route continues on SR 358 as part of the TransGeorgia route from Columbus to Savannah. The proposed construction will provide four 12-foot lanes divided by a 44-foot median for the entire project length. Project STP-155-1(23) will increase the capacity and *Level-of-Service* (LOS) on SR-96.

Existing, Design Year and Future Traffic

The 2002 Average Annual Daily Traffic (AADT) on SR-96 is 4,175 vehicles per day. The design year (2010) traffic ranges from 5,900 to 10,500 vehicles per day and the projected (2030) traffic volumes on SR 96 range from 9,700 AADT to 17,300 AADT, providing for *Level of Service* (LOS) in the "E" to "F" range. Growth in this area is likely to continue, possibly at an even quicker rate than in the past. The increasing traffic volumes, the large percentage of trucks (15%) and lack of passing opportunities will eventually cause the roadway to reach unacceptable levels of service.

SR 96 AADT			
Year	LOS A-B	LOS C-D	LOS E-F
2002	4,175		
2010		5,900	10,500
2030			9,700 – 17,300

Accident Data/Safety

Although the project corridor has two passing lanes, one in each direction, the accident rates in the corridor are higher than the statewide averages for similar facilities and the injury rate far exceeds the statewide averages. The improvement to the existing facility should help to reduce the accidents along the project corridor by correcting substandard vertical and horizontal alignments to current state route standards. The accidents along the project corridor consists of rear-end, sideswipes, and angle intersecting collisions which are caused by turning movements to and from SR 96.

The following table summarizes the corridor's accident statistics:

	2000		2001		2002	
	SR96 from SR 87 to I-16	State ¹	SR96 from SR 87 to I-16	State ¹	SR96 from SR 87 to I-16	State ¹
Total accidents	17		15		15	
Accident rate ²	217	182	170	186	137	188
Injuries	14		14		14	
Injury rate	179	58	159	60	128	62
Fatalities	2		0		0	
Fatality rate	25.51	2.06	0.00	2.09	0.00	2.09

Logical Termini

The project termini are logical in that the project is between two arterial routes. The project begins at SR 87/US 129Alt/US 23 which is an upgraded rural minor arterial with left and right turning bays. The project terminus at .82 miles north of I-16, where there is a significant drop in traffic at the interstate principal arterial.

Other projects in area

Project Numbers	Description	Programming
STP-0000-00(813), P.I.# 0000813	SR 87/US 23 from SR 96, Twiggs Co to I-16 in Bibb County. - 16.72 mile widening	PE - 2005 ROW - 2008 CST - LR
STP-155-1(22), P.I.#322460	SR 96 from CR 540/Old Hawkinsville Rd. in Houston Co. to SR 87/US 23 in Twiggs Co. - 7.84 mile widening	P.E. - 1994 ROW - LR CST - LR

Need and Purpose

The need and purpose of the proposed project is to satisfactorily accommodate the existing and future traffic demands and to correct the operational deficiencies which currently exist within the project corridor. Additional benefits will include a safer driving environment and better travel conditions for motorists along SR 96.

¹ Statewide rates for similar facilities (Rural Minor Arterial)

² Accident rates per 100 Million Vehicle Miles Traveled

SR 96 Concept Cost Estimate
Office of Road and Airport Design- General Office

February 25, 2005
Prepared by John M. Baxter, DE II

PROJECT INFORMATION

<u>PI Number</u>	322470	<u>Project Number</u>	STP-155-1(23)
<u>County</u>	Twiggs	<u>Project Length</u>	7.5 miles
<u>Existing Roadway:</u>	2 Lanes, with 2 passing lanes		
<u>Proposed Roadway:</u>	4 Lanes, with a forty four foot Depressed Median, and a bike shoulder		
<u>Traffic</u>			
<u>Current Design Year 2010</u>		Daily Volume (ADT)	5900
<u>Future Design Year 2030</u>		Daily Volume (ADT)	9700

COST ESTIMATE

RIGHT OF WAY		\$5,086,500
UTILITIES		\$0
CONSTRUCTION		
Major Structures	\$77,617	
Base and Paving	\$7,776,645	
Grading and Drainage	\$4,603,808	
Lump Items	\$4,703,204	
Miscellaneous	\$268,647	
Sub Total Construction	\$17,429,920	
Inflation, 5 Years at 3%	\$2,776,134	
E and C Costs, 10%	\$2,020,605	
Total Construction		\$22,226,659

Total	\$27,313,159
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Major Structures	Number	Description	Quantity	Unit Cost	Total
Culverts	1	Foundation Backfill type II	56 yd ³	\$36.75	\$2,062
		Class A concrete	140 yd ³	\$385.84	\$54,201
		Reinf. Steel	9596 Lbs	\$0.52	\$4,990
		Wing Wall Parapetes	class A conc. 40 yd ³	\$385.84	\$15,534
		Rein Steel	1596 Lbs	\$0.52	\$830
				Total =	\$77,617

Base and Paving		Length (Ft)	Width (Ft)	Depth (Ft)	Density (Lbs/Ft ³)	Quantity (Tons)	Unit Cost	Total
Graded Aggregate Base	Roadway	40920	48	1	135	132581	\$16.10	\$2,134,551
	Shoulders	40920	17	0.5	135	23478	\$16.10	\$377,993
						Quantity (yd ²)		
Mill Asph Conc. Pvmnt, 2"		40920	12	0	0	54560	\$0.75	\$40,920
						Spread Rate		
Asphalt	12.5 MM SP	40920	65	165	lbs/yd ²	24382	\$48.87	\$1,191,524
	19 MM SP	40920	41	440	lbs/yd ²	41011	\$38.08	\$1,561,696
	25 MM SP	40920	28	550	lbs/yd ²	35009	\$42.99	\$1,505,051
Other Paving	Leveling	39600	12	220	lbs/yd ²	5808	\$36.31	\$210,888
		39600	12	85	lbs/yd ²	2244	\$36.31	\$81,480
						Quantity (GL's)		
Bitum Tack Coat		40920	65	0.3	gl/yd ²	265980	\$0.87	\$231,403
Concrete Paving	Curb and Gutter	1660	0			1660	\$11.40	\$18,924
	Median	2240	20			4978	\$30.63	\$152,469
	Miscellaneous	7.5 Mi	0			0	\$35,966	\$269,745
							Total =	\$7,776,645

Grading and Drainage		Quantity	Unit Cost	Total	
Earthwork					
	Unclassified Excavation Soil	1720792	YD ³	\$2.21	\$3,802,950
	Unclassified Excavation Rock	0	YD ³	\$0.00	\$0
	Borrow	0	YD ³	\$0.00	\$0
Minor Drainage		7.5	MI	\$106,781.00	\$800,858
				Total =	\$4,603,808

Lump Items	Quantity		Unit Cost	Total
Traffic Control	7.5	MI	\$88,000.00	\$660,000
Clearing and Grubbing	227	AC	\$6,000.00	\$1,363,620
Erosion Control	7.5	MI	\$161,851.00	\$1,213,883
Landscaping	7.5	MI	\$50,000.00	\$375,000
Detours	3	MI	\$363,567.00	\$1,090,701
			Total =	\$4,703,204

Miscellaneous Project Items	Quantity		Unit Cost	Total
Guardrail	3960	LF	\$9.09	\$35,996
Guardrail Anchors	10	EA	\$401.57	\$4,016
Signing and Marking	7.5	MI	\$23,418.00	\$175,635
Lighting Systems	0	EA	\$350,000.00	\$0
Signals	0	EA	\$60,000.00	\$0
Field Engineers Office, Type 3	1	EA	\$53,000.00	\$53,000
			Total =	\$268,647

Major Structures	Number	Description	Quantity		Unit Cost	Total
Bridges	1	widening of existing bridge (56' x 290')	16207.52	ft ²	\$65.00	\$1,053,489
		jacking of existing bridge (50' x 290')	14471.00	ft ²	\$20.00	\$289,420
Walls	0					\$0
Culverts	0					\$0
						\$0
						\$0
						\$0
Bridge Culverts	0					\$0
Total =						\$1,342,909

Base and Paving		Length (Ft)	Width (Ft)	Depth (Ft)	Density (Lbs/Ft ³)	Quantity (Tons)	Unit Cost	Total
Graded Aggregate Base	Mainline	7474.8	60	1	135	30273	\$12.49	\$378,107
	Side Road	7474.8	24	1	135	12109	\$12.49	\$151,243
						Quantity (yd ²)		
Mill Asph Conc. Pvmnt, 2"		7474.8	24	0	0	19932.71	\$0.96	\$19,135
						Spread Rate		
Asphalt	12.5 MM SP	7474.8	104	165	lbs/yd ²	7125.94	\$49.99	\$356,226
	19 MM SP	7474.8	88	440	lbs/yd ²	16079.05	\$43.22	\$694,937
	25 MM SP	7474.8	88	550	lbs/yd ²	20098.82	\$35.36	\$710,694
Other Paving	Leveling	7474.8	12	220	lbs/yd ²	1096.30	\$36.31	\$39,807
		7474.8	12	85	lbs/yd ²	423.57	\$36.31	\$15,380
						Quantity (GL's)		
Bitum Tack Coat		7474.8	88	0.3	gl/yd ²	65777.95	\$0.87	\$57,227
Concrete Paving	Ramps	3000	16			5333.333	\$59.50	\$317,333
	Curb and Gutter	1000.0					\$11.40	\$11,400
	Median	7474.8	28			23254.83	\$30.63	\$712,295
	Miscellaneous	2.2	Mi				\$35,966	\$79,125
						Total =		\$3,542,910

Grading and Drainage		Quantity		Unit Cost	Total
Earthwork					
	Unclassified Excavation Soil	5000.00	YD ³	\$3.07	\$15,350
	Unclassified Excavation Rock	0.00	YD ³	\$0.00	\$0
	Borrow	3710.00	YD ³	\$5.29	\$19,626
Minor Drainage		2.20	MI	\$120,000.00	\$264,000
				Total =	\$298,976

Lump Items	Quantity		Unit Cost	Total
Traffic Control	2.2	MI	\$88,000.00	\$193,600
Clearing and Grubbing	75	AC	\$6,000.00	\$450,000
Erosion Control	2.2	MI	\$161,851.00	\$356,072
Landscaping	2.2	MI	\$50,000.00	\$110,000
Detours	0.5	MI	\$363,567.00	\$181,784
			Total =	\$1,291,456

Miscellaneous Project Items	Quantity		Unit Cost	Total
Guardrail	1000	LF	\$9.09	\$9,090.00
Anchorage, type 12	5	EA	\$1,371.05	\$6,855.25
Signing and Marking	2.2	MI	\$23,418.00	\$51,519.60
Lighting Systems	1	EA	\$350,000.00	\$350,000.00
Signals	0	EA	\$60,000.00	\$0.00
Field Engineers Office, Type 3	0	EA	\$53,000.00	\$0.00
			Total=	\$417,464.85

COST ESTIMATE SR 96

RIGHT OF WAY		\$5,086,500
UTILITIES		\$823,776
CONSTRUCTION		
Major Structures	\$77,617	
Base and Paving	\$7,776,645	
Grading and Drainage	\$4,603,808	
Lump Items	\$4,703,204	
Miscellaneous	\$268,647	
Sub Total Construction	\$17,429,920	
Inflation, 5 Years at 3%	\$2,776,134	
E and C Costs, 10%	\$2,020,605	
Total Construction		\$22,226,659

Total		\$28,136,935
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COST ESTIMATE SR96 / I-16 INTERCHANGE RECONSTRUCTION

RIGHT OF WAY		\$15,000,000
UTILITIES		\$0
CONSTRUCTION		
Major Structures	\$1,342,909	
Base and Paving	\$3,542,910	
Grading and Drainage	\$298,976	
Lump Items	\$1,291,456	
Miscellaneous	\$417,465	
Sub Total Construction	\$6,893,715	
Inflation, 5 Years at 3%	\$1,097,990	
E and C Costs, 10%	\$799,171	
Total Construction		\$8,790,876

Total		\$23,790,876
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OVERALL TOTAL FOR BOTH PROJECTS		\$51,927,811
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DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: Project # STP-155-1(23), Twiggs County, P.I. #322470 **DATE:** November 17, 2004

FROM: Thomas B. Howell, P.E., District Engineer **OFFICE:** Thomaston

TO: Gerald Ross, State Road & Airport Design Engineer
attn: John M. Baxter

SUBJECT: UTILITY COST ESTIMATE

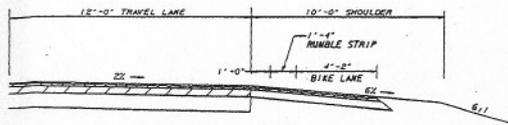
As you requested, the following is a ballpark utility cost estimate for facilities located within the scope of the above referenced project:

UTILITY OWNER	PRIVATE OR PUBLIC	TYPE OF UTILITY	REIMBURSABLE COSTS	NON-REIMBURSABLE COSTS
Alltel	Private	Telecom	125,000	136,376
Oconee EMC	Private	Electric	242,300	0
Georgia Power (Transmission)	Private	Electric	150,000	0
Georgia Transmission	Private	Electric	170,100	0
BellSouth			NO FACILITIES	
Georgia Power (Distribution)			NO FACILITIES	
Municipal Electric Authority of GA			NO FACILITIES	
WilTel			NO FACILITIES	
TOTAL			\$687,400	\$136,376

KG:GAW:pls

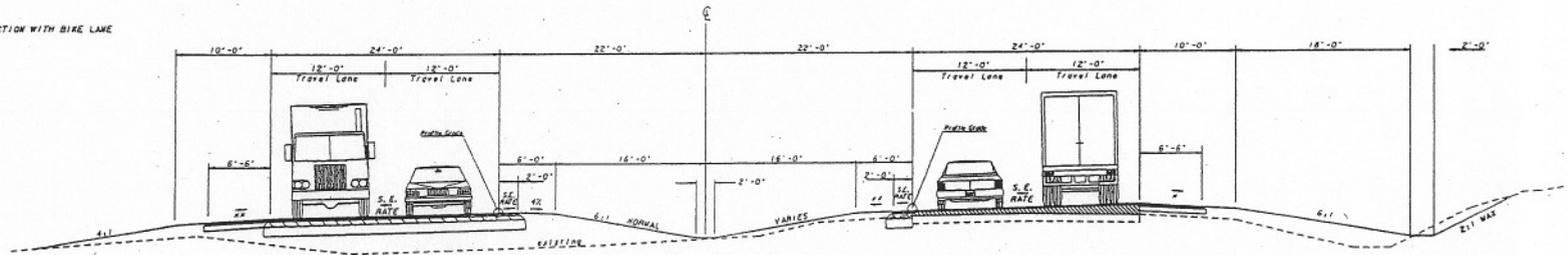
cc: Elaine Jackson, Secretary to Jeff Baker, P.E., State Utilities Engineer (via: e-mail)
Brent D'Angelo, P.E., Asst. State Utilities Engineer (via: e-mail)
Terry Brigman, State Utilities Preconstruction Engineer (via: e-mail)
Joe Palladi, State Transportation Planning Administrator

STATE	PROJECT NUMBER	SHEET TOTAL
GA.	STP-155-1(23)	N.O. SHEET



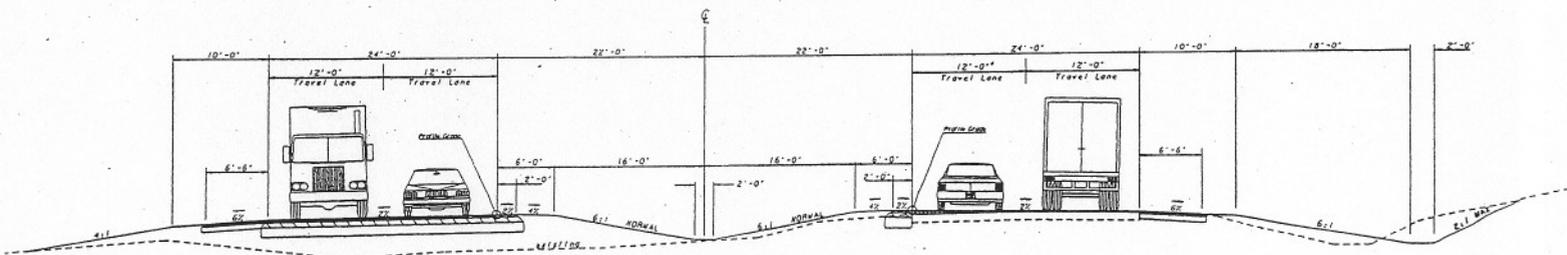
CONCEPT TYPICAL
SR-96

RURAL TANGENT SECTION WITH BIKE LANE



Widen to One Side
4 Lanes With a 44' Median
(D.S. 65mph)
SUPERELEVATED

- X SHOULDER TO SLOPE AT NORMAL RATE, HOWEVER, THE ALGEBRAIC DIFFERENCE IN PAVING SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.2% MINIMUM SHOULDER SLOPE TO BE 0.2%.
- XX SHOULDER TO SLOPE AT NORMAL RATE OR SUPERELEVATION RATE, WHICHEVER IS GREATER.



Widen to One Side
4 Lanes With a 44' Median
(D.S. 65mph)
NORMAL CROWN

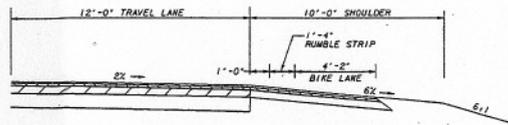
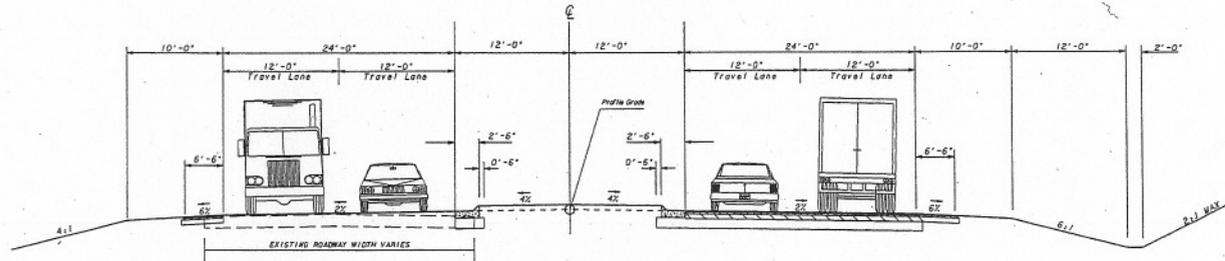
DATE	REVISIONS	DATE	REVISIONS

GEORGIA
DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION
PROJECT STP-155-1(23)
COUNTY TWIGGS
DATE 1/23/04 SH 1 OF

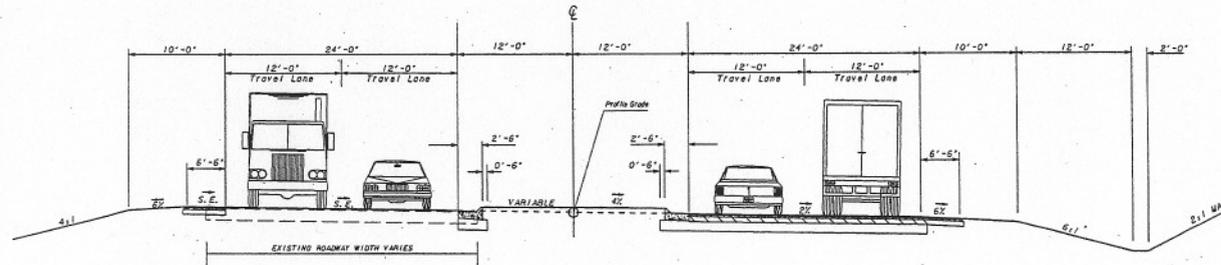
000#SPECIFICATION#
SHOWDATE/ME#

STATE	PROJECT NUMBER	SHEET TOTAL NO. SHEETS
GA.		

CONCEPT TYPICAL
SR-96 24 FT RAISED MEDIAN



RURAL TANGENT SECTION WITH BIKE LANE



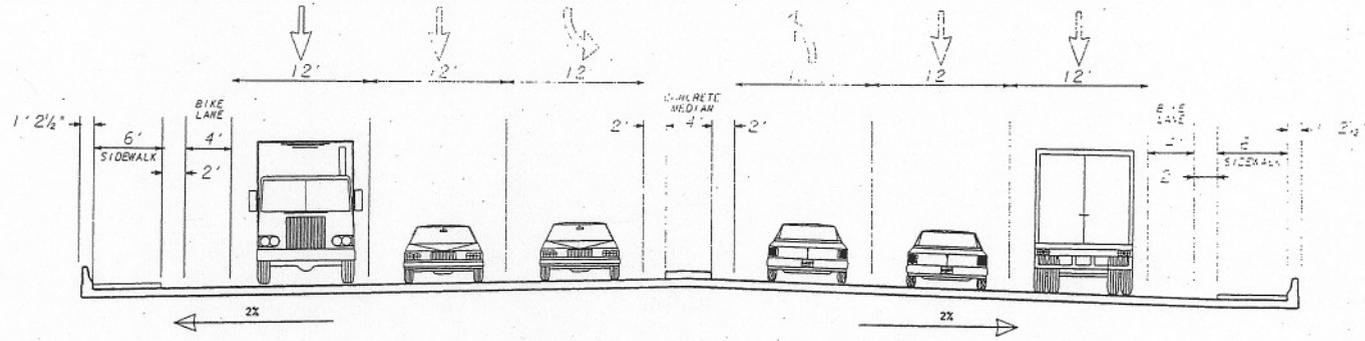
DATE	REVISIONS	DATE	REVISIONS

GEORGIA
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLAN

DGN#SPECIFICATION#*****
SHOWDATE#*****

STATE	PROJECT NUMBER	SHEET NO.	TOT. SHEETS
GA.			

S.R. 96 BRIDGE TYPICAL



TYPICAL SECTION
 PROPOSED BRIDGE
 NOT TO SCALE

DATE	REVISIONS	DATE	REVISIONS

GEORGIA
 DEPARTMENT OF TRANSPORTATION
 CONSTRUCTION PLAN

DGN#SPECIFICATION*****
 SHOWDATE TIME*****

Vehicle Analysis																					
Accident No	Date	Time	County	Route Type	Route	Mileage	Intersecting Rt Type	Intersecting Rt	Ramp Section	Injuries	Fatalities	Collision	Location of Impact	Harmful Event	Light	Surface	DirVeh1	DirVeh2	MvvrVeh1	MvvrVeh2	
90470233	1/7/1999	3:48 AM	Twigg	State Route	008700	3.64	1	9600		0	0	Not A Collision With A Motor Vehicle	On Roadway	Other Fixed Object	Daylight	Dry	E			5	
90470232	1/7/1999	4:05 AM	Twigg	State Route	008700	3.64	1	9600		0	0	Sideways - Same Direction	On Roadway	Motor Vehicle in Motion	Daylight	Dry	E	E	1	9	
90270350	1/15/1999	2:25 AM	Twigg	State Route	008700	3.64	1	9600		1	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	N	N	5	4	
90840485	4/7/1999	5:45 PM	Twigg	State Route	008700	3.64	1	9600		0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	E			2	2
90270177	3/21/1999	2:05 PM	Twigg	State Route	009600	8.76	2	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Overturn	Daylight	Dry	E			10	5
92740269	7/24/1999	1:41 PM	Twigg	State Route	009600	9.06	0	0		0	0	Not A Collision With A Motor Vehicle	On Shoulder	Tree	Daylight	Dry	E			5	
92410444	6/7/1999	9:00 PM	Twigg	State Route	009600	9.06	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	E			5	
92170378	9/23/1999	7:07 PM	Twigg	State Route	009600	9.42	0	0		0	0	Not A Collision With A Motor Vehicle	On Shoulder	Overturn	Daylight	Dry	W			5	
91170130	8/14/1999	12:30 PM	Twigg	State Route	009600	10.4	1	0		0	0	Not A Collision With A Motor Vehicle	Off Roadway	Ditch	Daylight	Dry	E			9	
93140434	1/29/1999	1:53 AM	Twigg	State Route	009600	10.65	0	0		0	0	Not A Collision With A Motor Vehicle	On Shoulder	Embankment	Dark-Not Lighted	Dry	N			5	
90602529	2/19/1999	8:10 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Not A Collision With A Motor Vehicle	On Shoulder	Ditch	Dark-Not Lighted	Dry	W	E	1	5	
90190583	6/22/1999	10:14 AM	Twigg	State Route	009600	10.92	1	35800		0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	E	W	7	5	
90940882	4/21/1999	7:33 AM	Twigg	State Route	009600	13.07	0	0		1	0	Rear End	On Roadway	Motor Vehicle in Motion	Dusk	Wet	W	W	5	5	
91520431	5/8/1999	1:30 AM	Twigg	State Route	009600	13.2	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	E			5	
91850795	12/5/1999	5:00 AM	Twigg	State Route	009600	13.22	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	W			5	
00230258	1/10/2000	2:15 PM	Twigg	State Route	008700	3.64	1	9600		0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	N	N	1	1	
00230259	3/30/2000	9:30 AM	Twigg	State Route	008700	3.64	0	0		0	0	Not A Collision With A Motor Vehicle	Off Roadway	Tree	Daylight	Wet	N			5	
02380370	9/16/2000	11:09 PM	Twigg	State Route	008700	3.64	1	9600		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	S			5	
02210186	7/3/2000	9:30 AM	Twigg	State Route	008700	3.64	1	9600		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dusk	Wet	S			5	
02210188	7/7/2000	8:27 PM	Twigg	State Route	009600	6.65	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dusk	Wet	W			5	
03180129	11/26/2000	10:35 PM	Twigg	State Route	009600	7.25	1	1		1	1	Not A Collision With A Motor Vehicle	Off Roadway	Ditch	Dark-Not Lighted	Dry	W			10	
02450448	9/22/2000	1:13 PM	Twigg	State Route	009600	7.48	4	1		4	1	Head On	On Roadway	Motor Vehicle in Motion	Daylight	Wet	E	W	10	10	
01940552	6/8/2000	8:25 PM	Twigg	State Route	009600	9.4	2	20200		0	0	Not A Collision With A Motor Vehicle	On Roadway	Jackknife	Dark-Not Lighted	Dry	E			5	
03520437	12/17/2000	11:27 PM	Twigg	State Route	009600	9.41	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	S			5	
02230264	1/18/2000	8:50 PM	Twigg	State Route	009600	9.42	0	0		0	0	Not A Collision With A Motor Vehicle	Off Roadway	Overturn	Dark-Lighted	Wet	W			10	
02350487	3/9/2000	8:28 PM	Twigg	State Route	009600	9.92	0	0		0	0	Sideways - Opposite Direction	On Roadway	Motor Vehicle in Motion	Dusk	Dry	N	E	5	10	
02210205	7/31/2000	6:07 AM	Twigg	State Route	009600	10.92	1	35800		2	0	Angle	On Roadway	Motor Vehicle in Motion	Dark-Not Lighted	Dry	N	E	1	5	
00680446	5/9/2000	5:12 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	W			5	
03350428	10/27/2000	12:15 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	E	N	2	1	
03520435	12/16/2000	4:15 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	W			5	1
02980368	9/5/2000	9:15 AM	Twigg	State Route	009600	10.92	1	35800		0	0	Not A Collision With A Motor Vehicle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	E	W	5	1	
02880677	10/25/2000	11:00 AM	Twigg	State Route	009600	10.92	1	35800		2	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	E	W	5	1	
00680441	2/26/2000	1:11 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Dry	N			5	5
03080013	11/22/2000	12:00 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	W	E	1	5	
02420105	1/12/2000	10:55 PM	Twigg	State Route	009600	11.92	0	0		0	0	Sideways - Opposite Direction	On Roadway	Motor Vehicle in Motion	Dark-Not Lighted	Dry	E	W	5	5	
02320265	1/18/2000	9:24 PM	Twigg	State Route	009600	13.06	0	0		0	0	Angle	On Roadway	Motor Vehicle in Motion	Dark-Not Lighted	Dry	E	E	1	5	
00230272	1/29/2000	7:05 AM	Twigg	State Route	009600	13.2	0	0		0	0	Not A Collision With A Motor Vehicle	Median	Guardrail Face	Daylight	Ice	W			5	
03520419	12/9/2000	1:00 PM	Twigg	State Route	009600	13.2	0	0		0	0	Not A Collision With A Motor Vehicle	On Shoulder	Guardrail Face	Daylight	Wet	W			5	
00680400	11/17/2000	7:31 PM	Twigg	State Route	009600	13.38	2	20000		0	0	Angle	On Roadway	Motor Vehicle in Motion	Dark-Lighted	Dry	W	N	5	5	
01061048	11/20/2000	6:30 PM	Twigg	State Route	009600	13.39	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	W			5	
01190205	3/31/2000	7:22 AM	Twigg	State Route	009600	13.7	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Daylight	Dry	E			5	
02202625	1/31/2001	5:15 AM	Twigg	State Route	008700	3.64	1	9600		1	0	Not A Collision With A Motor Vehicle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	N	S	5	5	
02250482	7/14/2001	3:00 AM	Twigg	State Route	008700	3.64	1	9600		0	0	Not A Collision With A Motor Vehicle	On Roadway	Other Object (Not Fixed)	Daylight	Dry	E			5	
02250524	1/21/2001	5:56 PM	Twigg	State Route	008700	3.64	1	9600		0	0	Angle	On Roadway	Motor Vehicle in Motion	Dark-Lighted	Dry	S	E	5	5	
01167074	4/13/2001	9:38 PM	Twigg	State Route	008700	3.66	0	0		0	0	Not A Collision With A Motor Vehicle	Off Roadway	Overturn	Daylight	Wet	N			5	
01140984	6/3/2001	10:37 PM	Twigg	State Route	008700	4.24	2	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Tree	Dark-Not Lighted	Wet	N			10	
04240127	6/3/2001	10:37 PM	Twigg	State Route	008700	4.24	2	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Tree	Dark-Not Lighted	Wet	N			10	
0030212	3/20/2001	6:08 AM	Twigg	State Route	009600	6.65	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Tree	Dark-Not Lighted	Wet	W			5	
01830161	5/28/2001	8:45 AM	Twigg	State Route	009600	9.92	1	0		1	0	Not A Collision With A Motor Vehicle	Off Roadway	Tree	Daylight	Dry	E			5	
03390161	11/22/2001	1:30 PM	Twigg	State Route	009600	10.67	1	0		1	0	Not A Collision With A Motor Vehicle	Off Roadway	Ditch	Daylight	Dry	E			5	
04070560	2/3/2001	11:26 PM	Twigg	State Route	009600	10.72	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Dark-Not Lighted	Dry	E			5	
02202515	1/16/2001	6:00 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	E	2	2		
01150740	4/16/2001	6:30 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Not A Collision With A Motor Vehicle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	W	W	9	9	
02400212	7/8/2001	5:40 AM	Twigg	State Route	009600	10.92	1	35800		6	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	E	W	5	1	
03980459	9/3/2001	2:00 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Wet	E	W	2	4	
02202518	1/19/2001	7:33 AM	Twigg	State Route	009600	10.92	1	35800		2	0	Head On	On Roadway	Motor Vehicle in Motion	Daylight	Wet	W	E	1	5	
01121012	4/8/2001	4:00 PM	Twigg	State Route	009600	10.92	1	35800		1	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	S	N	1	5	
02250478	7/17/2001	4:18 PM	Twigg	State Route	009600	10.92	1	35800		0	0	Angle	On Roadway	Motor Vehicle in Motion	Daylight	Dry	W	E	6	1	
01330154	11/13/2001	6:30 PM	Twigg	State Route	009600	11.04	1	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Animal	Dark-Not Lighted	Dry	W			5	
04190719	12/17/2001	6:11 AM	Twigg	State Route	009600	11.71	1	0		0	0	Rear End	On Roadway	Motor Vehicle in Motion	Daylight	Wet	E	W	10	10	
01970185	6/27/2001	3:39 PM	Twigg	State Route	009600	12.14	0	0		0	0	Not A Collision With A Motor Vehicle	On Roadway	Deer	Daylight	Dry	E			5	
03880177	12/25/2001	6:30 PM	Twigg	State Route	009600	13.15	0	0		0	0	Angle	Off Roadway	Parked Motor Vehicle	Dark-Not Lighted	Wet	N	N	7	5	
03900587	10/25/2001	8:00 AM	T																		

ACCIDENT RATE CALCULATION for year(s) 1999,2000,2001,2002,2003

Year	County	Rt Type	Route Num	Low Milelog	High Milelog	ADT	Distance	Vehicle Miles
1999	Twiggs	1	008700	3.50	3.64	4,800	0.14	672
1999	Twiggs	1	008700	3.64	4.50	2,800	0.86	2,408
1999	Twiggs	1	009600	4.50	5.65	6,400	1.15	7,360
1999	Twiggs	1	009600	5.65	10.92	3,800	5.27	20,026
1999	Twiggs	1	009600	10.92	13.20	650	2.28	1,482
1999	Twiggs	1	009600	13.20	14.10	2,000	0.90	1,800

Total Vehicle Miles: 33,748	Total Accidents: 15	Accident Rate: 122
Average ADT: 3,184	Total Injuries: 5	Injury Rate: 41
Length in Miles: 10.60	Total Fatalities: 0	Fatality Rate: 0.00

NOTE: Rates are per 100 Million Vehicle Miles

Year	County	Rt Type	Route Num	Low Milelog	High Milelog	ADT	Distance	Vehicle Miles
2000	Twiggs	1	008700	3.50	3.64	4,800	0.14	672
2000	Twiggs	1	008700	3.64	4.50	2,800	0.86	2,408
2000	Twiggs	1	009600	4.50	5.65	6,400	1.15	7,360
2000	Twiggs	1	009600	5.65	10.92	3,800	5.27	20,026
2000	Twiggs	1	009600	10.92	13.20	640	2.28	1,459
2000	Twiggs	1	009600	13.20	14.10	2,000	0.90	1,800

Total Vehicle Miles: 33,725	Total Accidents: 26	Accident Rate: 211
Average ADT: 3,182	Total Injuries: 14	Injury Rate: 114
Length in Miles: 10.60	Total Fatalities: 2	Fatality Rate: 16.25

NOTE: Rates are per 100 Million Vehicle Miles

Year	County	Rt Type	Route Num	Low Milelog	High Milelog	ADT	Distance	Vehicle Miles
2001	Twiggs	1	008700	3.50	3.64	6,600	0.14	924
2001	Twiggs	1	008700	3.64	4.50	2,500	0.86	2,150
2001	Twiggs	1	009600	4.50	5.65	7,600	1.15	8,740
2001	Twiggs	1	009600	5.65	10.92	4,100	5.27	21,607
2001	Twiggs	1	009600	10.92	13.20	1,100	2.28	2,508

2001	Twiggs	1	009600	13.20	14.10	2,000	0.90	1,800
------	--------	---	--------	-------	-------	-------	------	-------

Total Vehicle Miles: 37,729	Total Accidents: 22	Accident Rate: 160
Average ADT: 3,559	Total Injuries: 21	Injury Rate: 152
Length in Miles: 10.60	Total Fatalities: 0	Fatality Rate: 0.00

NOTE: Rates are per 100 Million Vehicle Miles

Year	County	Rt Type	Route Num	Low Milelog	High Milelog	ADT	Distance	Vehicle Miles
2002	Twiggs	1	008700	3.50	3.67	5,500	0.17	935
2002	Twiggs	1	008700	3.67	4.50	2,600	0.83	2,158
2002	Twiggs	1	009600	4.50	5.65	7,200	1.15	8,280
2002	Twiggs	1	009600	5.65	10.92	4,200	5.27	22,134
2002	Twiggs	1	009600	10.92	13.20	3,500	2.28	7,980
2002	Twiggs	1	009600	13.20	14.10	2,100	0.90	1,890

Total Vehicle Miles: 43,377	Total Accidents: 23	Accident Rate: 145
Average ADT: 4,092	Total Injuries: 21	Injury Rate: 133
Length in Miles: 10.60	Total Fatalities: 0	Fatality Rate: 0.00

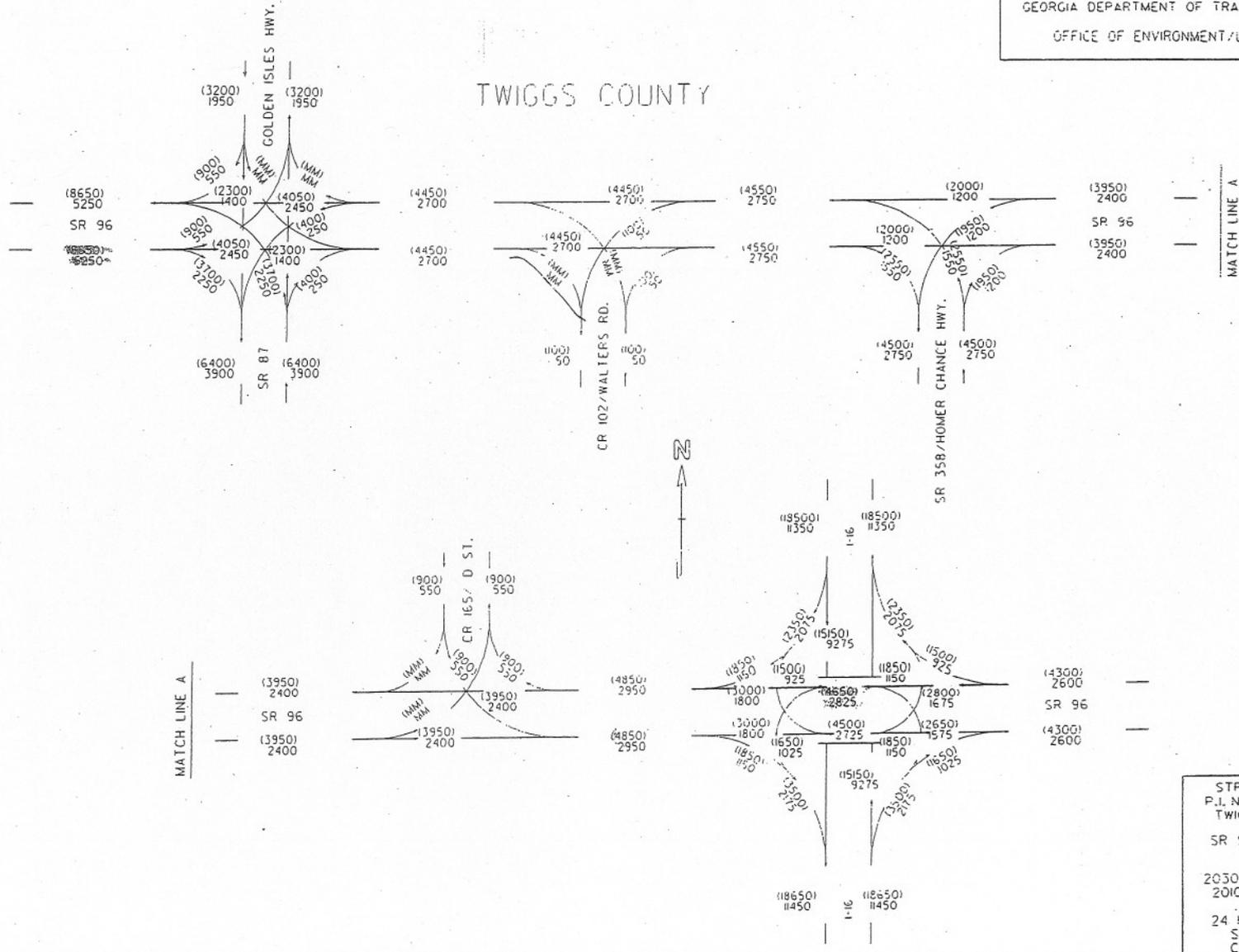
NOTE: Rates are per 100 Million Vehicle Miles

Year	County	Rt Type	Route Num	Low Milelog	High Milelog	ADT	Distance	Vehicle Miles
2003	Twiggs	State Route	008700	0	0	0	0.00	0
2003	Twiggs	State Route	009600	0	0	0	0.00	0

Total Vehicle Miles: 0	Total Accidents: 16	Accident Rate: 0
Average ADT: 0	Total Injuries: 4	Injury Rate: 0
Length in Miles: 0.00	Total Fatalities: 0	Fatality Rate: 0.00

NOTE: Rates are per 100 Million Vehicle Miles

TWIGGS COUNTY



STP-155-1123
P.L. NO. 32247
TWIGGS COUNTY
SR 96 FM SR 87
TO 1-16
2050 ADT = 1000
2010 ADT = 000
24 HR. T = 14%
S. U. = 5%
COMB. = 9%

TJW
10/03

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	John Baxter
Agency/Co.	GDOT
Date Performed	1/19/2005
Analysis Time Period	2030

Site Information

Intersection	SR 96 / SR 87
Jurisdiction	GDOT
Analysis Year	2005

Project ID STP-155-1(23)

East/West Street: SR 96

North/South Street: SR 87

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Movement						
Volume	80	270	200	25	395	0
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Movement						
Volume	455	270	45	70	155	0
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	L	TR	L	TR
PHF	1.00	0.88	1.00	0.88	1.00	1.00	1.00	1.00
Flow Rate	215	380	222	225	455	315	70	155
% Heavy Vehicles	11	11	11	11	11	11	11	11
No. Lanes	2		2		2		2	
Geometry Group	5		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.4	0.0	0.1	0.0	1.0	0.0	1.0	0.0
Prop. Right-Turns	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0
Prop. Heavy Vehicle	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82

Departure Headway and Service Time

hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.19	0.34	0.20	0.20	0.40	0.28	0.06	0.14
hd, final value	8.82	8.82	8.82	8.82	8.82	8.82	8.82	8.82
x, final value	0.53	0.87	0.55	0.56	1.13	0.73	0.19	0.40
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	6.5	5.9	6.5	5.9	6.5	5.9	6.5	5.9

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	405	437	398	401	455	431	320	373
Delay	20.91	44.98	22.07	22.11	113.54	30.29	14.93	18.32
LOS	C	E	C	C	F	D	B	C
Approach: Delay	36.28		22.09		79.48		17.27	
LOS	E		C		F		C	
Intersection Delay	47.40							
Intersection LOS	E							

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	John Baxter	Intersection	SR 96 / SR 87
Agency/Co.	GDOT	Jurisdiction	GDOT
Date Performed	1/19/2005	Analysis Year	2030
Analysis Time Period	AM traffic		

Project Description STP-155-1(23)	
East/West Street: SR 96	North/South Street: SR 87
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street Movement	Eastbound			Westbound		
	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	80	270	200	25	395	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	80	270	200	25	395	0
Percent Heavy Vehicles	11	--	--	11	--	--
Median Type	Undivided					
RT Channelized			1			1
Lanes	1	2	1	1	2	1
Configuration	L	T	R	L	T	R
Upstream Signal		0			0	

Minor Street Movement	Northbound			Southbound		
	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	455	270	45	0	155	70
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	455	270	45	0	155	70
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR

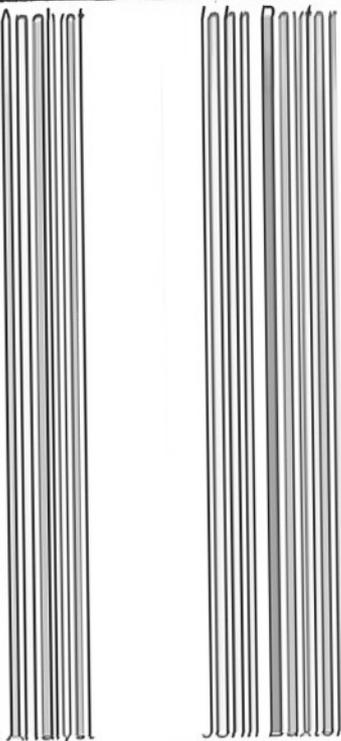
Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR	L		TR
v (vph)	80	25	455		315	0		225
C (m) (vph)	1098	1228	138		293	0		333
v/c	0.07	0.02	3.30		1.08			0.68
95% queue length	0.24	0.06	43.54		12.33			4.65
Control Delay	8.5	8.0			113.1			35.6
LOS	A	A	F		F	F		E
Approach Delay	--	--	696.8					
Approach LOS	--	--	F					

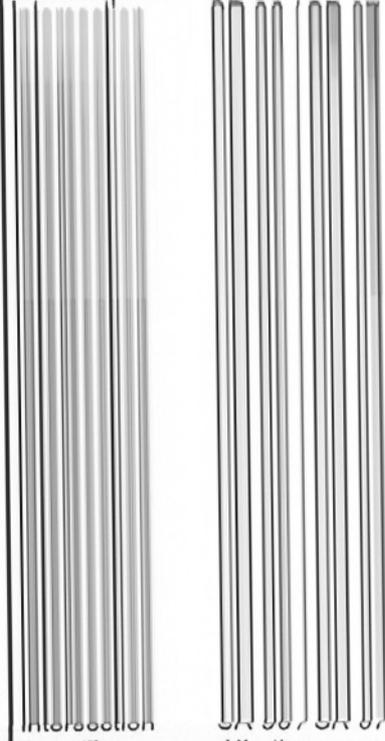
HCS2000™ DETAILED REPORT

General Information

Site Information



Agency or Co. *GDOT*
 Date Performed *1/19/2005*
 Traffic Period *AM Traffic*



Intersection
 Area Type *All other areas*
 Jurisdiction *GDOT*
 Analysis Year *2030*
 Project ID *SR 96 widening*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N _i	1	2	1	1	2	1	2	1	0	1	1	0
Lane group	L	T	R	L	T	R	L	TR		L	TR	
Volume, V (vph)	80	270	200	25	395	0	455	270	45	70	155	0
% Heavy vehicles, %HV	0	0	0	0	0	0	0	0	0	0	0	0
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A		A	A		A	A	A	A	A	A
Start-up lost time, l _i	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival type, AT	3	3	3	3	3	3	3	3		3	3	
Unit extension, UE	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Initial unmet demand, Q _b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N _m												
Buses stopping, N _B	0	0	0	0	0	0	0	0		0	0	
Min. time for pedestrians, G _p	3.2			3.2			3.2			3.2		
Phasing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08				
Timing	G = 15.0	G = 35.0	G =	G =	G = 15.0	G = 40.0	G =	G =				
	Y = 3	Y = 4	Y =	Y =	Y = 3	Y = 4	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 119.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	91	307	227	28	449	0	517	358		80	176	
Lane group capacity, c	427	1062	787	496	1062	787	879	625		432	639	
v/c ratio, X	0.21	0.29	0.29	0.06	0.42	0.00	0.59	0.57		0.19	0.28	
Total green ratio, g/C	0.45	0.29	0.49	0.45	0.29	0.49	0.49	0.34		0.49	0.34	
Uniform delay, d ₁	20.0	32.4	18.2	18.9	33.9	15.6	18.8	32.5		18.1	28.9	
Progression factor, PF	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Delay calibration, k	0.11	0.11	0.11	0.11	0.11	0.11	0.18	0.17		0.11	0.11	
Incremental delay, d ₂	0.3	0.2	0.2	0.0	0.3	0.0	1.0	1.3		0.2	0.2	

Initial queue delay, d_{3a}												
Control delay	20.3	32.6	18.4	18.9	34.1	15.6	19.8	33.8		18.3	29.1	
Lane group LOS	C	C	B	B	C	B	B	C		B	C	
Approach delay	25.6			33.2			25.5			25.8		
Approach LOS	C			C			C			C		
Intersection delay	27.2						Intersection LOS			C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	John M Baxter	Intersection	S.R. 96 / S.R. 358
Agency/Co.	GDOT-Office of Road Design	Jurisdiction	DISTRICT 3
Date Performed	1/26/2005	Analysis Year	2030
Analysis Time Period	AM DHV		

Project Description STP-155-1(23)		North/South Street: S.R. 358
East/West Street: S.R. 96	Study Period (hrs): 0.25	
Intersection Orientation: East-West		

Vehicle Volumes and Adjustments

Major Street Movement	Eastbound			Westbound		
	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	165	150	120	150	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	165	150	120	150	0
Percent Heavy Vehicles	0	--	--	11	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street Movement	Northbound			Southbound		
	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	250	0	210	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	250	0	210	0	0	0
Percent Heavy Vehicles	11	0	11	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Configuration		L		LR				
v (vph)		120		460				
C (m) (vph)		1179		583				
v/c		0.10		0.79				
95% queue length		0.34		7.53				
Control Delay		8.4		30.4				
LOS		A		D				
Approach Delay	--	--		30.4				
Approach LOS	--	--		D				

HCS2000™ DETAILED REPORT

General Information				Site Information			
Analyst	John M. Baxter			Intersection	S.R. 96 / S.R. 358		
Agency or Co.	GDOT-Office of Road Design			Area Type	All other areas		
Date Performed	1/26/2005			Jurisdiction	District 3		
Time Period	AM DHV			Analysis Year	2030		
				Project ID	SR 96 widening from SR 87 to I-16		

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N _i	0	2	1	1	2	0	0	0	0	0	0	0
Lane group		T	R	L	T			LR				
Volume, V (vph)		165	150	120	150		250		210			
% Heavy vehicles, %HV		11	11	11	11		11		11			
Peak-hour factor, PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Pretimed (P) or actuated (A)		A	A	A	A		A		A			
Start-up lost time, I ₁		2.0	2.0	2.0	2.0			2.0				
Extension of effective green, e		2.0	2.0	2.0	2.0			2.0				
Arrival type, AT		3	3	3	3			3				
Unit extension, UE		3.0	3.0	3.0	3.0			3.0				
Filtering/metering, I		1.000	1.000	1.000	1.000			1.000				
Initial unmet demand, Q _b		0.0	0.0	0.0	0.0			0.0				
Ped / Bike / RTOR volumes	0		0				0		0	0		
Lane width		12.0	12.0	12.0	12.0			12.0				
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, N _m												
Buses stopping, N _B		0	0	0	0			0				
Min. time for pedestrians, G _p		3.2					3.2				3.2	
Phasing	WB Only	EW Perm	03	04	NB Only	06	07	08				
Timing	G = 15.0	G = 45.0	G =	G =	G = 60.0	G =	G =	G =				
	Y = 4	Y = 4	Y =	Y =	Y = 4	Y =	Y =	Y =				
Duration of Analysis, T = 0.25							Cycle Length, C = 132.0					

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		183	167	133	167			511				
Lane group capacity, c		1109	496	549	1577			711				
v/c ratio, X		0.17	0.34	0.24	0.11			0.72				
Total green ratio, g/C		0.34	0.34	0.48	0.48			0.45				
Uniform delay, d ₁		30.4	32.4	19.2	18.5			29.2				
Progression factor, PF		1.000	1.000	1.000	1.000			1.000				
Delay calibration, k		0.11	0.11	0.11	0.11			0.28				
Incremental delay, d ₂		0.1	0.4	0.2	0.0			3.5				

Initial queue delay, d_3										
Control delay		30.4	32.8	19.4	18.5			32.7		
Lane group LOS		C	C	B	B			C		
Approach delay		31.6		18.9				32.7		
Approach LOS		C		B				C		
Intersection delay		28.8						Intersection LOS		C

Bridge Inventory Data Listing

Georgia Department of Transportation.

Structure ID: 289-0019-0

Twiggs

SUFF. RATING 92.09

Location & Geography			Signs & Attachements
* Structure ID:	289-0019-0	*104 Highway System:	225 Expansion Joint Type:
200 Bridge Information:	07	*26 Functional Classification:	242 Deck Drains:
*6A Feature Int:	I-16 (SR 404)	*204 Federal Route Type:	243 Parapet Location:
*6B Critical Bridge:	0	105 Federal Lands Highway:	Height:
*7A Route Number Carried:	SR00096	*110 Truck Route:	Width:
*7B Facility Carried:	SR 96	206 School Bus Route:	238 Curb Height:
*9 Location:	4.5 MI S OF JEFFERSONVILL	217 Benchmark Elevation:	Curb Material:
2 DOT District:	3.	218 Datum:	239 Handrail:
207 Year Photo:	1999	*19 Bypass Length:	*240 Median Barrier Rail:
*91 Inspection Frequency:	24 Date: 3/5/2003	*20 Toll:	241 Bridge Median Height:
92A Fract Crit Insp Freq:	00 Date: 2/1/1901	*21 Maintenance:	* Bridge Median Width:
92B Underwater Insp Freq:	00 Date: 2/1/1901	*22 Owner:	230 Guardrail Loc. Dir. Rear:
92C Other Spc. Insp Freq:	00 Date: 2/1/1901	*31 Design Load:	Fwr:
*4 Place Code:	00000	37 Historical Significance:	Oppo. Dir. Rear:
*5 Inventory Route (O/U):	1	205 Congressional District:	Oppo. Fwr:
Type:	3	27 Year Constructed:	244 Approach Slab:
Designation:	1	106 Year Reconstructed:	224 Retaining Wall:
Number:	00096	33 Bridge Median:	233 Posted Speed Limit:
Direction:	0	34 Skew:	236 Warning Sign:
*16 Latitude:	32 - 37.4 HMMS Prefix: SR	35 Structure Flared:	234 Delineator:
*17 Longitude:	83 - 22.2 HMMS Suffix: 00	38 Navigation Control:	235 Hazzard Boards:
98 Border Bridge:	000 % Shared: 00	213 Special Steel Design:	237 Utilities - Gas:
99 ID Number:	0000000000000000	267 Type of Paint:	Water:
*100 STRAHNET:	2	*42 Type of Service on:	Electric:
12 Base Highway Network:	1	Type of Service under:	Telephone:
13ALRS Inventory Route:	2891009600	214 Movable Bridge:	Sewer:
13B Sub Inventory Route:	0	203 Type Bridge:	247 Lighting - Street:
101 Parallel Structure:	N	259 Pile Encasement:	Navigation:
*102 Direction of Traffic:	2	*43 Structure Type Main:	Aerial:
*264 Road Inventory Mile Post:	013.20	45 No. Spans Main:	*248 County Continuity No.:
*208 Inspection Area:	10 Initials: DLC	44 Structure Type Appr:	
Engineer's Initial:	jal	46 No. Spans Appr:	
		226 Bridge Curve Horz:	
		111 Pier Protection:	
		107 Deck Structure Type:	
* Location I.D. No.:	289-00096D-013.20E	108 Wearing Surface Type:	
		Membrane Type:	
		Deck Protection:	

Discussions:

Glen Barton and Ray A. Bennett, discussed some of the traffic patterns, and access to I-16 from SR 96, stating that a significant amount of traffic was going to Jeffersonville and Warner Robbins and a new industrial park is being developed near the I-16 / SR 96 Interchange, that will increase an already high amount of truck traffic through the SR 96 Corridor:

- Also, the county is beginning to establish new development that will be targeting the ports in Savannah.
- SR 96 from Jeffersonville heading towards I-16 for a distance of approximately two miles was already a four lane section, and that this project should consider the end of the existing four lane section.
- They also wanted to know how the other two SR 96 projects, from I-75 to Bonaire and from Bonaire to SR 87, will be coordinated with this one.
- They also stated that a major power line runs east and west along the project just north of SR 87/ SR 96 intersection and consideration be to given to possibly realigning the proposed alignment in this area.

David Painter brought up several issues throughout the meeting:

- He was concerned about the distance from the ramps of I-16 to the frontage roads.
- He stated that, if any work is to be done then a minimum of 300 ft would be needed from the radius of ramp to radius of frontage road in all quadrants.
- Also, Mr. Painter believes that this project will end up as a Full Oversight (FOS) if we add PCC pavement to the ramps and replace the bridge at I-16.
- He also recommends that some of SR 96 pavement should be PCC as well if the truck trip generation is as significant as the Twiggs County Commissioner stated.
- That at SR 87/SR 96 intersections a closer analysis of the intersection should be required to determine why so many accidents are occurring, and that we should consider grade separation for this intersection.
- A Tartersville bypass near the power line easement makes good sense particularly if this becomes FF (Fall Line Freeway). It would also make grade separating 4 lanes US 87 from 4 lanes SR 96 a bit easier on a hopefully unencumbered location.
- Also, Mr. Painter talked with David Millen, stating that SR 96 will be four lanes from I-75 to Tartersville with two other projects. Mr. Painter is not sure when they are scheduled, but will ask David for that information.
- Traffic data in support of logical termini in the vicinity of US129/SR 87 (west) and US80 (east) needs to be generated and validated to ensure that these are valid logical termini.

Lesa Walker stated that she had prepared a cursory need and purpose report, but is going to revise and add to it based on the new information she received today. She also commented that the Bike route on this project follow SR 96 up to SR 358, and towards Savannah.

Tom Queen stated that District Three recommended the interchange being part of the project. Also, that there may be some maintenance issues along the project corridor. And that the district is aware of several counties, Peach, Houston, and Twiggs that are extremely interested in the SR 96 corridor and would like to see each project developed.

A.J. Jubran recommended that the pavement design at the intersection of SR 87 and SR 96 be PCC pavement primarily due to the high truck traffic. He also stated that if the concept includes the interchange reconstruction that the pavement design be PCC pavement.

Jim Shackelford stated that Alltel has three remote switches on private easements, which are on the project. Two of the switches will not be affected by the current design of the project, but if any changes due occur they might be affected and the third switch is expected to be removed by the end of this year. Also, Mr. Shackelford stated that there is buried copper cable for telephone, running the length of the project from SR 87 to SR 358; the cable is then suspended from power poles from SR 358 to I-16.

Jim Simpson stated that currently all the SR 96 projects are outside the construction work program, but that Road Design was asked to begin the concept for this particular project. Mr. Simpson stated Road Design would study the project limits and coordinate with the Office of Planning to ensure it is consistent with the Need and Purpose for the project. He added that it may be possible to extend the project limits, but more likely, a separate project would need to be programmed for the interchange reconstruction.

The meeting concluded approximately 11:15 a.m.

The following additional information was received from Autry Howard of Oconee EMC on November 14, 2003:

Starting at I-16, Oconee EMC has three phase construction until you get to Hwy 358. The majority of poles are located on the right side of SR 96. Relocation cost could be reduced if the widening could be on the left side of the existing road. We have single phase construction from Hwy 358 to SR 87. The majority of these poles are on the left. Relocation cost could be reduced if widening could be on the right side of the existing road.

If you have any questions or additions, please contact Jim Simpson, project manager, at (404) 657-9192.

GMR:JSS:ss

Distribution:

cc:	Thomas L. Turner	David Mulling,
	Bryant Poole	Joe Palladi
	Phillip Allen	Harvey Keeper
	Jeff Baker	Terry McCollister
	Thomas B. Howell	David Graham
	Georgene Geary	Paul Liles
	David Millen	David Painter
	Glenn Barton	Ray Bennett
	Babs Abubakari	Jim Shackelford

This project is located in Twiggs County, beginning at SR 87, Mile Marker 5.7 and ending at I-16, Mile Marker 13.2. The project consists of widening the existing two lane road to four lanes with a 44 foot wide grassed, depressed median. The length of the project is approximately 7.5 miles. There are two existing passing lane sites on this project, beginning at mile marker 7.94 and ending at mile marker 9.53 on the eastbound and beginning at mile marker 10.57 and ending at mile marker 11.92 on the westbound. SR 96, from SR 87 to SR 358 is classified as a Rural Minor Arterial, and from SR 358 to I-16, is classified as a Rural Major Collector. An existing double 9 x 5 box culvert has been identified at mile post 12.2. This project is located on Georgia Bike Route 40, the TransGeorgia, from Columbus to Savannah. A rural bike shoulder has been established on the typical section and will be maintained throughout the length of the project.

Discussions:

Local Government:

Glen Barton and Ray A. Bennett, were in support of the project but would like the Department to consider extending the project limits past the I-16 / SR 96 interchange, stating that a significant amount of traffic is being generated from surrounding counties traveling to Warner Robbins and Jeffersonville and that a new industrial park is being developed near the I-16 / SR 96 Interchange, that will increase an already high amount of truck traffic through the SR 96 Corridor:

- Also, the county is beginning to establish new development that will be targeting the ports in Savannah.
- SR 96 from Jeffersonville heading towards I-16 for a distance of approximately two miles was already a four lane section, and that this project should consider the end of the existing four lane section.
- They also stated that a major power line runs east and west along the project just north of SR 87/ SR 96 intersection and consideration should be given to possibly realigning the proposed alignment in this area.
- The industrial park and the frontage road leading into SR 96 on the eastside of the interchange of I-16 and SR 96 stated that the only access into this parcel was the frontage road.
- And that we should consider some type of lighting system at the interchange of I-16 and SR 96.

Jim Simpson responded to the request to extend the project limits that the Office of Road Design is anticipating a project to be programmed to widen the bridge over I-16, and to maintain the widening of SR 96 past the interchange to attain logical termini for the project.

Gerald Ross stated that Road Design will request to the office of planning to establish a programmed project that will deal directly with the interchange modifications and to extend the project limits of SR 96 past the interchange to an acceptable distance. Mr. Ross also stated as a result of these interchange modifications, the ramp intersections and all frontage roads would be relocated or closed to adhere to the access management policy of a minimum distance required by the department and federal highway agency. Furthermore, that because SR 96 crosses an Interstate, it is Departmental policy to require a raised median for a 1,000 feet from the ramp termini or the first major intersection. Also, Mr. Ross stated that setting up a lighting system at the interchange is not a problem and that it would be included with the interchange project to be programmed, but did mention that the local government would have to be responsible for the energizing of the system.

James Basley from the Twiggs County Board of Education stated that the Board is in support of the project. Mr. Basley spoke about the hazards of traveling along SR 96, and pointed out that the intersection of SR 96 and SR 358 is considered a dangerous intersection. He also stated that any project to widen SR 96 would improve the safety of the roadway and reduce the risk the county faces of transporting children to school along SR 96.

GDOT:

Engineering Services:

Lisa Myers stated because this project is estimated to be over \$25 million and is categorized as a major STRAHNET corridor, which is considered to be on the National Highway System, that this project will require a Value Engineering Study.

District 3:

Tom Queen asked what time frame the Office of Road Design has for holding a public information meeting; that the office of Road Design is waiting on a Utility Cost Estimate for the concept report to be concluded, stated that the District recommends the interchange being part of the project, and that the priority of the project should be moved up.

Jim Simpson responded, that we would like to take care of the issues that are at hand now, for example the alignment, establishing another project for the bridge widening, and receiving the utility cost estimate, but speculated that maybe within the next year we would be interested in setting up a public information meeting.

Office of Planning:

Matthew Fowler stated that work would begin on establishing a bridge widening project in order to accommodate the extension of the logical termini.

- Also, discussed the project justification for the bridge widening, that it is not to be confused as a widening project extending SR 96 but only at the interchange.

Office of Environmental/location:

Corey Carter stated that there are four historical properties that are confirmed along the project corridor, and that another historical property is in the process of being confirmed historical.

- Also, stated that there were no known archaeology sites, or endangered species found at this time.
- Explained the project impacts of each historical impact, including the historical farm.
- And that he was going to send the office of Road Design the information so that we could incorporate it into the concept report and layout.

Office of Traffic Safety and Design:

Scott Zehngraft's comments were:

- Because of the high traffic number from the northbound traffic on SR 87 to the Westbound traffic on SR 96, dual left turn lanes should be examined and if the traffic volumes are not high enough at the time of construction, an offset left turn lane should be considered.
- Recommended to do the widening of SR 96 to the north side where the existing road is experiencing poor sight distance.
- Recommended to examine SR 358 and all of the county routes, straightening out the intersection to a ninety degree intersection, in order to eliminate the skew at some of the crossings.
- Recommended putting right turn lanes at all of the side streets.
- Recommended that at some point to contact the district traffic operations to look at signalization along the project, especially at the SR 87 / SR 96 intersection and the SR 358 / SR 96 intersection.

Additional comments at the end of the meeting were made from Gerald Ross, stating that because of the historical impacts on both sides of the project corridor, this will present a challenge in regard to the project's design and schedule.

The meeting concluded approximately 11:00 a.m.

If you have any questions or additions, please contact Jim Simpson, project manager, at (404) 657-9192 or John Baxter, Design Engineer, at (404) 657-9706.

GMR:JSS:ss

Distribution:

cc:	Thomas L. Turner	David Mulling
	Bryant Poole	Joe Palladi
	Phillip Allen	Harvey Keeper
	Jeff Baker	Don Brown
	Thomas B. Howell	David Graham
	Georgene Geary	David Painter, FHWA
	David Millen	Glenn Barton, Twiggs County
	Paul Liles	Ray Bennett, Twiggs County
	Jamie Simpson	James Basley, Twiggs Board of Education

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE: STP-155-1(23) Twiggs
P No.: 322470
S.R. 96 widening/reconstruction

OFFICE: Engineering Services

DATE: December 21, 2004

FROM: David Mulling, Project Review Engineer

TO: Gerald Ross, State Road Design Engineer

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
1	Use 4:1 front slope	\$1,211,440	No	Corridor has a high accident history. The 6:1 slopes shown are desirable in order to maximize the recovery area.
2	Make selective improvements to the corridor in lieu of widening the entire corridor	\$31,306,976	No	Does not address the need and purpose for the project.
4	Grade separate S.R. 87 from S.R. 96	-\$3,161,583*	No	Results in a substantial cost increase for the project.
5/6	Signalize critical intersections	-\$255,040*	Yes	
7	Maintain existing alignment on S.R. 96 at lake	\$233,780	No	Results in the use of a sub-standard horizontal curve.
9	Maximize the use of existing pavement and right of way	Design Suggestion	Yes	
11/14	Allow right ins/right outs at Citgo and Walthall Service Stations	Design Suggestion	No	Violates GDOT policy concerning Access Breaks at Interstate Interchanges.
12	Relocate access road to CR 100 behind Walthall Service Station	\$119,116	Yes	

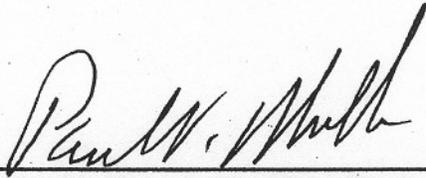
Implementation of Value Engineering Study Alternatives
STP-155-1(23) Twiggs
Page 2

ALT No.	Description	Savings PW & LCC	Implement	Comments
13	Relocate CR 100 connection to Missile Base Road	\$229,768	Yes	
18	Bypass the lake with a new alignment for S.R. 96	-\$398,551*	No	Could result in additional Environmental impacts.
21	Selectively use rigid pavement	-\$87,223*	Yes	

Note: Items with an asterisk result in a cost increase.

A meeting was held on December 21, 2004 to discuss the above recommendations. Jim Simpson, Nasser Rad and John Baxter of Road Design, and Ron Wishon of the Office of Engineering Services were in attendance.

Approved:



Paul V. Mullins, P. E., Chief Engineer

Date: 12/22/04

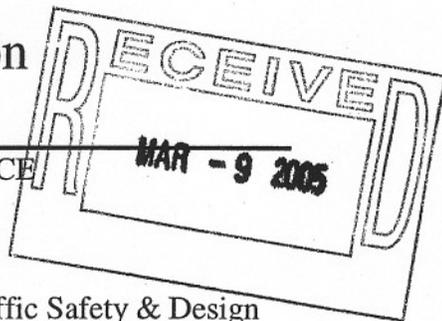
DTM/REW

Attachment

c: Gus Shanine
Jim Simpson
John Baxter
Nasser Rad
Lyn Clements
Lamar Pruitt
Brink Stokes
Corey Carter
Lisa Myers

Department of Transportation
State of Georgia

INTERDEPARTMENTAL CORRESPONDENCE



File: STP-155-1(23), NHS-0007-00(251)
Twiggs County
P.I. No. 322470, 0007251

Office: Traffic Safety & Design
Atlanta, Georgia
Date: March 03, 2005

From: ^{KG} Keith Golden, P.E., State Traffic Safety and Design Engineer
To: Meg Pirkle, Assistant Director of Preconstruction
Subject: Project Concept Report Review

We have reviewed the above referenced concept report for the proposed widening and route improvement along SR 96, in Twiggs County.

The Office of Traffic Safety and Design finds this report satisfactory for approval because it will improve safety and traffic operations within this area.

KG/SZ/nr

Attachment (signature page)

Cc: Harvey Keeper, State Environment /Location Engineer
Paul Liles, State Bridge Engineer
David Mulling, State Review Engineer
Thomas Howell, District 3 Engineer
Attn.: David Millen, District 3 Preconstruction Engineer
Joe Palladi, State Transportation Planning Administrator
Jamine Simpson, Financial Management Administrator
Brent A. Story, State Road and Airport Design Engineer
Attn.: Jim Simpson, Design Group Manager
General Files
Office Files

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-155-1(23), NHS-0007-00(251)

County: TWIGGS

P. I. Number: 322470, 0007251

Federal Route Number: None

State Route Number: 96

Recommendation for approval:

DATE March 1, 2005

DATE March 1, 2005

James A. Simpson Jr.
Project Manager
R. L. St. John
Office Head/District 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 _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE 3-4-05

Frank Balle

State Traffic Safety and Design Engineer

DATE _____

District Engineer

DATE _____

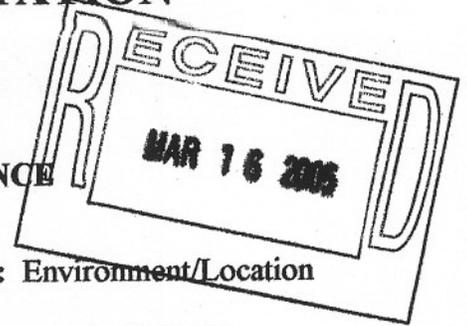
Project Review Engineer

DATE _____

State Bridge / Structural Design Engineer.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE



FILE: P.I. Nos. 322470 & 0007251

OFFICE: Environment/Location

DATE: March 15, 2005

A handwritten signature in black ink, appearing to read "Harvey D. Keeper".

FROM: Harvey D. Keeper, State Environmental/Location Engineer

TO: Margaret B. Pirkle, P.E., Assistant Director of Preconstruction

**SUBJECT: PROJECT CONCEPT REPORT
STP-155-1(23) and NH-0007-00(251) / Twiggs County**

The above subject concept report has been reviewed. Environmental timeline would be likely eighteen (18) months rather than the twelve (12) months as indicated on Page 6. A PIOH should be held on this project prior to submitting the draft document. The opportunity for a PHOH will need to be advertised at a minimum. PHOH may be required. PIOH required due to scope of project, access changes, ROW required and displacements.

If you have any questions, please contact me at (404) 699-4401.

HDK/lc

Attachment

cc: David Mulling, Project Review Engineer
Brent A. Story, P.E., State Road Design Engineer

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-155-1(23), NHS-0007-00(251)

County: TWIGGS

P. I. Number: 322470, 0007251

Federal Route Number: None

State Route Number: 96

Recommendation for approval:

DATE March 1, 2005

DATE March 1, 2005

James S. Simpson Jr.
Project Manager

R. L. [Signature]

Office Head/District 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 _____

State Transportation Financial Management Administrator

DATE 3.15.2005

[Signature]
State Environmental/Location Engineer

DATE _____

State Traffic Safety and Design Engineer

DATE _____

District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge / Structural Design Engineer.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-155-1(23), NHS-0007-00(251)

County: TWIGGS

P. I. Number: 322470, 0007251

Federal Route Number: None

State Route Number: 96

Recommendation for approval:

DATE March 1, 2005

DATE March 1, 2005

James S. Simpson Jr.
Project Manager
R. L. Hays
Office Head/District 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 _____

DATE 3-3-05

DATE _____

DATE _____

DATE _____

DATE _____

DATE _____

State Transportation Planning Administrator

James Simpson
State Transportation Financial Management Administrator

State Environmental/Location Engineer

State Traffic Safety and Design Engineer

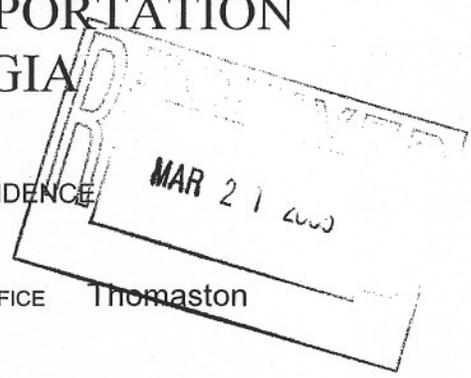
District Engineer

Project Review Engineer

State Bridge / Structural Design Engineer.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE



DBM RWA

FILE STP-155-1(23), NHS-0007-00(251) Twiggs Co. OFFICE Thomaston
SR96 From SR87 to I-16
P. I. No. 322470, 0007251
DATE March 17, 2005

FROM Thomas B. Howell, P.E., District Engineer

TO Meg Pirkle, Assistant Pre-Construction Division Director

SUBJECT **PROJECT CONCEPT REPORT**

We have reviewed the concept report on the above project and concur with the recommendation for approval with the addition that ITS needs to be imbedded in this project, and SR87 needs to be studied for signalization based on projected traffic.

Attached for your further handling is the concept report cover sheet which has been signed by the District Engineer.

DBM:RWA
Attachment
xc: David Mulling
Harvey Keeper

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-155-1(23), NHS-0007-00(251)

County: TWIGGS

P. I. Number: 322470, 0007251

Federal Route Number: None

State Route Number: 96

Recommendation for approval:

DATE March 1, 2005

DATE March 1, 2005

James S. Simpson Jr.

Project Manager

R. L. H. H.

Office Head/District 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 _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

[Signature]
State Traffic Safety and Design Engineer

DATE 3-17-05

District Engineer

DATE _____

Project Review Engineer

DATE _____

State Bridge / Structural Design Engineer.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-155-1(23), NHS-0007-00(251)

County: TWIGGS

P. I. Number: 322470, 0007251

Federal Route Number: None

State Route Number: 96

Recommendation for approval:

DATE March 1, 2005

DATE March 1, 2005

James S. Simpson Jr.

Project Manager

R. L. [Signature]

Office Head/District 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 _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety and Design Engineer

DATE _____

District Engineer

DATE 3-21-05

Dennis J. Melling
Project Review Engineer

DATE _____

State Bridge / Structural Design Engineer.

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

Office of Road and Airport Design

PROJECT CONCEPT REPORT

Project Number: STP-155-1(23), NHS-0007-00(251)

County: TWIGGS

P. I. Number: 322470, 0007251

Federal Route Number: None

State Route Number: 96

Recommendation for approval:

DATE March 1, 2005

DATE March 1, 2005

James S. Simpson Jr.
Project Manager
R. A. Hays
Office Head/District 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 _____

State Transportation Financial Management Administrator

DATE _____

State Environmental/Location Engineer

DATE _____

State Traffic Safety and Design Engineer

DATE _____

District Engineer

DATE _____

Project Review Engineer

DATE 4/23/05

Paul V. Tullis Jr.
State Bridge / Structural Design Engineer.

Quarles, Johnny

From: Simpson, Jim
Sent: Wednesday, November 02, 2005 11:42 AM
To: Painter, David (FHWA)
Cc: Quarles, Johnny; Baxter, John
Subject: RE: STP-155-1(23), PI 322470, Twiggs County, SR 96 widening, Concept Report comments

Dave,

We changed the concept report to reflect the changes and submitted to Johnny Quarles on 9/30/05. Have you not received it?

From: Painter, David [mailto:David.Painter@fhwa.dot.gov]
Sent: Wednesday, November 02, 2005 11:27 AM
To: Simpson, Jim
Subject: RE: STP-155-1(23), PI 322470, Twiggs County, SR 96 widening, Concept Report comments

Jim, Did you have the concept revised to reflect the changes from below?

-----Original Message-----

From: Simpson, Jim [mailto:Jim.Simpson@dot.state.ga.us]
Sent: Friday, May 20, 2005 10:39 AM
To: Painter, David
Cc: Story, Brent; McCook, Jason; Rad, Nasser; Baxter, John
Subject: FW: STP-155-1(23), PI 322470, Twiggs County, SR 96 widening, Concept Report comments

David,

Below are our responses to your comments on the Twiggs Co. concept report:

From: Painter, David [mailto:David.Painter@fhwa.dot.gov]
Sent: Monday, May 16, 2005 6:23 PM
To: Simpson, Jim
Subject: STP-155-1(23), PI 322470, Twiggs County, SR 96 widening, Concept Report comments

I have taken a look at this concept. Here are my comments.

1. The cover letter states that (23) ends south of I-16. It actually ends north of I-16. Yes. Both STP-155-1(23) and NHS-0007-00(251) end north of I-16.
2. The cover letter states that the bridge will be widened to the right side. Do you mean the east side? Yes.
3. I am not convinced that an additional left turn lane on SR87 to SR96 westbound is going to do the job particularly given the accident rate briefed at the initial concept meeting at this intersection. I did not see an accident rate in this concept packet that I could assign specifically to the intersection. The additional left turn lane is to accommodate the heavy left turn traffic and was recommended by the Office of Traffic and Safety Design. When the DHV is greater than 400 for a left turn lane it has been recommended that a dual left turn lane is needed. Additional improvements such as wider shoulders and

possible vertical profile improvements at S.R. 87/S.R. 96 should enhance intersection sight distance to provide a safer intersection. The accident data is located in the concept report right after the typical sections.(Milelog 3.64)

4. I am not convinced that an additional left turn lane on SR87 to SR96 westbound is going to do the job particularly given the likely future traffic volume. Given that the Golden Isle (GI) parkway (SR87/341) four lane widening to I-95 will be complete in a couple of years and the likelihood of FLF traffic using this route to avoid the missing section of FLF around Macon, I believe that your traffic projections for this project and for the 87/96 intersection are very low. We have coordinated the development of this concept report with the Office of Planning and the Office of Environmental Location, and they have verified and concur that what we are proposing in this concept report is consistent with the need and purpose report and future traffic projections.
5. Is a Tarversville bypass being considered? When the GI pkwy and FLF avoidance route are complete, I believe that you will see explosive growth at Tarversville. It would be nice to anticipate that growth with infrastructure before it occurs. No, it is not being considered. We believe what we propose, at Tarversville, is the best alternative, it will regulate and control traffic better through the SR 96 corridor, that is it will emphasize movement of traffic and safety through the SR 96/SR 87 intersection.
6. Page 4 of the concept report states that the "existing bridge can be reconstructed" I thought that it was being retained. What does this reconstruction entail? According to our Office of Bridge Maintenance, the superstructure can be retained but the existing deck will be removed and reconstructed, for the new crown point and cross slope.
7. Page 4 states that on ramps to I-16 will have an additional 16-foot lane. How far do these lanes extend? We will not know for sure until we receive survey, but it appears we will use 300 to 500 feet for an additional lane, which will be merged down to one lane to merge onto I-16.
8. Page 4 of the concept states that "if the bridge length is extended" the ramps will need to be relocated. Is the bridge length being extended? We will not know for sure until we move into preliminary design; We will have a better idea when we receive the preliminary bridge layout.
9. If SR 96 does become the route to avoid the missing section of FLF around Macon then the traffic projections at the I-16 SR 96 interchange are low and an additional left turn lane on the bridge from westbound 96 to southbound 16 may be needed. We could accomodate this potential need by making the bridge median another 8 -12 feet wider for future addition of this additional left turn lane. An additional right turn lane on SR 96 eastbound to southbound I-16 could also be needed. Based on our projections we believe what we propose will adequately handle future traffic at this location.
10. Has the truck traffic loading mentioned by the Twiggs county commissioner at the initial concept meeting been addressed in the project plans? Yes we have addressed the Commissioner's issues, and we feel what we propose at the SR 96 / I-16 Interchange will accommodate the truck loading at this location. PCC pavement is proposed on S.R. 96 from at least in between the I-16 ramps.

Thanks,

David Painter
MSE, PE