

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE NH-IM-95-1(126)&(132) Camden County OFFICE Preconstruction
P.I. Nos. 511082&511083 DATE January 11, 1995

FROM *CWH Hutto*
C. Wayne Hutto, Assistant Director of Preconstruction

TO SEE DISTRIBUTION

SUBJECT PROJECT CONCEPT REPORT APPROVAL

Attached for your files is the approval for subject project.

CWH/se

Attachment

DISTRIBUTION:

- John Lively
- Bob Mustin
- David Studstill
- Herman Griffin
- Toni Dunagan
- James Kennerly
- Darrell Elwell
- Marion Waters
- Craig Brack
- FHWA
- Paul Liles



U.S. Department
of Transportation
**Federal Highway
Administration**

Georgia Division Office

1720 Peachtree Road, N.W.
Suite 300
Atlanta, Georgia 30367

December 15, 1994

IN REPLY REFER TO:

HTM-GA

Mr. Wayne Shackelford
Commissioner
Department of Transportation
No. 2 Capitol Square
Atlanta, Georgia 30334

Subject: Georgia Projects NH-IM-95-1(116)(131), Camden County
NH-IM-95-1(126)(132), Camden County
and NH-IM-95-1(120)(136), McIntosh County

Dear Mr. Shackelford:

We have completed our review of the concept reports for the subject projects. The reports are approved with the understanding that we will coordinate with your Environmental staff to determine the appropriate level of environmental analysis for Phase II. Based on our preliminary information regarding potential environmental impacts, particularly to wetlands, we believe that an Environmental Assessment(s) is appropriate for phase II.

We will also work with your staff to assure that logical termini are established in accordance with 23 CFR 771.111(f).

Sincerely yours,

L. R. Dreihaupt

for Larry R. Dreihaupt, P.E.
Division Administrator

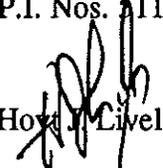
Enclosures



**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE NH-IM-95-1(126)&(132) Camden County OFFICE Preconstruction
P.I. Nos. 511082 & 511083 DATE November 18, 1994

FROM  Hoyt J. Lively, Jr., P.E., Director of Preconstruction

TO Wayne Shackelford, Commissioner

SUBJECT PROJECT CONCEPT REPORT

These combined projects are the widening and reconstruction of I-95 from SR 25 Spur to CR 138 in two phases. The existing roadway consists of 2 lanes in each direction separated by a 64 foot median for the entire project length. The existing major structures are: (1) Satilla River - twin 1587' x 44.5' bridges with sufficiency rating of 95.6; (2) Pine Island Road Overpass - 266' x 32.7' bridge with a sufficiency rating of 94.3; (3) Canoe Swamp - twin 102' x 44.5' bridges with a sufficiency rating of 95.6; (4) White Oak Creek - twin 935' x 44.5' bridges with a sufficiency rating of 95.6. The posted speed is 65 MPH and the design speed is 70 MPH. The base year traffic (1998) is 51,500 VPD and the design year traffic (2018) is 75,800 VPD.

NH-IM-95-1(126), Camden County (Phase I) consists of the widening and reconstruction of 8.205 miles of I-95 from 2 lanes in each direction to 3 lanes in each direction from SR 25 Spur to CR 138.

The widening is proposed as follows:

Existing 64' median section

Construct one half lane (6') and 12' shoulder (10' paved) to the inside in one direction and one half lane (6') and 15'-6" shoulder (12' paved) to the inside in the other direction. Construct one and a half lanes (18') to the outside, northbound and southbound. A total of 24' full depth new pavement will be added to the existing 24' to achieve the ultimate 48' section in each direction. However, I-95 will first function as a 6-lane interstate by utilizing the 3 inside lanes and the newly paved outer 12' (full depth) will function as the Phase I outside shoulder.

Wayne Shackelford
Page 2
November 18, 1994

NH-IM-95-1(126)&(132) Camden County

Bridge construction will be as follows:

- Widen twin bridges over Satilla River to 1587' x 76'
- Widen twin bridges over Conoe Swamp to 102' x 76'
- Widen twin bridges over White Oak Creek to 935' x 76'

The existing bridge at Pine Island Road (Overpass) will be jacked approximately 1.0'. A Design Exception will be required for the existing 69 MPH and 58 MPH vertical curves. The existing sub-standard superelevations will be corrected with leveling. The existing pavement from the beginning of the project to the Satilla River Bridge is CRC and will be overlaid with asphalt. The existing asphalt paving for the remainder of the project will also be overlaid. No additional rights-of-way is required for the I-95 widening. The roadway will remain open to traffic during construction.

NH-IM-95-1(132) Camden County (Phase II) consists of widening the roadway from 3 lanes in each direction to 4 lanes in each direction from SR 25 Spur to CR 138 for a total of 8.205 miles.

The widening is proposed as follows:

Existing 52' median section

Construct a 12' paved outside shoulder on the existing Phase I outside graded shoulder, northbound and southbound, overlay the Phase I outside shoulders with a riding surface and open as the 4th lane, northbound and southbound.

No additional rights-of-way is required for Phase II. The roadway will remain open to traffic during construction.

Environmental concerns for both projects include requiring a Coast Guard permit; a COE 404 permit; a Biological Assessment will be required; a CE will be prepared; a public hearing is not required; time saving procedures are appropriate.

Wayne Shackelford
Page 3
November 18, 1994

NH-IM-95-1(126)&(132) Camden County

The estimated costs for this project are:

	<u>NH-IM-95-1(126) PHASE I</u>		
	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG. DATE</u>
Constr(Infl&E/C)	\$22,102,000	\$17,000,000	1997
Rights-of-way	-0-	---	96-07
Utilities*	LGPA	LGPA	

It is recommended that the major bridges over Satilla River and White Oak Creek be programmed under a separate bridge project. (The project number and P.I. number will be determined by the Office of Programming). This construction will be done in Phase I.

The estimated costs are as follows:

	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG. DATE</u>
Constr(Infl&E/C)	\$16,508,000	---	1997
Rights-of-way	---	---	96-07
Utilities	LGPA	LGPA	

*Camden County signed LGPA for utilities 3-4-92

	<u>NH-IM-95-1(132) PHASE II</u>		
	<u>PROPOSED</u>	<u>APPROVED</u>	<u>PROG. DATE</u>
Constr(Infl&E/C)	\$2,510,000	---	LR
Rights-of-way	-0-	---	
Utilities	LGPA	LGPA	

Wayne Shackelford
Page 4
November 18, 1994

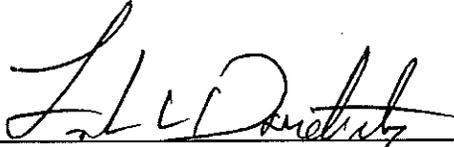
NH-IM-95-1(126)&(132) Camden County

These projects will increase capacity, enhance safety and reduce congestion along this portion of I-95. I recommend these project concepts be approved.

HJL/JDQ/se

Attachment

CONCUR:



Frank Danchetz, P.E., Chief Engineer

* APPROVED: F Moore
for Larry R. Dreihaup, Division Administrator, FHWA

APPROVED: Wayne Shackelford
Wayne Shackelford, Commissioner

* SUBJECT TO COMMENTS IN ATTACHED LETTER.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

RECEIVED
SEP 27 1994
PRECONSTRUCTION

INTERDEPARTMENT CORRESPONDENCE

FILE NH-IM-95-1 (126) & (132) Camden OFFICE Atlanta, Georgia
P.I. No. 511082, 511083 DATE Sept. 26, 1994

FROM Bob Mustin, P.E., Project Review Engineer *DTM*

TO C. Wayne Hutto, Assistant Director of Preconstruction

SUBJECT PROJECT CONCEPT REPORT

We have reviewed the attached Concept Report for this project.

The estimated costs of this project are as follows:

Unit (126)

Construction	\$	33,038,344
Inflation (5% per year)	\$	1,651,917
E & C (10%)	\$	3,469.02
Right of Way	\$	None
Reimbursable Utilities	\$	0

Unit (132)

Construction	\$	1,900,912
Inflation (5% per year)	\$	380,182
E & C (10%)	\$	228,109
Right of Way	\$	None
Reimbursable Utilities	\$	0

DTM:epd

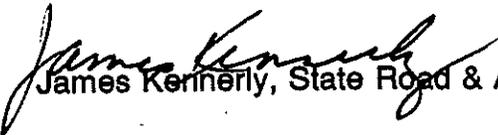
Attachments

cc: James Kennerly

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE NH-IM-95-1(126) &(132) Camden Co. OFFICE Atlanta
P.I. No. 511082, 511083 DATE Sept. 9, 1994

FROM  James Kennerly, State Road & Airport Design Engineer **RDB**

TO Bobby Mustin, Project Review Engineer

SUBJECT Project Concept Report

Attached is project concept report on the above projects. This report is for your review and further handling.

JK:JJG:bc

xc: John Lively
David Studstill, w/att
Wayne Hutto, w/att
Marion Waters, w/att
Craig Brack, w/att
Paul Liles, w/att



DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN

PROJECT CONCEPT REPORT

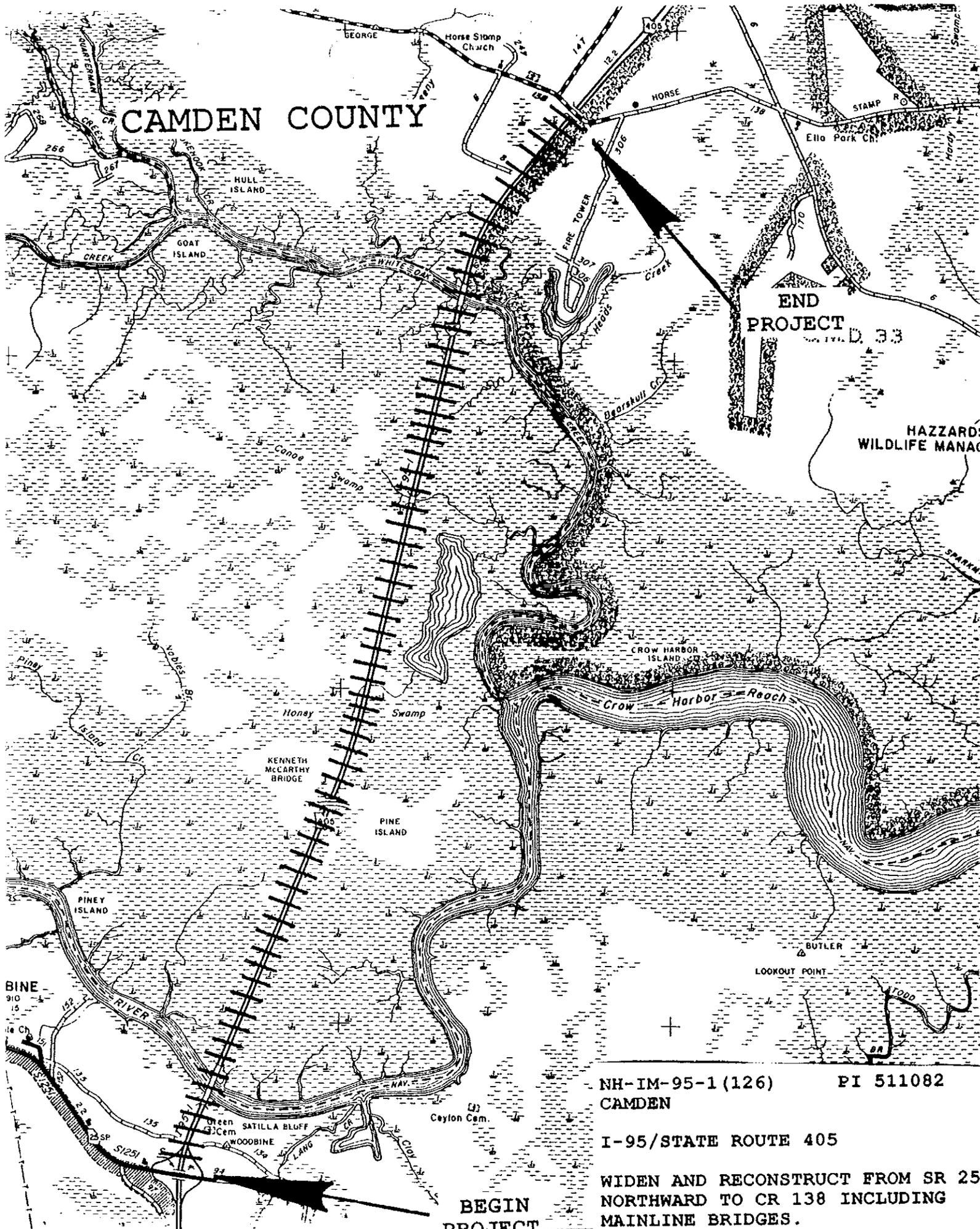
NH-IM-95-1(126)
NH-IM-95-1(132)
CAMDEN COUNTY

FEDERAL ROUTE NO: I-95
STATE ROUTE NO: 405
GADOT P.I. NO: 511082,511083

Date of Report: SEPT. 2, 1994

RECOMMENDATION FOR APPROVAL	
<u>9/5/94</u> DATE	<u><i>James Kenney</i></u> State Road & Airport Design Engineer
DATE	State Environmental Engineer
DATE	State Traffic Operations Engineer
DATE	District Engineer
DATE	State Bridge Engineer

CAMDEN COUNTY



END
PROJECT
M.I.D. 33

BEGIN
PROJECT

NH-IM-95-1(126) PI 511082
CAMDEN

I-95/STATE ROUTE 405

WIDEN AND RECONSTRUCT FROM SR 25
NORTHWARD TO CR 138 INCLUDING
MAINLINE BRIDGES.

LENGTH = 8.205 MILES

PROJECT CONCEPT REPORT

PROJECT NUMBER: NH-IM-95-1(126) will be referred to as Phase I and
NH-IM-95-1(132) will be referred to as Phase II.

PROJECT LOCATION & DESCRIPTION

These projects consist of the widening and reconstruction of 8.205 miles (13.205 KM) of I-95 from the SR 25 Spur to CR 138. Construction is proposed to be done in two phases. Phase I and Phase II are two separate projects. Phase I will widen the roadway from 2 lanes in each direction to three lanes in each direction for the entire length of the project. Phase II will widen the roadway from 3 lanes in each direction to 4 lanes in each direction.

A substantial portion of the Phase II grading and paving will be included in the design and construction of Phase I.

Note: All 8.205 miles (13.205km) of the project has an existing 64' (19.2m) median.

ROADWAY CONSTRUCTION:

The crown point has been shifted to accommodate a 52' (15.6m) median. Referencing the typical may prove helpful.

Phase I - Existing 64' (19.2m) Median Section

Construct one half-lane (6'/1.8m) and 12' (3.6m) shoulder (10'/3.0m paved) to the inside in one direction and one half-lane (6'/1.8m) and 15'-6" (4.65m) shoulder (12'/3.6m paved) to the inside in the other direction (The appropriate sides for the different inside shoulders will be determined during the plan development stage). Construct one and a half lanes (18'/5.4m) to the outside, Northbound and Southbound. A total of 24'/7.2m of full depth new pavement is to be added to the existing 24' (7.2m), Northbound and Southbound to achieve the ultimate 48' (14.4m) section in each direction. (The existing paving from the beginning of the project to the Satilla River bridge is CRC and will be overlaid with asphalt. For the remainder of the project the existing asphalt paving will also be overlaid with asphalt). However, as stated in the Project Description, I-95 will first function as a 6-lane interstate. This will be accomplished by utilizing the 3 inside lanes, and the newly paved outer 12' (3.6m) will function as the Phase I outside shoulder. 14' (4.2m) graded shoulders (to be paved under Phase II) will be added to the outside, Northbound and Southbound.

Phase II - Existing 52' (15.6m) Median Section

Construct a 12' (3.6m) paved outside shoulder on the existing Phase I, outside graded shoulder, Northbound and Southbound. Overlay the Phase I outside shoulders with a riding surface and open as the 4th lane, Northbound and Southbound.

BRIDGE CONSTRUCTION:

Phase I:

Six mainline bridges.

Satilla River - twin bridges - widen to 4 - 12' (3.6m) lanes, 14' (4.2m) shoulders inside and outside, North & Southbound.

Canoe Swamp - twin bridges - widen to 4 - 12' (3.6m) lanes, 14' (4.2m) shoulders inside and outside, North & Southbound.

White Oak Creek - twin bridges - widen to 4 - 12' (3.6m) lanes, 14' (4.2m) shoulders inside and outside, North & Southbound.

One overpass required jacking.

Pine Island Rd. must be jacked approximately 1' (0.3m).

TRAFFIC

CURRENT		PROJECTED	
YEAR	AADT	YEAR	AADT
1998	51500	2018	75800
PDP CLASSIFICATION		FUNCTIONAL CLASSIFICATION	
MINOR EXISTING		INTERSTATE PRINCIPLE ARTERIAL	
NON-CA (X)		CA ()	EXEMPT ()

PROJECT NEED & PURPOSE

I-95 is a major transportation corridor serving the eastern seaboard of the United States. It is a major corridor for the movement of goods and people between Florida and the Northeast section of the country. Due to increased traffic on I-95, additional lanes are required to increase capacity, enhance safety and reduce the constant platooning of vehicles on the roadway.

EXISTING ROADWAY

TYPICAL SECTION: 4-Lane rural interstate, 8.205 (13.205 km)miles of CRC
R/W width varies from 300'(90m) to 500'(150m)(total).

POSTED SPEED	MAX DEGREE OF CURVE	MAX GRADE
65 MPH	1.0 DEG.	3.0 %

MAJOR STRUCTURES:

1. Satilla River - twin 1587'(483.7m) x 44.5'(13.5m), SFR 95.6,
Superstructure: Steel & PSC, Substructure: PSC
2. Pine Island Rd. - overpass - 266'(81m) x 32.7'(9.9m), SFR 94.3,
Steel
3. Canoe Swamp - twin - 102'(31m) x 44.5'(13.5m), SFR 95.6,
Superstructure: PSC, Substructure: PSC
4. White Oak Creek - twin - 935'(284.9m) x 44.5'(13.5m), SFR 95.6,
Superstructure: PSC, Substructure: PSC

PROPOSED ROADWAY

PHASE I TYPICAL SECTION:

Existing 64'(19.2m) Median -
6-lane rural interstate with a 52'(15.6m) median
12'(3.6m) shoulder(10'/3m paved) inside, one
direction
15.5'(4.65m) (shoulder (12'/3.6m paved) inside,
opposite direction
12'(3.6m) paved outside shoulder with additional
14'(4.2m) outside graded shoulder (to be used in
Phase II) Northbound and Southbound

PHASE II - TYPICAL SECTION:

Existing 52'(4.5m) Median
8-lane rural interstate with a 52'(4.5m) median
12'(3.6m) shoulder(10'/3m paved) inside, one direction
15.5'(4.65m) shoulder (12'/3.6m paved) inside, opposite
direction
14'(4.2m) shoulder(12'/3.6m paved) outside, North &
Southbound

DESIGN SPEED
70 MPH

MAX DEGREE OF CURVE;
ALLOWABLE: 3.0 DEG.
PROPOSED: 1.0 DEG.

MAX GRADE;
ALLOWABLE: 3.0 %
PROPOSED: 3.0 %

PROPOSED MAJOR STRUCTURES

- Phase I - Satilla River - widen to 1587' (483.7m) x
76' (23.2m), North & Southbound.
- Canoe Swamp - widen to 102' (31m) x 76' (23.2m),
North & Southbound.
 - White Oak Creek - widen to 935' (284.9m) x
76' (23.2m), North & Southbound.
-

PROPOSED RIGHT OF WAY

- Phase I - none required
Phase II - none required

TYPE OF ACCESS CONTROL: LIMITED ACCESS

COORDINATION

CONCEPT TEAM MEETING DATE: FEB 4, 1993

LOCATION INSPECTION DATE: NONE

PERMITS REQUIRED (4f, COE, 404, etc.): 404, COAST GUARD

LEVEL OF PUBLIC INVOLVEMENT: NONE

TIME SAVING PROCEDURES APPROPRIATE: YES

OTHER PROJECT IN THE AREA:

STP-141-1(12) PI NO. 532480

STP-141-1(9) PI NO. 522080,

BRF-009-1(8), PI NO. 522690,

NH-IM-95-1(115), (116), (130), (131), - PI NOS.

511075, 511080, 511072, 511081 RESPECTIVELY.

MISCELLANEOUS

TRAFFIC CONTROL DURING CONSTRUCTION: Project to be built under traffic
(2 lanes, North & Southbound)

LEVEL OF ENVIRONMENTAL ANALYSIS: Categorical Exclusion

DESIGN EXCEPTIONS REQUIRED:

	YES	NO	UNDETERMINED
SUBST HORIZ ALIGNMENT	()	(X)	()
SUBST ROADWAY WIDTH	()	(X)	()
SUBST SHOULDER WIDTH	()	(X)	()
SUBST VERT GRADES	()	(X)	()
SUBST CROSS SLOPES	()	(X)	()
SUBST STOPPING SIGHT DIST	(X)	()	()
SUBST SUPERELEV RATES	()	(X)	()
SUBST HORIZ CLEARANCE	()	(X)	()
SUBST SPEED DESIGN	()	(X)	()
SUBST VERTICAL CLEARANCE	()	(X)	()
SUBST BRIDGE WIDTH	()	(X)	()
SUBST BR STRUCT CAPACITY	()	(X)	()

* SEE THE COMMENT SECTION FOR A BRIEF EXPLANATION OF ANY
DESIGN VARIATIONS ABOVE.

UNDERGROUND STORAGE TANKS: NONE

HAZARDOUS WASTE SITES: NONE

ALTERNATIVES CONSIDERED

1. No build.
2. The alternate for building Phase I and Phase II at the same time was considered and discounted because of possible delay for environmental considerations associated with Phase II. Also, three lanes provide an adequate level of service until Phase II is needed. Asphalt riding surface left exposed with no traffic will deteriorate rapidly and driver expectancy would be adversely impacted. There exists an immediate need for some relief for the traffic congestion on I-95 at the present.
3. The alternate of building a 40 ft. (12m) depressed median for the entire length of the project by adding a 12' (3.6m) lane inside and a 12' (3.6m) lane outside was considered. It was discounted because of drainage concerns (shallow ditch, flat grades).

COMMENTS

1. A design exception will be required for the substandard stopping sight distance. I-95 at Satilla River bridge has minimum and desirable speed designs of 69 mph and 58 mph, respectively. This exception is recommended because the cost to correct the vertical alignment to meet the required stopping sight distance would not be justified.
2. The existing sub-standard superelevation will be corrected with leveling.
3. Reimbursable Utilities - In lieu of the Local Government, it is assumed that the department will pay for all eligible utility costs.
4. It is recommended that the Department separate the major bridges (Satilla River and White Oak Creek) with a separate construction project. See next page for cost.

By copy of this report, we request the Office of Programming to program a separate bridge project for the bridges over Satilla River and White Oak Creek so we may have the option to obtain a consultant contract for the design.

ESTIMATED COST

	PHASE I	PHASE II	PHASE I	PHASE II
CONSTRUCTION:	\$33,038,344	\$1,900,912	RIGHT-OF-WAY:	N/A N/A
E & C (10) :	\$3,303,835	\$190,092	ACQUIRED BY:	N/A N/A
INFLATION :	\$1,817,109	\$577,118	UTILITIES:	SEE COMMENTS

	PHASE I	PHASE II
TOTAL CONSTRUCTION COST:	\$38,159,288	\$2,668,122

ATTACHMENTS: COST ESTIMATE, TYPICAL SECTION, CONCEPT MEETING MINUTES, and PREPROGRAMMING AUTHORIZATION.

ESTIMATED COST W/ SEPARATE BRIDGE PROJECT
(SATILLA RIVER and WHITE OAK CREEK)

	PHASE I	PHASE I
CONSTRUCTION:	\$ 8,721,000 (Satilla River) \$ 5,182,000 (White Oak)	RIGHT-OF-WAY: N/A
E & C (10) :	\$ 1,390,300	ACQUIRED BY: N/A
INFLATION :	\$ 764,665	UTILITIES: N/A

	PHASE I
TOTAL CONSTRUCTION COST:	\$16,057,965

NEW ESTIMATED COST (126) (IF BRIDGES ARE SEPARATE)

	PHASE I	PHASE I
CONSTRUCTION:	\$19,135,344	RIGHT-OF-WAY: N/A
E & C (10) :	\$1,913,533	ACQUIRED BY: N/A
INFLATION :	\$1,052,443	UTILITIES: SEE COMMENTS

	PHASE I
TOTAL CONSTRUCTION COST:	\$22,101,311

PHASE I
PRELIMINARY COST ESTIMATE

PROJECT NUMBER: NH-IM-95-1(126) COUNTY: CAMDEN

DATE: JULY 27, 1994 ESTIMATED LETTING DATE:

PREPARED BY: Wayne G. Mote PROJECT LENGTH (MILES): 8.205
(Todd J. Ketner)

() PROGRAMMING PROCESS () CONCEPT DEVELOPMENT (X) DURING PROJ DEV.

PROJECT COST

	PHASE I	PHASE II
A. RIGHT-OF-WAY:		
1. PROPERTY (land & easement)_____ \$ (see concept minutes)	N/A	N/A
2. DISPLACEMENTS: Res.0 Bus.0 M.H.0 \$	N/A	N/A
3. OTHER COST (adm./court, inflation)_____ \$	N/A	N/A
SUBTOTAL:A \$	N/A	N/A
B. REIMBURSABLE UTILITIES:		
1. RAILROAD_____ \$	-	-
2. TRANSMISSION LINES_____ \$	SEE COMMENTS	
3. SERVICES_____ \$	SEE COMMENTS	
SUBTOTAL:B \$	N/A	N/A

C. CONSTRUCTION:

PHASE I PHASE II

1. MAJOR STRUCTURES:

a. BRIDGES - SATILLA RIVER	\$ 8,721,000	-
- ST. CANOE SWAMP	\$ 566,000	-
- WHITE OAK CREEK	\$ 5,182,000	-
b. OVERPASSES (JACKING)		
- PINE ISLAND RD.	\$ 150,000	-
SUBTOTAL:C-1	\$ 14,619,000	-

2. GRADING AND DRAINAGE:

a. EARTHWORK		
- uncl exc. 30,500cy x \$2.50	\$ -	76,250
b. borrow 525,297cy x \$5.00	\$ 2,626,485	-
c. drainage - inside -	\$ 747,000	-
- outside -	\$ 250,000	-
SUBTOTAL:C-2	\$ 3,623,485	76,250

3. BASE AND PAVING:

a. GRADED AGGREGATE BASE		
PHASE I - 203,370T x 13.16	\$ 2,676,350	-
PHASE II - 38,137T x "	\$ -	501,883
b. ASPHALT PAVING - PHASE I		
- .68"D - 5,022T x 34.50	\$ 173,259	-
- 1.5" FINE SMA 19,594T x 44.90	\$ 879,771	-
- 2" B - 37004T x 37.54	\$ 1,389,131	-
- BASE - 68,545T x 39.00	\$ 2,673,255	-
- TACK - 41,649G x .67	\$ 27,905	-
- 1.5" E (SHLDR) 8,173T x 38.59	\$ 315,397	-
c. OVERLAY - PHASE I		
- .75" D - 8,878T x 34.50	\$ 306,291	-
- 1.5" FINE SMA -19,594T x 44.90	\$ 879,771	-
- 2" B - 13,324T x 37.54	\$ 500,183	-
- TACK - 32,361G x .67	\$ 21,682	-
d. ASPHALT PAVING - PHASE II		
- 1.5" E - 2,923T x 34.50	\$ -	100,844
- 2" B - 13,063T x 37.54	\$ -	490,386
- TACK - 8,091G x .67	\$ -	5,421
e. OVERLAY - PHASE II		
- .75" D - 4,448T x 34.50	\$ -	153,456
- TACK - 4,054G x .67	\$ -	2,717

			PHASE I	PHASE II
f. ASPHALT PAVING - RAMPS				
- .75" D -	178T x 34.50	\$	6,141	-
- 1.5" E	391T x 44.90	\$	17,556	-
- 2" B -	521T x 37.54	\$	19,559	-
- BASE -	780T x 39.00	\$	30,420	-
- GAB -	3,036T x 13.16	\$	39,954	-
- TACK -	644G x .67	\$	432	-
g. ASPHALT OVERLAY - RAMPS				
- .75" D -	110T x 34.50	\$	3,795	-
- 1.5" FINE SMA	242T x 44.90	\$	10,866	-
- 2" B -	323T x 37.54	\$	12,126	-
- TACK -	300G x .67	\$	201	-
	SUBTOTAL:C-3	\$	9,984,045	1,254,707

4. LUMP ITEMS:

a. TRAFFIC CONTROL		\$	556,000	223,000
TEMP. BARRIER FOR BRIDGES				
- 6448' x \$22.00		\$	141,856	-
b. CLEARING AND GRUBBING				
316 AC @ \$3231		\$	1,020,996	-
28 AC @ "		\$	-	90,468
c. GRASSING				
89 AC x 1000		\$	89,000	-
20 AC x "		\$	-	20,000
d. EROSION CONTROL		\$	223,000	112,000
e. DETOURS		\$	-	-
	SUBTOTAL:	\$	2,030,852	445,468

5. MISCELLANEOUS:

a. LIGHTING		\$	-	-
b. SIGNING - STRIPING - SIGNAL		\$	2,075,703	124,487
c. GUARDRAIL 43923 LF @ 13.78		\$	605,259	-
d. OTHER - APPROACH WORK NEEDED FOR BRIDGES TO BE JACKED.		\$	100,000	-
	SUBTOTAL:C-5	\$	2,780,962	124,487

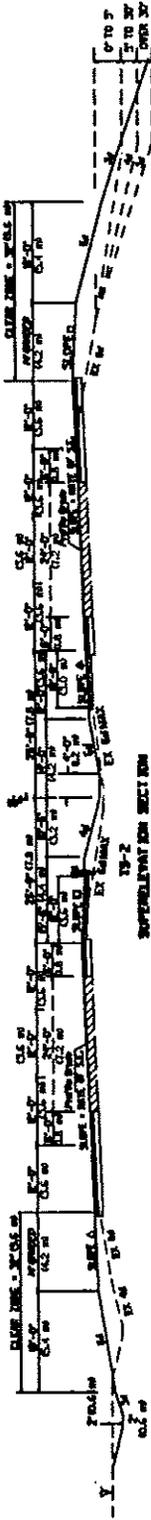
PHASE I
ESTIMATE SUMMARY

A. RIGHT-OF-WAY	\$	N/A	
B. REIMBURSABLE UTILITIES	\$	SEE COMMENT	
C. CONSTRUCTION		PHASE I	PHASE II
1. MAJOR STRUCTURES	\$	14,619,000	-
2. GRADING AND DRAINAGE	\$	3,623,485	76,250
3. BASE AND PAVING	\$	9,984,045	1,254,707
4. LUMP ITEMS	\$	2,030,852	445,468
5. MISCELLANEOUS	\$	2,780,962	124,487
6. SPECIAL FEATURES	\$	-	-
 SUBTOTAL CONSTRUCTION COST	\$	33,038,344	1,900,912
E. & C. (10%)	\$	3,303,835	190,092
INFLATION (5% PER YEAR, 1994) (5% PER YEAR, 1998)	\$	1,817,109	577,118
 TOTAL CONSTRUCTION COST	\$	38,159,288	2,668,122
		<u>PHASE I</u>	<u>PHASE II</u>
GRAND TOTAL PROJECT COST	\$	38,159,288	2,668,122

DATE	11/17/20
BY	11/17/20
CHECKED	11/17/20
SCALE	1"=10'

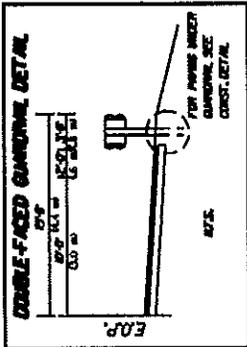
TYPICAL SECTIONS

52' (15.6 m) MED SUPER ELEVATION SECTION

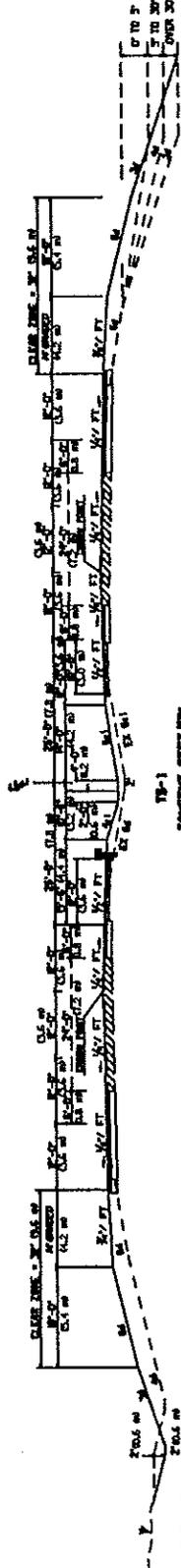


TP-2
SUPERELEVATION SECTION

APPLIES TO STA. 944+20 TO STA. 973+81
AND STA. 1140+81 TO STA. 1188+05



52' (15.6 m) MED TANGENT SECTION

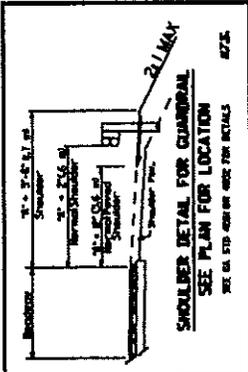


TP-1
TANGENT SECTION

APPLIES TO STA. 788+74 TO STA. 817+88.5
STA. 833+25.9 TO STA. 944+20
STA. 973+81 TO STA. 1028+49
STA. 1079+51 TO STA. 1133+25
STA. 1142+90 TO STA. 1148+81

AND STA. 1188+05 TO STA. 24+93.2
(EQUIDIVALENCE 1187+07.89 BK = 0+00 PWD)

SANTILLA RIVER BRIDGE STA. 817+88.5 TO 833+25.9
CHANGE SHARP BRIDGE STA. 1028+49 TO 1079+51
WHITE OAK CREEK BRIDGE STA. 1133+25 TO 1142+90



TYPICAL SECTION
PHASE I
SCALE = 1"=10'

▲ SLOPE 1/2" / 1'-0" OR RATE OF S.L.L. WICKEDER IS GREATER
▲ SLOPE 1/2" / 1'-0" OR RATE OF S.L.L. WICKEDER IS GREATER
CUTS AS FOLLOWS:
S.L. RATE OF 0.80'/FT. USE 1/2" IN 1'-0"
ALTERNATE DIFFERENCE IN WIDTHS AND PROFILES
SLOPE NOT TO EXCEED 0.87'/FT.

NOTE: An additional 4" to the shoulder width
be required on all 2% slopes to
facilitate the installation of guardrail.

CA. 11-18-55-11170

TYPICAL SECTIONS

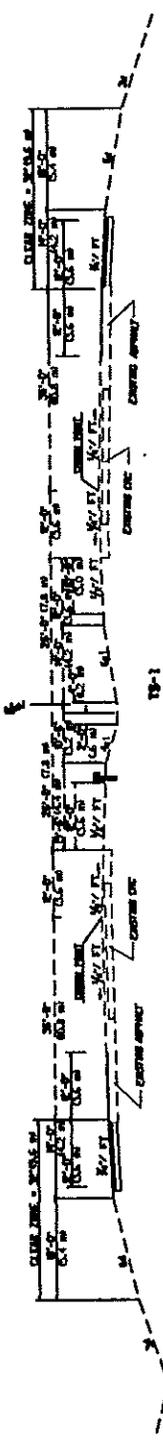
52' (15.6 m) MED SUPER ELEVATION SECTION



TS-2 SUPER ELEVATION SECTION

APPLIES TO STA. 944+20 TO STA. 973+81
AND STA. 1148+81 TO STA. 1186+09

52' (15.6 m) MED TANGENT SECTION



TS-1 TANGENT SECTION

APPLIES TO STA. 788+74 TO STA. 817+81.5
STA. 833+20.9 TO STA. 944+20
STA. 973+81 TO STA. 1028+49
STA. 1028+49 TO STA. 1133+25
STA. 1142+90 TO STA. 1148+81

AND STA. 1186+09 TO STA. 24+00.2
(EQUIVALENCE: 1197+07.51 BK : 0+00 PWD)

SANTILLA RIVER BRIDGE STA. 817+81.5 TO 833+20.9
CHARGE SWAMP BRIDGE STA. 1028+49 TO 1028+49
WHITE OAK CREEK BRIDGE STA. 1133+25 TO 1142+90

TYPICAL SECTION
PHASE II
SCALE= 1"=10'

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

COPY

INTERDEPARTMENT CORRESPONDENCE

FILE I-95 Corridor OFFICE Atlanta, GA.
I-95 Widening and Reconstruction DATE July 6, 1993

FROM 
Roland W. Hinners, P.E., State Road & Airport Design Engineer *JAK*

TO SEE DISTRIBUTION BELOW

SUBJECT MINUTES OF I-95 CORRIDOR MEETING WITH FHWA AND GDOT MANAGEMENT

The I-95 corridor meeting was held June 9, 1993 at 9:30 a.m. in the Road Design Conference Room. Persons present were: Jim Condron, Frank Julian, Floyd Moore, Lee Reynolds, all from FHWA and Charles Lewis, Frank Danchetz, Paul Mullins, Tom Turner, John Lively, Bobby Mustin, Wouter Gulden, Paul Liles, Holmes Clements, Roland Hinners, Jim Kennerly, Milton White, Jim Graybeal, Wayne Mote, Mike Reynolds, Kevin Hosey, and Jim Fuerst all from GDOT.

The meeting was opened by Jim Kennerly who stated that there were four different mainline typical sections considered for the I-95 corridor as follows: 40' median with Guardrail, Concrete Median Barrier, 52' median with Guardrail and 52' median without Guardrail. Jim Kennerly then turned the meeting over to Jim Condron for his comments on the different typical alternates.

Jim Condron stated that their two main concerns are safety and drainage. He said that he would not recommend narrow medians for rural Interstates in any cases and that I-95 is somewhat different from other projects with a 40' median. He also stated that he is concerned with the drainage aspects of the 40' median. He also said that they had problems with the Truman Parkway with drainage but it had a narrower median. He wanted to explore the possibility of widening all on the outside and retaining the 64' median or widening with one lane in one direction in the median and the other lane on the outside in the other direction.

Frank Danchetz was concerned that Jim Condron was talking about the entire corridor but Mr. Lewis wanted to discuss those projects north of I-16 and the projects south of U.S. 17. Frank asked if authorization had been given for NH-IM-95-1(108). John Lively said that unit 108 had been approved by FHWA. Jim Condron said that he was not aware that unit 108 had been approved but John Lively assured him that we have a signed copy of the concept from FHWA.

I-95 CORRIDOR
I-95 WIDENING AND RECONSTRUCTION
PAGE 2.

The meeting was then turned back over to Jim Kennerly. Jim stated that the GDOT's biggest concerns were safety drainage and wetland impacts. Jim talked about the median barrier alternate and said the GDOT is reluctant to go with it because of the drainage problems that would be expected because of the extremely flat grades that are on I-95.

Milton White stated that in order to drain the concrete median barrier alternate the shoulder would have to be rolled in order to give it a slope. This would be very unsafe since the shoulder would be peaked every 130 feet giving you approximately 260 feet between low point drop inlets. This would also be unsightly and the driver expectancy would be enhanced to provide a shoulder with a constant slope. Milton also stated that cross drain pipes would need to be jacked and bored at every other drainage structure to be able to adequately handle the runoff. Roland Hinners stated that the median barrier would involve sweeping and that the drainage structures and pipes may need to be cleaned approximately four times a year. He thought that this could be as risky as mowing the 13.5' strip of grass in the 40' median. Milton White also stated that the median barrier alternate would not be able to drain totally to the outside because of the possibility of hydroplaning.

Jim then talked about the 40 ft. median with Guardrail. He stated that with the 40 ft. median alternate the roadway would basically stay on the existing footprint which would minimize some of the wetland impacts. Jim also stated that the drainage provided should function adequately because we could use the existing side drains by extending them and placing a drop inlet between every existing drop inlet in the median. This alternate would have a shallow ditch of 1.13' in the median and it would carry the runoff. The question of maintaining a 13.5' strip of grass was brought up previously by District 5. They questioned the safety of mowing such a narrow strip of grass in the median on I-95. Jim then stated that perhaps we should consider other alternates.

The 52' median was subsequently considered. This median would almost double the median ditch depth to 2.2' and would allow for more storage of runoff in the median. There would be adequate lateral clearance under the overhead bridges to handle the future (phase 2) four lane section. The downside of this typical section is that in the existing CRC sections, there would be a reflective crack between the existing CRC and the new asphalt pavement in the center of the inside lanes and the center of the outside under Phase 1.

I-95 CORRIDOR
I-95 WIDENING AND RECONSTRUCTION
PAGE 3.

Jim Condron asked what kind of slope would be appropriate and which way would it drain. Jim Kennerly responded that a $\frac{1}{4}$ " would be used for the cross slope and that it would drain one lane and shoulder inside and ultimately three lanes and shoulder to the outside.

Jim Kennerly said that Office of Road Design's plans are now to submit NH-IM-95-1(124) with a 52' median with Guardrail based on the fact that motorists would feel more comfortable with a 52' median and that with the wider median, cross over median accidents would be less likely to occur as well as provide for more runoff storage due to the deeper ditch.

Frank Julian stated that the need for Guardrail with a 52' median depends on how high the traffic volume would be and that guardrail may not be necessary in lower traffic volume areas. Charles Lewis agreed with Frank Julian and added that he felt that both options were feasible but that he preferred to use the Guardrail with the 52' median. Frank Julian gave out a cost comparison chart of the four alternates based on installation cost and user cost and said that Alternate #3, 52' median without Guardrail, is exploring a new area and should be considered in segments of lower traffic.

Jim Condron asked what design storm frequency the drainage calculations were based on? Jim Kennerly and Milton White said it was based on a 50 year design storm.

Tom Turner stated that existing cross slopes were probably flatter than the $\frac{1}{4}$ "/ft. shown on the old plat and that we should verify this slope. He said it would be difficult to construct the transition from roadway crown point to Bridge crown point but it could be accomplished.

Charles Lewis agreed that the bridges should drain to the outside if the crown point is on the inside lane edge of pavement but keep the crown in the center of the two lanes (existing) if bridges are crowned in the center (2 lane section). Paul Liles stated that we would not close in the bridges along I-95 with the 52' median. Mike Reynolds suggested that we might want to transition to a 40 foot median at the Savannah River Bridge in order to keep from having to drain 4 lanes to the outside across such a long bridge (2800 feet). Frank Danchetz suggested that we end the project at the

I-95 CORRIDOR
I-95 WIDENING AND RECONSTRUCTION
PAGE 4.

S.R. 21 Interchange. Mike Reynolds stated that capacity studies show that this interchange's northbound entrance ramp needs additional lanes northbound on I-95 to function properly in the design year. It was agreed to end the widening northbound midway between the last interchange and the Savannah River Bridge, and to begin the third lane southbound just south of the Savannah River. Charles Lewis and the FHWA agreed that we should not widen the Savannah River Bridge with NH-IM-95-1(124), but widen those bridges later when South Carolina brings their section of I-95 on line.

Jim Condron asked how is the 3½" overlay going to affect the CRC pavement? Wouter Gulden said there should be no unmanageable problems with reflective cracking and that we should overlay sections of CRC before it began to show more serious distress and we would replace any poor sections of CRC. Wouter also said that we should use a waterproof membrane over the joint between the asphalt and the CRC.

John Lively asked Jim Graybeal if we went with a 52' median would it delay his projects in Camden County. Jim Graybeal answered that he will have to redo the Concept Report for NH-IM-95-1(114), but he should be able to make the April 1994 letting as the project is scheduled now.

Jim Condron then recommended that we use the 52' median with or without Guardrail depending on the traffic volumes of the area. He also suggested that we keep the Corp of Engineers and Fish and Wildlife up to date on what we are planning to do on I-95. He indicated that early consideration of wetland impacts have played a part in our decision making and we should make these resource agencies aware of this. He also said that the concrete median barrier should no longer be considered as a corridor alternative.

The meeting was adjourned.

RWH:MGR:JAK:JAF:pef

xc: John Lively
Charles Lewis
Frank Danchetz
Paul Mullins
Tom Turner
FHWA, Attn: Floyd Moore

Bobby Mustin
Ronald Collins/Wouter Gulden
Paul Liles
Marion Waters
Craig Brack

GEORGIA DEPARTMENT OF TRANSPORTATION
WORK AUTHORIZATION

REF: A. State Transportation Improvement Program P.I.# 511082
B. Federal Aid Item # 021103

* CHARACTER OF PROPOSED WORK AND REMARKS/STIPULATIONS
*
* PRELIMINARY ENGINEERING AND ASSOCIATED INCIDENTALS FOR THE
* FUTURE WIDENING
* 039-00405D-01466N; 01466N; 01930N; 01931N; 02076N; 02076N
* 039-0038; 0039; 0040; 0041; 0042; 0043-0
* ROW APPRAISALS AND ASSOCIATED INCIDENTALS. FA PARTICIPATION
* WILL BE LIMITED TO THE AREAS INCORPORATED INTO THE FINAL ROW
* FOR PROJECT.
*

SMOCL NO SEC UNIT COUNTY CD FY PHASE
NH-95-1 (126) CAMDEN 1 1993 P/E

STATE ROUTE: SR 405 MILEAGE: 8.44
I-95 FM SR 25 SPUR TO CR 138/INCL BRIDGES
REQUEST: Federal State Other Fund/Appn Code
\$380,000 \$304,000 \$76,000 -0- NH(315)

*
*
* Items marked below with [XX] are applicable to this phase
* of work.
*

FHA involvement: [X] Full [] Exempt [] CA

* [] Urban Transportation planning actions per 23 CFR 450.,
* Sub B, Annual Element/TIP Identifying #
* [X] Categorical Exclusion per 23 CFR 771.

Authorization requested for amount of federal funds shown above.

* [] Work to be accomplished by: _____
*

Signed: [Signature] Date: 1-8-93
State Transportation Programming Engineer

* [X] ADJUSTMENT OF UTILITIES.
*
* [] FHA participation limited to the areas incorporated into
* the final project R-O-W.
*

Authorization granted to proceed.

Signed: [Signature] Date: 2-4-93
For the Division Administrator, FHWA

Work is authorized and is to proceed as scheduled. The
Director of Administration is requested to open the necessary
accounts.

Signed: [Signature] Date: 2-4-93
Commissioner, Ga. DOT

REVIEWED AND RECORDED
BY THE
OFFICE OF PROGRAMMING
DATE 1-8-93
BY [Signature]

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN

PROJECT CONCEPT REPORT

NH-IM-95-1(126)
NH-IM-95-1(132)
CAMDEN COUNTY

FEDERAL ROUTE NO: I-95
STATE ROUTE NO: 405
GADOT P.I. NO: 511082,511083

Date of Report: SEPT. 2, 1994

RECOMMENDATION FOR APPROVAL	
<u>9/5/94</u> DATE	<u><i>James Kenney</i></u> State Road & Airport Design Engineer
<u>9/29/94</u> DATE	<u><i>Oil & Thibault</i></u> State Environmental Engineer
_____ DATE	_____ State Traffic Operations Engineer
_____ DATE	_____ District Engineer
_____ DATE	_____ State Bridge Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE NH-IM-95-1(126) & (132) Camden County OFFICE Traffic Operations
P.I. Nos. 511082 & 511083 Atlanta, Georgia
DATE September 28, 1994

FROM *ABR for* Marion G. Waters, III, P.E., State Traffic Operations Engineer

TO Bob Mustin, P.E., Project Review Engineer

SUBJECT Project Concept Report Review

We have reviewed the concept report on the above projects for the widening and reconstruction of 8.2 miles (13.2 km) of I-95 from SR 25 Spur to the CR 138 overpass in Camden County. Construction is proposed to be in two phases as separate projects. Unit (126) is Phase I and will widen the roadway from two to three lanes in each direction. Unit (132) is Phase II and will widen the roadway from three to four lanes in each direction. All 8.2 miles (13.2 km) of the project has an existing 64 foot (19.2 m) median.

Phase I construction will add 24 feet (7.2 m) of full depth paving in each direction plus grading for the final Phase II section. In the 64 foot (19.2 m) median section the full depth paving will add 6 feet (1.8 m) to the inside and 18 feet (5.4 m) to the outside. One of the Phase II travel lanes in each direction will be used as a 12 foot (3.6 m) paved shoulder in Phase I. Mainline bridges will be widened to four 12 foot (3.6 m) lanes in each direction with 14 foot (4.2 m) shoulders inside and outside.

Phase II will include 14 foot (4.2 m) outside shoulders (12 foot (3.6 m) paved) in both directions and a 12 foot (3.6 m) inside shoulder (10 foot (3.0 m) paved) in one direction and a 15.5 foot (4.4 m) inside shoulder (12 foot (3.6 m) paved) in the other direction to accommodate double-face guardrail in the proposed 52 foot (15.6 m) median.

In Phase I, the report proposes to utilize the three inside lanes for traffic with a 52 foot (15.6 m) median and the outer 12 feet (3.6 m) of full depth pavement as the outside shoulder. A 14 foot (4.2 m) graded shoulder would be added to the outside. Under Phase II, 12 feet (3.6 m) of the graded outside shoulder would be paved and the full depth Phase I outside shoulder would be overlaid with a riding surface.

Bob Mustin
September 28, 1994
Page 2

We recommend the concept for Phase I be revised to utilize the three outside lanes for traffic rather than the three inside lanes in the existing 64 foot (19.2 m) median section. This will provide a number of advantages without affecting the basic design since all grading for the Phase II section will be done on Phase I.

1) The overhead guide signs can be installed in Phase I at the correct locations for use on Phase II. If the inside lanes are used, the gore location of exit ramps will shift on Phase II requiring relocation of the exit direction signs. The advance guide sign structures would also have to be relocated, or sign bridges used, since the maximum length of cantilevered sign structures is presently 40 feet.

2) The double-face guardrail could be eliminated from the median since the net effect of the Phase I project would be to widen the median to 76 feet (22.8 m). This would not only be a cost savings in the construction, but would eliminate the maintenance costs of the guardrail until Phase II is implemented and the "hazard" to motorists of the guardrail located 12 feet (3.6 m) from the travel lane.

3) A more consistent roadway section would be provided for motorists on I-95 since preliminary plans are to utilize the outside three lanes in split median sections which constitute approximately 25% of the corridor. The need for special treatments in the transitions between these two sections would also be eliminated.

We believe this concept will improve safety and operational capacity on this section of roadway. Subject to the above recommendations, we therefore find this report satisfactory for approval.

MBW:TOC:dc

Attachment (signature page)

cc: David Studstill
James Kennerly (Attn: Jim Graybeal)
Wayne Hutto, w/attachment
Craig Brack, District Engineer, Jesup
Attention: Jimmy McCall w/attachment
General Files

RECEIVED

SEP 30 1994

PRECONSTRUCTION

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN

PROJECT CONCEPT REPORT

NH-IM-95-1(126)
NH-IM-95-1(132)
CAMDEN COUNTY

FEDERAL ROUTE NO: I-95
STATE ROUTE NO: 405
GADOT P.I. NO: 511082,511083

Date of Report: SEPT. 2, 1994

RECOMMENDATION FOR APPROVAL	
<u>9/5/94</u> DATE	<u><i>James Kenney</i></u> State Road & Airport Design Engineer
DATE	State Environmental Engineer
<u>9/29/94</u> DATE	<u><i>M. G. Waters, P.E.</i></u> State Traffic Operations Engineer
DATE	District Engineer
DATE	State Bridge Engineer

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF ROAD AND AIRPORT DESIGN

PROJECT CONCEPT REPORT

NH-IM-95-1(126)
NH-IM-95-1(132)
CAMDEN COUNTY

FEDERAL ROUTE NO: I-95
STATE ROUTE NO: 405
GADOT P.I. NO: 511082,511083

Date of Report: SEPT. 2, 1994

RECOMMENDATION FOR APPROVAL	
<u>9/5/94</u> DATE	<u><i>James Kenney</i></u> State Road & Airport Design Engineer
DATE	State Environmental Engineer
DATE	State Traffic Operations Engineer
DATE	District Engineer
<u>9/27/94</u> DATE	<u><i>Paul V. Tiller Jr.</i></u> State Bridge Engineer