STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI
SECRETARY

March 9, 2012

U. S. Army Corps of Engineers
Regulatory Field Office
69 Darlington Ave.
Wilmington, NC 28403

Attn: Mr. Ronnie Smith
NCDOT Coordinator

Dear Sir:

Subject: **Application for Section 404 Nationwide Permit 3 and Section 10 Permit** for the proposed replacement of Bridge No. 85 on I-95 Business / US 301 over Cape Fear River, Cumberland County. TIP No. B-4091; Federal Aid Project No. BRSTP-0301(12); WBS 33449.1.1

Please find enclosed the PCN form, stormwater management plan, permit drawings, and half-size plan sheets for the above referenced project. A Categorical Exclusion (CE) was completed for this project in January 2011, and distributed shortly thereafter. Additional copies will be made available upon request. The North Carolina Department of Transportation (NCDOT) proposes to replace existing Bridge No. 85 on I-95 Business / US 301 over Cape Fear River in Cumberland County. The project involves replacement of the existing 965-foot structure with a 980-foot long bridge in approximately the same location. Improvements to the approach roadways will be required for a distance of approximately 1,540 feet to the west and 420 feet to the east of the new structure.

The let date for this project is August 21, 2012; however, the let date may advance as additional funds become available.

Regulatory approvals

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that these activities be authorized by Nationwide Permit 3.

Section 10 Permit: Request is hereby made for a Section 10 Permit as required by the Rivers and Harbors Act.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6100
FAX: 919-212-5785

WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

Section 401 Water Quality Certification: We anticipate 401 General Certification number 3687 will apply to this project. All general conditions of the Water Quality Certification will be met and therefore NCDOT is not requesting written approval. NCDOT is providing two copies of this application to the NCDWQ for their review.

A copy of this permit application and its distribution list will be posted on the NCDOT website at http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html

Thank you for your assistance with this project. If you have any questions or need additional information, please contact John Merritt at jsmerritt@ncdot.gov or (919) 707-6140.

Sincerely,

Gregory J. Thorpe, Ph.D., Manager
Project Development and Environmental Analysis Unit

cc:

NCDOT Permit Application Standard Distribution List

Office Use Only:
Corps action ID no. _____
DWQ project no. _____
Form Version 1.3 Dec 10 2008

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit	☒ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 3	or General Permit (GP) number:	
1c. Has the N WP or GP number been verified by the Corps?	☐ Yes	☒ No

1d. Type(s) of approval sought from the DWQ (check all that apply):

☐ 401 Water Quality Certification – Regular ☐ Non-404 Jurisdictional General Permit

☐ 401 Water Quality Certification – Express ☐ Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: ☒ Yes ☐ No	For the record only for Corps Permit: ☐ Yes ☒ No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.		☐ Yes ☒ No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.		☐ Yes ☒ No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?		☐ Yes ☒ No

2. Project Information

2a. Name of project:	Replacement of Bridge No. 85 on I-95 Business / US 301
2b. County:	Cumberland
2c. Nearest municipality / town:	Cape Fear River
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4091

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	*not applicable*
3c. Responsible Party (for LLC i f applicable):	*not applicable*
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6140
3g. Fax no.:	(919) 212-5785
3h. Email address:	jsmerritt@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☐ Other, specify:
4b. Name:	*not applicable*
4c. Business name (if applicable):	
4d. Street address:	
4e. City, state, zip:	
4f. Telephone no.:	
4g. Fax no.:	
4h. Email address:	
5. Agent/Consultant Information (if applicable)	
5a. Name:	*not applicable*
5b. Business name (if applicable):	
5c. Street address:	
5d. City, state, zip:	
5e. Telephone no.:	
5f. Fax no.:	
5g. Email address:	

B. Project Information and Prior Project History

1. Property Identification

1a. Property identification no. (tax PIN or parcel ID):	*not applicable*
1b. Site coordinates (in decimal degrees):	Latitude: 35.058667 (DD.DDDDDD) Longitude: - 78.855127 (-DD.DDDDDD)
1c. Property size:	20 acres

2. Surface Waters

2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Cape Fear River
2b. Water Quality Classification of nearest receiving water:	C
2c. River basin:	Cape Fear

3. Project Description

3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application:

Land use in the area consists primarily of industrial development along roadways with forested land along Cape Fear River.

3b. List the total estimated acreage of all existing wetlands on the property:

NA

3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property:

280 ft.

3d. Explain the purpose of the proposed project:

To replace a structurally deficient and functionally obsolete bridge.

3e. Describe the overall project in detail, including the type of equipment to be used:

The project involves replacing a 965-foot bridge with a 980-foot, 7-span bridge on the existing alignment with an off-site detour. Standard road and bridge building equipment, such as trucks, dozers, and cranes will be used.

4. Jurisdictional Determinations

4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments: The jurisdictional determination (JD) has expired and will be reapplied for in conjunction with this permit. Original JD attached.	☒ Yes ☐ No ☐ Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary ☒ Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Josh Witherspoon	Agency/Consultant Company: Environmental Services, Inc. Other:

4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.

The JD was issued on December 27, 2004. Please find the attached JD.

5. Project History

5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☐ Yes ☒ No ☐ Unknown

5b. If yes, explain in detail according to "help file" instructions.

6. Future Project Plans

6a. Is this a phased project?	☐ Yes ☒ No

6b. If yes, explain.

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for your project (check all that apply):

☐ Wetlands ☐ Streams - tributaries ☐ Buffers

☒ Open Waters ☐ Pond Construction

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)
Site 1 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	

2h. Comments:

2. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
					3h. **Total stream and tributary impacts**	0 Perm 0 Temp

3i. Comments: I

3. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 ☐ P ☒ T	Cape Fear River	Temporary fill	River	0.05
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
			4f. Total open water impacts	0.05

4g. Comments: A temporary causeway and barge access will be needed to remove existing structure as well as construct proposed structure. Permanent surface water impacts due to bents will be 0.01 ac.

4. Pond or Lake Construction

If pond or lake construction proposed, then complete the chart below.

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded
P1								
P2								
5f. Total								

5g. Comments:

5h. Is a dam high hazard permit required?	☐ Yes ☐ No If yes, permit ID no:
5i. Expected pond surface area (acres):	
5j. Size of pond watershed (acres):	
5k. Method of construction:	

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

6a. Project is in which protected basin?			☐ Neuse ☐ Catawba	☐ Tar-Pamlico ☐ Randleman	☐ Other:
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☐ P ☐ T			☐ Yes ☐ No		
		6h. **Total buffer impacts**			
6i. Comments:					

D. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.

The proposed bridge is 15 feet longer than the existing bridge, the proposed bridge will be at approximately the same grade as the existing structure,use of minimum 3:1 side slopes, and there will be riprap at runoff outlets for erosion protection.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.

NCDOT Best Management Practices for Bridge Demolition, Removal and Construction will be followed, as well as those for Sedimentation and Erosion Control and the utilization of an off-site detour. The temporary fill placed in the river will be removed and re-graded to preconstruction contours.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☐ Yes ☒ No If no, explain: Due to the minimal impacts to Waters of the U.S., no compensatory mitigation is proposed.
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☐ Corps
2c. If yes, which mitigat ion option will be used for this project?	☐ Mitigation bank ☐ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation

3. Complete if Using a Mitigation Bank

3a. Name of Mitigation Bank: not applicable

3b. Credits Purchased (attach receipt and letter)	Type	Quantity

3c. Comments:

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.	☐ Yes
4b. Stream mitigation requested:	linear feet
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold
4d. Buffer mitigation requested (DWQ only):	square feet
4e. Riparian wetland mitigation requested:	acres
4f. Non-riparian wetland mitigation requested:	acres
4g. Coastal (tidal) wetland mitigation requested:	acres

4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?				☐ Yes ☒ No
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
	6f. **Total buffer mitigation required:**			
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).				
6h. Comments:				

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	☐ Yes ☒ No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments: N/A	☐ Yes ☐ No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	☒ Yes ☐ No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: see attached	
2e. Who will be responsible for the review of the Stormwater Management Plan?	☐ Certified Local Government ☐ DWQ Stormwater Program ☒ DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	not applicable
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	☐ Phase II ☐ NSW ☐ USMP ☐ Water Supply Watershed ☐ Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	☐ Coastal counties ☐ HQW ☐ ORW ☐ Session Law 2006-246 ☐ Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements? **N/A**	☐ Yes ☐ No
5b. Have all of the 401 Unit submittal requirements been met? **N/A**	☐ Yes ☐ No

F. Supplementary Information		
1. Environmental Documentation (DWQ Requirement)		
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☒ Yes	☐ No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	☒ Yes	☐ No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	☒ Yes	☐ No
2. Violations (DWQ Requirement)		
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes	☒ No
2b. Is this an after-the-fact permit application?	☐ Yes	☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):		
3. Cumulative Impacts (DWQ Requirement)		
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	☐ Yes ☒ No	
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.		
4. Sewage Disposal (DWQ Requirement)		
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. NA		

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	☐ Yes	☒ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☐ Yes	☒ No
5c. If yes, ind icate the USFWS Field Office you have contacted.	☐ Raleigh ☐ Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NHP, and NCDOT field surveys		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☐ Yes	☒ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation and concurrence from the NC Department of Cultural Resources, State Historic Preservation Office, dated January 5, 2004.		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Flood maps		

Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	03/09/2012 Date

Knapp

U.S. ARMY CORPS OF ENGINEERS
Wilmington District

Action ID: 2002-00467 **County:** Cumberland

Notification of Jurisdictional Determination

Requestor:
Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development & Environmental Analysis
1548 Mail Service Center
Raleigh, N.C. 27699-1548

Authorized Agent:
Mr. Josh Witherspoon
Environmental Services, Inc.
9600-G Southern Pine Boulevard
Charlotte, NC 28273

Size and Location of Project (waterbody, Highway name/number, town, etc.): TIP Project No. B-4091, State Project No. 8.1444101, Bridge No. 85 on I-95 Business over Cape Fear River, Cumberland County, North Carolina.

Basis for Determination: Type 329 navigable waters of the United States, Cape Fear River, Cape Fear River Basin.

On **July 9, 2004** the undersigned inspected the Section 404 jurisdictional boundaries as field delineated by the NCDOT and/or its representatives for the subject NCDOT project/corridor. The project site was inspected and the delineated jurisdictional boundaries as identified on the attached plans were found to accurately reflect the limits of Corps jurisdiction. The field delineated jurisdictional limits, as shown on the attached plans dated **April, 2004**, can be relied on for project planning and impact assessment. This verification is valid for five (5) years from the date of this letter.

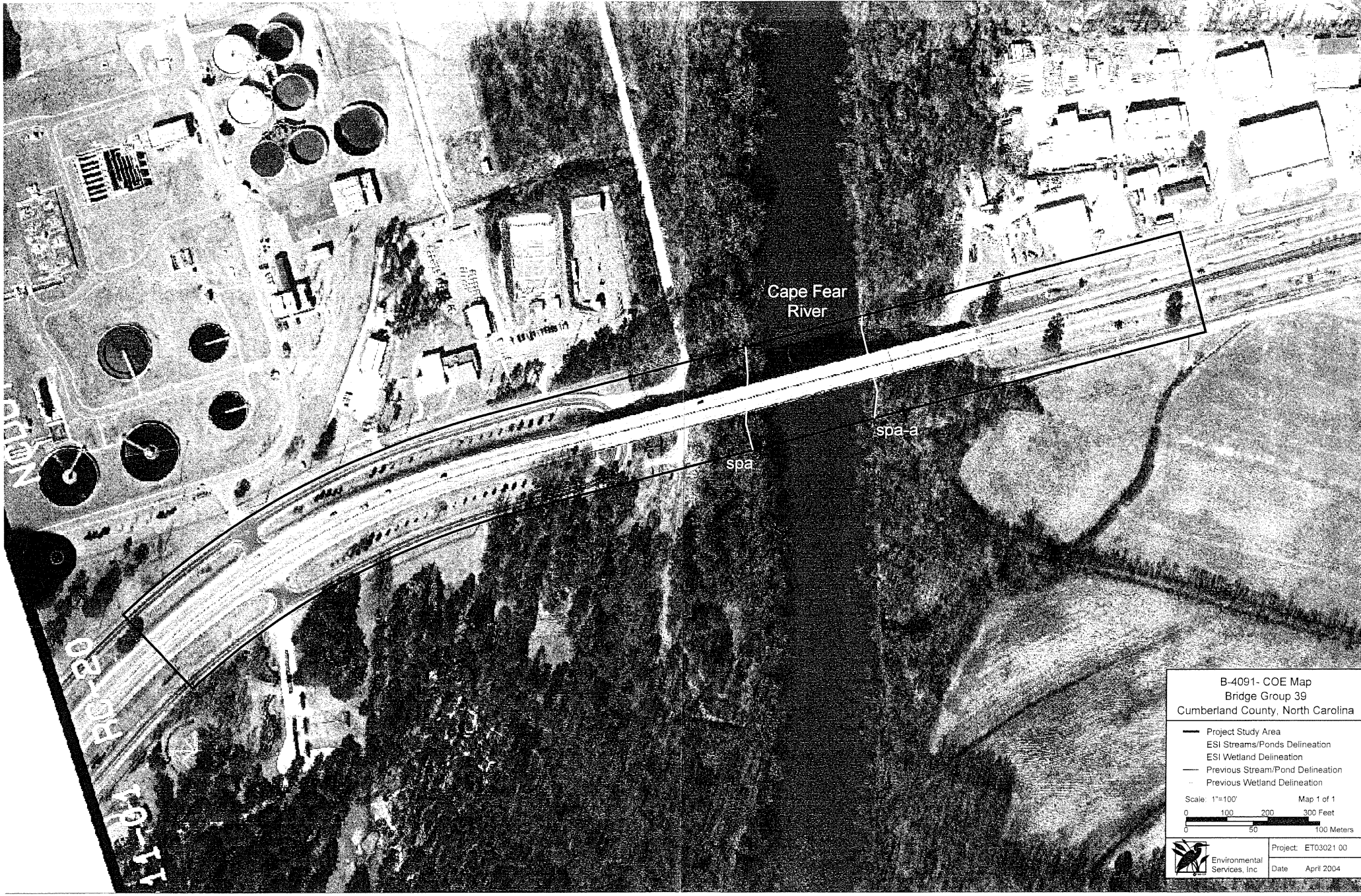
Any placement of dredged or fill material within the delineated jurisdictional limits will require Department of the Army authorization pursuant to Section 404 of the Clean Water Act, as amended (33 USC 1344). Any un-authorized placement of dredged or fill material within the delineated jurisdictional limits would be a violation of Section 301 of the Clean Water Act (33 USC 1311) and subject to enforcement action. If you have any questions regarding this verification or the Corps of Engineers' regulatory program, please contact Mr. Richard K. Spencer at 910-251-4172.

Project Manager Signature Richard K. Spencer

Richard K. Spencer

Date December 27, 2004 **Expiration Date** December 27, 2009

CF: Jim Rerko, DEO, NCDOT Div. 6


Cape Fear
River
spa-a
spa
NORTH
B-4091- COE Map
Bridge Group 39
Cumberland County, North Carolina
Project Study Area
ESI Streams/Ponds Delineation
ESI Wetland Delineation
Previous Stream/Pond Delineation
Previous Wetland Delineation
Scale: 1"=100'
Map 1 of 1
0 100 200 300 Feet
0 50 100 Meters
Environmental Services, Inc
Project: ET03021 00
Date April 2004

TIP PROJECT: B-4091

CONTRACT: C202879

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4091	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33449.1.1	BRSTP-301(12)	P.E.
33449.3.1	BRSTP-301(12)	R/W, UTIL.

Permit Drawing
Sheet 1 of 7

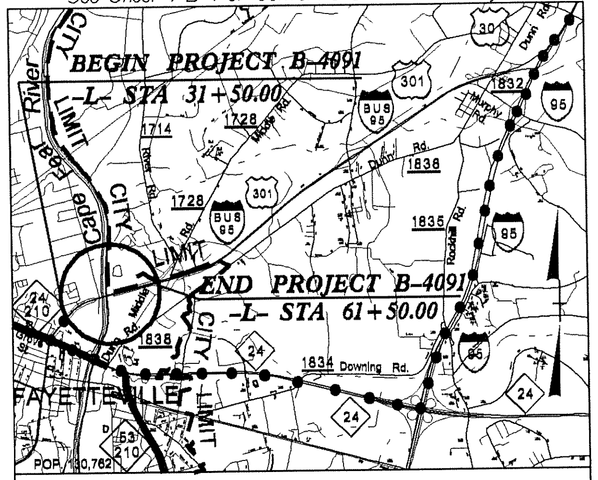
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

LOCATION: I-95 BUS LOOP & US 301 - REPLACE BRIDGE 85 OVER CAPE FEAR RIVER, SR 1738 & SR 1741 IN FAYETTEVILLE

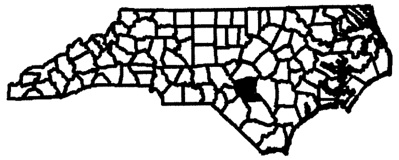
SURFACE WATER IMPACTS

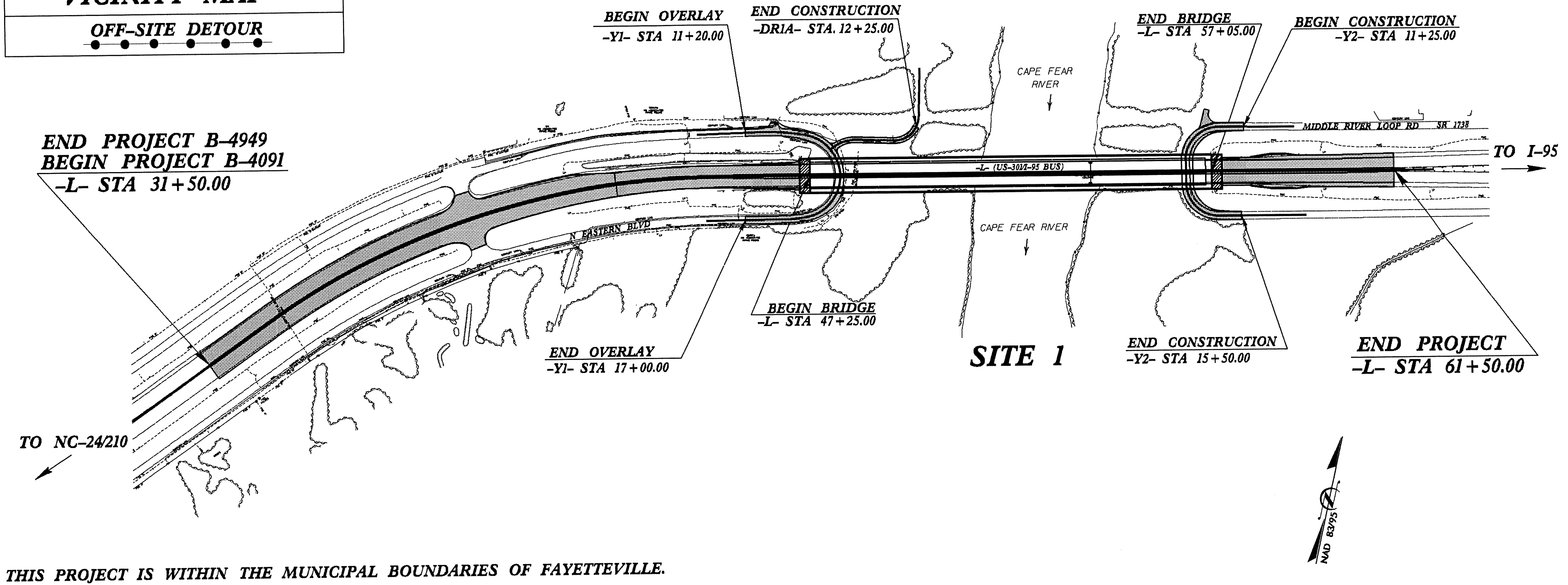
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Plan Sheet Symbols



VICINITY MAP

OFF-SITE DETOUR ● ● ● ● ● ●





THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF FAYETTEVILLE.
THERE IS CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHOULD BE PERFORMED TO THE LIMITS ESTABLISH BY METHOD III.

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2012 = 25,285
ADT 2035 = 37,170
DHV = 10 %
D = 55 %
*T = 7 %
V = 50 MPH
* TTST 3% DUAL 4%
FUNC. CLASS. = FREEWAY
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4091 = 0.382
LENGTH STRUCTURE TIP PROJECT B-4091 = 0.186
TOTAL LENGTH TIP PROJECT B-4091 = 0.568

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 19, 2011

LETTING DATE:
AUGUST 21, 2012

TONY HOUSER, PE
PROJECT ENGINEER

JEFFREY L. TEAGUE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

B-4091	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 2 of 7

REVISIONS

8/17/99

NAD 83/95

-DRIA- PC Sta. 10+07.06
-DRIA- POT Sta. 10+00.00=
-Y1- POC Sta.13+40.00
-DRIA- PT Sta. 10+68.56
-DRIA- POT Sta. 13+70.12
-Y1- POT Sta. 10+00.00
-Y1- PC Sta. 11+59.00
-Y1- PCC Sta. 12+68.82
-DRIA- PT Sta. 12+51.78
-DRIA- PC Sta. 11+57.16
-L- PT Sta. 44+90.61
-Y1- POT Sta. 17+97.87
-Y1- PT Sta. 16+04.87
-Y1- PCC Sta. 15+48.58

MATCHLINE -L- STA 40+00.00 SEE SHEET 4

MATCHLINE -L- STA 52+00.00 SEE SHEET 6

I S F BARN
ISBRK BUS.
+90.61 -L- 130.00' LT (EXIST R/W)
+90.61 -L- 130.00' RT (EXIST R/W)
GRAVEL
WOOD TOWER
WOODS
BST
CENTURY LINK
CITY OF FAYETTEVILLE
NO ASSOCIATED PIPING FOUND
(2)WM's NO ASSOCIATED PIPING FOUND
EXISTING R/W
RETAIN EX. DI
RETAIN
15" RCP-IV
18" RCP-IV
2GI
TYPE-III
ATTENUATOR
Convert to JB
GRAU 350
N EASTERN BLVD
19' BST
6' IRON FENCE
APPROXIMATE
FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE
CAPE FEAR BOTANICAL GARDEN
CAPE FEAR RIVER
BARGE LANDING
TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100' 200' 300'
SCALE: 1"= 100'

SITE 1

$$$$$$$$SYSTIME$$$$$
$$$$$$$$FILENAME$$$

B-4091	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 3 of 7

REVISIONS

8/17/99

NAD 83/95

-DRIA- PC Sta. 10+07.06
-DRIA- POT Sta. 10+00.00=
-Y1- POC Sta. 13+40.00
-DRIA- PT Sta. 10+68.56
-DRIA- POT Sta. 13+70.12
-Y1- POT Sta. 10+00.00
-Y1- PC Sta. 11+59.00
-Y1- PCC Sta. 12+68.82
-DRIA- PC Sta. 11+57.16
-DRIA- PT Sta. 12+51.78
-L- PT Sta. 44+90.61
-Y1- POT Sta. 17+97.87
-Y1- PT Sta. 16+04.87
-Y1- PCC Sta. 15+43.58

MATCHLINE -L- STA 40+00.00 SEE SHEET 4

MATCHLINE -L- STA 52+00.00 SEE SHEET 6

BARGE LANDING

CAPE FEAR BOTANICAL GARDEN

FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

CITY OF FAYETTEVILLE

CENTURY LINK

ISBRK BUS.

1S F BARN

GRAVEL

WOODS

WOOD TOWER

RETAIN EX. DI

15" RCP-IV

18" RCP-IV

24" RCP-IV

ATTENUATOR

Convert to JB

+90.61 -L-
130.00' LT
(EXIST R/W)

+90.61 -L-
130.00' RT
(EXIST R/W)

NO ASSOCIATED PIPING FOUND

12"WM's NO ASSOCIATED PIPING FOUND

6' IRON FENCE

8" CHL 3SBW

N EASTERN BLVD

EXISTING R/W

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100' 200' 300'
SCALE: 1"= 100'

SITE 1

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$FILENAME$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4091	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 4 of 7

BARGE LANDING

SITE 1

SCALE: 1"= 100'

NAD 83/95

MATCHLINE -L- STA 52+00.00 SEE SHEET 5

REVISIONS 8/17/99

CAPE FEAR RIVER

FULCHER INVESTMENTS, LLC

-Y2- PC Sta. 11+85.94

-Y2- POT Sta. 10+00.00

+55.00 -L- 160.00' LT EXIST RW

+90.00 -L- 160.00' LT EXIST RW

+45.00 -L- 141.16' LT (EXIST R/W)

2 LOUIS A. FULCHER

1 SMTL BUS

1 SF BUS

GRAVEL

48" CONC

CONC

STARR FAMILY GROUP LLC

PK NAIL

15" RCP

CENTURY LINK

EIP

-Y2- PT Sta. 13+16.98

RETAIN 15" RCP

MIDDLE RIVER LOOP ROAD SR 1737 18' BST

48" WW ISBW

-L- PT Sta. 62+50.00

14" RCP-IV

2GI

TYPE-III

GRAU 350

CB

SBL I-95/ US 301 36'BST

NBL I-95/ US 301 36'BST

CENTERLINE CAP FOR COLUMN

TS

-Y2- PC Sta. 13+71.65

WOODS

EXISTING R/W

+50.00 -Y2- EXIST R/W

+80.00 -Y2- EXIST R/W 50.00' RT

+75.00 -Y2- 55.00' RT

RETAIN 15' RCP

+50.00 -L- 137.41' RT (EXIST R/W)

FAYETTEVILLE COMMUNITY CHURCH

3

-Y2- POT Sta. 17+09.32

1 RIVER BLUFF PARTNERSHIP LLC

-Y2- PT Sta. 14+95.85

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

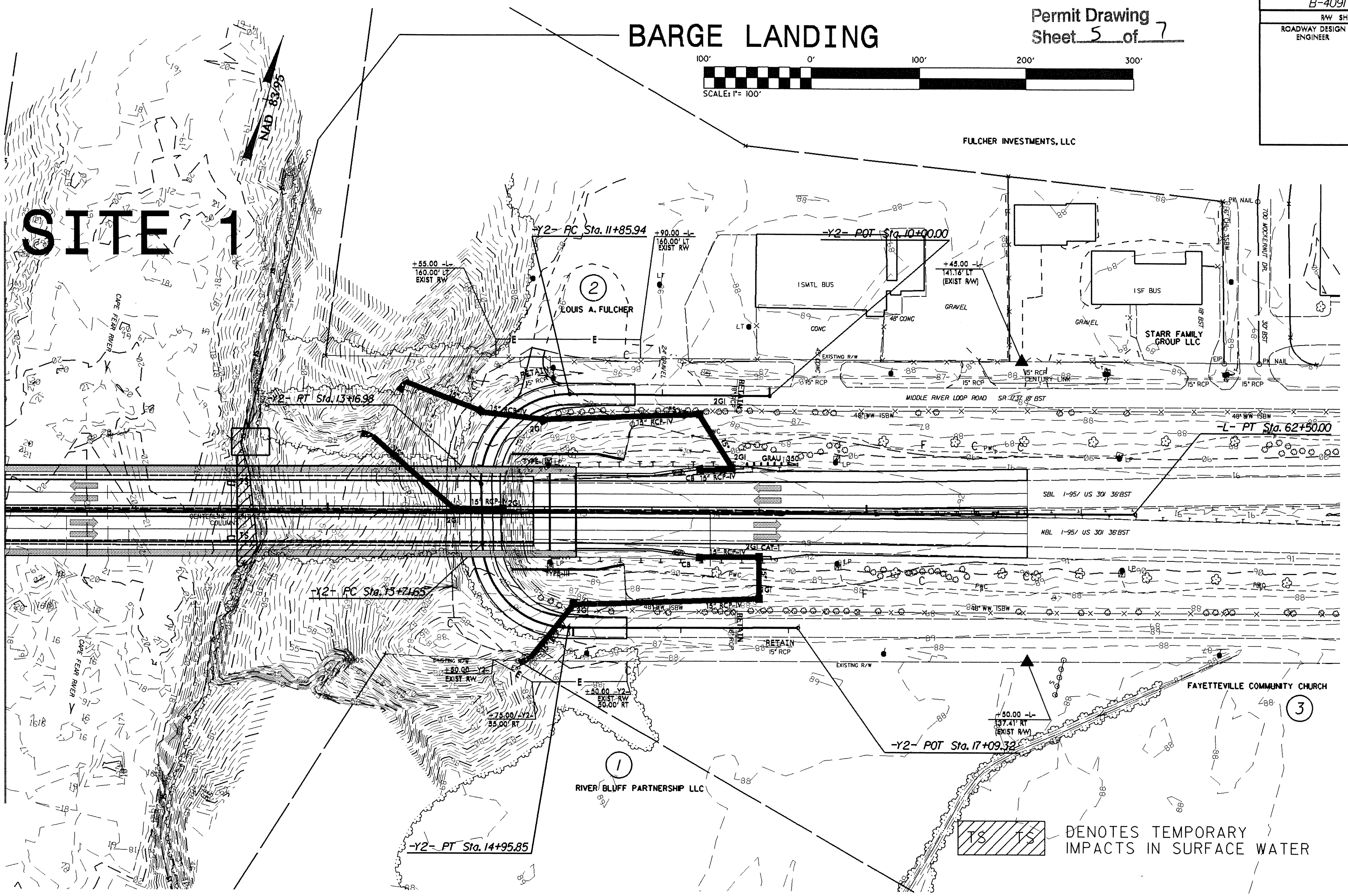
PROJECT REFERENCE NO.	SHEET NO.
B-4091	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 5 of 7

BARGE LANDING

SITE 1

MATCHLINE -L- STA 52+00.00 SEE SHEET 5



TS | TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS

8/17/99

$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROPERTY OWNERS

Site	Last Name	First Name	Address	City/Town	State	Zip Code
1	STATE OF NORTH CAROLINA		P.O. BOX 629	RALEIGH	NC	27611

Permit Drawing
Sheet 6 of 7

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY
WBS - 33449.1.1 (B-4091)

SHEET 11/29/2011

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channe Impacts Temp. (ft)	Natural Stream Design (ft)
1	52+15 -L-	workpad and barge access							0.05			
TOTALS:									0.05			

There will 0.01 ac of permanent fill in surface waters due to bents

Permit Drawing
Sheet 7 of 7

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY
WBS - 33449.1.1 (B-4091)

SHEET 3/9/2012

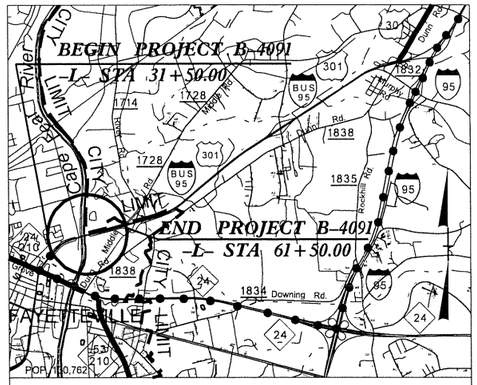
ATN Revised 3/31/05

09/08/59

TIP PROJECT: B-4091

CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

OFF-SITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

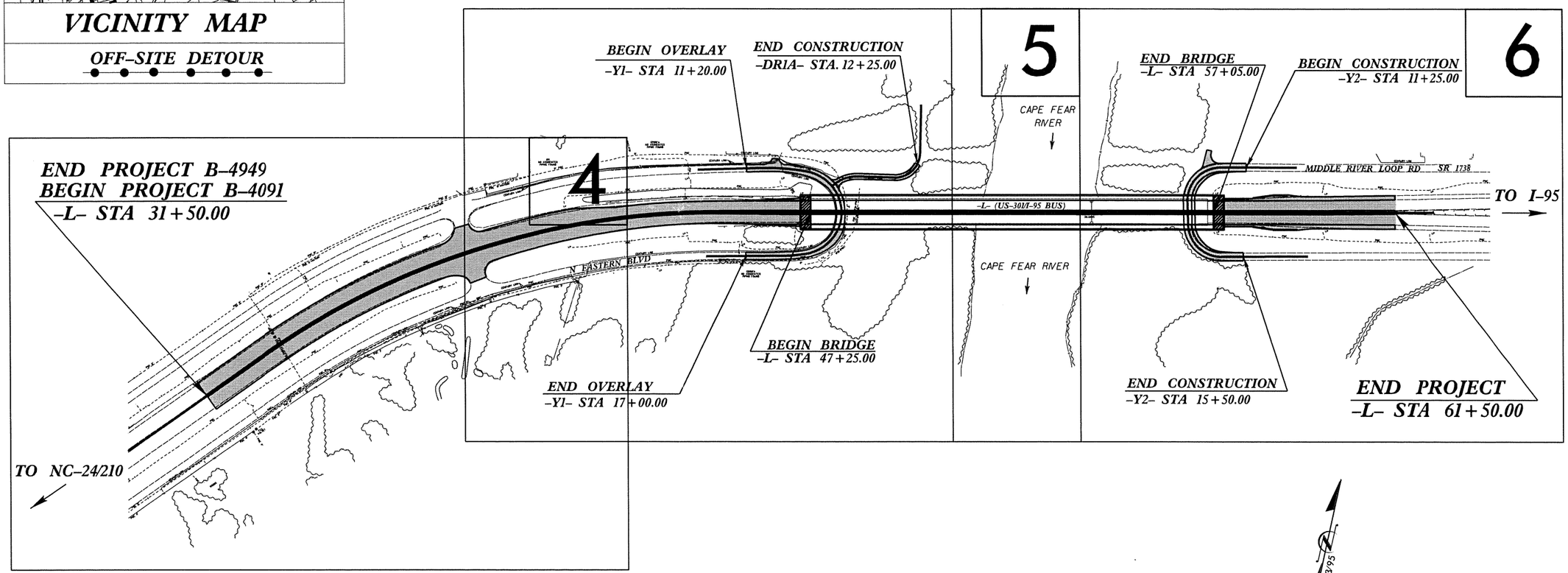
CUMBERLAND COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4091	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33449.1.1	BRSTP-301(12)	P.E.
33449.3.1	BRSTP-301(12)	R/W, UTIL.

LOCATION: *I-95 BUS LOOP & US 301 – REPLACE BRIDGE 85 OVER CAPE FEAR RIVER, SR 1738 & SR 1741 IN FAYETTEVILLE*

TYPE OF WORK: *GRADING, PAVING, DRAINAGE, STRUCTURES, & RETAINING WALLS*



NAD 83/95

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF FAYETTEVILLE.
THERE IS CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHOULD BE PERFORMED TO THE LIMITS ESTABLISH BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2012	=	25,285
ADT 2035	=	37,170
DHV	=	10 %
D	=	55 %
T	=	7 % *
V	=	50 MPH
CLASS	=	FREEWAY

* TTST 3% DUAL 4%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4091 = 0.382
LENGTH STRUCTURE TIP PROJECT B-4091 = 0.186
TOTAL LENGTH TIP PROJECT B-4091 = 0.568

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: AUGUST 19, 2011

LETTING DATE: AUGUST 21, 2012

TONY HOUSER, PE
PROJECT ENGINEER

JASON TALLEY, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER
P.E.
SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

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6/2/99

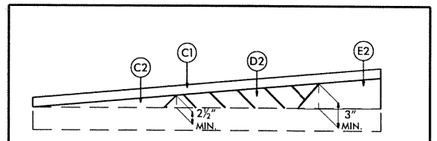
PROJECT REFERENCE NO.	SHEET NO.
B-4091	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

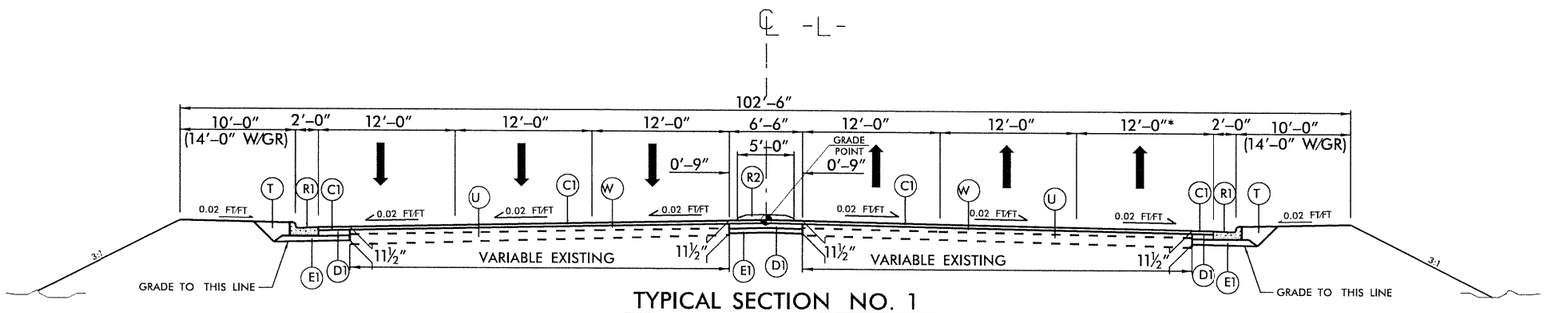
PAVEMENT SCHEDULE

FINAL PAVEMENT DESIGN

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	J	6" AGGREGATE BASE COURSE.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	R1	2'-6" CONCRETE CURB AND GUTTER.
C3	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137½ LBS. PER SQ. YD.	R2	5" MONOLITHIC CONCRETE ISLAND
C4	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137½ LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R3	SHOULDER BERM GUTTER
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R4	DOUBLE FACED CONCRETE BARRIER
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	T	EARTH MATERIAL.
E1	PROP. APPROX. 4½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	W	VARIABLE DEPTH ASPHALT PAVEMENT SEE STANDARD WEDGING DETAIL
E3	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.		



Wedging Detail For Resurfacing



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 FOR THE FOLLOWING:

-L- STA. 31+50.00 TO -L- STA. 42+50.00

*NOTE: LANE WIDTH TAPERS TO ZERO AT STATION 44+00.00

17-AUG-2011 15:24
H:\PROJECTS\B-4091\Roadway\b4091_rdy_typ.dgn
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PROJECT REFERENCE NO.	SHEET NO.
B-4091	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS 8/17/99

NAD 83/95

END TIP PROJECT B-4949
BEGIN TIP PROJECT B-4091
-L- POT STA 31+50.00

-L- PC Sta. 33+17.28

MATCHLINE -L- STA 40+00.00 SEE SHEET 5

CITY OF FAYETTEVILLE
DB 442 PG 287

+17.28 -L-
130.00' LT
(EXIST R/W)

+50.00 -L-
130.00' LT
(EXIST R/W)

+17.28 -L-
130.00' RT
(EXIST R/W)

+50.00 -L-
130.06' RT
(EXIST R/W)

5' MONOLITHIC CONCRETE ISLAND

2'-6" C&G

18° 35' 58" 26.0' E

-BL- 2

-L- 1

15" RCP-IV I-95/ US301

15" RCP-IV

ADJ 2GI

CB

CB 15" RCP-IV

CL "B" RIP RAP
EST 1 TON
EST 5 SY FILT FAB

R=45'

R=25'

R=30'

600' TAPER

6.5'

5.4'

36" INC

I-95/ US301 SBL 40' BST

I-95/ US301 NBL 40' BST

CENTURY LINK

H EASTERN BLVD @ BST

WOODS

6' IRON FENCE

BM80 CAPE FEAR BOTANICAL GARDEN
-L- STA 35+01.81 DEED 5907 PG892
139.17' RIGHT
ELEV. 87.07'

SUBSTA
SUB STATION
GRAVEL
6' CHL
1 STY BLK BUS
1 STY BUS
NO ASSOCIATED PROP FOUND
BRK SIGN
TEMP DRIVE
PWC 6'
PWC 12'
PWC 8'
PWC 5'
PWC 4'
RAIL
SLOPE
CMP
FSS
TSS
SFD

-L- CURVE DATA

PI Sta 39+23.12
Δ = 35° 12' 00.0" (RT)
D = 3° 00' 00.0"
L = 1173.33'
T = 605.84'
R = 1,909.86'
RO = 144'
SE = 0.04
INC = 36'

FOR -L- PROFILE, SEE SHEET NO. 7

29-NOV-2011 13:58
R:\Roadway\Projects\b4091_rdy_psh4.dgn
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PROJECT REFERENCE NO.	SHEET NO.
B-4091	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

NAD 83/95

MATCHLINE -L- STA 40+00.00 SEE SHEET 4

MATCHLINE -L- STA 52+00.00 SEE SHEET 6

-DRIA- PC Sta. 10+07.06
-DRIA- POT Sta. 10+00.00=
-Y1- POC Sta.13+40.00
BEGIN BRIDGE
-L- STA. 47+25.00
END WALL
-L- STA. 47+25 +/-
BEGIN APPROACH SLAB
-L- STA. 47+00.00
-DRIA- PT Sta. 10+68.56
REMOVE AND RESET
EXISTING FENCE
AND GATE
-DRIA- POT Sta. 13+70.12
-Y1- POT Sta. 10+00.00
-Y1- PC Sta. 11+59.00
-Y1- PCC Sta. 12+68.82
BEGIN OVERLAY
-Y1- STA. 11+20.00
BEGIN WALL
-L- STA. 46+25 +/-
-DRIA- PT Sta. 12+51.78
-DRIA- PC Sta. 11+57.16
END CONSTRUCTION
-DRIA- STA. 12+25.00
-L- PT Sta. 44+90.61
BEGIN WALL
-L- STA. 45+50 +/-
END OVERLAY
-Y1- STA. 17+00.00
-Y1- POT Sta. 17+97.87
-Y1- PT Sta. 16+04.87
END WALL
-L- STA. 47+25 +/-
-Y1- PCC Sta. 15+48.58
BEGIN MEDIAN BARRIER
-L- STA. 47+00.00

N 73° 34' 58.7" E
N 77° 01' 51.3" E
S 14° 37' 27.3" W
N 75° 10' 26.0" E -L-
S 01° 32' 00.9" W 143.53'
N 17° 19' 40.9" W 143.39'

100' TAPER
150' MEDIAN TAPER
600' TAPER
5' MONOLITHIC CONCRETE ISLAND
5'-6" SIDEWALK
5'-6" SIDEWALK

I S F BARN
GRAVEL
WOOD TOWER
WOODS
CITY OF FAYETTEVILLE
DB 442 PG 287
CENTURY LINK
(2)WM's NO ASSOCIATED PIPING FOUND
WV NO ASSOCIATED PIPING FOUND
ISBRK BUS.
+90.61 -L- 130.00' LT (EXIST R/W)
+90.61 -L- 130.00' RT (EXIST R/W)
BM81 -L- STA 50+14.43 87.50' LEFT ELEV. 68.04'
CL "B" RIP RAP EST 2 TONS 7 SY FILT FAB
6' IRON FENCE
N EASTERN BLVD
CAPE FEAR BOTANICAL GARDEN DB 5907 PG 892
FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE DB 592 PG 351
CAPE FEAR RIVER
-BL- 3
-BL- 4

DETAIL B
FALSE SUMP
(Not to Scale)
Outside Ditch Traffic Flow
20:1
10:1
2'
0.5' Min 1.0' Max
GI etc.
S=Ditch Slope
℄ Proposed Ditch
@ STA. 17+43 -Y1- (RT)
@ STA. 15+94 -Y1- (RT)

-L- CURVE DATA

PI Sta 39+23.12
Δ = 35° 12' 00.0" (RT)
D = 3° 00' 00.0"
L = 1173.33'
T = 605.84'
R = 1,909.86'
R0 = 144'
SE = 0.04
INC = 36'

-Y1- CURVE DATA

PI Sta 12+14.12
Δ = 12° 06' 03.1" (RT)
D = 11° 01' 06.3"
L = 109.82'
T = 55.12'
R = 520.00'
R0 = 72'
SE = 0.04
INC = 18'

PI Sta 15+76.80
Δ = 10° 14' 22.4" (RT)
D = 18° 11' 20.9"
L = 56.29'
T = 28.22'
R = 315.00'
SE = 0.04

PI Sta 18+05.94
Δ = 158° 42' 03.0" (RT)
D = 56° 43' 42.6"
L = 279.76'
T = 537.12'
R = 101.00'
R0 = 72'
SE = 0.04
INC = 18'

-DRIA- CURVE DATA

PI Sta 10+39.9
Δ = 40° 58' 12.0" (RT)
D = 66° 37' 22.8"
L = 61.50'
T = 32.13'
R = 86.00'
SE = 0.03

PI Sta 12+17.53
Δ = 90° 21' 10.3" (LT)
D = 95° 29' 34.7"
L = 94.62'
T = 60.37'
R = 60.00'
SE = 0.02

BRIDGE APPROACH SLAB
CONC MEDIAN BARRIER
DRIVEWAY RADII ARE 15', UNLESS NOTED
FOR -L- PROFILE, SEE SHEET NO. 8
FOR -Y1- PROFILE, SEE SHEET NO. 10
FOR -DRIA- PROFILE, SEE SHEET NO. 10
SEE SHEET 2-B FOR BRIDGE SKETCH
FOR STRUCTURE PLANS, SEE SHEET S-? AND S-?
FOR WALL PLANS, SEE SHEET W-? AND W-?

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$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4091	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS 8/17/99

MATCHLINE –L– STA 52+00.00 SEE SHEET 5

NAD 83/95

N 74°41'27" W 389.46'

N 07°03'48" W 364.61'

REMOVE AND RESET EXISTING FENCE AND GATE

REMOVE AND RESET EXISTING FENCE AND GATE

FULCHER INVESTMENTS, LLC
DB 6078 PG 25
PB 108 PG 176

N 81°29'58" E 245.94'

S 81°29'58" W 200.69'

PK NAIL

6' CHL SSBW

700 MOCKINGBIRD DR. S 15°13'25" E 130.30'

N 15°22'25" W 123.89'

S 15°13'51" E 386.13'

-Y2- PC Sta. 11+85.94

+90.00 -L- 160.00' LT EXIST RW

+55.00 -L- 160.00' LT EXIST RW

END APPROACH SLAB
-L- STA. 57+30.00

BEGIN WALL
-L- STA. 56+70.00 +/-

END BRIDGE
-L- STA. 57+05

-Y2- PT Sta. 13+16.98

2 LOUIS A. FULCHER DB 3584 PG 775

BEGIN CONSTRUCTION
-Y2- POT STA 11+25.00

-Y2- POT Sta. 10+00.00

END WOVEN WIRE FENCE
-Y2- STA. 11+25.00

BEGIN WOVEN WIRE FENCE
-L- STA. 57+75.00

ISMTL BUS END WALL

+45.00 -L- 141.16' LT (EXIST R/W)

ISF BUS

GRAVEL

48" CONC

STARR FAMILY GROUP LLC
DB 5858 PG 793

CL "B" RIP RAP EST 1 TON 5 SY FILT FAB

RIPRAP DECK DRAIN DISSIPATOR SEE DETAIL C

5'-6" SIDEWALK

S 75° 29' 39.5" W

BEG SBG +50.00

END SBG +86.25

150' TAPER LT & RT

150' MEDIAN TAPER

TIE TO EXIST. GUARDRAIL

-L- PT Sta. 62+50.00

MIDDLE RIVER LOOP ROAD SR 1737 18' BST

55 N 75°10' 26.0" E

-Y2- PC Sta. 13+71.65

-BL- 5

N 74° 58' 35.2" E

END SBG +111.25

BEGIN WALL
-L- STA. 56+70 +/-

S 17°45'58" W 280.00'

+50.00 -Y2- EXIST RW

+75.00 -Y2- 55.00' RT

+50.00 -Y2- EXIST RW 50.00' RT

END WALL
BEGIN WOVEN WIRE FENCE
-L- STA. 57+75.00

END WOVEN WIRE FENCE
-Y2- STA. 15+50.00

END CONSTRUCTION
-Y2- POT STA 15+50.00

1 RIVER BLUFF PARTNERSHIP LLC
DB 7427 PG 864
PB 119 PG 180

-Y2- PT Sta. 14+95.85

END MEDIAN BARRIER
-L- STA. 60+00.00
NOTE: SEE SPECIAL DETAIL

+50.00 -L- 137.41' RT (EXIST R/W)

-Y2- POT Sta. 17+09.32

FAYETTEVILLE COMMUNITY CHURCH
DB 352 PG 568

3

END TIP PROJECT B-4091
-L- POT STA 61+50.00

BM82
-L- STA. 61+97.30
59.96' RIGHT
ELEV. 89.94'

SBL I-95/ US 301 36'BST

NBL I-95/ US 301 36'BST

CAPE FEAR RIVER

WOODS

GRAVEL

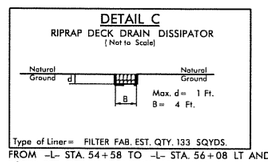
CONC

RETAIN 15" RCP

TRANSITION SECTION

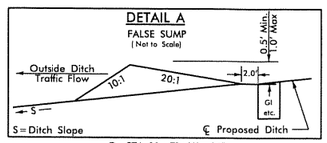
36' INC

DETAIL C
RIPRAP DECK DRAIN DISSIPATOR
(Not to Scale)



Type of Liner = FILTER FAB. EST. QTY. 133 SQYDS.
FROM –L– STA. 54+58 TO –L– STA. 56+08 LT AND RT (TYP.)
TOTAL EST. QTY. 60 TONS CLASS B RIPRAP

DETAIL A
FALSE SUMP
(Not to Scale)



S = Ditch Slope
℄ Proposed Ditch
@ STA. 10+71 –Y2– (LT)

–Y2– CURVE DATA

PI Sta 12+70.21	PI Sta 14+50.20
Δ = 91° 33' 50.6" (LT)	Δ = 88° 57' 13.6" (LT)
D = 69° 52' 22.4"	D = 71° 37' 11.0"
L = 131.04'	L = 124.20'
T = 84.27'	T = 78.55'
R = 82.00'	R = 80.00'
RO = 72'	RO = 72'
SE = 0.04	SE = 0.04
INC = 18'	INC = 18'

BRIDGE APPROACH SLAB
CONC MEDIAN BARRIER
DRIVEWAY RADII ARE 15', UNLESS NOTED
FOR –L– PROFILE, SEE SHEET NO. 8
FOR –Y1– PROFILE, SEE SHEET NO. 10
FOR –DR1A– PROFILE, SEE SHEET NO. 10
SEE SHEET 2-B FOR BRIDGE SKETCH
FOR STRUCTURE PLANS, SEE SHEET S–? AND S–?
FOR WALL PLANS, SEE SHEET W–? AND W–?

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$$$$USERNAME$$$$