



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

July 23, 2003

N.C. Department of Environment and Natural Resources
Division of Coastal Management
151-B Hwy 24
Hestron Plaza II
Morehead City, NC 28557

ATTENTION: Mr. Bill Arrington
District Manager

Dear Mr. Arrington

Subject: Onslow County, CAMA Major Development Permit Application for the replacement of Bridge No. 21 over Bear Creek on SR 1503, NCDOT Division 3, Federal Aid Project No. BRZ-1503(1), State Project No. 8.2261001, TIP Project No. B-3217. WBS Element 32938.1.1. \$400.00 Debit work order 8.2261001, WBS Element 32938.1.1

Please find enclosed copies of the Coastal Area Management Act (CAMA) permit application, Categorical Exclusion (CE), permit drawings, stormwater permit and half size plans. Work Order No. 8.2261001 will be debited for \$400.00 for the application fee for the above referenced project. Bridge No. 21 will be replaced on the existing alignment with a new bridge approximately 105 feet (ft) [32.0 meters (m)] in length and 45 ft (13.7 m) in width. The existing roadway approaches, which consist of two 12 ft. lanes, will be replaced with two 12 ft lanes with 8 ft shoulders, 4 ft paved and 4 ft turf. During construction, traffic will be maintained on a temporary on-site detour east (downstream) of the existing bridge. The length of the temporary detour bridge will be approximately 100 ft (30.5 m). Impacts to wetlands associated with the replacement of Bridge No. 21 will include temporary fill due to the temporary detour and permanent fill and mechanized clearing (Method III) for the permanent bridge.

Bear Creek is located in the White Oak River Basin. It is classified by Division of Water Quality as SA HQW waters (DWQ index No. 19-41-11). Class SA waters are suitable for commercial shellfishing and all other tidal saltwater uses. Class HQW waters are waters possessing special qualities including excellent water quality, Native or

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

Special Trout Waters, Critical Habitat areas, or WS-I and WS-II water supplies. The North Carolina Division of Marine Fisheries designates Bear Creek as a Primary Nursery Area. Therefore, NCDOT will strictly adhere to “Design Standards in Sensitive Watersheds” (15A NCAC 04B .0024) (High Quality Water Standards) throughout design and construction of this project.

Temporary Bridge Information: A temporary bridge will be located east of the existing bridge. Fabric will be in place underneath the fill for the detour structure and mostly likely H-piles will be used for the temporary bridge. The resulting temporary fill in wetlands associated with the temporary detour bridge is 0.53 acre (0.21 hectare) and approximately 0.18 acre (0.07 hectare) in mechanized clearing.

Shading Effects: The existing bridge is 24 ft wide and the proposed bridge will be 45 ft wide. The increase in width of the bridge will shade approximately 0.053 ac of coastal wetlands and 0.008 ac of open water.

Restoration Plan: Upon completion of the new bridge, the temporary bridge will be removed. The approach fill will be removed to natural grade and replanted with appropriate native wetland species. Temporary bents will either be pulled up or cut off and left in place.

Minimization: Embankment fill slopes are 3:1, steeper slopes were not feasible for this project because the sandy soils in this area cannot support a 2:1 slope . The southern end bent of the detour bridge was lengthened by 50 feet from the original design to minimize impacts to wetlands.

Mitigation: Based upon the agreements stipulated in the “Memorandum of Agreement Among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U.S. Army Corps of Engineers, Wilmington District” (MOA), it is understood that the North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP), will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for NCDOT projects that are listed in Exhibit 1 of the subject MOA during the EEP transition period which ends on June 30, 2005.

Since the subject project is listed in Exhibit 1, the necessary compensatory mitigation to offset unavoidable impacts to waters that are jurisdictional under the federal Clean Water Act will be provided by the EEP. The offsetting mitigation will derive from an inventory of assets already in existence within the same 8-digit cataloguing unit. The Department has avoided and minimized impacts to jurisdictional resources to the greatest extent possible as described above. The remaining, unavoidable permanent impacts to 0.45 acres of jurisdictional wetlands will be offset by compensatory mitigation provided by the EEP program if the US Army Corps of Engineers requires such mitigation.

Schedule: The project schedule calls for a November 18, 2003 let date with an availability date approximately six weeks after. It is expected that the contractor will choose to start construction of the temporary detour bridge shortly after the availability

date. The temporary bridge will be removed within 90 days upon completion of the project.

Disposal: After the temporary bridge is no longer needed, the contractor will use roadway building equipment to remove the concrete deck and riprap. All temporary bridge material will become the property of the contractor. The contractor will be required to submit a reclamation plan for removal and disposal of all material off-site.

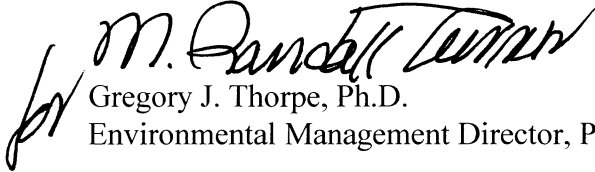
Bridge Demolition: The bridge has an asphalt surface on a reinforced concrete floor on timber joists. The bridge has timber cap and pile bents and end bents. The asphalt wearing surface will be removed prior to demolition without dropping into the water. Both the bridge rail and substructure will be removed without dropping components into Waters of the United States. This project is classified as a Case 2 bridge demolition, allowing no work at all in the water during moratorium periods associated with fish migration, spawning, and larval recruitment into nursery areas (March 1 to September 30). During construction, Best Management Practices for Bridge Demolition and Removal will be followed. Due to the potential sedimentation concerns resulting from demolition of the bridge, a turbidity curtain will be used to contain and minimize sedimentation in the stream.

Threatened and Endangered Species: As of March 7, 2002, the U.S. Fish and Wildlife Service (USFWS) lists 12 federally protected species for Onslow County. Since the completion of the CE document bald eagle (*Haliaeetus leucocephalus*) and golden sedge (*Carex lutea*) were added to the federally protected species list for Onslow County. The NCDOT evaluation of the original ten species in June 1999 and September 2000 resulted in Biological Conclusions of "No Effect" for all of these species. Surveys for golden sedge and bald eagle were conducted along with resurveys for rough-leaved loosestrife (*Lysimachia asperulaefolia*) and Cooley's meadowrue (*Thalictrum cooleyi*) in May 2003. Poor habitat exists for rough-leaved loosestrife and Cooley's meadowrue. No habitat exists for golden sedge and bald eagle. No specimens were found, therefore, Biological Conclusions for rough-leaved loosestrife and Cooley's meadowrue remain valid and Biological Conclusions of "No Effect" are determined for golden sedge and bald eagle. A review of the NC Natural Heritage Program database of rare species and unique habitats on June 10, 2003 revealed that no known occurrences of any federally protected species occur within one mile of the project area.

NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Development Permit. Copies of the green cards will be forwarded as soon as they are available. NCDOT will also be applying for issuance of a United States Army Corps of Engineers NWP 23 and NWP 33 and a 401 Water Quality Certification from the North Carolina Division of Water Quality.

If you have any questions or need additional information, please contact Rachelle Beauregard at (919) 715-1383.

Sincerely,


Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA

Cc: Mr. David Franklin, USACE, Wilmington
Mr. David Timpy, USACE, Wilmington
Mr. John Dorney, NCDWQ
Mr. Rick Monaghan, NCDMF, Morehead City
Mr. Ron Sechler, DMF, Beaufort
Mr. Gary Jordan, USFWS
Mr. Travis Wilson, NCWRC
Mr. Omar Sultan, Programming and TIP
Ms. Debbie Barbour, P.E., Highway Design
Mr. Jay Bennett, P.E., Roadway Design
Mr. Greg Perfetti, P.E., Structure Design
Mr. Dennis Pipkin, P.E., Project Planning Engineer
Mr. David Chang, P.E., Hydraulics
Mr. H. Allen Pope, P.E., Division 3 Engineer
Mr. Mason Herndon, Division 3 Environmental Officer
Mr. Mark Staley, Roadside Environmental Unit

APPLICATION

(To be completed by all applicants)

1. APPLICANT

a. Landowner:

Name NCDOT

Address _____

City _____ State _____

Zip _____ Day Phone _____

Fax _____

b. Authorized Agent:

Name Gregory J. Thorpe, Ph.D.

North Carolina Dept. of Transportation

Address 1548 Mail Service Center

City Raleigh State N.C.

Zip 27699-1548 Day Phone 919-733-3141

Fax 919-733-9794

c. Project name (if any) B-3217

NOTE: Permit will be issued in name of landowner(s), and/or project name.

2. LOCATION OF PROPOSED PROJECT

a. County Onslow

b. City, town, community or landmark
Hubert

c. Street address or secondary road number
SR 1503

d. Is proposed work within city limits or planning jurisdiction? Yes No

e. Name of body of water nearest project (e.g. river, creek, sound, bay) Bear Creek

3. DESCRIPTION AND PLANNED USE OF PROPOSED PROJECT

a. List all development activities you propose (e.g. building a home, motel, marina, bulkhead, pier, and excavation and/or filling activities).

Replace existing bridge with 105 foot bridge and a temporary detour bridge will be used.

b. Is the proposed activity maintenance of an existing project, new work, or both? New work

c. Will the project be for public, private or commercial use? public

d. Give a brief description of purpose, use, methods of construction and daily operations of proposed project. If more space is needed, please attach additional pages. Replace existing bridge with a new bridge over Bear Creek. Detour bridge will be in place during construction.

4. LAND AND WATER CHARACTERISTICS

- a. Size of entire tract 2.0 ac
- b. Size of individual lot(s) N/A
- c. Approximate elevation of tract above MHW or NWL MHW 3.5 ft
- d. Soil type(s) and texture(s) of tract
Wando fine sand, Bohicket silty clay loam, Muckalee loam, Bymeade fine sand and Norfolk loamy fine sand.
- e. Vegetation on tract Estuarine-coastal fringe evergreen forest, Brackish marsh, Mesic pine-hardwood flatwoods, Mantained/disturbed communities; Pinus taeda, Pinus palustris, Acer rubrum, Liquidambar styraciflua, Persea borbonia, Juncus roemerianus, Typha sp., Spartina cynosuroides, Cladium jamaicense
- f. Man-made features now on tract stormwater ditches, road shoulders and a residential lawn
- g. What is the CAMA Land Use Plan land classification of the site? *(Consult the local land use plan.)*
 Conservation Transitional
 Developed Community
 Rural Other
- h. How is the tract zoned by local government?
Rural
- i. Is the proposed project consistent with the applicable zoning? Yes No
(Attach zoning compliance certificate, if applicable)
- j. Has a professional archaeological assessment been done for the tract? Yes No
If yes, by whom? NCDOT and Camp Lejeune
- k. Is the project located in a National Registered Historic District or does it involve a National Register listed or eligible property?
 Yes No
- l. Are there wetlands on the site? Yes No
Coastal (marsh) Other (404)
If yes, has a delineation been conducted? yes

(Attach documentation, if available)

- m. Describe existing wastewater treatment facilities.
none
- n. Describe location and type of discharges to waters of the state. (For example, surface runoff, sanitary wastewater, industrial/commercial effluent, "wash down" and residential discharges.) surface runoff at 2 grated inlets located at beginning and end of proposed bridge
- o. Describe existing drinking water supply source.
waterline

5. ADDITIONAL INFORMATION

In addition to the completed application form, the following items must be submitted:

- **A copy of the deed** (with state application only) or other instrument under which the applicant claims title to the affected properties. If the applicant is not claiming to be the owner of said property, then forward a copy of the deed or other instrument under which the owner claims title, plus written permission from the owner to carry out the project.
- **An accurate, dated work plat** (including plan view and cross-sectional drawings) drawn to scale in black ink on an 8 1/2" by 11" white paper. (Refer to Coastal Resources Commission Rule 7J.0203 for a detailed description.)

Please note that original drawings are preferred and only high quality copies will be accepted. Blue-line prints or other larger plats are acceptable only if an adequate number of quality copies are provided by applicant. (Contact the U.S. Army Corps of Engineers regarding that agency's use of larger drawings.) A site or location map is a part of plat requirements and it must be sufficiently detailed to guide agency personnel unfamiliar with the area to

Form DCM-MP-1

the site. Include highway or secondary road (SR) numbers, landmarks, and the like.

- **A Stormwater Certification**, if one is necessary.
- **A list of the names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail.** Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management. Upon signing this form, the applicant further certifies that such notice has been provided.

Name see permit drawing sheet (10 of 10)
 Address _____
 Phone _____

Name _____
 Address _____
 Phone _____

Name _____
 Address _____
 Phone _____

- **A list of previous state or federal permits** issued for work on the project tract. Include permit numbers, permittee, and issuing dates.

- **A check for \$250** made payable to the Department of Environment, Health, and Natural Resources (DEHNR) to cover the costs of processing the application.

- **A signed AEC hazard notice** for projects in oceanfront and inlet areas.

- **A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A - 1 to 10)** If the project involves the expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.

6. CERTIFICATION AND PERMISSION TO ENTER ON LAND

I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to conditions and restrictions contained in the permit.

I certify that to the best of my knowledge, the proposed activity complies with the State of North Carolina's approved Coastal Management Program and will be conducted in a manner consistent with such program.

I certify that I am authorized to grant, and do in fact, grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

This is the 23 day July, 2003

Print Name for Gregory J. Thorpe, Ph.D.

Signature 
Landowner or Authorized Agent

Please indicate attachments pertaining to your proposed project.

- DCM MP-2 Excavation and Fill Information
- DCM MP-3 Upland Development
- DCM MP-4 Structures Information
- DCM MP-5 Bridges and Culverts
- DCM MP-6 Marina Development

NOTE: Please sign and date each attachment in the space provided at the bottom of each form.

BRIDGES AND CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM-MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project.

1. BRIDGES

- a. Public Private
- b. Type of bridge (construction material)
RC floor timber joists and abutments; 5 spans
- c. Water body to be crossed by bridge
Bear Creek
- d. Water depth at the proposed crossing at MLW or NWL +/- **4.0 feet**
- e. Will proposed bridge replace an existing bridge?
 Yes No
If yes,
 - (1) Length of existing bridge **87'**
 - (2) Width of existing bridge **24'**
 - (3) Navigation clearance underneath existing bridge +/- **5 ft**
 - (4) Will all, or a part of, the existing bridge be removed? (Explain) **all of the existing bridge will be removed**
- f. Will proposed bridge replace an existing culvert(s)?
 Yes No
If yes,
 - (1) Length of existing culvert _____
 - (2) Width of existing culvert _____
 - (3) Height of the top of the existing culvert above the MHW or NWL _____
 - (4) Will all, or a part of, the existing culvert be removed? (Explain) _____

- g. Length of proposed bridge **105'**
- h. Width of proposed bridge **45'**
- i. Height of proposed bridge above wetlands
4.5 feet +/-
- j. Will the proposed bridge affect existing water flow?
 Yes No
If yes, explain _____
- k. Navigation clearance underneath proposed bridge
7.0 feet
- l. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? Yes No
If yes, explain _____
- m. Will the proposed bridge cross wetlands containing no navigable waters? Yes No
If yes, explain **will bridge all coastal wetlands**
- n. Have you contacted the U.S. Coast Guard concerning their approval? **(not required)**
 Yes No
If yes, please provide record of their action.

2. CULVERTS N/A

- a. Water body in which culvert is to be placed
N/A
- b. Number of culverts proposed N/A

Form DCM-MP-5

c. Type of culvert (construction material, style) _____ **N/A**

d. Will proposed culvert replace an existing bridge?
____ Yes ____ No
If yes,
(1) Length of existing bridge _____
(2) Width of existing bridge _____
(3) Navigation clearance underneath existing bridge _____
(4) Will all, or a part of, the existing bridge be removed? (Explain) _____

e. Will proposed culvert replace an existing culvert?
____ Yes ____ No
If yes,
(1) Length of existing culvert _____
(2) Width of existing culvert _____
(3) Height of the top of the existing culvert above the MHW or NWL _____
(4) Will all, or a part of, the existing culvert be removed? (Explain) _____

f. Length of proposed culvert _____

g. Width of proposed culvert _____

h. Height of the top of the proposed culvert above the MHW or NWL _____

i. Will the proposed culvert affect existing water flow?
____ Yes ____ No
If yes, explain _____

j. Will the proposed culvert affect existing navigation potential? ____ Yes ____ No
If yes, explain _____

(4) Amount of material to be excavated in cubic yards _____

b. Will the placement of the proposed bridge or culvert require any excavation within: **NO**
____ Coastal Wetlands ____ SAVs ____ Other Wetlands
If yes,
(1) Length of area to be excavated _____
(2) Width of area to be excavated _____
(3) Amount of material to be excavated in cubic yards _____

c. Will the placement of the proposed bridge or culvert require any highground excavation?
____ Yes **X** No
If yes,
(1) Length of area to be excavated _____
(2) Width of area to be excavated _____
(3) Amount of material to be excavated in cubic yards _____

d. If the placement of the bridge or culvert involves any excavation, please complete the following:
(1) Location of the spoil disposal area
Approved upland disposal site _____

(2) Dimensions of spoil disposal area
Unknown at this time _____
(3) Do you claim title to the disposal area?
____ Yes **X** No
If no, attach a letter granting permission from the owner.
(4) Will the disposal area be available for future maintenance? ____ Yes **X** No
(5) Does the disposal area include any coastal wetlands (marsh), SAVs, or other wetlands?
____ Yes **X** No
If yes, give dimensions if different from (2) above. _____
(6) Does the disposal area include any area below the MHW or NWL? ____ Yes **X** No
If yes, give dimension if different from No. 2 above. _____

3. EXCAVATION AND FILL

a. Will the placement of the proposed bridge or culvert require any excavation below the MHW or NWL?
____ Yes **X** No
If yes,
(1) Length of area to be excavated _____
(2) Width of area to be excavated _____
(3) Depth of area to be excavated _____

e. Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d. above) to be placed below MHW or NWL? ____ Yes **X** No
If yes,
(1) Length of area to be filled _____
(2) Width of area to be filled _____
(3) Purpose of fill _____

Form DCM-MP-5

f. Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d. above) to be placed within:

___ Coastal Wetlands ___ SAVs X Other Wetlands

If yes, (see map)

(1) Length of area to be filled total of 0.31 ac

(2) Width of area to be filled _____

(3) Purpose of fill fill at bridge abutment and along fill slopes

g. Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d. above) to be placed on highground? X Yes ___ No

If yes,

(1) Length of area to be filled _____

(2) Width of area to be filled _____

(3) Purpose of fill expanding the road shoulder

4. GENERAL

a. Will the proposed project involve any mitigation?

___ Yes X No

If yes, explain in detail _____

b. Will the proposed project require the relocation of any existing utility lines? ___ Yes X No

If yes, explain in detail _____

c. Will the proposed project require the construction of any temporary detour structures?

X Yes ___ No

If yes, explain in detail 100 feet temporary detour bridge to be built approximately 90 feet downstream of mainline bridge. The entire causeway is 1608ft

d. Will the proposed project require any work channels? ___ Yes X No

If yes, complete Form DCM-MP-2

e. How will excavated or fill material be kept on site and erosion controlled? NCDOT High Quality Waters Erosion Control Methods will be used

f. What type of construction equipment will be used (for example, dragline, backhoe or hydraulic dredge)? Heavy highway construction equipment

g. Will wetlands be crossed in transporting equipment to project site? ___ Yes X No

If yes, explain steps that will be taken to lessen environmental impacts. _____

h. Will the placement of the proposed bridge or culvert require any shoreline stabilization?

X Yes ___ No

If yes, explain in detail rip rap on plans

Applicant or Project Name

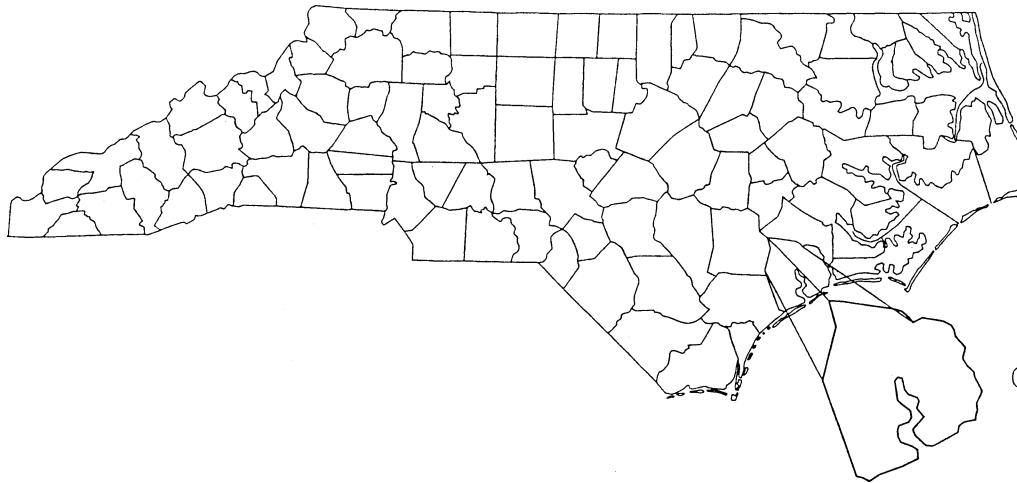
[Signature]

Signature

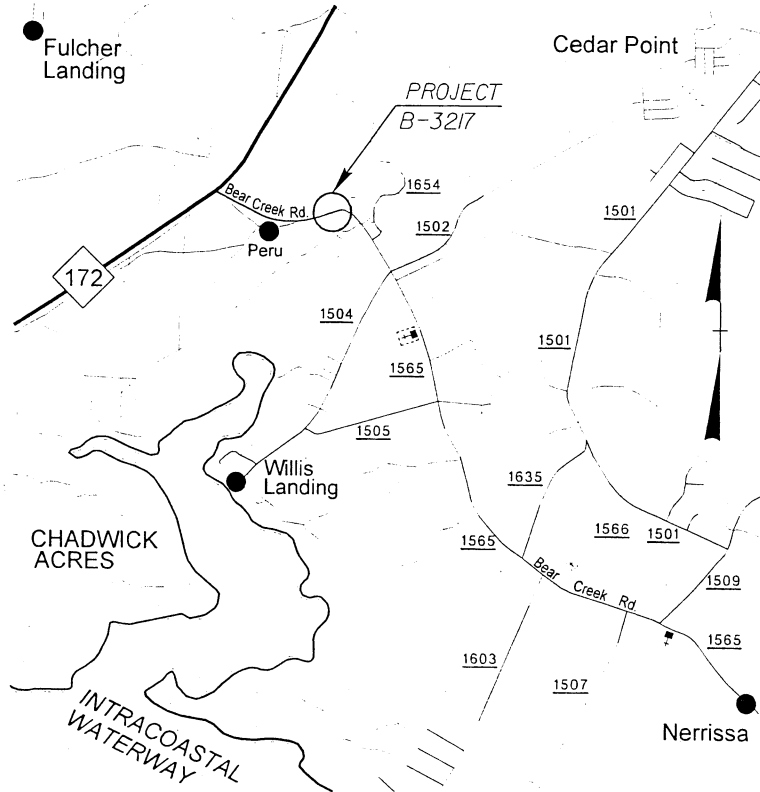
7-23-03

Date

NORTH CAROLINA

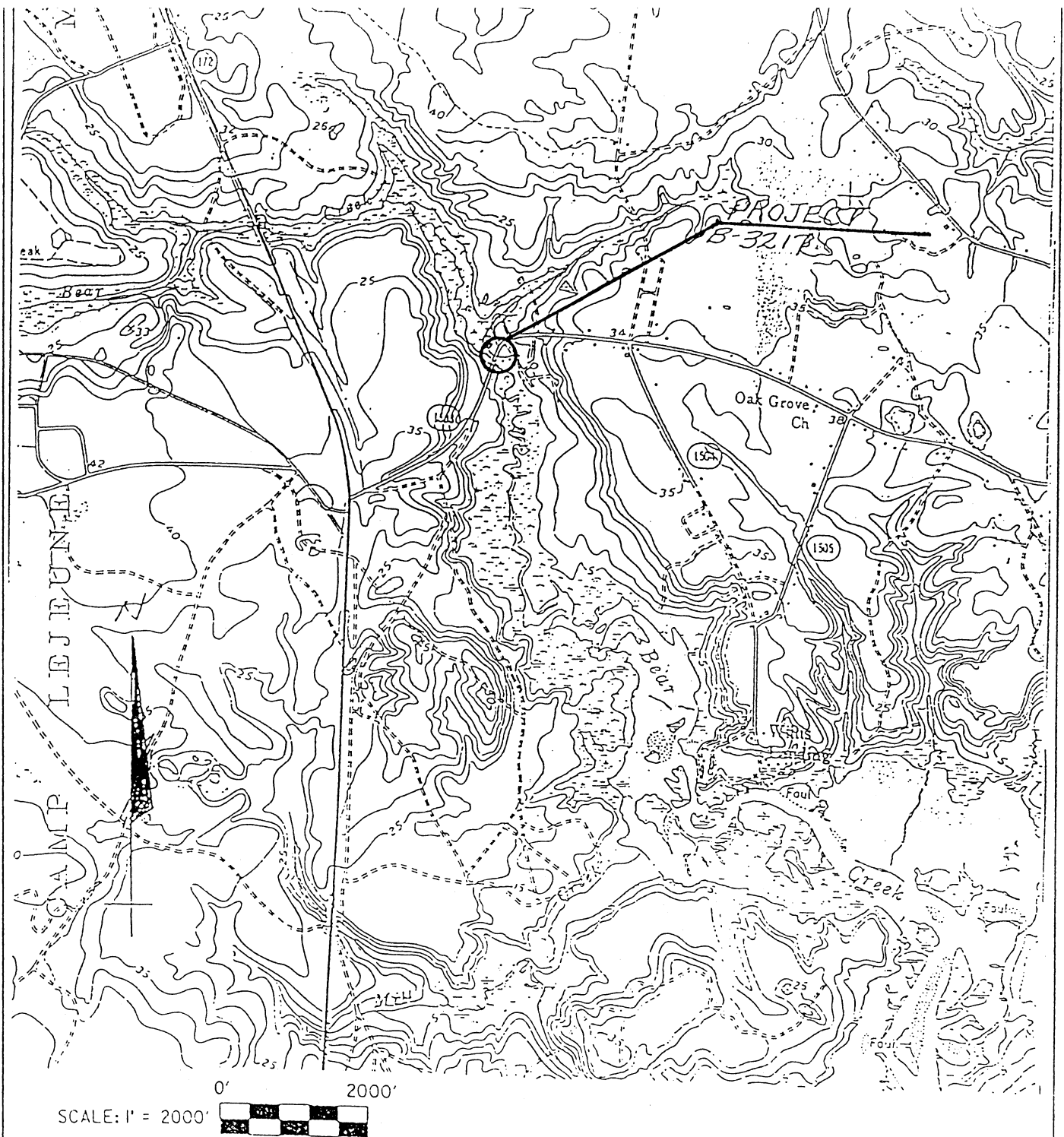


ONSLOW
COUNTY



VICINITY MAP

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
ONSLOW COUNTY
PROJECT: 8.2261001 (B3217)
REPLACEMENT OF BRG #21
ON SR 1503 OVER
BEAR CREEK

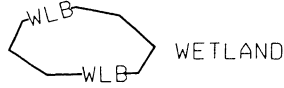


SITE
MAP

N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 8.2261001 (B3217)
 REPLACEMENT OF BRIDGE # 21
 ON SR 1505 OVER
 BEAR CREEK
 SHEET 2 OF 10 5/01/03

LEGEND

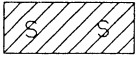
— WLB — WETLAND BOUNDARY
 — CWLB — COASTAL WETLAND BOUNDARY



WETLAND



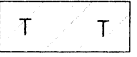
DENOTES FILL IN WETLAND



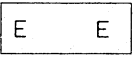
DENOTES FILL IN SURFACE WATER



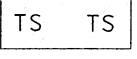
DENOTES FILL IN SURFACE WATER (POND)



DENOTES TEMPORARY FILL IN WETLAND



DENOTES EXCAVATION IN WETLAND



DENOTES TEMPORARY FILL IN SURFACE WATER



DENOTES MECHANIZED CLEARING

— — FLOW DIRECTION

— TB — TOP OF BANK

— WE — EDGE OF WATER

— C — PROP. LIMIT OF CUT

— F — PROP. LIMIT OF FILL

▲ PROP. RIGHT OF WAY

— NG — NATURAL GROUND

— PL — PROPERTY LINE

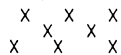
— TDE — TEMP. DRAINAGE EASEMENT

— PDE — PERMANENT DRAINAGE EASEMENT

— EAB — EXIST. ENDANGERED ANIMAL BOUNDARY

— EPB — EXIST. ENDANGERED PLANT BOUNDARY

— — — — — WATER SURFACE

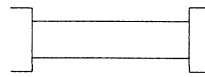


LIVE STAKES

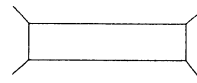


BOULDER

— — — — — CORE FIBER ROLLS



PROPOSED BRIDGE



PROPOSED BOX CULVERT



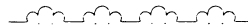
PROPOSED PIPE CULVERT

(DASHED LINES DENOTE EXISTING STRUCTURES)

12"-48" PIPES
54" PIPES & ABOVE



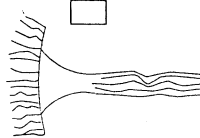
SINGLE TREE



WOODS LINE



DRAINAGE INLET



ROOTWAD



RIP RAP



ADJACENT PROPERTY OWNER OR PARCEL NUMBER IF AVAILABLE

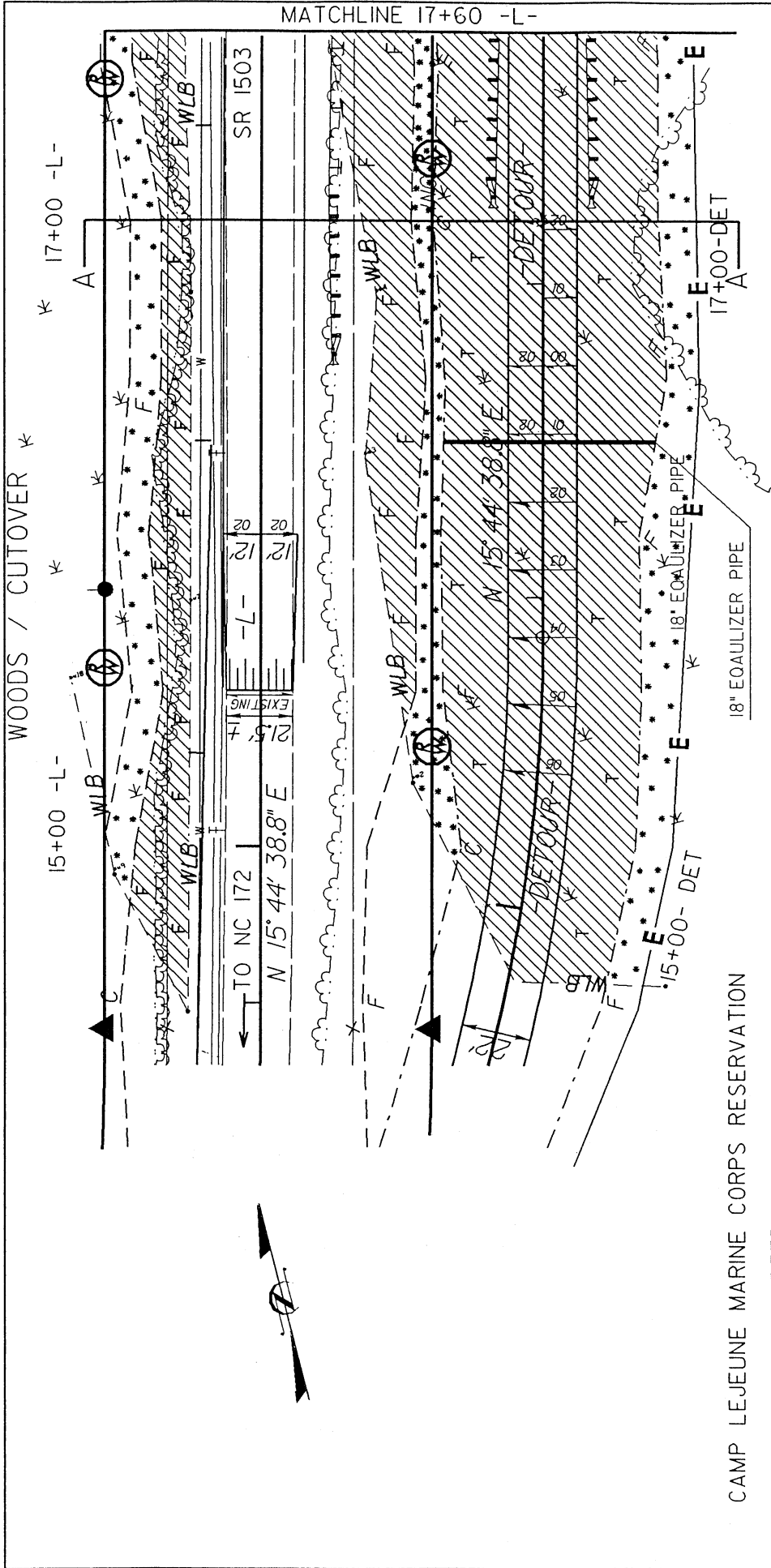
— BZ1 — BUFFER ZONE 1

— BZ2 — BUFFER ZONE 2

N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY

PROJECT: 8.2261001 (B3217)

REPLACEMENT OF BRG #21
 ON SR 1503 OVER
 BEAR CREEK



NCDOT

DIVISION OF HIGHWAYS
ONSLOW COUNTY

PROJECT: 8.2261001 (B-3217)
REPLACEMENT OF BRIDGE# 21
ON SR 1503 OVER
BEAR CREEK

PLAN VIEW

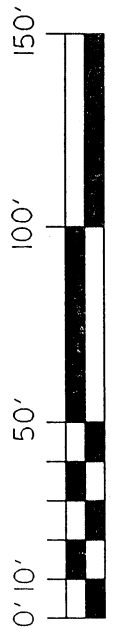
SITE 1

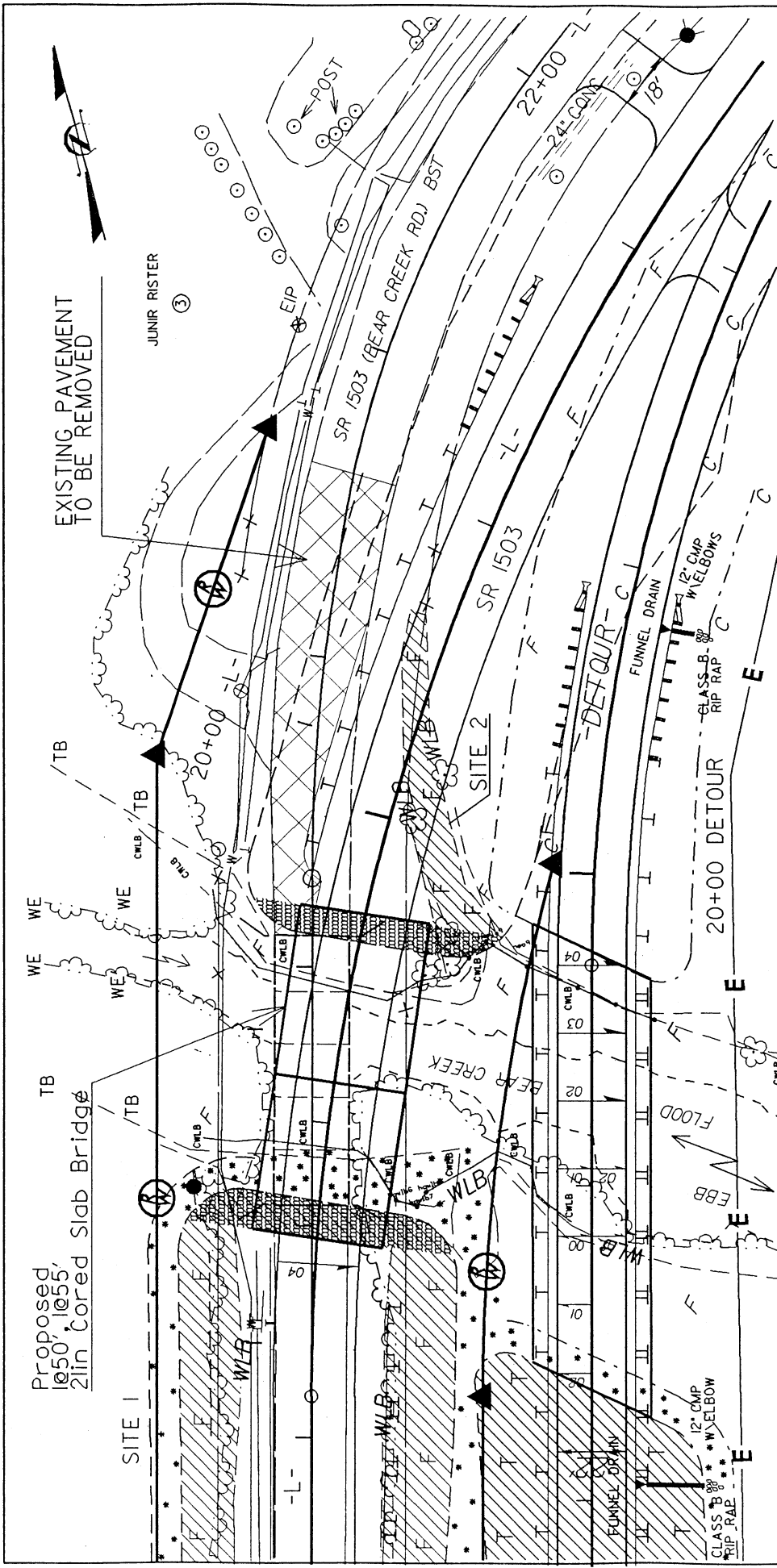
WOODS

CAMP LEJEUNE MARINE CORPS RESERVATION

NO DEED

②





NCDOT

DIVISION OF HIGHWAYS

ONSLOW COUNTY

PROJECT: 8.2261001 (B-3217)

REPLACEMENT OF BRIDGE # 21

ON SR 1503 OVER

BEAR CREEK

PLAN VIEW

SITE 2

Proposed
1050' @ 55'
21in Cored Slab Bridge

EXISTING PAVEMENT
TO BE REMOVED

SITE 1

SITE 2

20+00 DETOUR

20+00

SR 1503

SR 1503 (BEAR CREEK RD.) BST

JUNIOR RISTER

ETHRIAM LINZEY BELL

WOODS



MATCHLINE 17+60 -L-

DETOUR

$PI = 16+00.00$
 $EL = 9.00'$
 $VC = 200'$
 $K = 180$

20

20

10

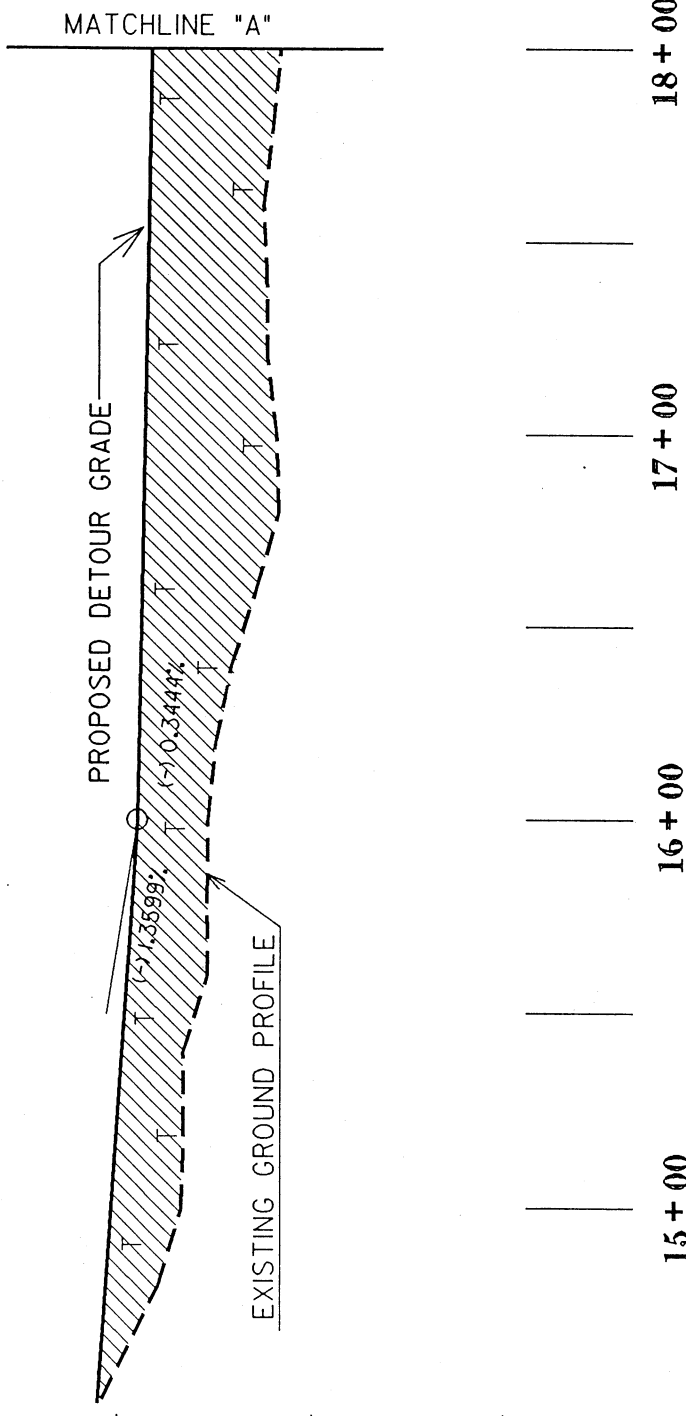
10

0

0

-10

-10



PROFILE

SCALE: 1" = 50' HORIZ.
 1" = 10' VERT.

NCDOT

DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 8.2261001 (B3217)
 REPLACEMENT OF BRIDGE # 21
 ON SR 1503 OVER
 BEAR CREEK

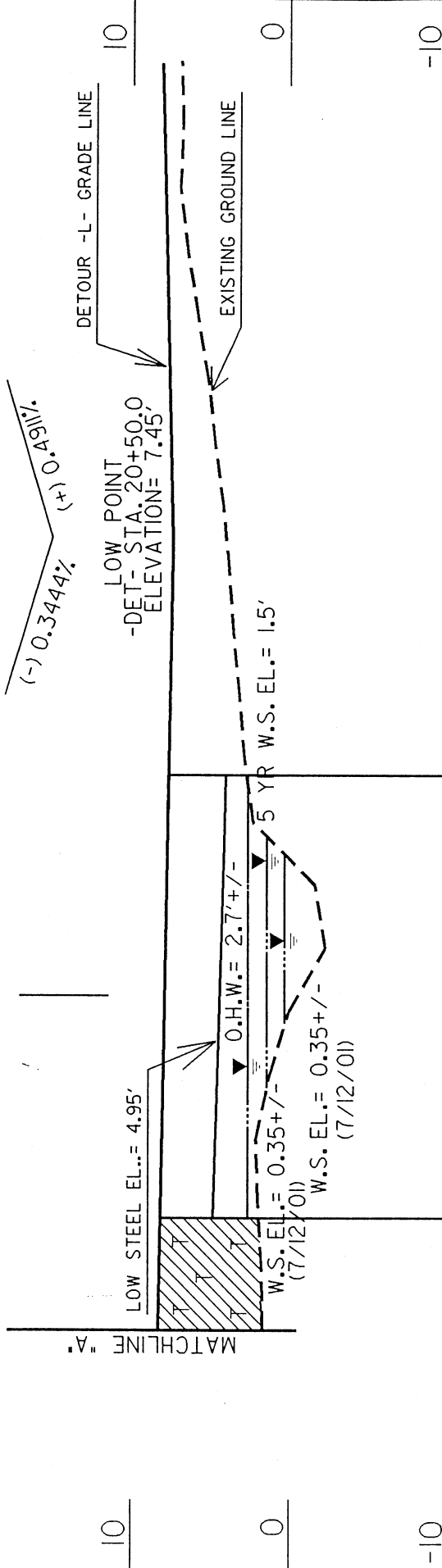
DETOUR

CL STA. 19+05 -DET-
 CL GRADE ELEV. = 7.95'
 MINIMUM LENGTH = 140'
 115 DEGREE SKEW

PI = 20+50.0
 EL = 7.45'
 VC = 150'
 K = 180

20

20



21 + 00

20 + 00

19 + 00

18 + 00

-10

-10

NCDOT

DIVISION OF HIGHWAYS
 ONSLOW COUNTY

PROJECT: 8.2261001 (B-3217)

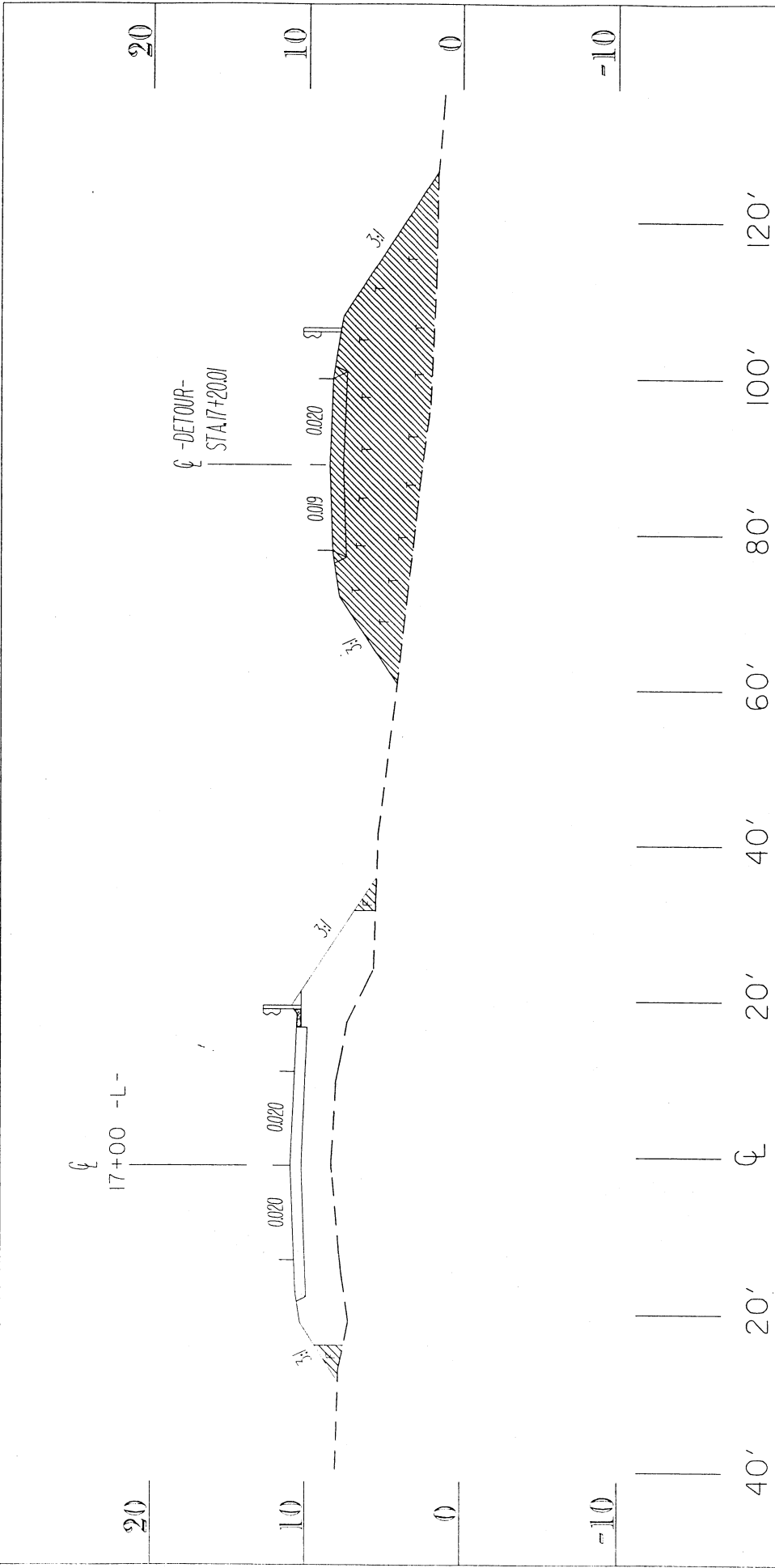
REPLACEMENT OF BRIDGE # 21

ON SR 1503 OVER
 BEAR CREEK

PROFILE

SCALE: 1" = 50' HORIZ.

1" = 10' VERT.



N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 8.2261001 (B-5217)
 REPLACEMENT OF BRIDGE # 21
 ONS SRI503 OVER
 BEAR CREEK

SECTION A-A

SCALE: 1" = 20' HORIZ.
 1" = 10' VERT.

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS			SURFACE WATER IMPACTS							
			Fill In Wetlands (ac)	Temp. Fill In Wetland (ac)	Excavation In Wetland (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)	Natural Stream Design (ft)		
1	14+48 -L- TO 18+75 -L- 14+76 -DET- TO 18+35 -DET-	BR. APPROACH FILL BR. APPROACH FILL	0.28	0.53									
2	19+59 -L- TO 20+06 -L-	BR. APPROACH FILL	0.03										
	TOTAL PERM. MECH. CLEARING					0.14							
	TOTAL TEMP. MECH. X.CLEARING					0.18							
TOTALS:			0.31	0.53	0	0.32	0	0	0	0	0	0	0

NCDOT

DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 8.2661001 B-3217
 REPLACEMENT OF BRIDGE # 21
 ON SR 1503 OVER
 BEAR CREEK

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
①	ONslow COUNTY BOARD OF EDUCATION	P.O. BOX 99 JACKSONVILLE, NC 98540
②	CAMP LE JEUNE MARINE CORPS RESERVATION	
③	JUNIR RISTER	942 WEST McCLELLAN RD. MESA, AZ 85201
④	ETHRIAM L. BELL	216 BEAR CREEK RD. HUBERT, NC 28539

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
ONslow COUNTY

PROJECT: 8.2261001 (B3217)
REPLACEMENT OF BRG[#] 21
ON SR 1503 OVER
BEAR CREEK

SHEET 10 OF 10 5 // 01 // 03



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

March 24, 2003

Commanding General
Attn: Public Works Division/John Jordan
PSC Box 20004
Camp Lejeune, NC 28542-0004

Dear Landowner:

The North Carolina Department of Transportation is planning to replace Bridge No. 21 on SR 1503 over Bear Creek. The proposed project will replace the aging existing structure over Bear Creek. The project will replace the existing 87-foot long bridge with an approximately 100-foot long bridge. The additional length will allow for less impacts to the stream and adjacent wetlands. This project crosses an Area of Environmental Concern, as defined by the North Carolina Division of Coastal Management (DCM), and must be approved by the DCM under provisions of the Coastal Area Management Act (CAMA). One of the prerequisites to this approval is that adjacent riparian landowners be given an opportunity to comment on the proposal. A vicinity map and site drawings are enclosed for your review.

The attached form is submitted to insure that you have an opportunity to comment on the proposal. The work planned is depicted in the attached drawing. If you have no objections to the proposal, please return the form with your response within 10 days to this office. If you do have objections to the project, please forward your comments to:

Mr. Bill Arrington
Division of Coastal Management
Morehead City District
151-B Hwy. 24
Morehead City, NC 28557

Thank you for your cooperation.

Sincerely,

A handwritten signature in cursive script that reads "Rachelle L. Beauregard".

Rachelle Beauregard., Environmental Biologist
Project Development and Environmental Analysis Branch

Enclosures

cc: Bill Arrington, DCM
H. Allen Pope, P.E.
File B-3217

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-733-3141
FAX: 919-733-9794

WEBSITE: WWW.DOH.DOT.STATE.NC.US

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

July 11, 2003

Onslow County Board of Education
P.O. Box 99
Jacksonville, NC 98540

Dear Landowner:

The North Carolina Department of Transportation is planning to replace Bridge No. 21 on SR 1503 over Bear Creek. The proposed project will replace the aging existing structure over Bear Creek. The project will replace the existing 87-foot long bridge with an approximately 100-foot long bridge. The additional length will allow for less impacts to the stream and adjacent wetlands. This project crosses an Area of Environmental Concern, as defined by the North Carolina Division of Coastal Management (DCM), and must be approved by the DCM under provisions of the Coastal Area Management Act (CAMA). One of the prerequisites to this approval is that adjacent riparian landowners be given an opportunity to comment on the proposal. A vicinity map and site drawings are enclosed for your review.

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Mr. Bill Arrington
Division of Coastal Management
Morehead City District
151-B Hwy. 24
Morehead City, NC 28557

Thank you for your cooperation.

Sincerely,

Rachelle Beauregard., Environmental Biologist
Project Development and Environmental Analysis Branch

Enclosures

cc: Bill Arrington, DCM
H. Allen Pope, P.E.
File B-3217



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

July 11, 2003

Junir Rister
942 West McClellan Rd.
Mesa, AZ 85201

Dear Landowner:

The North Carolina Department of Transportation is planning to replace Bridge No. 21 on SR 1503 over Bear Creek. The proposed project will replace the aging existing structure over Bear Creek. The project will replace the existing 87-foot long bridge with an approximately 100-foot long bridge. The additional length will allow for less impacts to the stream and adjacent wetlands. This project crosses an Area of Environmental Concern, as defined by the North Carolina Division of Coastal Management (DCM), and must be approved by the DCM under provisions of the Coastal Area Management Act (CAMA). One of the prerequisites to this approval is that adjacent riparian landowners be given an opportunity to comment on the proposal. A vicinity map and site drawings are enclosed for your review.

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Mr. Bill Arrington
Division of Coastal Management
Morehead City District
151-B Hwy. 24
Morehead City, NC 28557

Thank you for your cooperation.

Sincerely,

Rachelle Beauregard., Environmental Biologist
Project Development and Environmental Analysis Branch

Enclosures

cc: Bill Arrington, DCM
H. Allen Pope, P.E.
File B-3217



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

July 11, 2003

Ethriam L. Bell
216 Bear Creek Rd.
Hubert, NC 28539

Dear Landowner:

The North Carolina Department of Transportation is planning to replace Bridge No. 21 on SR 1503 over Bear Creek. The proposed project will replace the aging existing structure over Bear Creek. The project will replace the existing 87-foot long bridge with an approximately 100-foot long bridge. The additional length will allow for less impacts to the stream and adjacent wetlands. This project crosses an Area of Environmental Concern, as defined by the North Carolina Division of Coastal Management (DCM), and must be approved by the DCM under provisions of the Coastal Area Management Act (CAMA). One of the prerequisites to this approval is that adjacent riparian landowners be given an opportunity to comment on the proposal. A vicinity map and site drawings are enclosed for your review.

The attached form is submitted to insure that you have an opportunity to comment on the proposal. The work planned is depicted in the attached drawing. If you have no objections to the proposal, please return the form with your response within 10 days to this office. If you do have objections to the project, please forward your comments to:

Mr. Bill Arrington
Division of Coastal Management
Morehead City District
151-B Hwy. 24
Morehead City, NC 28557

Thank you for your cooperation.

Sincerely,

Rachelle Beauregard., Environmental Biologist
Project Development and Environmental Analysis Branch

Enclosures

cc: Bill Arrington, DCM
H. Allen Pope, P.E.
File B-3217

ADJACENT RIPARIAN LANDOWNER STATEMENT
(Onslow County: Replace Bridge No. 21 over Bear Creek)

General Statutes and Division of Coastal Management Major Development Permit approval procedures require that riparian landowners with property adjoining a proposed development in an Area of Environmental Concern (AEC) be given ten (10) days in which to comment on the proposed development. This form allows the adjacent riparian landowner to express either: (1) that he objects to the project; or, (2) that he does not object and desires to waive his/her right to the 10-day period so that the processing of the application can progress more rapidly. Of course, the adjacent riparian landowner need not sign this form at all if he/she so chooses.

I, _____, am an adjacent riparian property owner and am aware of the North Carolina Department of Transportation's plans for replacing bridge number twenty-one over Bear Creek in Onslow County, North Carolina. I am further aware that this work will occur in one or more AEC's and therefore will require authorization from the Division of Coastal Management in accordance with the Coastal Area Management Act (CAMA).

_____ I have no objection to the project as presently proposed and hereby waive that right of objection as provided in General Statute 113-229

_____ I have objections to the project as presently proposed and my comments are attached

Signature of Adjacent Riparian Landowner

Date: _____

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark
Here

Sent To Junir Rister
 Street, Apt. No., or PO Box No. 942 West Mc-Clellan Rd.
 City, State, ZIP+4 Mesa, AZ 85201

PS Form 3800, May 2000

See Reverse for Instructions

7000 1670 0003 2580 0952 8762

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark
Here

Sent To Onslow County Board of Education
 Street, Apt. No., or PO Box No. P.O. Box 99
 City, State, ZIP+4 Jacksonville, NC 28540

PS Form 3800, May 2000

See Reverse for Instructions

7000 1670 0000 2580 0952 8755

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark
Here

Sent To Ethniam L. Bell
 Street, Apt. No., or PO Box No. 216 Bear Creek Rd.
 City, State, ZIP+4 Hubert, NC 28539

PS Form 3800, May 2000

See Reverse for Instructions

7000 1670 0003 2580 0952 8748

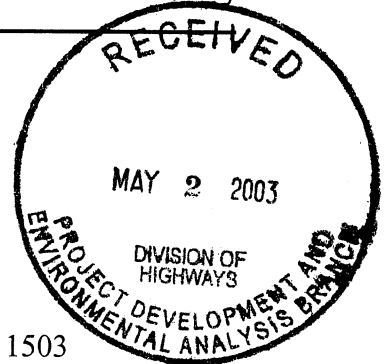


Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources
Alan W. Klimek, P.E. Director
Division of Water Quality

4RB ✓

April 30, 2003

Mr. Gregory J. Thorpe, Director
NCDOT PDEA Branch
1548 Mail Service Center
Raleigh, NC 27699-1548



Subject: Permit No. SW8 030230
B-3217 Bridge No. 21 SR 1503
Other Stormwater Permit
Linear Public Road/Bridge Project
Onslow County

Dear Mr. Thorpe:

The Wilmington Regional Office received a complete Stormwater Management Permit Application for B-3217 Bridge No. 21 SR 1503 on February 24, 2003. Staff review of the plans and specifications has determined that the project, as proposed, will comply with the Stormwater Regulations set forth in Title 15A NCAC 2H .1000. We are forwarding Permit No. SW8 030230 dated April 30, 2003, for the construction of the subject project.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the conditions and limitations as specified therein.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, P.O. Drawer 27447, Raleigh, NC 27611-7447. Unless such demands are made this permit shall be final and binding.

If you have any questions, or need additional information concerning this matter, please contact either me or Linda Lewis at (910) 395-3900.

Sincerely,

for Rick Shiver
Water Quality Regional Supervisor

RSS/arl: S:\WQS\STORMWAT\PERMIT\030230.apr03
cc: Onslow, County Building Inspections
Division of Coastal Management
Linda Lewis
Wilmington Regional Office
Central Files

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

STATE STORMWATER MANAGEMENT PERMIT

OTHER PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules and Regulations

PERMISSION IS HEREBY GRANTED TO

NCDOT

B-3217 Bridge No. 21 SR 1503

Onslow County

FOR THE

construction of a public road / bridge in compliance with the provisions of 15A NCAC 2H .1000 (hereafter referred to as the "*stormwater rules*") and the approved stormwater management plans and specifications, and other supporting data as attached and on file with and approved by the Division of Water Quality and considered a part of this permit.

The Permit shall be effective from the date of issuance until rescinded and shall be subject to the following specific conditions and limitations:

I. DESIGN STANDARDS

1. The runoff from the impervious surfaces has been directed away from surface waters as much as possible.
2. The amount of built-upon area has been minimized as much as possible.
3. Best Management Practices are employed which minimize water quality impacts.
4. Approved plans and specifications for projects covered by this permit are incorporated by reference and are enforceable parts of the permit.
5. Vegetated roadside ditches are 3:1 slopes or flatter.

II. SCHEDULE OF COMPLIANCE

1. The permittee shall at all times provide adequate erosion control measures in conformance with the approved Erosion Control Plan.

2. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction for the following items:
 - a. Major revisions to the approved plans, such as road realignment, deletion of any proposed BMP, changes to the drainage area or scope of the project, etc.
 - b. Project name change.
 - c. Redesign of, addition to, or deletion of the approved amount of built-upon area, regardless of size.
 - d. Alteration of the proposed drainage.
3. The permittee shall submit all information requested by the Director or his representative within the time frame specified in the written information request.
4. The Director may determine that other revisions to the project should require a modification to the permit.
5. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

III. GENERAL CONDITIONS

1. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division of Water Quality, in accordance with North Carolina General Statutes 143-215.6A to 143-215.6C.
2. The permit issued shall continue in force and effect until revoked or terminated.
3. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and reissuance, or termination does not stay any permit condition.
4. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 15A of the North Carolina Administrative Code, Subchapter 2H.1000; and North Carolina General Statute 143-215.1 et. al.
5. The permit is not transferable to any person except after notice to and approval by the Director. The Director may require modification or revocation and reissuance of the permit to change the name and incorporate such other requirements as may be necessary. A formal permit request must be submitted to the Division of Water Quality accompanied by the appropriate fee, documentation from both parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits, and may or may not be approved. The permittee is responsible for compliance with the terms and conditions of this permit until such time as the Director approves the transfer.

6. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state and federal) which have jurisdiction.

Permit issued this, the 30th day of April, 2003

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

Edward Beck

for Alan W. Klimek, P.E., Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number SW8 030230

OFFICE USE ONLY		
Date Received	Fee Paid	Permit Number
2/24/03	420.00 1399398	JW8030230

State of North Carolina
 Department of Environment and Natural Resources
 Division of Water Quality

RECEIVED
 MAY 09 2002

STORMWATER MANAGEMENT PERMIT APPLICATION FORM
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 LINEAR ROADWAY PROJECT
 DIVISION OF HIGHWAYS
 HYDRAULICS UNIT
This form may be photocopied for use as an original.

DWO Stormwater Management Plan Review:

A complete stormwater management plan submittal includes this application form, a supplement form for each BMP proposed (see Section V), design calculations, and plans and specifications showing all road and BMP details.

I. PROJECT INFORMATION

NCDOT Project Number: 8-2261001 (B-3217) County: Onslow

Project Name: _____

Project Location: Replacement of BRIDGE No. 21 on SR 1303 over BEAR CR.

Contact Person: _____ Phone: _____ Fax: _____

Receiving Stream Name: BEAR CR. River Basin: White OAK Class: _____

Proposed linear feet of project: 0.24 miles

Proposed Structural BMP and Road Station (attach a list of station and BMP type if more room is needed):

Type of proposed project: (check all that apply):

- New
- Widening
- 2 lane*
- 4 lane*
- Curb and Gutter
- Bridge Replacement
- Other (Describe) _____

*2 lane and 4 lane imply that roadside ditches are used unless Curb and Gutter is also checked.

II. REQUIRED ITEMS CHECKLIST

Initial in the space provided below to indicate the following design requirements have been met and supporting documentation is attached. Supporting documentation shall, at a minimum, consist of a brief narrative description including (1) the scope of the project, (2) how the items below are met, (3) how the proposed best management practices minimize water quality impacts, and (4) any significant constraints and/or justification for not meeting a, b, c and d to the maximum extent practicable.

Designer's Initials

- WSZ a. The amount of impervious surface has been minimized as much as possible.
- WSZ b. The runoff from the impervious areas has been diverted away from surface waters as much as possible.
- WSZ c. Best Management Practices are employed which minimize water quality impacts.
- WSZ d. Vegetated roadside ditches are 3:1 slope or flatter.

III. OPERATION AND MAINTENANCE AGREEMENT

I acknowledge and agree by my initials below that the North Carolina Department of Transportation is responsible for the implementation of the four maintenance items listed. I agree to notify DWQ of any operational problems with the BMP's that would impact water quality or prior to making any changes to the system or responsible party.

Maintenance Engineer's Initials

- DT a. BMP's shall be inspected and maintained in good working order.
DT b. Eroded areas shall be repaired and reseeded as needed.
DT c. Stormwater collection systems, including piping, inlets, and outlets, shall be maintained to insure proper functioning.

Maintenance Engineer's Name:

David L. Thomas DAVID L. THOMAS, P.E.
Title: DIVISION MAINTENANCE ENGINEER

IV. APPLICATION CERTIFICATION

I, (print or type name) M. RANDALL TURNER of PD&EA Branch, certify that the information included on this permit application form is, to the best of my knowledge, correct and that the project will be constructed in conformance with the approved plans and that the proposed project complies with the requirements of 15A NCAC 2H .1000.

Title: Unit Head, NCDOT

Address: 1598 MAIL SERVICE CENTER, RALEIGH, NC 27699-1598

Signature: M. Randall Turner Date: 2-10-03

V. SUPPLEMENT FORMS

The applicable state stormwater management permit supplement form(s) listed below must be submitted for each BMP specified for this project. Contact the Stormwater and General Permits Unit at (919) 733-5083 for the status and availability of these forms.

Form SWU-102	Wet Detention Basin Supplement
Form SWU-103	Infiltration Basin Supplement
Form SWU-104	Low Density Supplement
Form SWU-105	Curb Outlet System Supplement
Form SWU-106	Off-Site System Supplement
Form SWU-107	Underground Infiltration Trench Supplement
Form SWU-108	Neuse River Basin Supplement
Form SWU-109	Innovative Best Management Practice Supplement
Form SWU-110	Extended Dry Detention Basin Supplement

STATE PROJECT: 8.2261001 (B-3217)
F. A. PROJECT: BRZ-1503(1)
COUNTY: ONSLOW
PROJECT LENGTH: 0.34 MILES

May 13, 2002

Project Scope

NCDOT proposes to replace Bridge No. 21 on SR1503 over Bear Creek at its existing location. The existing 5 span, 87ft. long, 25.4ft. wide bridge will be replaced by a 2-span, 95ft. long, 45ft. wide bridge. A temporary detour bridge (100 ft. long) will be located just to the east (downstream) of SR1503. The existing roadway approaches, which consist of two 12 ft. lanes, will be replaced with two 12 ft. lanes with 8 ft. shoulders. Four feet of the shoulder area will be paved and 4 ft. will be turf. Bear Creek is classified as Class SA waters and is a designated fish nursery area.

Best Management Practices Utilized

- No deck drains will be installed in the bridge deck (No direct discharge into Bear Creek)
- Detour structure will be a bridge and not 2@72in CMPs as initially proposed in the Preliminary Hydraulic Study. This was done to keep the disturbance of the main channel and adjacent wetlands to a reasonable minimum.
- The possibility of using an off-site detour was reinvestigated given the recent emphasis on the protection of wetlands and high quality waters. After considering alternatives, Division personnel determined that given all issues at hand that an on-site detour is the best alternative.
- The maximum span for a cored slab bridge was used in order to keep bents out of the main channel.
- Roadway ditches were removed from wetland areas where possible to limit wetland impacts.
- Approach roadway footprint was reinvestigated and minimized where possible to limit wetland impact.