STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

October 31, 2005

N. C. Dept. of Environment and Natural Resources
Division of Coastal Management
1367 U. S. Highway 17
Elizabeth City, NC 27909

Attention: Ms. Wanda Gooden

Dear Madam:

Subject: **CAMA Major Development Permit Application** for the Replacement of Bridge No. 11 on SR 1219 (Francis Mill Road) over the Cashie River in Bertie County. Federal Project No. BRZ-1219[1], State Project No. 8.2010501, TIP No. B-4027.

Please find enclosed the CAMA major permit application, Categorical Exclusion (CE), permit drawings, half-size plans, and the landowner receipts for the above-mentioned project. WBS Element 33394.1.1 will be debited for $400.00 for the application of the subject project. The North Carolina Department of Transportation (NCDOT) proposes to replace existing Bridge No. 11 on SR 1219 over the Cashie River (DWQ Index # 03-02-10) in Bertie County. The project involves replacement of the existing structure with a 160-foot cored slab bridge at approximately the same location and a slightly higher roadway elevation, using top-down construction. The approach roadway will consist of two 11-foot travel lanes with shoulder widths of at least 6 feet. Shoulder widths will be increased by at least 3 feet where guardrail is warranted. Traffic will be detoured off-site, along surrounding roads, during construction. SR 1219 is classified as a Rural Local Route in the Statewide Functional Classification system. The project schedule calls for an April 18, 2006 Let date with a review date of February 28, 2006.

Impacts To Waters of the United States

General Description: The project is located in the Roanoke River Basin (HU 03010107). A best usage classification of "C Sw" has been assigned to the Cashie River. Neither High Quality Waters (HQW), Water Supplies (WS-I: undeveloped watersheds or WS-II: predominately undeveloped watersheds), nor Outstanding Resource Waters (ORW) occur within 1.0 mile (1.6 km) of project study area. The Cashie River is not designated as a North Carolina Natural 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

Scenic River, or as a national Wild and Scenic River. Water depth at the project site is approximately six feet.

Permanent Impacts: The Cashie River and adjacent wetlands will be impacted by the proposed project. Construction of the proposed project will result in a permanent impact of 0.236 acre from roadway fill in wetlands (see permit drawings). In addition, a total less than 0.001 acre of surface water will be impacted from placement of bents in the channel.

Temporary Impacts: In addition to permanent impacts, 0.194 acre of temporary impacts to wetlands will occur, as a result of hand clearing (see permit drawings). This consists of 25 feet of hand clearing in wetlands beyond the South side of the bridge and 5 feet of hand clearing in wetlands beyond the toe of slope to allow the installation of erosion control devices (i.e. silt screen).

Utility Impacts: Temporary impacts to 0.114 acre will occur to wetlands from the relocation of power lines, telephone lines, and a water line. The work will primarily occur in areas also affected by the road fill and hand clearing (see attached Utility Drawings). Installation will involve utilization of the directional bore method. Hand clearing and temporary work mats will be used when applicable. Two existing utility poles located to the south of the bridge will be removed.

Bridge Demolition

The existing bridge consists of reinforced concrete channels with an asphalt-wearing surface. The end bents and interior bents consist of precast prestressed caps and timber piles. Additional interior bents (crutch bents) consisting of HP piles and recycled I-beams have been added to support the structure. The contractor will likely remove the original piles with a vibratory hammer; the crutch bents can be removed by cutting the caps free from the piles and removing with crane. An old bulkhead is located at the north end of the bridge. This bulkhead will not likely be disturbed unless it conflicts with construction of the new bents. The bridge can be removed without dropping components into Waters of the United States during construction. Best Management Practices for Bridge Demolition and Removal will be followed to avoid any temporary fill from entering Waters of the United States. The bridge demolition is classified as a Case 2 due to the in-stream moratorium for anadromous fish (February 15 to June 15).

Avoidance, Minimization, and Mitigation

Avoidance and Minimization: Avoidance examines all appropriate and practicable possibilities of averting impacts to "Waters of the United States". Due to the presence of surface waters and wetlands within the project study area, avoidance of all impacts is not possible. The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts. Minimization measures were incorporated as part of the project design these included:

- Use of an off-site detour during construction.
- Construction of a 40-foot longer bridge
- Best Management Practices for the Protection of Surface Water and Guidelines for Anadromous Fish Passage will also be utilized during demolition of the existing bridge and construction of the new bridge.
- Use of 3:1 Fill slopes in jurisdictional areas.
- Hand clearing in wetlands.

Mitigation: The U.S. Army Corps of Engineers' interpretation of Nationwide Permits is that all impacts to perennial streams or intermittent streams or wetlands that exhibit important aquatic function require mitigation. Therefore, the remaining unavoidable impacts to 0.236 acre of wetlands will be offset by compensatory 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. 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. A copy of the EEP's acceptance letter, dated September 20, 2005, is attached.

Federal Protected Species

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of January 29, 2003 the US Fish and Wildlife Service (USFWS) lists one federally protected species for Bertie County (see Table 1). No species have been added to or deleted from the list since the completion of the CE (February 27, 2004).

Table 1. Federally protected species of Bertie County.

Scientific Name	Common Name	Federal Status	Biological Conclusion
Picoides borealis	Red-cockaded woodpecker	E	No Effect

Endangered (E) – is defined as a taxon "in danger of extinction throughout all or a significant portion of its range."

Regulatory Approvals

NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Development Permit. The landowner receipts are attached. NCDOT has also applied for the issuance of a United States Army Corps of Engineers NWP 23, NWP 12, a 401 Water Quality Certification, and a stormwater permit from NCDWQ under separate cover.

A copy of this permit application will be posted on the NCDOT website at: http://www.doh.dot.state.nc.us/preconstruct/pe/neu/permit.html. Thank you for your time and assistance with this project. Please contact Tyler Stanton at tstanton@dot.state.nc.us or (919) 715-1439 if you have any questions or need any additional information.

Sincerely,

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

Cc w/attachment:
Ms. Cathy Brittingham, NCDCM

Cc w/o attachment:
Mr. John Hennessy, NCDWQ
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Michael Street, NCDMF
Dr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Anthony Roper, P.E., Division 1 Engineer
Mr. Clay Willis, Division 1 Environmental Officer
Mr. Scott McLendon, USACE, Wilmington
Mr. Jay Bennett, P.E., Roadway Design
Mr. Omar Sultan, Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch
Mr. Bill Goodwin, P.E., PDEA

Form DCM-MP-1

APPLICATION

(To be completed by all applicants)

1. APPLICANT

a. Landowner:

Name N. C. Department of Transportation

Address 1548 Mail Service Center

City Raleigh State NC

Zip 27699-1548 Day Phone 919-733-3141

Fax 919-733-9794

b. Authorized Agent:

Name

Address

City State

Zip Day Phone

Fax

c. Project name (if any) **33394.1.1 (B-4027) Replace bridge no. 11 over Cashie River on SR 1219**

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

2. LOCATION OF PROPOSED PROJECT

a. County:Bertie

b. City, town, community or landmark Lewiston-Woodville

c. Street address or secondary road number SR 1219

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

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

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.

Removal of existing bridge. Construction of replacement bridge. Improve roadway approaches with additional fill to raise grade and widen shoulders.

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

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

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. The project is necessary to replace an aging bridge. Heavy equipment will be used to remove the existing bridge and construct the new bridge. Construction method will be top-down.

4. LAND AND WATER CHARACTERISTICS

a. Size of entire tract N/A

b. Size of individual lot(s) N/A

c. Approximate elevation of tract above MHW or NWL
N.G. = 0- 1' Roadway = 6'

d. Soil type(s) and texture(s) of tract
Alluvium, loose to dense sand

e. Vegetation on tract roadside grasses, cypress-gum swamp, bottomland hardwoods.

f. Man-made features now on tract
roadway fill, bridge, powerline, waterline.

g. What is the CAMA Land Use Plan land classification of the site? *(Consult the local land use plan.)*

____ Conservation	____ Transitional
____ Developed	____ Community
_x_ Rural	____ Other

h. How is the tract zoned by local government?
N/A

i. Is the proposed project consistent with the applicable zoning? _X_ Yes ____ No
(Attach zoning compliance certificate, if applicable)

j. Has a professional archaeological assessment been done for the tract? _X_ Yes ____ No
If yes, by whom? NCDOT

k. Is the project located in a National Registered Historic District or does it involve a National Register listed or eligible property?
_x_ Yes ____ No

l. Are there wetlands on the site? _x_ Yes ____ No
Coastal (marsh) ____ Other _x_
If yes, has a delineation been conducted? yes
(Attach documentation, if available)

m. Describe existing wastewater treatment facilities.
N/A

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.) stormwater discharges are by sheet flow.

o. Describe existing drinking water supply source.
N/A

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
  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 attached list
  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 $400** 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 31 day of October, 2005.

Print Name Philip S. Harris III

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
_x_ 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.*

Form DCM-MP-5

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 ___X___ Private _____

b. Type of bridge (construction material)
Concrete cored-slab

c. Water body to be crossed by bridge
Cashie River

d. Water depth at the proposed crossing at MLW or 7'_

e. Will proposed bridge replace an existing bridge?
__x__ Yes _____ No
If yes,
(1) Length of existing bridge 120'
(2) Width of existing bridge 24'
(3) Navigation clearance underneath existing bridge 3.3'
(4) Will all, or a part of, the existing bridge be removed? (Explain)
all of existing bridge will be removed

f. Will proposed bridge replace an existing culvert(s)?
_____ Yes __x__ 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 160'

h. Width of proposed bridge 33'

i. Height of proposed bridge above wetlands
6.5'

j. Will the proposed bridge affect existing water flow?
____ Yes __x__ No
If yes, explain

k. Navigation clearance underneath proposed bridge
4'

l. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? _____Yes __x__ No
If yes, explain

m. Will the proposed bridge cross wetlands containing no navigable waters? __x__ Yes _____ No
If yes, explain navigation would be limited to the smallest of watercraft (i.e. canoe)

n. Have you contacted the U.S. Coast Guard concerning their approval?
_____ Yes __x__ No
If yes, please provide record of their action.

2. CULVERTS

a. Water body in which culvert is to be placed

_____

b. Number of culverts proposed_____

c. Type of culvert (construction material, style)

_____

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 _____
_____

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 _____
(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?
__x__ Yes _____ No
If yes,
(1) Length of area to be excavated 40'
(2) Width of area to be excavated 45'
(3) Amount of material to be excavated in cubic yards 215 cu. yrds.

d. If the placement of the bridge or culvert involves any excavation, please complete the following:
(1) Location of the spoil disposal area
to be determined by the contractor
_____
(2) Dimensions of spoil disposal area
to be determined by the contractor
(3) Do you claim title to the disposal area?
_____ Yes ____ No N/A
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._____

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 _____

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,
(1) Length of area to be filled +/- 750'
(2) Width of area to be filled +/- 7'
(3) Purpose of fill roadway embankment

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 +/- 750'
(2) Width of area to be filled +/- 60'
(3) Purpose of fill roadway

4. GENERAL

a. Will the proposed project involve any mitigation?
__x__ Yes ____ No
If yes, explain in detail _____

b. Will the proposed project require the relocation of any existing utility lines? __x__ Yes ___ No
If yes, explain in detail powerline, telephone, and waterline. Accomplished by directional bore method.

c. Will the proposed project require the construction of any temporary detour structures?
____ Yes __x__ No
If yes, explain in detail _____

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 approved BMPs will be utilized

f. What type of construction equipment will be used (for example, dragline, backhoe or hydraulic dredge)? Heavy highway construction equipment: Crane for bridge, excavator for removal of existing abutments, heavy grading equipment for roadway

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?
____ Yes __x__ No
If yes, explain in detail _____

NCDOT
Applicant or Project Name

Signature

10/31/05
Date

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

James C. Doughtie, Jr.
329 Francis Mill Road
Aulander, NC 27805

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X James Doughtie ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery 8/4/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7003 3110 0000 6901 6168

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1035

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 3, 2005

James C. Doughtie, Jr.
329 Francis Mill Road
Aulander, NC 27805

Dear Landowner:

The North Carolina Department of Transportation is planning to replace bridge number 11 on SR 1219 over the Cashie River. The proposed project will replace the aging existing structure with a 160-foot long bridge. The additional length will allow for the replacement of a substandard structure as well as improve the existing floodplain. 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:

Ms. Lynn Mathis
Division of Coastal Management
1367 U. S. Highway 17
Elizabeth City, NC 27909

Thank you for your cooperation.

Sincerely,

Phil S. Harris, III, P.E., Manager
PDEA - Office of Natural Environment

Enclosures

cc: Lynn Mathis, DCM
Bill Goodwin, P.E., PDEA
File B-4027

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

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Katherine O. Jernigan
414 N. Curtis Street
Ahoskie, NC 27910

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Katherine Jernigan ☐ Agent ☑ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7003 3110 0000 6901 6502

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
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August 3, 2005

Katherine O. Jernigan
414 N. Curtis Street
Ahoskie, NC 27910

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Ms. Lynn Mathis
Division of Coastal Management
1367 U. S. Highway 17
Elizabeth City, NC 27909

Thank you for your cooperation.

Sincerely,

Phil S. Harris, III, P.E., Manager
PDEA - Office of Natural Environment

Enclosures

cc: Lynn Mathis, DCM
Bill Goodwin, P.E., PDEA
File B-4027

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

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Plum Creek Timberlands, L.P.
987 Griswoldville, Road
Macon, GA 31210

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Jeff Kross

C. Date of Delivery 8 8 05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7003 3110 0000 6901 6526

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 3, 2005

Plum Creek Timberlands, L.P.
987 Griswoldville, Road
Macon, GA 31210

Dear Landowner:

The North Carolina Department of Transportation is planning to replace bridge number 11 on SR 1219 over the Cashie River. The proposed project will replace the aging existing structure with a 160-foot long bridge. The additional length will allow for the replacement of a substandard structure as well as improve the existing floodplain. 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:

Ms. Lynn Mathis
Division of Coastal Management
1367 U. S. Highway 17
Elizabeth City, NC 27909

Thank you for your cooperation.

Sincerely,

Phil S. Harris, III, P.E., Manager
PDEA - Office of Natural Environment

Enclosures

cc: Lynn Mathis, DCM
Bill Goodwin, P.E., PDEA
File B-4027

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

Bertie County
Bridge No. 11 on SR 1219
Over Cashie River
Federal Aid Project No. BRZ-1219(1)
State Project No. 8.2010501
WBS No. 33394.1.1
T.I.P. No. B-4027

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

Approved:

2/27/04
DATE

for Gregory J. Thorpe, PhD, Environmental Management Director
Project Develoment and Environmental Analysis Branch (PDEA)

2/27/04
DATE

John F. Sullivan, III, Division Administrator
Federal Highway Administration (FHWA)

Bertie County
Bridge No. 11 on SR 1219
Over Cashie River
Federal Aid Project No. BRZ-1219(1)
State Project No. 8.2010501
WBS No. 33394.1.1
T.I.P. No. B-4027

CATEGORICAL EXCLUSION

Documentation Prepared in
Project Development and Environmental Analysis Branch By:

February 2004

Karen B. Capps, PE

Karen B. Capps, PE
Project Planning Engineer

William T. Goodwin Jr.

William T. Goodwin Jr., PE, Unit Head
Bridge Replacement Planning Unit

PROJECT COMMITMENTS

Bertie County
Bridge No. 11 on SR 1219 Over Cashie River
Federal Aid Project No. BRZ-1219(1)
State Project No. 8.2010501
WBS No. 33394.1.1
T.I.P. No. B-4027

Division 1 Construction Engineer, Structure Design Unit

The proposed structure should be designed to facilitate top-down construction. If it is determined that top-down construction cannot be used, then additional coordination with the United States Army Corps of Engineers and Bertie County Emergency Management Services will be required.

No deck drains will be allowed to discharge directly into the Cashie River.

Division 1 Construction Engineer, Structure Design Unit, Roadway Design Unit

The total time of **road closure** for this project should be held to to a minimum due to the length of delay on the proposed detour route for the local citizens. The contractor should be given incentives to minimize the road closure for the project. The **total project construction time** can be longer, as long as work can be done under traffic. Bertie County Emergency Management Services will be notified a minimum of thirty (30) days in advance of the beginning of the road closure.

This reach of The Cashie River has potential as a travel corridor for anadromous fish. Therefore, an in-stream moratorium will be in effect from February 15 to June 15. The Stream Crossing Guidelines for Anadromous Fish Passage will be implemented, as applicable.

Bertie County
Bridge No. 11 on SR 1219
Over Cashie River
Federal Aid Project No. BRZ-1219(1)
State Project No. 8.2010501
T.I.P. No. B-4027

INTRODUCTION: Bridge No. 11 is included in the latest approved North Carolina Department of Transportation (NCDOT) Transportation Improvement Program and is eligible for the Federal-Aid Bridge Replacement and Rehabilitation Program. The location is shown in Figure 1. No substantial environmental impacts are anticipated. The project is classified as a Federal "Categorical Exclusion".

I. PURPOSE AND NEED STATEMENT

Bridge Maintenance Unit records indicate the bridge has a sufficiency rating of 24.8 out of a possible 100 for a new structure. The bridge is considered to be structurally deficient and functionally obsolete. The replacement of this inadequate structure will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located in the northwest section of Bertie County about 4.6 miles east of Lewiston, NC (See Figure 1). The project vicinity is rural in nature with forest stands, scattered residential development and farms.

SR 1219 is classified as a rural local route in the Statewide Functional Classification System and it is not a National Highway System Route. This route is not a designated bicycle route and there is no indication that an unusual number of bicyclists use this roadway.

In the vicinity of the bridge, SR 1219 has an 18-foot pavement width with approximately 4-foot grass shoulders. The roadway grade is fairly flat and tangent through the project area. The horizontal bridge alignment is tangent with curves on both approaches. The roadway is situated approximately 11 feet above the creek bed.

Bridge No. 11 is a four-span structure that consists of reinforced concrete channels (Bridge Maintenance Design -13) with an asphalt wearing surface. The rails consist of metal guardrail bolted to the exterior channel members. The exterior channel members have a concrete curb cast with the member. The end bents and interior bents consist of precast prestresssed caps and timber piles. Additional interior bents consisting of HP piles and recycled I-beams have been added to the structure. The existing bridge was constructed in 1966. The overall length of the structure is 120 feet. The clear roadway width is 24.1 feet. The posted weight limit on this bridge is 21 tons for single vehicles (SV) and 27 tons for truck-tractor semi-trailer's (TTST).

The utility impact on this project is low. An aerial power line runs along the west side of the road. There is underground telephone marked on both sides of the road that becomes aerial at the bridge along the west side of the structure. There is the potential for impacting these telephone lines during construction due to their proximity to the existing road.

The current traffic volume of 600 vehicles per day (VPD) is expected to increase to 1,100 VPD by the year 2025. The projected volume includes one percent truck-tractor semi-trailer (TTST) and two percent dual-tired vehicles (DT). The speed limit is not posted in this area and is assumed statutory 55 mph. No accidents were reported in the vicinity of Bridge No. 11 during a recent three-year period.

Six (6) school buses cross the bridge daily on their morning and afternoon routes.

III. ALTERNATIVES

A. Project Description

The replacement structure will be of sufficient width to provide for two 11-foot lanes with four-foot offsets on each side.

The proposed structure will have a crest vertical curve in the center in order to facilitate drainage. The existing approach grades are flat.

The existing roadway approaches will be widened to accommodate two 11-foot lanes. Six-foot unpaved shoulders will be provided on each side and increased to nine-foot shoulders where guardrail is required. This roadway will continue to be designated as a rural local route.

B. Reasonable and Feasible Alternatives

The two alternatives that were studied for replacing Bridge No. 11 are described below.

Alternate 1: (Preferred) involves replacing the existing bridge in the same location with a 135-foot long cored slab bridge. Please reference Figure 2. Traffic would be detoured onto surrounding secondary roads during construction.

Alternate 2: would replace the existing bridge in the same location with a 135-foot long cored slab bridge. Traffic would be maintained with a temporary, onsite detour located just downstream (southeast) of the existing structure. The temporary detour structure would need to be 100 feet in length with a roadway elevation that is two feet lower than that of the existing bridge.

C. Alternatives Eliminated From Further Consideration

The "do-nothing" alternative will eventually necessitate closure of the bridge. This is not acceptable due to the traffic service provided by SR 1219.

"Rehabilitation" of the old bridge is not practical due to its age and the type of existing superstructure members in place. The additional bents placed on this bridge are evidence that these members cannot handle the current traffic load. Since the traffic is expected to increase, rehabilitation is not practical.

D. Preferred Alternative

Alternate 1 is preferred for the replacement of Bridge No. 11. This alternate is the most economically feasible because it minimizes environmental impacts to a high quality resource and eliminates the cost of a temporary onsite detour. Traffic will be detoured around on other secondary roads during construction. The proposed detour route utilizes SR 1221, SR 1210, SR 1200, NC 11/42, and NC 308 (See Fig. 1). The expected delay is approximately nine minutes. Division One concurs with the proposed alternate. Due to the expected delay on the detour route, every effort should be made to keep the length of road closure to a minimum. The total project construction time may be longer, as long as work can proceed under traffic. Bertie County EMS will be contacted a minimum of thirty (30) days in advance of the beginning of any road closure in order to facilitate coordination of services.

IV. ESTIMATED COSTS

The estimated costs for the two alternates are as follows:

	Alternate 1 (Preferred)	**Alternate 2**
Structure	$ 303,750	$ 303,750
Roadway Approaches	$ 152,237	$ 152,237
Temporary Detour	$0	$ 575,000
Structure Removal	$ 26,136	$ 26,136
Misc. & Mobilization	$ 117,990	$ 117,990
Eng. & Contingencies	$ 99,887	$ 99,887
Total Construction Costs	$ 700,000	$ 1,275,000
Right-Of-Way Costs	$ 45,600	$ 66,000
Total Project Cost	$ 745,600	$ 1,341,000

V. NATURAL RESOURCES

PHYSICAL RESOURCES

The project area is located within a level, wide floodplain valley surrounded by gently sloping valley walls. Elevations in the project area range from a high of approximately 60 feet National Geodetic Vertical Datum (NGVD), on the southwestern end of the project area, to a low of approximately 40 feet NGVD within the stream channel. Land use within and near the project area consists of woodlands, swamps, pine plantations, agricultural fields, and rural residential lots.

Soils

Information about soils in the project area was taken from the *Soil Survey of Bertie County, North Carolina* (SCS 1990). The project area is underlain by four soil series: Bibb and Johnston loams, Pantego loam, Rains sandy loam, and Norfolk sandy loam. Bibb and Johnston soils occur along the river channel, Pantego and Rains are found on slopes and river terraces, and Norfolk sandy loam is found on uplands. The Bibb and Johnston, Pantego, and Rains series are considered hydric soils by the NRCS (NRCS 1997).

WATER RESOURCES

Physical Characteristics of Surface Waters

The project area is located within sub-basin 03-02-10 (Cashie River drainage) of the Roanoke River Basin (DWQ 2001). This area is part of USGS Hydrologic Unit 03010107 of the South Atlantic/Gulf Region. The structure targeted for replacement spans the Cashie River and the Cashie River floodplain. This section of the Cashie River has been assigned Stream Index Number 24-2-(1) by the N.C. Division of Water Quality (DWQ 2002). At the project area, the Cashie River is a poorly-defined, third-order, perennial stream with low flow over a silt substrate. The floodplain of the Cashie River slopes gently upwards from the water surface. Water clarity was poor due to tannin staining, with visibility to 8 inches and flow velocity was low.

Best Usage Classification

The Best Usage Classification for the Cashie River is C Sw (DWQ 2002). No Watershed Critical Areas or water resources classified as High Quality Waters, Water Supplies (WS-I or WS-II), or Outstanding Resource Waters are located within 1.0 mile of the project area.

Point Source Discharge Permits

Sub-basin 03-02-10 of the Roanoke River Basin supports four National Pollutant Discharge Elimination System permitted point source dischargers. Total discharge is 1.3

million gallons per day, although one discharger is not limited as to flow amount. One major discharger (Windsor Wastewater Treatment Plant) accounts for a total of 1.15 million gallons per day. Three minor dischargers account for 0.15 million gallons per day. The dischargers in the sub-basin are located in Windsor, approximately 16 stream miles to the southeast and downstream from the project area, and in Lewiston-Woodville, approximately 3.5 stream miles west and upstream of the project area.

BIOTIC RESOURCES

Terrestrial Communities

Three terrestrial communities were identified in the project area: Cypress-Gum Swamp (Blackwater Subtype), Coastal Plain Bottomland Hardwoods (Blackwater Subtype), and disturbed/maintained land. A summary of plant community areas is presented in the following table.

Plant community coverage within the project area.

Plant Community	Area
Cypress-Gum Swamp (Blackwater Subtype)	16.9 acres
Coastal Plain Bottomland Hardwoods (Blackwater Subtype)	6.9 acres
Disturbed/maintained land	11.3 acres

Aquatic Communities

WRC has developed a Significant Aquatic Endangered Species Habitat database to enhance planning, siting, and impact analysis in areas proposed by WRC as being critical due to the presence of Endangered or Threatened aquatic species. No Significant Aquatic Endangered Species Habitat occurs within the project area. The nearest Significant Aquatic Endangered Species Habitat occurs approximately 12.0 miles north, in the Chowan River Basin. However, this reach of the Cashie River has potential as a travel corridor for anadromous fish. Therefore, in-water work during project construction may need to be avoided during moratorium periods associated with fish migration, spawning, and nursery areas.

To minimize fishing and non-fishing activities that adversely affect marine fisheries, areas of Essential Fish Habitat (EFH) afford limited protection under the Magnuson-Stevens Act of 1996 (16 U.S.C. 1801 *et seq.*). No EFH occurs within the project area.

Summary of Anticipated Impacts to Biotic Resources

Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of a stringent erosion control schedule and the use of Best Management Practices (BMPs). Long-term impacts resulting from construction are expected to be negligible. Due to the composition of the Cashie River streambed,

sediment curtains should be utilized to minimize potential water quality degradation as a result of bridge replacement.

JURISDICTIONAL TOPICS

Waters of the United States

Surface waters within the embankments of the Cashie River are subject to jurisdictional consideration under Section 404 of the Clean Water Act as waters of the United States (33 CFR Section 328.3). During the field visit, the channel of the Cashie River was not distinguishable from the adjacent Cypress-Gum Swamp.

Jurisdictional wetlands are present as defined by Cowardin *et a* (1979). Vegetated wetlands are defined by the presence of three primary criteria: hydric soils, hydrophytic vegetation, and evidence of hydrology at or near the surface for a portion (12.5 percent) of the growing season (DOA 1987). Approximately 69 percent (26.6 acres) of the project area consists of vegetated wetlands represented by Cypress-Gum Swamp and Coastal Plain Bottomland Hardwoods. Table 1 lists these wetland types and their areas within the project area. On the whole, wetlands within the project area would be considered riverine by the DWQ based on their location within the Cashie River floodplain.

Table 1: Wetland types within the project area. Areas are expressed in acres.

Cowardin Classification	Plant Community	Area	DWQ Rating
PFO1A	Coastal Plain Bottomland Hardwoods	8.7	55
PFO1C	Cypress-Gum Swamp	10.7	55
PFO1/2F	Cypress-Gum Swamp	7.2	70
Total		26.6	

Bridge Demolition

Demolition and removal of a highway bridge over Waters of the United States must be addressed when applying to the U.S. Corps of Engineers (COE) for a permit. Bridge No. 11 is composed of prestressed concrete channels with concrete parapet and W-beam guardrail and a substructure of precast, prestressed concrete caps on timber piles. The superstructure can be removed without dropping any components into jurisdictional waters. The bridge demolition is classified as a Case 2 due to the in-stream moratorium for anadromous fish.

Summary of Anticipated Impacts To Jurisdictional Waters and Wetlands

The preferred alternative (Alternative 1) has a total wetland impact of 0.6 Ac, which will require mitigation. Project construction cannot be accomplished without infringing on the

surface waters. Anticipated surface water impacts fall under the jurisdiction of the USACE and the DWQ. There are no anticipated stream impacts at this time.

Permits

The project area may contain Public Trust Waters Areas of Environmental Concerns (AEC's). If replacement of the bridge avoids impacts to AECs, the Division of Coastal Management (DCM) will review the permit application for CAMA consistency. If an AEC is proposed to be impacted, a CAMA Major Permit or General Permit for bridge replacement (15A NCAC 07H.2300) may be applicable.

This project may be processed as a Categorical Exclusion (CE) under Federal Highway Administration (FHWA) guidelines. The USACE has made available Nationwide Permit (NWP) No. 23 (67 FR 2020, 2082; January 15, 2002) for CEs due to minimal impacts to waters of the U.S. expected with bridge construction. DWQ has made available a General 401 Water Quality Certification for NWP No. 23 (GC 3361). If temporary construction is required that is not described in the CE, a NWP No. 33 (67 FR 2020, 2084, January 15, 2002) and associated DWQ General Water Quality Certification (GC 3366) may apply. In the event that NWP No. 23 will not suffice, impacts attributed to bridge replacement and associated approach improvements may qualify under General Bridge Permit (GP) 031 issued by the Wilmington USACE District. DWQ has made available a General 401 Water Quality Certification for GP 031 (GC 3375). Notification to the USACE Wilmington district office is required if this general permit is utilized.

Avoidance, Minimization, Mitigation

Because this project will likely be authorized under a Nationwide Permit, mitigation for impacts to surface waters may or may not be required by the USACE. In accordance with the Division of Water Quality Wetland Rules [15A NCAC 2H .0506 (h)] "Fill or alteration of more than one-tenth of an acre of wetlands will require compensatory mitigation; and fill or alteration of more than 150 linear feet of streams may require compensatory mitigation." The proposed project has avoided and minimized impacts to the wetlands by replacing the bridge in the same location and slightly higher elevation. The shoulder widths for the approach roadway work have been minimized and widened only where guardrail is required.

Rare and Protected Species

Some populations of plants and animals are declining either as a result of natural forces or their difficulty competing with humans for resources. Rare and protected species listed for Bertie County, and any likely impacts to these species as a result of the proposed project construction, are discussed in the following sections.

Federally Protected Species

Species with the federal classification of Endangered, Threatened, or officially Proposed for such listing are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). One federally protected species is listed for Bertie County (February 25, 2003 FWS list), and is presented in the following table.

Common Name	Scientific Name	Status	Biological Conclusion
Red-cockaded woodpecker	*Picoides borealis*	E[1]	No Effect

[1]Endangered. The term "Endangered Species" is defined as any species which is in danger of extinction throughout all or a significant portion of its range.

Red-cockaded woodpecker

A few mature loblolly pine trees exist within the project area and adjacent areas. Some of these trees may be old enough to provide suitable nesting and foraging habitat for red-cockaded woodpeckers. However, the trees are widely spaced and occur in scattered locations. The clustered arrangement of pine trees preferred by the birds for nesting colonies is not provided in the vicinity of the project area. In addition, the use of these scattered pines for foraging sites would depend on the birds' crossing large, inhospitable tracts of roadways and agricultural fields. Therefore, although suitable individual trees exist within the project area, the project area as a whole does not offer suitable habitat for the red-cockaded woodpecker. No systematic surveys were conducted for the red-cockaded woodpecker during the field visit. The nearest occurrence of red-cockaded woodpecker documented by the NHP is approximately 4.2 miles to the northeast.

BIOLOGICAL CONCLUSION: NO EFFECT

CONCLUSIONS

It is anticipated that the preferred alternate will only impact 0.6 acres of jurisdictional areas. Permits likely to be required for this project area a Section 404 NWP No. 23 and No. 33 along with their corresponding Section 401 Water Quality Certifications. Cypress-Gum Swamp, a High Quality Resource, occurs within the project area. Essential Fish Habitat and breeding or migration areas for anadromous fish also may occur within the project area. The National Marine Fisheries will be consulted as to the timing of construction activities to minimize impacts to fisheries resources. The N.C. Department of Coastal Management (DCM) will review the project application for consistency with the coastal management program.

Construction of a replacement bridge within the footprint of the existing Bridge No. 11 is recommended to minimize impacts to wetlands, plant communities, and fisheries resources.

VI. CULTURAL RESOURCES

A. Compliance Guidelines

This project is subject to compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, implemented by the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106, codified at Title 36 CFR Part 800. Section 106 requires Federal agencies to take into account the effect of their undertakings (federally funded, licensed, or permitted) on properties included in or eligible for inclusion in the National Register of Historic Places and afford the Advisory Council a reasonable opportunity to comment on such undertakings.

B. Historic Architecture

The State Historic Preservation Office (SHPO) reviewed the subject project. There are no known architectural or historic sites within the proposed project area. The SHPO concurs that the project is not likely to affect any resources of historical significance (see letter dated January 11, 2001).

C. Archaeology

The State Historic Preservation Office (SHPO) reviewed the subject project. There are no known archaeological sites within the proposed project area, and no archaeological investigation need be conducted (see letter dated January 11, 2001).

VII. GENERAL ENVIRONMENTAL EFFECTS

The project is expected to have an overall positive impact. Replacement of an inadequate bridge will result in safer traffic operations.

The project is considered to be a Federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.

The bridge replacement will not have an adverse effect on the quality of the human or natural environment with the use of the current North Carolina Department of Transportation standards and specifications.

The project is not in conflict with any plan, existing land use, or zoning regulation. No change in land use is expected to result from the construction of the project.

No adverse impact on families or communities is anticipated. Right-of-Way acquisition will be limited. No relocatees are expected with implementation of the proposed alternative.

No adverse effect on public facilities or services is expected. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

The proposed project will not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impact to prime farmland of all land acquisition and construction projects. There are no soils classified as prime, unique, or having state or local importance in the vicinity of the project. Therefore, the project will not involve the direct conversion of farmland acreage within these classifications.

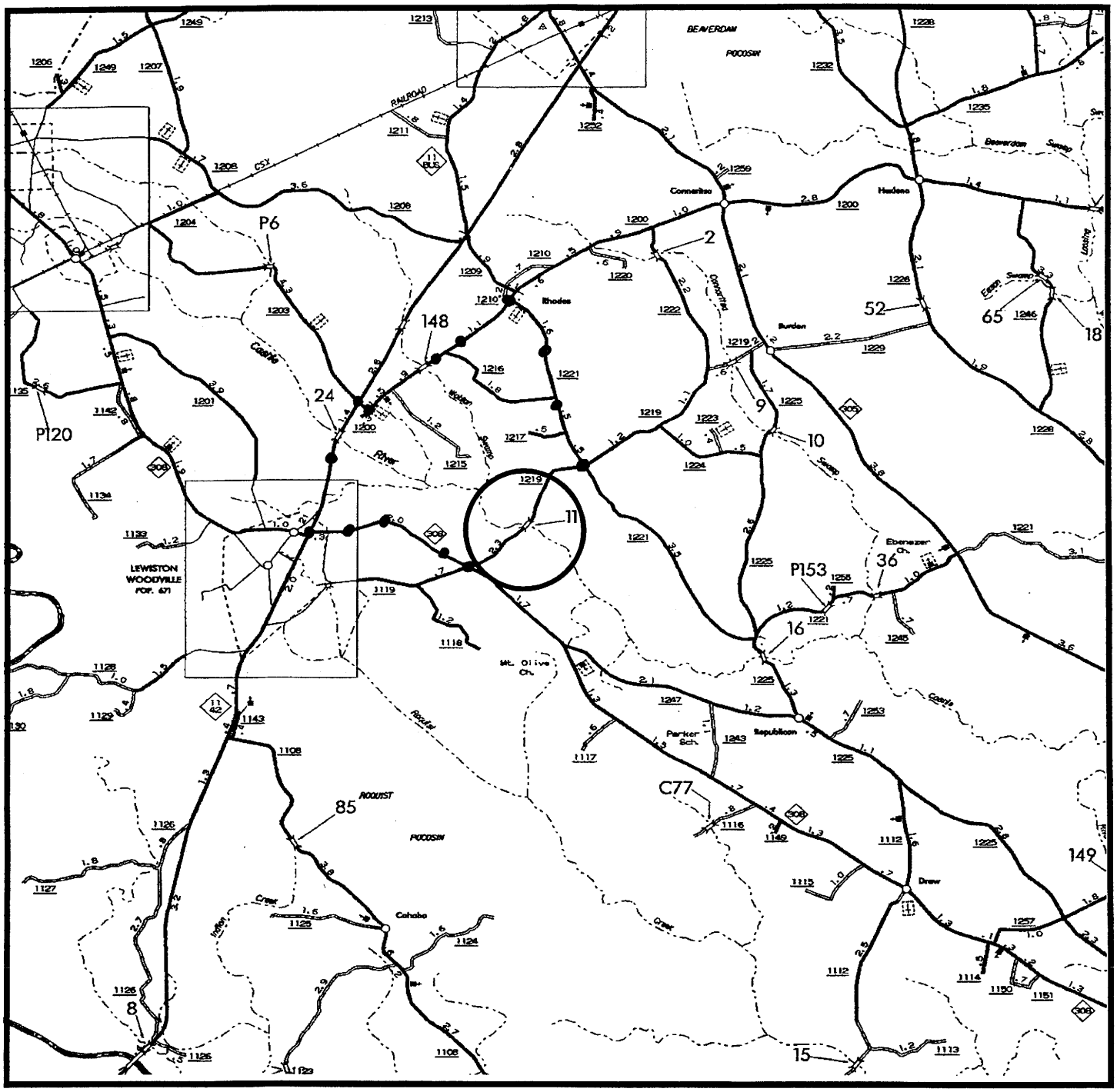
This project is an air quality "neutral" project, so it is not required to be included in the regional emissions analysis and a project level CO analysis is not required. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality in compliance with 15 NCAC 2D.0520.

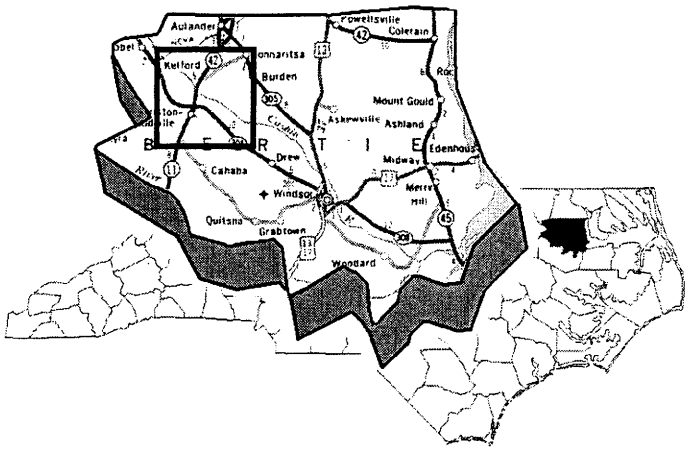
Noise levels could increase during construction but will be temporary. However, the proposed project is not expected to result in permanent noise impacts or substantial noise increases as defined by Title 23, Code of Federal Regulation (CFR), Part 772 or damage air quality as defined by the 1990 Clean Air Act Amendments and the National Environmental Policy Act. No additional reports are required.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Environmental Management, Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section revealed no underground storage tanks or hazardous waste sites in the project area.

This crossing of the Cashie River is located in a designated flood hazard zone. However, no detailed flood study has been performed. The approximate 100-year floodplain in the project area is shown in Figure 6. There are no practical alternatives to crossing the floodplain area. Any shift in alignment will result in an impact area of about the same magnitude. The proposed project is not anticipated to increase the level or extent of upstream flood potential.

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project.





Studied Detour

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS BRANCH

BERTIE COUNTY
REPLACE BRIDGE NO. 11 ON SR 1219
OVER THE CASHIE RIVER
B-4027

Figure 1

North Carolina Department of Cultural Resources
State Historic Preservation Office
David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Division of Historical Resources
David J. Olson, Director

April 29, 2003

MEMORANDUM

TO: Greg Thorpe, Manager
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: David Brook

SUBJECT: Replacement of Bridge No. 11 on SR 1219 over Cashie River, B-4027, Bertie County, ER03-0921

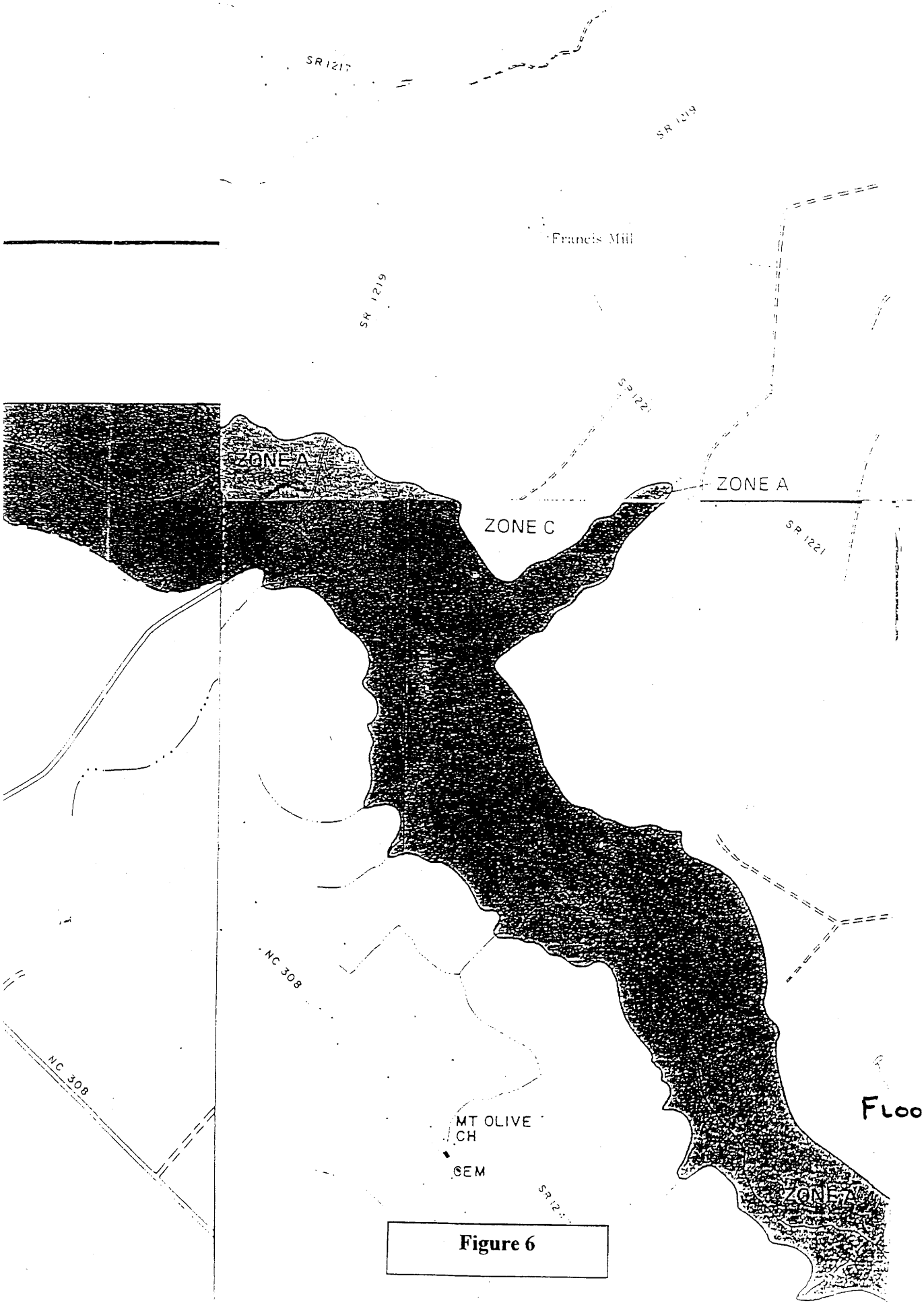
Thank you for your memorandum of April 7, 2003, concerning the above project.

We have conducted a review of the proposed undertaking and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the undertaking as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr



FLOODPLAIN MAP

Figure 6

Begin Project

Begin Bridge

End Bridge

End Project

Cashie River

N

North Carolina Department of Transportation

Division of Highways

Planning & Environmental Branch

Bertie County

Replace Bridge No. 11 on SR 1219

Over Cashie River

B-4027

Scale 1"=100'

Figure 2

Begin Project

Begin Bridge

End Bridge

End Project

Temporary Detour

Cashie River

N

North Carolina Department of Transportation

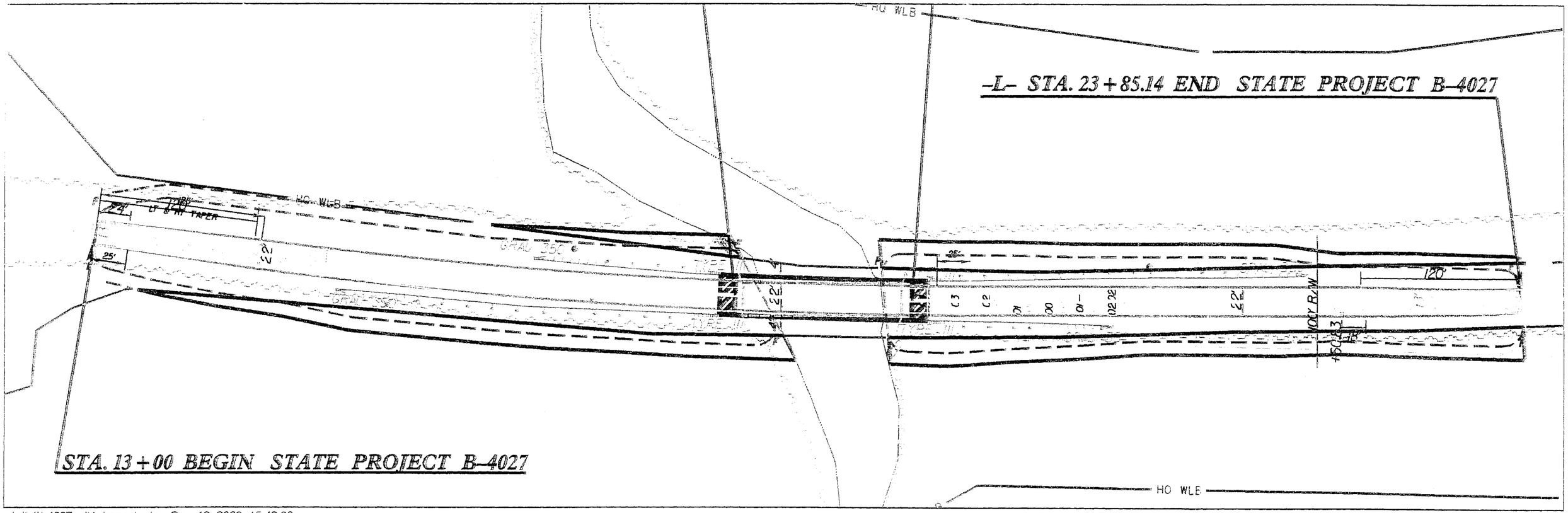
Division of Highways

Planning & Environmental Branch

Bertie County
Replace Bridge No. 11 on SR 1219
Over Cashie River
B-4027

Scale 1"=100'

Figure 3



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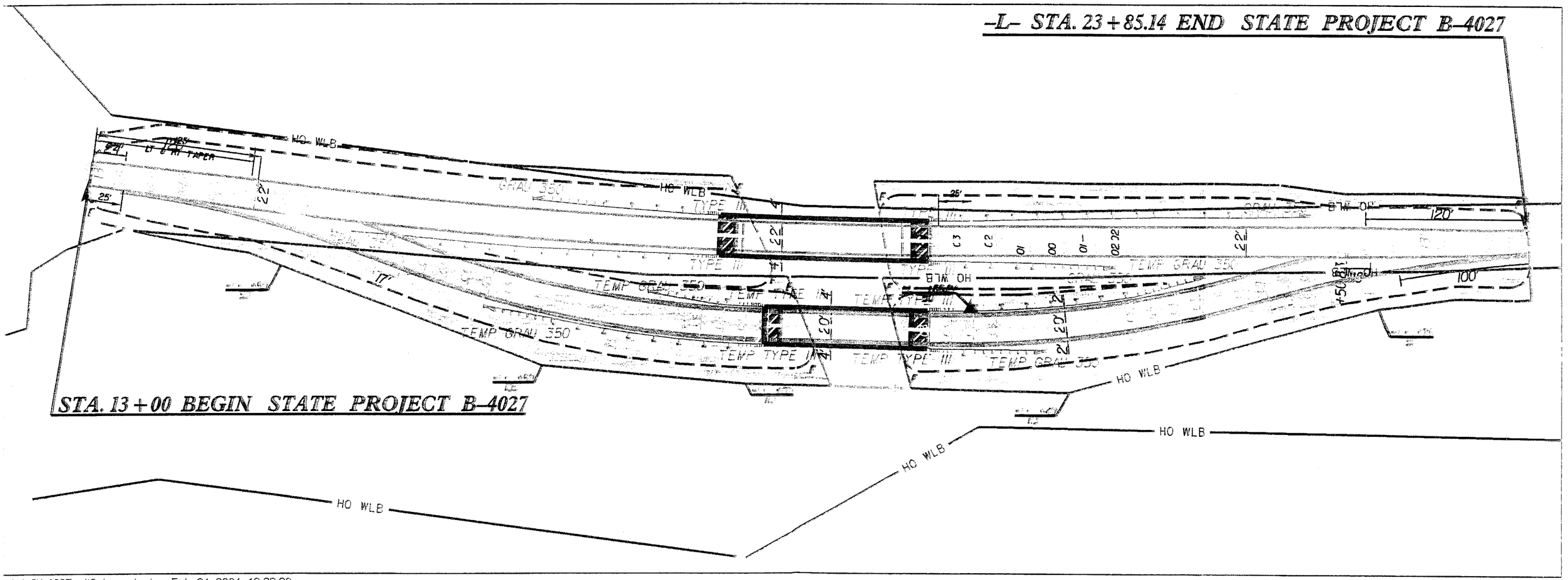
WETLAND IMPACTS

Total = 0.6 acres

North Carolina Department of Transportation
Division of Highways
Planning & Environmental Branch

Bertie County
Replace Bridge No. 11 on SR 1219
Over Cashie River
B-4027

Figure 4



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WETLAND IMPACTS

Total = 1.4 acres

North Carolina Department of Transportation
Division of Highways
Planning & Environmental Branch

Bertie County
Replace Bridge No. 11 on SR 1219
Over Cashie River
B-4027

Figure 5

Ecosystem Enhancement PROGRAM

September 20, 2005

Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4027, Bridge 11 over the Cashie River on SR 1219 (Francis Mill Road), Bertie County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory riverine wetland mitigation for the subject project. Based on the information supplied by you in a letter dated July 8, 2005, the revised impacts are located in CU 03010205 of the Pasquotank River Basin in the Northern Outer Coastal Plain (NOCP) Eco-Region, and are as follows:

Riverine Wetland Impacts: 0.236 acre

This mitigation acceptance letter replaces the mitigation acceptance letter issued on August 3, 2005. The subject project is not listed in Exhibit 2 of 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 dated July 22, 2003. Mitigation for this project will be provided in accordance with the above referenced agreement. EEP will commit to implementing sufficient compensatory wetland mitigation to offset the impacts associated with this project by the end of the MOA year in which this project is permitted, in accordance with Section X of the Tri-Party MOA.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

William D. Gilmore, P.E.
EEP Director

cc: Mr. Bill Biddlecome, USACE-Washington
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: B-4027 Revised

Ecosystem Enhancement PROGRAM

September 20, 2005

Mr. Bill Biddlecome
U. S. Army Corps of Engineers
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889-1000

Dear Mr. Biddlecome:

Subject: EEP Mitigation Acceptance Letter:

B-4027, Bridge 11 over the Cashie River on SR 1219 (Francis Mill Road), Bertie County; Pasquotank River Basin (CU 03010205); Northern Outer Coastal Plain (NOCP) Eco-Region

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide compensatory riverine wetland mitigation for the unavoidable impacts associated with the above referenced project. The impacts as reported by the NCDOT are 0.236 acre of riverine wetlands. **This mitigation strategy letter replaces the mitigation strategy letter issued on August 12, 2005.**

EEP will commit to implementing sufficient compensatory riverine wetland mitigation to offset the impacts associated with this project by the end of the MOA year in which this project is permitted, in accordance with Section X of the Tri-Party MOA signed on July 22, 2003. EEP intends to provide compensatory riverine wetland mitigation up to a 2:1 ratio in Cataloging Unit 03010205 of the Pasquotank River Basin. Mitigation sites currently containing surplus mitigation assets consists of, but not inclusive of, the Balance Farm Mitigation Site and the Dismal Swamp Mitigation Site.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

James B. Stanfield for

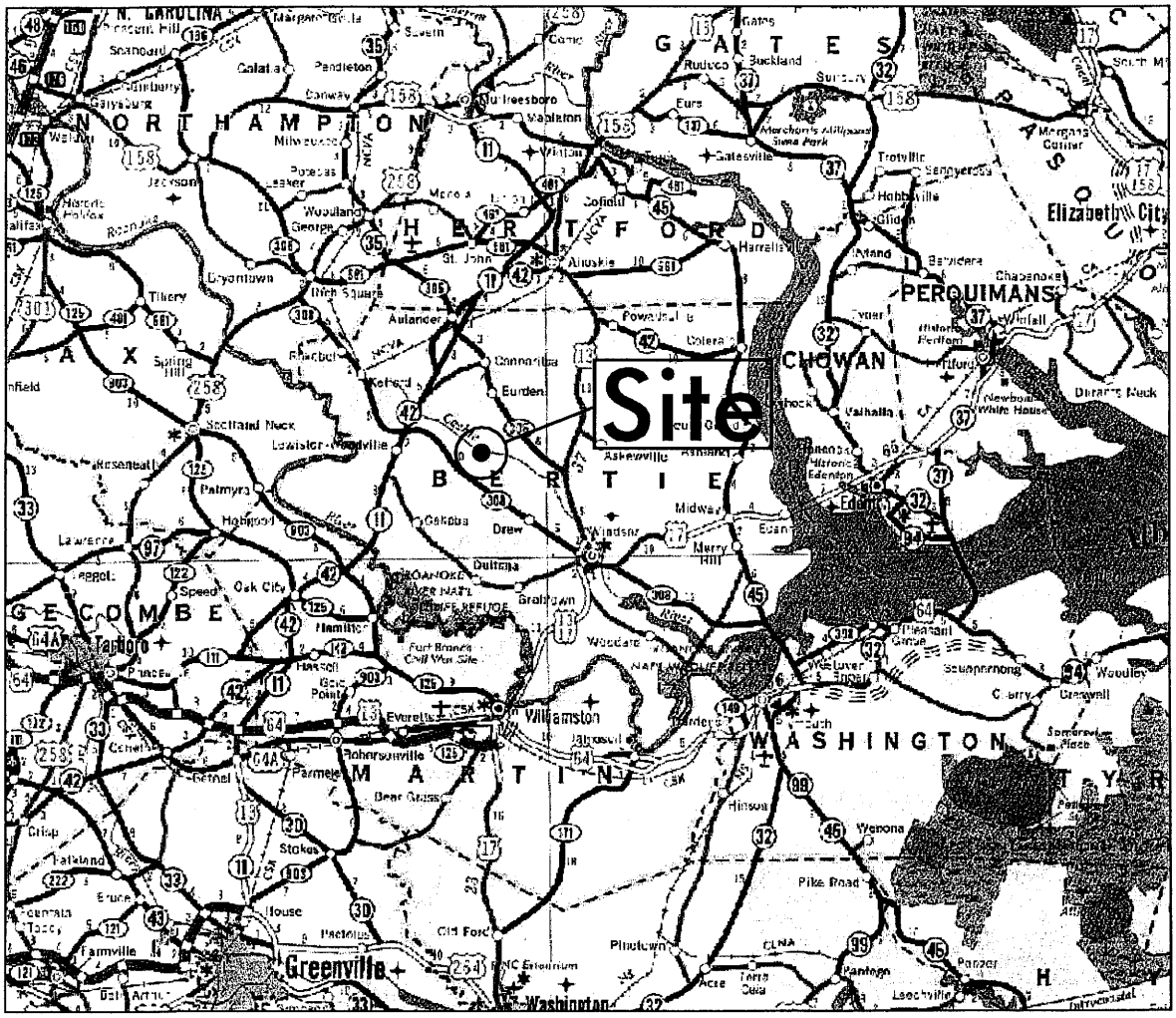
William D. Gilmore, P.E.
EEP Director

cc: Mr. Gregory J. Thorpe, Ph.D., NCDOT-PDEA
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: B-4027

Permit Drawings

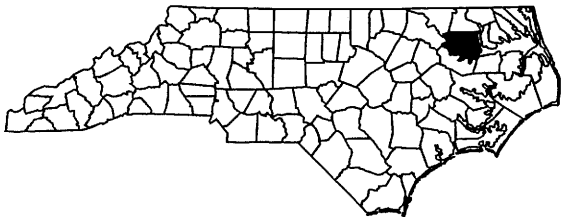
B-4027

Bertie County



VICINITY MAP

NORTH CAROLINA



NCDOT

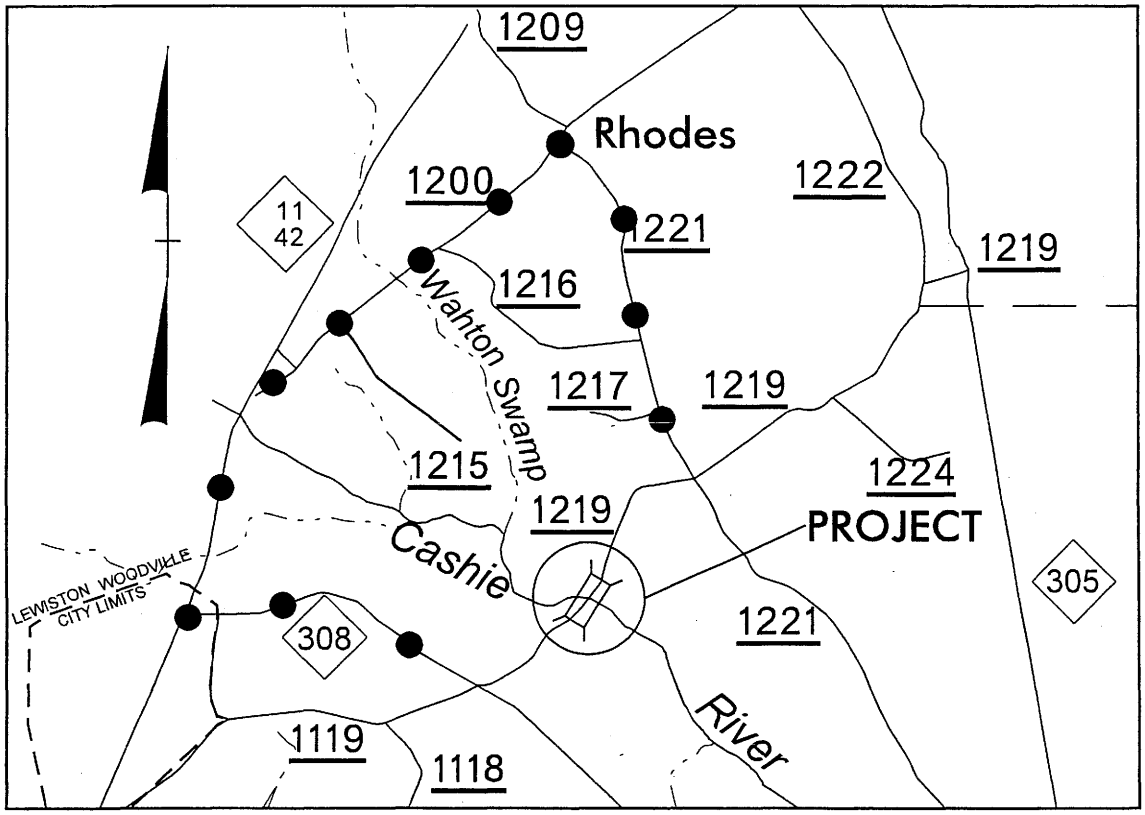
DIVISION OF HIGHWAYS

BERTIE COUNTY

PROJECT: 33394.1.1 (B-4027)

BRIDGE REPLACEMENT
BRIDGE #11 ON SR1219
OVER CASHIE RIVER

SHEET 1 **OF** 10 **3/21/05**



Detour

VICINITY MAP

NCDOT

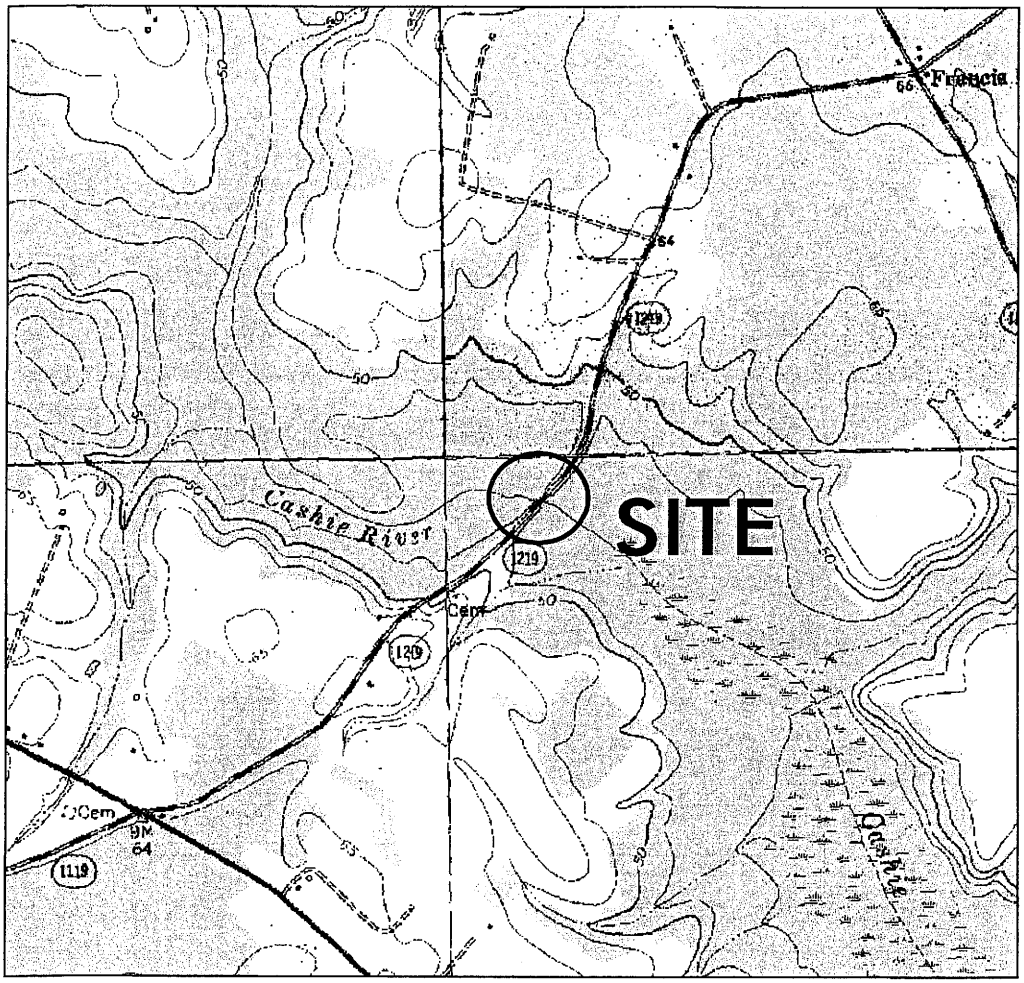
DIVISION OF HIGHWAYS

BERTIE COUNTY

PROJECT: 33394.1.1 (B-4027)

BRIDGE REPLACEMENT
BRIDGE #11 ON SR1219
OVER CASHIE RIVER

SHEET 2 **OF** 16 **3/21/05**



Kelford	Aulander
Woodville	* Republican

Quad Map Layout

*Site

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4027-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 868538.765(ft) EASTING: 2554185.997(ft) VERTICAL DATUM USED IS NAVD 88

1000 0 2000 ft.

SITE MAP

NCDOT

DIVISION OF HIGHWAYS

BERTIE COUNTY

PROJECT: 33394.1.1 (B-4027)

BRIDGE REPLACEMENT BRIDGE #11 ON SR1219 OVER CASHIE RIVER

SHEET 3 **OF** 10 **3/21/05**

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAME	ADDRESS
(1)	Katherine O. Jernigan	414 N. Curtis Street Ahoskie NC 27910
(2)	James C. Doughtie, Jr	329 Francis Mill Road Aulander NC 27805
(3)	Plum Creek Timberlands, L.P.	987 Griswoldville Road Macon GA

NCDOT

DIVISION OF HIGHWAYS

BERTIE COUNTY

PROJECT: 33394.1.1 (B-4027)

BRIDGE REPLACEMENT
BRIDGE #11 ON SR1219
OVER CASHIE RIVER

PROJECT REFERENCE NO.	SHEET NO.
B-4027	1-B

4 of 10

Note: Not to Scale

**S.U.E. = Subsurface Utility Engineering*

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
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BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign
- Well
- Small Mine
- Foundation
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- School
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- Standard Guage — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
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- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite Marker
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- Proposed Control of Access
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Curb Cut for Future Wheel Chair Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equaility Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — TV
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

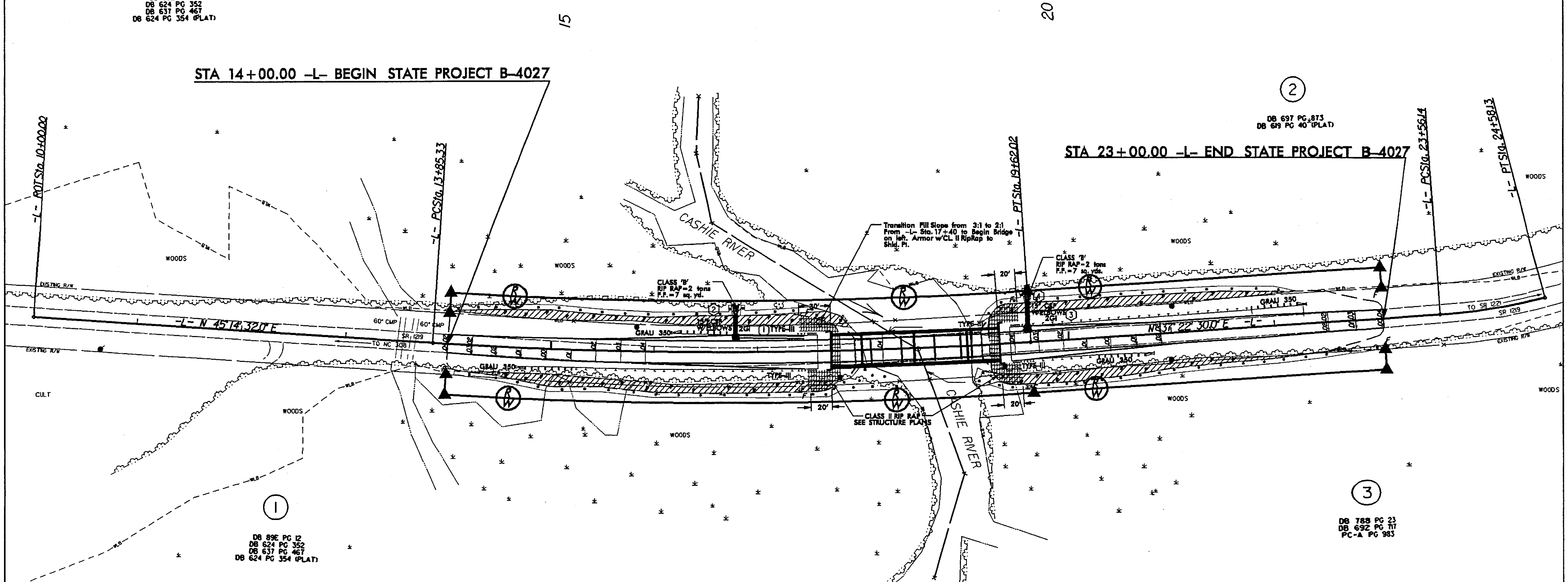
MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?U/L
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
B-4027	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

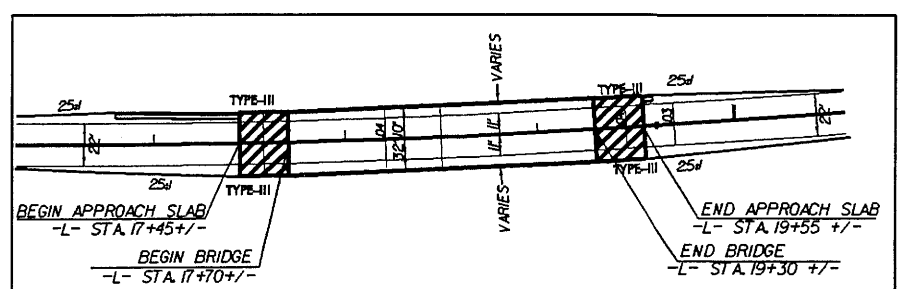
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FOR -L- PROFILE SEE SHEET 5



PLAN VIEW

-L-
PI Sta 16+74.13
Δ = 7° 52' 02.0" (LT)
D = 1° 21' 51.5"
L = 576.70'
T = 288.80'
R = 4,200.00'
SE = .04
RUNOFF = SEE PLANS



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

DENOTES FILL IN WETLANDS

DENOTES HAND CLEARING IN WETLANDS

SHEET 5 OF 10 9/12/05

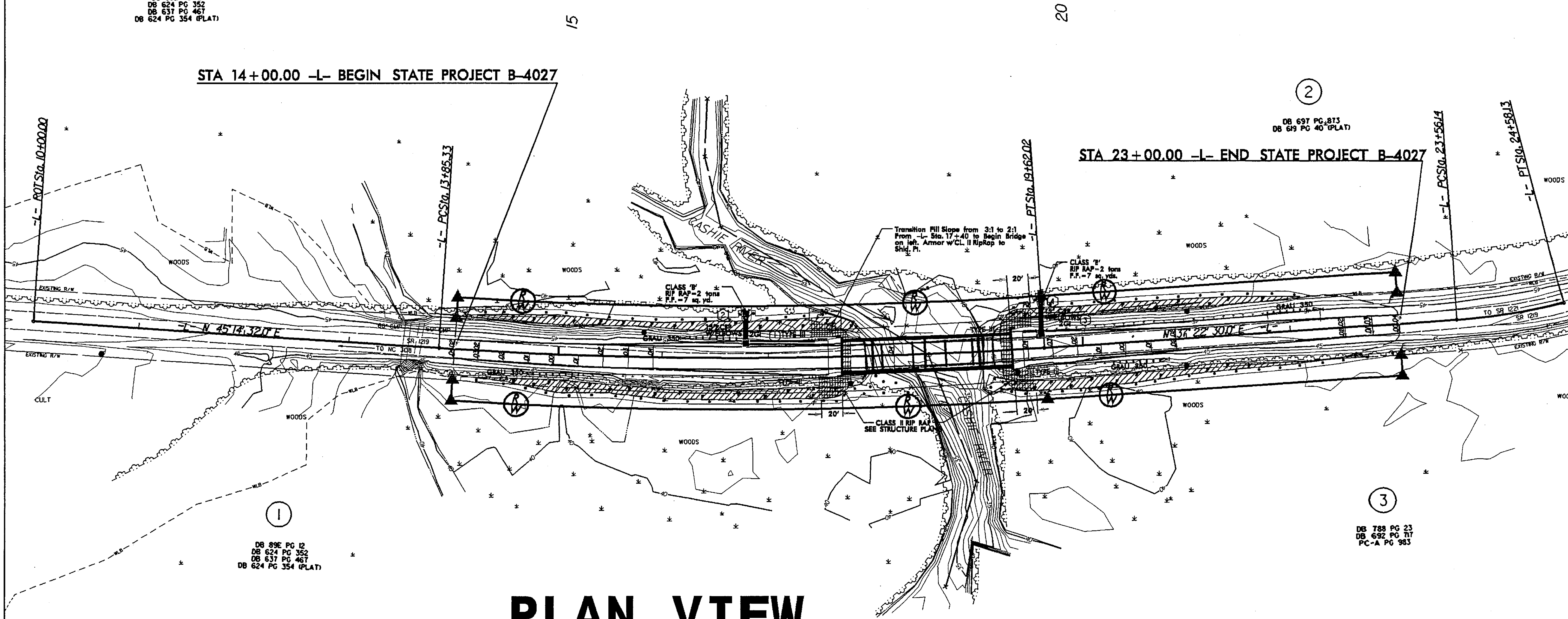
BRIDGE APPROACH SLAB

12-SEP-2005 11:16
r:\hydraulics\b4027_hyd_prmt_psh04.dgn

PROJECT REFERENCE NO.	SHEET NO.
B-4027	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

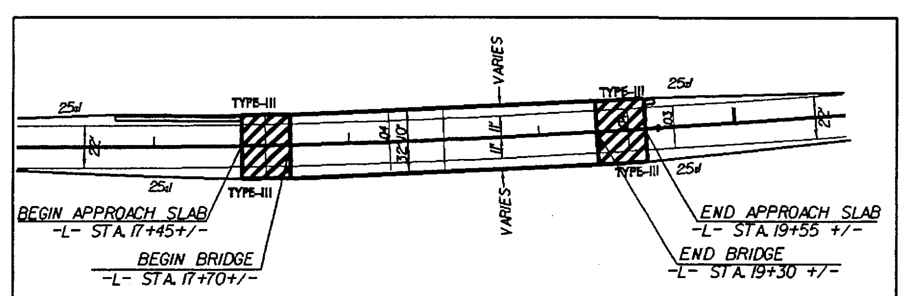
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FOR -L- PROFILE SEE SHEET 5


STA 14+00.00 -L- BEGIN STATE PROJECT B-4027
STA 23+00.00 -L- END STATE PROJECT B-4027
-L- POT Sta. 10+00.00
-L- PC Sta. 13+85.33
-L- PT Sta. 19+62.02
-L- PC Sta. 23+56.14
-L- PT Sta. 24+58.13
-L- N 45° 14' 32.0" E
N 37° 22' 30.0" E
CASHIE RIVER
DB 89E PG 12
DB 624 PG 352
DB 637 PG 467
DB 624 PG 354 (PLAT)
DB 697 PG 873
DB 619 PG 40 (PLAT)
DB 788 PG 23
DB 692 PG 717
PC-A PG 983
Transition Fill Slope from 3:1 to 2:1 From -L- Sta. 17+40 to Begin Bridge on left. Armor w/CL. II RipRap to Shld. Pt.
CLASS 'B' RIP RAP-2 tons F.F.-7 sq. yd.
CLASS II RIP RAP SEE STRUCTURE PLANS
WOODS
EXISTING R/W
TO NC 308
SR 1219
TO SR 1221
CULT

PLAN VIEW

-L-
PI Sta 16+74.13
Δ = 7° 52' 02.0" (LT)
D = 1° 21' 51.5"
L = 576.70'
T = 288.80'
R = 4,200.00'
SE = .04
RUNOFF = SEE PLANS



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

DENOTES FILL IN WETLANDS

DENOTES HAND CLEARING IN WETLANDS

BRIDGE APPROACH SLAB

8/17/99

12-SEP-2005 10:46
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5/14/9

BM6 ELEVATION = 47.51
N 868618 E 2554182
L STATION 10+00
S 57° 06' 14.3" W DIST 137.40
R/R SPIKE IN BASE OF 16" GUM

BM7 ELEVATION = 44.31
N 869866 E 2555206
L STATION 24+58
N 29° 14' 13.7" W Dist 133.69
R/R SPIKE IN BASE OF 16" OAK

PROJECT REFERENCE NO.	SHEET NO.
B-4027	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

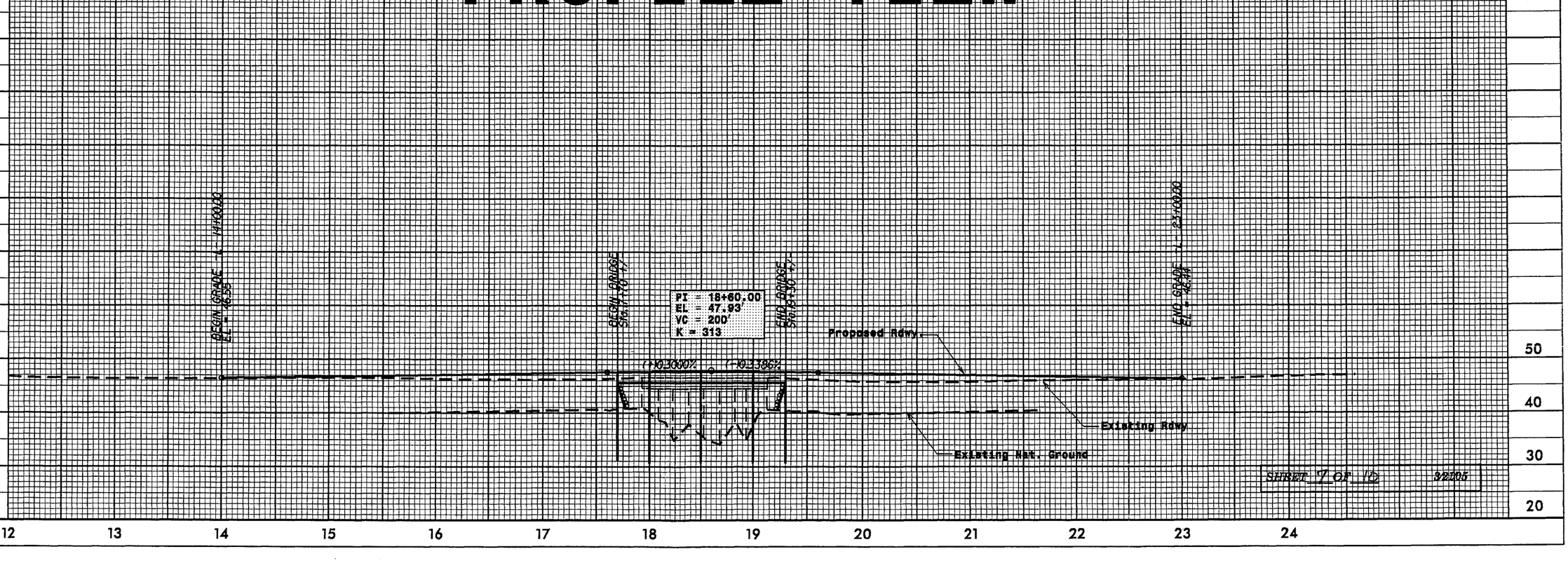
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 2400 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 45.0 FT
BASE DISCHARGE	= 3600 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 46.6 FT
OVERTOPPING DISCHARGE	= 5300 CFS
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING ELEVATION	= 47.7 FT

— 1 —

PROFILE VIEW



SHEET 7 OF 10 32105

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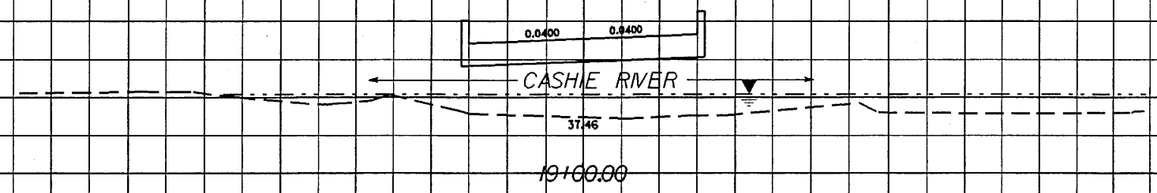
smorgan
A1

8/23/99

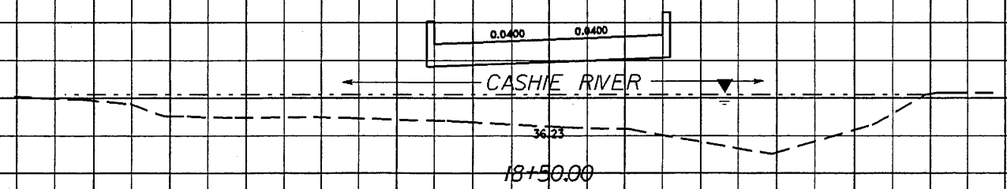
0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4027	X-2

CROSS SECTION VIEW

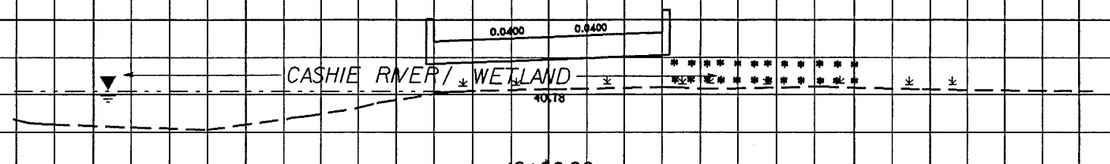
END BRIDGE STA 19+30 +/-



19+00.00

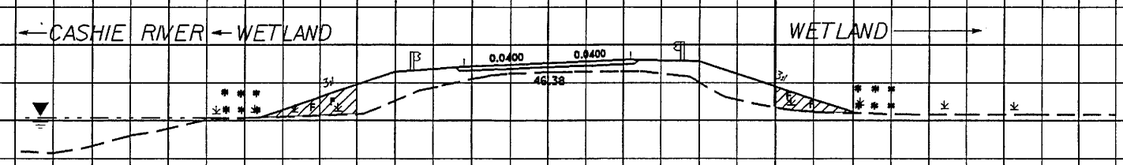


18+50.00

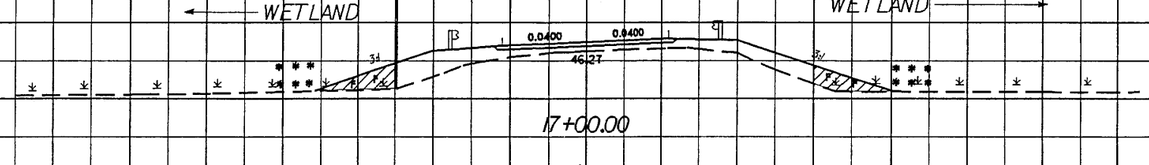


18+00.00

BEGIN BRIDGE STA 17+70 +/-



17+50.00



17+00.00

℄

DENOTES HAND CLEARING IN WETLAND

DENOTES FILL IN WETLAND

SHEET 8 OF 10 9/12/05

12-SEP-2005 11:24
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smorgan
A_HY21B20

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)	Natural Stream Design (ft)
	13+93/23+00	160' BRIDGE	0.236				0.194				
TOTALS:			0.236				0.194				

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BERTIE COUNTY
WBS - 33394.1.1 (B-4027)

SHEET 10 of 10 9/12/2005

JMD Revised 2/03/05

Roadway Plans

B-4027

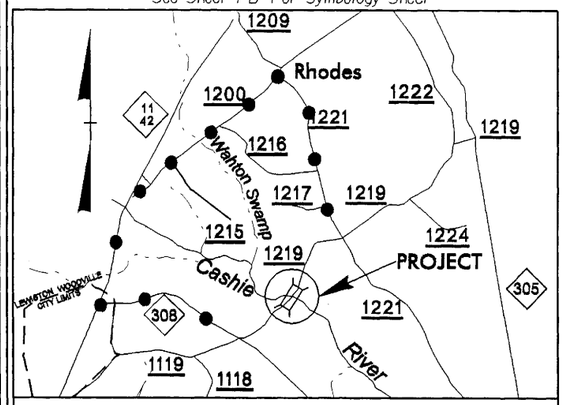
Bertie County

09/08/99

TIP PROJECT: B-4027

CONTRACT: C20141

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Symbology Sheet



VICINITY MAP

Detour

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BERTIE COUNTY

LOCATION: BRIDGE NO. 11 OVER CASHIE RIVER ON SR 1219

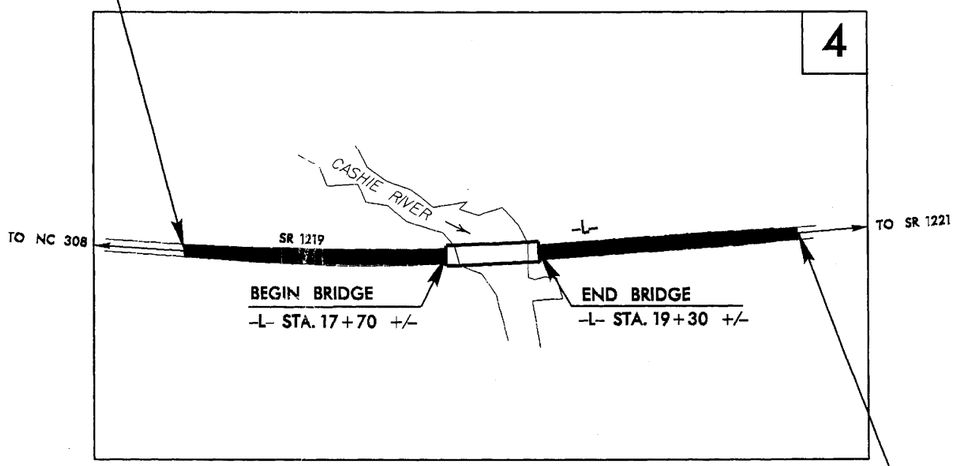
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4027	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33394.1.1	BRZ-1219(1)	PE
33394.2.1	BRZ-1219(1)	R/W, UTILI
33394.3.1	BRZ-1219(1)	CONST.

NAD 83

STA 14+00.00 -L- BEGIN TIP PROJECT B-4027



STA 23+00.00 -L- END TIP PROJECT B-4027

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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 2006 = 687
ADT 2026 = 1122
DHV = 10 %
D = 60 %
T = 3 % *
V = 60 MPH
* TTST 1% DUAL 2%
FUNC CLASS = Rural Local

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4027	=	0.140
LENGTH STRUCTURE TIP PROJECT B-4027	=	0.030
TOTAL LENGTH TIP PROJECT B-4027	=	0.170

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

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: FEBRUARY 24, 2005

LETTING DATE: FEBRUARY 21, 2006

BRENDA MOORE, PE
PROJECT ENGINEER

REKHA PATEL, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

P.E.
STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

25-MAY-2005 11:34
R:\Roadway\Proj\B-4027_rdy.tsh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4027	1-B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

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DIVISION OF HIGHWAYS

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- Proposed Barbed Wire Fence
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- Existing Endangered Plant Boundary — EPB

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- Well — W
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- School
- Church
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- Proposed Right of Way Line with Concrete or Granite Marker — RW
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
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- Proposed Permanent Utility Easement — PUE

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- Curb Cut for Future Wheel Chair Ramp — CCFR
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- Proposed Cable Guiderail
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- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

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- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — TV
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter — G
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — PVTL
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
B-4027	1C
LOCATION AND SURVEYS	

SURVEY CONTROL SHEET B-4027

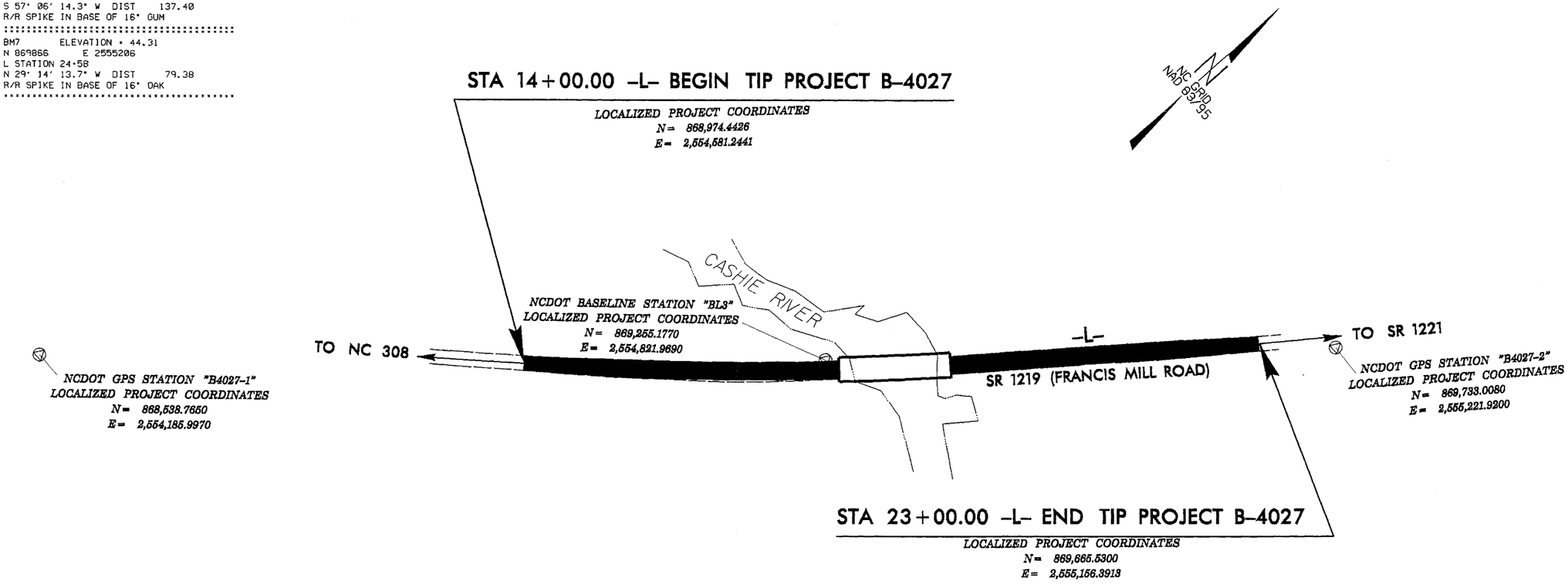
CONTROL DATA

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL1	GPS B4027-1	868538.7650	2554185.9970	48.60	OUTSIDE PROJECT LIMITS	
BL3	BL-3	869255.1770	2554821.9690	45.28	17+70.27	12.30 LT
BL2	GPS B4027-2	869733.0080	2555221.9200	46.07	23+92.61	12.35 RT

BENCHMARK DATA

```
*****************************************
BM6       ELEVATION = 47.51
N 868618      E 2554182
L STATION 10+00
S 57° 06' 14.3" W  DIST    137.40
R/R SPIKE IN BASE OF 16" GUM
::::::::::::::::::::::::::::::::::::::::::
BM7       ELEVATION = 44.31
N 869866      E 2555206
L STATION 24+58
N 29° 14' 13.7" W  DIST     79.38
R/R SPIKE IN BASE OF 16" OAK
*****************************************
```



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4027-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 868538.765(ft) EASTING: 2554185.997(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99999200
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4027-1" TO -L- STATION 14+00.00 IS N 42° 12' 51.6" E 588.2476 ft
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING HTTP:\WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT

FILE: b4027_ls_control_040922.txt

SITE CALIBRATION PARAMETERS HAVE NOT BEEN DETERMINED FOR THIS PROJECT.
IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

△ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.

PROJECT CONTROL ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEM.

NETWORK FOR GPS "B4027-1" ESTABLISHED FROM NGS ONLINE POSITIONING USER SERVICE (OPUS)

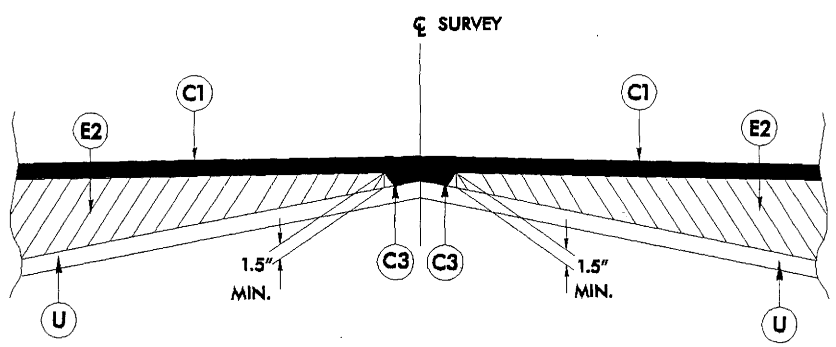
PROJECT REFERENCE NO.	SHEET NO.
B-4027	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

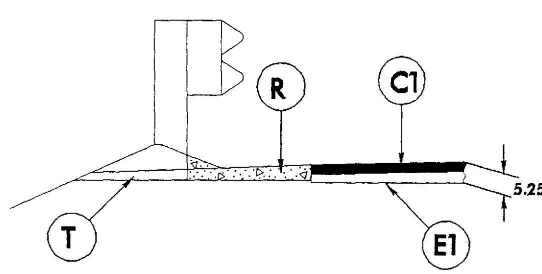
FINAL PAVEMENT SCHEDULE

C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, 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.
R	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



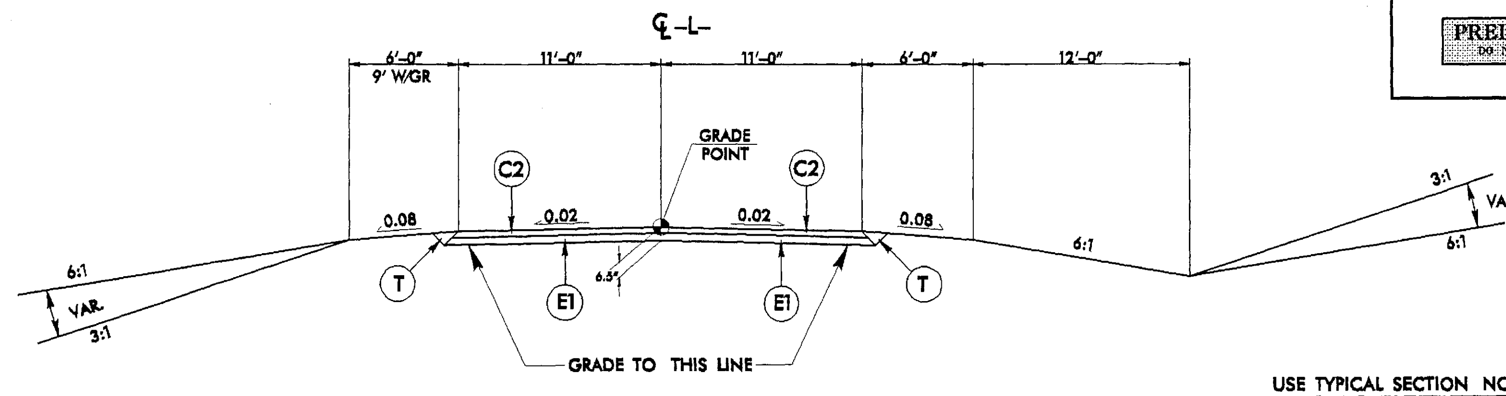
Wedging Detail



SHOULDER BERM GUTTER DETAIL

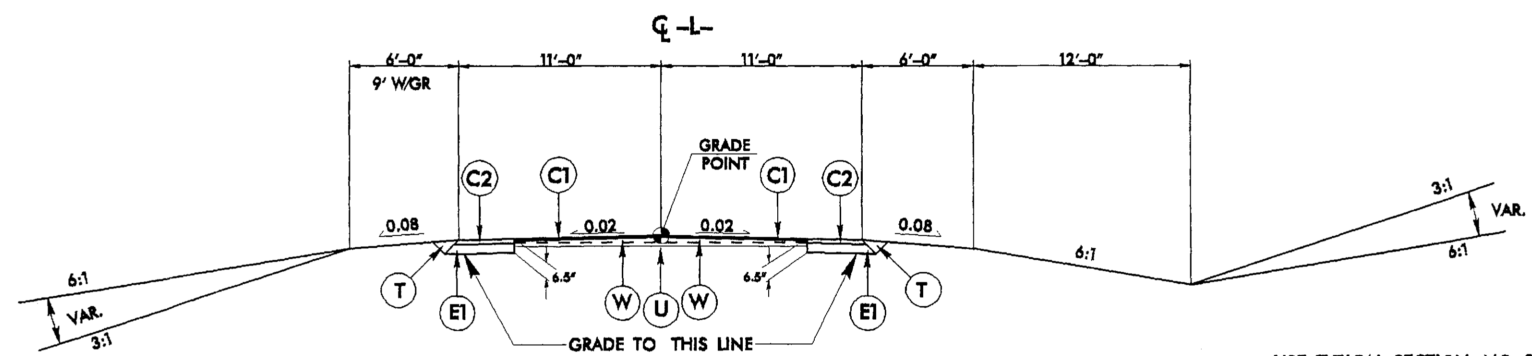
USE SHOULDER BERM GUTTER

-L- STA. 16+80.00 TO -L- STA. 17+45.00 (LT.)
-L- STA. 19+55.00 TO -L- STA. 19+60.67 (LT.)



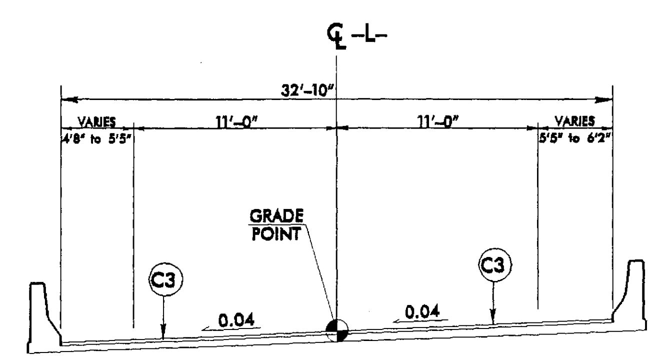
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
-L- STA 16+50.00 TO 17+70 +/- (BEGIN BRIDGE)
-L- STA 19+30 +/- (END BRIDGE) TO 21+00.00



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
-L- STA 14+00.00 TO 16+50.00
-L- STA 21+00.00 TO 23+00.00



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
-L- STA 17+70 +/- TO 19+30 +/-

6/2/99

25-MAY-2005 11:34
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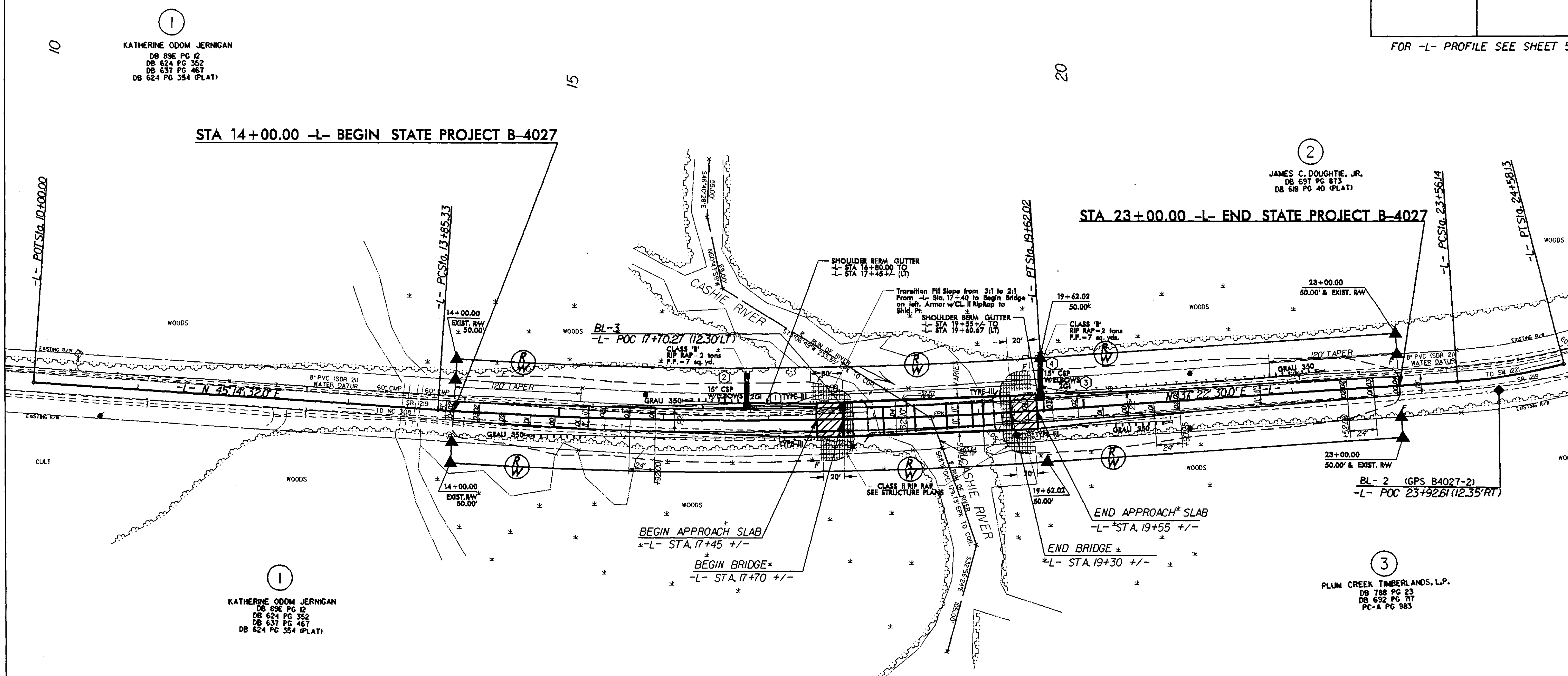
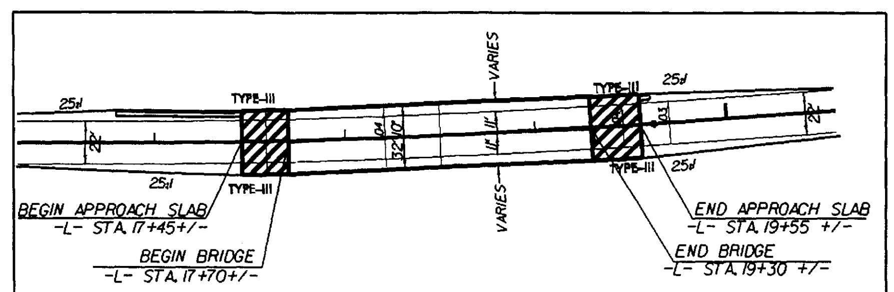
PROJECT REFERENCE NO.	SHEET NO.
B-4027	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FOR -L- PROFILE SEE SHEET 5


KATHERINE ODOM JERNIGAN
DB 89E PG 12
DB 624 PG 352
DB 637 PG 467
DB 624 PG 354 (PLAT)
STA 14+00.00 -L- BEGIN STATE PROJECT B-4027
STA 23+00.00 -L- END STATE PROJECT B-4027
JAMES C. DOUGHTIE, JR.
DB 697 PG 873
DB 619 PG 40 (PLAT)
-L- POT Sta. 10+00.00
-L- PC Sta. 13+85.33
-L- PT Sta. 19+62.02
-L- PC Sta. 23+56.14
-L- PT Sta. 24+58.13
CASHIE RIVER
-L- N 45°14' 32.0" E
N 53° 22' 30.0" E
BL-3
-L- POC 17+70.27 (12.30'LT)
BL- 2 (GPS B4027-2)
-L- POC 23+92.61 (12.35'RT)
SHOULDER BERM GUTTER
-L- STA 16+80.00 TO
-L- STA 17+45 +/- (LT)
SHOULDER BERM GUTTER
-L- STA 19+55 +/- TO
-L- STA 19+60.67 (LT)
CLASS 'B'
RIP RAP = 2 tons
F.F. = 7 sq. yd.
CLASS II RIP RAP
SEE STRUCTURE PLANS
BEGIN APPROACH SLAB
-L- STA. 17+45 +/-
BEGIN BRIDGE
-L- STA. 17+70 +/-
END APPROACH SLAB
-L- STA. 19+55 +/-
END BRIDGE
-L- STA. 19+30 +/-
14+00.00
EXIST. R/W
50.00'
19+62.02
50.00'
23+00.00
50.00' & EXIST. R/W
120' TAPER
WOODS
CULT
PLUM CREEK TIMBERLANDS, L.P.
DB 788 PG 23
DB 692 PG 717
PC-A PG 983

-L-
PI Sta 16+74.13
Δ = 7° 52' 02.0" (LT)
D = 1° 21' 51.1"
L = 576.70'
T = 288.80'
R = 4,200.00'
SE = .04
RUNOFF = SEE PLANS



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

BRIDGE APPROACH SLAB

8/17/99

25-MAY-2005 11:34
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$$$$USERNAME$$$$

5/14/99

BM6 ELEVATION = 47.51
N 868618 E 2554182
L STATION 10+00
S 57° 06' 14.3" W DIST 137.40
R/R SPIKE IN BASE OF 16" GUM

BM7 ELEVATION = 44.31
N 869866 E 2555206
L STATION 24+58
N 29° 14' 13.7" W Dist 133.69
R/R SPIKE IN BASE OF 16" OAK

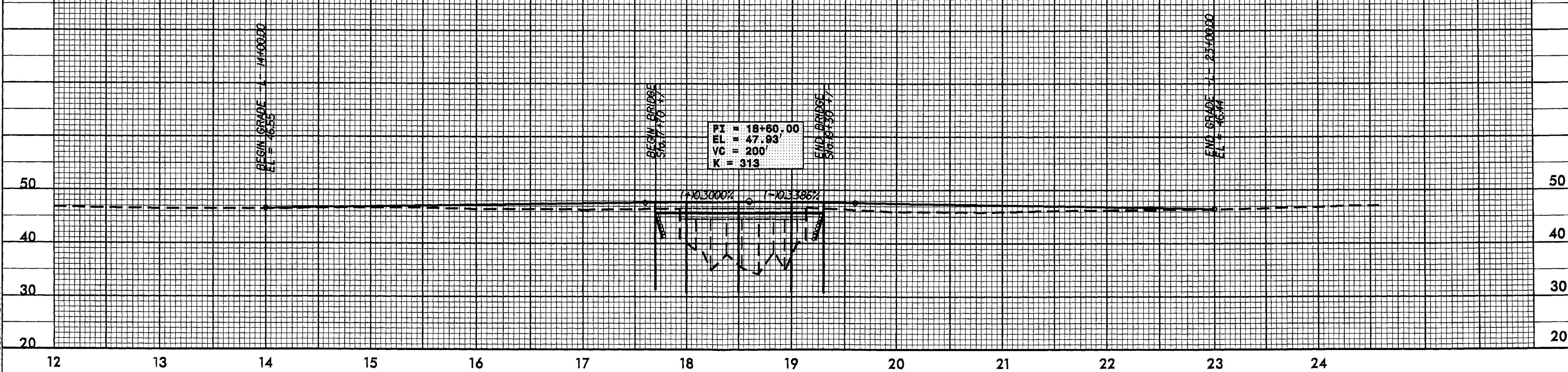
PROJECT REFERENCE NO.	SHEET NO.
B-4027	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 2400 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 45.0 FT
BASE DISCHARGE	= 3600 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 46.6 FT
OVERTOPPING DISCHARGE	= 5300 CFS
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING ELEVATION	= 47.7 FT

-L-



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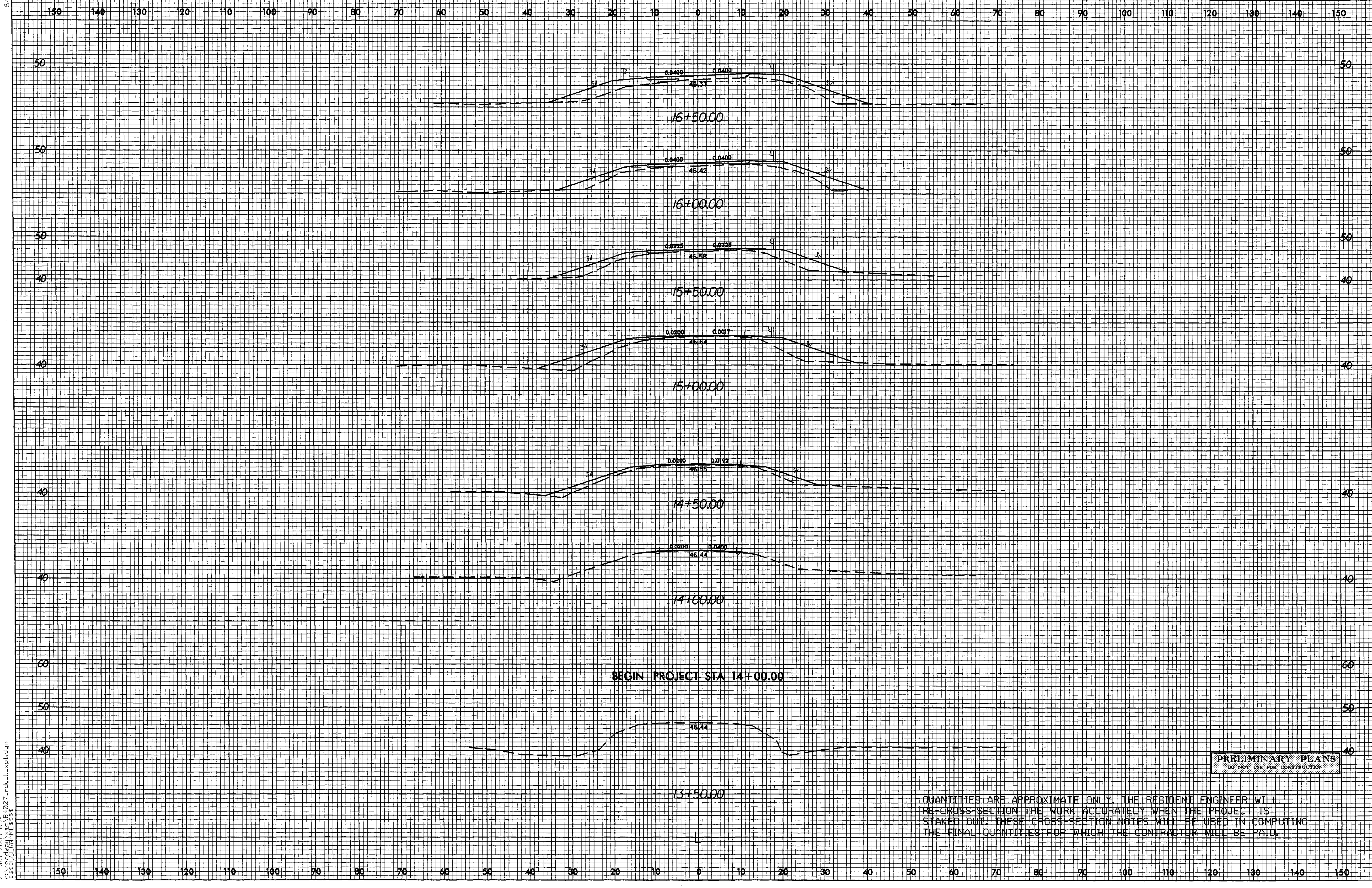
PROJ. REFERENCE NO.	SHEET NO.
B-4027	X-1



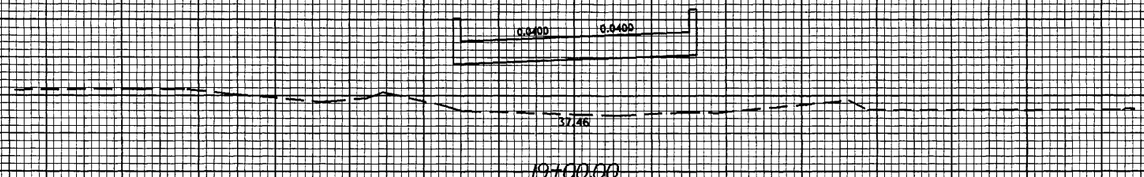
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

QUANTITIES ARE APPROXIMATE ONLY. THE RESIDENT ENGINEER WILL RE-CROSS-SECTION THE WORK ACCURATELY WHEN THE PROJECT IS STAKED OUT. THESE CROSS-SECTION NOTES WILL BE USED IN COMPUTING THE FINAL QUANTITIES FOR WHICH THE CONTRACTOR WILL BE PAID.

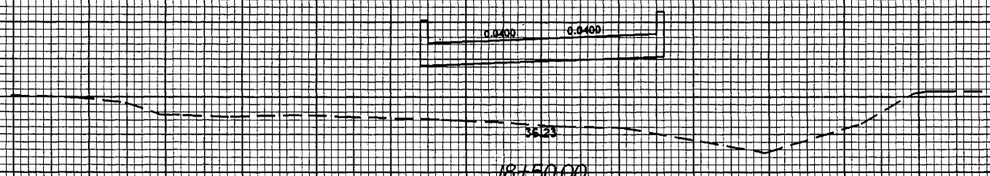
8/23/99

0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4027	X-2

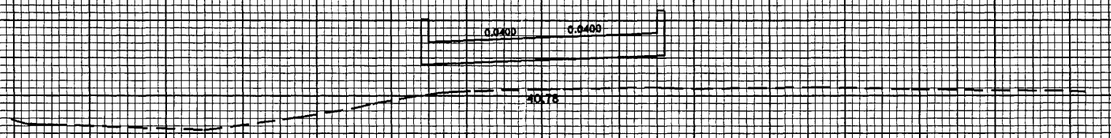
END BRIDGE STA 19+30 +/-



19+00.00

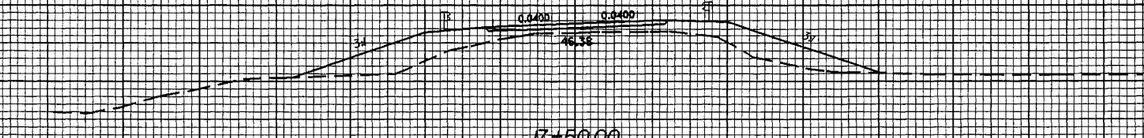


18+50.00

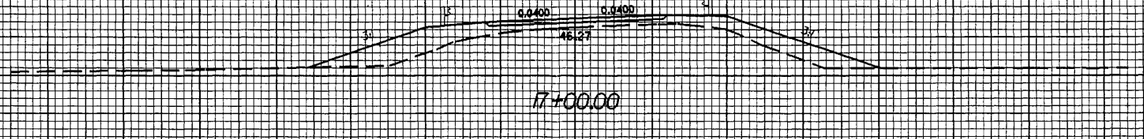


18+00.00

BEGIN BRIDGE STA 17+70 +/-



17+50.00



17+00.00

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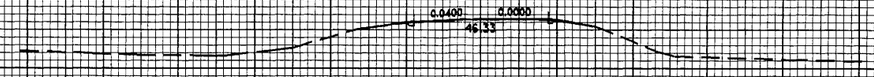
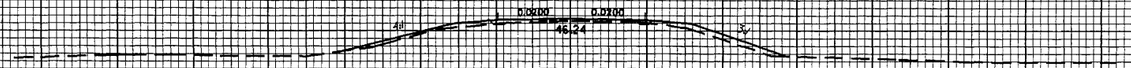
8/23/99

0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4027	X-3

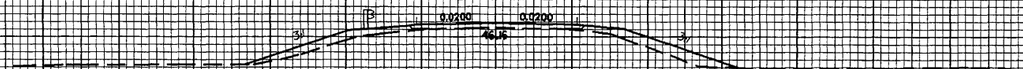
END PROJECT STA 23+00.00



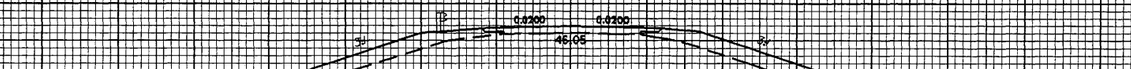
23+00.00



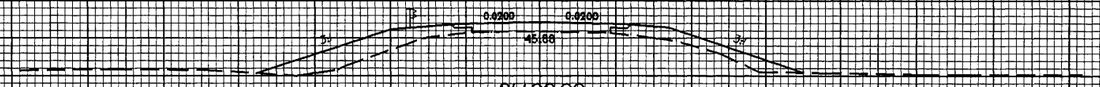
22+50.00



22+00.00



21+50.00



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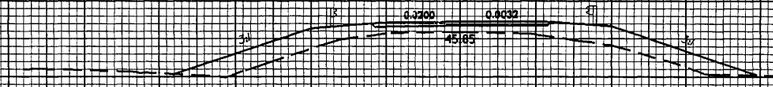

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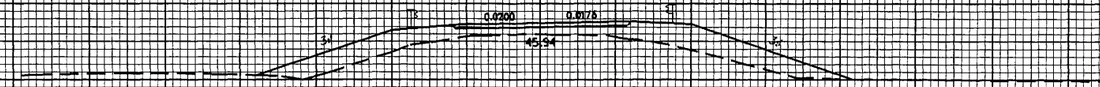
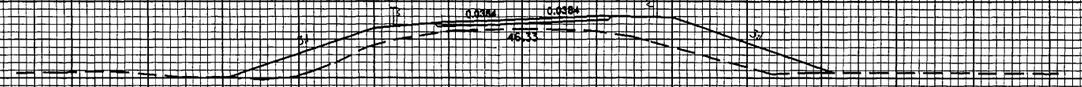


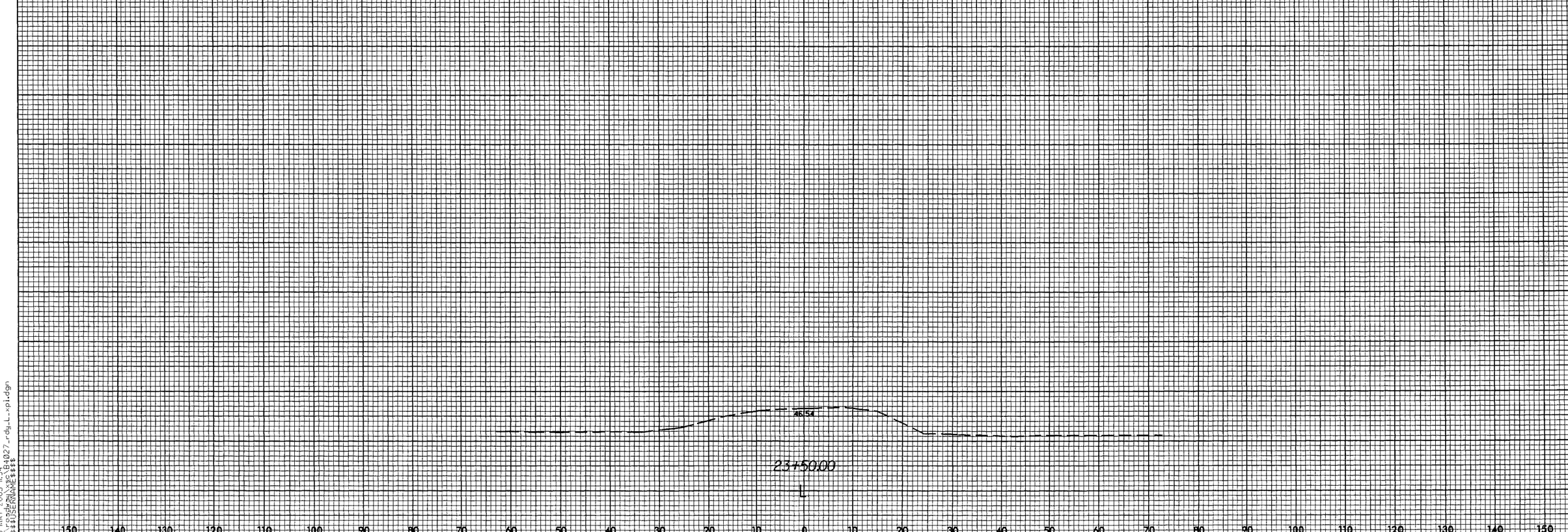
20+00.00



19+50.00

8/23/99

0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4027	X-4



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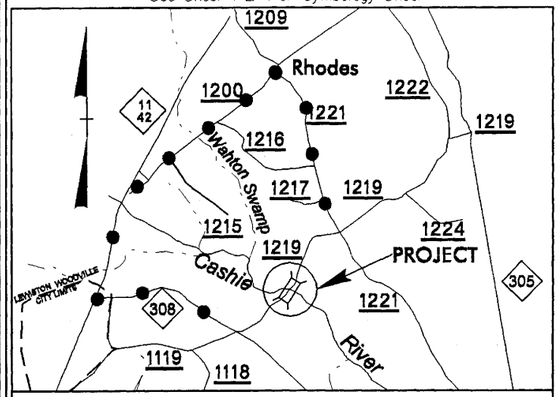
Utility Plans

B-4027

Bertie County

TIP PROJECT: B-4027

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Symbology Sheet



VICINITY MAP

Detour

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BERTIE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4027	1	

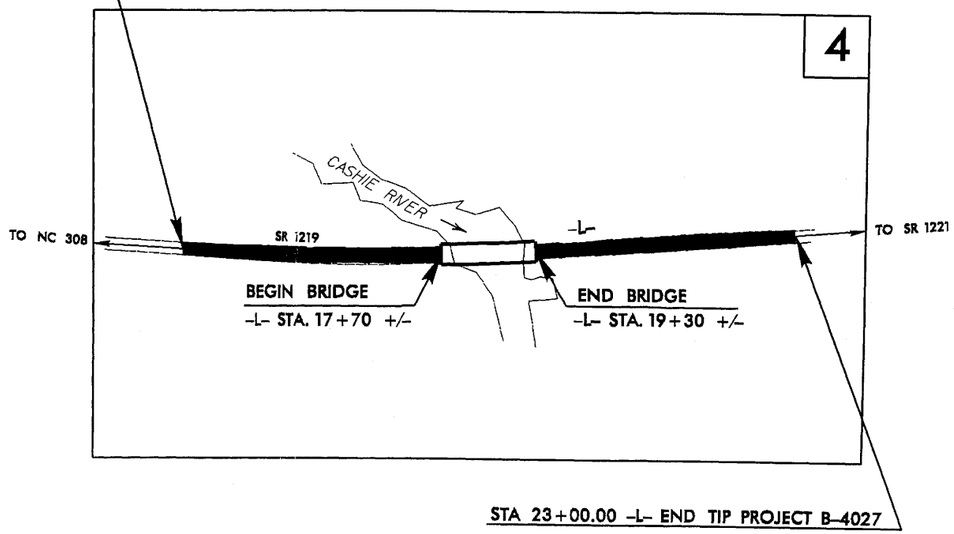
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33394.1.1	BRZ-1219(1)	PE
33394.2.1	BRZ-1219(1)	R/W, UTILI
33394.3.1	BRZ-1219(1)	CONST.

LOCATION: BRIDGE NO. 11 OVER CASHIE RIVER ON SR 1219

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

NAD 83

STA 14+00.00 -L- BEGIN TIP PROJECT B-4027



STA 23+00.00 -L- END TIP PROJECT B-4027

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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 2006 = 687
ADT 2026 = 1122
DHV = 10 %
D = 60 %
T = 3 % *
V = 60 MPH
* TTST 1% DUAL 2%
FUNC CLASS = Rural Local

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4027	=	0.140
LENGTH STRUCTURE TIP PROJECT B-4027	=	0.030
TOTAL LENGTH TIP PROJECT B-4027	=	0.170

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

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: FEBRUARY 24, 2005

LETTING DATE: FEBRUARY 21, 2006

BRENDA MOORE, PE
PROJECT ENGINEER

REKHA PATEL, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

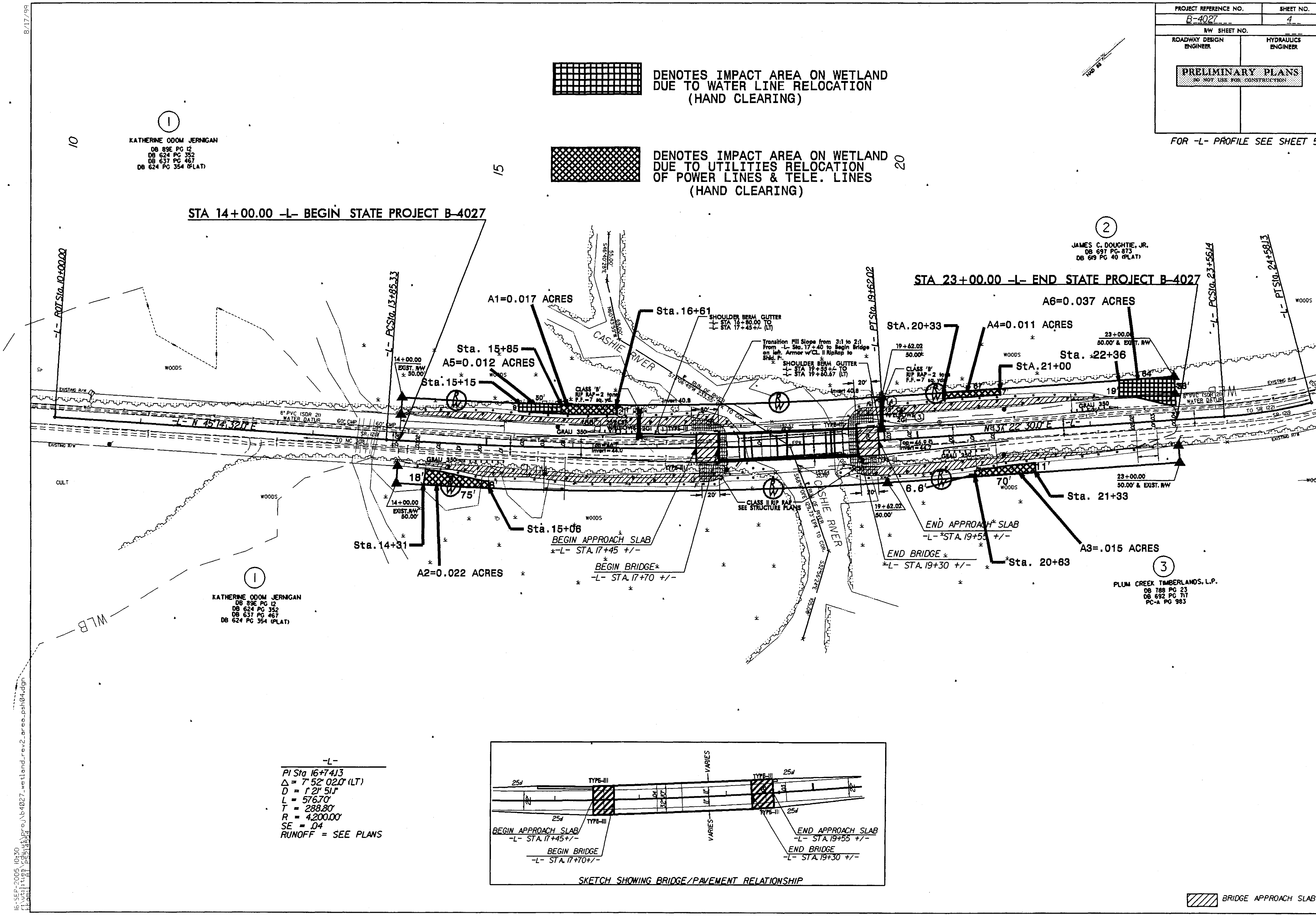
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE DESIGN ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*



PROJECT REFERENCE NO. B-4027
SHEET NO. 4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
FOR -L- PROFILE SEE SHEET 5
DENOTES IMPACT AREA ON WETLAND DUE TO WATER LINE RELOCATION (HAND CLEARING)
DENOTES IMPACT AREA ON WETLAND DUE TO UTILITIES RELOCATION OF POWER LINES & TELE. LINES (HAND CLEARING)
KATHERINE ODOM JERNIGAN
DB 89E PG 12
DB 624 PG 352
DB 637 PG 467
DB 624 PG 354 (PLAT)
JAMES C. DOUGHTIE, JR.
DB 697 PG 873
DB 619 PG 40 (PLAT)
PLUM CREEK TIMBERLANDS, L.P.
DB 788 PG 23
DB 692 PG 717
PC-A PG 983
STA 14+00.00 -L- BEGIN STATE PROJECT B-4027
STA 23+00.00 -L- END STATE PROJECT B-4027
A1=0.017 ACRES
A2=0.022 ACRES
A3=.015 ACRES
A4=0.011 ACRES
A5=0.012 ACRES
A6=0.037 ACRES
Sta. 14+31
Sta. 15+06
Sta. 15+15
Sta. 15+85
Sta. 16+61
StA. 20+33
Sta. 20+63
StA. 21+00
Sta. 21+33
Sta. 22+36
-L- POT Sta. 10+00.00
-L- PC Sta. 13+85.33
-L- PT Sta. 19+62.02
-L- PC Sta. 23+56.14
-L- PT Sta. 24+58.13
-L- N 45°14' 32.0" E
N 53°22' 30.0" E
CASHIE RIVER
WOODS
CULT
BEGIN APPROACH SLAB -L- STA. 17+45 +/-
BEGIN BRIDGE -L- STA. 17+70 +/-
END BRIDGE -L- STA. 19+30 +/-
END APPROACH SLAB -L- STA. 19+55 +/-
-L-
PI Sta 16+74.13
Δ = 7° 52' 02.0" (LT)
D = 1° 21' 51.1"
L = 576.70'
T = 288.80'
R = 4,200.00'
SE = .04
RUNOFF = SEE PLANS
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
BRIDGE APPROACH SLAB

TOTAL TEMPORARY IMPACTS ON WETLAND
DUE TO WATER LINE RELOCATION

Area=0.049 Acres

TOTAL TEMPORARY IMPACTS ON WETLAND
DUE TO UTILITIES RELOCATION OF POWER
LINES AND TELE. LINES

Area=0.065 Acres

TOTAL WETLANDS IMPACT

Area=0.114 Acres

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

PROJECT: 8.2010501, (B-4027)
BRIDGE 11 OVER CASHIE RIVER
ON SR 1219