STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

November 6, 2007

Mr. William Wescott
U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

Mr. Stephen Lane
Division of Coastal Management
N. C. Dept. of Env. & Natural Resources
400 Commerce Avenue
Morehead City, NC 28557

Dear Sirs:

Subject: **Nationwide 23 and 33 Permit Application, CAMA Major Development Permit Application, and Tar-Pamlico Riparian Buffer Authorization Request** for the proposed replacement of Bridge No. 8 over Tranters Creek on SR 1403 and SR 1567, in Beaufort and Pitt Counties. Federal Aid Project No. BRZ-1403(4), State Project No. 8.2150801, TIP No. B-4020. Debit $400.00 from WBS Element 33387.1.1

Please find enclosed the CAMA Major Permit (MP) forms, Preconstruction Notification (PCN), adjacent riparian landowner return receipts, NCDWQ Stormwater Permit, on-site restoration plan, permit drawings, and half-size plan sheets for the above referenced project. A Categorical Exclusion (CE) was completed for this project on August 18, 2006 and distributed shortly thereafter. Additional copies are available upon request. The North Carolina Department of Transportation (NCDOT) proposes to replace existing Bridge No. 8 on SR 1403 and SR 1567 over Tranters Creek in Beaufort and Pitt Counties. The project involves replacement of the existing bridge structure with a 440-foot cored slab bridge at approximately the same location using a temporary work bridge for construction. Bridge substructure will consist of 12-inch HP piles for the end bents, and for the other bents we will use 24-inch steel pipe piles. The existing bridge navigational clearance will be maintained. The approach roadway will consist of a 24-foot travel way providing for two 12-foot travel lanes with 8-foot shoulders including 4-foot paved shoulders. There will be no permanent impacts to Tranters Creek and 0.37-acre of permanent impacts to adjacent wetlands. Traffic will be detoured off-site, on surrounding roads, during construction.

Impacts to Waters of the United States

General Description: The project is located in the Tar-Pamlico River Basin (Hydrologic Unit 03020103). A best usage classification of "C Sw NSW" has been assigned to Tranters Creek [DWQ Index #28-103]. Neither 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. Tranters Creek is not designated as a North Carolina Natural or Scenic River, or as a National Wild and Scenic River. Additionally, Tranters Creek is not listed on the Final 2006 303(d) list of impaired waters due to sedimentation for the Tar-Pamilico River Basin, nor does it drain into any Section 303(d) waters within 1.0 mile of the project study area.

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

Permanent Impacts: Wetlands adjacent to Tranters Creek will be impacted by the proposed project. Construction of the proposed project will result in permanent impacts to riverine wetlands, including 0.22 acre of fill in 404 wetlands due to roadway fill and 0.15-acre of excavation in 404 wetlands for the reconstruction of the roadside ditch. (see permit drawings).

Temporary Impacts: There will be a temporary work bridge located on the northeast portion of the project resulting in less than 0.01 acre of temporary impacts to surface waters. Also, this project will result in 0.08 acre of temporary fill in wetlands in the Hand Clearing areas for the installation of erosion control measures, including some or all of the following: Temporary Silt Fence, Special Sediment Control Fence, and/or Temporary Rock Silt Checks.

Utility Impacts: There will be no impacts to jurisdictional resources due to utilities. The proposed underground power and telephone lines will be relocated using directional bore.

Hand Clearing: There will be 0.31 acre of hand clearing in wetlands.

Tar-Pamlico Buffer Rules: This project lies within the Tar-Pamlico River Basin; therefore, the regulations pertaining to the Tar-Pamlico Buffer Rules will apply. There are 3,943 square feet of impacts to Zone 1 and 3,113 square feet of impacts in Zone 2. Of these impacts, 6,426 square feet are considered allowable due to bridge construction and 630 square feet are allowable due to roadway construction. This road crossing activity is allowable because impacts are less than the 150-foot/0.3 acre threshold, for which mitigation is required. Uses designated as allowable may proceed within the riparian buffer provided that there are no practical alternatives to the requested use pursuant to Item (8) of this rule.

Bridge Demolition

The existing bridge superstructure consists of a steel plank floor on I-beams. The substructure consists of reinforced concrete caps on timber piles. The bridge will be removed and piles will be pulled piece-by-piece 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.

Federally Protected Species

As of May 10, 2007 the US Fish and Wildlife Service (USFWS) lists eight federally protected species for Beaufort and Pitt Counties (Table 1). A Biological Conclusion of "May Affect, Not Likely to Adversely Affect" was reached for the bald eagle (*Haliaeetus leucocephalus)* and the West Indian Manatee (*Trichechus manatus)*. A copy of the USFWS concurrence letter is attached. The remaining of the federally protected species of Beaufort and Pitt Counties has biological conclusions of "No Effect".

Table 1. Federally protected species of Beaufort and Pitt Counties.

Scientific Name	Common Name	Federal Status	Habitat	Biological Conclusion	County
Lepidochelys kempii	Kemp's ridley sea turtle	E	No	No Effect	B
Trichechus manatus	West Indian Manatee	E	Yes	MANLTAA	B/P
Picoides borealis	Red-cockaded woodpecker	E	No	No Effect	B/P
Canis rufus	Red wolf	EXP	N/A	N/A	B
Lysimachia asperulaefolia	Rough-leaved loosestrife	E	Yes	No Effect	B
Elliptio steinstansana	Tar River spiny mussel	E	No	No Effect	P
Aeschynomene virginica	Sensitive jointvetch	T	Yes	No Effect	B

Effective August 8, 2007, the bald eagle (Haliaeetus leucocephalus) was delisted from the Endangered Species Act. A Biological Conclusion is no longer necessary for this species. The bald eagle is protected under the Bald and Golden Eagle Protection Act. Accordingly, bald eagle occurrences and nesting habitat were surveyed. The most recent survey, on April 26, 2006, found no individuals or nesting sites within 660 feet of the project limits. This project will therefore have no adverse effects on the bald eagle.

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 incorporated as part of the project design included:

- Use of an off-site detour during construction
- Construction of a 132-foot longer bridge
- Stream Crossing Guidelines for Anadromous Fish Passage will be implemented
- No in-water work will occur from February 15 to September 30, as requested by the North Carolina Department of Environment and Natural Resources Division of Marine Fisheries, as Tranters Creek is designated as a Primary Nursery Area
- Design Standards in Sensitive Watersheds will be utilized during demolition of the existing bridge and construction of the new bridge due to the designation of Tranters Creek as a Primary Nursery Area
- The Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters will be implemented during construction.
- There will be no deck drains on the proposed bridge
- Fill slopes in wetlands will be at a 3:1 ratio

Mitigation

The proposed project will have permanent impacts to wetlands totaling 0.37 acre due fill and excavation. NCDOT is proposing on-site mitigation totaling 0.14 acre. See the attached Restoration Plan detailing the on-site proposal. The rest of the 0.23 acre of impacts will be covered by surplus mitigation within the same cataloging unit (shown on the attached debit ledger).

Project Schedule

The review date for this project is April 1, 2008 and the Let Date is May 20, 2008.

Regulatory Approvals

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that a Nationwide Permit 23 authorize these activities. We are also requesting the issuance of a Nationwide Permit 33 for the temporary fill due to the installation of erosion control measures. (72 CFR; 11092-11198, March 12, 2007).

Section 401 Permit: We anticipate 401 General Certification numbers 3701 and 3688 will apply to this project. NCDOT is providing five copies of this application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality, for their approval. NCDOT received a stormwater permit (SW7070417), dated June 20, 2007, from NCDWQ (attached).

CAMA: NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Development Permit. The landowner receipts are provided with this permit application. Authorization to debit the $400 Permit Application Fee from WBS Element 33388.1.1 is hereby given.

Tar-Pamlico River Riparian Buffer Authorization: NCDOT requests that the NC Division of Water Quality review this application and issue a written approval for a Tar-Pamlico River Riparian Buffer Authorization.

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

Thank you for your time and assistance with this project. Please contact Mr. Chris Manley at cdmanley@dot.state.nc.us or (919) 715-1487 if you have any questions or need additional information.

Sincerely,

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

W/attachment:
Mr. John Hennessy, NCDWQ (5 copies)
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Michael Street, NCDMF
Mr. Steve Sollod, NCDCM
Dr. David Chang, P.E., Hydraulics
Mr. Greg Perfetti, P.E., Structure Design
Mr. Victor Barbour, P.E., Project Services Unit
Mr. Mark Staley, Roadside Environmental
Mr. C. E. Lassiter, P.E., Division 2 Engineer
Mr. Jay Johnson, Division 2 Environmental Officer

W/o attachment:
Mr. Scott McLendon, USACE, Wilmington
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P.E., Programming & TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Stephen W. Kirby, PDEA
Ms. Leilani Paugh, NEU
Mr. Randy Griffin, NEU

Office Use Only: Form Version March 05

USACE Action ID No. _____ **DWQ No.** _____

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

I. Processing

1. Check all of the approval(s) requested for this project:
   - ☒ Section 404 Permit
   - ☐ Section 10 Permit
   - ☒ 401 Water Quality Certification
   - ☒ Riparian or Watershed Buffer Rules
   - ☐ Isolated Wetland Permit from DWQ
   - ☐ Express 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: NW 23 & 33

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here: ☐

4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here: ☐

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here: ☒

II. Applicant Information

1. Owner/Applicant Information
   Name: Gregory J. Thorpe, Ph.D., Environmental Management Director
   Mailing Address: 1598 Mail Service Center
   Telephone Number: (919) 733-3141 Fax Number: (919) 733-9794
   E-mail Address:

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)
   Name:
   Company Affiliation:
   Mailing Address:
   Telephone Number: Fax Number:
   E-mail Address:

III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Replacement of Bridge No. 8

2. T.I.P. Project Number or State Project Number (NCDOT Only): B-4020

3. Property Identification Number (Tax PIN): N/A

4. Location
   County: Beaufort/Pitt Nearest Town: Washington
   Subdivision name (include phase/lot number): N/A
   Directions to site (include road numbers/names, landmarks, etc.): The project is located at Tranters Creek (Bridge No. 8) on SR 1403/SR 1567. Tranters Creek is the line between Beaufort and Pitt County

5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
   Decimal Degrees (6 digits minimum): 35.5631 °N -77.0865 °W

6. Property size (acres): N/A

7. Name of nearest receiving body of water: Tranters Creek

8. River Basin: Tar-Pamlico
   (Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at http://h2o.enr.state.nc.us/admin/maps/.)

9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: Existing conditions contain the roadway and bridge to cross Tranters Creek. General land use is foresty, agriculture, and residental

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

The existing Bridge No.8 will be removed without dropping any components in the water. The new bridge will be built using a temporary workpad and will be 132 ft. longer. Road and bridge construction equipment will be used such as cranes, earth moving equipment, and road surface equipment.

11. Explain the purpose of the proposed work: To replace the existing bridge.

IV. Prior Project History

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.Jurisdictional Determination Action ID 200411716 (date: 12/28/04 ; expiration date: 12/28/2009), State Stormwater Permit No. SW7070417

V. Future Project Plans

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.
N/A

VI. Proposed Impacts to Waters of the United States/Waters of the State

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: There will be permanent impacts due to the replacement of Bridge No. 8. The permanent impacts are the result of fill and excavation in the wetland for the road material and the roadside ditch.

2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
1	permanent fill	forested	yes	abuting	0.22
1	excavation	forested	yes	abuting	0.15
1	temporary Fill	Forested	yes	abuting	0.08
Total Wetland Impact (acres)					0.45

3. List the total acreage (estimated) of all existing wetlands on the property: 5.5

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
N/A						
Total Stream Impact (by length and acreage)						

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
N/A				
Total Open Water Impact (acres)				N/A

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	N/A
Wetland Impact (acres):	0.45
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres)	0.45
Total Stream Impact (linear feet):	N/A

7. Isolated Waters
   Do any isolated waters exist on the property? ☐ Yes ☒ No
   Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

8. Pond Creation
   If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.
   Pond to be created in (check all that apply): ☐ uplands ☐ stream ☐ wetlands
   Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): N/A
   Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.): N/A
   Current land use in the vicinity of the pond: N/A
   Size of watershed draining to pond: N/A Expected pond surface area: N/A

VII. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

Use of an off-site detour during construction; Construction of a 132-foot longer bridge; Stream Crossing Guidelines for Anadromous Fish Passage will be implemented; No in-water work will occur from February 15 to September 30, as requested by the North Carolina Department of Environment and Natural Resources Division of Marine Fisheries, as Tranters Creek is designated as a Primary Nursery Area; Design Standards in Sensitive Watersheds will be utilized during demolition of the existing bridge and construction of the new bridge due to the designation of Tranters Creek as a Primary Nursery Area; The Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters will be implemented during construction.; There will be no deck drains on the proposed bridge; Fill slopes in wetlands will be at a 3:1 ratio

VIII. Mitigation

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCEEP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina, available at http://h2o.enr.state.nc.us/ncwetlands/strmgide.html.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.
   Please see the restoration plan and drawings for mitigation details.

2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant's responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at http://h2o.enr.state.nc.us/wrp/index.htm. If use of the NCEEP is proposed, please check the appropriate box on page five and provide the following information:

   Amount of stream mitigation requested (linear feet): N/A
   Amount of buffer mitigation requested (square feet): N/A
   Amount of Riparian wetland mitigation requested (acres): N/A
   Amount of Non-riparian wetland mitigation requested (acres): N/A

Amount of Coastal wetland mitigation requested (acres): N/A

IX. Environmental Documentation (required by DWQ)

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes ☒ No ☐

2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)? Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation. Yes ☒ No ☐

3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes ☒ No ☐

X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify_____)? Yes ☒ No ☐

2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1	3943	3 (2 for Catawba)	N/A
2	3113	1.5	N/A
Total	7056		N/A

* Zone 1 extends out 30 feet perpendicular from the top of the near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. N/A

XI. Stormwater (required by DWQ)

Describe impervious acreage (existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level. See Stormwater Permit attached

XII. Sewage Disposal (required by DWQ)

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.
N/A

XIII. Violations (required by DWQ)

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?
Yes ☐ No ☒

Is this an after-the-fact permit application? Yes ☐ No ☒

XIV. Cumulative Impacts (required by DWQ)

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes ☐ No ☒
If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at http://h2o.enr.state.nc.us/ncwetlands. If no, please provide a short narrative description:

XV. Other Circumstances (Optional):

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).
See the Permit Application Cover Letter

E. L. Lusk for Gregory J. Thorpe, PhD 10-22-07

Applicant/Agent's Signature **Date**

(Agent's signature is valid only if an authorization letter from the applicant is provided.)

DCM MP-1

APPLICATION for Major Development Permit

(last revised 12/27/06)

North Carolina DIVISION OF COASTAL MANAGEMENT

1. Primary Applicant/ Landowner Information

Business Name		Project Name (if applicable)		
North Carolina Department Of Transportation		B-4020		
Applicant 1: First Name	MI	Last Name		
Gregory	J.	Thorpe		
Applicant 2: First Name	MI	Last Name		
If additional applicants, please attach an additional page(s) with names listed.				
Mailing Address		PO Box	City	State
1598 Mail Service Center			Raleigh	NC
ZIP	Country	Phone No.		FAX No.
27699	USA	919 - 715 - 1334 ext.		919 - 715 - 5501
Street Address *(if different from above)*		City	State	ZIP
				-
Email				

2. Agent/Contractor Information

Business Name				
Agent/ Contractor 1: First Name	MI	Last Name		
Agent/ Contractor 2: First Name	MI	Last Name		
Mailing Address		PO Box	City	State
ZIP		Phone No. 1		Phone No. 2
		- - ext.		- - ext.
FAX No.		Contractor #		
Street Address *(if different from above)*		City	State	ZIP
				-
Email				

<Form continues on back>

3. Project Location

County (can be multiple)	Street Address	State Rd. #
Beaufort Pitt	SR 1403 (Beaufort) / SR 1567 (Pitt) County Line	SR 1403/SR 1567

Subdivision Name	City	State	Zip
N/A	Washington	NC	-

Phone No.	Lot No.(s) *(if many, attach additional page with list)*
N/A - - ext.	N/A, , , ,

a. In which NC river basin is the project located?	b. Name of body of water nearest to proposed project
Tar-Pamlico	Tranters Creek
c. Is the water body identified in (b) above, natural or manmade? ☒Natural ☐Manmade ☐Unknown	d. Name the closest major water body to the proposed project site. Tar River
e. Is proposed work within city limits or planning jurisdiction? ☐Yes ☒No	f. If applicable, list the planning jurisdiction or city limit the proposed work falls within. N/A

4. Site Description

a. Total length of shoreline on the tract (ft.)	b. Size of entire tract (sq.ft.)
275' within R/W limits	N/A
c. Size of individual lot(s) N/A, , , *(If many lot sizes, please attach additional page with a list)*	d. Approximate elevation of tract above NHW *(normal high water)* or NWL *(normal water level)* 11.0' ☐NHW or ☒NWL

e. Vegetation on tract
Cypress-gum swamp and Disturbed/Maintained (containing various grasses and weeds) are the vegetative communities on site.

f. Man-made features and uses now on tract
Bridge No.8 and SR 1403 / SR 1567 for travel

g. Identify and describe the existing land uses adjacent to the proposed project site.
Residential, forestry, and City of Washington Boat Launch Facility

h. How does local government zone the tract?	i. Is the proposed project consistent with the applicable zoning? (Attach zoning compliance certificate, if applicable) ☐Yes ☐No ☒NA
N/A	

j. Is the proposed activity part of an urban waterfront redevelopment proposal? ☐Yes ☒No

k. Has a professional archaeological assessment been done for the tract? If yes, attach a copy. ☐Yes ☒No ☐NA

If yes, by whom?

l. Is the proposed project located in a National Registered Historic District or does it involve a National Register listed or eligible property? ☐Yes ☒No ☐NA

<Form continues on next page>

m. (i) Are there wetlands on the site? ☒Yes ☐No

(ii) Are there coastal wetlands on the site? ☐Yes ☒No

(iii) If yes to either (i) or (ii) above, has a delineation been conducted? ☒Yes ☐No
(Attach documentation, if available)

n. Describe existing wastewater treatment facilities.
N/A

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

p. Describe existing storm water management or treatment systems.
See stormwater management permit

5. Activities and Impacts

a. Will the project be for commercial, public, or private use? ☐Commercial ☒Public/Government ☐Private/Community

b. Give a brief description of purpose, use, and daily operations of the project when complete.
Replacement of the existing bridge over Tranters Creek.

c. Describe the proposed construction methodology, types of construction equipment to be used during construction, the number of each type of equipment and where it is to be stored.
The existing Bridge No.8 will be removed without dropping anything in the water. The new bridge will be built using a temporary workpad and will be 132 ft. longer. Road and bridge construction equipment will be used such as cranes, earth moving equipment, and road surface equipment.

d. List all development activities you propose.
Construction of a new bridge and roadway.

e. Are the proposed activities maintenance of an existing project, new work, or both? Both

f. What is the approximate total disturbed land area resulting from the proposed project? 1.1 ☐Sq.Ft or ☒Acres

g. Will the proposed project encroach on any public easement, public accessway or other area that the public has established use of? ☐Yes ☐No ☐NA

h. Describe location and type of existing and proposed discharges to waters of the state.
Offsite and Roadway stormwater runoff

i. Will wastewater or stormwater be discharged into a wetland? ☒Yes ☐No ☐NA

If yes, will this discharged water be of the same salinity as the receiving water? ☒Yes ☐No ☐NA

j. Is there any mitigation proposed? ☒Yes ☐No ☐NA
If yes, attach a mitigation proposal.

<Form continues on back>

6. Additional Information

In addition to this completed application form, (MP-1) the following items below, if applicable, must be submitted in order for the application package to be complete. Items (a) – (f) are always applicable to any major development application. Please consult the application instruction booklet on how to properly prepare the required items below.

a. A project narrative.

b. An accurate, dated work plat (including plan view and cross-sectional drawings) drawn to scale. Please give the present status of the proposed project. Is any portion already complete? If previously authorized work, clearly indicate on maps, plats, drawings to distinguish between work completed and proposed.

c. A site or location map that is sufficiently detailed to guide agency personnel unfamiliar with the area to the site.

d. A copy of the deed (with state application only) or other instrument under which the applicant claims title to the affected properties.

e. The appropriate application fee. Check or money order made payable to DENR.

f. 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.

Name Fletcher Family Properties
Phone No.

Address 6870 Clark's Neck Road, Washington, NC 27889

Name City of Washington
Phone No.

Address 102 East Second Street, Washington, NC 27889

Name Eric S. Raub
Phone No.

Address 6879 Clark's Neck Road, Washington, NC 27889

g. A list of previous state or federal permits issued for work on the project tract. Include permit numbers, permittee, and issuing dates.
State Stormwater Permit, No. SW7070417, NCDWQ, June 20, 2007

h. Signed consultant or agent authorization form, if applicable.

i. Wetland delineation, if necessary.

j. A signed AEC hazard notice for projects in oceanfront and inlet areas. *(Must be signed by property owner)*

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

7. 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 the conditions and restrictions contained in the permit.

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.

Date 10.22.07 Print Name E.L.Lusk

Signature E. L. Lusk

Please indicate application attachments pertaining to your proposed project.

☐DCM MP-2 Excavation and Fill Information ☒DCM MP-5 Bridges and Culverts

☐DCM MP-3 Upland Development

☐DCM MP-4 Structures Information

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. Please include all supplemental information.

1. BRIDGES

☐ *This section not applicable*

a. Is the proposed bridge:
☐Commercial ☒Public/Government ☐Private/Community

b. Water body to be crossed by bridge:
Tranters Creek

c. Type of bridge (construction material):
This will be a cored slab bridge, and substructure will consist of 12-inch HP piles for the end bents, and for the other bents we will use 24-inch steel pipe piles, which will be driven into position.

d. Water depth at the proposed crossing at NLW or NWL:
18.6'

e. (i) Will proposed bridge replace an existing bridge? ☒Yes ☐No
If yes,
(ii) Length of existing bridge: 306'
(iii) Width of existing bridge: 30.8'
(iv) Navigation clearance underneath existing bridge: 8.5'
(v) Will all, or a part of, the existing bridge be removed? (Explain) Existing bridge, piers, and abutments will be removed.

f. (i) Will proposed bridge replace an existing culvert? ☐Yes ☒No
If yes,
(ii) Length of existing culvert:
(iii) Width of existing culvert:
(iv) Height of the top of the existing culvert above the NHW or NWL:
(v) Will all, or a part of, the existing culvert be removed? (Explain)

g. Length of proposed bridge: 440 ft.

h. Width of proposed bridge: 36'

i. Will the proposed bridge affect existing water flow? ☐Yes ☒No
If yes, explain:

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? ☒Yes ☐No
If yes, explain:

k. Navigation clearance underneath proposed bridge: 9.7'

l. Have you contacted the U.S. Coast Guard concerning their approval? ☒Yes ☐No
If yes, explain: See Letter in the CE

m. Will the proposed bridge cross wetlands containing no navigable waters? ☐Yes ☒No
If yes, explain:

n. Height of proposed bridge above wetlands: 6.5 ft.

2. CULVERTS

☒ *This section not applicable*

a. Number of culverts proposed: N/A

b. Water body in which the culvert is to be placed:

< Form continues on back>

c. Type of culvert (construction material):

d. (i) Will proposed culvert replace an existing bridge? ☐Yes ☐No

If yes,

(ii) Length of existing bridge:

(iii) Width of existing bridge:

(iv) Navigation clearance underneath existing bridge:

(v) Will all, or a part of, the existing bridge be removed? (Explain)

e. (i) Will proposed culvert replace an existing culvert? ☐Yes ☐No

If yes,

(ii) Length of existing culvert(s):

(iii) Width of existing culvert(s):

(iv) Height of the top of the existing culvert above the NHW or NWL:

(v) 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 NHW or NWL.

i. Depth of culvert to be buried below existing bottom contour.

j. Will the proposed culvert affect navigation by reducing or increasing the existing navigable opening? ☐Yes ☐No

If yes, explain:

k. Will the proposed culvert affect existing water flow? ☐Yes ☐No

If yes, explain:

3. EXCAVATION and FILL

☐*This section not applicable*

a. (i) Will the placement of the proposed bridge or culvert require any excavation below the NHW or NWL? ☐Yes ☒No

If yes,

(ii) Avg. length of area to be excavated:

(iii) Avg. width of area to be excavated:

(iv) Avg. depth of area to be excavated:

(v) Amount of material to be excavated in cubic yards:

b. (i) Will the placement of the proposed bridge or culvert require any excavation within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW _____ ☐SAV _____ ☐SB

☒WL 7350 ☐None

(ii) Describe the purpose of the excavation in these areas:

To relocate roadside ditch

c. (i) Will the placement of the proposed bridge or culvert require any high-ground excavation? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be excavated: 134'

(iii) Avg. width of area to be excavated: 60'

(iv) Avg. depth of area to be excavated:

(v) Amount of material to be excavated in cubic yards: 1212

d. If the placement of the bridge or culvert involves any excavation, please complete the following:

(i) Location of the spoil disposal area: To be determined by the contractor

(ii) Dimensions of the spoil disposal area: To be determined by the contractor

(iii) Do you claim title to the disposal area? ☐Yes ☒No *(If no, attach a letter granting permission from the owner.)*

(iv) Will the disposal area be available for future maintenance? ☐Yes ☒No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

☐CW ☐SAV ☐WL ☐SB ☒None

If any boxes are checked, give dimensions if different from (ii) above.

(vi) Does the disposal area include any area below the NHW or NWL? ? ☐Yes ☒No

If yes, give dimensions if different from (ii) above.

e. (i) 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 NHW or NWL? ☐Yes ☒No

If yes,

(ii) Avg. length of area to be filled:

(iii) Avg. width of area to be filled:

(iv) Purpose of fill:

f. (i) 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/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

☐CW ____ ☐SAV ____ ☐SB

☒WL 11220 ☐None

(ii) Describe the purpose of the excavation in these areas:

Approach Fill

g. (i) 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 high-ground? ☒Yes ☐No

If yes,

(ii) Avg. length of area to be filled: 350'

(iii) Avg. width of area to be filled: 50'

(iv) Purpose of fill: Approach Fill

4. GENERAL

a. Will the proposed project require the relocation of any existing utility lines? ☒Yes ☐No

If yes, explain: See Drawings and Utility Narative

If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.

b. Will the proposed project require the construction of any temporary detour structures? ☐Yes ☒No

If yes, explain:

< Form continues on back>

c. Will the proposed project require any work channels? ☐Yes ☒No

If yes, complete Form DCM-MP-2.

d. How will excavated or fill material be kept on site and erosion controlled?

Using NCDOT Best Management Practices

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

Road and bridge construction equipment will be used such as cranes, earth moving equipment, and road surface equipment.

f. Will wetlands be crossed in transporting equipment to project site? ☐Yes ☒No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

g. Will the placement of the proposed bridge or culvert require any shoreline stabilization? ☐Yes ☐No

If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.

10-22-07
Date

B-4020
Project Name

E.L.Lusk
Applicant Name

E. L. Lusk
Applicant Signature

Restoration Plan for Tranter's Creek Wetland
At Bridge No. 8
In Beaufort/Pitt County
TIP B-4020
May 29, 2007

The North Carolina Department of Transportation (NCDOT) will perform on-site mitigation for riverine swamp impacts at the SR 1403 overpass of Tranter's Creek at the boundary of Beaufort and Pitt Counties. This mitigation site occurs within Transportation Improvement Program (TIP) B-4020. The project begins approximately 350 feet west of Bridge No. 8 and continues to approximately 400 feet to the east of the bridge.

NCDOT will restore approximately 0.14 acres of riverine swamp wetland by removal of existing causeway fill. The roadway project will impact 0.37 acres of unavoidable wetlands, leaving no wetland restoration assets on-site.

EXISTING CONDITIONS:

The project is located in along the Beaufort and Pitt County lines just west of the City of Washington. Land use in the project area is predominantly forested with scattered residential lots.

The existing causeway for the SR 1403 overpass at Bridge No. 8 is located in the floodplain of Tranter's Creek. The floodplain harbors a mature riverine swamp forest dominated by canopy species including bald cypress (*Taxodium distichum*), red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*) and black gum (*Nyssa biflora*). Aerial power line and telephone lines are located in the northwest quadrant of the project, running parallel to the causeway. This maintained herbaceous plants including cattail (Typha latifolia), rose mallow (Hibiscus moscheutos), lizard's tail (Saururus cernuus), and soft rush (Juncus effusus) dominate area.

The Categorical Exclusion (CE) for TIP B-4020, dated April 2003, provides further details concerning existing and proposed roadway conditions.

PROPOSED CONDITIONS:
DESIGN

The proposed wetland mitigation will consist of restoring approximately 0.14 acres of riverine swamp wetland. Restoration will involve removing causeway fill from the approaches to Bridge No. 8 to match the swamp wetland elevation. Representative spot elevations will be taken within the adjacent reference wetland to determine the target elevation. Excavated areas will be ripped and disked if necessary.

The Natural Environment Unit shall be contacted to provide construction oversight to ensure that the wetland mitigation area is constructed appropriately.

VEGETATION PLANTING

The restoration area adjacent to the new structure will be planted following the completion of the site grading. The following riverine swamp tree species will be planted: bald cypress and swamp blackgum. Planting density shall be 680 seedlings per acre, which equates to a plant spacing of 8 feet on-center. Restoration area under the bridge will not be planted with hardwood species, but will be stabilized by seeding with the appropriate wetland seed mix.

MONITORING:

Upon successful completion of construction, the following monitoring strategy is proposed for the mitigation site. NCDOT will document monitoring activities on the site in an annual report distributed to the regulatory agencies.

HYDROLOGIC MONITORING

No specific hydrological monitoring is proposed for this restoration site. The target elevation will be based on the adjacent wetland and verified during construction. Constructing the site at the adjacent wetland elevation will ensure the hydrology in the restored area is similar to the hydrology in the reference area.

VEGETATION SUCCESS CRITERIA

NCDOT shall monitor the restoration site by visual observation and photo points for survival of planted seedlings and stabilization of restored areas. NCDOT shall monitor the site for a minimum of three years or until the site is deemed successful. Monitoring will be initiated upon completion of the site planting.

Mildred Wood Mitigation Site Debit Ledger

The Mildred Wood Mitigation Site was constructed as onsite mitigation for T.I.P. R-2111/R-2112A US 64 relocation in Edgecombe and Martin Counties. The 418-acre site is located in Edgecombe County southeast of Tarboro and may be accessed from US 64 on its southern boundary. The site has completed its monitoring period and met prescribed hydrologic and vegetative success criteria.

The Site was originally debited for R-2111, R-2112A, and R-509GB and has since been debited for R-2112B, alterations, U-2218, U-2720, B-2980,.and B-4021. To offset the 0.23 acres of unavoidable impacts to riverine wetlands due to T.I.P. B-4020, the Mildred Wood Mitigation Site will be debited 0.46 acres of riverine wetland restoration. These debits are reflected in the debit ledger below.

Onsite Mitigation Debit Ledger w/ Residual Assets

Site Name	**HUC**	**Mitigation Type**	**Original** (acres)	**Available** (acres)	**Debit** R-2111, R-2112A, & R-509GB	**Debit** R-2112B
Mildred Wood	3020103	Riverine Restoration	395	100.33	217	23
		Riverine Preservation	23	8		15

Debit Alterations	**Debit** U-2218	**Debit** U-2720	**Debit** U-2980	**Debit** B-4021	**Debit** B-4020
23.5	21.5	6	3	0.25	0.46

DIVISION OF WATER QUALITY
DWQ

Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen H. Sullins, Director
Division of Water Quality

Manley

Dr. Gregory J. Thorpe
NC Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Subject: Permit No. SW7070417
TIP No. B-4020, SR 1413 Bridge Over Tranters Creek
State Stormwater Permit
Linear Public Road/Bridge Project
Beaufort County

Dear Dr. Thorpe:

The Washington Regional Office received a completed Stormwater Application for the subject project on April 23, 2007. Staff review of the plans and specifications has determined that the project, as proposed, will comply with the Stormwater Regulations set forth in Title 15A NCAC 2H.1000. We are forwarding Permit No. SW7070417 dated June 20, 2007 to the NC Department of Transportation for the proposed improvements and bridge replacement to SR 1413 over Tranters Creek in Beaufort County.

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

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

If you have any questions, or need additional information concerning this matter, please contact Roger Thorpe or me at (252) 946-6481.

Sincerely,

Al Hodge, Regional Supervisor
Surface Water Protection Section
Washington Regional Office

cc: Washington Regional Office
Central Files

North Carolina Division of Water Quality
943 Washington Square Mall
Washington, NC 27889

Internet: www.ncwaterquality.org
Phone (252) 946-6481
Fax (252) 946-9215

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

STATE STORMWATER MANAGEMENT PERMIT

STORMWATER PERMIT

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

PERMISSION IS HEREBY GRANTED TO

NC Department of Transportation

Beaufort County

FOR THE

Construction of a public road/bridge in compliance with the provisions of 15A NCAC 2H.1000 (hereafter referred to as the *"stormwater rules"*) and the approved stormwater management plans and specifications and other supporting data as attached and on file with and approved by the Division of Water Quality and considered a part of this permit for bridge replacement over Tranters Creek on SR 1403 in Beaufort County.

This permit shall be effective from the date of issuance until rescinded and shall be subject to the following specified conditions and limitations:

I. DESIGN STANDARDS

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

6. The permit issued shall continue in force and effect until revoked or terminated.

7. The permittee shall notify the Division of any name, ownership or mailing address changes within 30 days.

8. The issuance of this permit does not preclude the Permittee from complying with the Neuse River Riparian Buffer Rules (15A NCAC 02B .0233) or the Tar-Pamlico River Riparian Buffer Rules (15A NCAC 02B .0259).

Permit issued this the 20 th day of June, 2007.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

for Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number SW7070417

II. SCHEDULE OF COMPLIANCE

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

2. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

3. The permittee shall submit all information requested by the Director or his representative within the time frame specified in the written information request.

4. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction for the following items:

   a. Major revisions to the approved plans, such as road realignment, deletion of any proposed BMP, changes to the drainage area or scope of the project, etc.
   b. Project name change.
   c. Redesign of, addition to, or deletion of the approved amount of built-upon area, regardless of size.
   d. Alteration of the proposed drainage.

5. The Director may determine that other revisions to the project should require a modification to the permit.

III. GENERAL CONDITIONS

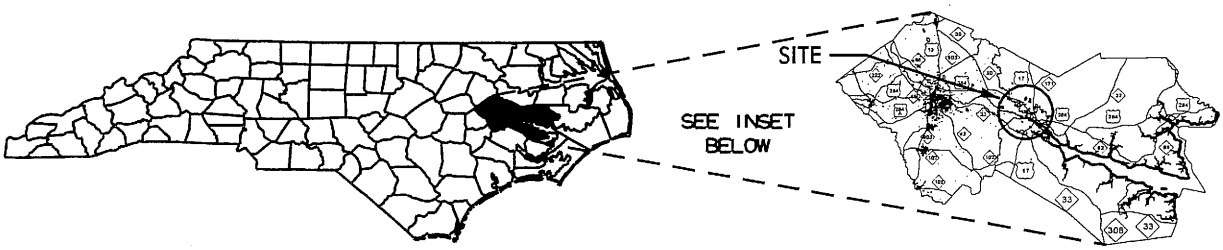
1. This permit is not transferable to any person except after notice to and approval by the Director. The Director may require modification or revocation and reissuance of the permit to change name and incorporate such other requirements as may be necessary. A formal permit request must be submitted to the Division of Water Quality accompanied by the appropriate fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved. The permittee is responsible for compliance with the terms and conditions of this permit until such time as the Director approves the transfer.

2. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to enforcement action by the Division of Water Quality, in accordance with North Carolina General Statute 143-215.6(A) to 143-215.6(C).

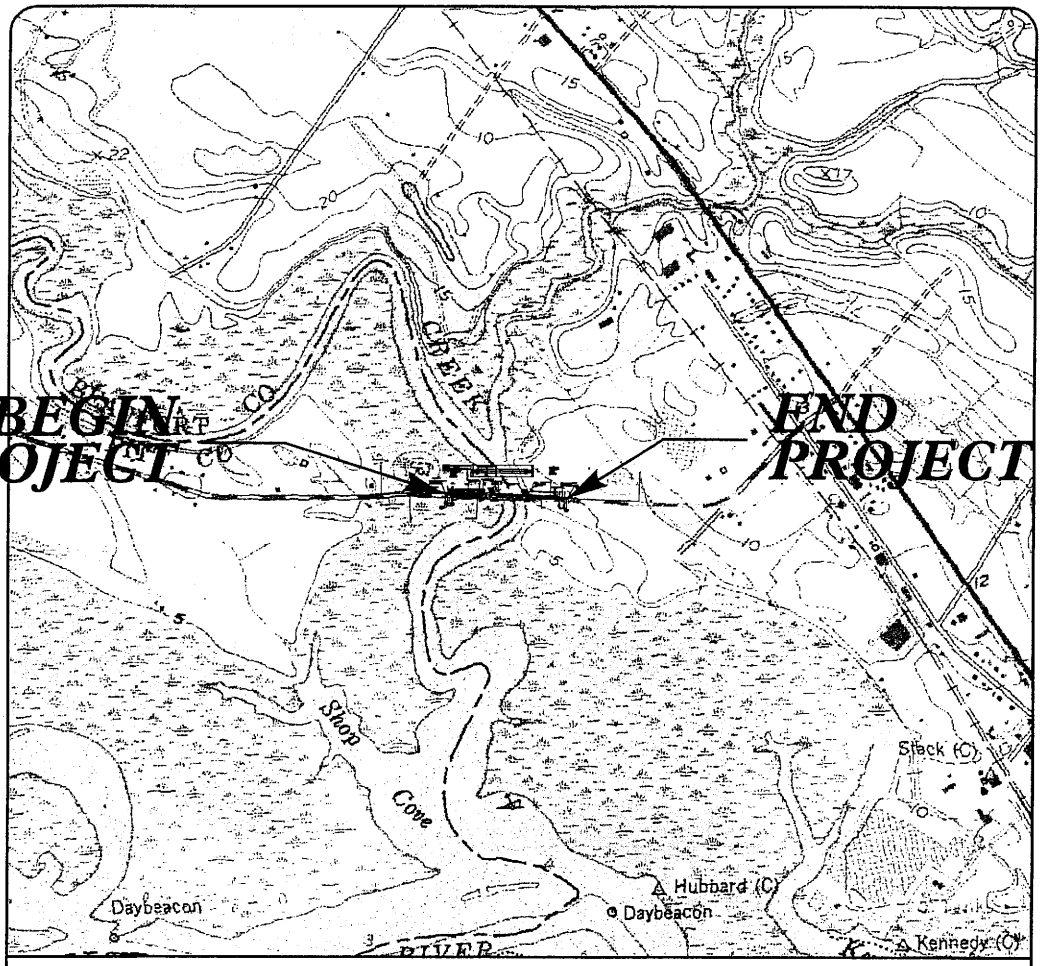
3. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction.

4. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by laws, rules, and regulations contained in Title 15A of the North Carolina Administrative Code, Subchapter 2H .1000; and North Carolina General Statute 143-215.1 et. al.

5. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and reissuance or termination does not stay any permit condition.



BEAUFORT/PITT COUNTIES



VICINITY MAP NTS

WETLAND IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT / PITT COUNTY
PROJECT: (B-4020)
BRIDGE NO. 8 OVER
TRANTERS CREEK ON SR 1403 / SR 1567

SHEET ____ OF ____

Permit Drawing
Sheet 1 of 7

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	16+25/24+45 -L-	BRIDGE	0.22		0.15		0.31					
TOTALS:			0.22		0.15	0.00	0.31					

Area of impacts due to proposed piers is 201 ft^2.

Wetland Mitigation Due to Excavation = 6163 square feet (0.14 ac)

0.08 acres of Temporary Fill in Wetlands in the Hand Clearing areas for Erosion Control Measures.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT/PITT COUNTY
PROJECT: 33387.1.1 (B-4020)

SHEET Mar-07

ATN Revised 3/31/05

Permit Drawing
Sheet 2 of 7

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
1	Fletcher Family Properties, LLC	
2	Eric S. Raub	
3	City of Washington	102 E. 2nd Street Washington, NC 27889
4	City of Washington	102 E. 2nd Street Washington, NC 27889

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT / PITT COUNTY
PROJECT: (B-4020)
BRIDGE NO.8 OVER TRANTERS CREEK
ON SR 1403 / SR 1567

Permit-Drawing
Sheet 3 of 7

SHEET 1 OF 1

09/08/99

TIP PROJECT: B-4020

CONTRACT:

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

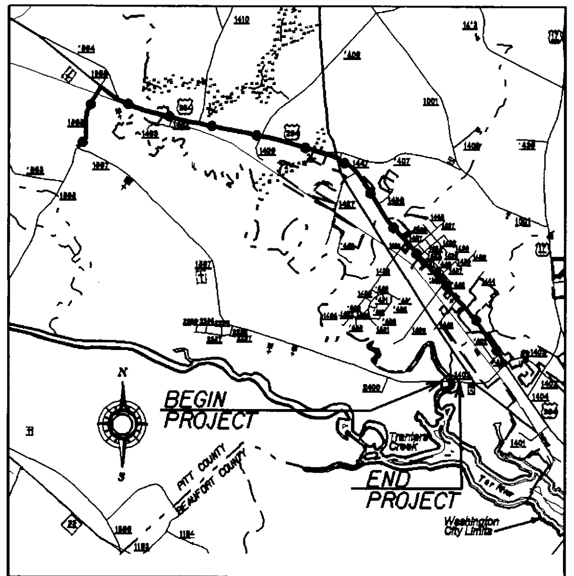
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4020	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33387.1.1	BRZ-1403(4)	P.E.

BEAUFORT / PITT COUNTIES

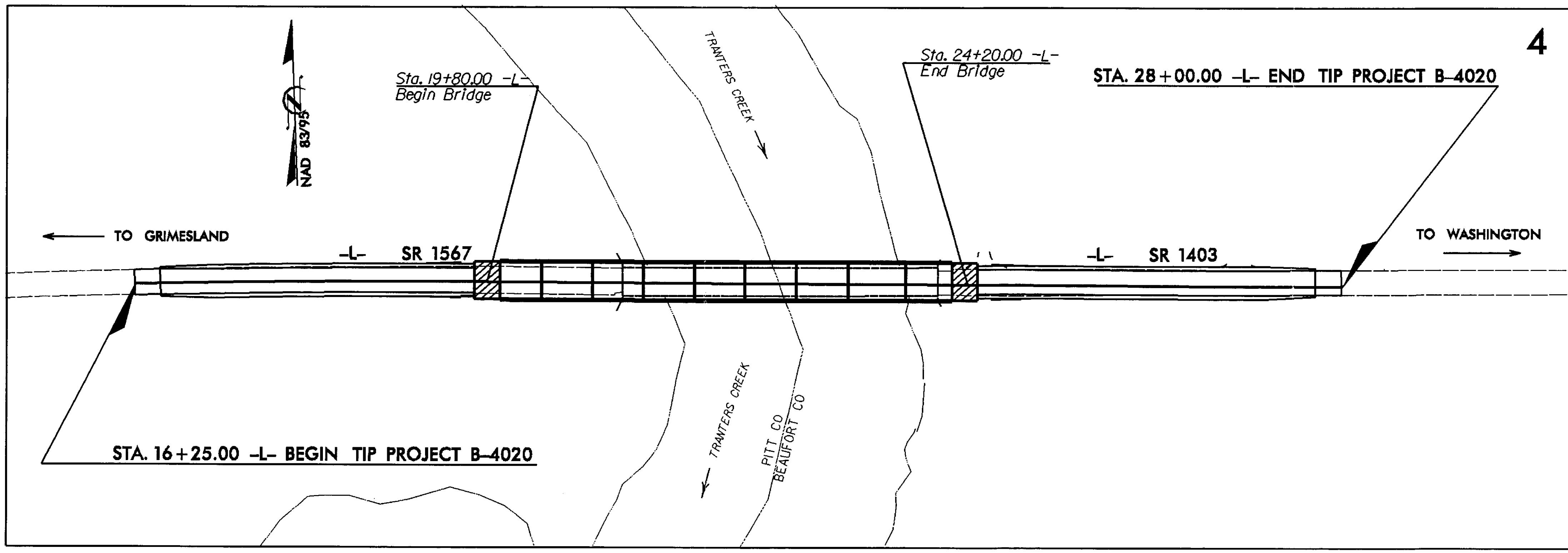
LOCATION: BRIDGE NO. 8 OVER TRANTERS CREEK ON SR 1403 / SR 1567 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE



VICINITY MAP

LEGEND ●—●—● *Studied Detour Route*



THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

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 2007 = 5940
ADT 2030 = 9300
DHV = 10 %
D = 60 %
T = 3 % *
V = 60 MPH
FUNC. CLASS = URBAN LOCAL
* TTST 1 % DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4020	=	0.139 mi.
LENGTH STRUCTURE TIP PROJECT B-4020	=	0.083 mi.
TOTAL LENGTH TIP PROJECT B-4020	=	0.222 mi.

Prepared In the Office of:
WANG ENGINEERING COMPANY, INC. CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

GREG S. PURVIS, P. E.
PROJECT ENGINEER

LETTING DATE:
December 18, 2007

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

Permit Drawing Sheet 4 of 7

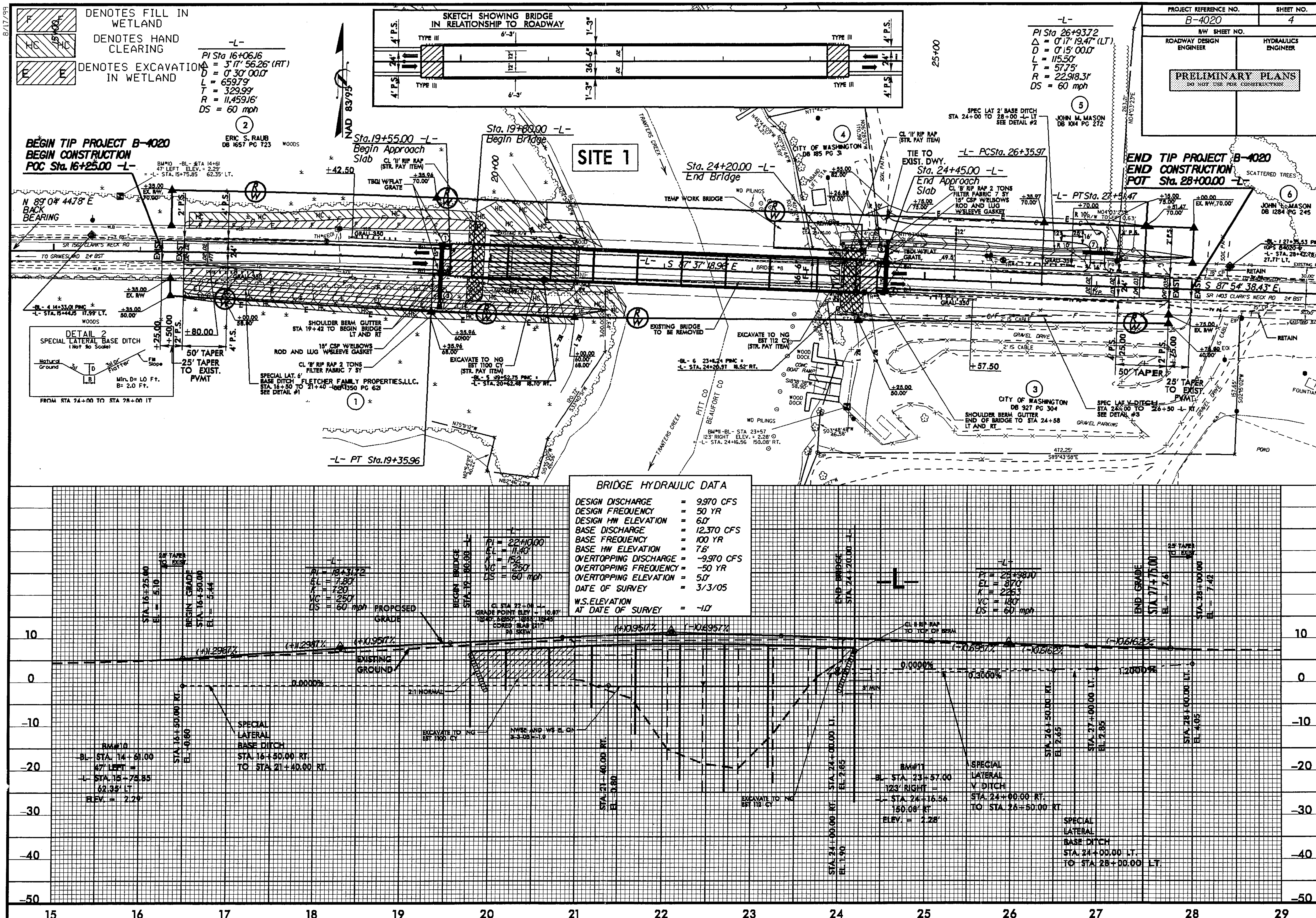
STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

Permit Drawing Sheet 4 of 7

18-JAN-2007 14:02



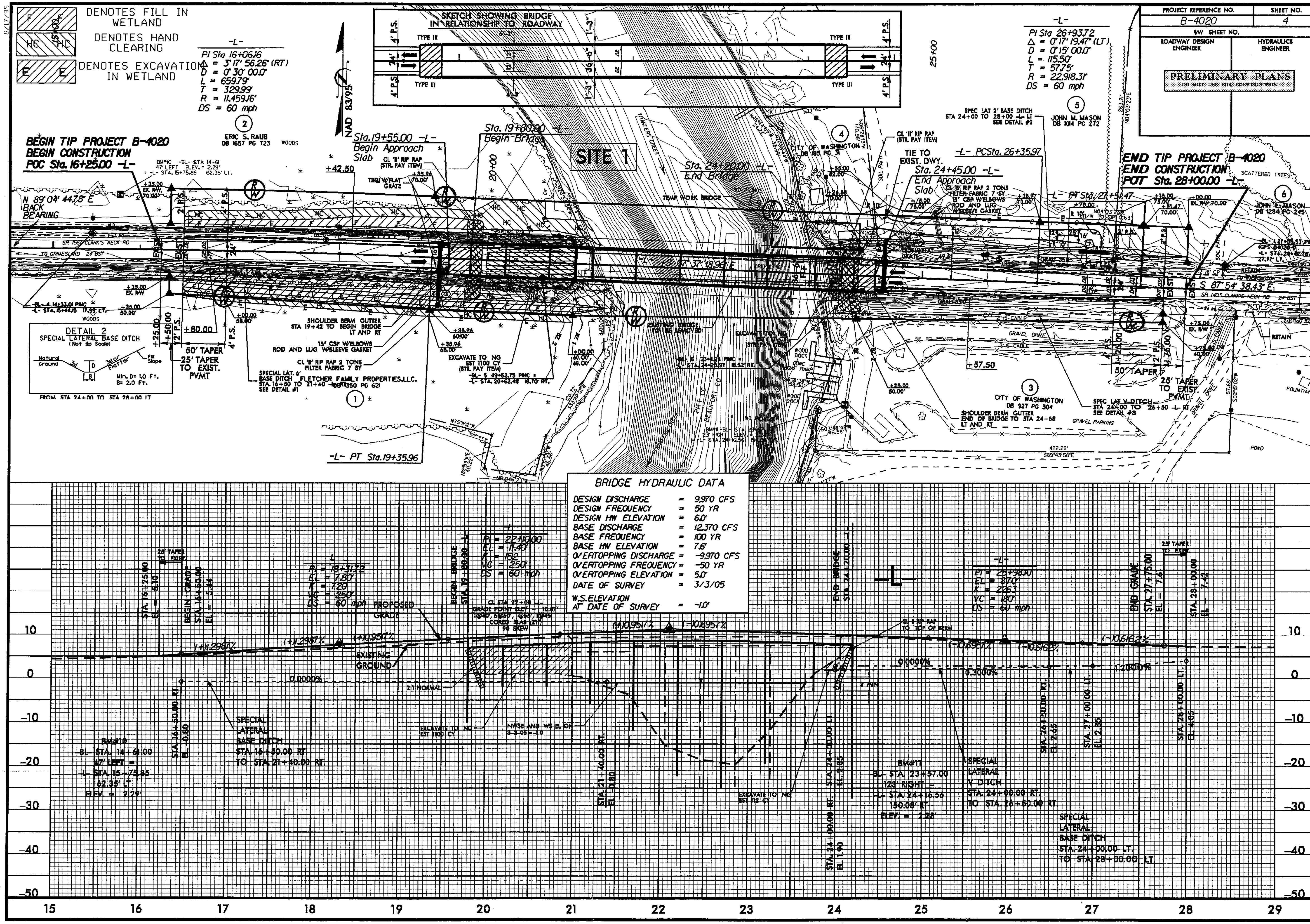
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	9,970 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.0'
BASE DISCHARGE	=	12,370 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	7.6'
OVERTOPPING DISCHARGE	=	~9,970 CFS
OVERTOPPING FREQUENCY	=	~50 YR
OVERTOPPING ELEVATION	=	5.0'
DATE OF SURVEY	=	3/3/05
W.S. ELEVATION AT DATE OF SURVEY	=	~1.0'

8/17/99

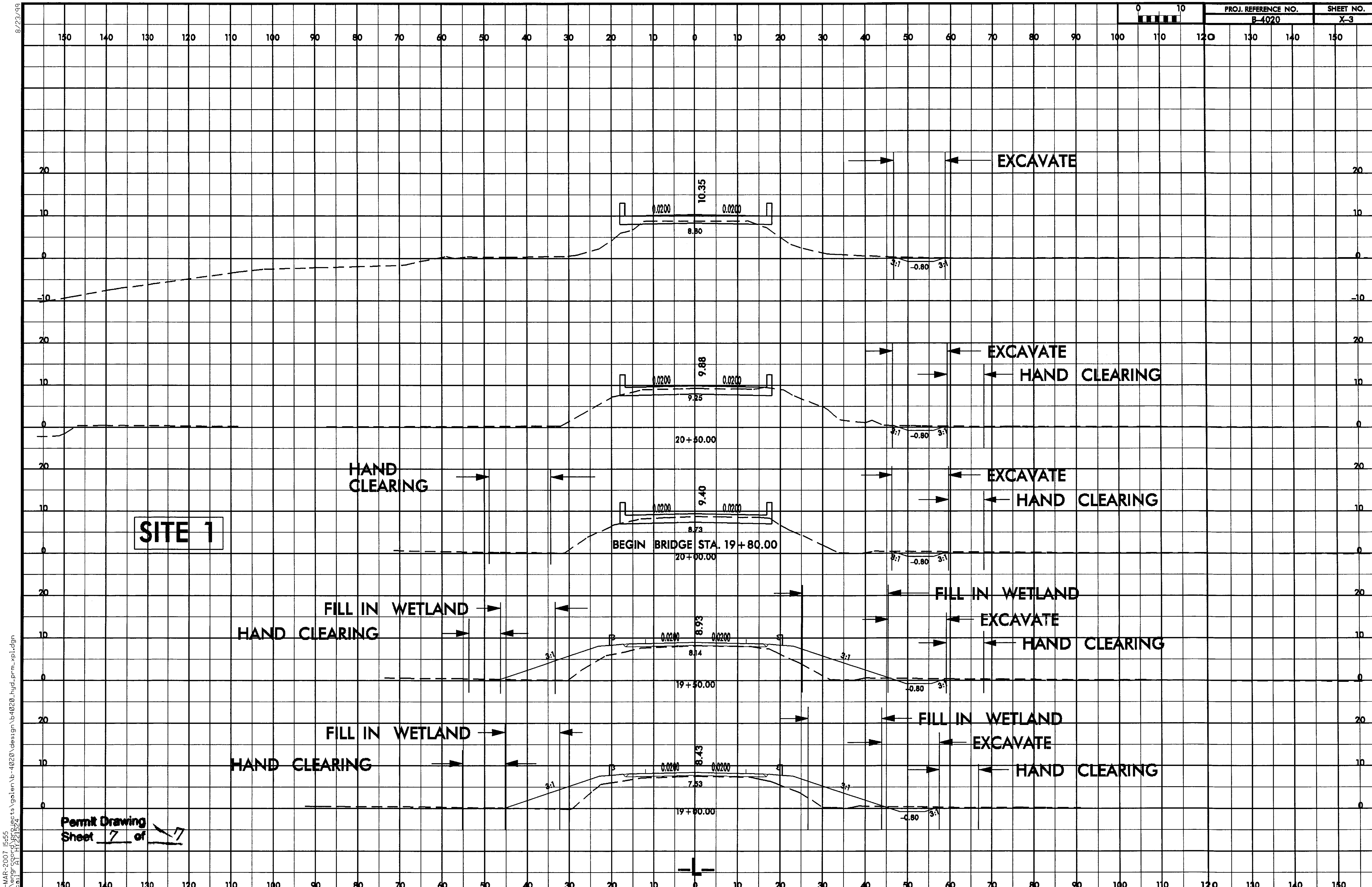
March 2007

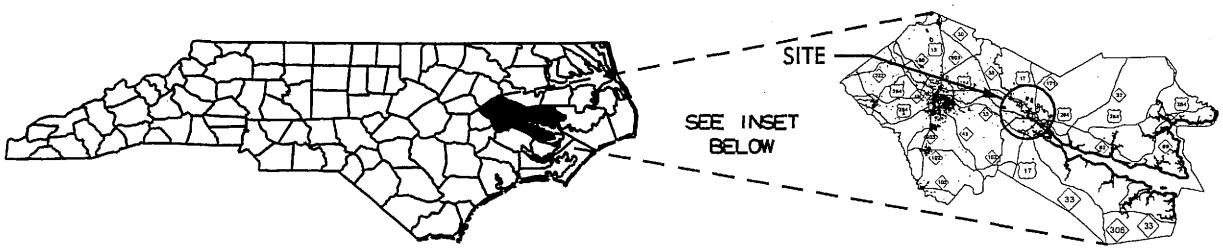
5 7



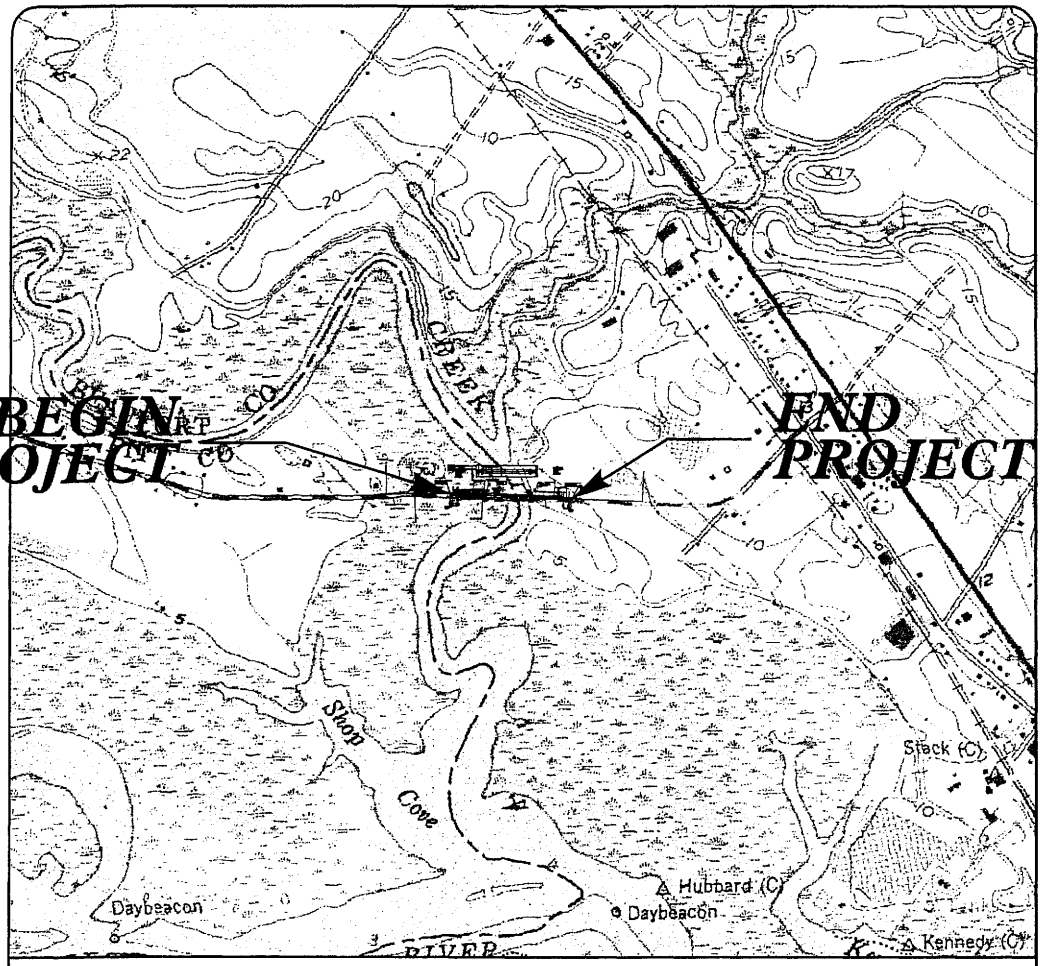
March 2007

Permit Drawing
Sheet 6 of 7


PROJ. REFERENCE NO.
B-4020
SHEET NO.
X-3
EXCAVATE
10.35
0.0200
8.80
3:1
-0.80
9.88
9.25
HAND CLEARING
20+50.00
9.40
8.73
BEGIN BRIDGE STA. 19+80.00
20+00.00
SITE 1
FILL IN WETLAND
8.93
8.14
19+50.00
8.43
7.53
19+00.00
Permit Drawing
Sheet 7 of 7
-L-
19-MAR-2007 15:55
s:\engrcoord\projects\galen\b-4020\design\b4020_hyd_prm_xpl.dgn
8/23/99



BEAUFORT/PITT COUNTIES



VICINITY MAP NTS

BUFFER IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT / PITT COUNTY
PROJECT: (B-4020)
BRIDGE NO. 8 OVER
TRANTERS CREEK ON SR 1403 / SR 1567

SHEET ____ OF ____

Buffer Drawing
Sheet 1 of 6

Buffer Drawing
Sheet 2 of 6

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	9 Span Bridge	-L- 19+80-24+20		X		3943	2483	6426					
1	Roadway Fill	-L- 16+50-19+80 -L- 24+20-24+50	X			0	630	630					
TOTAL:						3943	3113	7056					

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT/PITT COUNTY
PROJECT: 33387.1.1 (B-4020)

January-07
SHEET OF

Rev. May 2006

Buffer Drawing
Sheet 3 of 6

BUFFER IMPACTS SUMMARY

		WETLANDS IN BUFFER	
Site	Station	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	19+55/24+45 -L-	1447	1280
	TOTAL	1447	1280

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

BEAUFORT/PITT COUNTY

PROJECT:33387.1.1 (B-4020)

January-07

TIP PROJECT: B-4020

CONTRACT:

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

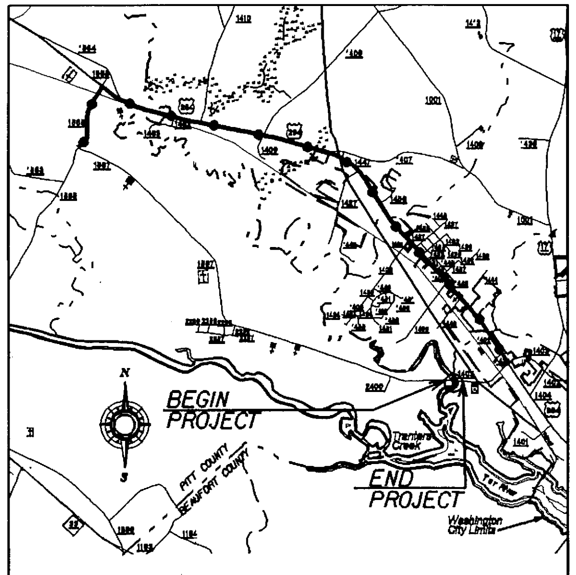
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4020	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33387.1.1	BRZ-1403(4)	P.E.

BEAUFORT / PITT COUNTIES

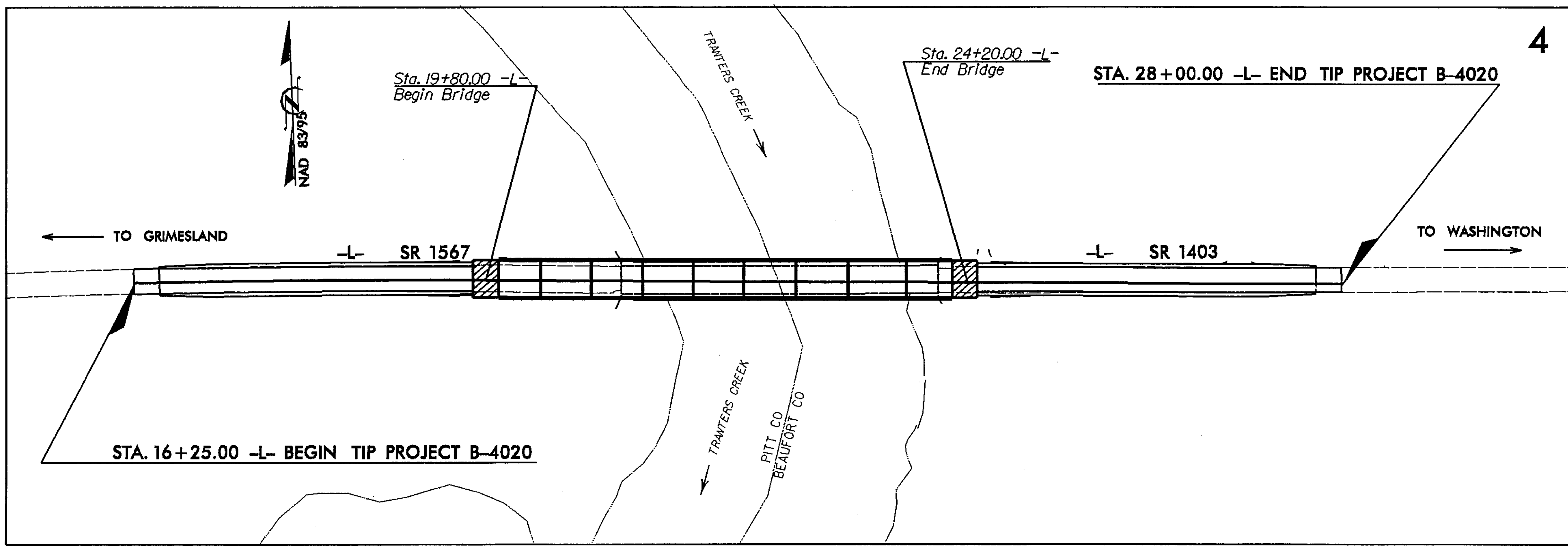
LOCATION: BRIDGE NO. 8 OVER TRANTERS CREEK ON SR 1403 / SR 1567 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE



VICINITY MAP

LEGEND ●—●—● Studied Detour Route



THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2007 = 5940
ADT 2030 = 9300
DHV = 10 %
D = 60 %
T = 3 % *
V = 60 MPH
FUNC. CLASS = URBAN LOCAL
* TTST 1 % DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4020	=	0.139 mi.
LENGTH STRUCTURE TIP PROJECT B-4020	=	0.083 mi.
TOTAL LENGTH TIP PROJECT B-4020	=	0.222 mi.

Prepared in the Office of:
WANG ENGINEERING COMPANY, INC.
CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:
December 18, 2007

GREG S. PURVIS, P. E.
PROJECT ENGINEER

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

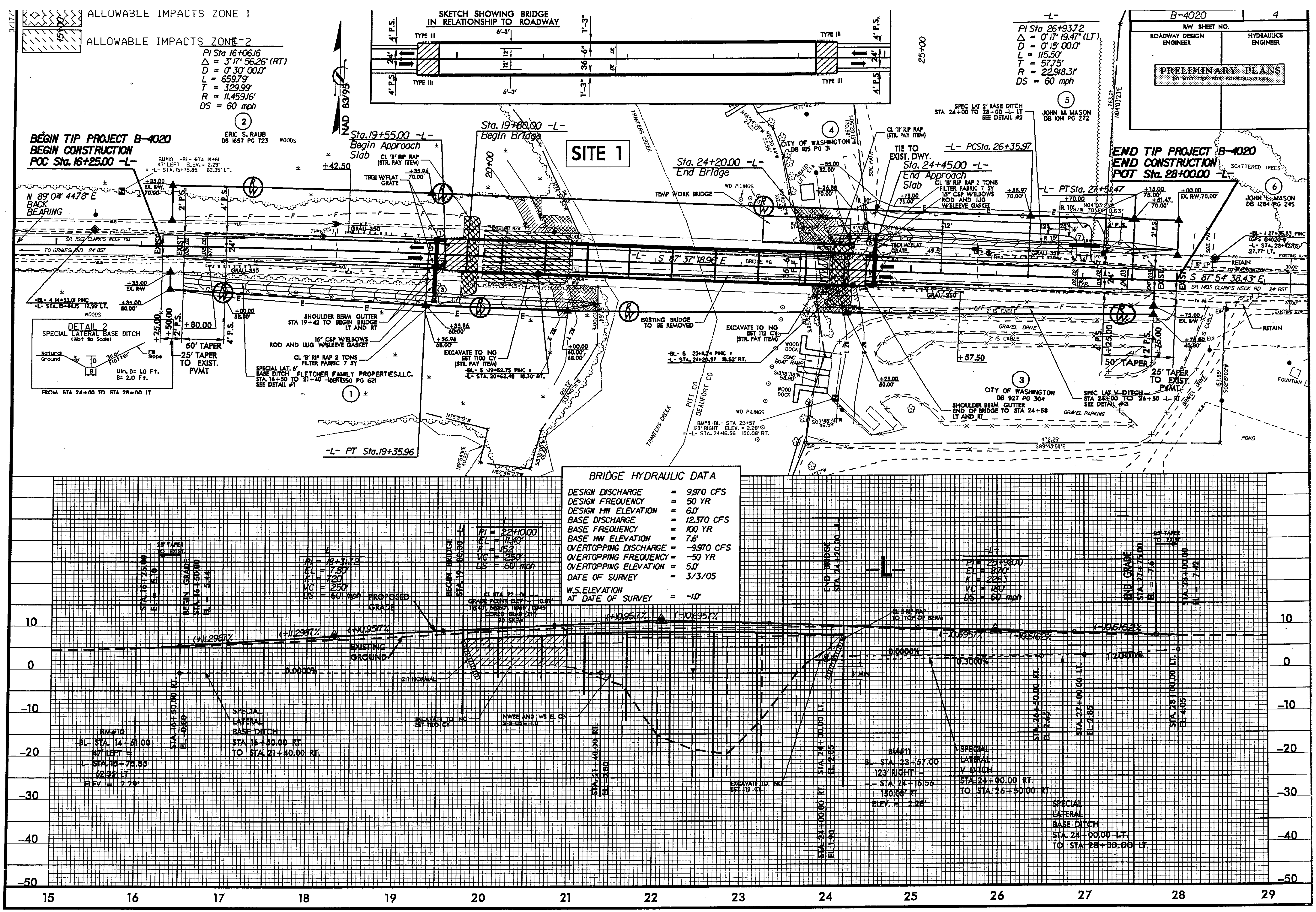
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

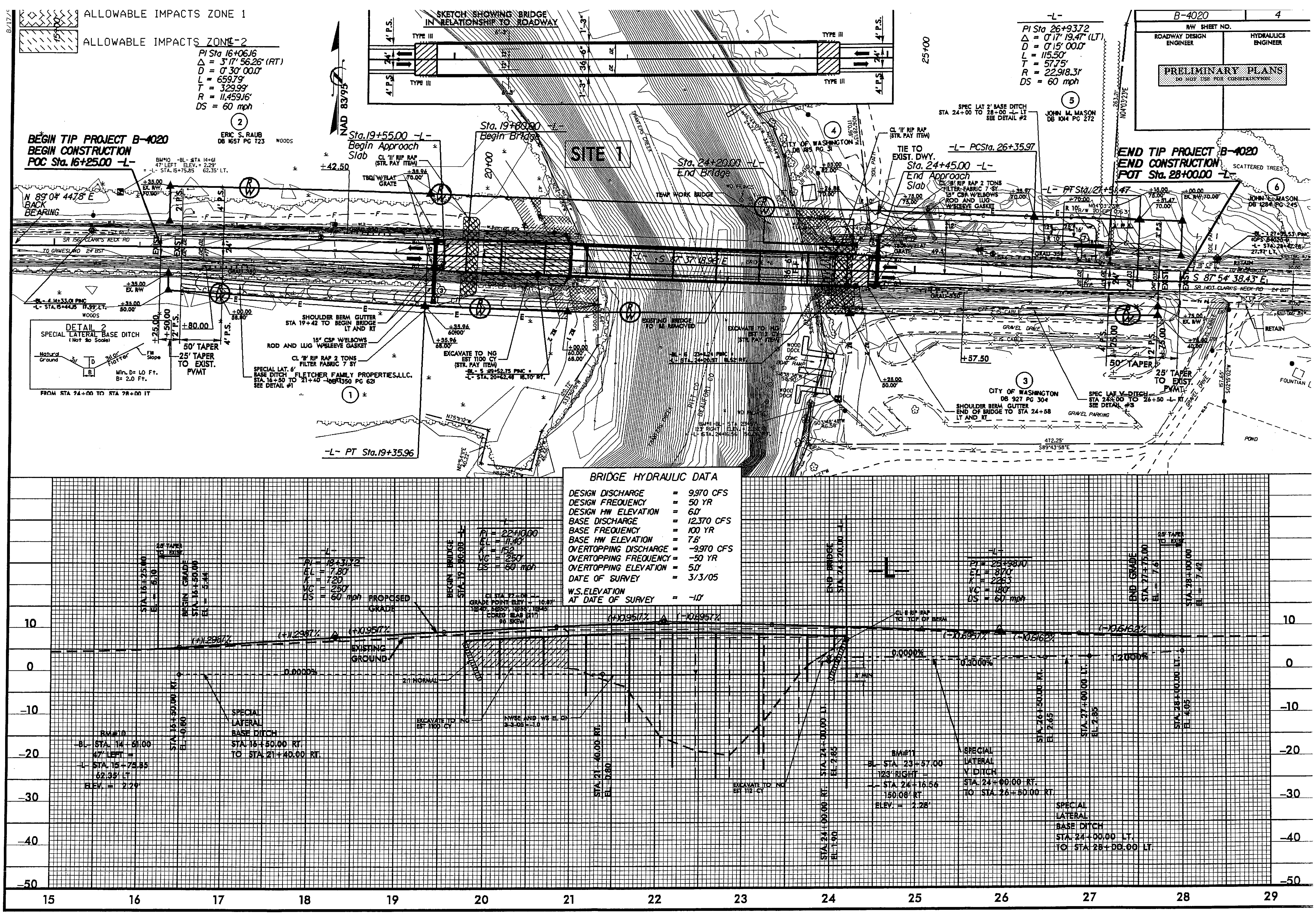
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

Buffer Drawing
Sheet 4 of 6



Buffer Drawing
Sheet 5 of 6 March 2007



March 2007

Buffer Drawing
Sheet 6 of 6

CONTRACT:

TIP PROJECT: B-4020

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT / PITT COUNTIES

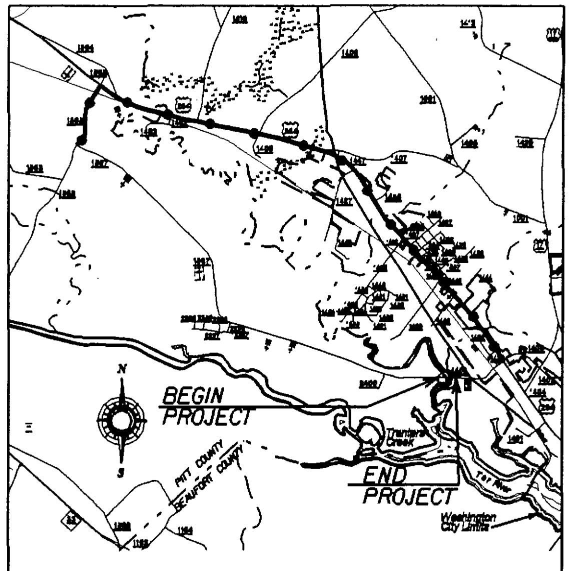
LOCATION: BRIDGE NO. 8 OVER TRANTERS CREEK ON SR 1403 / SR 1567 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4020	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33387.1.1	BRZ-1403(4)	P.E.	

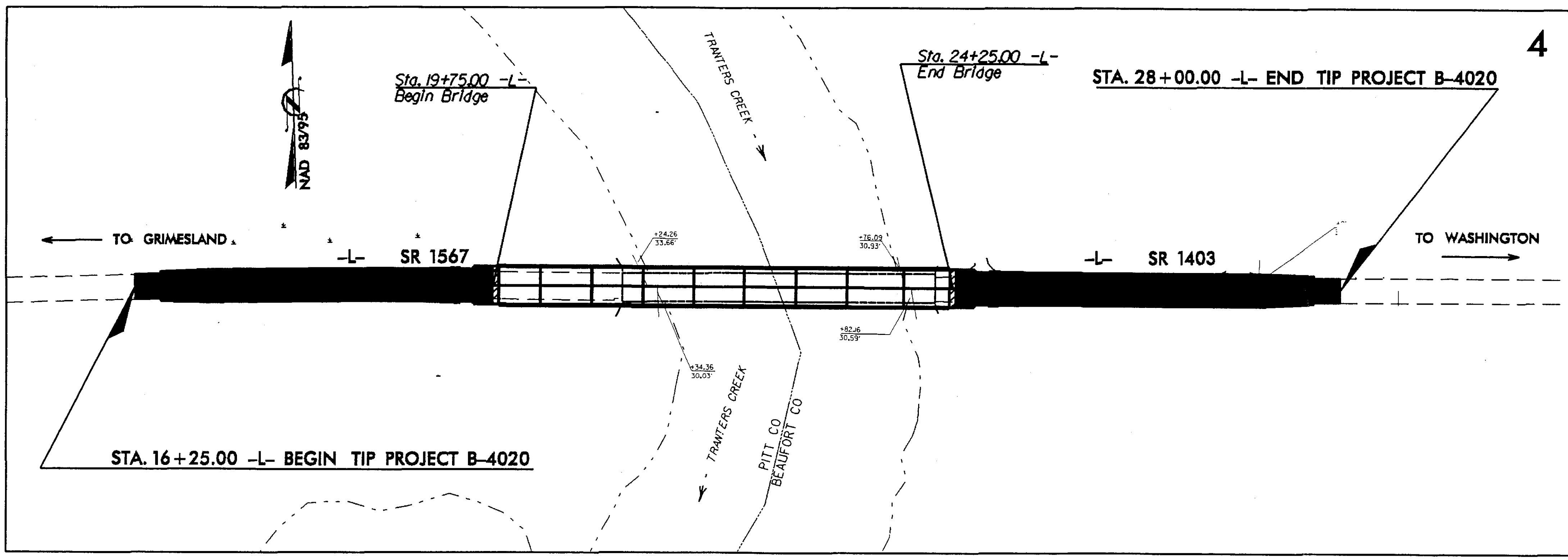
UTILITY DRAWINGS

Sheet 1 of 2



VICINITY MAP

LEGEND —●—●—●— Studied Detour Route



THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD :"

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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 2007 = 5940
ADT 2030 = 9300
DHV = 60 %
D = 10 %
T = 3 % *
V = 60 MPH
FUNC. CLASS = URBAN LOCAL
* TTST 1 % DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4020	=	0.137 mi.
LENGTH STRUCTURE TIP PROJECT B-4020	=	0.085 mi.
TOTAL LENGTH TIP PROJECT B-4020	=	0.222 mi.

Prepared In the Office of:
WANG ENGINEERING COMPANY, INC.
CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: February 17, 2006

LETTING DATE:

GREG S. PURVIS, P. E.
PROJECT ENGINEER

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

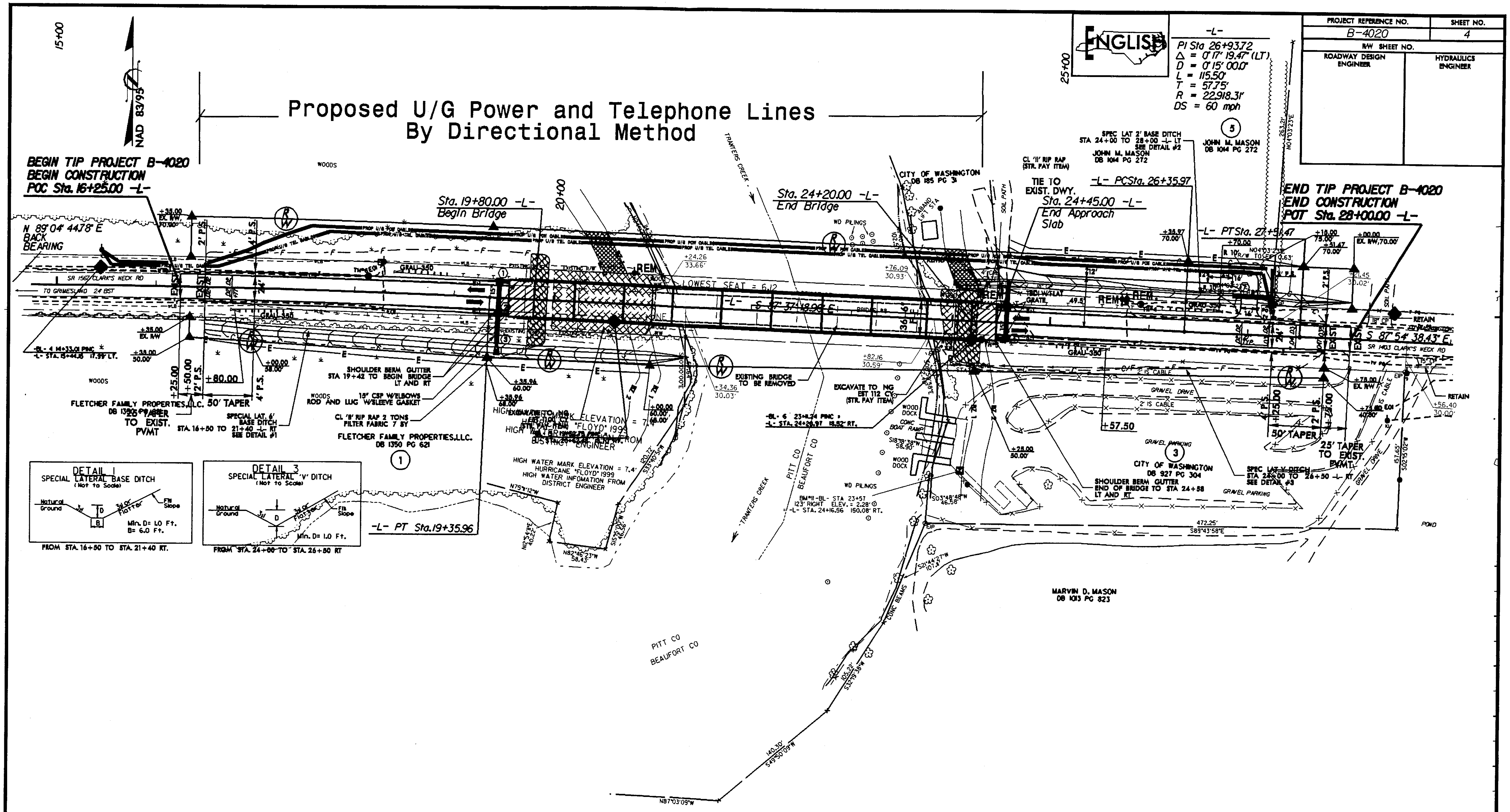
STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

09/08/99

21-FEB-2007 15:28
r:\utilities\r2u\ut\proj\b4020_rdy_tsh.dgn
$$$$USERNAME$$$$



PROJECT REFERENCE NO.	SHEET NO.
B-4020	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

UTILITY DRAWINGS

Sheet 2 of 2

CONTRACT:

TIP PROJECT: B-4020

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

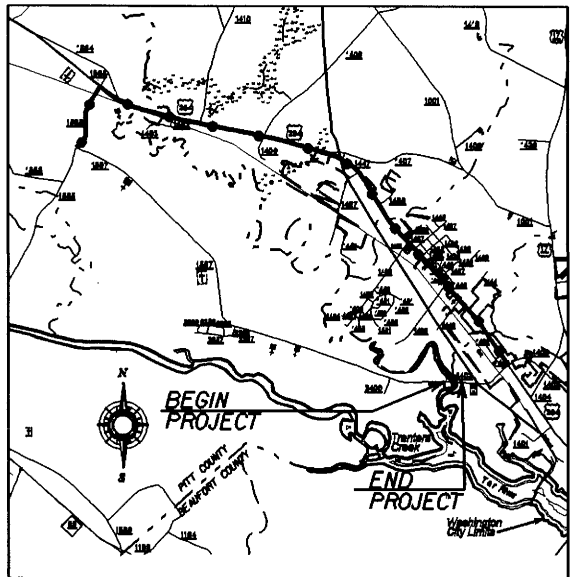
BEAUFORT / PITT COUNTIES

LOCATION: BRIDGE NO. 8 OVER TRANTERS CREEK ON SR 1403 / SR 1567 IN WASHINGTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

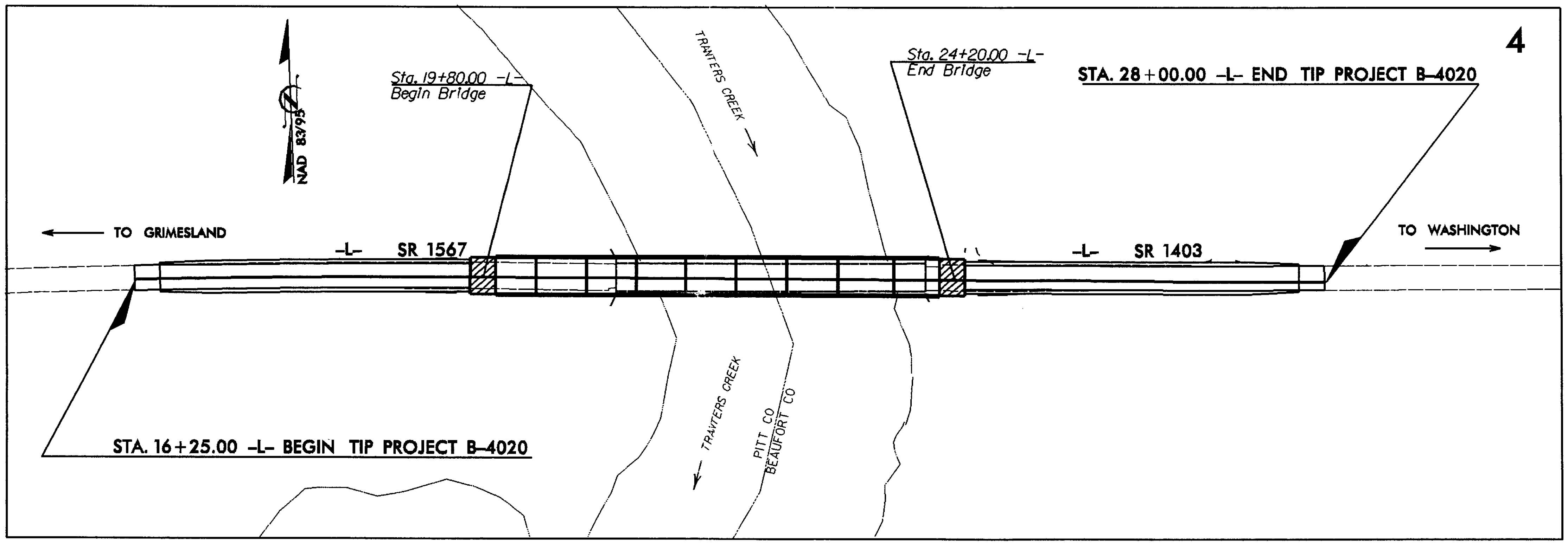
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4020	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33387.1.1	BRZ-1403(4)	P.E.
33387.2.1	BRZ-1403(4)	R/W, UTIL.



VICINITY MAP

LEGEND ●—●—● *Studied Detour Route*



THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

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 2007 = 5940
ADT 2030 = 9300
DHV = 10 %
D = 60 %
T = 3 % *
V = 60 MPH
FUNC. CLASS = URBAN LOCAL
* TTST 1 % DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4020	=	0.139 mi.
LENGTH STRUCTURE TIP PROJECT B-4020	=	0.083 mi.
TOTAL LENGTH TIP PROJECT B-4020	=	0.222 mi.

Prepared In the Office of:
WANG ENGINEERING COMPANY, INC.
CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

GREG S. PURVIS, P. E.
PROJECT ENGINEER

LETTING DATE:
December 18, 2007

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

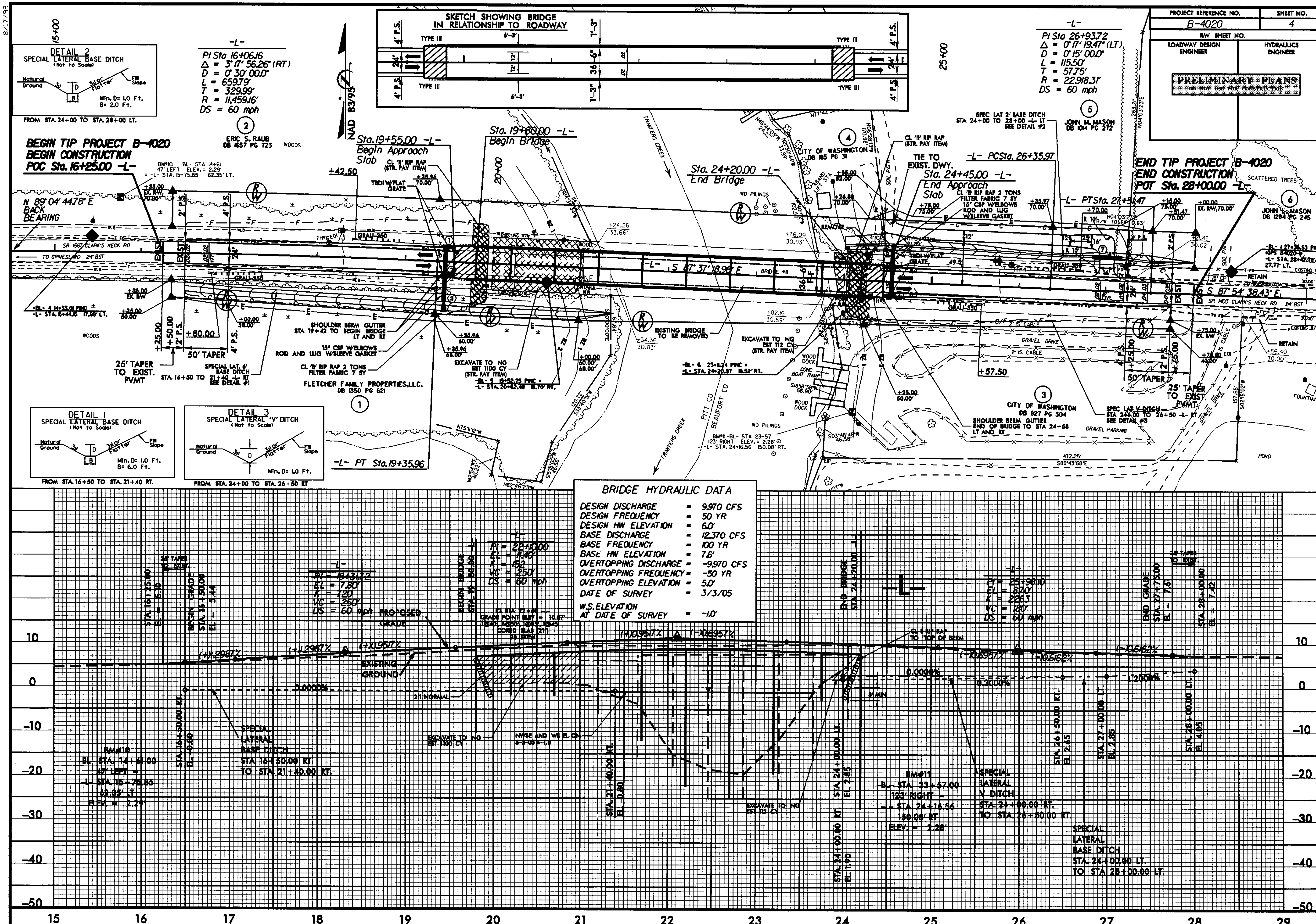
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

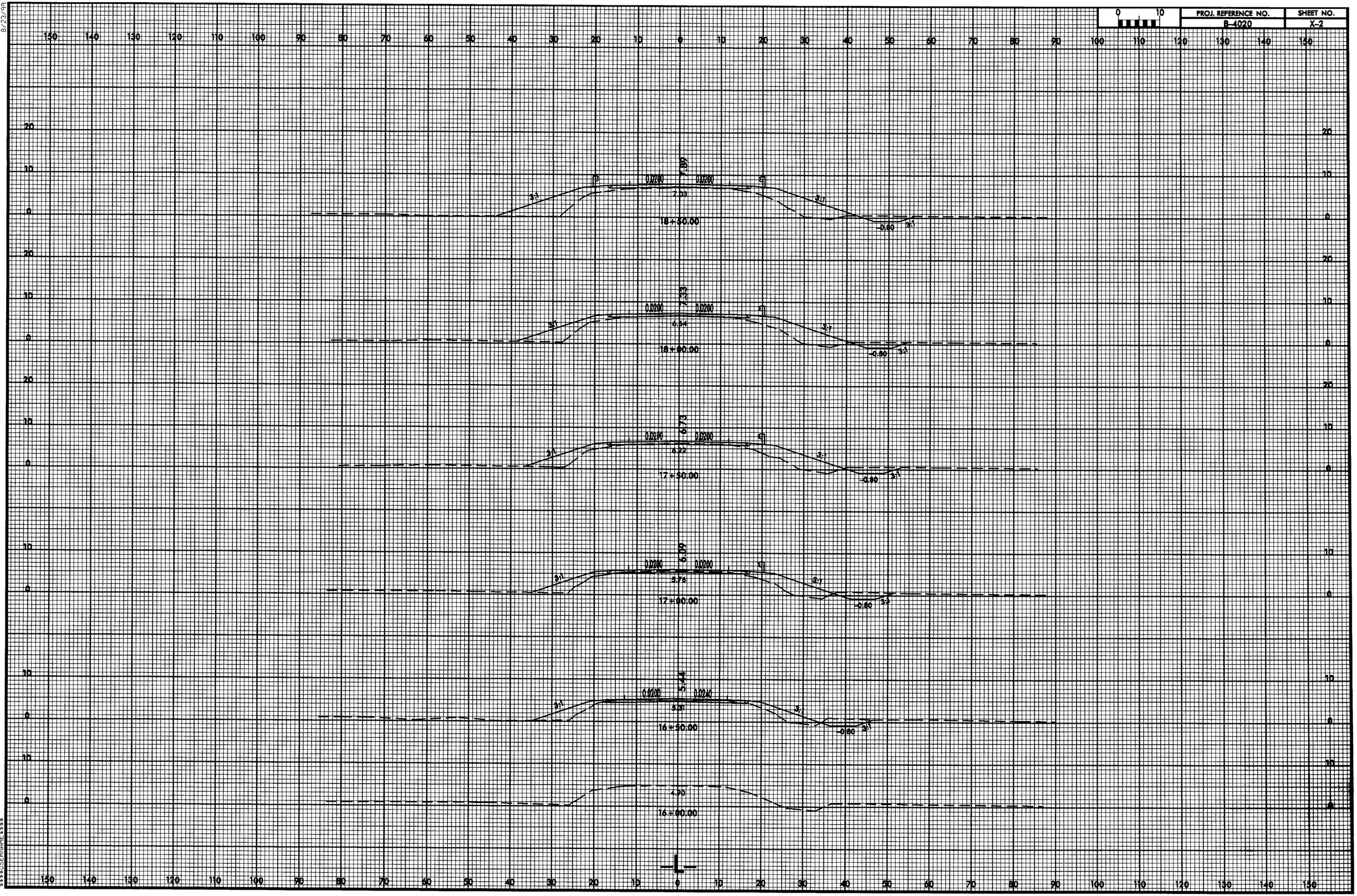


BRIDGE HYDRAULIC DATA

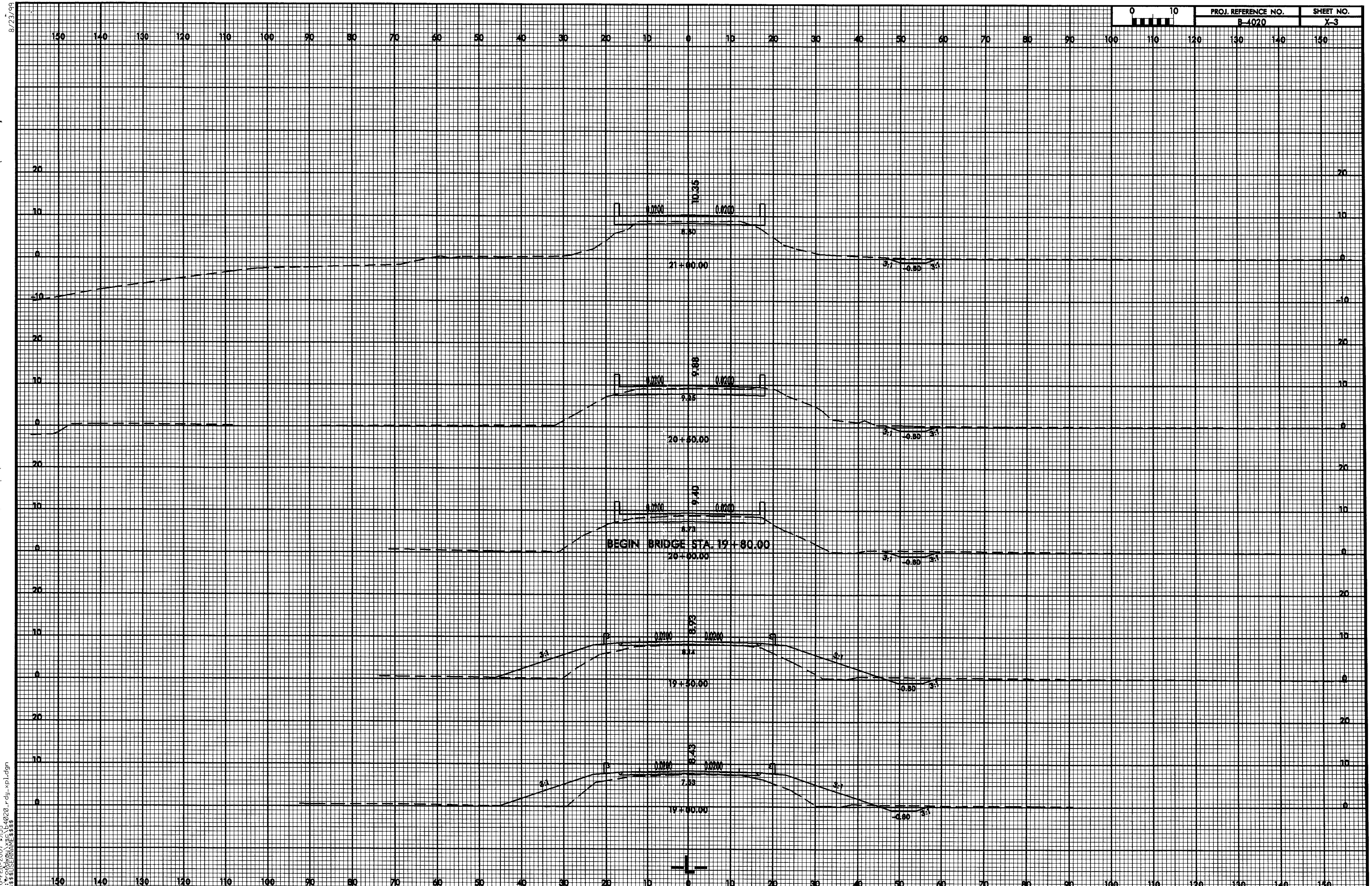
DESIGN DISCHARGE	=	9,970 CFS
DESIGN FREQUENCY	=	50 YR
DESIGN HW ELEVATION	=	6.0'
BASE DISCHARGE	=	12,370 CFS
BASE FREQUENCY	=	100 YR
BASE HW ELEVATION	=	7.6'
OVERTOPPING DISCHARGE	=	-9,970 CFS
OVERTOPPING FREQUENCY	=	-50 YR
OVERTOPPING ELEVATION	=	5.0'
DATE OF SURVEY	=	3/3/05
W.S. ELEVATION AT DATE OF SURVEY	=	-1.0'

8/23/99

0	10	PROJ. REFERENCE NO.	SHEET NO.
		B-4020	X-2



20-FEB-2007 10:35
C:\projects\XS4020_rdy_xpl.dgn
$$$$USERNAME$$$$



8/23/99

20-FEB-2007 09:35
r:\roadway\xsc\b4020_rdy_xpl.dgn
$$$$USERNAME$$$$

8/23/99

0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4020	X-4

10.73
0.0100
0.0100
-10.73
23+00.00

10.88
0.0100
0.0100
-10.88
22+50.00

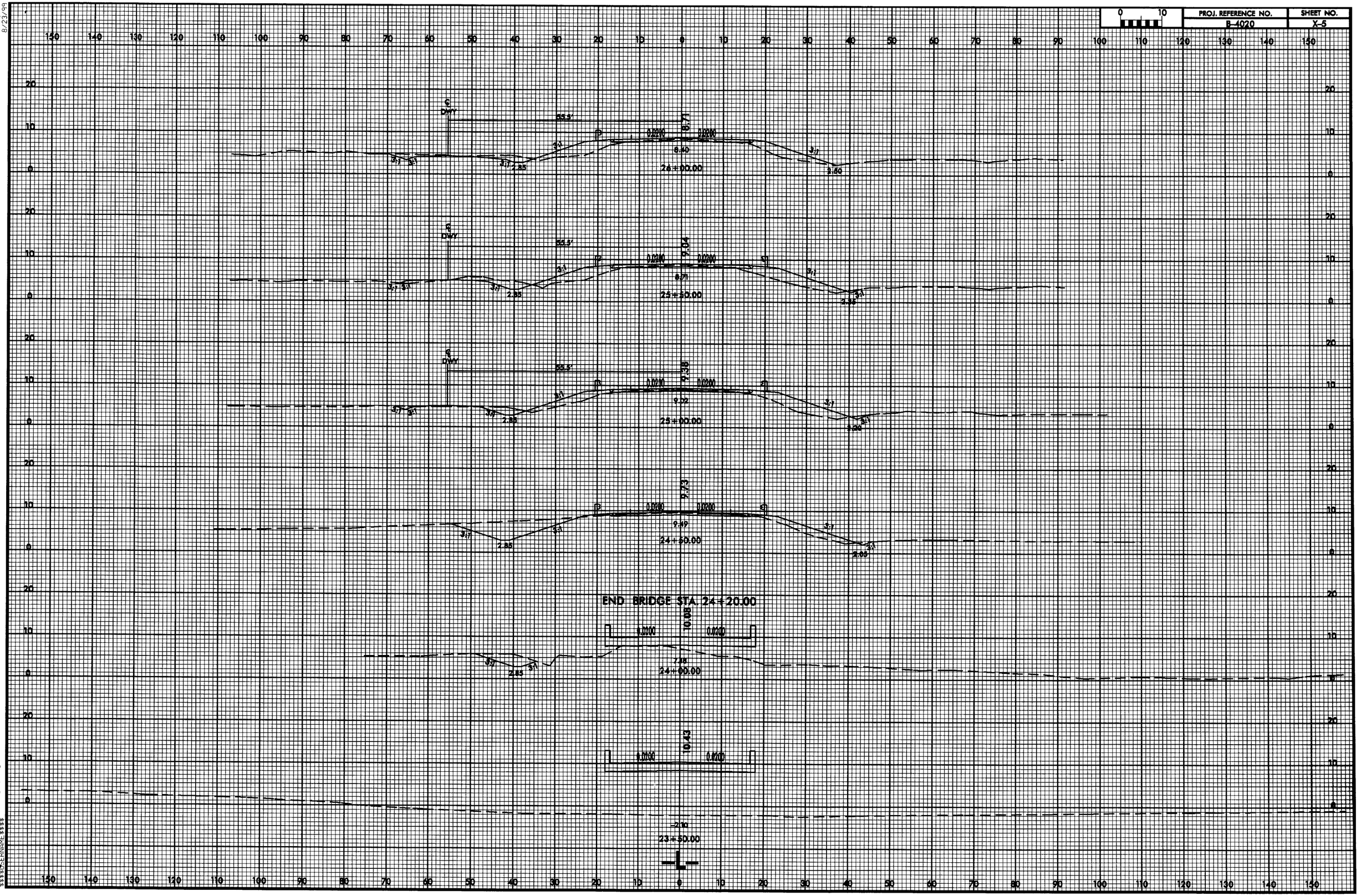
10.87
0.0100
0.0100
-9.76
22+00.00

10.69
0.0100
0.0100
-11.16
21+50.00

20-FEB-2007 10:36
c:\projects\b-4020\b-4020_rdy_xpl.dgn
$$$$USERNAME$$$$

8/23/99

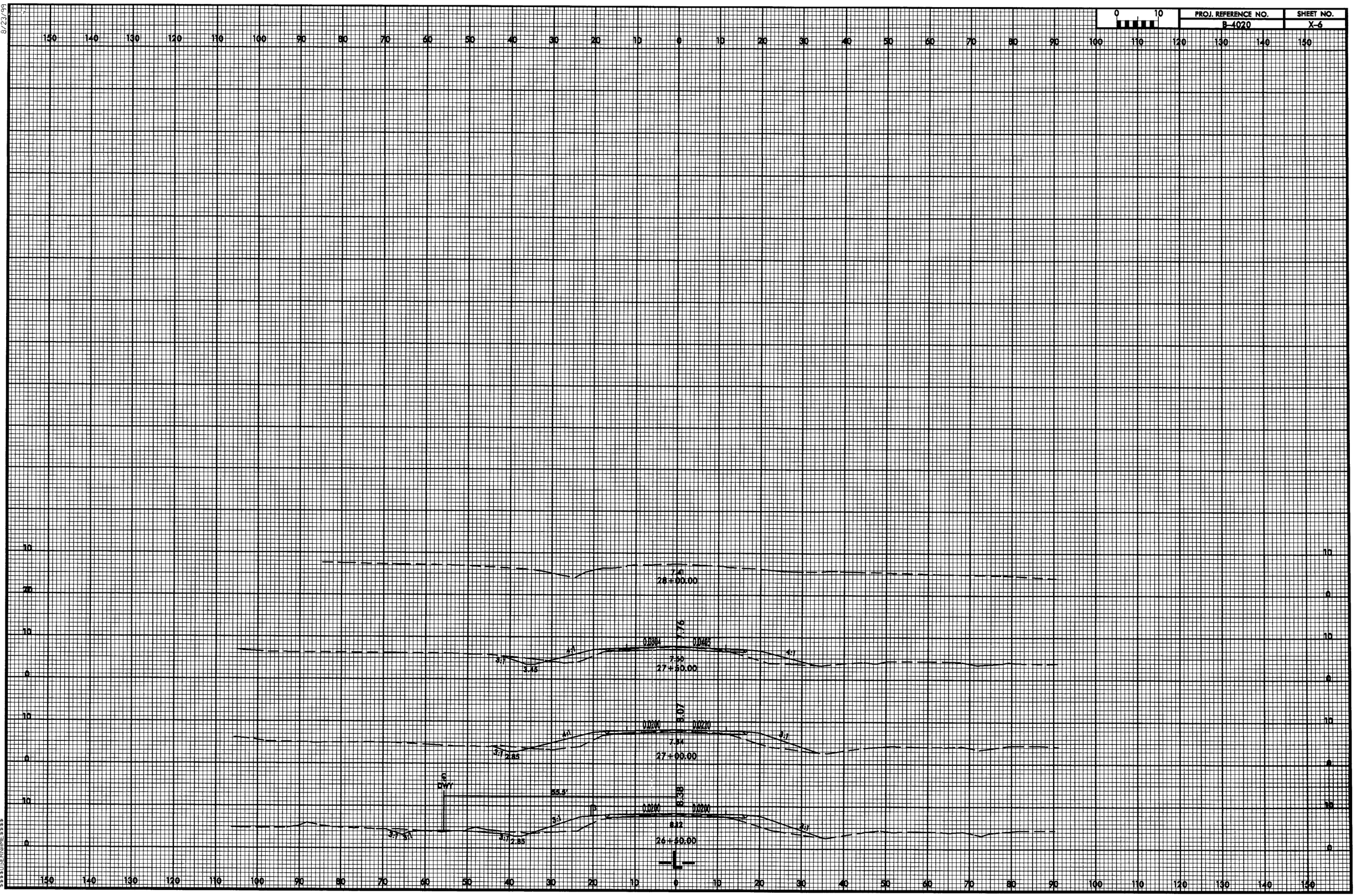
0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4020	X-5



20-FEB-2007 10:36
c:\projects\b4020_rdy_xpl.dgn
$$$$USERNAME$$$$

8/23/99

0 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4020	X-6



Beaufort/Pitt Counties

Bridge No. 8 on SR 1403/SR 1567 Over Tranters Creek

Federal-Aid Project No. BRZ-1403(4)

State Project No. 33387.1.1

T.I.P. Project No. B-4020

CATEGORICAL EXCLUSION

AND PROGRAMMATIC SECTION 4(f) EVALUATION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROVED:

8·10·06
DATE

for Gregory J. Thorpe, Ph. D., Environmental Management Director
Project Development and Environmental
Analysis Branch, NCDOT

8-18-06
DATE

for John F. Sullivan, III, P. E.
Division Administrator, FHWA

Beaufort/Pitt Counties

Bridge No. 8 on SR 1403/SR 1567 Over Tranters Creek

Federal-Aid Project No. BRZ-1403(4)

State Project No. 33387.1.1

T.I.P. Project No. B-4020

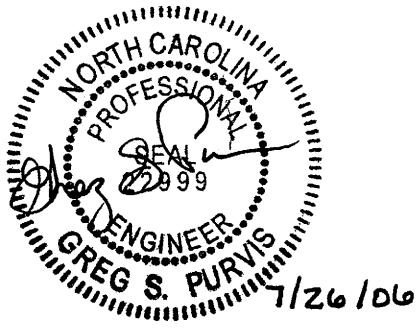
CATEGORICAL EXCLUSION

AND PROGRAMMATIC SECTION 4(f) EVALUATION

July 2006

Document Prepared by:
Wang Engineering Company, Inc.

Greg S. Purvis, P. E.
Project Manager



7/26/06

James Wang, Ph.D., P. E.
Principal

For the North Carolina Department of Transportation

Wade Kirby, P. E., P. G.
Project Manager
Project Development and Environmental Analysis Branch

PROJECT COMMITMENTS

Beaufort/Pitt Counties
Bridge No. 8 on SR 1403/SR 1567 Over Tranters Creek
Federal-Aid Project No. BRZ-1403(4)
State Project No. 33387.1.1
T.I.P. Project No. B-4020

In addition to the standard Nationwide Permit No. 23 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, NCDOT's Guidelines for Best Management Practices for the Protection of Surface Waters, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Division Two

The Stream Crossing Guidelines for Anadromous Fish Passage will be implemented.

An in-water work moratorium will be in effect from February 15 to September 30 due to Anadromous Fish in the project area.

The Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters will be implemented during construction.

Road closure will be coordinated with the Beaufort County Schools and Beaufort County Emergency Management Services prior to construction.

Hydraulics & Project Development and Environmental Analysis Branch

A CAMA major stormwater permit will be required.

Beaufort/Pitt Counties
Bridge No. 8 on SR 1403/SR 1567 Over Tranters Creek
Federal-Aid Project No. BRZ-1403(4)
State Project No. 33387.1.1
T.I.P. Project No. B-4020

INTRODUCTION: The replacement of Bridge No. 8 is included in the 2006-2012 North Carolina Department of Transportation (NCDOT) Transportation Improvement Program (TIP) and the Federal-Aid Bridge Replacement 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

Bridge Maintenance Unit records indicated the bridge has a sufficiency rating of 9.0 out of a possible 100 for a new structure. The bridge is considered functionally obsolete and structurally deficient. The replacement of an inadequate structure will result in safer and more efficient traffic operations.

II. EXISTING CONDITIONS

SR 1403/SR 1567 (Clarks Neck Road) is classified as an urban local. Land use in the project area is predominantly residential. There is a City of Washington boat ramp access in the southeast quadrant of the study area. The Singleton Primitive Baptist Church located in the northeast quadrant of the project study area is a National Register eligible property.

Bridge No. 8 was constructed in 1935. The existing structure is 308 feet in length, consisting of seven spans with the maximum span at approximately 66 feet. The clear roadway width is 28 feet, providing two 12-foot travel lanes with two-foot gutters. The superstructure consists of a steel plank floor on I-beams. The substructure consists of reinforced concrete caps on timber piles. The bed to crown height is 31 feet and the normal depth of flow is 20.5 feet. The posted weight limit is 22 tons for single vehicles (SV) and 26 tons for truck-tractors semi-trailers (TTST).

The existing bridge on SR 1403 is on tangent. The west approach has an approximate 13,030-foot radius curve that is approximately 129 feet from the bridge. The east approach has an approximate 2,123-foot radius curve that is approximately 95 feet from the bridge. SR 1403 consists of two 10.5-foot lanes with approximately seven-foot grass shoulders.

The estimated 2004 average daily traffic volume is 5,200 vehicles per day (vpd). The projected traffic volume is expected to increase to 9,300 vpd by the design year 2030. The volumes include one percent TTST and two percent dual tired vehicles.

The speed limit in the vicinity of the bridge is not posted and therefore a statutory 55 miles per hour (mph) is assumed.

This section of SR 1403/SR 1567 is part of a designated NC Bicycling Highway, NC-2 Mountains to Sea.

There is an aerial power line and telephone on the west side of the existing bridge. Utility impacts are anticipated to be low.

There were three crashes reported for the three-year period of October 1, 2002 to September 30, 2005.

No school buses cross this bridge.

III. ALTERNATIVES

A. Project Description

The proposed structure will provide a 33-foot six-inch clear roadway width to allow for two 12-foot travel lanes with four-foot nine inches each side from edge of travel lane to face of bridge rail. The bridge railing height will be a 54-inch bicycle safe rail. The existing bridge navigational clearance will be maintained.

The proposed approach roadway will consist of a 24-foot travel way providing for two 12-foot travel lanes with eight-foot shoulders including four foot paved shoulders. The proposed right-of-way width varies from 80 feet to 100 feet. The design speed will be 60 mph.

Based on a preliminary hydraulic analysis, Bridge No. 8 will be replaced with an approximate 440-foot long bridge. The bridge was lengthened approximately 120 feet to mitigate for the impacts to the adjacent high quality wetlands on the west side of the proposed bridge. The grade of the roadway will match the elevation of the existing roadway. The minimum deck grade will be 0.3%. The length of the proposed bridge and the recommended roadway elevation may be adjusted (increased or decreased) to accommodate design floods as determined in the final hydrologic study and hydraulic design.

B. Build Alternatives

Three (3) build alternatives studied for replacing the existing bridge are described below.

Alternate A (Preferred) replaces the bridge at the existing location. During construction, traffic will be maintained by an off-site detour route along SR 1565 (Grimesland Bridge Road) and US 264 approximately 6.3 miles in length. The length of approach work will be approximately 355 feet on the west side of the bridge and approximately 380 feet on the east side of the bridge. Alternate A was selected because of the comparatively lower construction cost, lower environmental impacts, and lesser construction time associated with it.

Alternate B replaces the bridge on existing alignment. During construction, traffic will be maintained by an on-site temporary detour structure located south of the existing bridge. The length of approach work will be approximately 615 feet on the west side of the bridge and approximately 363 feet on the east side of the bridge. The proposed structure will be approximately 340 feet. The length of the temporary detour structure will be 305 feet. Alternate B was not chosen because it has comparatively higher natural environment impacts and construction cost.

Alternate C replaces the bridge at the existing location. During construction, traffic will be maintained by an off-site detour route along SR 1565 (Grimesland Bridge Road) and US 264 approximately 6.3 miles in length. The length of approach work will be approximately 600 feet on the west side of the bridge and approximately 765 feet on the east side of the bridge. The proposed structure will be approximately 635 feet and would provide an additional approximate

5-feet of vertical clearance underneath the bridge. Alternate C was not chosen because it has comparatively higher human environment impacts and construction cost.

C. Alternatives Eliminated From Further Study

The "Do-Nothing" Alternative will eventually necessitate removal of the bridge and closing of the road. This is not desirable due to the traffic service provided by SR 1403/SR 1567.

Investigation of the existing structure by the Bridge Maintenance Unit indicates the rehabilitation of the old bridge is not feasible due to its age and deteriorated condition.

D. Preferred Alternative

Alternate A, replacing the existing bridge at the existing location, while maintaining traffic by an off-site detour route is the preferred alternate. Alternate A was selected because of the comparatively lower construction cost, lower environmental impacts, and lesser construction time associated with it.

The Division Engineer concurs with Alternate A as the preferred alternative.

Alternate A is estimated to cost $2,684,400. A breakdown of the estimated cost is shown in Item V (Table 1).

IV. DESIGN EXCEPTIONS ANTICIPATED

No design exceptions will be required.

V. ESTIMATED COSTS

The estimated costs, based on current 2006 prices, are as follows:

Table 1. Estimated Costs

	Alternate A (Preferred)	Alternate B	Alternate C
Structure Removal (existing)	$ 86,600	$ 86,600	$ 86,600
Structure (proposed)	1,504,800	1,114,400	2,171,700
Detour Structure and Approaches	0	521,300	0
Roadway Approaches	272,900	272,900	461,300
Miscellaneous and Mobilization	361,700	416,800	546,400
Engineering and Contingencies	374,000	388,000	484,000
ROW/Const. Easements/Utilities:	84,400	103,300	149,000
	---	---	---
TOTAL	$ 2,684,400	$ 2,903,300	$ 3,899,000

The estimated cost of the project, as shown in the 2006-2012 Transportation Improvement Program, is $3,030,000 including $180,000 for right-of-way, $2,450,000 for construction, and $400,000 for prior years costs.

VI. NATURAL RESOURCES

A. Methodology

Materials and research data in support of this investigation have been derived from a number of sources including applicable U.S. Geological Survey (USGS) topographic mapping (Washington, NC [1993] 7.5-minute quadrangle), U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping (FWS 1994a), and recent aerial photography. Water quality information for area streams and tributaries was derived from North Carolina Division of Water Quality (DWQ) sources (DWQ 1999, 2003a-c, 2004a-c). Quantitative sampling was not undertaken to support existing data.

Natural community descriptions are based on a classification system utilized by the N.C. Natural Heritage Program (NHP) (Schafale and Weakley 1990). When appropriate, community classifications were modified to better reflect field observations. Vascular plant names generally follow nomenclature found in Radford *et al.* (1968), with adjustments made to reflect more current nomenclature (Kartesz 1998). Habitat used by terrestrial wildlife and aquatic organisms, as well as expected population distributions, were determined through field observations, evaluation of available habitat, and supportive documentation (Webster *et al.* 1985, Potter *et al.* 1980, Martof *et al.* 1980, Rohde *et al.* 1994, Menhinick 1991, Hamel 1992, Palmer and Braswell 1995, Conant and Collins 1998).

Jurisdictional areas were evaluated using the three-parameter approach following U.S. Army Corps of Engineers (ACE) delineation guidelines (Environmental Laboratory 1987). Wetland jurisdictional areas were characterized according to a classification scheme established by Cowardin *et al.* (1979) and *A Field Guide to North Carolina Wetlands* (DEM 1996).

Information regarding federally protected species within the project study area was obtained from the FWS lists of federally protected species (July 26, 2006) and federal species of concern (FSC) for Beaufort and Pitt Counties. Supporting documents and databases documenting the presence of rare species and rare natural communities were consulted before commencing field investigations (Amoroso 2002, LeGrand and Hall 2001).

Bridge No. 8 was visited on April 2 and 20, 2004. The project study area was walked and visually surveyed for significant features. Special concerns evaluated in the field include 1) potential habitat for protected species and 2) wetlands and water quality protection in Tranters Creek.

B. Physiography and Soils

The project study area occurs within the Mid-Atlantic Floodplains and Low Terraces ecoregion of the Southeastern Plains physiographic province of North Carolina (Griffith *et al.* 2002). The project study area is situated within the Yorktown Formation and is underlain by fossiliferous clay with varying amounts of fine-grained sand and bluish gray shell material commonly concentrated in lenses (NCGS 1985). Elevations in the project study area are approximately 0 to 10 feet National Geodetic Vertical Datum (USGS Washington, NC [1993] 7.5-minute quadrangle).

Soils within the project study area consist of three series: Altavista, State, and Swamp (probably synonymous with Dorovan). Altavista fine sandy loams are nearly level, moderately well drained soils found on stream and marine terraces along the Pamlico River. Permeability and available water capacity are moderate. The seasonal high water table is approximately 1.5 to 2.5 feet below the surface during winter and early spring. Altavista fine sandy loams encompass most of the project

study area east of Tranters Creek (Beaufort County). Altavista soils are replaced by State soils near the eastern terminus of the project study area. Altavista soils are not listed as hydric soils in Beaufort County (NRCS 1997).

State sandy loams are nearly level, well drained soils on river and stream terraces. Permeability and available water capacity are moderate. The seasonal high water table is approximately 4 to 6 feet during winter and early spring. State soils are not listed as hydric for Beaufort County (NRCS 1997).

Swamp soils were mapped as just that in Pitt County with few descriptors (SCS 1974). The soils are probably equivalent to Dorovan soils in Beaufort County (NRCS 1995). Dorovan soils are nearly level, very poorly drained organic soils on floodplains along the Pamlico River and its tributaries. Permeability is moderate and the available water capacity is very high. The seasonal high water table ranges from 1 foot above the surface to 0.5 foot below the surface, but is usually at or above the surface. Swamp and Dorovan are listed as hydric soils in Pitt and Beaufort Counties, respectively (NRCS 1997).

C. Water Resources

1. Waters Impacted

The project study area is located on the boundary of sub-basin 03-03-06 and 03-03-05 of the Tar-Pamlico River Basin (DWQ 1999). Sub-basin 03-03-06 is located upstream and north of Bridge No. 8. Sub-basin 03-03-05 is located downstream and south of Bridge No. 8. Tranters Creek empties into the Tar River in sub-basin 03-03-05 approximately 0.1 mile from Bridge No. 8. Sub-basin 03-03-07 begins approximately 0.2 mile downstream from the confluence of Tranters Creek and the Tar River. Therefore, water quality at Bridge No. 8 is primarily affected by activities within sub-basin 03-03-06, and activities at Bridge No. 8 primarily affect water quality in sub-basins 03-03-05 and 03-03-07. The project study area is part of USGS hydrologic unit 03020103 of the South Atlantic-Gulf Coast Region (Seaber *et al.* 1987). This section of Tranters Creek, from the source to the Tar River, has been assigned Stream Index Number 28-103 by the DWQ (DWQ 2003a, DWQ 2004a).

2. Water Resource Characteristics

Within the project study area, Tranters Creek is a fifth-order perennial stream exhibiting strong sinuosity, very slow velocity, and poor riffle-pool sequence. The width of the stream is approximately 210 feet at the point of the bridge crossing. During the field survey, water clarity was good. The substrate was composed of silt and sand. The right stream bank was mostly submerged and its location was only apparent due to the lack of woody vegetation in the channel.

Classifications are assigned to waters of the State of North Carolina based on the existing or contemplated best usage of various streams, or segments of streams, in the basin. A Best Usage Classification of **C Sw NSW** has been assigned to Tranters Creek in the project study area. These waters are protected for Class **C** uses which include aquatic life propagation and survival, fishing, wildlife, secondary recreation, and agriculture. Secondary recreation refers to human body contact with waters on an infrequent or incidental basis. The supplemental classification **Sw**, Swamp Waters, characterizes the stream as having naturally occurring very low velocities, low pH, and low dissolved oxygen. No specific restrictions on discharge types or development are involved. The supplemental classification **NSW**, Nutrient Sensitive Waters, is intended for waters needing additional nutrient management due to vulnerability to excessive growth of microscopic or macroscopic vegetation. In general, management strategies for point and non-

point source pollution control require no increase in nutrients over background levels. The effect of **NSW** classification on the replacement of Bridge No. 8 is discussed in Section 4.3 of this document. Tranters Creek is "**Supporting**" of its Best Usage Classifications (DWQ 2003a).

No watershed Critical Area (**CA**) occurs within 1 mile of the project study area. No designated High Quality Waters (**HQW**), Outstanding Resource Waters (**ORW**), Water Supply I (**WS-I**), or Water Supply II (**WS-II**) waters occur within 1 mile of the project study area (DWQ 1999, DWQ 2003b).

DWQ conducts a whole-basin approach to water quality management for the 17 river basins within the state. To accomplish this goal the DWQ collects biological, chemical, and physical data that can be used in basinwide assessment and planning. All basins are reassessed every five years. A benthic macroinvertebrate sampling station and ambient monitoring station (A-16) are located at Bridge No. 8 (DWQ 1999). Tranters Creek at this station received a "good-fair" bioclassification rating in 1997 (DWQ 1999, DWQ 2003b). Benthic macroinvertebrate samples were not taken at this station in 2002 because of high salinity (DWQ 2003a). A benthic macroinvertebrate monitoring station (B-1) approximately 10 miles upstream was given a "good-fair" (Moderate Stress) bioclassification in 2002, which may have been due to drought conditions. The ambient monitoring station A-16 indicated elevated levels of total phosphorus in 2003 (DWQ 2003b).

The Tar-Pamlico River subbasin 03-03-06 supports two permitted dischargers (DWQ 2004c). Total permitted flow is slightly over 1.8 million gallons per day with the largest being the Robersonville Waste Water Treatment Plant (WWTP) at 1.8 million gallons per day. The receiving stream for this discharger is Flat Swamp (SIN 28-103-2 (DWQ 2004a)) which comes to a confluence with Tranters Creek approximately 10 miles upstream of the project study area. The smaller of the two dischargers is Bear Grass Elementary School WWTP with a discharge of 5000 gallons per day. The receiving stream for this discharger is Turkey Swamp (SIN 28-103-5 (DWQ 2004a)) which comes to a confluence with Tranters Creek approximately 5 miles upstream of the project study area.

Nonpoint source (NPS) pollution refers to runoff that enters surface waters through stormwater or snow melt. Sediments and nutrients are the major pollution sources associated with NPS pollution. Other pollutants include any substance that may be washed off the ground or removed from the atmosphere and carried into surface waters. Unlike point source pollution, NPS pollution is diffuse in nature and occurs at random intervals depending on rainfall events. Major non-point sources of pollution within the project study area subbasins (03-03-06 and 03-03-05) are generally few and primarily from forestry operations (DWQ 1999).

The DWQ has assembled a list of impaired waterbodies according to the Clean Water Act Section 303(d) and 40 CFR 130.7. The list is a comprehensive public accounting of all impaired waterbodies. An impaired waterbody is one that does not meet water quality standards including designated uses, numeric and narrative criteria, and anti-degradation requirements defined in 40 CFR 131. The standards violation may be due to an individual pollutant, multiple pollutants, or an unknown cause of impairment. The source of impairment could be from point sources, nonpoint sources, and/or atmospheric deposition. Some sources of impairment exist across state lines. North Carolina's methodology is strongly based on the aquatic life use support guidelines available in the Section 305(b) guidelines (EPA-841-B-97-002A and -002B). Tranters Creek is not listed on the NC 2002 or the Draft 2004 Section 303(d) list of impaired streams in the Tar-Pamlico River Basin (DWQ 2003c and 2004b).

The WRC has developed a Significant Aquatic Endangered Species Habitat database to enhance planning 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 study area. The nearest Significant Aquatic Endangered Species Habitat within the Tar-Pamlico River Basin occurs approximately 33 miles northwest of the project study area near Tarboro, NC (WRC 1998).

To minimize fishing and non-fishing activities that adversely affect marine fisheries, areas of Essential Fish Habitat afford limited protection under the Magnuson-Stevens Act of 1996 (16 U.S.C. 1801 *et seq.*). Essential Fish Habitat has been broadly defined by congress as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Fishing and non-fishing related activities that can adversely affect fisheries include fishing gear, dredging, filling, agricultural and urban runoff, and point-source pollution discharge. Palustrine emergent and forested wetlands are located within the project study area. Anadromous fish spawning habitat occurs within Tranters Creek. Consultation with the National Marine Fisheries Service (NMFS) may be required to determine if Essential Fish Habitat exists within the project study area (NMFS 2001).

3. Anticipated Impacts

a) Impacts Related to Water 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) for Construction and Maintenance Activities (NCDOT 2003). The contractor will follow contract specifications pertaining to erosion control measures as outlined in 23 CFR 650 Subpart B and Article 107-13 entitled *Control of Erosion, Siltation, and Pollution.* These measures include the use of dikes, berms, silt basins, and other containment measures to control runoff; elimination of construction staging areas in floodplains and adjacent to waterways; re-seeding of herbaceous cover on disturbed sites; management of chemicals (herbicides, pesticides, de-icing compounds) with potential negative impacts on water quality; and avoidance of direct discharges into streams by catch basins and roadside vegetation. In addition, tall fescue is not suitable for erosion controls along stream banks.

The proposed bridge replacement will allow for continuation of pre-project stream flows in Tranters Creek, thereby protecting the integrity of this waterway. Long-term impacts resulting from construction are expected to be negligible. In order to minimize impacts to water resources, NCDOT's *BMPs for the Protection of Surface Waters* will be strictly enforced during the entire life of the project. Sediment curtains should be utilized to minimize potential water quality degradation as a result of bridge replacement.

NCDOT will coordinate with various resource agencies during project planning to ensure that all concerns regarding bridge demolition are resolved. Anadromous fish spawning habitat occurs within Tranters Creek. The replacement of Bridge No. 8 can therefore be classified as Case 2; where no in-water work will be allowed during moratorium periods associated with anadromous fish migration (February 15 to September 30). The final decision for this determination lies with the WRC.

b) Impacts Related to Bridge Demolition and Removal

In order to protect the water quality and aquatic life in the area affected by this project, the NCDOT and all potential contractors will follow appropriate guidelines for bridge demolition and removal. These guidelines are presented in three NCDOT documents entitled "Pre-Construction Guidelines for Bridge Demolition and Removal", "Policy: Bridge Demolition and Removal in Waters of the United States", and "Best Management Practices for Bridge Demolition and Removal" (all documents dated 9/20/99). Guidelines followed for bridge demolition and removal are in addition to those implemented for Best Management Practices for the Protection of Surface Waters.

Dropping any portion of the structure into waters of the United States will be avoided unless there is no other practical method of removal. In the event that no other practical method is feasible, a worst-case scenario is assumed for calculations of fill entering waters of the United States. There is potential for components of the bridge to be dropped into waters of the United States. The resulting temporary fill associated with the concrete deck is expected to be approximately 7 cubic yards. NCDOT's Best Management Practices for Bridge Demolition and Removal (BMP-BDR) will be applied for the removal of this bridge.

Under the guidelines presented in the documents noted in the first paragraph of this section, work done in the water for this project will fall under Case 2, which states that no in-water work will be performed during moratorium periods (February 15 to September 30) associated with fish migration, spawning, and larval recruitment into nursery areas. This conclusion is based upon the classification of the waters within the project area and vicinity, the Stream Crossing Guidelines for Anadromous Fish Passage, and comments received from the North Carolina Wildlife Resources Commission (NCWRC).

D. Biotic Resources

1. Plant Communities

Three distinct plant communities were identified within the project study area: disturbed/maintained land, Cypress-Gum Forest (Blackwater Subtype), and Freshwater Marsh (maintained). These plant communities are described below.

a) Disturbed/Maintained Land

Disturbed/maintained land covers the most area within the project study area, approximately 5.2 acres, and occurs as maintained residential areas and road and powerline right-of-ways. The maintained roadside is approximately 10 to 30 feet wide. The maintained powerline right-of-way is approximately 35 feet wide and occurs in the southwest quadrant of the project study area. Very few trees and shrubs contribute to the composition of this community. Plant species on the roadside margins include clovers (*Trifolium* spp.), glecoma (*Glecoma hederacea*), dandelion (*Taraxacum officinale*), Japanese honeysuckle (*Lonicera japonica*), thistle (*Carduus repandus*), trumpet vine (*Campsis radicans*), blackberry (*Rubus* sp.), and fescue (*Festuca* sp.). Disturbed/maintained land is relatively low in plant and wildlife diversity. Wildlife species that utilize disturbed/maintained land include American robin (*Turdus migratorius*), white-tailed deer (*Odocoileus virginianus*), and eastern cottontail (*Sylvilagus floridanus*). American robins forage for soil invertebrates. White-tailed deer and rabbits consume many of the herbaceous species.

b) Cypress-Gum Forest (Blackwater Subtype)

Cypress-Gum Forest is the second most dominant community within the project study area, covering 4.8 acres. The canopy is mainly composed of red maple (*Acer rubrum*), bald cypress (*Taxodium distichum*), green ash (*Fraxinus pennsylvanica*), and black gum (*Nyssa biflora*). Some loblolly pine (*Pinus taeda*) also occupies the canopy. Shrubs present include wax myrtle (*Morella cerifera*), American holly (*Ilex opaca*), blueberry (*Vacciunium elliottii*), (*Cyrilla racemiflora*), Carolina ash (*Fraxinus caroliniana*), fetter-bush (*Leucothoe racemosa*), giant cane (*Arundinaria gigantea*), and saplings of canopy species (mainly red maple). The herb layer consists of cinnamon fern (*Osmunda cinnamomea*), sedges (*Carex* spp.), and rushes (*Juncus* spp.). Vines present include greenbrier (*Smilax laurifolia*), muscadine grape (*Vitis rotundifolia*), and poison ivy (*Toxicodendron radicans*). Wildlife species observed within this community include yellow-throated warbler (*Dendroica* dominica), northern parula (*Parula americana*), Carolina chickadee (*Parus carolinensis*), and Carolina wren (*Throthorus ludovicianus*). Other wildlife species that utilize Cypress-Gum Forest include prothonotary warbler (*Protonotaria citrea*), egrets (*Egretta* spp.), herons (*Ardea* spp.), and white ibis (*Eudocimus albus*).

Prothonotary warblers nest over water in small cavities in Carolina ash or standing dead wood. Like many migrant songbirds, they are exclusively insectivorous during the breeding season and thrive on the abundant insects within the Cypress-gum Forest. Egrets and herons establish colonial heronries and one may find 10 to 100 nests within several acres. No heronries were observed during the field visit. Ibises nest on coastal islands but fly many miles to forage in freshwater swamps. Their use of Cypress-Gum Forests is interesting in that the young must be fed crayfish (*Procambarus* spp.) until their supraorbital salt gland develops. If fed the fiddler crabs (*Uca* spp.) that the adults consume, the young will not survive dehydration (Bildstein *et al.* 1990). All areas of this plant community within the project study area are jurisdictional and subject to consideration under Section 404 of the Clean Water Act as "waters of the United States" (33 CFR Section 328.3).

c) Freshwater Marsh

Freshwater Marsh is the least abundant plant community in the project study area (approximately 0.6 acre). This community is located within a maintained powerline easement (Figure 6). Natural Freshwater Marshes are typically found in deep depressions or natural lakes in the Coastal Plain or along the margins of reservoirs or beaver ponds throughout the state (DEM 1996). The hydrology of natural Freshwater Marshes ranges from semi-permanently to permanently inundated and the dominant plants vary because of this. The wetter a Freshwater marsh, the more herbaceous species dominate. If this particular Freshwater Marsh were not maintained, it would likely succeed to a Cypress-gum Forest. A few trees within the powerline easement such as red maple, sweetgum (*Liquidambar styraciflua*), black gum, and black willow (*Salix nigra*) are coppicing. The dominant shrubs consist of blackberry, giant cane, and swamp rose (*Rosa palustris*). Dominant herbaceous species present include cattail (*Typha latifolia*), rose mallow (*Hibiscus moscheutos*), lizard's tail (*Saururus cernuus*), and soft rush (*Juncus effusus*). Vines present include Japanese honeysuckle and muscadine grape. Due to the small size and disturbed characteristics of this community, the normally diverse assemblage of wildlife would not normally be expected. Wildlife, which may be expected to occur within this community, include wading birds such as herons, egrets, and least bittern (*Ixobrychus exilis*). All areas of this plant community within the project study area are jurisdictional and subject to consideration under Section 404 of the Clean Water Act as "waters of the United States" (33 CFR Section 328.3).

2. Aquatic Communities

Spring peepers (*Pseudacris crucifer*), southern cricket frogs (*Acris gryllus*), southern chorus frog (*Pseudacris nigrita*), and yellowbelly slider (*Trachemys scripta*) were the only aquatic amphibians and reptiles observed during the site visit. Typical amphibian species for these habitat types include carpenter frog (*Rana virgatipes*), southern leopard frog (*Rana utricularia*), two-toed amphiuma (*Amphiuma means*), lesser siren (*Siren intermedia*), and greater siren (*S. lacertina*). Tranters Creek and the associated swamps provide suitable habitat for aquatic and semi-aquatic reptiles including eastern river cooter (*Pseudemys concinna concinna*), eastern mud turtle (*Kinosternon subrubrum subrubrum*), common musk turtle (*Sternotherus odoratus*), chicken turtle (*Deirochelys reticularia*), painted turtle (*Chrysemys picta*), snapping turtle (*Chelydra serpentina*), black swamp snake (*Seminatrix pygaea*), red-bellied watersnake (*Nerodia erythrogaster*), mud snake (*Farancia abacura*), rainbow snake (*F. erytrogramma*), and cottonmouth (*Agkistrodon piscivorous*). No benthic invertebrates were observed during the field visit.

No sampling was undertaken in Tranters Creek to determine fishery potential. No identifiable fish were noted during the field visit. Species which may be present within Tranters Creek (Menhinick 1991) include Atlantic menhaden (*Brevoortia tyrannus*), gizzard shad (*Dorosoma cepedianum*), alewife (*Alosa pseudoharengus*), bay anchovy (*Anchoa mitchilli*), chain pickerel (*Esox niger*), golden shiner (*Notemigonus crysoleucas*), creek chubsucker (*Erimyson oblongus*), yellow bullhead (*Ictalurus natalis*), tadpole madtom (*Noturus gyrinus*), pirate perch (*Aphredoderus sayanus*), eastern mosquitofish (*Gambusia holbrooki*), inland silverside (*Menidia beryllina*), white perch (*Morone americana*), bluespotted sunfish (*Enneacanthus gloriosus*), warmouth (*Lepomis gulosus*), bluegill (*L. macroshirus*), pumpkinseed (*L. gibbosus*), largemouth bass (*Micropterus salmoides*), black crappie (*Pomoxis nigromaculatus*), yellow perch (*Perca flavescens*), swamp darter (*Etheostoma fusiforme*), striped mullet (*Mugil cephalus*), and hogchoker (*Trinectes maculatus*).

3. Anticipated Impacts to Biotic Communities

Permanent plant community impacts for Alternates A and B are small (approximately 0.8 acre, Table 2) and the majority of impacts (approximately 0.6 acre) will occur in the most disturbed areas (disturbed/maintained). Alternate C will result in approximately 1.6 acre (Table 2) of permanent plant community impacts, half of which will occur in the most disturbed areas (disturbed/maintained). Temporary impacts associated with the Alternate B detour bridge are small: a total of 0.3 acre will be temporarily affected by the on-site detour. It should be noted that Alternate A calls for extension of the bridge a distance of 120 feet longer that the existing bridge, allowing for removal of approximately 0.2 acre of roadway fill. This 0.2-acre area of fill removal could be graded to approximate natural contour and will not only allow for wetland restoration, but will also increase the active floodplain width at the bridge crossing, improving the function of both the stream and the wetland in the vicinity of the bridge.

No significant habitat fragmentation will be expected as a result of project activities if potential improvements are restricted to adjoining roadside margins. Construction noise and associated disturbances will have short-term impacts on avifauna and migratory wildlife movement patterns.

Table 2. Project Study Area Plant Community Impacts

Plant Community	Total Area	Permanent Impacts (Alternates A & B)	Alternate B Temporary Impacts	Alternate B Total Impacts	Alternate C Total Impacts
Cypress-Gum Forest	4.8	0.1	0.2	0.3	0.2
Disturbed/Maintained	5.2	0.6	0.1	0.7	1.3
Freshwater Marsh	0.7	0.1	-	0.1	0.1
Total	**10.7**	**0.8**	**0.3**	**1.1**	**1.6**

Areas are given in acres.

Potential downstream impacts to aquatic habitat will be avoided by bridging the stream system to maintain regular flow and stream integrity. Short-term impacts associated with turbidity and suspended sediments may affect benthic populations. Benthic invertebrates form the basis of the food chain in stream and estuarine systems. Impacts to downstream habitats associated with turbidity and suspended sediments resulting from bridge replacement will be minimized through the use of silt curtains and the implementation of stringent erosion control measures.

No Significant Aquatic Endangered Species Habitat exists within or near the project study area. Because anadromous fish breed in Tranters Creek, the replacement of Bridge No. 8 can be classified as Case 2; therefore, no in-water work will be allowed during moratorium periods associated with anadromous fish migration (February 15 to September 30). The final decision for this determination lies with the WRC.

E. Special Topics

1. Waters of the United States

Surface waters within and adjacent to the embankments of the Tranters Creek are subject to jurisdictional consideration under Section 404 of the Clean Water Act as "waters of the United States" (33 CFR Section 328.3). The Tranters Creek channel and immediate floodplain, within the project study area, have been characterized on NWI mapping (NWI Washington, NC [1994] 7.5-minute quadrangle) as riverine, lower perennial with an unconsolidated bottom that is permanently flooded (R2UBH) and palustrine, forested, deciduous (broadleaved and needle-leaved), and semipermanently flooded (PFO1/2F), respectively. During the field visit, Tranters Creek was determined to be riverine, lower perennial with an unconsolidated bottom that is permanently flooded (R2UBH). The project study area contains a total of approximately 805 linear feet and 2.7 acres of perennial stream (Table 3).

Vegetated wetlands are subject to jurisdictional consideration under Section 404 of the Clean Water Act as "waters of the United States" (33 CFR Section 328.3). These areas are defined by the presence of three primary criteria: hydric soils, hydrophytic vegetation, and evidence of hydrology at or near the surface for a minimum of 12.5 percent of the growing season (Environmental Laboratory 1987). During the field visit, the two wetland types found were palustrine, forested, broad-leaved deciduous/needle-leaved deciduous, and semipermanently

flooded (PFO1/2F) and palustrine, emergent, non-persistent, and semipermanently flooded (PEM2F).

Table 3. Jurisdictional Areas and Impacts within the Project Study Area

Cowardin Classification	Linear Distance (feet)	Total Area (acres)	Permanent Impacts (A and B) (acres)	Temporary Impacts (B) (acres)	Permanent Impacts (C) (acres)	DEM Rating
R2UBH (Tranters Creek)	450	2.7	-	-	-	N/A
PEM2F (Maintained Emergent)	N/A	0.7	0.1	-	0.1	73
PFO1/2F (Cypress-Gum Forest)	N/A	4.8	0.1	0.2	0.2	89
Total	**450**	**8.2**	**0.2**	**0.2**	**0.3**	**N/A**

1- As determined by DEM Wetland Rating Worksheet

a). Summary of Impacts

Replacement of Bridge No. 8 will be constructed with one of three alternatives: A) replacement in place with an off-site detour of approximately 10 miles , B) replacement in place with an on-site detour via a temporary bridge on the east side of the existing structure or C) replacement in place with an off-site detour. The replacement structure for Alternates A and B will result in permanent impacts to 0.2 acre of vegetated wetlands. The temporary detour bridge proposed as part of Alternate B will result in no permanent impacts to surface waters and 0.2 acre temporary impacts to PFO1/2F wetland (Figure 6 and Table 3). However, because of the Tar-Pamlico River Basin Buffer Rule, written authorization from the DWQ is required for buffer impacts associated with the replacement structure and the temporary detour. The replacement structure for Alternate C will result in no permanent impacts to surface waters and 0.1 acre of permanent impacts to PEM2F wetland and 0.2 acre of permanent impacts to PFO1/2F wetland (Figure 7 and Table 2). It should be noted that Alternate A calls for extension of the bridge a distance of 120 feet longer that the existing bridge, allowing for removal of approximately 0.2 acre of roadway fill. This 0.2-acre area of fill removal could be graded to approximate natural contour and will not only allow for wetland restoration, but will also increase the active floodplain width at the bridge crossing, improving the function of both the stream and the wetland in the vicinity of the bridge.

2. Permits

a). Section 404 of the Clean Water Act

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 2082; January 15, 2002) for CE's due to expected minimal impact. Activities under this permit are categorically excluded from environmental documentation

because they are included within a category of activities that neither individually nor cumulatively have a significant effect on the human and natural environment. Activities authorized under nationwide permits must satisfy all terms and conditions of the particular permit.

b). Section 401 Water Quality Certification

DWQ has made available a General 401 Water Quality Certification for NWP No. 23 (GC 3403). If temporary structures are necessary for construction activities, access fills, or dewatering of the site, then a NWP 33 (67 FR 2020, 2087; January 15, 2002) permit and associated General 401 Water Quality Certification (GC 3366) will be required. Impacts to vegetated wetlands may be authorized under NWP 3 (67 FR 2020, 2078) and the associated General 401 Water Quality Certification (GC 3376). In the event that NWP No. 23, 33, and 3 will not suffice, minor impacts attributed to bridging and associated approach improvements are expected to qualify under General Bridge Permit 031 and its associated General 401 Water Quality Certification (GC 3404). Notification to the Wilmington USACE District office is required if this general permit is utilized.

c). Bridge Demolition and Removal

If no practical alternative exists to remove the current bridge other than to drop it into the water, prior to removal of debris off-site, fill related to demolition procedures will need to be considered during the permitting process. A worst-case scenario will be assumed with the understanding that if there is any other practical method available, the bridge will not be dropped into the water. The worst-case scenario associated with the bridge removal is expected to be 7 cubic yards of temporary fill. Permitting will be coordinated such that any permit needed for bridge construction will also address issues related to bridge demolition. As this reach of Tranters Creek has potential as a travel corridor for migratory fish, this project can be classified as Case 2, where no in-stream work be allowed during moratorium periods associated with anadromous fish migration.

d). Coast Guard

According to a letter received from the U.S. Coast Guard (USCG) dated April 4, 2005, this reach of Tranters Creek is considered legally navigable for Bridge Administration purposes. This reach of Tranters Creek also meets the criteria for advance approval waterways outlined in Title 33, Code of Federal Regulations, Section 115.70. Advance approval waterways are those that are navigable in law, but are not actually navigated by other than small boats. The Commandment of the Coast Guard has given advance approval to the construction or repair of bridges across such waterways; therefore, Section 10 permit for structures and/or work in or affecting navigable waters of the United States will not be required for this project.

e). Coastal Area Management Act (CAMA)

The proposed project will occur in one of the 20 counties covered by the Coastal Area Management Act (CAMA). Areas of Environmental Concern (AEC) within these counties are under the jurisdiction of the Division of Coastal Management (DCM). Because the project study area contains navigable waters and is located within inland fishing waters, Public Trust Areas (a CAMA AEC) are expected to potentially be affected by the proposed project. Public Trust Areas are defined in 15A NCAC 07H .0207. If the project area contains Public Trust Waters AECs and replacement of the bridge avoids impacts to AECs, the 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.

3. Riparian Buffer Protection Rules for the Tar-Pamlico River Basin

The Nutrient Sensitive Waters Management Strategy for the Protection and Maintenance of Riparian Buffers for the Tar-Pamlico River Basin (15A NCAC 02B .0259) provides a designation for uses that cause impacts to riparian buffers within the Tar-Pamlico River Basin. The Tar-Pamlico River Basin Buffer Rule applies to 50-foot wide riparian buffers (measured perpendicular to the stream) directly adjacent to surface waters in the Tar-Pamlico River Basin. Designated surface waters are indicated on USGS 7.5-minute topographic maps and county soil surveys. Within the project study area, Tranters Creek is the only feature subject to the riparian buffer rule.

Changes in land use within the buffer area are considered to be buffer impacts. Land use changes within the riparian buffer are defined as being Exempt, Allowable, Allowable with Mitigation, or Prohibited (15A NCAC 2B .0259 (7)). The Exempt designation refers to uses allowed within the buffer. The Allowable designation refers to uses that may proceed within the riparian buffer provided there are no practical alternatives, and that written authorization from the DWQ is obtained prior to project development. The Allowable with Mitigation designation refers to uses that are allowed, given there are no practical alternatives, and appropriate mitigation plans have been approved. The Prohibited designation refers to uses that are prohibited without a variance. Exemptions to the riparian buffer rule include the footprint of existing uses that are present and ongoing (15A NCAC 2B .0259 (3)(b)).

Both alternatives for the replacement of Bridge No. 8 permanently impact less than 150 linear feet of riparian buffer, and are therefore Allowable under the Tar-Pamlico River Basin Buffer Rule. Temporary impacts from the on-site detour of Alternate B are approximately 3,049 square feet. Impacts from temporary roads used for bridge construction or replacement are Allowable under the Tar-Pamlico River Basin Buffer Rule, providing that restoration activities, such as soil stabilization and revegetation, are conducted immediately after construction (15A NCAC 2B .0233 (6)). Written authorization from the DWQ is required for buffer impacts associated with the replacement structure and the temporary detour. In addition, any changes in stormwater flow due to the proposed project must be diffused to enter the buffers as sheet flow.

4. Mitigation

The USACE has adopted through the Council on Environmental Quality (CEQ) a wetland mitigation policy that embraces the concept of "no net loss of wetlands" and sequencing. The purpose of this policy is to restore and maintain the chemical, biological, and physical integrity of waters of the United States, and specifically wetlands. Mitigation of wetland impacts has been defined by the CEQ to include: avoiding impacts (to wetlands), minimizing impacts, rectifying impacts, reducing impacts over time and compensating for impacts (40 CFR 1508.20). Each of these three aspects (avoidance, minimization, and compensatory mitigation) must be considered sequentially.

Avoidance mitigation examines all appropriate and practicable possibilities of averting impacts to waters of the United States. According to a 1990 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and the USACE, in determining "appropriate and practicable" measures to offset unavoidable impacts, such measures should be appropriate to the

scope and degree of those impacts and practicable in terms of cost, existing technology and logistics in light of overall project purposes. Impacts to streams are expected due to the nature of the project. Not all sediment can be prevented from entering waters of the United States.

Minimization includes the examination of appropriate and practicable steps to reduce the adverse impacts to waters of the United States. Implementation of these steps will be required through project modifications and permit conditions. Minimization typically focuses on decreasing the footprint of the proposed project through the reduction of median widths, right-of-way widths, fill slopes, and/or road shoulder widths. All efforts will be made to decrease impacts to surface waters.

Compensatory mitigation is not normally considered until anticipated impacts to waters of the United States have been avoided and minimized to the maximum extent possible. It is recognized that "no net loss of wetlands" functions and values may not be achieved in each and every permit action. In accordance with 15A NCAC 2H .0506(h), DWQ may require compensatory mitigation for projects with equal to or greater than 0.1 acre of impacts to jurisdictional wetlands or greater than or equal to 150 linear feet of total perennial stream impacts. Furthermore, in accordance with 67 FR 2020, 2092; January 15, 2002, the USACE requires compensatory mitigation when necessary to ensure that adverse effects to the aquatic environment are minimal. The size and type of the proposed project impact and the function and value of the impacted aquatic resource are factors considered in determining acceptability of appropriate and practicable compensatory mitigation. Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required. Compensatory actions often include restoration, preservation and enhancement, and creation of waters of the United States. Such actions should be undertaken first in areas adjacent to or contiguous to the discharge site.

Compensatory mitigation for Section 404 jurisdictional area impacts may not need to be proposed for this project due to the potentially limited nature of the project impacts. However, utilization of BMPs is recommended in an effort to minimize impacts. Temporary impacts to floodplains associated with construction activities could be mitigated by replanting disturbed areas with native riparian species and removal of temporary fill material upon project completion. Fill or alteration of more than 150 linear feet of stream may require compensatory mitigation in accordance with 15 NCAC 2H .0506(h). A final determination regarding mitigation rests with the DCM, USACE, and DWQ.

Opportunities for compensatory mitigation are available within the project study area. Extending the distance between abutments will allow for less concentrated flow under Bridge No. 8. This will reduce flooding immediately upstream and improve aquatic habitat under the bridge and downstream. Moving the western abutment farther west and lengthening the bridge could provide on-site mitigation. The amount of mitigation would vary with the distance that the western abutment is moved (approximately 0.1-0.8 acre).

F. Protected Species

1. Federally Protected Species

Species with the federal classification of Endangered (E), Threatened (T), Threatened due to Similarity of Appearance (T [S/A]), or officially Proposed (P) for such listing are protected under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The term "Endangered Species" is defined as "any species which is in danger of extinction throughout all

or a significant portion of its range," and the term "Threatened Species" is defined as "any species which is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range" (16 U.S.C. 1532). The term "Threatened due to Similarity of Appearance" is defined as a species which is not "Endangered" or "Threatened," but "closely resembles an Endangered or Threatened species" (16 U.S.C. 1532). Eight federally protected species are listed as occurring in Beaufort and Pitt Counties (FWS 2006a and 2006b).

A summary of Biological Conclusions for the replacement of Bridge No. 8 is presented in the following table:

Table 4. Federally Protected Species

Common Name	Scientific Name	Biological Conclusion	Federal Status
Red wolf	*Canis rufus*	May Affect, Not Likely to Adversely Affect	E
West Indian manatee	*Trichechus manatus*	May Affect, Not Likely to Adversely Affect	E
Bald Eagle	*Haliaeetus leucocephalus*	May Affect, Not Likely to Adversely Affect	T
Red-cockaded woodpecker	*Picoides borealis*	No Effect	E
Kemp's ridley sea turtle	*Lepidochelys kempii*	No Effect	E
Tar spinymussel	*Elliptio steinstansana*	No Effect	E
Sensitive joint vetch	*Aeschynomene virginica*	No Effect	T
Rough-leaved loosestrife	*Lysimachia asperulaefolia*	No Effect	E

T- Threatened, E- Endangered

Canis rufus (Red Wolf)
Endangered
Family: Canidae
Date Listed: November 19, 1986

The red wolf is a medium-sized canid that resembles the coyote but is larger and more robust. Adults measure 4.5 to 5.5 feet in length, and weigh from 35 to 90 pounds. This species is slightly smaller than the gray wolf (*C. lupus*) with a more slender and elongated head (FWS 1990), and longer legs (Webster *et al.* 1985). Its pelage is shorter and coarser than in any race of *C. lupus* (USFWS 1990) and individuals vary in color from reddish to gray to black (Webster *et al.* 1985). The red wolf prefers habitat that provides large amounts of cover, including both upland and swamp forests, coastal marshes, and prairies (Webster *et al.* 1985). Small- to medium-sized mammals are normal prey items, but the red wolf is also heavily dependent on white-tailed deer (USFWS 1990). The red wolf was once found throughout the southeastern United States, but was extirpated from most of its range by 1920. Captive-bred animals were released at Alligator River National Wildlife Refuge in the fall of 1987, and successful reproduction resulted in 26-30 adults by August 1993.

The red wolf is considered by USFWS to be an experimental, nonessential endangered species. It is experimental because the local population has been recently introduced into the species historic

range and habitat. This species is considered nonessential because loss of the experimental population is not expected to appreciably reduce the likelihood of the survival of the species in the wild (CFR 50, Part 17.80). The red wolf is considered by USFWS to be Threatened on public land, for consultation purposes, and as a species Proposed for listing on private land. Therefore, with respect to the proposed project, the red wolf is considered as Proposed for listing.

BIOLOGICAL CONCLUSION: MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT

A review of the NHP database of rare species and unique habitats revealed no records of red wolves within 10 miles of the project study area. There is suitable habitat for red wolves in the project study area. Based upon the limited nature of the project, replacement of Bridge No. 8 should not adversely affect this species.

Trichechus manatus (West Indian Manatee)
Endangered
Family: Trichechidae
Date Listed: March 11, 1967

The West Indian Manatee is a large, gray aquatic mammal that averages 10 to 13 feet in length and weighs up to 1,000 pounds. The manatee has a laterally flattened tail, no hind limbs, and the front limbs have been modified as flippers. This species occurs in the Caribbean and western Atlantic from Brazil to the southeastern coast of the United States. Manatees occur around the southeastern end of Puerto Rico and Vieques Island (an estimated 60 to 100 animals in 1993), but are rarely seen and are considered absent from the Virgin Islands (USFWS 1993). These mammals inhabit warm waters, both fresh and salt, where the diet consists mostly of aquatic vegetation and sometimes shoreline vegetation. Manatees have also been known to feed on fish. This species prefers vegetated bottoms in 4 to 20 feet of water and near a source of freshwater. Manatees are known to migrate to North Carolina in the summer (USFWS 1993).

BIOLOGICAL CONCLUSION: MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT

A review of the NHP database of rare species and unique habitats revealed a record of manatees within 1 mile of the project study area. There is suitable habitat for Manatee in the project study area. Based upon the close proximity of documented manatees (within a mile), replacement of Bridge No. 8 may impact this species. However, due to the seasonal nature of manatee occurrence and the protection of habitat through stringent erosion control and other BMPs, the risk to manatees from the replacement of Bridge No. 8 is low. The USFWS has generated "Guidelines for Avoiding Impacts to the West Indian Manatee" for use during construction activities in North Carolina waters. These guidelines should be implemented during this project. In a letter dated May 5, 2006 the USFWS concurred with the biological conclusion that this project may affect, but is not likely to adversely affect the West Indian Manatee.

Haliaeetus leucocephalus (Bald Eagle)
Threatened (proposed for delisting)
Family: Accipitridae
Date Listed: March 11, 1967

The bald eagle is a large raptor with a wingspan greater than 6 feet. Adult bald eagles are dark brown with a white head and tail. Immature bald eagles are brown with white mottling on the tail, belly, and wing linings. Bald eagles typically feed on fish; however, they may also take birds and small mammals. In the Carolinas, the nesting season extends from December through May

(Potter *et al.* 1980). Bald eagles typically nest in tall, living trees in conspicuous locations near open water. Eagles forage over large bodies of water and utilize adjacent trees for perching (Hamel 1992). Disturbance activities within a primary zone extending 750 to 1,500 feet from a nest tree are considered to result in unacceptable conditions for eagles (USFWS 1987). USFWS recommends avoiding the disturbance, including construction and tree cutting, within this primary zone. A secondary zone, extends from the primary zone boundary out to a distance of 1 mile from a nest tree. Construction and land-clearing activities should be restricted within the secondary zone to the non-nesting period. The USFWS also recommends avoiding the alteration of natural shorelines where bald eagles forage and avoiding significant land-clearing activities within 1,500 feet of known roosting sites.

BIOLOGICAL CONCLUSION: MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT

NHP records document the nearest occurrence of the bald eagle in Beaufort/Pitt County as approximately 1.5 miles west of the project study area. The project study area has breeding and foraging habitat for bald eagles. In July 2004, a canoe survey was conducted along the Tranters Creek shoreline for a distance of 1500 feet upstream and downstream of Bridge No. 8. No bald eagles or eagle nests were observed during this survey. In a letter dated May 5, 2006 the USFWS concurred with the biological conclusion that this project may affect, but is not likely to adversely affect bald eagles.

Picoides borealis (Red-cockaded Woodpecker)
Endangered
Family: Picidae
Date Listed: October 13, 1970

This small woodpecker (7 to 8.5 inches long) has a black head, prominent white cheek patches, and a black-and-white barred back. Males often have red markings (cockades) behind the eye; however, the cockades may be absent or difficult to see (Potter *et al.* 1980). Primary habitat consists of mature to over-mature southern pine forests dominated by loblolly, long-leaf (*Pinus palustris*), slash (*P. elliottii*), and pond pines (*P. serotina*) (Thompson and Baker 1971). Nest cavities are constructed in the heartwood of living pines, generally older than 70 years that have been infected with red-heart disease. Nest cavity trees tend to occur in clusters, which are referred to as colonies (USFWS 1985). The woodpecker drills holes in the bark around the cavity entrance, resulting in a shiny, resinous buildup around the entrance that allows for easy detection of active nest trees. Pine flatwoods or pine-dominated savannas, which have been maintained by frequent natural fires, serve as ideal nesting and foraging sites for this woodpecker. Development of a thick understory may result in abandonment of cavity trees.

BIOLOGICAL CONCLUSION: NO EFFECT

A review of the NHP database of rare species and unique habitats revealed no records of existing populations of red-cockaded woodpecker within 5 miles of the project study area. There are few mature pine trees and many hardwoods within the project study area; therefore, the project study area contains no suitable red-cockaded woodpecker nesting and foraging habitat. Based upon the lack of suitable habitat, this project is not expected to affect red-cockaded woodpecker.

Lepidochelys kempii (Kemp's ridley sea turtle)
Endangered
Family: Cheloniidae
Date Listed: December 7, 1970

The Kemp's ridley sea turtle is the smallest of the sea turtles (23- to 30-inch carapace, 79 to 110 pounds) and is generally considered the most endangered species of sea turtle in the world (Palmer and Braswell 1995). This species ranges from the Gulf of Mexico and the east coast, to Nova Scotia and Europe. In addition to its small size, this species is discernible by the heart shaped carapace and gray coloration. Kemp's ridley prefers shallow coastal waters, including sounds and the lower portions of large rivers, where it feeds on crabs, shrimp, snails, clams, and some saltwater plants. Nearly all members of this species are believed to nest on a short strand of ocean beach in the state of Tamaulipas, Mexico. Only a single nesting record exists for North Carolina, on Long Beach in Brunswick County (1992). The nearest suitable nesting habitat for this species is the Outer Banks ocean beaches.

BIOLOGICAL CONCLUSION: **NO EFFECT**

A review of the NHP database of rare species and unique habitats revealed no existing records of Kemp's ridley sea turtle within 10 miles of the project study area. There is no suitable habitat for Kemp's ridley sea turtle in the project study area. Based upon the lack of habitat for Kemp's ridley sea turtle and NHP records for Beaufort County, this project should not impact this species.

Elliptio steinstansana (Tar spinymussel)
Endangered
Family: Unionidae
Date Listed: June 27, 1985

The Tar River spinymussel is a small, subrhomboidal mussel that grows to approximately 2.5 inches in length. The external shell of the adult is smooth, orange-brown to dark brown, and ornamented by one or two rows of short spines (to 0.2 inches long). The shell is thicker on the anterior end and thinner on the posterior end. Preferred habitat of the spiny mussel includes relatively fast-flowing, well-oxygenated, circumneutral water over a silt-free, noncompacted, gravel/coarse sand substrate (USFWS 1992). The mussel's range is believed to be limited to a 1-mile section of the Tar River in Edgecombe County and Swift Creek in Vance and Edgecombe Counties (TSCFTM 1990). This species is now also known from Little Fishing Creek in Halifax County, Shocco and Sandy Creek subbasin in Warren/Franklin Counties, and the Little River subbasin of the Neuse River basin in Johnston County (WRC 2004).

BIOLOGICAL CONCLUSION: **NO EFFECT**

NHP records document the nearest occurrence of the tar spinymussel approximately 50 miles upstream on the Tar River from the project study area. The project study area has no habitat for the tar spinymussel. Based upon NHP records and the lack of habitat, the replacement of Bridge No. 8 will have no effect on the tar spinymussel.

Aeschynomene virginica (Sensitive Jointvetch)
Threatened
Family: Fabaceae
Date Listed: May 20, 1992

Sensitive joint-vetch is a robust, bushy-branched, annual legume n exceeding 3.3 feet in height. Young stems have bristly hairs with large, swollen bases (Leonard 1985). The alternate, compound leaves are even-pinnate, approximately 1 to 2 inches wide, with 30 to 56 toothless leaflets (Radford *et al.* 1968). The leaves fold closed when touched. Flowers are bright greenish-

yellow with red veins, about 0.5 inch long, and are subtended by bractlets with toothed margins (Leonard 1985). Flowers are produced on few-flowered racemes from July to October. The jointed legume (loment) is about 2 inches long, has 6 to 10 segments, and a 0.5 to 1 inch long stalk.

Sensitive jointvetch occurs in the intertidal zone near the upper limit of tidal fluctuation. It seems to prefer sparsely vegetated areas where annuals predominate (USFWS 1995). Habitat for this species in North Carolina consists of moist to wet coastal roadside ditches and moist fields that are nearly tidal, especially in full sun (Leonard 1985). Associated plants listed for this jointvetch in North Carolina are all freshwater species. Sensitive jointvetch is not expected to be found in association with salt-tolerant species such as saltmarsh cordgrass or giant cordgrass (Rouse 1994). This species seems to favor microhabitats where there is a reduction in competition from other plant species, and usually some form of soil disturbance (USFWS 1995).

BIOLOGICAL CONCLUSION: **NO EFFECT**

A review of the NHP database of rare species and unique habitats revealed a record of sensitive joint-vetch population within 2 miles of the project study area. There is suitable habitat for sensitive jointvetch in the project study area in some of the maintained areas near Bridge No. 8, particularly in the freshwater marsh. Systematic surveys for this species were performed on August 19, 2004; using overlapping transects to cover the habitat area. No specimens of sensitive jointvetch were located, and the presence of this species within the project study area can be discounted.

Lysimachia asperulaefolia (Rough-leaved Loosestrife)
Endangered
Family: Primulaceae
Date Listed: June 12, 1987

Rough-leaved loosestrife is a rhizomatous perennial with erect stems 1 to 2 inches tall. Leaves are sessile in whorls of 3 or 4, broadest at the base, and have three prominent veins. The leaf margins are entire and slightly revolute. Flowers are yellow, bisexual, and usually have five petals that open from late May to June. Seeds form in August and the small round capsules, surrounded by the persistent calyx, dehisce in October. Rough-leaved loosestrife typically occurs along the ecotone between long-leaf pine savannas and wetter, shrubby areas where lack of canopy vegetation allows abundant sunlight into the herbaceous layer. Rough-leaved loosestrife is endemic to the Coastal Plain and Sandhill regions of the Carolinas. This species is fire maintained, and suppression of naturally occurring fires has contributed to the loss of habitat in our state. Drainage of habitat may also have adverse effects on the plant (USFWS 1994b). Habitats where rough-leaved loosestrife have been found are low and high pocosin, wet pine flatwoods, pine savanna, streamhead pocosins, and sandhill seeps (Schafale and Weakley 1990), as well as peaty pond margins, and disturbed sites such as roadside depressions, power line right-of-ways, and firebreaks (USFWS 1994b).

BIOLOGICAL CONCLUSION: **NO EFFECT**

A review of the NCNHP database of rare species and unique habitats revealed no records of existing population of rough-leaved loosestrife within 5 miles of the project study area. There is suitable habitat for rough-leaved loosestrife in the power line corridor within project study area. A systematic survey was conducted on June 10, 2004 within all suitable habitat in the project study area, and no individuals of this species were found. Based on the survey results, this project will not affect rough-leaved loosestrife.

2. Federal Species of Concern

The FWS also provides lists (FWS 2006a and 2006b) which include a category of species designated as "Federal species of concern" (FSC) in Beaufort and Pitt Counties (Table 5). A species with this designation is one that may or may not be listed in the future (formerly C2 candidate species or species under consideration for listing for which there is insufficient information to support listing).

The FSC designation provides no federal protection under the ESA for species listed. NHP files document *Rana capito* within 3.9 miles of the project study area. No other occurrences are located within 5 miles of the project study area.

Table 5. Federal Species of Concern

Common Name	Scientific Name	Biological Conclusion	Federal Status
Red wolf	*Canis rufus*	May Affect, Not Likely to Adversely Affect	E
West Indian manatee	*Trichechus manatus*	May Affect, Not Likely to Adversely Affect	E
Bald Eagle	*Haliaeetus leucocephalus*	May Affect, Not Likely to Adversely Affect	T
Red-cockaded woodpecker	*Picoides borealis*	No Effect	E
Kemp's ridley sea turtle	*Lepidochelys kempii*	No Effect	E
Tar spinymussel	*Elliptio steinstansana*	No Effect	E
Sensitive joint vetch	*Aeschynomene virginica*	No Effect	T
Rough-leaved loosestrife	*Lysimachia asperulaefolia*	No Effect	E

T- Threatened, E- Endangered

VII. CULTURAL RESOURCES

A. Compliance Guidelines

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

and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings.

B. Historic Architecture

A field survey of the Area of Potential Effects (APE) was conducted by NCDOT architectural historians on July 30, 2003. All structures within the APE were photographed, and later reviewed with the North Carolina State Historic Preservation Office (HPO). In a report dated June 2004 it was determined that Singleton Primitive Baptist Church was eligible for the National Register. The church is located approximately 150 feet northeast of the end of the project. HPO concurred with the eligibility of the church in a memorandum dated August 23, 2004. In a concurrence meeting on June 28, 2004 NCDOT, HPO, and FHWA agreed that the project would have no effect on the church and a concurrence form was signed to this effect. Copies of all correspondence and the concurrence form are included in Appendix A.

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 needed to be conducted (see letter dated July 15, 2005 in Appendix A).

VIII. 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 a Federal "Categorical Exclusion" due to its limited scope and lack of significant environmental consequences.

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

The project is not in conflict with any plan, existing land use, or zoning regulation. No substantial change in land use is expected to result from 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 anticipated. The project is not expected to adversely affect social, economic, or religious opportunities in the area.

There is a City of Washington boat ramp access located in the southeast quadrant of the study area. There will be no impacts to the existing boat ramp.

No North Carolina Geodetic Survey control monuments will be impacted during construction of this project.

The Farmland Protection Policy Act requires all federal agencies or their representatives to consider the potential impacts to prime and important farmland soils by all land acquisition and construction projects. Prime and important farmland soils are defined by the Natural Resources Conservation Service (NRCS).

Since there are no prime or important farmlands in the immediate vicinity of the proposed bridge the Farmland Protection Policy does not apply.

This project is an air quality "neutral" project, so it is not required to be included the regional emission analysis (if applicable) and a project level CO analysis is not required.

This project is located in Beaufort/Pitt County, which has been determined to be in compliance with the National Ambient Air Quality Standards. 40 CFR Part 51 is not applicable, because the proposed project is located in an attainment area. This project is not anticipated to create any adverse effects on the air quality of this attainment area.

The traffic volumes will not increase or decrease because of this project. Therefore, the project's impact on noise and air quality will not be substantial.

Noise levels could increase during construction but will be temporary. If vegetation is disposed of by burning, all burning shall be done in accordance with applicable local laws and regulations of the North Carolina SIP for air quality in compliance with 15 NCAC 2D.0520. This evaluation completes the assessment requirements for highway traffic noise (23 CFR Part 772) and for air quality (1990 CAAA and NEPA) and no additional reports are required.

An examination of records at the North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section and the North Carolina Department of Human Resources, Solid Waste Management Section revealed no hazardous waste sites, no regulated or unregulated landfills or dumpsites with in the project area. No facility with underground storage tanks (UST) was identified in the project vicinity.

Beaufort County is a participant in the Federal Flood Insurance Program. The bridge is located within a Detailed Study Area, but there is no floodway delineated in this area. Since the proposed replacement for Bridge No. 8 would be a structure similar in waterway opening size, it is not anticipated that it will have any significant adverse impact on the existing floodplain and floodway. The proposed alternatives will not modify flow characteristics and will have a minimal impact on floodplains due to roadway encroachment. The existing drainage patterns and groundwater will not be affected.

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

IX. PROGRAMMATIC SECTION 4(F) EVALUATION

Part 23 CFR 771.135 Section 4(f) (49 U.S.C. 303) states that "The Administrator may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

(i) There is no feasible and prudent alternative to the use of land from the property; and
(ii) The action includes all possible planning to minimize harm to the property resulting from such use."

In accordance with the criteria set forth in the Federal Register December 23, 1986, the following Programmatic Section 4(f) for Minor Involvements with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges evaluation was prepared:

Since this project necessitates the use of a minor amount of land from a recreation land, a city owned boat ramp, which is adjacent to the existing roadway, and since the project meets the criteria set forth in the Federal Register (December 23, 1986), a programmatic Section 4(f) evaluation satisfies the requirements of Section 4(f).

The following alternatives, which avoid use of the recreation, have been fully evaluated: (1) do nothing; (2) improve the highway without using the adjacent historic site; (3) build the replacement structure on new location without using the recreation land.

No Build Alternative: The No Build or "Do-Nothing" alternative is not considered feasible and prudent because the bridge will eventually deteriorate beyond repair and necessitate closure of the bridge. This is not prudent due to the traffic service provided by SR 1403 and SR 1567.

Rehabilitation of the Existing Bridge: This alternative is not considered to be feasible and prudent due to the age and deteriorated condition of the existing bridge.

Replacement of Bridge No. 8 on New Location: Moving the bridge location to a point upstream to avoid impacts to the recreation land would negatively impact the Singleton Primitive Baptist Church a National Register eligible structure. An alternative on new location will introduce horizontal curves into the alignment and increase cost. Therefore, this alternative is not considered feasible or prudent.

These alternatives were not found to be feasible and prudent.

All possible planning to minimize harm to the recreation land has been performed as an integral part of this project. Alternative A, the preferred alternative, will minimize impacts to the recreation land. The recreation land will be impacted by widening the approach lanes from 21 feet to 24 feet, widening the shoulders from 7 feet to 8 feet including 4 feet paved, and providing guardrail.

The approved Final Programmatic Section 4(f) for Minor Involvements with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges is included in Appendix B.

X. PUBLIC INVOLVEMENT

A mailing list was developed based upon property owners located near the bridge. Approximately twenty names are included on the list. Newsletters were mailed early in the planning process to the nearby property owners and local officials. A copy of the newsletter is attached in Appendix C. A workshop was held on February 21, 2005 at Eastern Elementary School in Washington. Approximately thirty-seven people attended the workshop. Among the comments received at the workshop were: 1). Several citizens asked that the clearance underneath the bridge be raised to accommodate additional boat traffic. 2). Several citizens commented that the bridge should be lengthened to mitigate for flooding. The proposed bridge was lengthened to mitigate for the proposed impacts to high quality wetlands. The vertical clearance under the bridge will be studied further during final design.

XI. UNRESOLVED ISSUES AND AREAS OF CONTROVERSY

No unresolved issues or areas of controversy have been identified during the planning process and none are anticipated.

XII. AGENCY COMMENTS

Scoping letters were sent to the following agencies listed below. Agencies that responded are marked with an asterisk (*). Comment letters are included in Appendix A.

Federal Agencies

US Fish and Wildlife Service – Raleigh*
US Army Corps of Engineers – Washington
US Army Corps of Engineers – Wilmington
Environmental Protection Agency – Raleigh
National Marine Fisheries – Beaufort
US Geological Survey – Raleigh

State Agencies

NC Wildlife Resources Commission*
NC Department of Environment and Natural Resources
NC Division of Water Quality
NC Department of Cultural Resources*
NC Division of Coastal Management*
NC Division of Marine Fisheries

Regional and Local Agencies

City of Washington*
Beaufort County Schools
Beaufort County Schools –Transportation Department
Beaufort County
Beaufort County EMS
Pitt County Schools
Pitt County Schools –Transportation Department*
Pitt County
Pitt County EMS
Mid East Commission RPO

The following are comments received during the scoping process:

1. United States Department of the Interior - Fish and Wildlife Service

Comment: "Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical."

Response: The preferred alternate, Alternative A, replaces the existing bridge in the existing location and minimizes natural environment impacts.

Comment: "Off-site detours should be used rather than construction of temporary, on-site bridges."

Response: An off-site detour will be utilized for this project.

Comment: "Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons. ....The general moratorium period for anadromous fish is February 15- June 30."

Response: An in-water work moratorium will be in effect from February 15 to September 30 due to Anadromous Fish in the project area (See WRC comment on page 26).

Comment: "The bridge design should not alter the natural stream and stream-bank morphology or impede fish passage."

Response: The bridge will be replaced in the existing location and the final bridge length will be determined during final design.

Comment: "Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or flood plain."

Response: The bridge will be replaced in the existing location and the final bridge length will be determined during final design.

Comment: "There is a past concurrence of the West Indian manatee (*Trichechus manatus*) less than one mile south of the project area. The Service's Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters should be implemented to minimize impacts to this species."

Response: The guidelines will be implemented during construction.

2. North Carolina Wildlife Resources Commission

Comment: "We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Tranter's Creek, including striped bass, American Shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30."

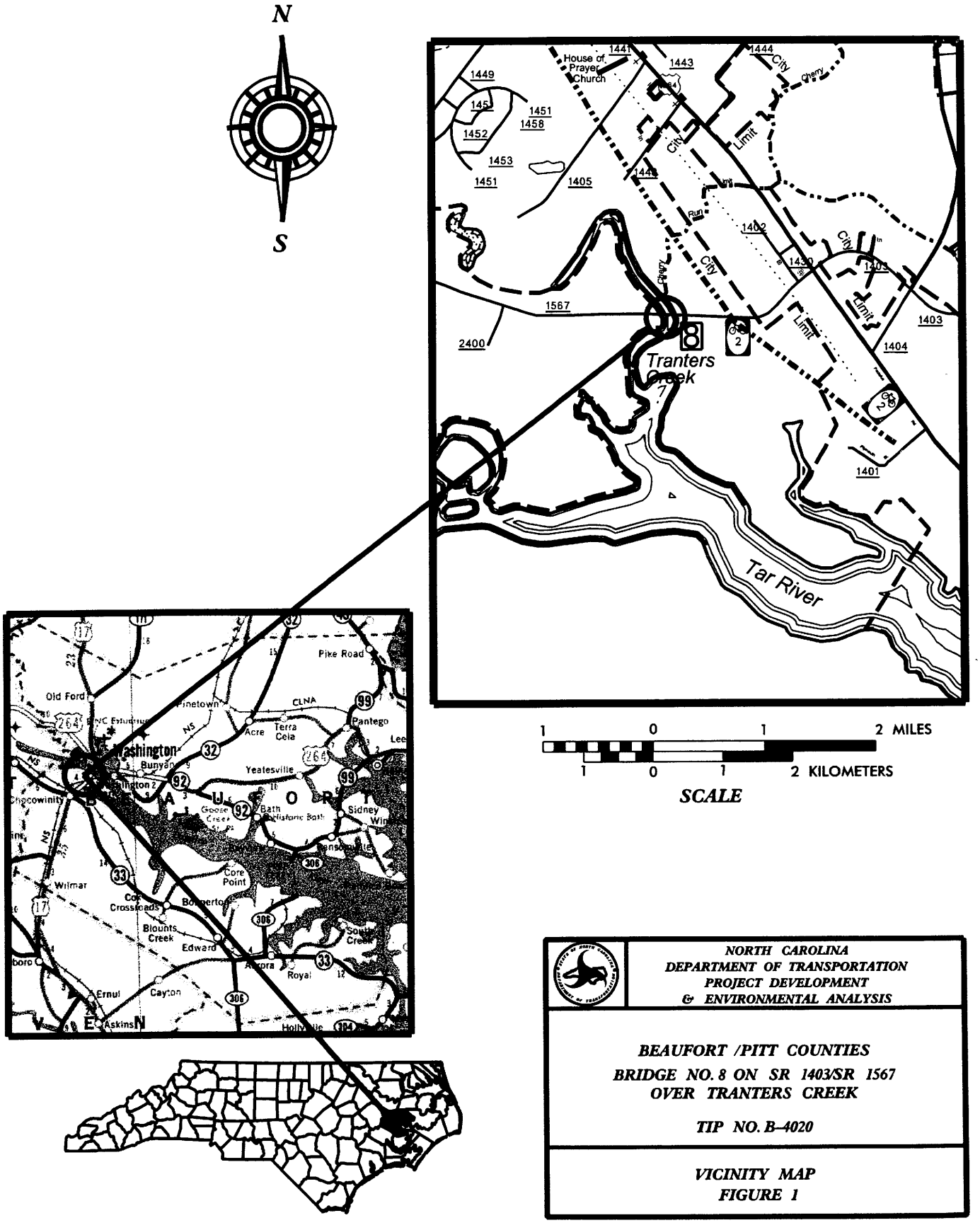
Response: The bridge will be replaced in the existing location and an in-water work moratorium will be in effect from February 15 to September 30 due to Anadromous Fish in the project area.

3. North Carolina Division of Coastal Management

Comment: "...the following projects will impact CAMA Area of Environmental Concern (AEC) and will require CAMA permits."

Response: NCDOT will coordinate with the DCM during final design to obtain the permits necessary.

FIGURES

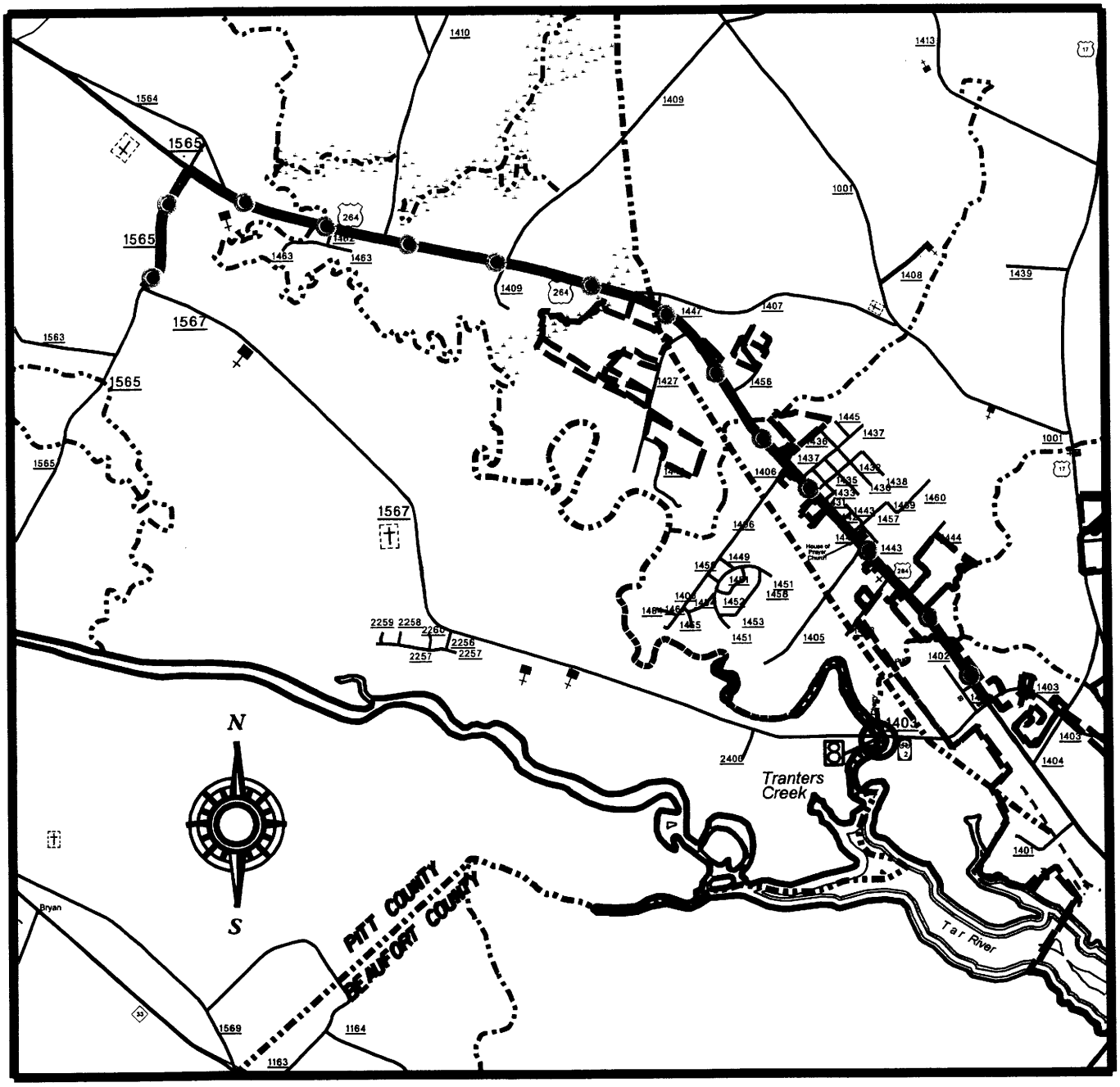


NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
& ENVIRONMENTAL ANALYSIS

BEAUFORT /PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567
OVER TRANTERS CREEK

TIP NO. B-4020

VICINITY MAP
FIGURE 1



LEGEND

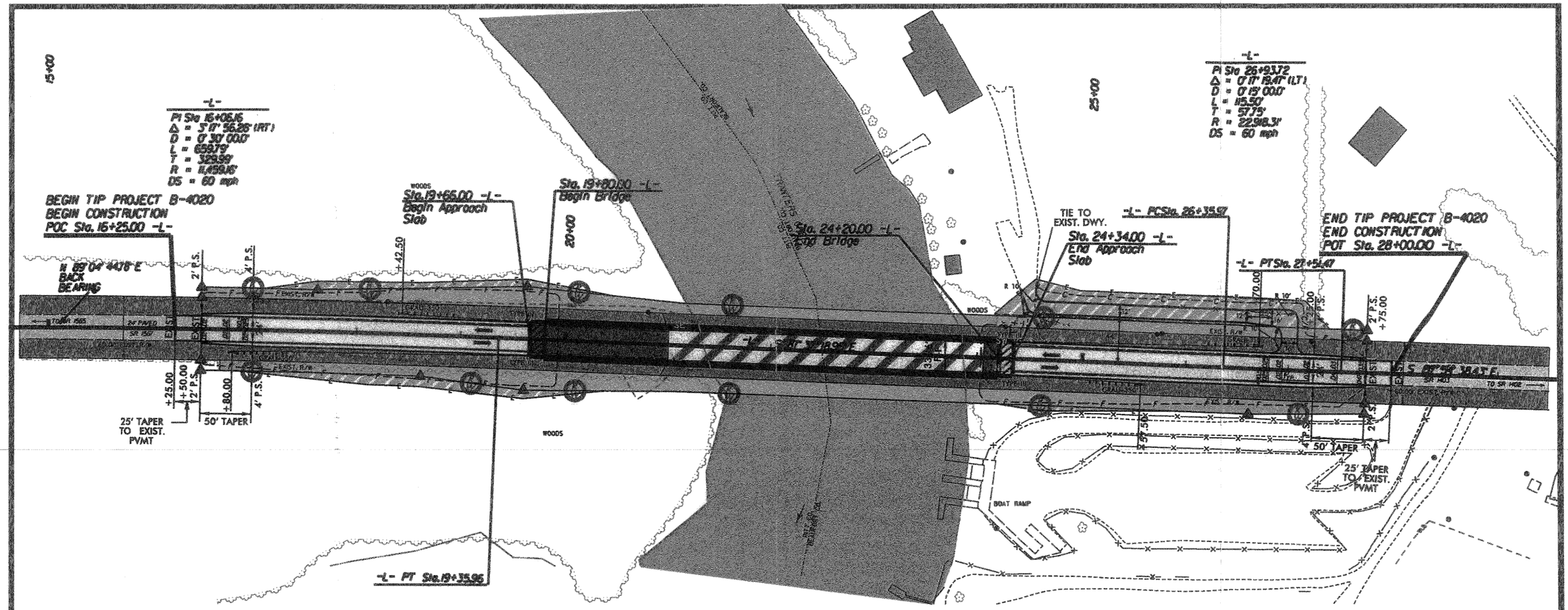
Studied Detour Route

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
& ENVIRONMENTAL ANALYSIS

BEAUFORT /PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567
OVER TRANTERS CREEK

TIP NO. B-4020

VICINITY MAP - DETOUR ROUTE
FIGURE 1A



LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS, AND PONDS
- 100/200 PRESENT ADT (2000) / FUTURE ADT (2025)

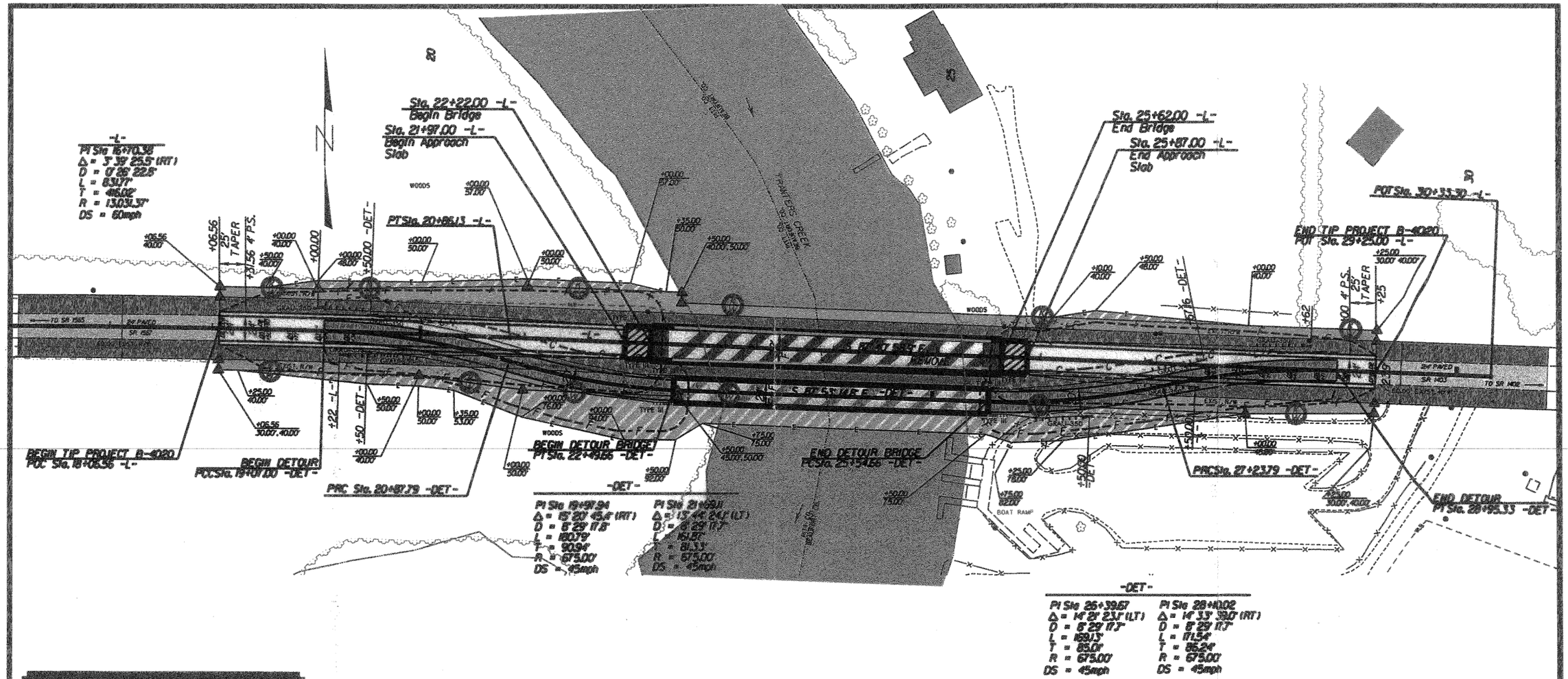
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

BEAUFORT / PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567 OVER TRANTERS CREEK
TIP NO. B-4020

ALTERNATE A
(PREFERRED)
FIGURE 2A



LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- TEMPORARY DETOUR
- TEMPORARY DETOUR STRUCTURE
- LAKES, RIVER, STREAMS, AND PONDS
- 100/200 PRESENT ADT (2001) / FUTURE ADT (2025)

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

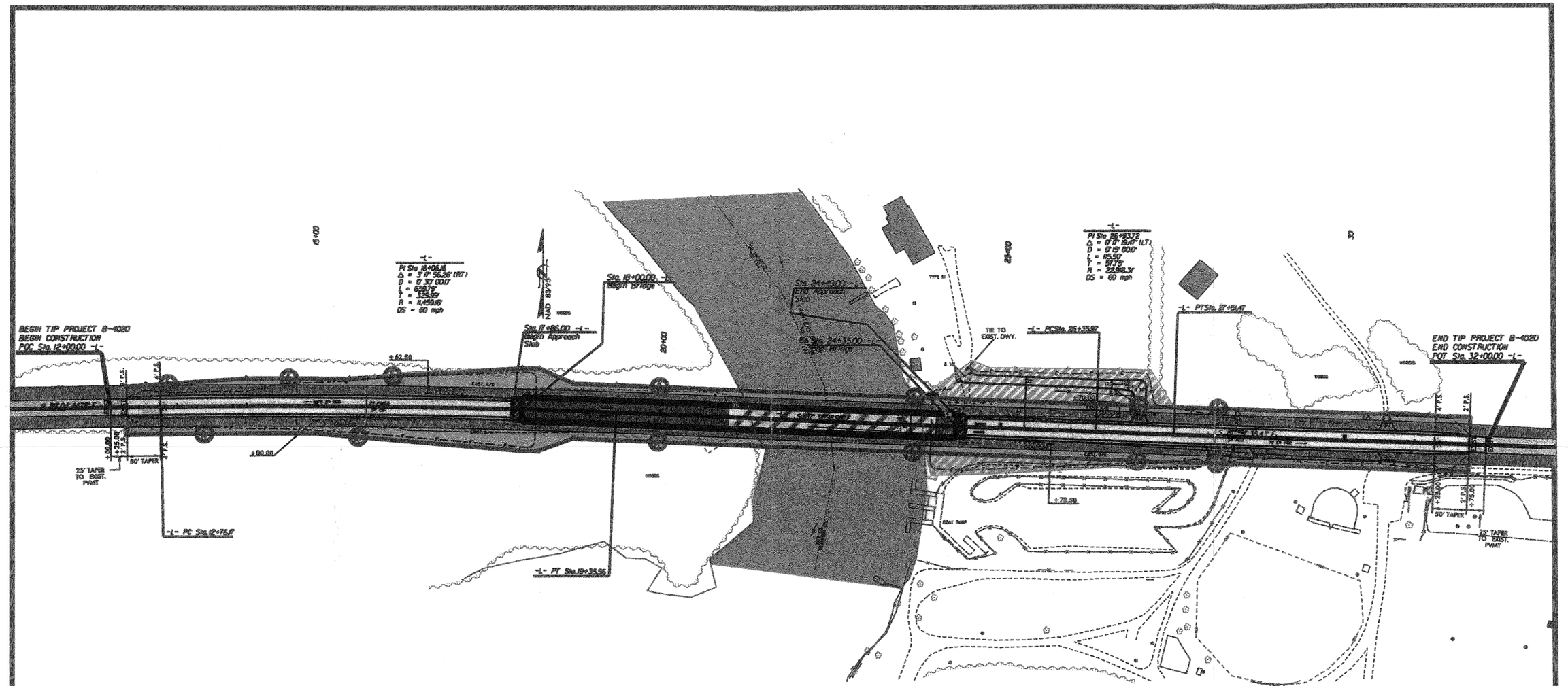
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

BEAUFORT / PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567 OVER TRANTERS CREEK
TIP NO. B-4020

ALTERNATE B

FIGURE 2B



LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS, AND PONDS
- 100 / 200 — PRESENT ADT (2001) / FUTURE ADT (2025)

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

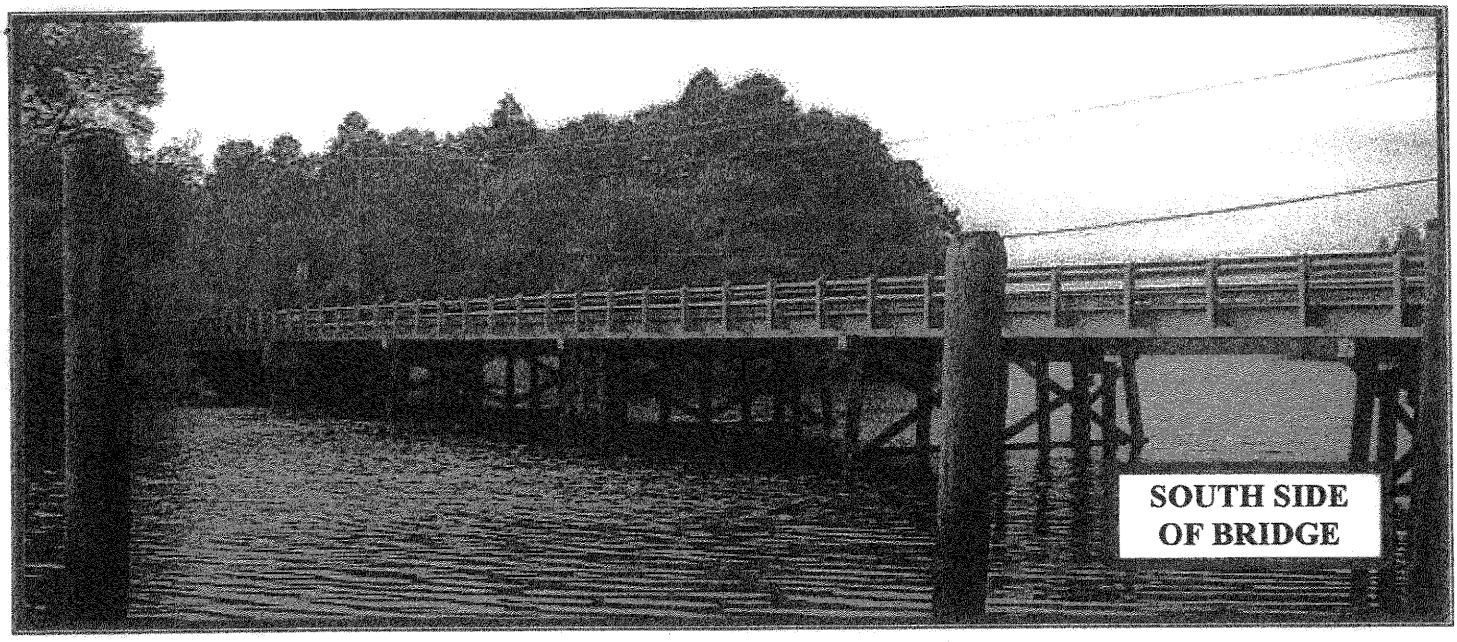
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

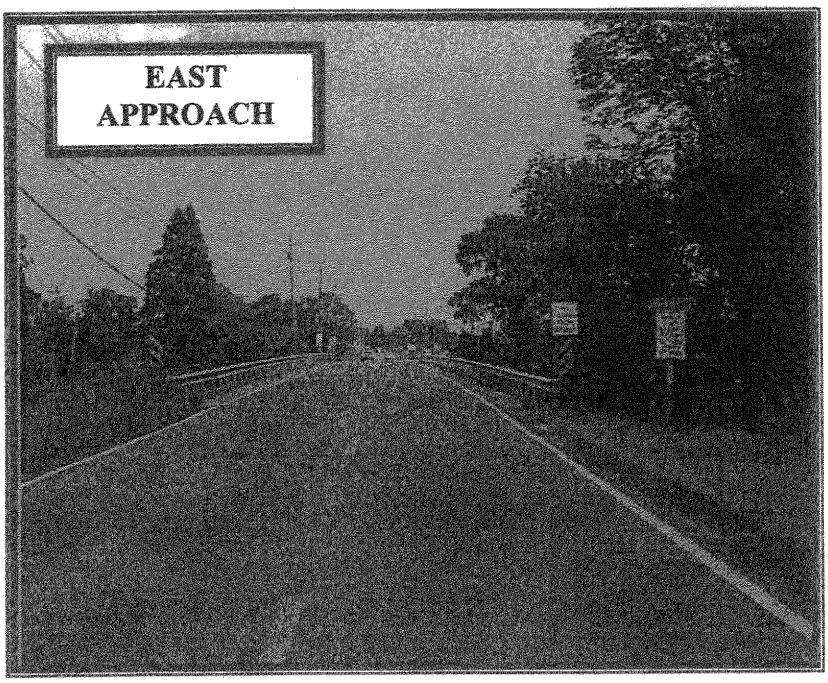
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

BEAUFORT / PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567 OVER TRANTERS CREEK
TIP NO. B-4020

ALTERNATE C

FIGURE 2C

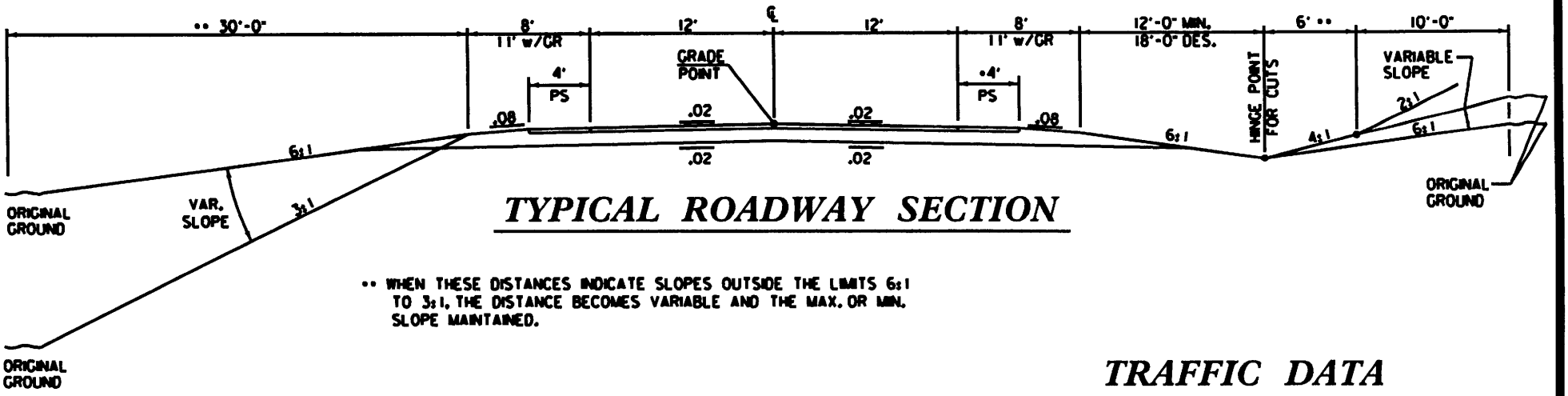




B-4020
Replacement of Bridge No. 8 on SR 1403/SR 1567 Over Tranters Creek
Beaufort/Pitt Counties

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

FIGURE 3



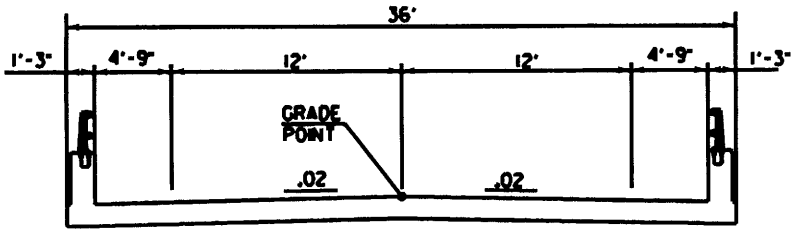
TYPICAL ROADWAY SECTION

•• WHEN THESE DISTANCES INDICATE SLOPES OUTSIDE THE LIMITS 6:1 TO 3:1, THE DISTANCE BECOMES VARIABLE AND THE MAX. OR MIN. SLOPE MAINTAINED.

TRAFFIC DATA

ADT 2002	*4,800*	*LOS B*
ADT 2004	*5,200*	*LOS B*
ADT 2030	*9,300*	*LOS C*
DUAL	*2%*	
TTST	*1%*	

FUNCTIONAL CLASSIFICATION: URBAN LOCAL



TYPICAL BRIDGE SECTION

EXISTING BRIDGE LENGTH IS 308 FT.

• - BICYCLE ROUTE

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPEMENT AND
ENVIRONMENTAL ANALYSIS BRANCH

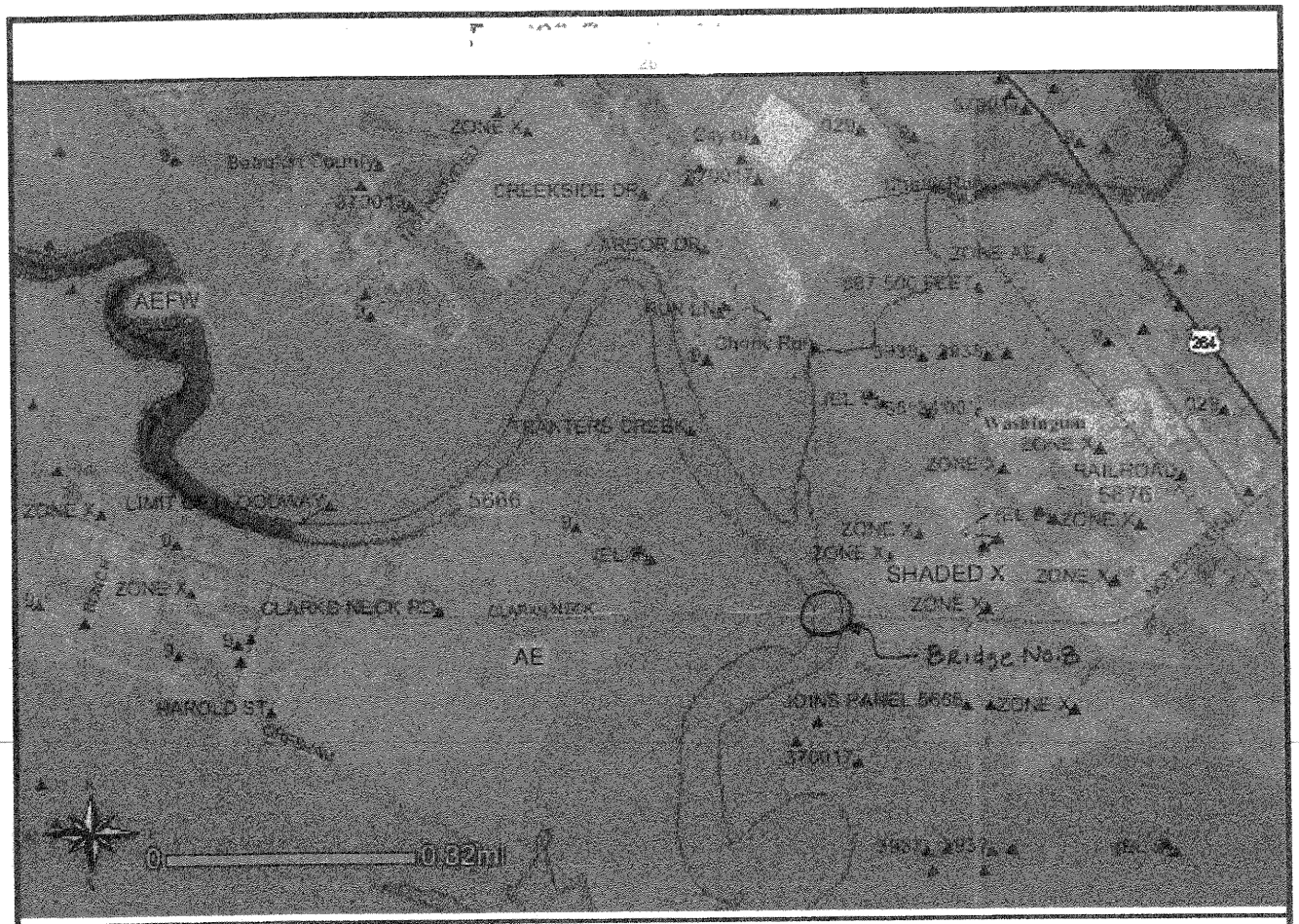
BEAUFORT/PITT COUNTIES

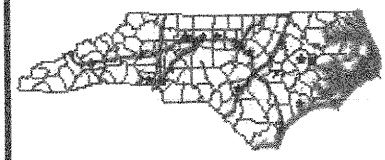
BRIDGE NO. 8 ON SR 1403/SR 1567
OVER TRANTERS CREEK

B-4020

FIGURE 4

...\CE\b4020_pdea_ce_fig4_typ.dgn 01/23/2006 10:31:22 AM





North Carolina Cooperating Technical State

FEMA'S COOPERATING TECHNICAL PARTNER

N.C. Floodplain Mapping Information System

On-Line Mapping Application Provided by the North Carolina Floodplain Mapping Program

Disclaimer: This is not a legally binding (FIRM) Flood Insurance Rate Map and should not be used as such.

Legend

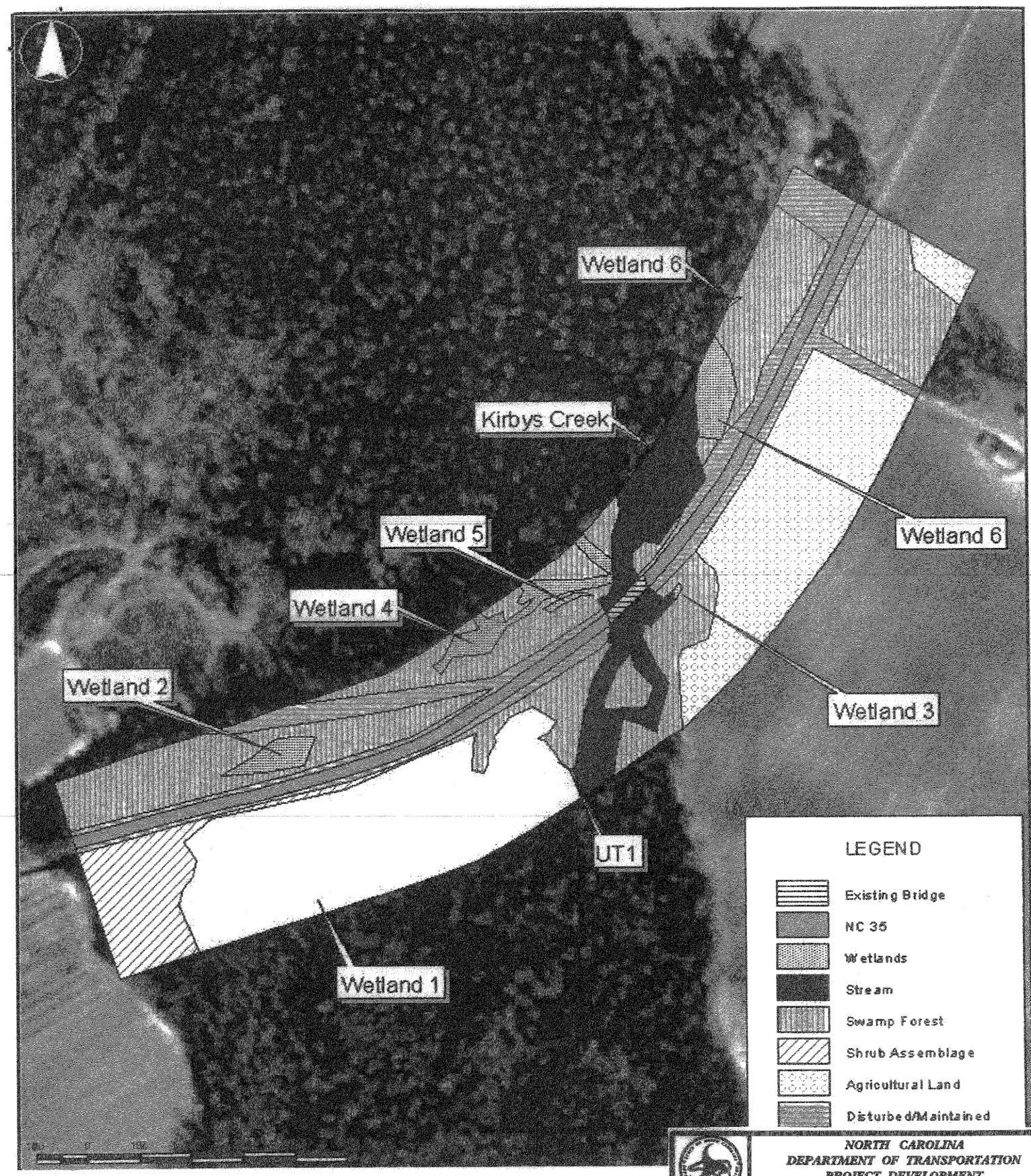
- DFIRM GRID
- DFIRM Available
- Elevation Data Grid
- Annotation Points
- DFIRM Label Leader Lines
- NHS NC-Routes
- NHS US-Routes
- NHS Interstates
- Primary Highways
- Interstate Highways
- US Highways
- NC Highways
- NC Secondary Roads
- Railroads
- Roads
- Rivers and Streams
- Flood Hazard
- 100yr Flooding - No BFE's (A)
- 100yr Flood - Velocity Zone (V or VE)
- 100yr Shallow Flooding (AO or AH)
- 500yr Flooding (X or Shaded X)
- 100yr Flooding - Has BFE's (AE)
- 100yr FloodWay (AEFW)
- Municipal Boundary
- Coastal Sounds
- Water
- County Boundaries
- Aerial Photography

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
& ENVIRONMENTAL ANALYSIS

BEAUFORT /PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567
OVER TRANTERS CREEK

TIP NO. B–4020

FEMA FLOODPLAIN MAP
FIGURE 5



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
& ENVIRONMENTAL ANALYSIS

BEAUFORT /PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567
OVER TRANTERS CREEK

TIP NO. B-4020

NATURAL COMMUNITIES MAP
FIGURE 6

APPENDIX A

Comments received from Federal, State, and Local Agencies

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

January 13, 2004

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

Dear Dr. Thorpe:

This letter is in response to your request for comments from the U.S. Fish and Wildlife Service (Service) on the potential environmental impacts of the proposed replacement of the following nine bridges:

- B-4018, Beaufort County, Bridge No. 104 on NC 32 over Broad Creek
- B-4019, Beaufort County, Bridge No. 103 on NC 32 over Runyon Creek
- B-4020, Beaufort/Pitt County, Bridge No. 8 on SR 1403 over Tranters Creek
- B-4055, Carteret County, Bridge No. 22 on SR 1124 over Branch of Newport River
- B-4132, Halifax County, Bridge No. 97 on NC 561 over Looking Glass Swamp
- B-4172, Lenoir County, Bridge No. 9 on NC 55 over Jericho Run
- B-4212, Northampton County, Bridge No. 77 on NC 35 over Kirby's Creek
- B-4321, Wayne County, Bridge No. 17 on SR 1918 over Carraway Creek
- B-4326, Wilson County, Bridge No. 79 on SR 1001 over Bloomery Swamp

These comments provide scoping information in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667d) and section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

For bridge replacement projects, the Service recommends the following general conservation measures to avoid or minimize environmental impacts to fish and wildlife resources:

1. Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical;

2. If unavoidable wetland impacts are proposed, every effort should be made to identify compensatory mitigation sites in advance. Project planning should include a detailed compensatory mitigation plan for offsetting unavoidable wetland impacts. Opportunities to protect mitigation areas in perpetuity via conservation easements, land trusts or by

other means should be explored at the outset;

3. Off-site detours should be used rather than construction of temporary, on-site bridges. For projects requiring an on-site detour in wetlands or open water, such detours should be aligned along the side of the existing structure which has the least and/or least quality of fish and wildlife habitat. At the completion of construction, the detour area should be entirely removed and the impacted areas be planted with appropriate vegetation, including trees if necessary;

4. Wherever appropriate, construction in sensitive areas should occur outside fish spawning and migratory bird nesting seasons. In waterways that may serve as travel corridors for fish, in-water work should be avoided during moratorium periods associated with migration, spawning and sensitive pre-adult life stages. The general moratorium period for anadromous fish is February 15 - June 30;

5. New bridges should be long enough to allow for sufficient wildlife passage along stream corridors;

6. Best Management Practices (BMP) for Protection of Surface Waters should be implemented;

7. Bridge designs should include provisions for roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from run-off of storm water and pollutants;

8. The bridge designs should not alter the natural stream and stream-bank morphology or impede fish passage. To the extent possible, piers and bents should be placed outside the bank-full width of the stream;

9. Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or flood plain. If spanning the flood plain is not feasible, culverts should be installed in the flood plain portion of the approach to restore some of the hydrological functions of the flood plain and reduce high velocities of flood waters within the affected area.

A list of federally protected species for each county in North Carolina can be found at http://nc-es.fws.gov/es/countyfr.html . Additional information about the habitats in which each species is often found can also be found at http://endangered.fws.gov . Please note, the use of the North Carolina Natural Heritage Program data should not be substituted for actual field surveys if suitable habitat occurs near the project site. If suitable habitat exists in the project area, we recommend that biological surveys for the listed species be conducted and submitted to us for review. All survey documentation must include survey methodologies and results.

We do not have any specific comments for the individual projects, with the exception of the following two:

B-4020, Beaufort/Pitt County - There is a past occurrence of the West Indian manatee (*Trichechus manatus*) less than one mile south of the project area. The Service's **Guidelines For Avoiding Impacts To The West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters** should be implemented to minimize impacts to this species. These guidelines can be found at http://nc-es.fws.gov/es/publications.html .

B-4055, Carteret County - There are known occurrences of red-cockaded woodpeckers (*Picoides borealis*) and rough-leaved loosestrife (*Lysimachia asperulaefolia*) within two and three miles, respectively, of the project area. If habitat for these or any other listed species occurs at the site, appropriate surveys should be conducted. In addition, this site occurs within the Croatan Game Lands area. Impacts to this protected area should be minimized to the maximum extent practical.

We reserve the right to review any federal permits that may be required for this project, at the public notice stage. Therefore, it is important that resource agency coordination occur early in the planning process in order to resolve any conflicts that may arise and minimize delays in project implementation. In addition to the above guidance, we recommend that the environmental documentation for this project include the following in sufficient detail to facilitate a thorough review of the action:

1. A clearly defined and detailed purpose and need for the proposed project;

2. A description of the proposed action with an analysis of all alternatives being considered, including the "no action" alternative;

3. A description of the fish and wildlife resources, and their habitats, within the project impact area that may be directly or indirectly affected;

4. The extent and acreage of waters of the U.S., including wetlands, that are to be impacted by filling, dredging, clearing, ditching, or draining. Acres of wetland impact should be differentiated by habitat type based on the wetland classification scheme of the National Wetlands Inventory (NWI). Wetland boundaries should be determined by using the 1987 Corps of Engineers Wetlands Delineation Manual and verified by the U.S. Army Corps of Engineers;

5. The anticipated environmental impacts, both temporary and permanent, that would be likely to occur as a direct result of the proposed project. The assessment should also include the extent to which the proposed project would result in secondary impacts to natural resources, and how this and similar projects contribute to cumulative adverse effects;

6. Design features and construction techniques which would be employed to avoid or minimize the fragmentation or direct loss of wildlife habitat and waters of the US;

7. If unavoidable wetland impacts are proposed, project planning should include a detailed compensatory mitigation plan for offsetting the unavoidable impacts.

The Service appreciates the opportunity to comment on this project. Please continue to advise us during the progression of the planning process, including your official determination of the impacts of this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520, ext. 32.

Sincerely,

Garland B. Pardue, Ph.D.
Ecological Services Supervisor

cc: Mike Bell, USACE, Washington, NC
Bill Biddlecome, USACE, Washington, NC
John Hennessy, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

May 3, 2006

Phil S. Harris, III, P.E.
North Carolina Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

This letter is in response to your letter of April 26, 2006 which provided the U.S. Fish and Wildlife Service (Service) with the biological determination of the North Carolina Department of Transportation (NCDOT) that the replacement of Bridge No. 8 on SR 1403 over Tranters Creek in Beaufort and Pitt County (TIP No. B-4020) may affect, but is not likely to adversely affect the federally protected bald eagle (*Haliaeetus leucocephalus*) and West Indian manatee (*Trichechus manatus*). In addition, NCDOT has determined that the project will have no effect on the federally protected Kemp's ridley sea turtle (*Lepidochelys manatus*), red-cockaded woodpecker (*Picoides borealis*), Tar River spinymussel (*Elliptio steinstansana*), rough-leaved loosestrife (*Lysimachia asperulaefolia*) and sensitive jointvetch (*Aeschynomene virginica*). These comments are provided in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

According to information provided, an eagle survey was conducted within a one mile radius of the project site on March 30, 2006. No eagles or eagle nests were observed. Based on the survey results, the Service concurs with your determination that the project may affect, but is not likely to adversely affect the bald eagle.

NCDOT has committed to implementing the Service's **GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE: Precautionary Measures for Construction Activities in North Carolina Waters.** Based on this commitment and on all available information, the Service concurs with your determination that the proposed project may affect, but is not likely to adversely affect the West Indian manatee. Please note that the above guidelines were revised in 2003 and can be found at the following website: http://nc-es.fws.gov/mammal/manatee_guidelines.pdf .

Based on the lack of habitat, the Service concurs with your determination that the project will have no effect on the Kemp's ridley sea turtle, red-cockaded woodpecker and Tar River spinymussel.

Based on 2004 survey results provided to the Service via facsimile on May 1, 2006 by Chris Manley of NCDOT, the Service concurs with your determination that the project will have no effect on rough-leaved loosestrife and sensitive jointvetch. We believe that the requirements of section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered in this review; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates the opportunity to review this project. If you have any questions regarding our response, please contact Mr. Gary Jordan at (919) 856-4520 (Ext. 32).

Sincerely,

Pete Benjamin
Ecological Services Supervisor

cc: William Wescott, USACE, Washington, NC
Brian Wrenn, NCDWQ, Raleigh, NC
Travis Wilson, NCWRC, Creedmoor, NC
Chris Militscher, USEPA, Raleigh, NC
John Sullivan, FHwA, Raleigh, NC

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: obr
Phone: (757) 398-6422
Fax: (757) 398-6334
Email: BBrazier@lantd5.uscg.mil

16591
4 APR 05

Mr. Brian Yamamoto
NCDOT – Project Development and
Environmental Analysis Branch
Consulting Engineering Unit
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Yamamoto:

We reviewed the information forwarded by the Ecoscience Corporation by letter dated March 16, 2005, regarding the proposed replacement of two bridges across Tranter's and Runion Creeks in Beaufort County, North Carolina.

Since Tranter's and Runion Creeks are subject to tidal influence, it is considered legally navigable for Bridge Administration purposes. These waterways also meet the criteria for advanced approval waterways outlined in Title 33, Code of Federal Regulations, Section 115.70. Advance approval waterways are those that are navigable in law, but not actually navigated by other than small boats. The Commandant of the Coast Guard has given his advance approval to the construction of bridges across such waterways. Therefore, Coast Guard Bridge Permits are not required for the proposed replacement bridges.

The fact that Coast Guard Bridge Permits are not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of these proposed projects.

If you have any questions regarding this matter, please contact Mr. Bill H. Brazier, at the phone number or address shown above.

Sincerely,

WAVERLY W. GREGORY, JR.
Chief, Bridge Administration Branch
By direction of the Commander
Fifth Coast Guard District

Copy: Mr. Alexander P. (Sandy) Smith, Senior Project Manager, Ecoscience Corporation

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

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

Office of Archives and History
Division of Historical Resources
David Brook, Director

July 15, 2005

MEMORANDUM

TO: Gregory J. Thorpe, Ph.D., Director
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: Peter Sandbeck pbg for Peter Sandbeck

SUBJECT: Bridge Group 50, Bridge 8, SR 1403 over Tranters Creek
B-4020, Beaufort and Pitt Counties, ER 04-0104

Our memorandum of February 18, 2004 concerning this project contained conflicting recommendations with regard to archaeological resources. We apologize for the confusion and would like to clarify our comments.

There are no known archaeological sites within the proposed project area. Based on our present knowledge of the area, it is unlikely that any archaeological resources, which may be eligible for inclusion in the National Register of Historic Places, will be affected by the project construction. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

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, please 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: Paul Mohler
NC DOT

B-4020

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

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

Office of Archives and History
Division of Historical Resources
David Brook, Director

August 23, 2004

MEMORANDUM

TO: Gregory Thorpe, Ph.D., Director
Project Development and Environmental Analysis Branch
NCDOT Division of Highways

FROM: Peter B. Sandbeck *for Peter Sandbeck*

SUBJECT: Bridge Replacement of Bridge No. 8 on SR 1403/SR1567 over Tranters Creek, WBS Project # 33387.1.1, Federal Aid # BRSTP-1403 (4), TIP# B-4020, Beaufort County, ER 04-0104

Thank you for your letter of June 16, 2004, transmitting Historic Architectural Resources Survey Report for the above project.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following property is eligible for the National Register of Historic Places under the criterion cited:

> Singleton Primitive Baptist Church, north side of Secondary Road 1403, approximately five miles west of town, is eligible for the National Register under Criterion C for architecture. It is a significant and intact example of a nineteenth-century Primitive Baptist house of worship. The property meets criteria considerations for moved properties because it is primarily significant for its architectural value and has not been compromised by the move from its original location. We also concur with the proposed National Register boundary as described and delineated in the survey report.

For purposes of compliance with Section 106 of the National Historic Preservation Act, we concur that the following property is not eligible for listing in the National Register of Historic Places:

> Bridge No. 8 linking SR 1403 to SR 1567 is not eligible for the National Register because it is a replacement to an earlier 1935 bridge. During the 1973 rebuilding, the earlier bridge was nearly eradicated and is now a common steel stringer bridge.

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.

PBS:w

cc: Mary Pope Furr

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

INTEROFFICE MEMORANDUM

TO: Elmo Vance, PE

FROM: Penne Sandbeck, Historic Architecture/PDEA

SUBJECT: B-4020 (Replace Bridge No. 8 on SR1403/SR 1567), Beaufort County

DATE: July 1, 2004

CC: Project File
Sarah McBride, NC-HPO

Attached is a signed concurrence form stating NCDOT and NC-HPO's concurrence that:

- There are no effects on the National Register-eligible property (Singleton Primitive Baptist Church) located within the project's area of potential effect.

Since there are no historic properties affected by the proposed project, compliance with Section 106 of the National Historic Preservation Act is complete. ***Please notify us in writing immediately*** should the scope of this project change. A change in scope may necessitate a new survey of the APE.

Please also make sure that this copy of the signed concurrence form is attached in the Environmental Document.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
OFFICE OF HUMAN ENVIRONMENT
1583 MAIL SERVICE CENTER
RALEIGH, NC 27699-1583

TELEPHONE: 919-715-1500
FAX: 919-715-1522
WEBSITE: WWW.NCDOT.ORG

LOCATION:
PARKER LINCOLN BUILDING
2728 CAPITAL BOULEVARD, SUITE 168
RALEIGH, NC 27604

Federal Aid # **BRZ-1403 (4)** *TIP #B-4020* *County*: **Beaufort**

CONCURRENCE FORM FOR ASSESSMENT OF EFFECTS

Project Description: Replace Bridge No. 8 on SR 1403/SR 1567 over Tranters Creek, Beaufort County

On June 28, 2004, representatives of the

- ☒ North Carolina Department of Transportation (NCDOT)
- ☒ Federal Highway Administration (FHWA)
- ☒ North Carolina State Historic Preservation Office (HPO)
- ☐ Other

Reviewed the subject project and agreed

- ☐ There are no effects on the National Register-listed property/properties located within the project's area of potential effect and listed on the reverse.
- ☒ There are no effects on the National Register-eligible property/properties located within the project's area of potential effect and listed on the reverse.
- ☐ There is an effect on the National Register-listed property/properties located within the project's area of potential effect. The property/properties and the effect(s) are listed on the reverse.
- ☐ There is an effect on the National Register-eligible property/properties located within the project's area of potential effect. The property/properties and effect(s) are listed on the reverse.

Signed:

Renee Sandbeck 6-28-2004
Representative, NCDOT Date

Michael C. Dawson 6/28/04
FHWA, for the Division Administrator, or other Federal Agency Date

Jennifer D. McGee 6/28/04
Representative, HPO Date

David Brook BJS 6-30-04
State Historic Preservation Officer Date

Federal Aid # **BRZ-1403 (4)** *TIP #* **B-4020** *County*: Beaufort

Properties within the area of potential effect for which there is no effect. Indicate if property is National Register-listed (NR) or determined eligible (DE).

Singleton Primitive Baptist Church (DE)

Properties within the area of potential effect for which there is an effect. Indicate property status (NR or DE) and describe the effect.

Reason(s) why the effect is not adverse (if applicable).

Initialed: NCDOT JPSS FHWA MCK HPO SDM

Greg Purvis

From: Steve Sollod [Steve.Sollod@ncmail.net]
Sent: Friday, June 18, 2004 2:32 PM
To: gthorpe@dot.state.nc.us
Cc: bgoodwin@dot.state.nc.us; kcapps@dot.state.nc.us; bill arrington; Doug Huggett
Subject: [Fwd: Scoping Request]

Scoping Request
(2.33 KB)

Based on a preliminary evaluation by Bill Arrington, DCM's Field Representative and Transportation Project Coordinator for NCDOT's Divisions 2 & 3, the following projects will impact CAMA Areas of Environmental Concern (AEC) and will require CAMA permits.

B-4018, Bridge No. 104 on NC 32 over Broad Creek, Beaufort County
B-4019, Bridge No. 103 on NC 32 over Runyon Creek, Beaufort County
B-4020, Bridge No. 8 on SR 1403 over Tranters Creek, Beaufort/Pitt County
B-4055, Bridge No. 22 on SR 1124 over Branch of Newport River, Carteret County

The specific type of permit and specific permit conditions will depend on design of the project, methods of construction, and impacts to AECs. It is recommended that NCDOT allow sufficient time to coordinate with DCM.

Be advised, DCM did not receive the NCDOT January 8, 2004 letter requesting comments on the potential impacts of the proposed projects. We apologize for the delayed response. Please ensure future requests for comments on potential environmental impacts are also directed to DCM.

Please contact me at 733-2293 X 240 for questions or comments.

Steve Sollod

--
Steve Sollod
Transportation Project Coordinator
NC Division of Coastal Management
1638 Mail Service Center
Raleigh, NC 27699-1638
(919) 733-2293 X240 Phone
(919) 733-1495 FAX

North Carolina Wildlife Resources Commission

Charles R. Fullwood, Executive Director

MEMORANDUM

TO: Elmo Vance
Project Development and Environmental Analysis Branch, NCDOT

FROM: Travis Wilson, Highway Project Coordinator
Habitat Conservation Program

DATE: February 5, 2004

SUBJECT: NCDOT Bridge Replacements in Beaufort, Carteret, Halifax, Lenoir, Northampton, Wayne, and Wilson counties. TIP Nos. B-4018, B-4019, B-4020, B-4055, B-4132, B-4172, B-4212, B-4321, and B-4326.

Biologists with the N. C. Wildlife Resources Commission (NCWRC) have reviewed the information provided and have the following preliminary comments on the subject project. Our comments are provided in accordance with provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

Our standard recommendations for bridge replacement projects of this scope are as follows:

1. We generally prefer spanning structures. Spanning structures usually do not require work within the stream and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges allows for human and wildlife passage beneath the structure, does not block fish passage, and does not block navigation by canoeists and boaters.

2. Bridge deck drains should not discharge directly into the stream.

3. Live concrete should not be allowed to contact the water in or entering into the stream.

4. If possible, bridge supports (bents) should not be placed in the stream.

Mailing Address: Division of Inland Fisheries • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: 919/ 733-3633 ext. 281 • Fax: (919) 715-7643

5. If temporary access roads or detours are constructed, they should be removed back to original ground elevations immediately upon the completion of the project. Disturbed areas should be seeded or mulched to stabilize the soil and native tree species should be planted with a spacing of not more than 10'x10'. If possible, when using temporary structures the area should be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact, allows the area to revegetate naturally and minimizes disturbed soil.

6. A clear bank (riprap free) area of at least 10 feet should remain on each side of the steam underneath the bridge.

7. In trout waters, the N.C. Wildlife Resources Commission reviews all U.S. Army Corps of Engineers nationwide and general '404' permits. We have the option of requesting additional measures to protect trout and trout habitat and we can recommend that the project require an individual '404' permit.

8. In streams that contain threatened or endangered species, NCDOT biologist ~~Mr. Hal Bain~~ should be notified. Special measures to protect these sensitive species may be required. NCDOT should also contact the U.S. Fish and Wildlife Service for information on requirements of the Endangered Species Act as it relates to the project. NO LONGER WITH DOT

9. In streams that are used by anadromous fish, the NCDOT official policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage (May 12, 1997)" should be followed.

10. In areas with significant fisheries for sunfish, seasonal exclusions may also be recommended.

11. Sedimentation and erosion control measures sufficient to protect aquatic resources must be implemented prior to any ground disturbing activities. Structures should be maintained regularly, especially following rainfall events.

12. Temporary or permanent herbaceous vegetation should be planted on all bare soil within 15 days of ground disturbing activities to provide long-term erosion control.

13. All work in or adjacent to stream waters should be conducted in a dry work area. Sandbags, rock berms, cofferdams, or other diversion structures should be used where possible to prevent excavation in flowing water.

14. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams.

15. Only clean, sediment-free rock should be used as temporary fill (causeways), and should be removed without excessive disturbance of the natural stream bottom when construction is completed.

16. During subsurface investigations, equipment should be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

If corrugated metal pipe arches, reinforced concrete pipes, or concrete box culverts are used:

1. The culvert must be designed to allow for aquatic life and fish passage. Generally, the culvert or pipe invert should be buried at least 1 foot below the natural streambed (measured from the natural thalweg depth). If multiple barrels are required, barrels other than the base flow barrel(s) should be placed on or near stream bankfull or floodplain bench elevation (similar to Lyonsfield design). These should be reconnected to floodplain benches as appropriate. This may be accomplished by utilizing sills on the upstream and downstream ends to restrict or divert flow to the base flow barrel(s). Silled barrels should be filled with sediment so as not to cause noxious or mosquito breeding conditions. Sufficient water depth should be provided in the base flow barrel(s) during low flows to accommodate fish movement. If culverts are longer than 40-50 linear feet, alternating or notched baffles should be installed in a manner that mimics existing stream pattern. This should enhance aquatic life passage: 1) by depositing sediments in the barrel, 2) by maintaining channel depth and flow regimes, and 3) by providing resting places for fish and other aquatic organisms. In essence, base flow barrel(s) should provide a continuum of water depth and channel width without substantial modifications of velocity.

2. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage.

3. Culverts or pipes should be situated along the existing channel alignment whenever possible to avoid channel realignment. Widening the stream channel must be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

4. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be professionally designed, sized, and installed.

In most cases, we prefer the replacement of the existing structure at the same location with road closure. If road closure is not feasible, a temporary detour should be designed and located to avoid wetland impacts, minimize the need for clearing and to avoid destabilizing stream banks. If the structure will be on a new alignment, the old structure should be removed and the approach fills removed from the 100-year floodplain. Approach fills should be removed down to the natural ground elevation. The area should be stabilized with grass and planted with native tree species. If the area reclaimed was previously wetlands, NCDOT should restore the area to wetlands. If successful, the site may be utilized as mitigation for the subject project or other projects in the watershed.

Project specific comments:

1. B-4018, Beaufort County, Bridge No. 104 over Broad Creek on NC 32. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Broad Creek, including striped bass, American shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

2. B-4019, Beaufort County, Bridge No. 103 over Runyon Creek on NC 32. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Runyon Creek, including striped bass, American shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

3. B-4020, Beaufort County, Bridge No. 8 over Tranter's Creek on SR 1403. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this portion of Tranter's Creek, including striped bass, American shad, river herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

4. B-4055, Carteret County, Bridge No. 22 over Branch of Newport River on SR 1124. We recommend replacing this bridge with a bridge. Adult and juvenile anadromous species are found in this area, including striped bass, American shad, blueback herring, and hickory shad. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to September 30. Standard recommendations apply.

5. B-4132, Halifax County, Bridge No. 97 over Looking Glass Swamp on NC 561. We recommend replacing this bridge with a bridge. Anadromous species are found in this portion of Looking Glass Swamp, including alewife and blueback herring. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15. Standard recommendations apply.

6. B-4172, Lenoir County, Bridge No. 9 over Jericho Run on NC 55. We recommend replacing this bridge with a bridge. Standard recommendations apply.

7. B-4212, Northampton County, Bridge No. 77 over Kirby's Creek on NC 35. We recommend replacing this bridge with a bridge. Anadromous species are found in this portion of Kirby's Creek, including alewife and blueback herring. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15. Standard recommendations apply.

8. B-4321, Wayne County, Bridge No. 17 over Caraway Creek on SR 1918. We recommend replacing this bridge with a bridge. Anadromous species are found in this portion of Caraway Creek, including alewife and blueback herring. NCDOT should follow all stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15. Standard recommendations apply.

9. B-4326, Wilson County, Bridge No. 79 over Bloomery Swamp on SR 1001. We recommend replacing this bridge with a bridge. Standard recommendations apply.

NCDOT should routinely minimize adverse impacts to fish and wildlife resources in the vicinity of bridge replacements. Restoring previously disturbed floodplain benches should narrow and deepen streams previously widened and shallowed during initial bridge installation. NCDOT should install and maintain sedimentation control measures throughout the life of the project and prevent wet concrete from contacting water in or entering into these streams. Replacement of bridges with spanning structures of some type, as opposed to pipe or box

culverts, is recommended in most cases. Spanning structures allow wildlife passage along streambanks and reduce habitat fragmentation.

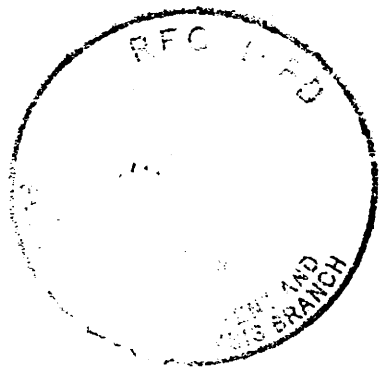
If you need further assistance or information on NCWRC concerns regarding bridge replacements, please contact me at (919) 528-9886. Thank you for the opportunity to review and comment on these projects.

Cc: Gary Jordan, U.S. Fish and Wildlife Service, Raleigh

Karen Taylor

City of Washington

P. O. Box 1988, Washington, NC 27889-1988



January 26, 2005

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

Re: B-4020, Beaufort/Pitt County, Replace Bridge over Tranters' Creek on SR 1403

Dear Dr. Thorpe:

Sorry, long in coming. After review of proposed Alternate A, there are no objections to your proposal.

Thank you for information.

Sincerely,

Steven L. Harrell

Steven L. Harrell
City Manager

Pitt County Schools

Department of Transportation
901 Mall Drive
Greenville, North Carolina 27834

Office: (252) 756-1424
Fax:(252) 756-8243

January 14, 2004

Mr. Elmo Vance
NC Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh, NC 27699-1548

Reference:B-4020, Beaufort/Pitt County, Replace Bridge No. 8 on SR 1403 over Tranters Creek

Dear Mr. Vance:

Because this is at the county line of Beaufort/Pitt County there is little beneficial or adverse impact on our operation from this project. It would be unusual for a Pitt County School bus to cross the county line on a regular bases.

If you have any questions about this correspondence, please give me a call at (252) 756-1424.

Cordially,

Joey Weathington
Transportation Director
Pitt County Schools

APPENDIX B

Programmatic Section 4(f) Evaluation

NORTH CAROLINA DIVISION
FINAL NATIONWIDE SECTION 4(f) EVALUATION AND APPROVAL
FOR FEDERALLY-AIDED HIGHWAY PROJECTS WITH MINOR INVOLVEMENT
WITH PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
WATERFOWL REFUGES

F. A. Project: **BRZ-1403(4)**

State Project **33387.1.1**

T. I. P. No. **B-4020**

Description:

Replacement of Bridge No. 8 on SR 1403/SR 1567 Over Tranters Creek in Beaufort/Pitt Counties

		Yes	No
1.	Is the proposed project designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same location?	X	☐
2.	Is the project on new location?	☐	X
3.	Is the Section 4(f) land a publicly owned public park, recreation land, or wildlife and waterfowl refuge located adjacent to the existing highway?	X	☐
4.	Does the amount and location of the land to be used impair the use of the remaining Section 4(f) land, in whole or in part, for its intended purpose? (See chart below)	☐	X

Total size of section 4(f) site Maximum to be acquired

less than 10 acres	.....	10 percent of site
10 acres-100 acres	.....	1 acre
greater than 100 acres	.....	1 percent of site

		Yes	No
5.	Do the proximity impacts of the project (e.g., noise, air and water pollution, wildlife and habitat effects, aesthetic values) on the remaining Section 4(f) land impair the use of such land for its intended purpose?	☐	X
6.	Do the officials having jurisdiction over the Section 4(f) land agree, in writing, with the assessment of the impacts of the proposed project on, and the proposed mitigation for, the Section 4(f) lands?	X	☐
7.	Does the project use land from a site purchased or improved with funds under the Land and Water Conservation Act (Section 6(f)), the Federal Aid in Fish Restoration Act (Dingell-Johnson Act), the Federal Aid in Wildlife Act (Pittman-Robertson Act), or similar laws, or are the lands otherwise encumbered with a Federal interest (e.g., former Federal surplus property)?	☐	X
8.	If the project involves lands described in Item 7 above, does the appropriate Federal Agency object to the land conversion or transfer?	☐	X
9.	Does the project require preparation of an EIS?	☐	X

ALTERNATIVES CONSIDERED AND FOUND NOT TO BE FEASIBLE AND PRUDENT

	Yes	No
The following alternatives were evaluated and found not to be feasible and prudent:	X	☐

1. Do-nothing.

Does the "do nothing" alternative:

	(a) correct capacity deficiencies?	☐	X
or	(b) correct existing safety hazards?	☐	X

or (c) correct deteriorated conditions?	☐	X
and (d) create costs, unusual problems, or impacts of extraordinary measure?	X	☐

2. Improvement of the highway without using the adjacent public park, recreational land, or wildlife waterfowl refuge.	X	☐
(a) Have minor alignment shifts, changes in standards, use of retaining walls, etc., or traffic management measures been evaluated?	X	☐

(b) The items in 2(a) would result in (circle, as appropriate)

(i) substantial adverse community impact

or (ii) substantial increased costs

or (iii) unique engineering, transportation, maintenance, or safety problems

or (iv) substantial social, environmental, or economic impacts

or (v) a project which does not meet the need

and (vi) impacts, costs, or problems which are extraordinary magnitude

	Yes	No
3. Build an improved facility on new location without using the public park, recreational land, or wildlife and waterfowl refuge. (This would be a localized "run around.")	X	☐

(a) An alternate on new location would result in: (circle, as appropriate)

(i) a project which does not solve the existing problems

or (ii) substantial social, environmental, or economic impacts

or (iii) a substantial increase in project cost or engineering difficulties

and (iv) such impacts, costs, or difficulties of truly unusual or unique or extraordinary magnitude

MINIMIZATION OF HARM

	Yes	No
1. The project includes all possible planning to minimize harm.	X	☐

2. Measures to minimize harm include the following:

(circle those which are appropriate)

a. Replacement of lands used with lands of reasonably equivalent usefulness and location and of at least comparable value.

b. Replacement of facilities impacted by the project including sidewalks, paths, benches, lights, trees, and other facilities.

c. Restoration and landscaping of disturbed areas.

d. Incorporation of design features and habitat features, where necessary, to reduce or minimize impacts to the Section 4(f) property.

e. Payment of the fair market value of the land and improvements taken or improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.

f. Additional or alternative mitigation measures as determined necessary based on consultation with the

based on consultation with the officials having jurisdiction over the parkland, recreation area, or wildlife or waterfowl refuge.

3. A discussion of specific mitigation measures is provided as follows:

Note: Any response in a box requires additional information prior to approval. Consult Nationwide 4(f) evaluation.

COORDINATION

The proposed project has been coordinated with the following (attach correspondence):

(a) Officials having jurisdiction over the Section 4(f) Land
(b) Local/State/Federal Agencies

c. US Coast Guard (for bridges requiring bridge permits)
d. DOI, if Section 6(f) lands are involved

SUMMARY AND APPROVAL

The project meets all criteria included in the programmatic 4(f) evaluation approved on December 23, 1986.

All required alternatives have been evaluated and the findings made are clearly applicable to this project. There are no feasible or prudent alternatives which avoid use of the Section 4(f) land.

The project includes all possible planning to minimize harm, and there are assurances that the measures to minimize harm will be incorporated in the project.

All appropriate coordination has been successfully completed.

Approved:

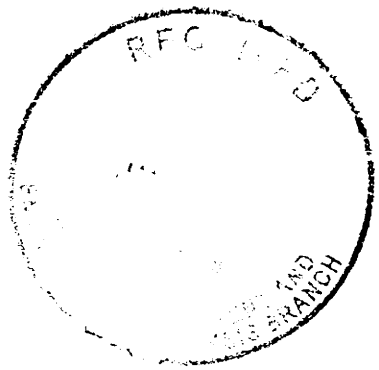
8.10.06 for _____
Date Manager, Project Development and Environmental Analysis Branch
NCDOT

8/18/06 _____
Date Division Administrator, FHWA

Karen Taylor

City of Washington

P. O. Box 1988, Washington, NC 27889-1988



January 26, 2005

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

Re: B-4020, Beaufort/Pitt County, Replace Bridge over Tranters' Creek on SR 1403

Dear Dr. Thorpe:

Sorry, long in coming. After review of proposed Alternate A, there are no objections to your proposal.

Thank you for information.

Sincerely,

Steven L. Harrell

Steven L. Harrell
City Manager

102 E. Second St. • Telephone 252-975-9300 TDD 1-800-735-2962 • Fax 252-946-1965

APPENDIX C

Newsletter
Official Workshop Announcement
Workshop Handout

NEWSLETTER

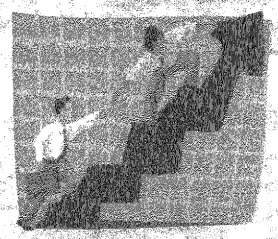
Beaufort/Pitt County
For Replacement of Bridge No. 8
Over Tranters Creek On SR 1403/SR 1567

TIP Project No. B-4020

Citizens Informational Workshop

Monday February 21, 2005, from 4:30 PM to 7:30 PM, at Eastern Elementary School in Washington

This newsletter is published by the North Carolina Department of Transportation *(NCDOT)* to inform concerned citizens of an ***Informational Workshop*** concerning the proposed replacement and road closure of Bridge No. 8 on SR 1403/SR 1567 over Tranters Creek (TIP Project No. B-4020). This newsletter gives an overview of the steps in the project development process and presents the bridge replacement alternatives evaluated.



STEPS TO SUCCESS

Step 6 Environmental Document
Step 5 **Public Involvement**
Step 4 Selection of Preferred Alternative
Step 3 Environmental Studies
Step 2 Alternatives Development
Step 1 Project Initiation/Scoping

THE PROJECT DEVELOPMENT PROCESS

During **Step 1** of the project development process, information was collected on the existing human and natural environments. This information was used to identify preliminary alternatives for replacing Bridge No. 8. In **Step 2**, the preliminary alternatives were evaluated and two "build" alternatives were selected for detailed environmental studies. **Steps 3 and 4** involved conducting the detailed environmental studies for the "build" alternatives and selecting a preferred alternative. The build alternatives were:

Alternate A, replacing the existing bridge at the existing location, while maintaining traffic by an off-site detour route is the preferred alternate. The off-site detour is along SR 1565 (Grimesland Bridge Road) and US 264, approximately 6.3 miles in length. Alternate A was selected because of the comparatively lower construction cost, lower environmental impacts, and lesser construction time associated with it.

Alternate B replaces the bridge on existing alignment. During construction, traffic will be maintained by an on-site temporary detour structure located south of the existing bridge. Alternate B was not chosen because it has comparatively higher natural environment impacts and construction cost.

The NCDOT is aware that citizens living in the proposed project area want to know the potential effects of the project on their homes and businesses. However, exact information is not available at this stage in the planning process. Additional design work will be performed before the actual right-of-way limits can be established. This newsletter is to inform the public of the replacement of Bridge No. 8 and solicit your input on the project.

Planning and environmental studies for this project are in progress. The Federal Categorical Exclusion (CE) is scheduled for approval in February 2005. The CE will address the potential impacts of the proposed bridge replacement on the human and natural environments and will include recommended design criteria for the project. Input received from the public will be included in the decision making process.

A Citizens Informational Workshop will be held on Monday February 21, 2005 at Eastern Elementary School, 947 Hudnell Street in Washington. The preferred alternate will be displayed at the Citizens Informational Workshop for ***your*** review and comments. Following the informational workshop and evaluation of the comments, an environmental document will be published.

NEWSLETTER

Public involvement is an important part of the project planning process. The North Carolina Department of Transportation is committed to ensuring all issues of concern to the public are addressed and considered. We encourage you to attend the Citizens Informational Workshop and discuss your views with the Project study team. If you are unable to attend, you may send your comments to one of the addresses listed below. **Your comments are important to us!**

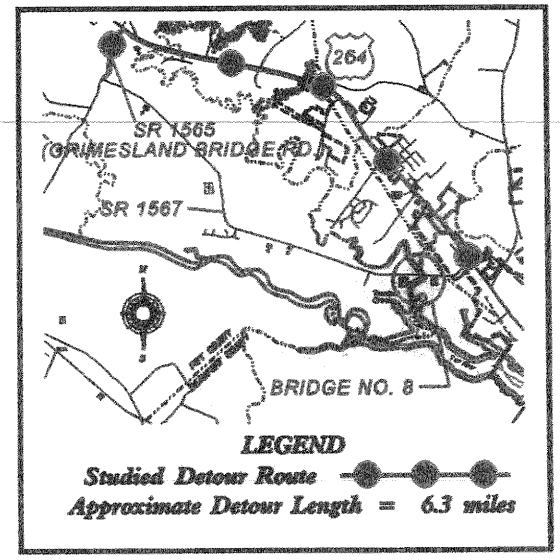
Ms. Karen B. Taylor, P.E.
NCDOT - PD&EA Branch
1548 Mail Service Center
Raleigh, North Carolina 27699-1548
(919) 733-7844, ext. 223
email:kbtaylor@dot.state.nc.us

or Mr. Greg Purvis, P.E.
Wang Engineering
15200 Weston Parkway, Suite 101
Cary, North Carolina 27513
(919) 677-9544
email:gpurvis@wang-engineering.com

If you have transportation questions on other projects, call the NCDOT Customer Service Office toll-free at 1-877-DOT-4YOU.

You are invited to a
Citizen Informational Workshop
Monday February 21, 2005
From 4:30 pm to 7:30 pm
At
Eastern Elementary School
947 Hudnell Street
in
Washington

BEAUFORT/PITT COUNTY
Replacement of Bridge No. 8
Over Tranters Creek
On SR 1403/SR 1567
TIP PROJECT NO. B-4020



North Carolina Department of Transportation
Project Development and Environmental Analysis
1548 Mail Service Center
Raleigh NC 27699-1548

NOTICE OF A CITIZENS INFORMATIONAL WORKSHOP
FOR THE REPLACEMENT OF BRIDGE NO.103 ON NC 32 OVER RUNYON CREEK AND BRIDGE NO.8 ON SR 1403/SR 1567 OVER TRANTERS CREEK

WBS Nos.33386.1.1 & 33387.1.1 B-4019 & B-4020 Beaufort/Pitt Counties

The North Carolina Department of Transportation (NCDOT) will hold the above Citizens Informational Workshop on Monday February 21, 2005 between the hours of 4:30 p.m. and 7:30 p.m. in the Cafeteria of Eastern Elementary School located at 947 Hudnell Street in Washington, NC.

The purpose of this workshop is for NCDOT representatives to provide information, answer questions, and accept written comments regarding this project. Interested citizens may attend anytime during the above mentioned hours. NCDOT proposes improvements to replace bridge nos. 8 and 103 over the Tranters and Runyon Creeks.

Anyone desiring additional information may contact Karen Taylor, 1548 Mail Service Center, Raleigh, NC 27699-1548, by phone at (919) 733-7844 ext. 223, fax at (919) 733-9794, or E-mail at kbtaylor@dot.state.nc.us

NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in this workshop to comply with the Americans with Disabilities Act. To receive special services, please contact Ms. Taylor as early as possible so that arrangements can be made.

NOTICE OF A CITIZENS INFORMATIONAL WORKSHOP
FOR THE REPLACEMENT OF BRIDGE NO.103 ON NC 32 OVER RUNYON CREEK AND BRIDGE NO.8 ON SR 1403/SR 1567 OVER TRANTERS CREEK

WBS Nos.33386.1.1 & 33387.1.1 B-4019 & B-4020 Beaufort/Pitt Counties

The North Carolina Department of Transportation (NCDOT) will hold the above Citizens Informational Workshop on Monday February 21, 2005 between the hours of 4:30 p.m. and 7:30 p.m. in the Cafeteria of Eastern Elementary School located at 947 Hudnell Street in Washington, NC.

The purpose of this workshop is for NCDOT representatives to provide information, answer questions, and accept written comments regarding this project. Interested citizens may attend anytime during the above mentioned hours. NCDOT proposes improvements to replace bridge nos. 8 and 103 over the Tranters and Runyon Creeks.

Anyone desiring additional information may contact Karen Taylor, 1548 Mail Service Center, Raleigh, NC 27699-1548, by phone at (919) 733-7844 ext. 223, fax at (919) 733-9794, or E-mail at kbtaylor@dot.state.nc.us

NCDOT will provide auxiliary aids and services for disabled persons who wish to participate in this workshop to comply with the Americans with Disabilities Act. To receive special services, please contact Ms. Taylor as early as possible so that arrangements can be made.

PUBLIC INVOLVEMENT AND THE PROJECT PLANNING PROCESS

ESTIMATED TRAFFIC VOLUMES

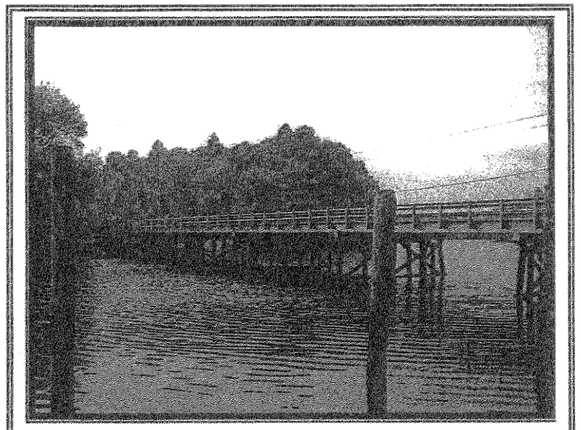
The estimated 2004 average daily traffic volume is 5,200 vehicles per day (vpd). The projected traffic volume is expected to increase to 9,300 vpd by the design year 2030.

PROJECT PLANNING

The planning and environmental studies for this highway project will comply with the National Environmental Policy Act (NEPA). The type of document published for this project will be a Federal Categorical Exclusion (CE). This document will fully discuss the purpose and need for the proposed improvements, evaluate alternatives, and analyze the project's impacts on both the human and natural environment.

Some topics that the document will address include:

- Neighborhood and community impacts
- Efficiency and safety of travel
- Relocation of homes and businesses
- Economy of project area
- Historic properties and sites
- Wetlands
- Endangered species
- Wildlife and plant communities
- Water quality
- Floodplains
- Farmland and land use plans of project area
- Hazardous materials involvement
- Traffic noise and air quality



CURRENT STATUS

Planning and environmental studies for this project are in progress. The Federal Categorical Exclusion (CE) is scheduled for approval in February 2005. The CE will address the potential impacts of the proposed bridge replacement on the human and natural environments and will include recommended design criteria for the project. Input received from the public will be included in the decision making process.

PUBLIC INVOLVEMENT IN PROJECT PLANNING

Public involvement is an integral part of NCDOT's project planning process. The concerns of citizens and interest groups are always considered during project planning studies. Often, additional project alternatives are studied, or existing alternatives changed, based on comments received from the public.

If you have comments concerning the NCDOT or questions regarding other projects, you may call the NCDOT Customer Service Department toll-free at **1-877-DOT-4YOU.**

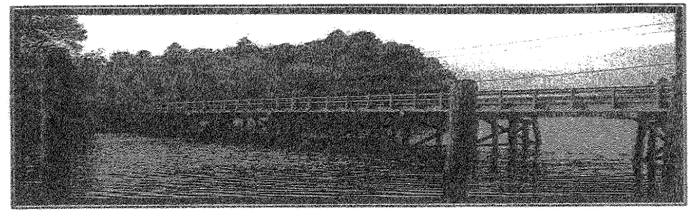
If additional information is needed or you would like to submit comments after the workshop, please address your requests and comments to:

Ms. Karen B. Taylor, P.E.
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548
EMAIL: kbtaylor@dot.state.nc.us
TELEPHONE: (919)733-7844, ext. 223

Mr. Greg Purvis, P.E.
Wang Engineering
15200 Weston Parkway Suite 101
Cary, NC 27513
EMAIL: gpurvis@wang-engineering.com
TELEPHONE: (919)677-9544

Monday February 21, 2005, from 4:30 PM to 7:30 PM, at Eastern Elementary School

Citizens Informational Workshop



Beaufort/Pitt Counties
For Replacement of Bridge No. 8
Over Tranters Creek On SR 1403/SR 1567

TIP Project No. B-4020

The North Carolina Department of Transportation (NCDOT) has begun the engineering and environmental studies for the replacement of Bridge No. 8 on SR 1403/SR 1567 over Tranters Creek. The studies consist of alternative evaluations, preliminary engineering, environmental analysis, and the preparation of an environmental document.

The purpose of this workshop is to review the reasonable and feasible alternates with interested citizens and to receive comments concerning the proposed project. Representatives of the NCDOT are available to answer your questions and discuss the project with you. If you have comments or suggestions about the proposed improvements described in this handout, please inform a representative of the North Carolina Department of Transportation.

The NCDOT is aware that citizens living in the proposed project area want to know the potential effects of the project on their homes and businesses. However, exact information is not available at this stage in the planning process. Additional design work will be performed before the actual right-of-way limits can be established. This workshop is to inform the public of the replacement of Bridge No. 8 and solicit your input on the project.

You are encouraged to view the project maps and displays. Please ask questions if you have any and complete the enclosed comment sheet. We will keep a record of your comments and consider your suggestions concerning the proposed replacement of Bridge No. 8.

PROJECT PURPOSE AND DESCRIPTION

NCDOT's 2004-2010 Transportation Improvement Program (TIP) proposes to replace Bridge No. 8 on SR 1403/SR 1567 over Tranters Creek (see vicinity map). Due to the deteriorated state of the existing structure, improvements are needed for Bridge No. 8 to meet the current NCDOT standards.

Two alternates evaluated for detailed environmental studies are described below.

Alternate A (Preferred) replaces the bridge at the existing location. During construction, traffic will be maintained by an off-site detour route along SR 1565 (Grimesland Bridge Road) and US 264 approximately 6.3 miles in length. Alternate A was selected because of the comparatively lower construction cost, lower environmental impacts, and lesser construction time associated with it.

Alternate B replaces the bridge on existing alignment. During construction, traffic will be maintained by an on-site temporary detour structure located south of the existing bridge. Alternate B was not chosen because it has comparatively higher natural environment impacts and construction cost.

PROJECT SCHEDULE AND COST ESTIMATE

	TIP Schedule	Estimated Cost	
		Alternate A	**Alternate B**
Right of Way	February 2006	$ 84,400	$ 103,300
Construction	February 2007	$ 1,700,000	$ 2,250,000
Total Estimated Cost		$ 1,784,000	$ 2,353,300

NOTE: The schedule and cost estimates are preliminary and subject to change.

-L-
PI Sta 15+70.38
Δ = 3° 39' 25.5" (RT)
D = 0° 26' 22.8"
L = 813.77'
T = 406.02'
R = 13031.37'
DS = 60mph

Sta. 22+22.00 -L-
Begin Bridge
Sta. 21+97.00 -L-
Begin Approach Slab

Sta. 25+62.00 -L-
End Bridge
Sta. 25+87.00 -L-
End Approach Slab

POT Sta. 30+33.30 -L-

END TIP PROJECT B-4020
POT Sta. 29+25.00 -L-

BEGIN TIP PROJECT B-4020
POC Sta. 18+06.56 -L-

PT Sta. 20+86.13 -L-

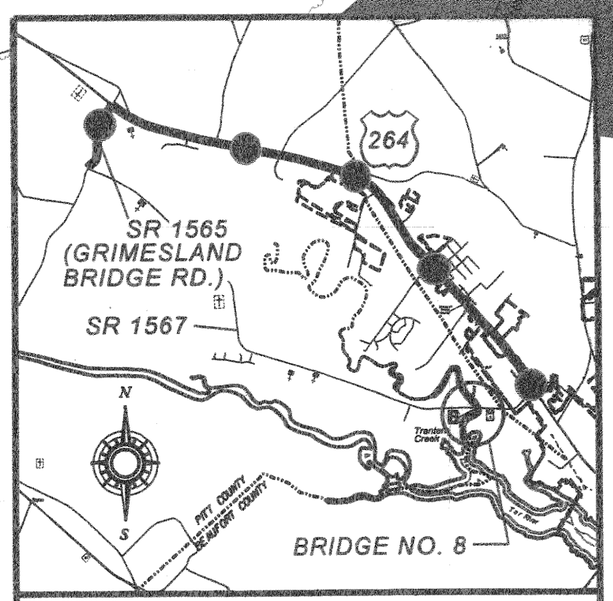
WOODS

BOAT RAMP

50 0 50 100 FEET
SCALE

LEGEND

- BUILDINGS
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- ALL EASEMENTS
- EXISTING ROADWAY
- EXISTING ROADWAY TO BE RESURFACED
- PROPOSED ROADWAY
- PROPOSED STRUCTURES, ISLAND, CURB AND GUTTER
- EXISTING STRUCTURES, ISLAND, CURB AND GUTTER TO BE REMOVED
- LAKES, RIVER, STREAMS, AND PONDS
- 109/208 PRESENT ADT (2001) / FUTURE ADT (2025)



MAP LEGEND

1 0 1 2 MILES
SCALE

Studied Detour Route
Approximate Detour Length = 6.3 miles

ALTERNATE A ESTIMATED TOTAL COST

$1,784,000

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

BEAUFORT / PITT COUNTIES
BRIDGE NO. 8 ON SR 1403/SR 1567 OVER TRANTERS CREEK
TIP NO. B-4020

1 " = 50'

ALTERNATE A (PREFERRED)
FIGURE 2

COMMENT SHEET

Replace Bridge No. 8 on SR 1403/SR 1567
Over Tranters Creek
Beaufort/Pitt Counties
TIP Project No. B-4020
February 21, 2005

Please take the time to give us your comments and concerns regarding this project. Please continue any responses on the back of this sheet.

NAME: _____
(PLEASE PRINT)

ADDRESS: _____
(PLEASE PRINT)

COMMENTS, CONCERNS AND/OR QUESTIONS REGARDING TIP PROJECT NO. B-4020:

Please send comments to:

Ms. Karen B. Taylor, P.E.
Project Development & Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Email: *kbtaylor@dot.state.nc.us*

APPENDIX D

Guidelines for Avoiding Impacts to the West Indian Manatee

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE
Precautionary Measures for Construction Activities in North Carolina Waters

The West Indian manatee (*Trichechus manatus*), also known as the Florida manatee, is a Federally-listed endangered aquatic mammal protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Marine Mammal Protection Act of 1972, as amended (16 U.S.C 1461 *et seq.*). The manatee is also listed as endangered under the North Carolina Endangered Species Act of 1987 (Article 25 of Chapter 113 of the General Statutes). The U.S. Fish and Wildlife Service (Service) is the lead Federal agency responsible for the protection and recovery of the West Indian manatee under the provisions of the Endangered Species Act.

Adult manatees average 10 feet long and weigh about 2,200 pounds, although some individuals have been recorded at lengths greater than 13 feet and weighing as much as 3,500 pounds. Manatees are commonly found in fresh, brackish, or marine water habitats, including shallow coastal bays, lagoons, estuaries, and inland rivers of varying salinity extremes. Manatees spend much of their time underwater or partly submerged, making them difficult to detect even in shallow water. While the manatee's principal stronghold in the United States is Florida, the species is considered a seasonal inhabitant of North Carolina with most occurrences reported from June through October.

To protect manatees in North Carolina, the Service's Raleigh Field Office has prepared precautionary measures for general construction activities in waters used by the species. Implementation of these measure will allow in-water projects which do not require blasting to proceed without adverse impacts to manatees. In addition, inclusion of these guidelines as conservation measures in a Biological Assessment or Biological Evaluation, or as part of the determination of impacts on the manatee in an environmental document prepared pursuant to the National Environmental Policy Act, will expedite the Service's review of the document for the fulfillment of requirements under Section 7 of the Endangered Species Act. These measures include:

1. The project manager and/or contractor will inform all personnel associated with the project that manatees may be present in the project area, and the need to avoid any harm to these endangered mammals. The project manager will ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water. All construction personnel will be informed that they are responsible for observing water-related activities for the presence of manatees.

2. The project manager and/or the contractor will advise all construction personnel that

there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act and the Endangered Species Act.

3. If a manatee is seen within 100 yards of the active construction and/or dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions will include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operational area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition (i.e., it may not be herded or harassed from the area).

4. Any collision with and/or injury to a manatee will be reported immediately. The report must be made to the U.S. Fish and Wildlife Service (ph. 919.856.4520 ext. 16), the National Marine Fisheries Service (ph. 252.728.8762), and the North Carolina Wildlife Resources Commission (ph. 252.448.1546).

5. A sign will be posted in all vessels associated with the project where it is clearly visible to the vessel operator. The sign should state:

> CAUTION: The endangered manatee may occur in these waters during the warmer months, primarily from June through October. Idle speed is required if operating this vessel in shallow water during these months. All equipment must be shut down if a manatee comes within 50 feet of the vessel or operating equipment. A collision with and/or injury to the manatee must be reported immediately to the U.S. Fish and Wildlife Service (919-856-4520 ext. 16), the National Marine Fisheries Service (252.728.8762), and the North Carolina Wildlife Resources Commission (252.448.1546).

6. The contractor will maintain a log detailing sightings, collisions, and/or injuries to manatees during project activities. Upon completion of the action, the project manager will prepare a report which summarizes all information on manatees encountered and submit the report to the Service's Raleigh Field Office.

7. All vessels associated with the construction project will operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

8. If siltation barriers must be placed in shallow water, these barriers will be: (a) made of material in which manatees cannot become entangled; (b) secured in a manner that they cannot break free and entangle manatees; and, (c) regularly monitored to ensure that manatees have not become entangled. Barriers will be placed in a manner to allow manatees entry to or exit from essential habitat.

Prepared by (rev. 06/2003):
U.S. Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726
919/856-4520

Figure 1. The whole body of the West Indian manatee may be visible in clear water; but in the dark and muddy waters of coastal North Carolina, one normally sees only a small part of the head when the manatee raises its nose to breathe.

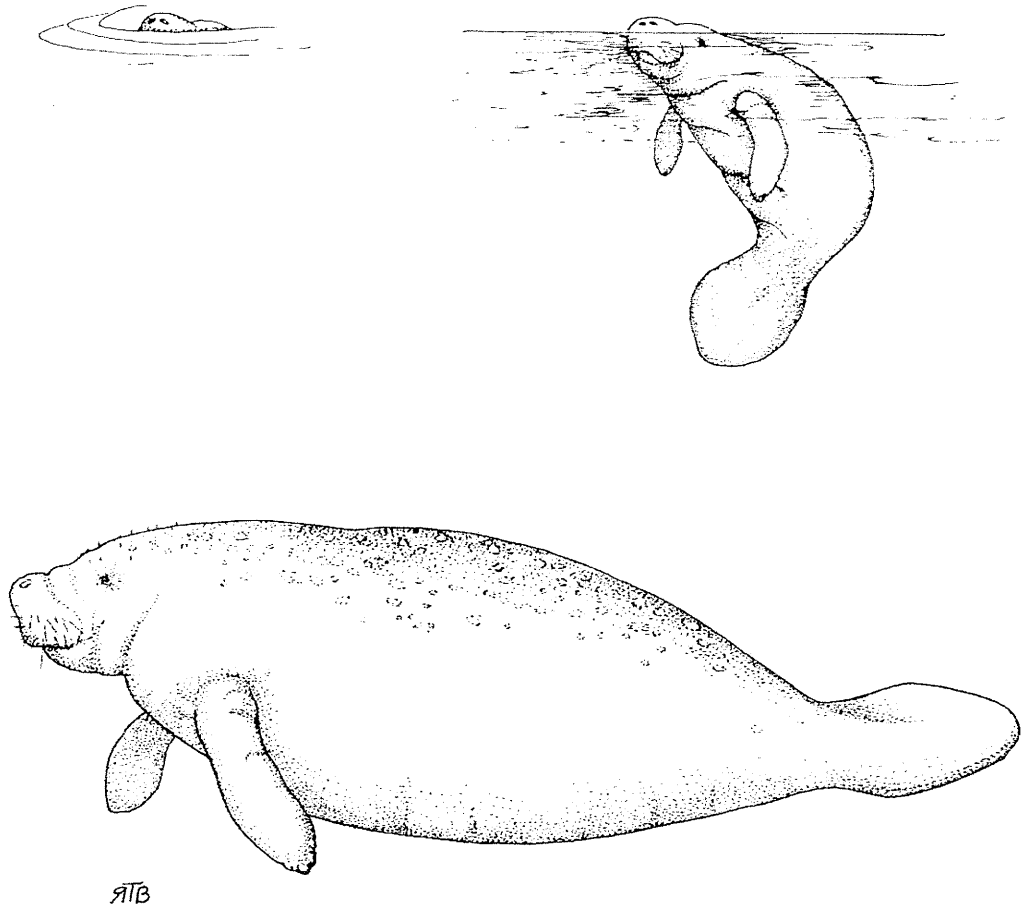


Illustration used with the permission of the North Carolina State Museum of Natural Sciences. Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina State Museum of Natural Sciences. Raleigh, NC. pp. 52.

APPENDIX E

Routine Wetland Determination Data Forms

WET KB10

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: TIP: B-4020	Date: April 1, 2004
Applicant/Owner: NCDOT	County: Beaufort
Investigator: EcoScience	State: NC
Do Normal Circumstances exist on the site? (Yes) No	Community ID: WET
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: KB
Is the area a potential Problem Area? Yes (No)	Plot ID: KB10
(If needed, explain on reverse)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Acer rubrum	C	FAC	9.		
2. Fraxinus pennsylvanica	C	FACW	10.		
3. Nyssa sylvatica biflora	C	OBL	11.		
4. Taxodium distichum	C	OBL	12.		
5. Vaccinium elliottii	S	OBL	13.		
6. Leucothoe racemosa	S	FACW	14.		
7. Cyrilla racemiflora	S	FACW	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100

Remarks:

HYDROLOGY

__Recorded Data (Describe in Remarks):
- __Stream, Lake or Tide Gauge
- __Aerial Photographs
- __Other
- X No Recorded Data Available

Field Observations:
- Depth of Surface Water: 1 (in.)
- Depth to Free Water in Pit: 2 (in.)
- Depth to Saturated Soil: 0 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- X Inundated
- X Saturated in Upper 12 Inches
- X Water Marks
- X Drift Lines
- __Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- __Oxidized Root Channels in Upper 12 Inches
- __Water-Stained Leaves
- __Local Soil Survey Data
- X FAC-Neutral Test
- __Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Swamp/Dorovan

Drainage Class: Very poor

Taxonomy (Subgroup): Typic Medisaprists

Field Observations
Confirm Mapped Type: (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-2	O	10YR/3/2	N/A		muck
2+	A	10YR/3/1	N/A		loam

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- X Sulfidic Odor
- X Aquic Moisture Regime
- X Reducing Conditions
- X Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- X Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks:

Approved by HQUSACE 2/92

HJL
8/93

UP KB10

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: TIP B-4020	Date: April, 2004
Applicant/Owner: NCDOT	County: Beaufort
Investigator: EcoScience	State: NC
Do Normal Circumstances exist on the site? (Yes) No	Community ID: UP
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: KB
Is the area a potential Problem Area? Yes (No)	Plot ID: KB10
(If needed, explain on reverse	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Fesve	H	?	9.		
2. Trifolium	H	FACU	10.		
3. Taraxacum	H	?	11.		
4. Lonicera japonica	V	FAC-	12.		
5. Glecoma	H	?	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): Ø

Remarks:

HYDROLOGY

__Recorded Data (Describe in Remarks):
- __Stream, Lake or Tide Gauge
- __Aerial Photographs
- __Other
- X No Recorded Data Available

Field Observations:
- Depth of Surface Water: Ø (in.)
- Depth to Free Water in Pit: +12 (in.)
- Depth to Saturated Soil: +12 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
- __Inundated
- __Saturated in Upper 12 Inches
- __Water Marks
- __Drift Lines
- __Sediment Deposits
- __Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- __Oxidized Root Channels in Upper 12 Inches
- __Water-Stained Leaves
- __Local Soil Survey Data
- __FAC-Neutral Test
- __Other (Explain in Remarks)

Remarks:

SOILS

Map Unit Name (Series and Phase): Swamp/Dorovan

Drainage Class: Very Poor

Taxonomy (Subgroup): Typic Medisaprists

Field Observations Confirm Mapped Type: Yes (No)

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
12+	A	10YR/4/4	—	—	loamy sand

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (No) (Circle)

Wetland Hydrology Present? Yes (No)

Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? (Circle) Yes (No)

Remarks:

Approved by HQUSACE 2/92

HJL
8/93

Wetland Rating Worksheet

Project name B-4020 Nearest road Clarks Neck SR1403
County _____ Name of Evaluator _____ Date _____

Wetland location
- _ on pond or lake
- X on perennial stream
- _ on intermittent stream
- _ within interstream divide
- _ other

Adjacent land use (within 1/2 mile upstream)
forested/natural vegetation 30 %
agriculture, urban/suburban 60 %
impervious surface 10 %

Soil Series Dorovan/Swamp
- X predominantly organic-humus, muck, or peat
- _ predominantly mineral- non-sandy
- _ predominantly sandy

Dominant Vegetation
(1) Typha latifolia
(2) Juncus spp.
(3) Arundinaria

Flooding and Wetness
- X semipermanently to permanently flooded or inundated
- _ seasonally flooded or inundated
- _ intermittently flooded or temporary surface water
- _ no evidence of flooding or surface water

Hydraulic Factors
- _ steep topography
- _ ditched or channelized
- X wetland width >/= 50 feet

Wetland Type (select one)
- _ Bottomland hardwood forest
- _ Headwater forest
- _ Swamp forest
- _ Wet flat
- _ Pocosin
- _ Pine savanna
- X Freshwater marsh
- _ Bog/fen
- _ Ephemeral wetland
- _ Other

*The rating system cannot be applied to salt or brackish marshes

Water storage	4	*	4	=	16
Bank/Shoreline stabilization	3	*	4	=	12
Pollutant removal	5	*	5	=	25
Wildlife habitat	2	*	2	=	4
Aquatic life value	3	*	4	=	12
Recreation/Education	4	*	1	=	4

Total score 73

Add 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream

Wetland Rating Worksheet

Project name B-4020 Nearest road Clarks Neck SR1403
County Beaufort/Pitt Name of Evaluator Kendrick Weeks Date April 2, 2004

Wetland location
- _ on pond or lake
- X on perennial stream
- _ on intermittent stream
- _ within interstream divide
- _ other

Adjacent land use (within 1/2 mile upstream)
- forested/natural vegetation 30 %
- agriculture, urban/suburban 60 %
- impervious surface 10 %

Soil Series Dorovan/Swamp
- X predominantly organic-humus, muck, or peat
- _ predominantly mineral- non-sandy
- _ predominantly sandy

Dominant Vegetation
- (1) Acer rubrum
- (2) Fraxinus pennsylvanica
- (3) Taxodium distichum

Flooding and Wetness
- X semipermanently to permanently flooded or inundated
- _ seasonally flooded or inundated
- _ intermittently flooded or temporary surface water
- _ no evidence of flooding or surface water

Hydraulic Factors
- _ steep topography
- _ ditched or channelized
- X wetland width >/= 50 feet

Wetland Type (select one)

_ Bottomland hardwood forest	_ Pine savanna
_ Headwater forest	_ Freshwater marsh
X Swamp forest	_ Bog/fen
_ Wet flat	_ Ephemeral wetland
_ Pocosin	_ Other

*The rating system cannot be applied to salt or brackish marshes

Water storage	5	*	4	=	20	
Bank/Shoreline stabilization	3	*	4	=	12	Total score
Pollutant removal	5	*	5	=	25	89
Wildlife habitat	4	*	2	=	8	
Aquatic life value	5	*	4	=	20	
Recreation/Education	4	*	1	=	4	

Add 1 point if in sensitive watershed and >10% nonpoint disturbance within 1/2 mile upstream