STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 29, 2009

U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1890
Wilmington, NC 28402-1890

ATTN: Ms. Kim Garvey
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 23 and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 28 over Jordan Creek (also Juniper Creek) on SR 1433 (McGirts Bridge Road), Scotland County, Division 8. State Project No. 8.2590901, F.A. Project No. BRSTP – 1433(2), T.I.P. Project No. B-4642.

Debit $240.00 from WBS 33810.1.1

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 28 over Jordan Creek (also Juniper Creek) on SR 1433 (McGirts Bridge Road). A Nationwide Permit (NWP) 23 and Section 401 Water Quality Certification (WQC) 3701 will be required for 0.58 acres of permanent wetland impacts resulting from roadway fill, excavation, and mechanized clearing associated with the construction of the new bridge. An additional 4 square feet of permanent wetland impacts and 0.28 acres of hand clearing will result from the relocation of two telephone poles and the associated aerial line.

Please see the enclosed copies of the Pre-Construction Notification (PCN), permit drawings, roadway design plans, stormwater management plan, and Ecosystem Enhancement Program (EEP) acceptance letter for the subject project. A Jurisdictional Determination (JD) request packet was submitted to the Corps in July 2006. However, only a verbal verification was received following the February 14, 2007 site visit with Regulatory Specialist Richard Spencer. A Categorical Exclusion (CE) was completed for this project in July 2007 and a Right of Way (ROW) Consultation was completed in January 2009. Both documents were distributed shortly after completion. Additional copies are available upon request.

This project is currently scheduled for letting on February 16, 2010 (review date of December 29, 2009).

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

TELEPHONE: 919-431-2000

FAX: 919-431-2001

WEBSITE: WWW.NCDOT.ORG

PHYSICAL ADDRESS:
4701 Atlantic Ave.
Suite 116
Raleigh, NC 27604

A copy of this permit application will be posted on the NCDOT website at: http://www.ncdot.org/doh/preconstruct/pe/. If you have any questions or need additional information, please contact Jim Mason at either (919) 431-1593 or jsmason@ncdot.gov.

Sincerely,

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

w/attachment

Mr. Brian Wrenn, NCDWQ (5 Copies)

w/o attachment (see website for attachments)

Dr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Greg Perfetti, P.E., Structure Design
Mr. Victor Barbour, P.E., Project Services Unit
Mr. Tim Johnson, P.E., Division 8 Engineer
Mr. Art King, Division 8 Environmental Officer
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Scott McLendon, USACE, Wilmington
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Tracy Walter, PDEA Project Planning Engineer
Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch

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

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit	☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 23	or General Permit (GP) number:	
1c. Has the NWP or GP number been verified by the Corps?	☐ Yes	☒ No

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

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

☐ 401 Water Quality Certification – Express ☐ Riparian Buffer Authorization

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

2. Project Information

2a. Name of project:	Replacement of Bridge No. 28 over Jordan Creek (also Juniper Creek) on SR 1433 (McGirts Bridge Road)
2b. County:	Scotland
2c. Nearest municipality / town:	Laurinburg
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4642

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	*not applicable*
3c. Responsible Party (for LLC if applicable):	*not applicable*
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 431-1593
3g. Fax no.:	(919) 431-2002
3h. Email address:	jsmason@ncdot.gov

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

B. Project Information and Prior Project History		
1. Property Identification		
1a. Property identification no. (tax PIN or parcel ID):	*not applicable*	
1b. Site coordinates (in decimal degrees):	Latitude: 34.797559 (DD.DDDDDD)	Longitude: - 79.397184 (-DD.DDDDDD)
1c. Property size:	1.87 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Jordan Creek	
2b. Water Quality Classification of nearest receiving water:	C Sw	
2c. River basin:	Lumber	
3. Project Description		
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: McGirts Bridge Road is classified as a Rural Major Collector. Land use within the project vicinity includes residential, cultivated land, hardwood swamp, and unmanaged shrubland.		
3b. List the total estimated acreage of all existing wetlands on the property: 0.78		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 120		
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge (see Categorical Exclusion document).		
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing the existing four-span, 69-foot bridge with a three-span, 130-foot bridge on the existing alignment. The proposed structure will be a cored slab bridge with a clear roadway width of 33 feet. An off-site detour will be utilized during construction. Standard road building equipment, such as trucks, dozers, and cranes will be used.		
4. Jurisdictional Determinations		
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments: Neither a preliminary nor an approved JD has been issued for this project. However, all features were verified during a site visit between Regulatory Specialist Richard Spencer and EcoScience biologists on February 14, 2007.	☒ Yes ☐ No ☐ Unknown	
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary ☐ Final	
4c. If yes, who delineated the jurisdictional areas? Name (if known): Layna Thrush	Agency/Consultant Company: EcoScience Corporation Other:	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. February 14, 2007		
5. Project History		
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☐ Yes ☒ No ☐ Unknown	
5b. If yes, explain in detail according to "help file" instructions.		

6. **Future Project Plans**	
6a. Is this a phased project?	☐ Yes ☒ No
6b. If yes, explain.	

C. Proposed Impacts Inventory

1. Impacts Summary

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

☒ Wetlands ☐ Streams - tributaries ☐ Buffers

☐ Open Waters ☐ Pond Construction

2. Wetland Impacts

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

2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)
Site 1 ☒ P ☐ T	Roadway Fill	Riverine Swamp Forest	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.28
Site 2 ☒ P ☐ T	Excavation	Riverine Swamp Forest	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.01
Site 3 ☒ P ☐ T	Mechanized Clearing	Riverine Swamp Forest	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.29
Site 4 ☒ P ☐ T	Utility Pole Relocation*	Riverine Swamp Forest	☒ Yes ☐ No	☒ Corps ☐ DWQ	<0.01
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 6 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	0.58 Permanent 0 Temporary

2h. Comments: All impacts are located at Site 1 of the project and are listed above based on impact type.
* Actual permanent impact is 4 square feet.

3. Stream Impacts

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

3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
					3h. **Total stream and tributary impacts**	0 Permanent 0 Temporary

3i. Comments:

4. Open Water Impacts

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

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 ☐ P ☐ T				
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
			4f. Total open water impacts	0 Permanent 0 Temporary

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

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

6. Buffer Impacts (for DWQ)

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

6a. Project is in which protected basin?			☐ Neuse ☐ Catawba	☐ Tar-Pamlico ☐ Randleman	☐ Other:
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☐ P ☐ T			☐ Yes ☐ No		
B2 ☐ P ☐ T			☐ Yes ☐ No		
B3 ☐ P ☐ T			☐ Yes ☐ No		
		6h. **Total buffer impacts**		0	0
6i. Comments:					

D. Impact Justification and Mitigation

1. Avoidance and Minimization

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

The proposed bridge will span the creek; the proposed bridge is 61 feet longer than the existing bridge; the number of spans has been reduced from four on the existing bridge to three on the proposed bridge. As a result, three existing interior bents will be removed from the creek; the proposed bridge will be at approximately the same grade as the existing structure; the project is a replace-in-place with an offsite detour. Wetlands are present in all four quadrants of the project. Therefore, it is not feasible to avoid wetland impacts. However, the following measures have been taken: rip rap energy dissipaters will be used at two pipe outlets draining into the wetlands; roadway approach work has been reduced to minimize fill slope encroachment into the wetlands; 3:1 slopes will be used (instead of the typical 6:1) on this project. 3:1 slopes are necessary due to the instability of the borrow material that would be placed on the slopes; where feasible, hand clearing rather than grubbing will be used.

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

NCDOT will implement Best Management Practices (BMPs) for Bridge Demolition and Removal. NCDOT's BMPs for the Protection of Surface Waters will be strictly enforced during construction of this project. Additionally, top-down construction will be employed and no temporary structures will be used during construction.

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

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

3. Complete if Using a Mitigation Bank

3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		

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

4a. Approval letter from in-lieu fee program is attached.	☒ Yes
4b. Stream mitigation requested:	0 linear feet
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold
4d. Buffer mitigation requested (DWQ only):	0 square feet
4e. Riparian wetland mitigation requested:	0.58 acres of impact at 2:1 mitigation = 1.16 acres
4f. Non-riparian wetland mitigation requested:	0 acres
4g. Coastal (tidal) wetland mitigation requested:	0 acres
4h. Comments:	

5. Complete if Using a Permittee Responsible Mitigation Plan

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

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

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

F. Supplementary Information		
1. Environmental Documentation (DWQ Requirement)		
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☒ Yes	☐ No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	☒ Yes	☐ No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	☒ Yes	☐ No
2. Violations (DWQ Requirement)		
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes	☒ No
2b. Is this an after-the-fact permit application?	☐ Yes	☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):		
3. Cumulative Impacts (DWQ Requirement)		
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	☐ Yes	☒ No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. see NEPA document		
4. Sewage Disposal (DWQ Requirement)		
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. not applicable		

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	☒ Yes	☐ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☒ Yes	☐ No
5c. If yes, indicate the USFWS Field Office you have contacted.	☒ Raleigh ☐ Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? Based on NCDOT field surveys, the N.C. Natural Heritage Program database (last updated April 30, 2009), and the U.S. Fish and Wildlife Service website for Scotland County, it has been determined that the proposed project will have No Effect on either Endangered or Threatened Species (American alligator, American chaffseed, Canby's dropwort, Michaux's sumac, red-cockaded woodpecker, or rough-leaved loosestrife) or Designated Critical Habitat. Section 7 consultation is not required for the American alligator. A re-survey for Michaux's sumac was performed on 7/15/08. No federally protected species were present, resulting in the biological conclusion of No Effect remaining vaild. No habitat was present for the remaining species and re-surveys were not required.		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☐ Yes	☒ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		

Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	E. P. Lusk Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	7.29.09 Date

Ecosystem Enhancement PROGRAM

June 15, 2009

Mr. Richard Spencer
U. S. Army Corps of Engineers
Wilmington Regulatory Field Office
Post Office Box 1890
Wilmington, North Carolina 28401-1890

Dear Mr. Spencer:

Subject: EEP Mitigation Acceptance Letter:

B-4642, Replace Bridge Number 28 over Jordan Creek on SR 1433 (McGirts Bridge Road), Scotland County; Lumber River Basin (Cataloging Unit 03040204); Southern Inner Coastal Plain (SICP) Eco-Region

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory riparian wetland mitigation for the unavoidable impact associated with the above referenced project. As indicated in the NCDOT's mitigation request dated June 4, 2009, riparian wetland mitigation from EEP is required for 0.58 acre of riparian wetland impact.

Mitigation associated with this project will be provided in accordance with Section X of Amendment No. 2 to the Memorandum of Agreement between the N. C. Department of Environment and Natural Resources, the N. C. Department of Transportation, and the U. S. Army Corps of Engineers fully executed on March 8, 2007 (Tri-Party MOA). EEP commits to implement sufficient riparian wetland mitigation up to 1.16 riparian wetland credits to offset the impacts associated with this project by the end of the MOA year in which this project is permitted. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

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

Sincerely,

William D. Gilmore, P.E.
EEP Director

cc: Mr. Gregory J. Thorpe, Ph.D., NCDOT-PDEA
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: B-4642

Ecosystem Enhancement PROGRAM

June 15, 2009

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4642, Replace Bridge Number 28 over Jordan Creek on SR 1433 (McGirts Bridge Road), Scotland County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the riparian wetland mitigation for the subject project. Based on the information supplied by you dated June 4, 2009, the impacts are located in CU 03040204 of the Lumber River Basin in the Southern Inner Coastal Plain (SICP) Eco-Region, and are as follows:

Riparian Wetland: 0.58 acre

EEP commits to implementing sufficient compensatory riparian wetland mitigation credits to offset the impacts associated with this project by the end of the MOA Year in which this project is permitted, in accordance with Section X of the Amendment No. 2 to the Memorandum of Agreement between the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, fully executed on March 8, 2007. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

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

Sincerely,

James B. Stanfill for

William D. Gilmore, P.E.
EEP Director

cc: Mr. Richard Spencer, USACE – Wilmington Regulatory Field Office
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: B-4642

STORMWATER MANAGEMENT PLAN

Project: 33810.1.1
TIP No. B-4642
Scotland County 04/20/2009

Hydraulics Project Manager: W. Henry Wells, Jr. P.E. (Sungate Design Group),
Marshall Clawson, P.E. (NCDOT Hydraulics Unit)

ROADWAY DESCRIPTION

The project B-4642 consists of constructing a new bridge 130 feet long to replace the existing bridge #28 in Scotland County on SR-1433 over Juniper Creek. The total project length is 0.140 miles. The project creates impacts to Juniper Creek, which is located in the Lumber River Basin. The project drainage systems consist of grated inlets with associated pipe systems, and rip rap energy dissipaters at the pipe outlets.

Jurisdiction Stream: Juniper Creek

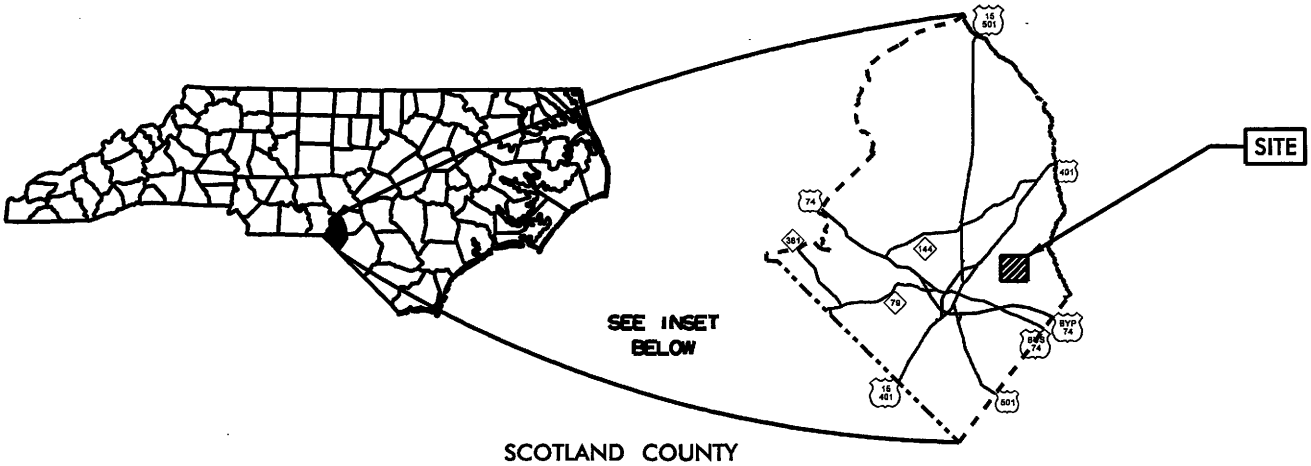
ENVIRONMENTAL DESCRIPTION

The project is located within the Lumber River Basin in Scotland County, which is not a CAMA county. There are wetland sites surrounding the bridge that will be impacted by the proposed project. Impacts have been minimized by and using rip rap energy dissipaters at the pipe outlets and reducing the roadway approach work to minimize fill slopes encroachment into the wetlands.

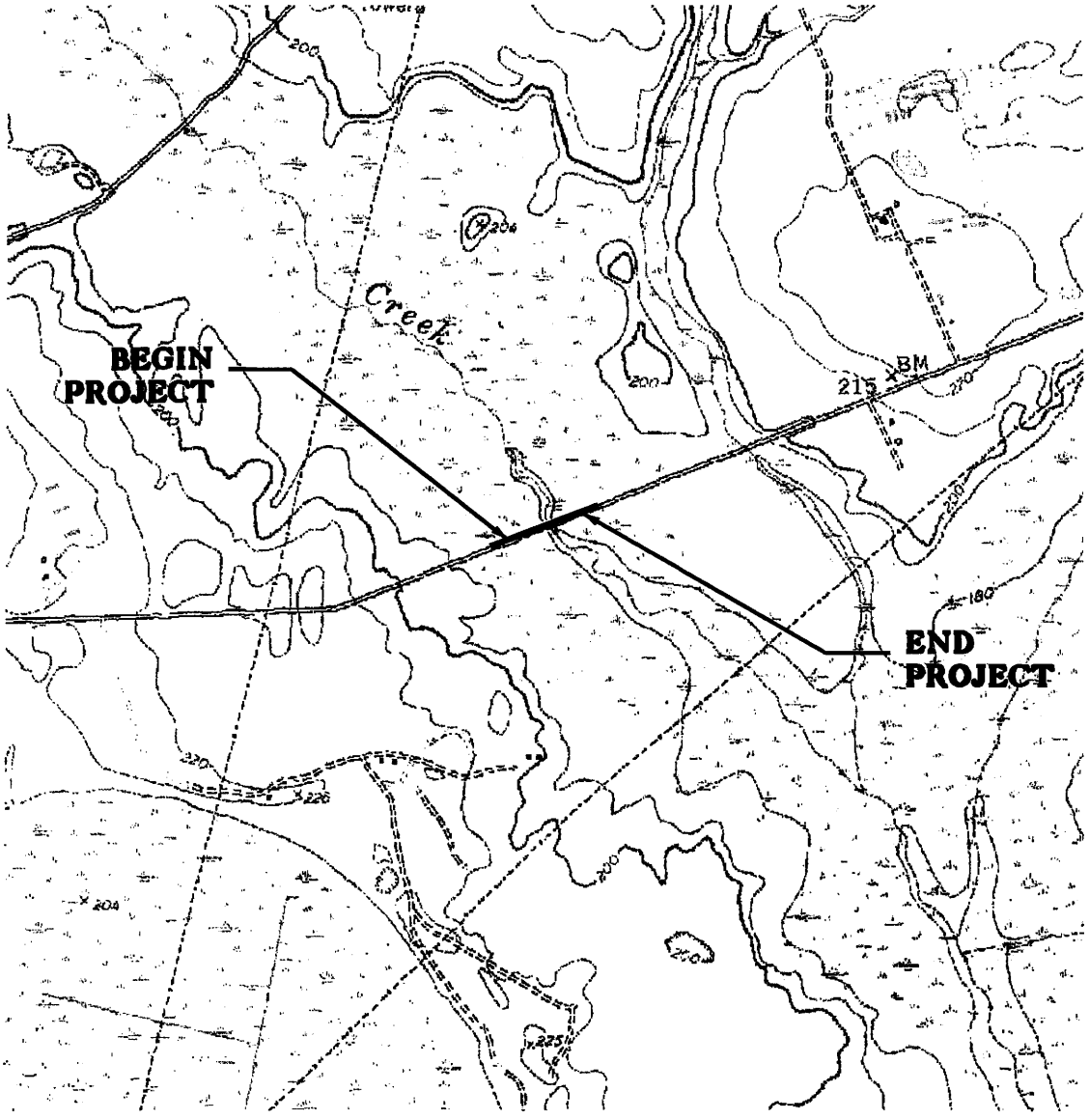
BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

The primary goal of Best Management Practices (BMPs) is to prevent degradation of the states surface waters by the location, construction and operation of the highway system. The BMPs are activities, practices and procedures taken to prevent or reduce stormwater pollution. The BMP measures used on this project to reduce stormwater impacts are:

- Rip rap energy dissipators at pipe outlets.



SCOTLAND COUNTY



WETLAND/STREAM
IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

SCOTLAND COUNTY
PROJECT:33810.1.1 (B-4642)
BRIDGE NO.28
OVER JORDAN CREEK
ON SR 1433

SHEET 1 OF 8 3-25-09

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
1	EDGAR JOHNSON	PO Box 699 Rose Hill, NC 28458
2	HEWITT FULTON, III	PO Box 1348 Laurinburg, NC 28352
3	Z. V. PATE, INC.	PO Box 159 Laurel Hill, NC 28351

NCDOT

DIVISION OF HIGHWAYS

SCOTLAND COUNTY

PROJECT:33810.1.1 (B-4642)
BRIDGE NO. 28
OVER JORDAN CREEK
ON SR 1433

SHEET 2 OF 8 3/25/09

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	11+75 TO 15+20 -L	ROADWAY FILL AND EXCAVATION	0.12		<0.01	0.15						
	15+80 TO 19+15 -L	ROADWAY FILL AND EXCAVATION	0.16		0.01	0.14						
TOTALS:			0.28		0.01	0.29						

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SCOTLAND COUNTY
PROJECT: 33810.1.1 (B-4642)

SHEET 3 of 8 3/25/2009

ATN Revised 3/31/05

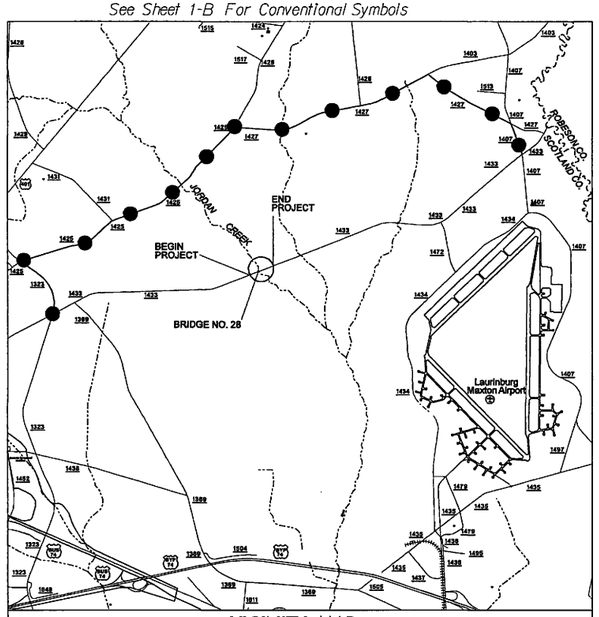
09/08/09

TIP PROJECT: B-4642

CONTRACT:

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

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



VICINITY MAP

LEGEND Offsite Detour Route

R/W PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SCOTLAND COUNTY

LOCATION: BRIDGE NO. 28 OVER JORDAN CREEK ON SR 1433

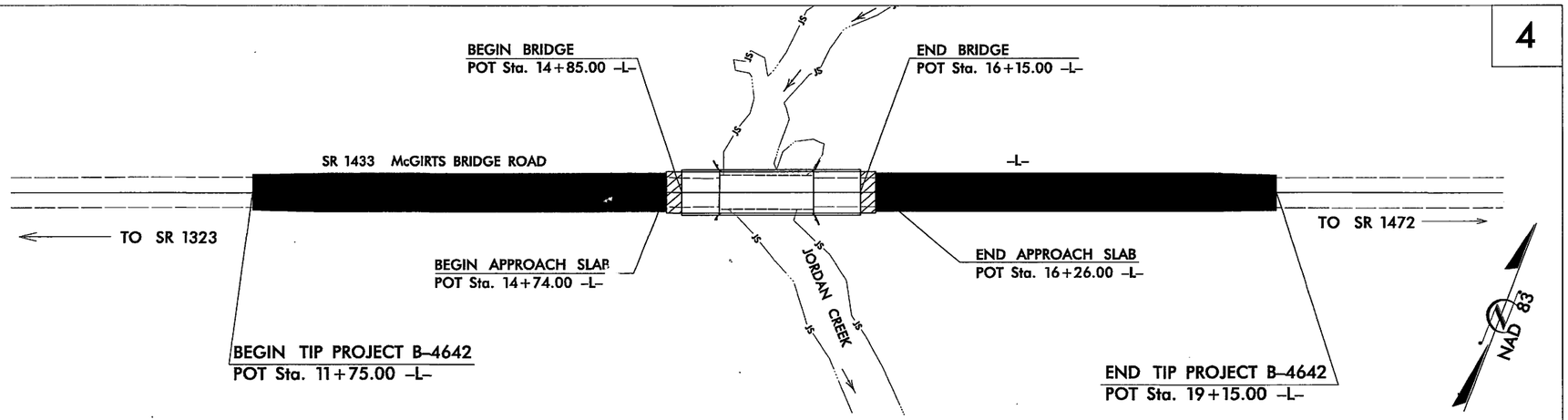
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4642	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
33810.1.1	BRSTP-1433(2)	PE	
33810.2.1	BRSTP-1433(2)	R/W, UTIL.	

ENGLISH

Permit Drawing
Sheet 4 of 8

4



WETLAND/STREAM IMPACTS

THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: DOUG TAYLOR, 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 2010 = 3,300
ADT 2030 = 5,100
DHV = 10 %
D = 60 %
T = 3 %
V = 60 MPH
FUNC. CLASS = RURAL MAJOR COLLECTOR
TTST 1 % DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4642 = 0.115 mi.

LENGTH STRUCTURE TIP PROJECT B-4642 = 0.025 mi.

TOTAL LENGTH TIP PROJECT B-4642 = 0.140 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: FEBRUARY 20, 2009

LETTING DATE: FEBRUARY 16, 2010

CLIFTON T. REGISTER, P.E.
PROJECT ENGINEER

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SUNGATE DESIGN GROUP, PA

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
WANG ENGINEERING

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

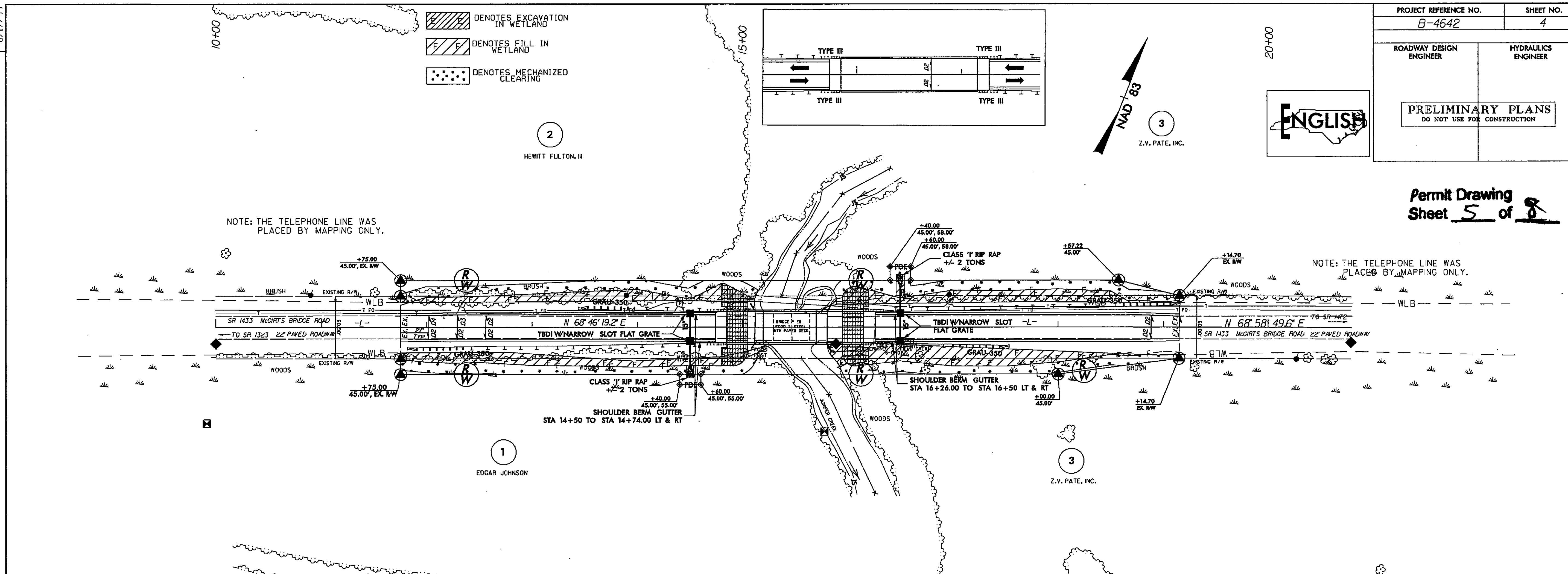
P.E.
STATE HIGHWAY DESIGN ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
B-4642	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

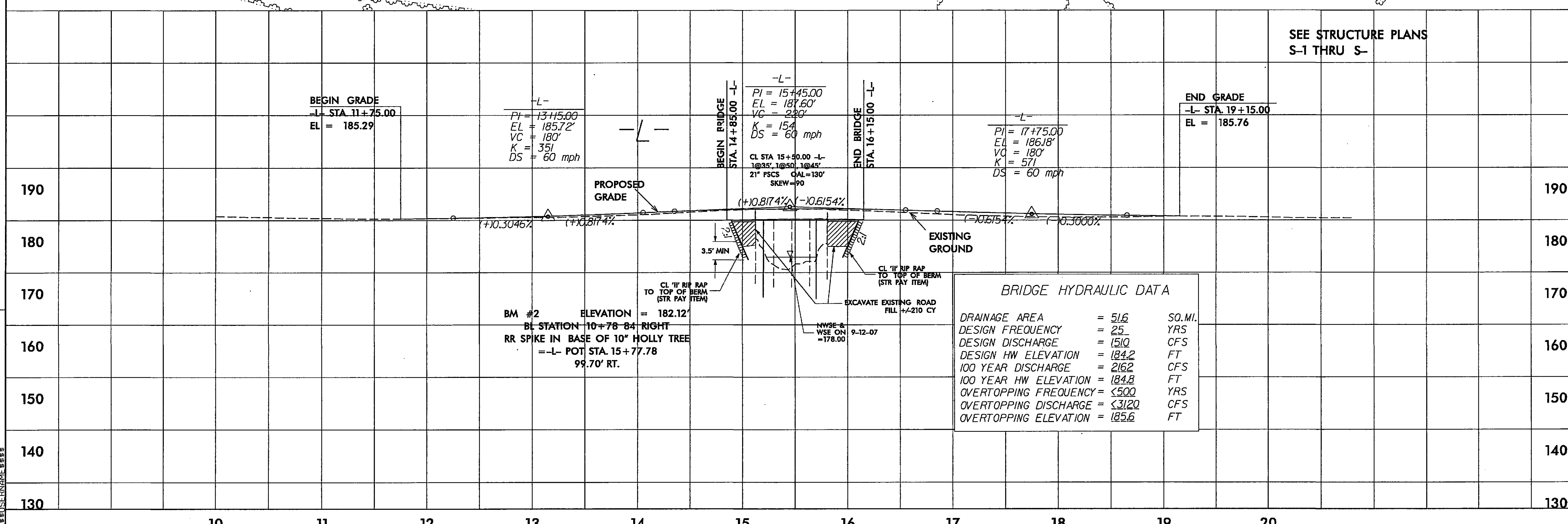
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ENGLISH

Permit Drawing
Sheet 5 of 8



DENOTES EXCAVATION IN WETLAND
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
10+00
15+00
20+00
TYPE III
NAD 83
2
HEWITT FULTON, III
3
Z.V. PATE, INC.
NOTE: THE TELEPHONE LINE WAS PLACED BY MAPPING ONLY.
WOODS
BRUSH
EXISTING R/W
WLB
SR 1433 McGIRTS BRIDGE ROAD
TO SR 1323 22' PAVED ROADWAY
N 68° 46' 19.2" E
TBDI W/NARROW SLOT FLAT GRATE
N 68° 58' 49.6" E
TO SR 1412
CLASS 'I' RIP RAP +/- 2 TONS
SHOULDER BERM GUTTER STA 14+50 TO STA 14+74.00 LT & RT
SHOULDER BERM GUTTER STA 16+26.00 TO STA 16+50 LT & RT
1
EDGAR JOHNSON
3
Z.V. PATE, INC.



SEE STRUCTURE PLANS S-1 THRU S-
BEGIN GRADE
-L- STA. 11+75.00
EL = 185.29
-L-
PI = 13+15.00
EL = 185.72'
VC = 180'
K = 351
DS = 60 mph
BEGIN BRIDGE STA. 14+85.00 -L-
-L-
PI = 15+45.00
EL = 187.60'
VC = 220'
K = 154
DS = 60 mph
CL STA 15+50.00 -L-
1@35', 1@50', 1@45'
21" PSCS OAL=130'
SKEW=90
END BRIDGE STA. 16+15.00 -L-
-L-
PI = 17+75.00
EL = 186.18'
VC = 180'
K = 571
DS = 60 mph
END GRADE
-L- STA. 19+15.00
EL = 185.76
PROPOSED GRADE
EXISTING GROUND
(+)0.3046%
(+)0.8174%
(-)0.6154%
(-)0.3000%
3.5' MIN
CL 'II' RIP RAP TO TOP OF BERM (STR PAY ITEM)
EXCAVATE EXISTING ROAD FILL +/-210 CY
NWSE & WSE ON 9-12-07 =178.00
BM #2 ELEVATION = 182.12'
BL STATION 10+78.84 RIGHT
RR SPIKE IN BASE OF 10" HOLLY TREE
=-L- POT STA. 15+77.78
99.70' RT.
190
180
170
160
150
140
130
10
11
12
13
14
15
16
17
18
19
20

BRIDGE HYDRAULIC DATA

DRAINAGE AREA	=	51.6	SQ.MI.
DESIGN FREQUENCY	=	25	YRS
DESIGN DISCHARGE	=	1510	CFS
DESIGN HW ELEVATION	=	184.2	FT
100 YEAR DISCHARGE	=	2162	CFS
100 YEAR HW ELEVATION	=	184.8	FT
OVERTOPPING FREQUENCY	=	<500	YRS
OVERTOPPING DISCHARGE	=	<3120	CFS
OVERTOPPING ELEVATION	=	185.6	FT

REVISIONS

8/17/99

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

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4642	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ENGLISH

Permit Drawing
Sheet 6 of 8

BRIDGE HYDRAULIC DATA

DRAINAGE AREA	=	51.6	SQ.MI.
DESIGN FREQUENCY	=	25	YRS
DESIGN DISCHARGE	=	1510	CFS
DESIGN HW ELEVATION	=	184.2	FT
100 YEAR DISCHARGE	=	2162	CFS
100 YEAR HW ELEVATION	=	184.8	FT
OVERTOPPING FREQUENCY	=	<500	YRS
OVERTOPPING DISCHARGE	=	<3120	CFS
OVERTOPPING ELEVATION	=	185.6	FT

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

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4642	X-2

Permit Drawing
Sheet 7 of 8

FILL IN WETLAND
MECHANIZED CLEARING
3:1
0.020
186.05
0.020
185.72
3:1
FILL IN WETLAND
MECHANIZED CLEARING

13+50.00

3:1
0.020
185.75
0.020
185.56
3:1

13+00.00

3:1
0.022
185.53
0.020
185.45
3:1

12+50.00

MECHANIZED CLEARING
FILL IN WETLAND
3:1
0.041
185.
0.020
185.33
3:1
FILL IN WETLAND
MECHANIZED CLEARING

12+00.00

3:1
EXIST
185.29
EXIST
185.29
3:1

11+75.00

185.30

11+50.00

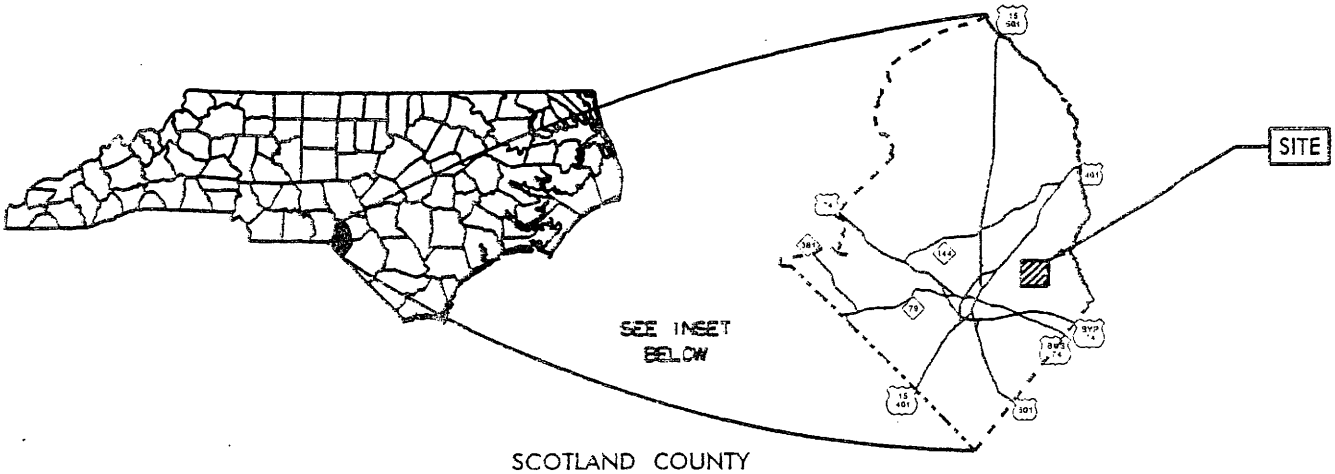
–L–

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

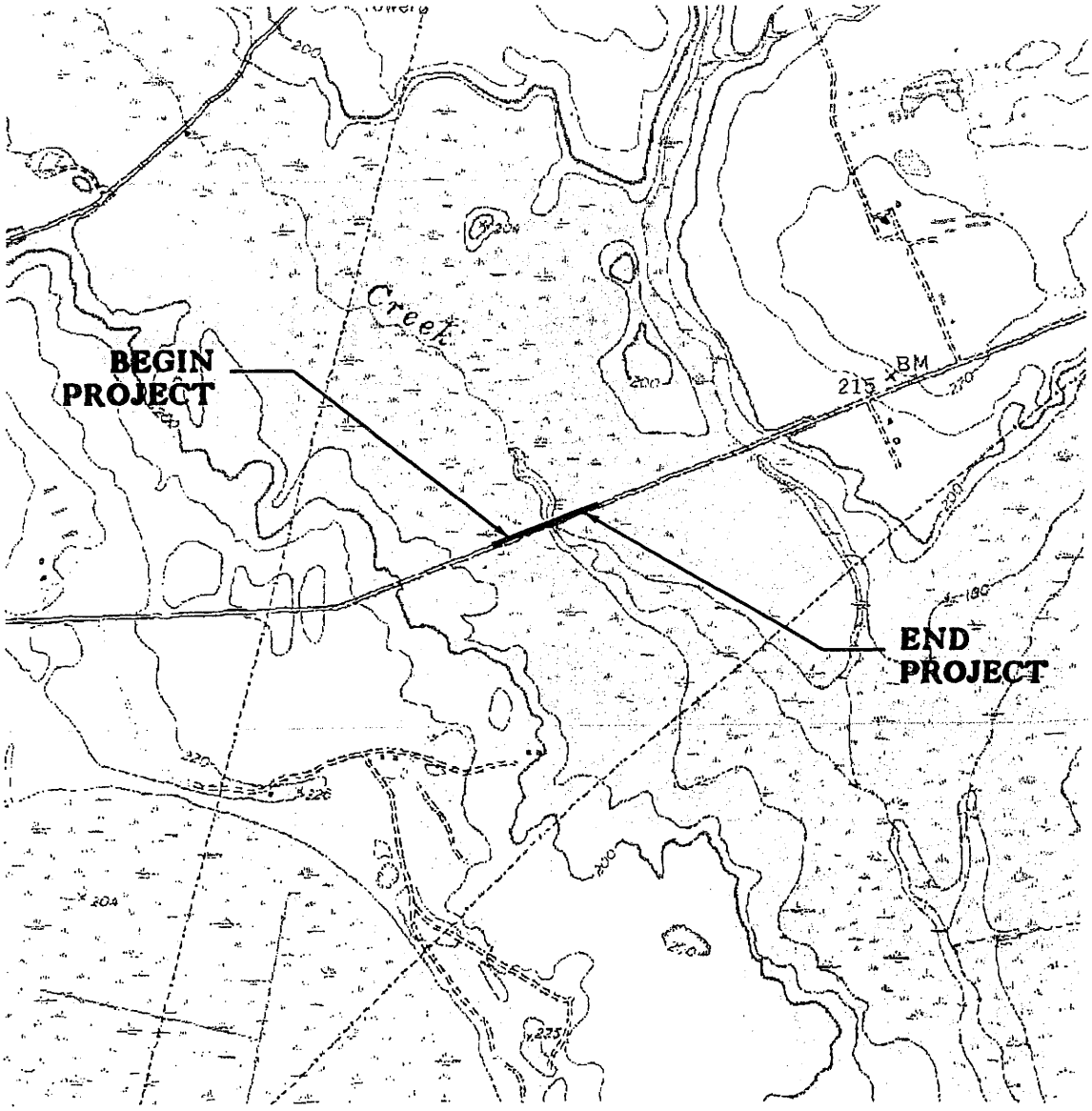
8/23/99

PROJ. REFERENCE NO.	SHEET NO.
B-4642	X-4

Permit Drawing
Sheet 8 of 8



SCOTLAND COUNTY



UTILITIES
WETLAND/STREAM
IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

SCOTLAND COUNTY
PROJECT:33810.1.1 (B-4642)
BRIDGE NO.28
OVER JORDAN CREEK
ON SR 1433

SHEET 1 OF 6

5-28-09

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	HEWITT FULTON, III	PO Box 1348 Laurinburg, NC 28352
3	Z. V. PATE, INC.	PO Box 159 Laurel Hill, NC 28351

NCDOT

DIVISION OF HIGHWAYS

SCOTLAND COUNTY

PROJECT: 33810.1.1 (B-4642)
BRIDGE NO. 28
OVER JORDAN CREEK
ON SR 1433

SHEET 2 OF 6 5/28/09

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
1	-L-10+88.60 TO 17+69.15	Power line					0.28					
TOTALS:			0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00

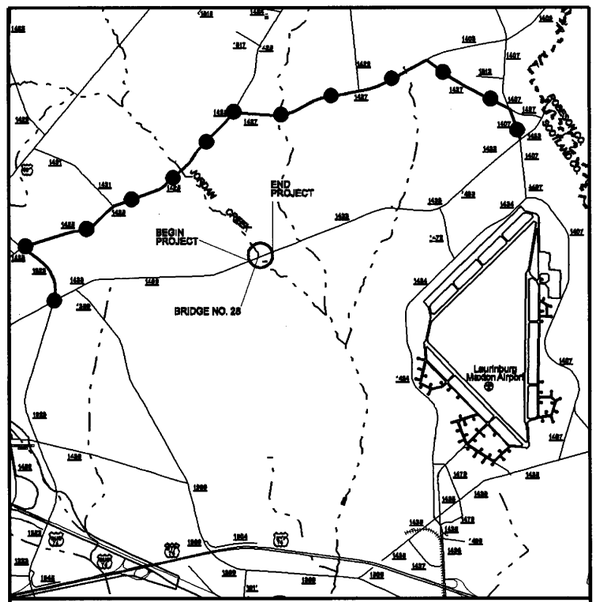
Note: 4 sq. ft. permanent impact in the wetlands from permanent pole installation.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SCOTLAND COUNTY
PROJECT 33810.1.1 (B-4642)
BRIDGE NO. 28
OVER JORDAN CREEK ON SR 1433
SHEET 3 OF 6 5/28/2009

ATN Revised 3/31/05

T.I.P. NO.	SHEET NO.
B–4642	4 / 6

TIP PROJECT: B–4642

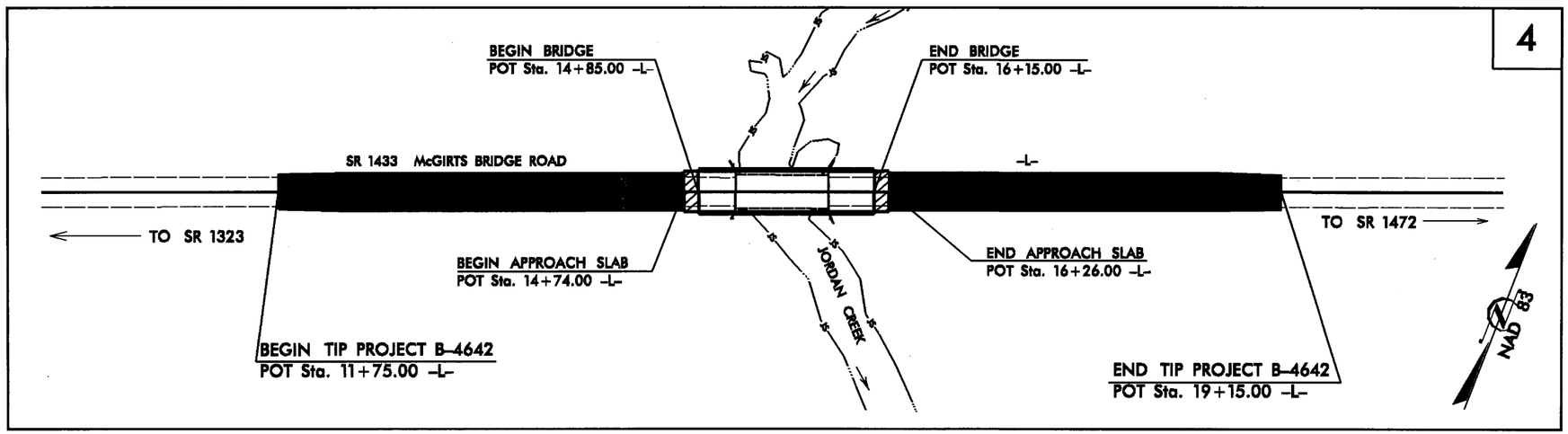


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS PLANS
SCOTLAND COUNTY

LOCATION: BRIDGE NO. 28 OVER JORDAN CREEK ON SR 1433

TYPE OF WORK: POWER, TELEPHONE, FIBER OPTIC COMMUNICATIONS CABLE



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)

INDEX OF SHEETS

SHEET NO.	*DESCRIPTION*
UO–1	*TITLE SHEET*
UO–2	*UTILITIES BY OTHERS PLAN SHEET*

UTILITY OWNERS ON PROJECT

(1) POWER – LUMBEE RIVER EMC
(2) TELEPHONE – AT&T
(3) FIBER OPTIC COMM. – CITY OF LAURINBURG

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION
1591 MAIL SERVICES CENTER
RALEIGH NC 27699–1591
PHONE (919) 250–4128
FAX (919) 250–4119

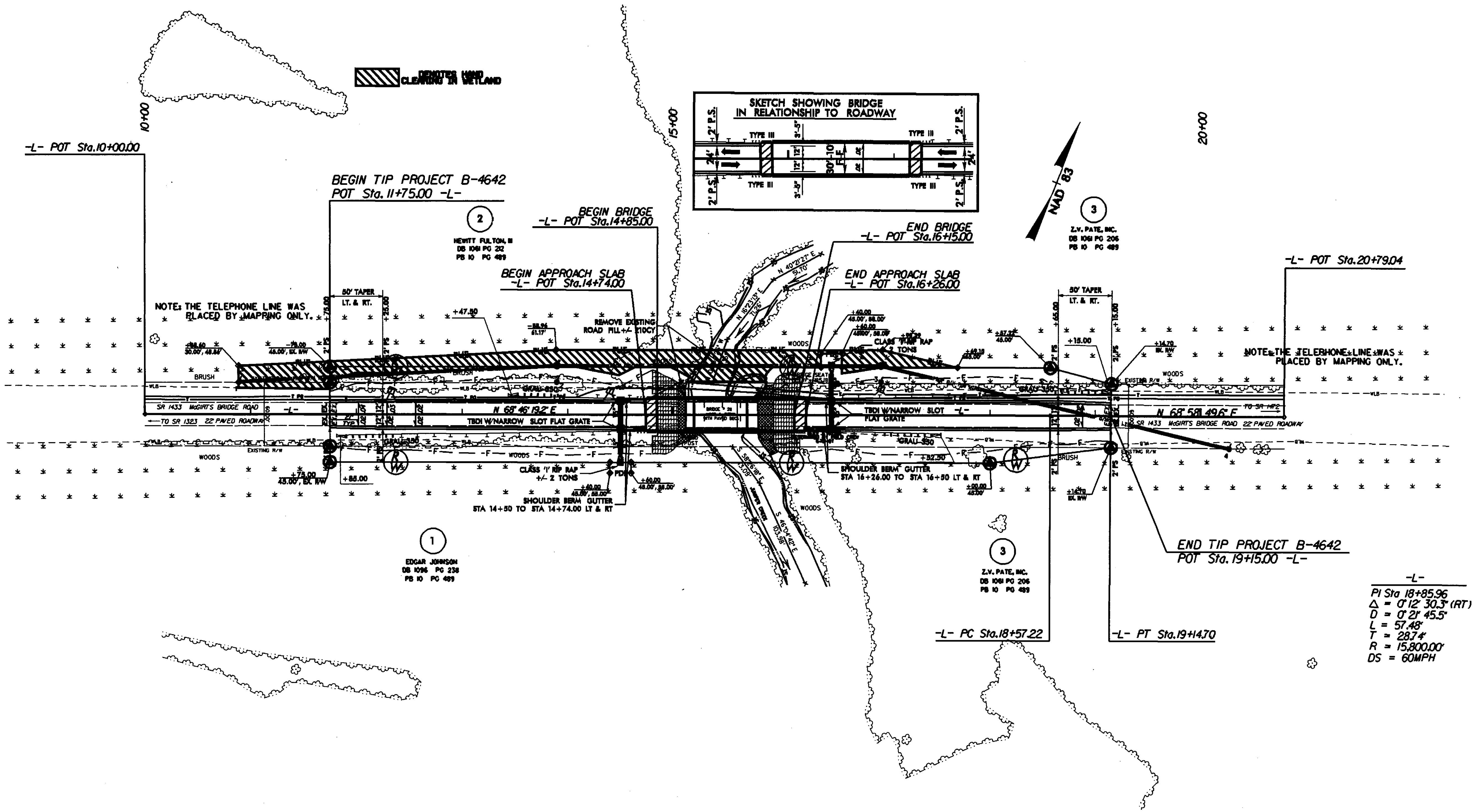
Roger Worthington, P.E. — *UTILITIES SECTION ENGINEER*
Carl Barclay, P.E. — *UTILITIES SQUAD LEADER PROJECT ENGINEER*
Bo Hemphill, P.E. — *UTILITIES PROJECT DESIGNER*

PROJECT REFERENCE NO.	SHEET NO.
B-4642	5 OF 6

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



-L-
PI Sta 18+85.96
Δ = 0° 12' 30.3" (RT)
D = 0° 21' 45.5"
L = 57.48'
T = 28.74'
R = 15,800.00'
DS = 60MPH

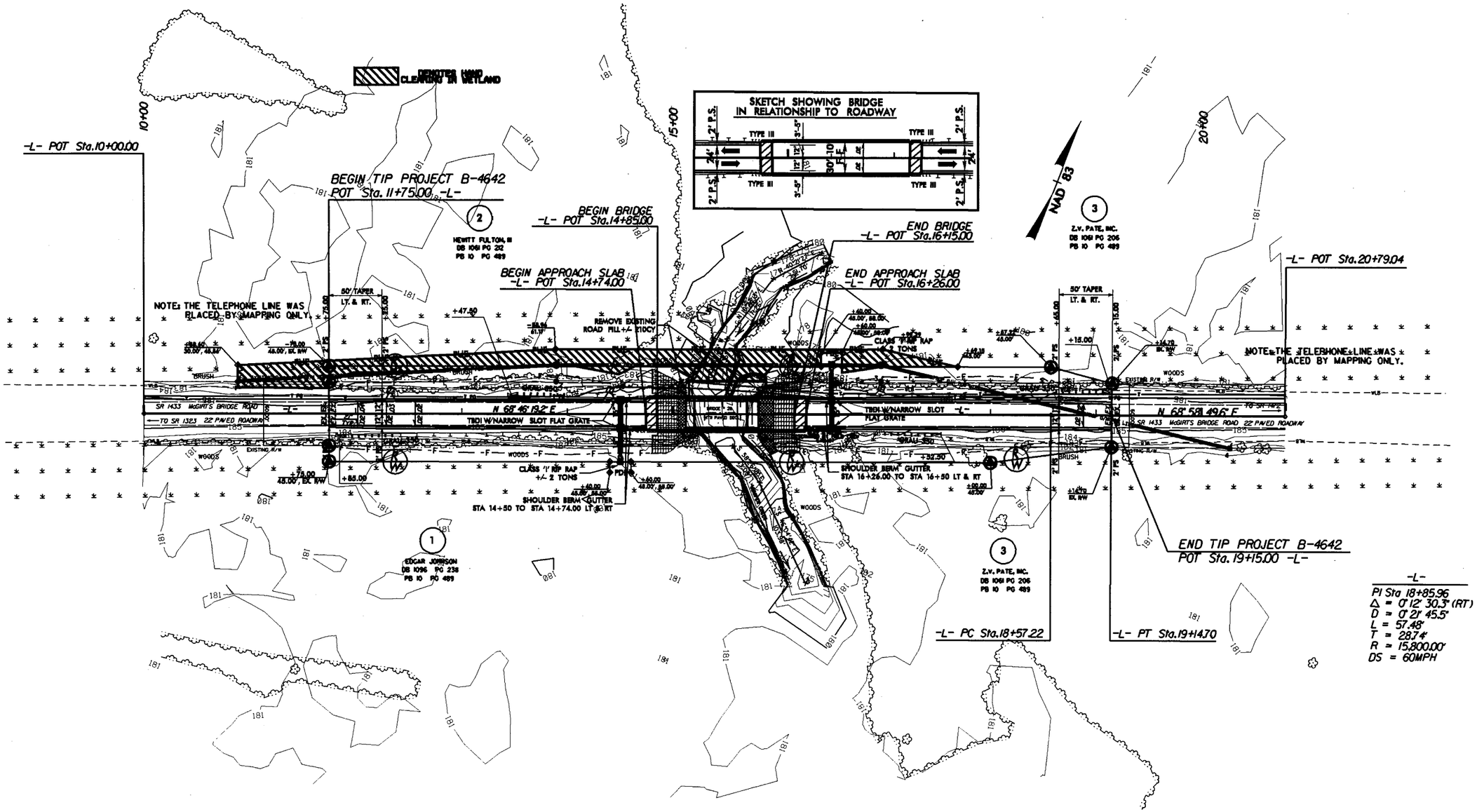
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4642	6 OF 6

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

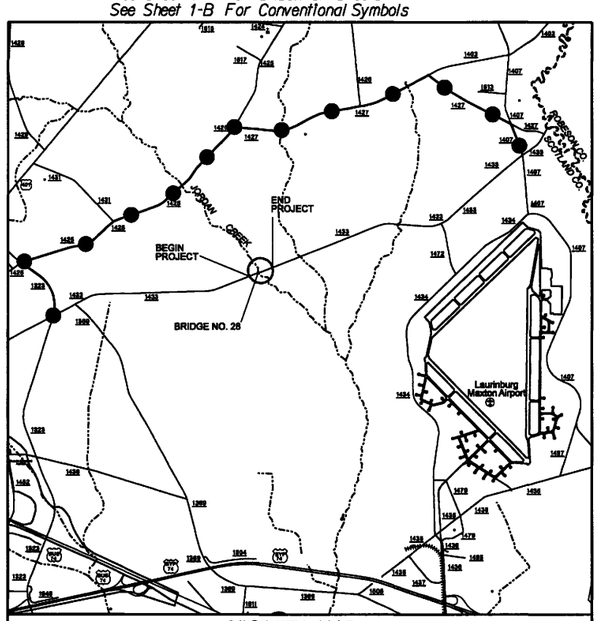
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION



28-MAY-2009 10:27
I:\projects\b4642_ut_04_ue02_psh_env_permit.dgn

TIP PROJECT: B-4642

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



VICINITY MAP

LEGEND — Offsite Detour Route

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

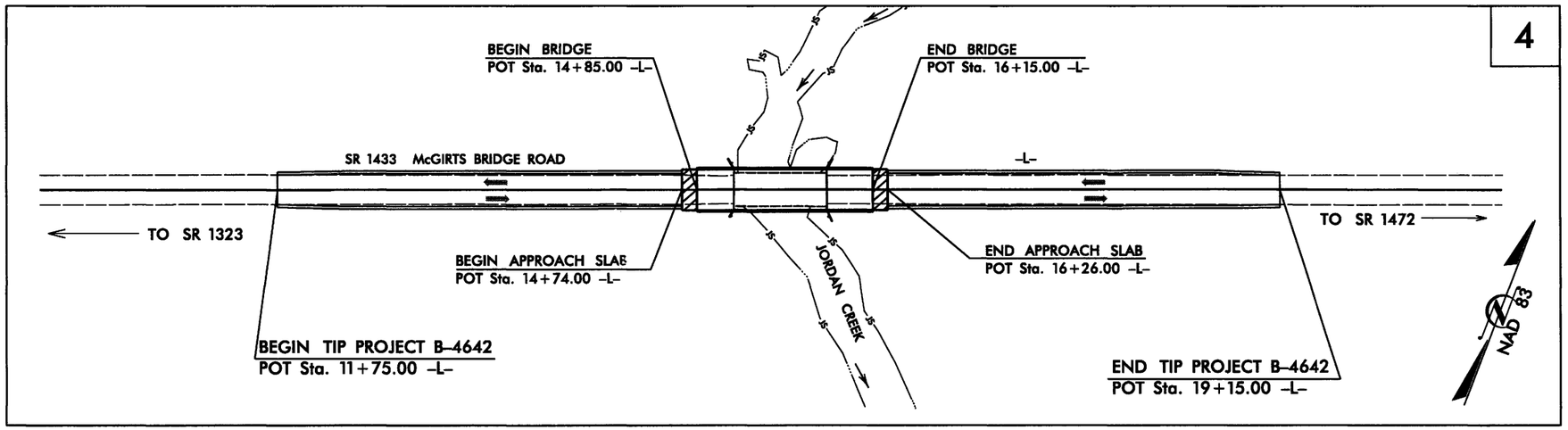
SCOTLAND COUNTY

LOCATION: BRIDGE NO. 28 OVER JORDAN CREEK ON SR 1433

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4642	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33810.1.1	BRSTP-1433(2)	PE
33810.2.1	BRSTP-1433(2)	R/W, UTIL.



THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: DOUG TAYLOR, P.E., PROJECT ENGINEER - ROADWAY DESIGN

CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

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

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 2010 = 3,300
ADT 2030 = 5,100
DHV = 10 %
D = 60 %
T = 3 %
V = 60 MPH
FUNC. CLASS = RURAL MAJOR COLLECTOR
TTST 1 % DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4642 = 0.115 mi.
LENGTH STRUCTURE TIP PROJECT B-4642 = 0.025 mi.
TOTAL LENGTH TIP PROJECT B-4642 = 0.140 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:
FEBRUARY 20, 2009

LETTING DATE:
FEBRUARY 16, 2010

CLIFTON T. REGISTER, P.E.
PROJECT ENGINEER

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SUNGATE DESIGN GROUP, PA

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
WANG ENGINEERING

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

3/15/06

PROJECT REFERENCE NO.	SHEET NO.
B-4642	1-B

Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — IP
- Property Corner
- Property Monument — CM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

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

ROADS AND RELATED FEATURES:

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

VEGETATION:

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

EXISTING STRUCTURES:

MAJOR:

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

MINOR:

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

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

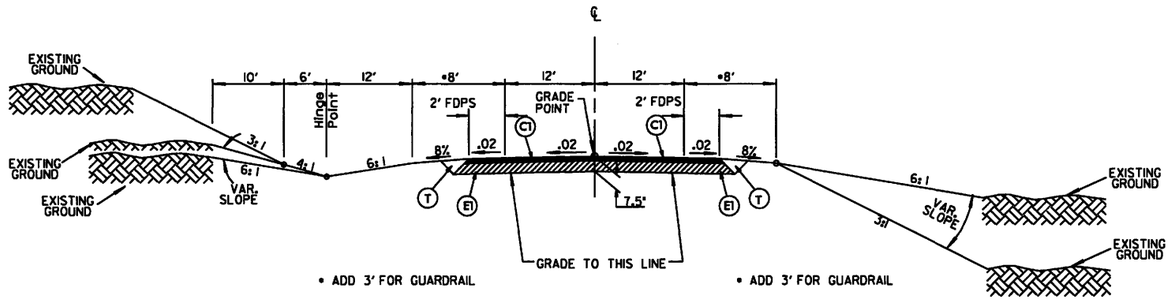
MISCELLANEOUS:

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

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4642	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



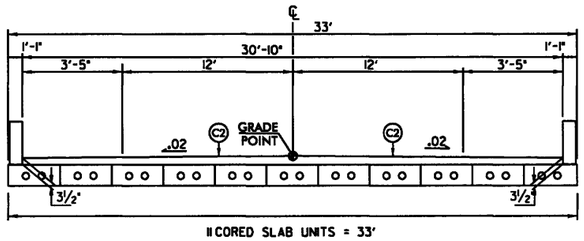
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS

-L- Sta. 11+75.00 to Sta. 14+85.00 (BEGIN BRIDGE)
-L- Sta. 16+15.00 (END BRIDGE) to Sta. 19+15.00

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2.5" ASPHALT CONC. SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. APPROX. 3.5" ASPHALT CONC. SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 192.5 LBS PER SQ. YD. IN EACH OF TWO LAYERS.
E1	PROP. APPROX. 5" ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS PER SQ. YD.
T	EARTH MATERIAL

NOTE: ALL SLOPES 1:1 UNLESS OTHERWISE SPECIFIED



‖CORED SLAB UNITS = 33'

TYPICAL BRIDGE SECTION

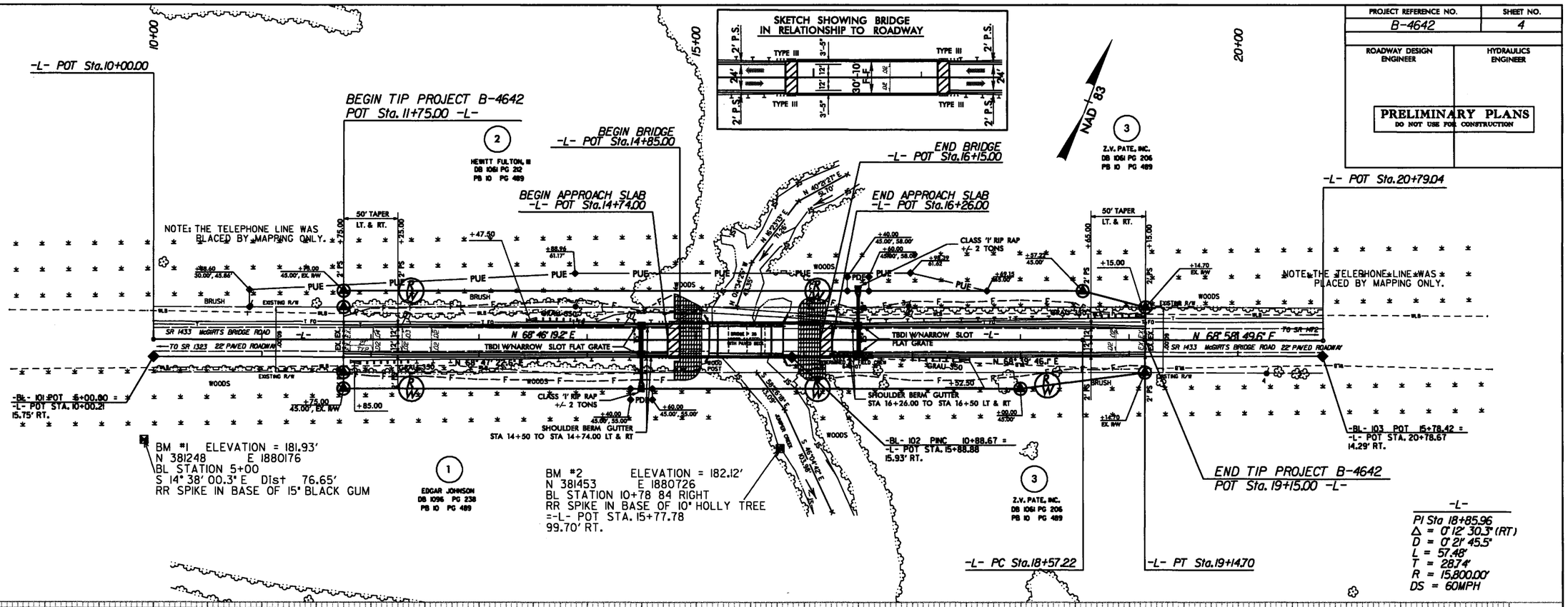
-L- Sta. 14+85.00 to Sta. 16+15.00

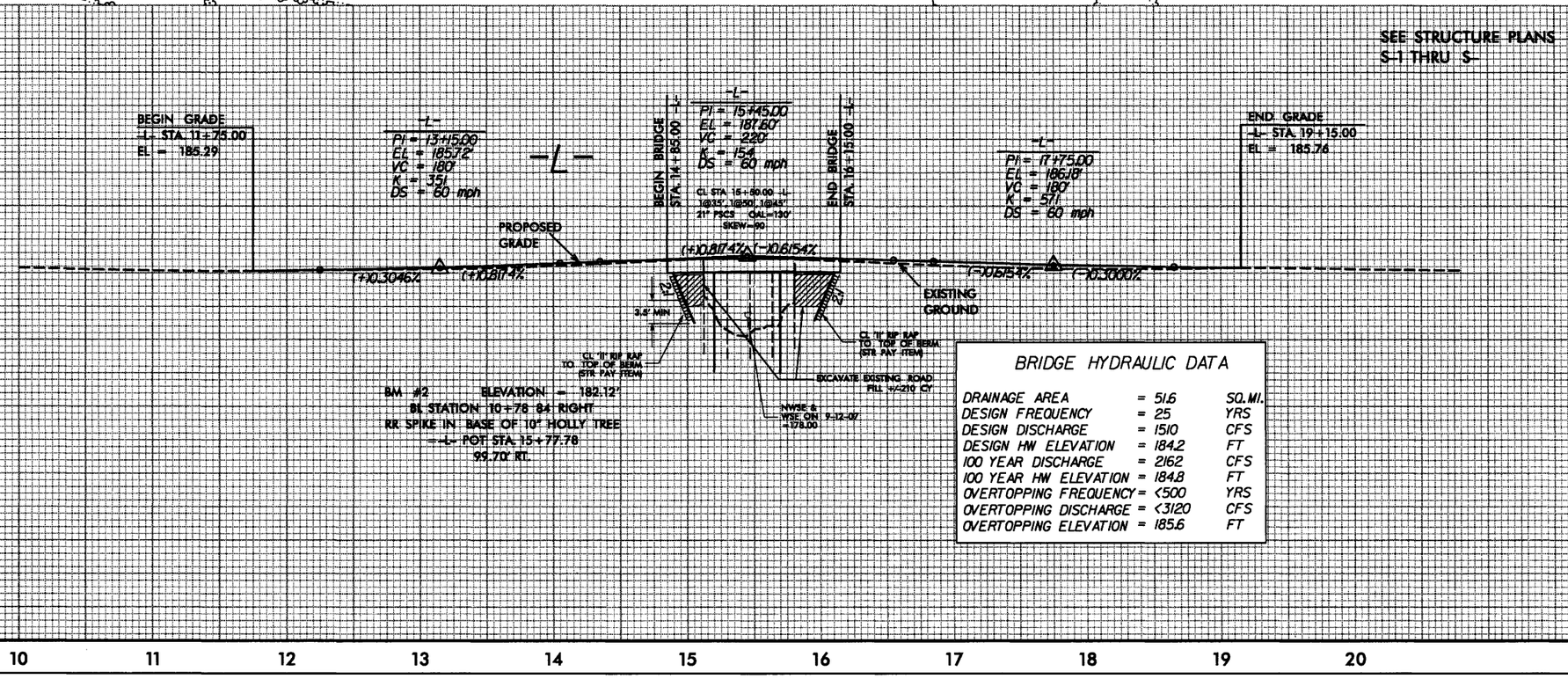
$$$$SYSTIME$$$$
$$$$SYSDATE$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4642	4

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CROSS-SECTION SUMMARY

PROJ. REFERENCE NO.	SHEET NO.
B-4642	X-1

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing, breaking of existing pavement and removal of existing pavement will be paid for at the lump sum price for "Grading".

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

Station -L-	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
11+75.00	0	0
12+00.00	7	16
12+50.00	13	32
13+00.00	22	75
13+50.00	16	77
14+00.00	10	68
14+50.00	27	117
14+85.00	7	58
16+15.00	0	0
16+50.00	3	8
17+00.00	4	55
17+50.00	1	51
18+00.00	2	76
18+50.00	8	38
19+00.00	56	198
19+15.00	52	185

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CROSS SECTION INDEX SHEET

LINE	STATION TO STATION		SHEET TO SHEET	
-L-	11+50.00	19+50.00	X-2	X-5

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4642	X-2

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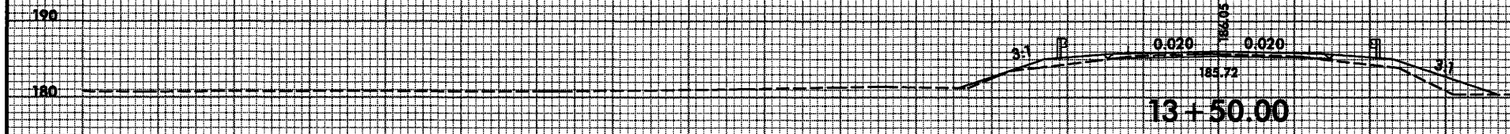
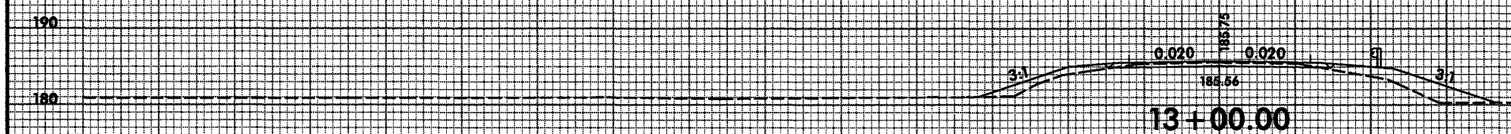
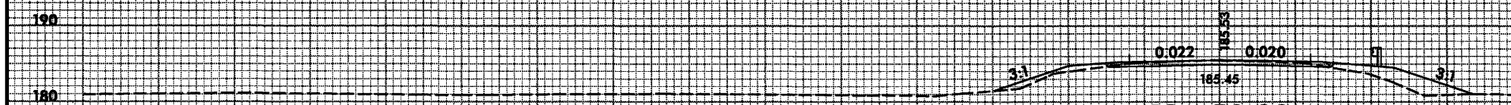
200 190 180



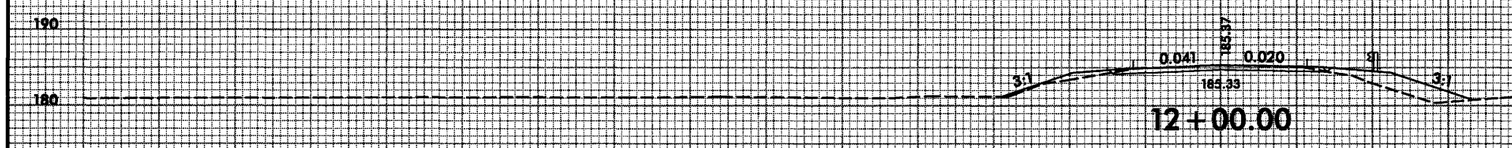
13+50.00



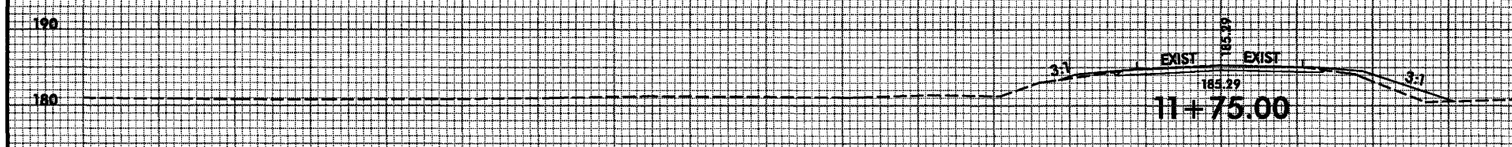
13+00.00



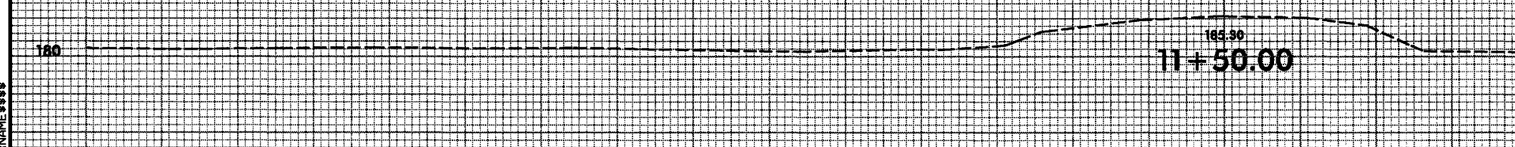
12+50.00



12+00.00



11+75.00



11+50.00

-L-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

$$SYSTIME$$$$DGN$$
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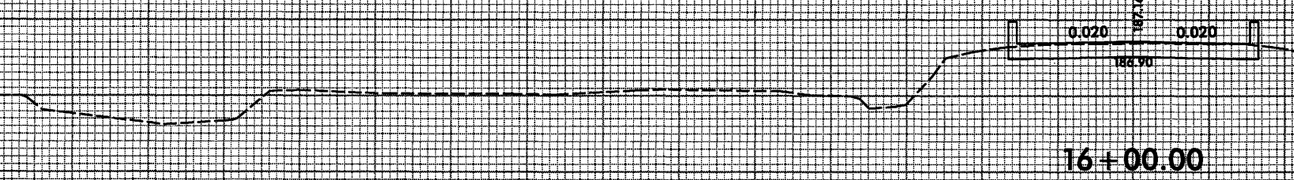
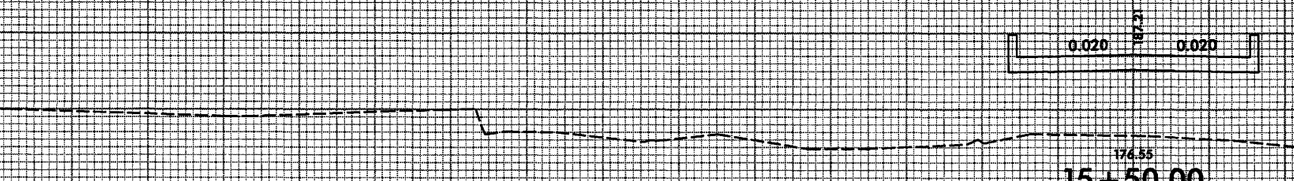
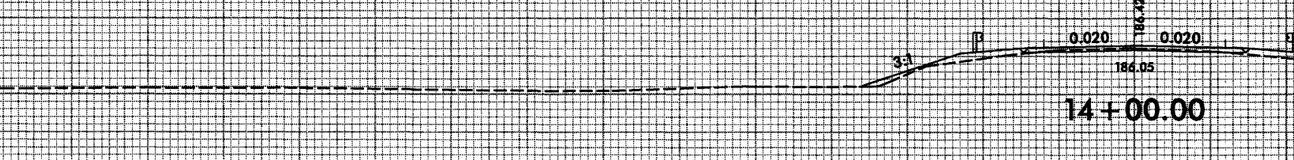






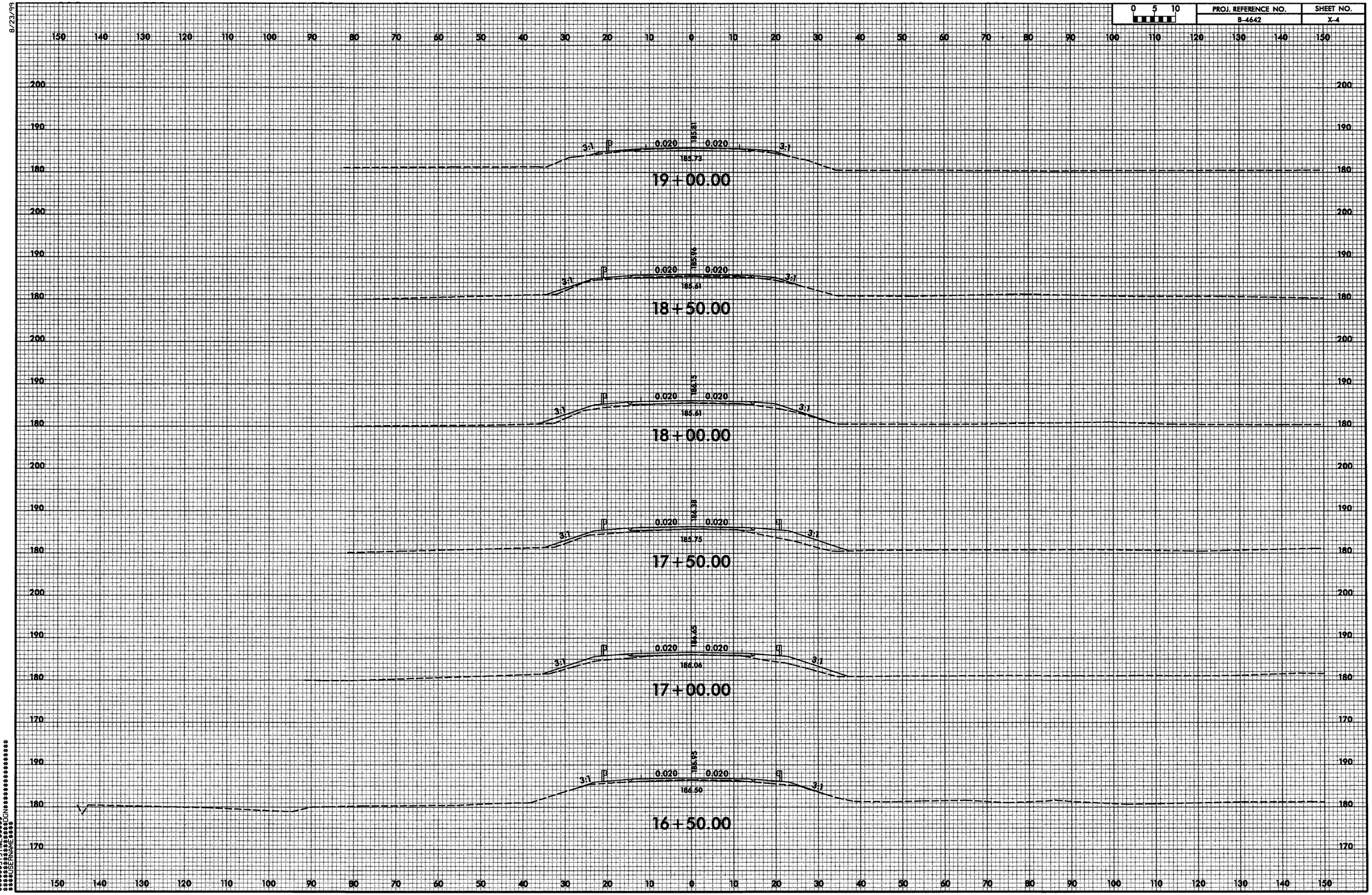
8/23/99

PROJ. REFERENCE NO.	SHEET NO.
B-4642	X-3

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

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-4642	X-4



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$$USERNAME$$

8/23/99

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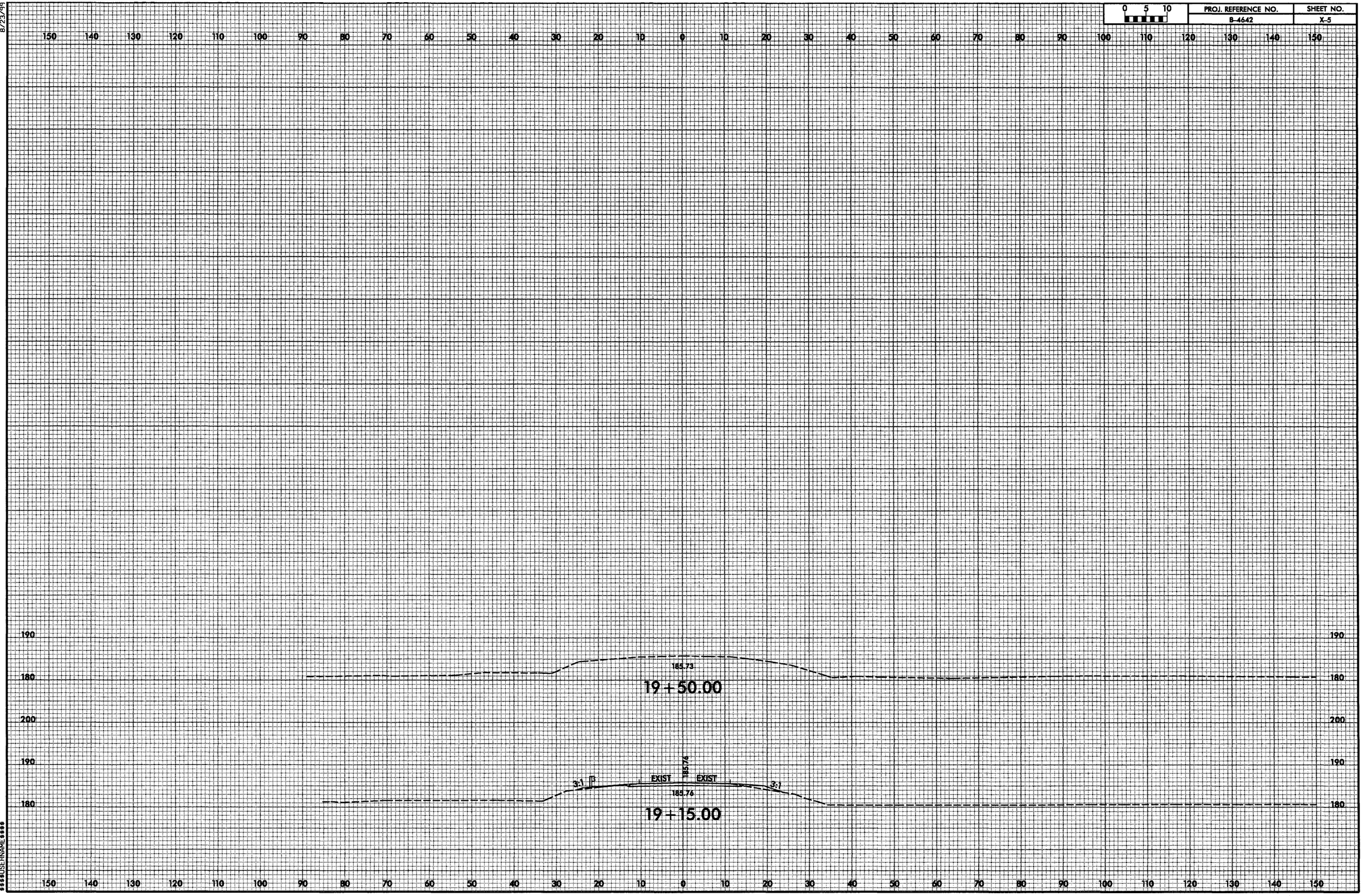
	B-4642	X-5



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$$$$USERNAME$$$$

Scotland County

Bridge No. 28 on SR 1433 (McGirts Bridge Road)

Over Jordan Creek

Federal-Aid Project No. BRSTP-1433(2)

W.B.S. No. 33810.1.1

T.I.P. Project No. B-4642

CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

AND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

7/11/07
DATE

For [signature]
Gregory J. Thorpe, Ph. D., Environmental Management Director
Project Development and Environmental
Analysis Branch, NCDOT

7/18/07
DATE

For [signature]
John F. Sullivan, III, P. E.
Division Administrator, FHWA

Scotland County

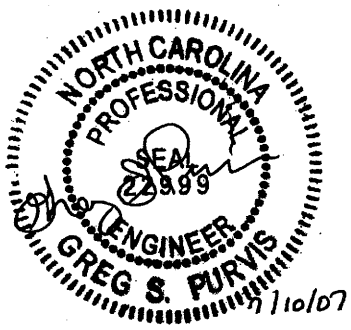
Bridge No. 28 on SR 1433 (McGirts Bridge Road)

Over Jordan Creek

Federal-Aid Project No. BRSTP-1433(2)

W.B.S. No. 33810.1.1

T.I.P. Project No. B-4642



CATEGORICAL EXCLUSION

July 2007

Document Prepared by:
Wang Engineering Company, Inc.

Greg S. Purvis, P. E.
Project Manager

7/10/07
DATE

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

7-10-07
DATE

For the North Carolina Department of Transportation

Tracy Walter
Project Manager
Bridge Project Development Unit

7/11/07
DATE

Bryan D. Kluchar, P.E.
Project Engineer
Bridge Project Development

7/11/07
DATE

PROJECT COMMITMENTS

Scotland County
Bridge No. 28 on SR 1433 (McGirts Bridge Road)
Over Jordan Creek
Federal-Aid Project No. BRSTP-1433(2)
W.B.S. No. 33810.1.1
T.I.P. Project No. B-4642

Division Eight Construction, Resident Engineer's Office

In order to have time to adequately reroute school busses, Scotland County Schools should be contacted at (910) 277-4355 at least one month prior to road closure.

Scotland County Emergency Services needs to be contacted at (910) 276-1313 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

This project is located near the Laurinburg-Maxton Airport. Although this project does not conflict with airport operation, the Laurinburg-Maxton Airport should be contacted at (910) 844-5081 prior to beginning construction.

Hydraulics Unit

Jordan Creek is a FEMA regulated stream within a Limited Detailed Study area. Coordination with FEMA will be required.

Scotland County
Bridge No. 28 on SR 1433 (McGirts Bridge Road)
Over Jordan Creek
Federal-Aid Project No. BRSTP-1433(2)
W.B.S. No. 33810.1.1
T.I.P. Project No. B-4642

INTRODUCTION: The replacement of Bridge No. 28 is included in the latest approved North Carolina Department of Transportation (NCDOT) Transportation Improvement Program (TIP) and is eligible for 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 15.0 out of a possible 100 and a structural appraisal of 2 out of a possible 9. Therefore, based on Federal Highway Administration (FHWA) standards, the bridge is considered structurally deficient. In addition, the existing structure is considered functionally obsolete due to a deck geometry appraisal of 2 out of a possible 9.

Bridge No. 28 is composed of timber and steel. Timber typically does not last beyond 40 to 50 years due to the natural deterioration rates of wood. Rehabilitation of a timber structure is generally practical only when a few members are damaged or prematurely deteriorated. The condition of Bridge No. 28, built in 1951, has deteriorated to the point that makes rehabilitation impractical. Replacement of the bridge will result in safer traffic operations.

II. EXISTING CONDITIONS

The project is located 1.57 miles northeast of the intersection with SR 1369 (see Figure 1). Land use in the project area is predominantly woodlands and farmland. Undeveloped woodlands are adjacent on the north and south sides of the study area. The Laurinburg-Maxton Airport is located approximately 2.0 miles southeast of the existing bridge.

SR 1433 is classified as a rural major collector in the Statewide Functional Classification System and it is not a National Highway System Route. This route is not a designated bicycle route and there is no indication that an unusual number of bicyclists use the roadway.

In the vicinity of the bridge, SR 1433 has a 21-foot pavement width with four-foot grass shoulders (see Figure 3). The roadway grade slopes away from the existing bridge slightly on both sides. The existing bridge on SR 1433 is located in a tangent. The roadway is situated approximately twelve feet above the creek bed.

Bridge No. 28 is a four-span structure that consists of a timber deck with asphalt wearing surface on I-beams. The substructure consists of timber caps on timber piles and one of the interior bents has a steel crutch bent. The existing bridge (see Figure 3) was constructed in 1951. The overall length of the structure is 69 feet. The clear roadway width is 23.2 feet. The posted weight limit on this bridge is 18 tons for single vehicles and 26 tons for TTST's.

On the upstream side of the bridge overhead power crosses Jordan Creek and crosses the eastern approach diagonally. Fiber optic and telephone utilities are underground on the upstream side of the bridge. Utility impacts are anticipated to be low.

The current traffic volume is 3,000 vehicles per day (VPD) is expected to increase to 5,100 VPD by the year 2030. The projected volume includes one percent truck-tractor semi-trailer (TTST) and two percent dual-tired vehicles (DT). The speed limit in the vicinity of the bridge is not posted and therefore a statutory 55 miles per hour (mph) is assumed. One school bus crosses this bridge daily two times each and four buses cross one time each for a total of 6 trips.

There were no accidents reported during a recent three-year period.

III. ALTERNATIVES

A. Project Description

The replacement structure will consist of a bridge approximately 110-foot long. The bridge length is based on preliminary design information and is set by hydraulic requirements. The bridge will be of sufficient width to provide for two 12-foot lanes with three-foot offsets (minimum offset allowed per NCDOT policy) on each side. The roadway grade of the new structure will be approximately the same as the existing grade.

The existing roadway will be widened to a 24-foot pavement width to provide two 12-foot lanes. Eight-foot shoulders will be provided on each side; two feet of which will be paved in accordance with the current NCDOT Design Policy. This roadway will be designed as a rural major collector. The proposed design speed is 60 mph.

B. Reasonable and Feasible Alternatives

One (1) alternative studied for replacing the existing bridge is described below.

Alternate A (Preferred) replaces the bridge at the existing location. Traffic will be detoured offsite (see Figure 1) during the construction period. The length of approach work will be approximately 360 feet on the west side of the bridge and approximately 340 feet on the east side of the bridge.

NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The offsite detour for this project would include SR 1407 (Airbase Road), SR 1427 (Lee's Mill Road), SR 1425 (Blakley Road), and SR 1323 (Highland Road) approximately 5.53 miles in length. The detour for the average road user would result in 2 minutes additional travel time (1.25 miles additional travel). Up to a twelve-month duration of construction is expected on this project.

Based on the Guidelines, the criteria above indicate that on the basis of delay alone the detour is acceptable. Scotland County Emergency Services along with Scotland County Schools Transportation have also indicated that the detour is acceptable. NCDOT Division 8 has indicated the condition of all roads, bridges and intersections on the offsite detour are acceptable without improvement and concurs with the use of the detour.

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 1433.

"Rehabilitation" of the existing bridge is not practical due to being composed mainly of timber and the natural deterioration of timber.

D. Preferred Alternative

Alternate A, replacing the existing bridge in the existing location while maintaining traffic on an offsite detour during the construction period is the preferred alternate. Alternate A was selected because of the low human and natural environmental impacts associated with it.

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

IV. DESIGN EXCEPTIONS ANTICIPATED

No design exceptions will be required.

V. ESTIMATED COSTS

The estimated costs, based on current 2007 prices, are as follows:

Table 1. – Estimated Costs

	Alternate A (Preferred)
Structure Removal (existing)	$ 16,400
Structure (proposed)	389,900
Detour Structure and Approaches	0
Roadway Approaches	163,200
Miscellaneous and Mobilization	133,500
Engineering and Contingencies	122,000
Total Construction Cost	825,000
ROW/Const. Easements:	5,500
Utilities	76,900

TOTAL	$ 907,400

VI. NATURAL RESOURCES

A. Physical Characteristics

1. Water Resources

The project study area is located within sub-basin 03-07-55 of the Lumber River Basin (NCDWQ 2003). This area is part of USGS Hydrologic Unit 03040204 (Seaber et al. 1987) of the South Atlantic/Gulf Region. The structure targeted for replacement spans Jordan Creek. The portion of Jordan Creek traversing the project study area has been assigned Stream Index Number 14-34-4-(2) by the NCDWQ (NCDWQ 2006a). Jordan Creek flows from north to south through the project study area and enters the project study area as a well-defined, fourth-order, perennial stream with moderate flow over a silt/sand substrate. A Best Usage Classification of **C Sw** has been assigned to this section of Jordan Creek. Jordan Creek is currently listed by the NCDWQ as **Supporting** for its designated uses. With respect to temperature regimes, Jordan Creek is designated as a warm water stream (USACE et al. 2003). Neither Jordan Creek, nor any stream draining to Jordan Creek, is listed on the 2004 final Section 303(d) list (NCDWQ 2004). No streams within 1.0 mile of the project study area are on the 2004 final Section 303(d) list. No Outstanding Resource Waters (ORW), High Quality Waters (HQW), Water Supply I

(WS-I), Water Supply II (WS-II), or watershed Critical Area (CA) waters occur within 1 mile of the project study area (NCDWQ 2003, NCDWQ 2006a).

2. Biotic Resources

Three distinct plant communities were identified within the project study area: (1) cutover scrub-shrub, (2) Cypress-Gum Swamp (Blackwater subtype), and (3) disturbed/maintained land. Plant communities were delineated to determine the approximate area and location of each. Construction noise and associated disturbances are anticipated to have short-term impacts on avifauna and migratory wildlife movement patterns.

Table 2. Plant Community Areas Within the Project Study Area

Plant Community	Acres	Percent Cover
Disturbed/maintained land	1.4	15.0
Cutover Scrub-Shrub	3.9	43.0
Cypress-Gum Swamp	3.8	42.0
Total	9.1	100

B. Jurisdictional Topics

1. Surface Waters and Wetlands

Jordan Creek exhibits characteristics of a well-defined, perennial stream with medium flow over a sand and silt substrate. Jordan Creek can be classified as riverine, lower perennial, with an unconsolidated bottom composed primarily of sand (R2UB2) (Cowardin et al. 1979). The project study area contains a total of approximately 420 linear feet (0.25 acre) of perennial stream.

Project study area wetlands occur within Cypress-Gum Swamp forest and Cutover Scrub-Shrub areas. Wetlands 1 and 2 support a mature forest that contains both bald cypress (*Taxodium distichum*) and swamp blackgum (*Nyssa biflora*). These two species are primarily located near the open water associated with Jordan Creek. The areas containing cypress and blackgum transition to areas of increasingly denser vegetation in places where there is slightly higher ground and little to no standing water. Wetlands 3 and 4 support a less mature community than Wetlands 1 and 2 that contains red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), and tulip poplar (*Liriodendron tulipifera*) saplings and a dense layer of blackberry (*Rubus argutus*) and vines. Evidence of wetland hydrology includes drainage pattern, standing water, water-stained leaves, and watermarks. The project study area contains a total of approximately 7.78 acres of vegetated wetlands.

Table 3. Wetland Areas Within the Project Study Area

Jurisdictional Area	Cowardin Classification	Riverine or Non-Riverine	Rating	Area (acres)
Wetland 1	PFO1B and C	Riverine	62	1.8
Wetland 2	PFO1B and C	Riverine	62	2.2
Wetland 3	PFO1B and C	Riverine	62	1.7
Wetland 4	PFO1B and C	Riverine	62	2.1
Total Acreage		--	--	**7.8**

The project will not impact Jordan Creek and no temporary fill associated with demolition of the bridge superstructure is anticipated. This project is subject to Best Management Practices for Bridge Demolition and Removal (BMP-BDR's).

2. Permits

In accordance with provisions of Section 404 of the Clean Water Act (33 USC 1344), a Section 404 Nationwide Permit (NWP) 23 from the USACE is likely to be applicable for all impacts to Waters of the United States resulting from the proposed project. A NWP No. 33 may be required if temporary construction including cofferdams, access and dewatering are required for this project. A North Carolina Division of Water Quality (DWQ) Section 401 Water Quality General Certification is required prior to the issuance of the Section 404 NWP 23 and/or NWP 33.

3. 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).

The USFWS currently lists six federally protected species with ranges that extend into Scotland County (as May 10, 2007 Table 4).

The project study area was walked and visually surveyed for significant features including potential protected species habitat. The field work for this investigation was conducted on July 5, 2006 by EcoScience Corporation biologists Layna Thrush and David O'Loughlin.

Table 4. Federally Protected Species Listed for Scotland County

Common Name	Scientific Name	Federal Status	Biological Conclusion
American alligator	*Alligator mississippiensis*	T (S/A)	NA
Red-cockaded woodpecker	*Picoides borealis*	E	NO EFFECT
American chaffseed	*Schwalbea americana*	E	NO EFFECT
Canby's dropwort	*Oxypolis canbyi*	E	NO EFFECT
Michaux's sumac	*Rhus michauxii*	E	NO EFFECT
Rough-leaved loosestrife	*Lysimachia asperulaefolia*	E	NO EFFECT

American alligator **Biological Conclusion:** **NOT REQUIRED**
T(S/A) species are not subject to Section 7 consultation and **a biological conclusion for this species is not required.** Potential habitat for American alligator exists within the project study area. NCNHP records (reviewed June 12, 2006) document one occurrence of American alligator approximately 2.0 miles downstream of the project study area in Maxton Pond. No American alligators were seen during the field visit. Construction activities may temporarily displace any American alligators in the vicinity; however, no long-term impact to American alligator is anticipated as a result of this project.

Red-cockaded woodpecker **Biological Conclusion:** **NO EFFECT**
The project area does not provide suitable habitat for red-cockaded woodpecker. The entire project study area is a wetland with dense understory vegetation and no pine trees old enough to

foster habitat. NCNHP records (reviewed June 12, 2006) document no occurrence of this species within 2.0 miles of the project study area. Consequently, the proposed project will have "No Effect" on the red-cockaded woodpecker.

American chaffseed **Biological Conclusion:** **NO EFFECT**
The project area provides no suitable habitat for American chaffseed. The project area consists of cypress/black gum swamp and disturbed/maintained areas, neither of which is considered habitat. NCNHP records (reviewed June 12, 2006) document no occurrence of this species within 2.0 miles of the project study area. Consequently, the proposed project will have "No Effect" on American chaffseed.

Canby's dropwort **Biological Conclusion:** **NO EFFECT**
The project study area does not provide habitat preferred by Canby's dropwort. The project study area contains too much vegetative competition to be suitable for this species. NCNHP records (reviewed June 12, 2006) document no occurrence of this species within 2.0 miles of the project study area. Consequently, the proposed project will have "No Effect" on Canby's dropwort.

Michaux's sumac **Biological Conclusion:** **NO EFFECT**
The project area provides habitat preferred by Michaux's sumac along roadsides. NCNHP records (reviewed June 12, 2006) document no occurrence of this species within 2.0 miles of the project study area, and a systematic survey conducted on July 5, 2006 by ESC biologists David O'Loughlin and Layna Thrush revealed no individuals of this species within the project study area. Consequently, the proposed project will have "No Effect" on Michaux's sumac.

Rough-leaved loosestrife **Biological Conclusion:** **NO EFFECT**
The project area provides no suitable habitat for rough-leaved loosestrife. The project study area has neither the soil conditions nor the lack of vegetative competition necessary to support this species. NCNHP records (reviewed June 12, 2006) document no occurrence of this species within 2.0 miles of the project study area. Consequently, the proposed project will have "No Effect" on rough-leaved loosestrife.

VII. HUMAN ENVIRONMENT

Section 106 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.

Historic Architecture

The Historic Preservation Office (HPO) reviewed the subject project and determined that no surveys are required (see letter dated May 1, 2006).

Archaeology

The Historic Preservation Office (HPO) 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 May 1, 2006).

Community Impacts

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.

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.

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.

The project will not have a disproportionately high and adverse human health and environmental effect on any minority or low-income population.

Noise & Air Quality

This project is an air quality neutral project in accordance with 40 CFR 93.126. It is not required to be included in the regional emissions analysis (if applicable) and project level CO or PM2.5 analyses are not required. This project will not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative. Therefore, FHWA has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Consequently, this effort is exempt from analysis for MSATs. Any burning of vegetation shall be performed in accordance with applicable local laws and regulations of the North Carolina State Implementation Plan (SIP) for air quality compliance with 15 NCAC 2D.0520.

Noise levels may increase during project construction; however, these impacts are not expected to be substantial considering the relatively short-term nature of construction noise and the limitation of construction to daytime hours. The transmission loss characteristics of nearby natural elements and man-made structures are believed to be sufficient to moderate the effects of intrusive construction noise.

VIII. GENERAL ENVIRONMENTAL EFFECTS

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

The 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 proposed project will not require right-of-way acquisition or easement from any land protected under section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303).

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.

Scotland County is a participant in the Federal Flood Insurance Program. The bridge is located within a FEMA Limited Detail Study Area, Zone AE. The new structures should be designed to match or lower the existing 100-year storm elevation upstream of the roadway. Since the proposed replacement for Bridge No. 28 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. OTHER AGENCY COMMENTS

NCDOT has sought input from the following agencies as a part of the project development: U.S. Army Corps of Engineers, N. C. Department of Cultural Resources, U. S. Fish & Wildlife Service, N. C. Division of Water Quality, N. C. Wildlife Resources Commission, National Marine Fisheries, U. S. Forest Service, Scotland County Emergency Services and the Scotland County Public Schools.

The **U.S. Fish & Wildlife Service** in a standardized letter provided a request that they prefer any replacement structure to be a spanning structure.

Response: The existing bridge will be replaced with a bridge and bents in the stream will minimized to the extent possible. Equal or greater conveyance will be provided with bridge and wetland impacts will be minimized/avoided to extent practical.

The **N.C. Wildlife Resource Commission and the North Carolina Division of Water Quality** had no special concerns for this project.

The **Scotland County Public Schools and Scotland County Emergency Services** indicated that an offsite detour is acceptable.

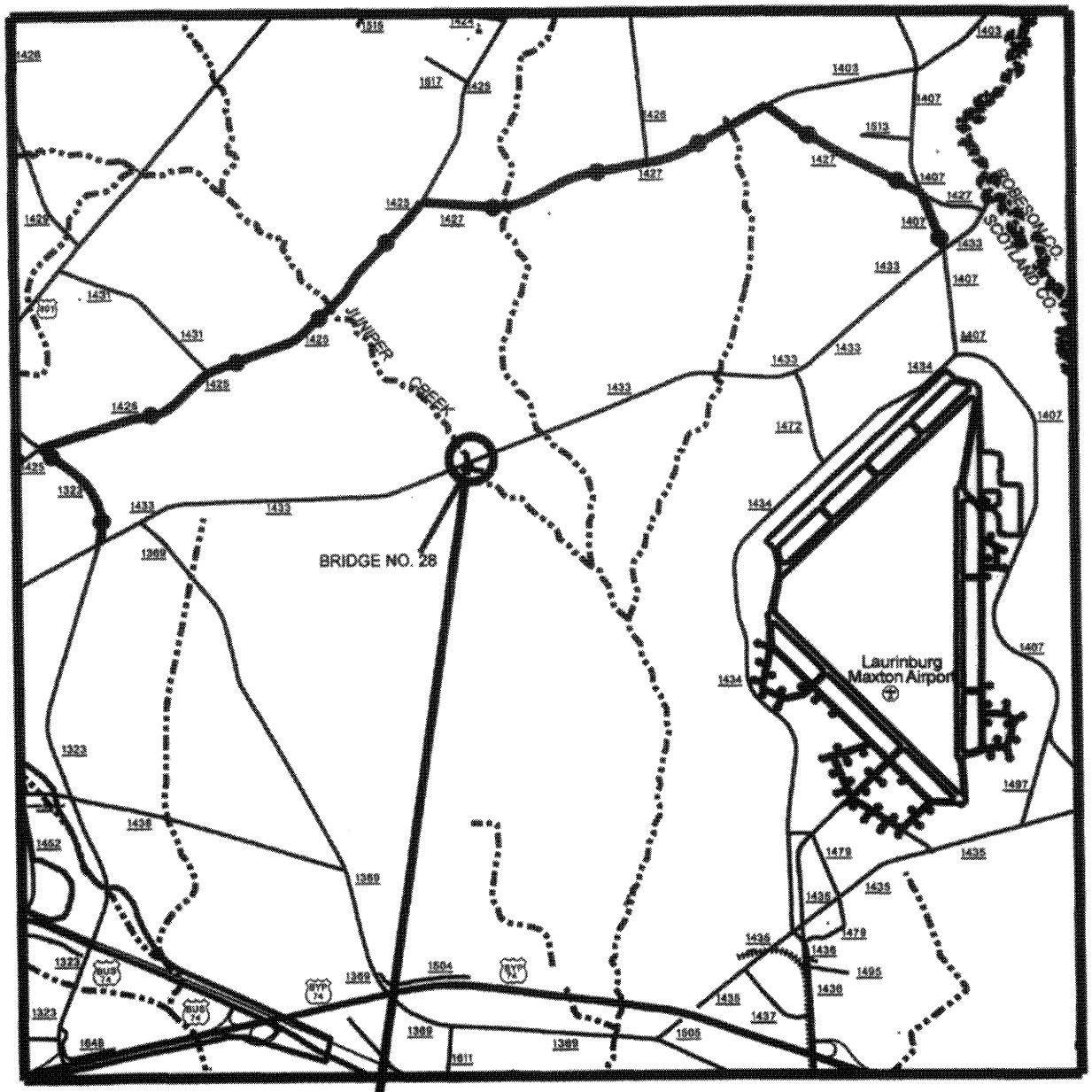
X. PUBLIC INVOLVEMENT

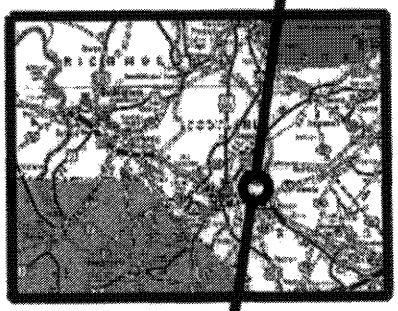
A newsletter has been sent to all those living along SR 1433 between the intersection with SR 1323 and the intersection with SR 1427. No comments have been received to date.

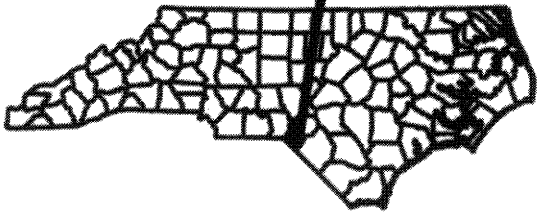
XI. CONCLUSION

On the basis of the above discussion, it is concluded that no substantial adverse environmental impacts will result from implementation of the project. The project is therefore considered to be a federal "Categorical Exclusion" due to its limited scope and lack of substantial environmental consequences.

FIGURES







LEGEND

Studied Detour Route

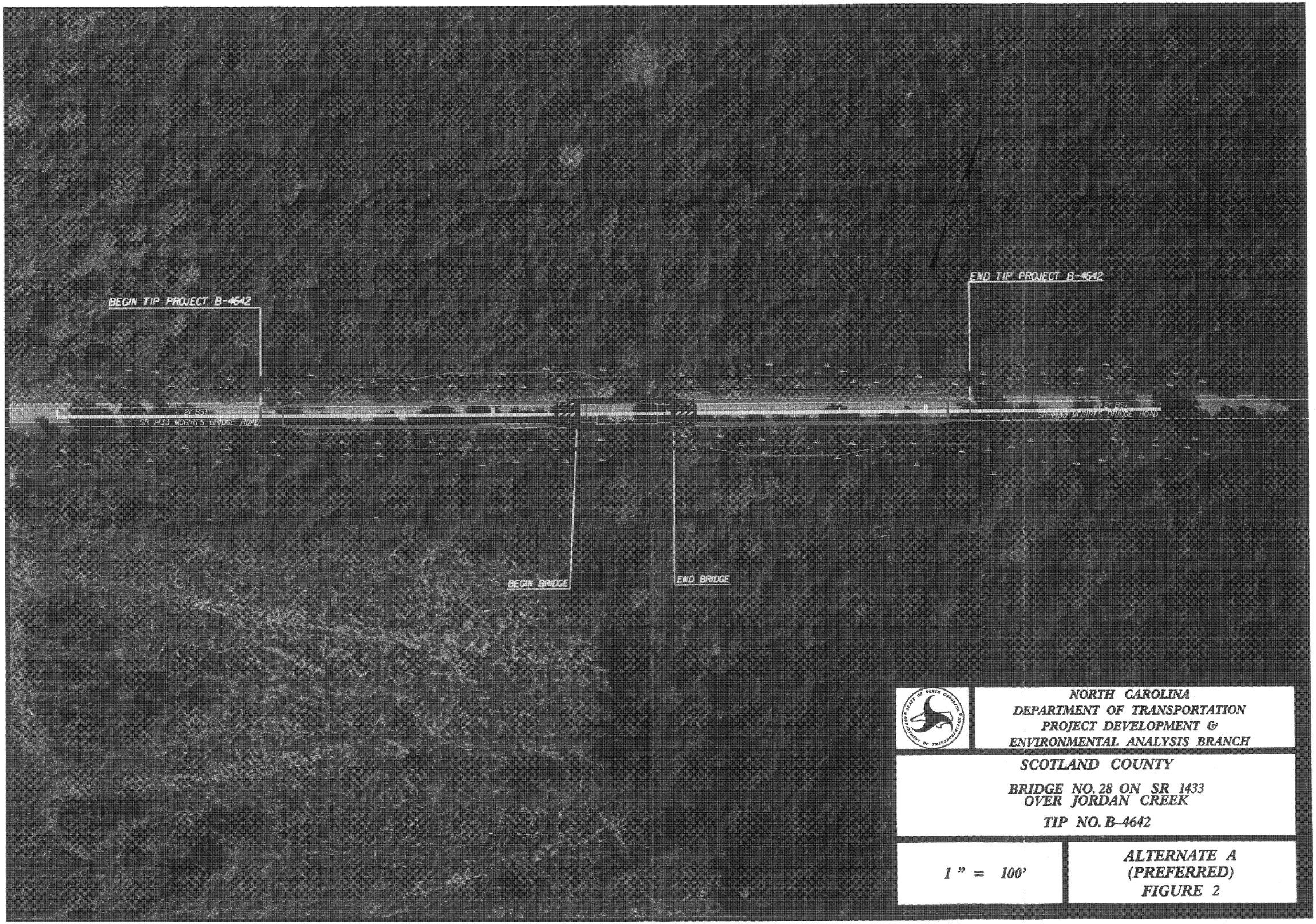
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
& ENVIRONMENTAL ANALYSIS

SCOTLAND COUNTY

BRIDGE NO. 28 ON SR 1433
OVER JORDAN CREEK

TIP NO. B-4642

VICINITY MAP
FIGURE 1



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT &
ENVIRONMENTAL ANALYSIS BRANCH

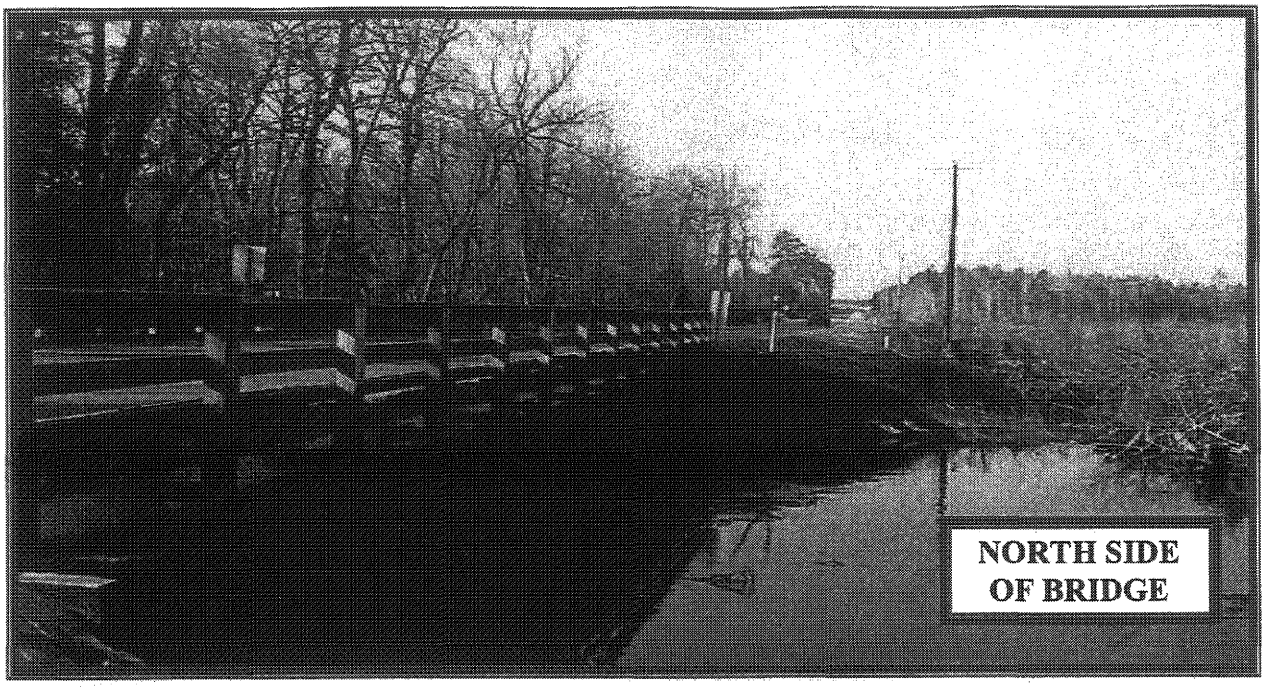
SCOTLAND COUNTY

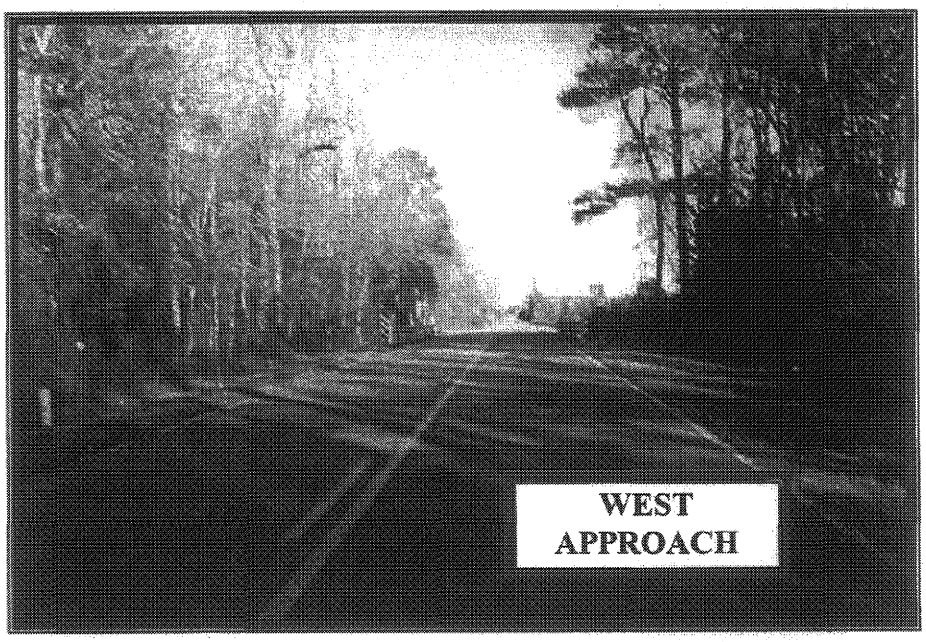
BRIDGE NO. 28 ON SR 1433
OVER JORDAN CREEK

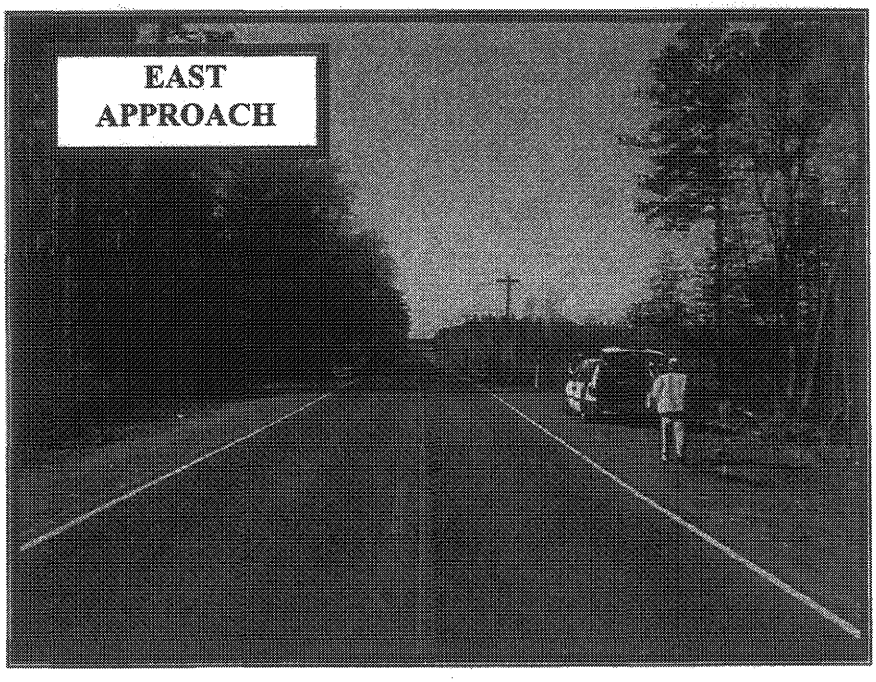
TIP NO. B-4642

1 " = 100'

ALTERNATE A
(PREFERRED)
FIGURE 2







B-4642
Replacement of Bridge
No. 28 on SR 1433
Over Jordan Creek
Scotland County

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

FIGURE 3

APPENDIX A

Comments received from Federal, State, and Local Agencies

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

May 1, 2006

MEMORANDUM

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

FROM: Peter Sandbeck

SUBJECT: Replace Bridge 28 on SR 1433 over Juniper Creek, B-4642, Scotland County, ER 06-0832

Thank you for your letter of March 21, 2006, concerning the above project.

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

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

Thank you for your cooperation and consideration. If you have questions concerning the above comment, 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.

North Carolina Department of Transportation
PROJECT ENVIRONMENTAL CONSULTATION FORM
I. D. No. B-4642

I. GENERAL INFORMATION

a. Consultation Phase:	Right of Way Consultation	
b. Project Description:	Replacement of Bridge No. 28 Jordan Creek on SR 1433 in Scotland County	
c. WBS Project No. State Project: Federal Project:	33810.1.1 8.2590901 BRSTP-1433 (2)	
d. Document Type:	Categorical Exclusion	07/18/07

II. ACTION PROPOSED IN CATEGORICAL EXCLUSION

Bridge No. 28 will be replaced on the existing location with a spanning structure. Traffic will me maintained using an offsite detour.

III. CONCLUSIONS

The Categorical Exclusion has been reevaluated as required by 23 CFR 771. The current proposed action is essentially the same as the action proposed in the Categorical Exclusion. Proposed changes, if any, are noted below in Section IV. It has been determined that anticipated social, economic, and environmental impacts were accurately described in the Categorical Exclusion unless noted otherwise herein. Therefore, the previous Administration Action remains valid.

IV. CHANGES IN PROPOSED ACTION AND ENVIRONMENTAL CONSEQUENCES

There are no changes in the proposed action.

No changes have occurred between the current NCDWQ water usage classification and the water resource classification listed within the Categorical Exclusion.

V. LIST OF PROJECT COMMITMENTS

Please see attached green sheet.

VI. COORDINATION

Project Development and Environmental Analysis Branch personnel have discussed current project proposals with others as follows:

Malcolm Watson Roadway Design	11-08 Date
Jim Mason Natural Environment Unit	09-08 Date

VII. NCDOT CONCURRENCE

Project Planning Engineer Project Development & Environmental Analysis Branch	1/9/2009 Date
Bridge Project Development Unit Head Project Development & Environmental Analysis Branch	1/9/09 Date

VIII. FHWA CONCURRENCE

N/A John F. Sullivan, III, PE, Division Administrator Federal Highway Administration	N/A Date