STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

January 21, 2011

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

ATTN: Mr. Tom Steffens
NCDOT Coordinator

N. C. Dept. of Environment and Natural Resources
Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557

ATTN: Mr. Stephen Lane
NCDOT Coordinator

Dear Sirs:

Subject: **Application for Section 404 Nationwide Permits 23 and 13, Section 401 Water Quality Certification, CAMA Major Development Permit, and Tar-Pamlico Riparian Buffer Authorization** for the replacement of Bridge No. 51 over Broad Creek on US 264 in Beaufort County. State Project No. 8.1151601; Federal Aid Project Number BRSTP-264(24); Debit $400 from WBS 33690.1.1; **TIP No. B-4413**.

The North Carolina Department of Transportation (NCDOT), Division of Highways, in consultation with the Federal Highway Administration (FHWA), proposes to replace Bridge No. 51 in Beaufort County. The proposed let date for the project is October 18, 2011 with a review date of August 18, 2011; however, the let date may advance as additional funds become available.

Please find enclosed a Pre-Construction Notification (PCN) form, permit drawings, buffer drawings, utility drawings, roadway plans, a copy of the State Stormwater Management Plan, EEP Mitigation Acceptance Letter, North Carolina Division of Coastal Management Major Permit Forms 1, 2, and 5. Please note that due to schedule constraints, adjacent riparian landowner return receipts will be forwarded once they become available. A Categorical Exclusion (CE) was completed for this project on May 29, 2008, and distributed shortly thereafter. Additional copies are available upon request.

Regulatory Approvals

Section 404 Permit: NCDOT requests that a Nationwide Permit 23 be issued to authorize the majority of impacts resulting from this project in accordance with 23 CFR 771.115(b). We are also requesting the issuance of a Nationwide Permit 13 for bank stabilization. (72 CFR; 11092-11198, March 12, 2007).

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

TELEPHONE: 919-431-2000
FAX: 919-431-2002
WEBSITE: WWW.NCDOT.ORG

LOCATION:
4701 ATLANTIC AVENUE
SUITE 116
RALEIGH NC 27604

Section 401 Permit: We anticipate 401 Certification numbers 3701 and 3689 will apply to this project. All general conditions of the Water Quality Certifications will be met and we are requesting written approval from NCDWQ. In accordance with 15A NCAC 2H, Section .0500(a), we are providing five copies of this application to the NCDWQ for their approval.

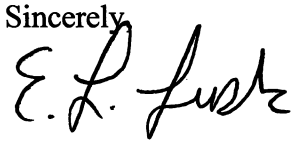
CAMA: NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Development Permit. The certified mail landowner receipts will be provided once they are available. Authorization to debit the $400 Permit Application Fee from WBS Element 33690.1.1 is hereby given.

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

If you have any questions or need additional information, please call or email Dr. Lance P. Fontaine at 919-431-6667 or lpfontaine@ncdot.gov.

Sincerely,



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

W/attachment
- Mr. Brian Wrenn, NCDWQ (5 Copies)
- Mr. Steve Sollod, NCDCM

W/o attachment (see website for attachments)
- Dr. David Chang, P.E., Hydraulics
- Mr. Greg Perfetti, P.E., Structure Design
- Mr. Dewayne Sykes, P.E., Utilities
- Mr. Mark Staley, Roadside Environmental
- Mr. C. E. Lassiter, P.E., Div. 2 Engineer
- Mr. Jay Johnson, Div. 2 Environmental Officer
- Mr. Gary Jordan, USFWS
- Mr. Travis Wilson, NCWRC
- Mr. Ron Sechler, NMFS
- Ms. Anne Deaton, NCDMF
- Mr. Jay Bennett, P.E., Roadway Design
- Mr. Majed Alghandour, P. E., Programming and TIP
- Mr. Art McMillan, P.E., Highway Design
- Ms. Beth Harmon, EEP
- Mr. Phillip Ayscue, NCDOT External Audit Branch
- Ms. Natalie Lockhart, PDEA Project Planning Engineer

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **SAW 2009-01868** County: **Beaufort** U.S.G.S. Quad: **Pantego**

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Fontaine

Property Owner/Agent: **NC Department of Transportation**
Address: **attn: Lance Fontaine**
1598 Mail Service Cente
Raleigh, NC 27699
Telephone No.: **919-431-6667**

Property description:
Size (acres) **10** Nearest Town **Pantego**
Nearest Waterway **Broad Creek** River Basin **Tar-Pamlico**
USGS HUC **03020104** Coordinates N **35.570055** W **-76.692991**
Location description **B-4413 over Broad Creek on US 264 southwest of Pantego.**

Indicate Which of the Following Apply:

A. Preliminary Determination

_ Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).

B. Approved Determination

_ There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X There are waters of the U.S. including wetlands on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

X The waters of the U.S. including wetland on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

_ The wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on _____. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Washington, NC, at (252) 946-6481 to determine their requirements.

Action Id. **SAW 2009-01868**

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **William Wescott** at **910-251-4629**.

C. Basis For Determination

Broad Creek is a TNW that flows into Pantego Creek which flows into Pungo River (AIWW). Wetlands are abutting Broad Creek.

D. Remarks

E. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B. above)

This correspondence constitutes an approved jurisdictional determination for the above described site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

District Engineer, Wilmington Regulatory Division
Attn:William Wescott, Project Manager,
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the District Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **12/6/2009**.

It is not necessary to submit an RFA form to the District Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: William Wescott, P.W.S.

Date **10/06/2009** Expiration Date **10/06/2014**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at http://regulatory.usacesurvey.com/ to complete the survey online.

Copy furnished:

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: NCDOT	File Number:	Date: 10/6/2009
Attached is:SAW 2009-01868		See Section below
☐ INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
☐ PROFFERED PERMIT (Standard Permit or Letter of permission)		B
☐ PERMIT DENIAL		C
☒ APPROVED JURISDICTIONAL DETERMINATION		D
☐ PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
USACE Attn: William Wescott Post Office Box 1000 Washington, NC 27889	Mr. Mike Bell, Administrative Appeal Review Officer CESAD-ET-CO-R U.S. Army Corps of Engineers, South Atlantic Division 60 Forsyth Street, Room 9M15 Atlanta, Georgia 30303-8801

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

For appeals on Initial Proffered Permits and approved Jurisdictional Determinations send this form to:

District Engineer, Wilmington Regulatory Division, Attn:William Wescott, Project Manager, Washington Regulatory Field Office, Post Office Box 1000, Washington, North Carolina 27889

For Permit denials and Proffered Permits send this form to:

Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Mike Bell, Administrative Appeal Officer, CESAD-ET-CO-R, 60 Forsyth Street, Room 9M15, Atlanta, Georgia 30303-8801

NCDOT Highway Stormwater Program

Released: July 2010 (DRAFT)

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

Version 1.1

General Project Information

Project No.:	33690.1.1 (B-4413)		**Date:**	11/4/2010		
City/Town:	Pantego, NC		**Designer:**	Amy Keeter		
County(ies):	Beaufort County		**Project Manager:**	Galen Cail, PE		
River Basin(s):	Tar-Pamlico		**CAMA County?**	yes	**TVA County?**	no
Primary Receiving Water:	Broad Creek		**NCDWQ Stream Index:**	C,SC,NSW		
NCDWQ Surface Water Classification for Primary Receiving Water		**Primary:**	Class C			
		Supplemental:	Nutrient Sensitive Waters (NSW)			
Other Stream Classification:	Areas of Environmental Concern					
303(d) Stream?	yes	**Type(s) of Impairment:**	Severe Bioclassification	chlorophyll a, copper		
State Stormwater Permit Required?	yes	**If yes, why?**	CAMA County			
Could the Project Impact Threatened or Endangered Species?			yes			
Description:	No Effect or May Effect, Not Likely to Adversely Effect (West Indian Manatee)					
Anadromous Fish Present?	yes					
Description:						
Buffer Rules in Effect?	yes		**Buffer Rules:**	Tar-Pamlico River Basin		

Existing Site

Description of Existing Project Area:	Two Lane US 264
Average Daily Traffic (existing):	3800 vpd
Existing Cross Section:	12' Travel Lanes, 8' Grass Shoulders
Surrounding Land Use:	Swamp,Wooded
General Comments:	

Project Description

Description of Proposed Project:	Replacement of Bridge #51 on US 264 over Broad Creek		
Average Daily Traffic (proposed):	6,100 vpd (2030)		
Proposed Cross-Section:	12' Travel Lanes, 8' Grass Shoulders, 3:1 Side Slopes		
Interchange Modification:	no	**Median Type:**	None
Terminus:	NA		
Terminus:	NA		
Project Length (lin. miles/feet):	0.150mi.	**Added Impervious Area (ac.):**	0.11ac
General Comments:	Reduced number of bents in creek from 5 to 2. 3:1 max side slopes. Utilizing preformed scour hole and grassed swales. Using Class I rip-rap on banks to minimize potential bank erosion. Increasing bridge opening area. No deck drains.		

Environmental Summary

Riparian Buffer and Jurisdictional Stream Impacts and Associated SCMs

Station	Stream Name	Stream Type	Jurisdict. Stream	Buffer?	Classific-ation?	Proposed Structure	SCM Type	Checklist Complete?	DA (ac.)	Q_2 (ft^3/s)	Q_{10} (ft^3/s)	WQv^c (ft^3)
15+77-L- LT.	Broad Crk	Perennial	RPW	Tar-Pamlico	Class C	1 @ 40', 1 @ 50', 1 @ 40' -- 21" Cored Slab	preformed scour hole	yes	0.10	0.5	0.6	

General Comments:

Project: B-4413 Beaufort Co. Affected Buffer Areas
Description: Replacement of Brdge #51 on US 264 over Broad Creek

Date: Jan-11
Dsn. By: AMK
Check: WGC

SHT.	Stormwater Structure	Station	Drainage Structure	Drainage Area (ac)	Req'd Length (ft.)	Provided Length (ft)	Channel Slope (ft/ft)	Side Slopes	Q2 cfs	V2 fps	Q10 cfs	V10 fps	Remarks
4	GS	14+35-L- LT	TB2GI	0.10	10.0	67	0.002	3:1	0.50	0.60	0.60	0.70	
4	PSH	16+89-L-RT	TB2GI	0.10					0.50		0.60		
4	GS	16+14-L-LT	Ditch	0.09	9.0	130	0.003	3:1	0.40	0.70	0.50	0.70	

DDB = DRY DETENTION BASIN
GS = GRASSED SWALE
PSH = PREFORMED SCOUR HOLE
LS = LEVEL SPREADER

2GI = GRATE INLET
CB = CATCH BASIN
OE = OPEN END PIPE

Ecosystem Enhancement PROGRAM

January 19, 2011

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-4413, Replace Bridge Number 51 over Broad Creek on US 264, Beaufort County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the riparian wetland mitigation and buffer mitigation for the subject project. Based on the information supplied by you on January 12, 2011, the riparian wetland impacts are located in CU 03020104 of the Tar-Pamlico River Basin in the Northern Outer Coastal Plain (NOCP) Eco-Region, and are as follows:

Stream and Wetlands	River Basin	CU Location	Eco-Region	Stream			Wetlands		
				Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Tar-Pamlico	03020104	NOCP	0	0	0	0.58	0	0
Mitigation Units (up to 2:1)	Tar-Pamlico	03020104	NOCP	0	0	0	1.16	0	0

All buffer mitigation requests and approvals are administrated through the Riparian Restoration Buffer Fund. The NCDOT will be responsible to ensure that appropriate compensation for the additional buffer mitigation will be provided in the agreed upon method of fund transfer. Upon receipt of the NCDWQ's Buffer Authorization Certification, EEP will transfer funds from MOA Fund into the Riparian Restoration Buffer Fund. Upon completion of transfer payment, NCDOT will have completed its additional riparian buffer mitigation responsibility for B-4413. Subsequently, EEP will conduct a review of current MOA mitigation projects in the river basin to determine if available buffer mitigation credits exist. If there are buffer mitigation credits available, then the Riparian Restoration Buffer Fund will purchase the appropriate amount of buffer mitigation credits from MOA Fund. The buffer impacts and anticipated buffer mitigation credits needed are as follows:

Buffer	River Basin	CU Location	Eco-Region	Buffer		
				Zone 1	Zone 2	TOTAL
Impacts	Tar-Pamlico	03020104	NOCP	3,355.0	2,149.0	5,504.0
Mitigation Units	Tar-Pamlico	03020103, 03020104, or 03020105	NOCP	10,065.0	3,224.0	13,289.0

EEP commits to implementing sufficient compensatory riparian wetland mitigation credits to offset the impacts associated with this project in accordance with the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. 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. Stanfield for

William D. Gilmore, P.E.
EEP Director

Cc: Mr. Tom Steffens, USACE – Washington Regulatory Field Office
Mr. Brian Wrenn, NC Division of Water Quality
File: B-4413

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 13	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. 51 over Broad Creek on US 264
2b. County:	Beaufort
2c. Nearest municipality / town:	Pantego
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4413

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) 431-6667
3g. Fax no.:	(919) 431-2002
3h. Email address:	lpfontaine@ncdot.gov

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

B. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	*not applicable*
1b. Site coordinates (in decimal degrees):	Latitude: 35.570604 (DD.DDDDDD) Longitude: - 76.692861 (-DD.DDDDDD)
1c. Property size:	2.7 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Broad Creek
2b. Water Quality Classification of nearest receiving water:	SC; NSW
2c. River basin:	Broad
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: Existing conditions on the site include mostly forested areas with maintained/disturbed roadside shoulders and driveway access to Broad Creek. General land use in the project vicinity is agriculture and silviculture.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.85	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: Broad Creek - 512 feet	
3d. Explain the purpose of the proposed project: To replace a structurally deficient bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 69-foot bridge with a 130-foot, 3-span bridge on the existing alignment with an off-site detour. Standard road and bridge building equipment, such as trucks, dozers, and cranes will be used. Telephone and fiber-optic utilities will be relocated on-site via the directional bore method without impacts to wetland areas or Broad Creek.	
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:	☒ 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): J. Harbour	Agency/Consultant Company: ESI, Inc. Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. October 6, 2009	
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. A representative for Tideland EMC contacted our office on November 05, 2009 indicating that the utility company would be relocating their existing pole line and would acquire the necessary permits.	

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	Fill	Riparian	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.33
Site 2 ☒ P ☐ T	Excavation	Riparian	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.01
Site 3 ☒ P ☐ T	Mechanized clearing	Riparian	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.24
Site 4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 6 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	0.58 Permanent 0.00 Temporary

2h. Comments:

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	Embankment Riprap	Broad Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	70	11
Site 2 ☐ P ☒ T	Existing abutment removal	Broad Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	70	58
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**	11 Perm 58 Temp

3i. Comments: Impacts due to proposed piers is 20 square feet (<0.01 ac).

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	X Permanent X 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	Roadway Fill	Broad Creek	☐ Yes ☒ No	218	809
B2 ☒ P ☐ T	Bridge	Broad Creek	☐ Yes ☒ No	927	0
B3 ☒ P ☐ T	Driveway	Broad Creek	☒ Yes ☐ No	1130	782
B4 ☒ P ☐ T	Access Road	Broad Creek	☐ Yes ☒ No	2225	1367
		6h. **Total buffer impacts**		4500	2958
6i. Comments:					

D. Impact Justification and Mitigation

1. Avoidance and Minimization

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

The proposed bridge is 61 feet longer than the existing bridge; the proposed bridge will be at approximately the same grade as the existing structure; an off-site detour will be used; development and adherence to stormwater management plan involving the use of grassy swales where appropriate, reduction in bent quantity (from 5 to 2), use of class I rip rap to prevent erosion at outlets, no deck drains, and use of preformed scour holes. Additionally, hydrological connectivity of the stream will be improved with the use of a longer bridge and removal of fill to improve hydrological conveyance and reduce velocities; an off site detour will be used, 3:1 fill slopes where practicable.

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

Design Standards in Sensitive Watersheds utilizing appropriate sedimentation and erosion control measures; top-down construction; adherence to in-water work moratorium of February 15 to June 15 due to anadromous fish; adherence to West Indian Manatee Guidelines; telephone and fiber optic utilities will use trenchless method (directional bore) to place their facilities under Broad Creek; staging area and access boxes for telephone and fiber optic utilities will be located outside wetland areas and buffer zone.

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

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☒ Yes ☐ No If no, explain:
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):	BZ1: 3,390; BZ2: 1,173 square feet
4e. Riparian wetland mitigation requested:	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	Fill for driveway	1,130	3 (2 for Catawba)	3,390
Zone 2	Fill for driveway	782	1.5	1,173
		6f. **Total buffer mitigation required:**		4,563

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).

NC EEP will provide buffer mitigation.

6h. Comments: Required mitigation for impacts in buffer that are not associated with bridge or canal maintenance access road.

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: See attached permit drawings.	☒ 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 permit drawings and 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 Pending
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☒ No Pending

F. Supplementary Information		
1. Environmental Documentation (DWQ Requirement)		
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☒ Yes	☐ No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	☒ Yes	☐ No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	☒ Yes	☐ No
2. Violations (DWQ Requirement)		
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes	☒ No
2b. Is this an after-the-fact permit application?	☐ Yes	☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):		
3. Cumulative Impacts (DWQ Requirement)		
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	☐ Yes ☒ No	
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.		
4. Sewage Disposal (DWQ Requirement)		
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. 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? NCNHP, USFWS, field surveys; Re-survey for sensitive joint-vetch conducted June 25, 2009. Biological conclusion remains No Effect.		
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	_____ Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	_____ Date

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: North Carolina Department Of Transportation			Project Name (if applicable): B-4413 (33690.1.1)	
Applicant 1: First Name	MI	Last Name		
Applicant 2: First Name	MI	Last Name		
If additional applicants, please attach an additional page(s) with names listed.				
Mailing Address: 1598 Mail Service Center		PO Box	City: Raleigh	State: NC
ZIP: 27699 1598	Country: USA	Phone No.: 919 - 431 - 6667 ext.	FAX No.: 919 - 431 - 2002	
Street Address *(if different from above)*		City	State	ZIP -
Email: lpfontaine@ncdot.gov				

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 - - ext.	Phone No. 2 - - 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	US 264 over Broad Creek		US 264
Subdivision Name	**City**	**State**	**Zip**
	southwest of Pantego	NC	27860 -

Phone No.	Lot No.(s) *(if many, attach additional page with list)*
- - ext.	, , , ,
a. In which NC river basin is the project located? Tar-Pamlico	b. Name of body of water nearest to proposed project Broad 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. Pantego Creek
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.

4. Site Description

a. Total length of shoreline on the tract (ft.)	b. Size of entire tract (sq.ft.)
195'	123,054 sq ft (inside Temp Easement limits) 8700 sq ft inside R/W
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)* 10' ☐NHW or ☒NWL

e. Vegetation on tract

Taxodium distichum, Acer rubrum, Pinus taeda, Quercus nigra, Myrica cerifera, Liquidambar styraciflua, Sabal minor, Smilax rotundifolia, Typha latifolia, Scirpus cyperinus, Juncus effusus, Vaccinium corymbosum, Perusa palustris, Vitis rotundifolia, Fagus grandifolia, Andropogon virginicus, Ilex opaca, Sambucus canadensis, Lonicera japonica, Magnolia virginiana

f. Man-made features and uses now on tract

Existing US 264 road facility including ditches; bridge and roadway approaches; dirt access road

g. Identify and describe the existing land uses adjacent to the proposed project site.

Rural area dominated by bottomland hardwood forest and riverine swamp forest with some nearby agriculture, silviculture, and canals.

h. How does local government zone the tract?	i. Is the proposed project consistent with the applicable zoning? (Attach zoning compliance certificate, if applicable)
Zoned "Not Cleared" per Beaufort Co. website	☐Yes ☐No ☒NA

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. If yes, by whom?	☒Yes ☐No ☐NA North Carolina Dept. of Cultural Resources - State Historic Preservation Office
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? *(Attach documentation, if available)*	☒Yes ☐No

n. Describe existing wastewater treatment facilities.

None

o. Describe existing drinking water supply source.

None

p. Describe existing storm water management or treatment systems.

None

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.

Replace existing bridge due to low sufficiency rating. Lengthen bridge and improve road facility and safety with widening and addition of guardrail

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.

Propose top/down construction with no temporary causeway(s). Typical construction equipment includes crane, bulldozer, dump trucks, motor grader, pile driver, etc.

d. List all development activities you propose.

Replace/Lengthen bridge; Remove portion of existing road fill/causeway to improve bridge hydraulic conveyance. Existing piers will be removed (5) and replaced with proposed piers (2). Addition of fill due to widening facility and raising of the existing road grade and construction of driveway/access ties (2). Telephone and fiber optic utilities will use trenchless method (directional bore) to place their facilities under Broad Creek; staging area and access boxes for telephone and fiber optic utilities will be located outside wetland areas and buffer zone.

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? 96,500 ☒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.

Existing facility drains as sheet flow to wetlands in all 4 quadrants. Propose grassed ditches in NW and NE quads between proposed facility and driveways to creek. Use embankment rip rap on creek banks to convey stormwater from ditches to creek. Maintain sheet flow to wetlands South of facility.

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 See attached permit drawings

Phone No.

Address

Name

Phone No.

Address

Name

Phone No.

Address

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

Tideland electric obtained permits for replacement of the overhead utility lines in the eastern side of the project. Our office does not have additional information regarding these permits.

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 1.17.11 Print Name E.L. Lysk

Signature E.L. Lysk

Please indicate application attachments pertaining to your proposed project.

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

Form DCM MP-2

EXCAVATION and FILL

(Except for 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.

Describe below the purpose of proposed excavation and/or fill activities. **All values should be given in feet.**

	Access Channel (NLW or NWL)	Canal	Boat Basin	Boat Ramp	Rock Groin	Rock Breakwater	Other (excluding shoreline stabilization)
Length							
Width							
Avg. Existing Depth					NA	NA	
Final Project Depth					NA	NA	

1. EXCAVATION

☒ *This section not applicable*

a. Amount of material to be excavated from below NHW or NWL in cubic yards.

b. Type of material to be excavated.

c. (i) Does the area to be excavated include 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 _____ ☐None

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

d. High-ground excavation in cubic yards.

2. DISPOSAL OF EXCAVATED MATERIAL

☒ *This section not applicable*

a. Location of disposal area.

b. Dimensions of disposal area.

c. (i) Do you claim title to disposal area?

☐Yes ☐No ☐NA

(ii) If no, attach a letter granting permission from the owner.

d. (i) Will a disposal area be available for future maintenance?

☐Yes ☐No ☐NA

(ii) If yes, where?

e. (i) Does the disposal area include any 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 _____ ☐None

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

f. (i) Does the disposal include any area in the water?

☐Yes ☐No ☐NA

(ii) If yes, how much water area is affected?

3. SHORELINE STABILIZATION

☐ *This section not applicable*

(If development is a wood groin, use MP-4 – Structures)

a. Type of shoreline stabilization:
☐Bulkhead ☒Riprap ☐Breakwater/Sill ☐Other: _____

b. Length: 11'
Width: 33'

c. Average distance waterward of NHW or NWL: 16'

d. Maximum distance waterward of NHW or NWL: 22' max ---------- 2 features to be utilized; 1 in NE quad @ 22'; one in NW quad @ 11'

e. Type of stabilization material:
Class I Rip Rap w/ Filter Fabric

f. (i) Has there been shoreline erosion during preceding 12 months?
☐Yes ☒No ☐NA
(ii) If yes, state amount of erosion and source of erosion amount information.

g. Number of square feet of fill to be placed below water level.
Bulkhead backfill _____ Riprap 308 sq ft
Breakwater/Sill _____ Other _____

h. Type of fill material.
Class I Rip Rap w/ filter fabric

i. Source of fill material.
To be determined by contractor

4. OTHER FILL ACTIVITIES

☒ *This section not applicable*

(Excluding Shoreline Stabilization)

a. (i) Will fill material be brought to the site? ☐Yes ☐No ☐NA
If yes,
(ii) Amount of material to be placed in the water _____
(iii) Dimensions of fill area _____
(iv) Purpose of fill

b. (i) Will fill material be placed in 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 _____ ☐None
(ii) Describe the purpose of the fill in these areas:

5. GENERAL

a. How will excavated or fill material be kept on site and erosion controlled?
Adherence to design standards in sensitive watersheds.

b. What type of construction equipment will be used (e.g., dragline, backhoe, or hydraulic dredge)?
Typical construction equipment includes crane, bulldozer, dump trucks, motor grader, etc.

c. (i) Will navigational aids be required as a result of the project?
☐Yes ☐No ☒NA
(ii) If yes, explain what type and how they will be implemented.

d. (i) Will wetlands be crossed in transporting equipment to project site? ☐Yes ☒No ☐NA
(ii) If yes, explain steps that will be taken to avoid or minimize environmental impacts.

1·17·11
Date

B-4413
Project Name

Gregory Thorpe
Applicant Name

E. L. Lusk
Applicant Signature

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:
Broad Creek

c. Type of bridge (construction material):
1 @ 40', 1 @ 50', 1 @ 40'-- 21" Cored Slab

d. Water depth at the proposed crossing at NLW or NWL:
8.5'

e. (i) Will proposed bridge replace an existing bridge? ☒Yes ☐No
If yes,
(ii) Length of existing bridge: 69'
(iii) Width of existing bridge: 28'
(iv) Navigation clearance underneath existing bridge: 6.8' from NWL
(v) Will all, or a part of, the existing bridge be removed? (Explain) All the existing bridge and piers will be removed. Portion of existing road fill 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: 130'

h. Width of proposed bridge: 36'

i. Will the proposed bridge affect existing water flow? ☒Yes ☐No
If yes, explain: Longer bridge and removed fill will improve bridge conveyance and reduce velocities.

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening? ☒Yes ☐No
If yes, explain: Bridge opening will increase from existing 579 sq ft to 876 sq ft. Navigation clearance will be improved to 8.3' from NWL.

k. Navigation clearance underneath proposed bridge: 8.3' from NWL

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

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

n. Height of proposed bridge above wetlands: N/A

2. CULVERTS

☒ *This section not applicable*

a. Number of culverts proposed: _____

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 470 ☐None

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

Grassed ditch between proposed facility and driveway to convey water to creek.

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: _____

(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: _____

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

(i) Location of the spoil disposal area: Approved NCDOT site: offsite or as approved fill material to be utilized on project.

(ii) Dimensions of the spoil disposal area: 850 cu yds

(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 14,400 ☐None

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

Fill in these areas due to widening of facility and construction of driveways (2).

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: 685 ft

(iii) Avg. width of area to be filled: 45 ft

(iv) Purpose of fill: Widening of facility and construction of driveways (2).

4. GENERAL

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

If yes, explain: See attached utility plans. Telephone and fiber optic utilities will use trenchless method (directional bore) to place their facilities under Broad Creek; staging area and access boxes for telephone and fiber optic utilities will be located outside wetland areas and buffer zone.

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?

Adherence to design standards in sensitive watersheds.

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

Standard NCDOT road and bridge construction equipment will be employed, including by not limited to a crane, bulldozer, dump truck, and motor grader, pile driver, etc.

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.

1.17.11

Date

B-4413

Project Name

E.G. Lusk

Applicant Name

E. L. Lusk

Applicant Signature

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

January 18, 2011

Mr. Earl De hoog
1108 Ross Road
Bath, NC 27808

Dear Landowner:

The North Carolina Department of Transportation is planning to replace bridge number 51 on US 264 over Broad Creek. The proposed project will replace the aging existing structure over Broad Creek. The project will replace the existing 69-foot bridge with a 130-foot bridge. The additional length will allow for the replacement of a substandard structure as well as improve the existing floodplain. This project crosses an Area of Environmental Concern, as defined by the North Carolina Division of Coastal Management (DCM), and must be approved by the DCM under provisions of the Coastal Area Management Act (CAMA). One of the prerequisites to this approval is that adjacent riparian landowners be given an opportunity to comment on the proposal. A vicinity map and site drawings are enclosed for your review.

The attached form is submitted to ensure that you have an opportunity to comment on the proposal. The work planned is depicted in the attached drawing. If you have **no** objections to the proposal, please return the form with your response within 30 days to this office. If you **do** have objections to the project, please forward your comments to:

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

Thank you for your cooperation.

Sincerely,

E. L. Luck

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

Enclosures
cc: Stephen Lane, NCDCM
File B-4413

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

TELEPHONE: 919-431-2000
FAX: 919-431-2002

WEBSITE: WWW.NCDOT.ORG

LOCATION:
4701 ATLANTIC AVENUE
SUITE 116
RALEIGH NC 27604

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

January 18, 2011

Mrs. Jane R. Leatherbee
14 Trout Bropok Trail
Kingston, MA 02364

Dear Landowner:

The North Carolina Department of Transportation is planning to replace bridge number 51 on US 264 over Broad Creek. The proposed project will replace the aging existing structure over Broad Creek. The project will replace the existing 69-foot bridge with a 130-foot bridge. The additional length will allow for the replacement of a substandard structure as well as improve the existing floodplain. This project crosses an Area of Environmental Concern, as defined by the North Carolina Division of Coastal Management (DCM), and must be approved by the DCM under provisions of the Coastal Area Management Act (CAMA). One of the prerequisites to this approval is that adjacent riparian landowners be given an opportunity to comment on the proposal. A vicinity map and site drawings are enclosed for your review.

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

Thank you for your cooperation.

Sincerely,

E. L. Lupk

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

Enclosures
cc: Stephen Lane, NCDCM
File B-4413

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

TELEPHONE: 919-431-2000
FAX: 919-431-2002

WEBSITE: WWW.NCDOT.ORG

LOCATION:
4701 ATLANTIC AVENUE
SUITE 116
RALEIGH NC 27604

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

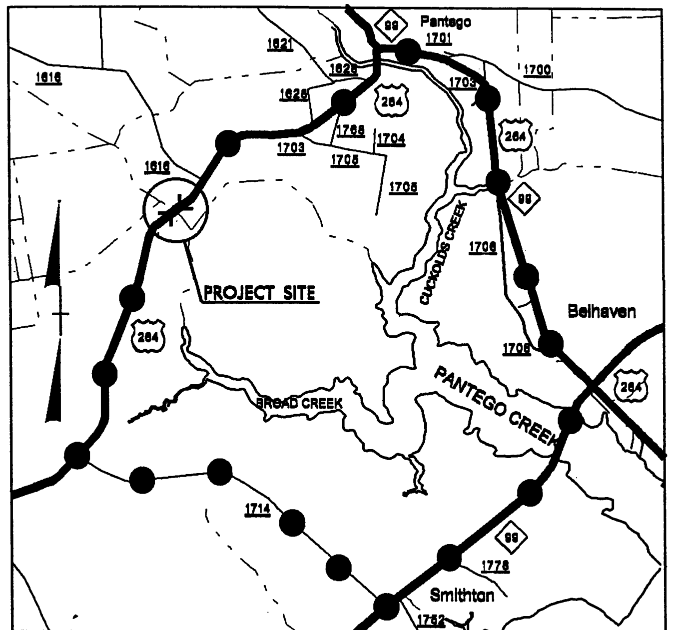
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4413	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33690.1.1	BRSTP-0264(24)	PE
33690.2.1	BRSTP-0264(24)	ROW, UTIL

BEAUFORT COUNTY

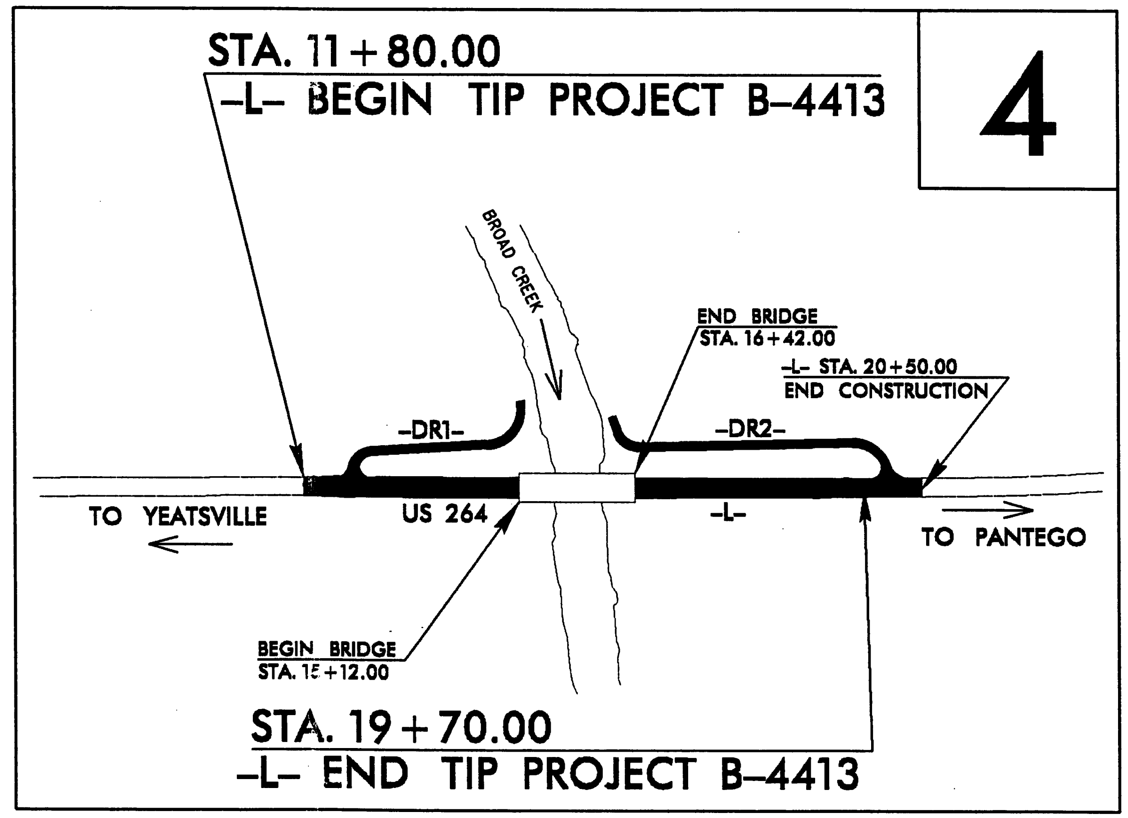
LOCATION: BRIDGE NO. 51 OVER BROAD CREEK ON US 264

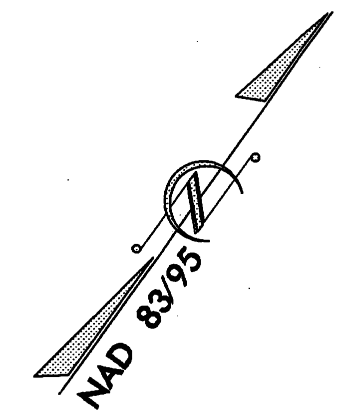
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE



VICINITY MAP

●—●—●—●—●—● OFFSITE DETOUR





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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: B-4413

CONTRACT:

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 = 3,792
ADT 2030 = 6,100
DHV = 10 %
D = 60 %
T = 7 % *
V = 60 MPH
FUNC. CLASS. = RURAL MINOR ARTERIAL
REGIONAL TIER
*(TTST 3% + DUAL 4%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4413 = 0.125 MI
LENGTH STRUCTURE TIP PROJECT B-4413 = 0.025 MI
TOTAL LENGTH TIP PROJECT B-4413 = 0.150 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 1, 2010

LETTING DATE:
OCTOBER 18, 2011

BRENDA MOORE, PE
PROJECT ENGINEER

THAD F. DUNCAN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY DESIGN ENGINEER P.E.

09/08/99

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

6/2/99

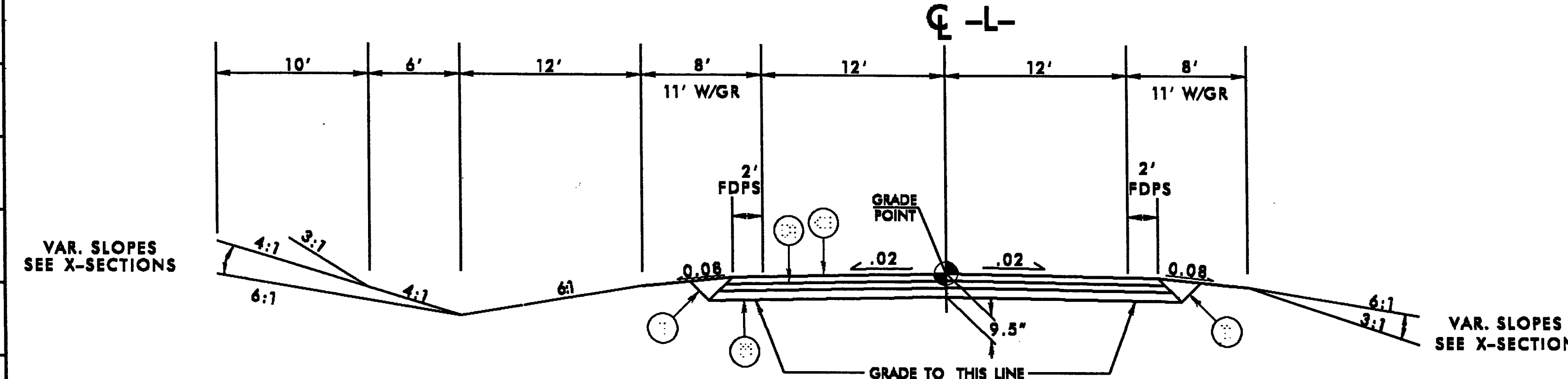
PROJECT REFERENCE NO.	SHEET NO.
B-4413	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
J1	PROP. 6" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL).

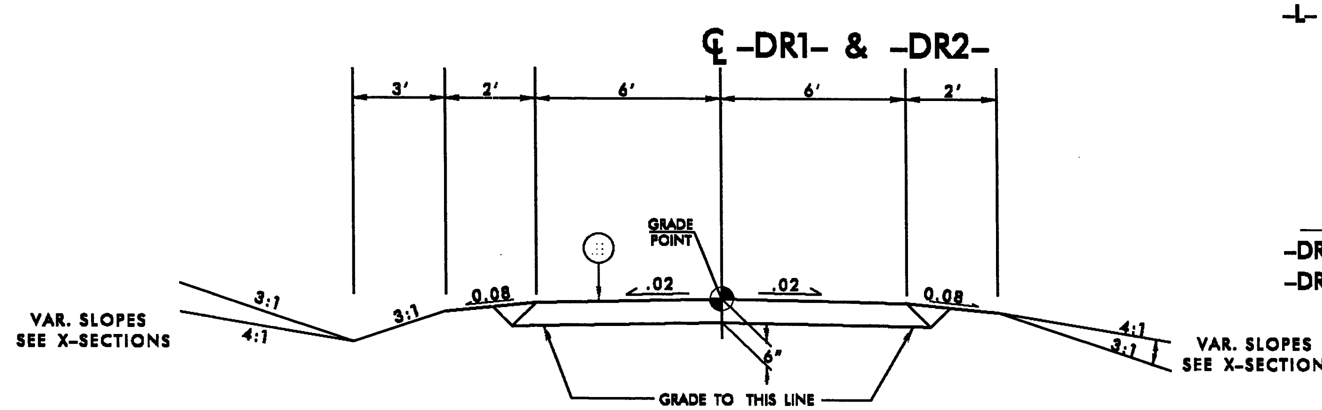
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

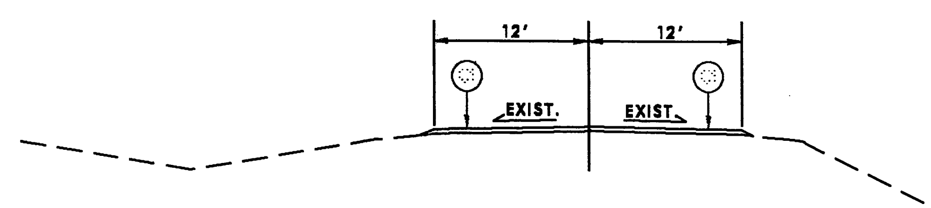
-L- STA. 11+80.00 TO -L- STA. 12+30.00 TRANSITION FROM EXIST.
-L- STA. 12+30.00 TO -L- STA. 15+12.00 (BEGIN BRIDGE)
-L- STA. 16+42.00 (END BRIDGE) TO -L- STA. 19+20.00
-L- STA. 19+20.00 TO -L- STA. 19+70.00 TRANSITION TO EXIST.



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

-DR1- STA. 10+25.00 TO -DR1- STA. 13+23.14
-DR2- STA. 10+14.00 TO -DR2- STA. 14+30.37



TYPICAL SECTION NO. 3

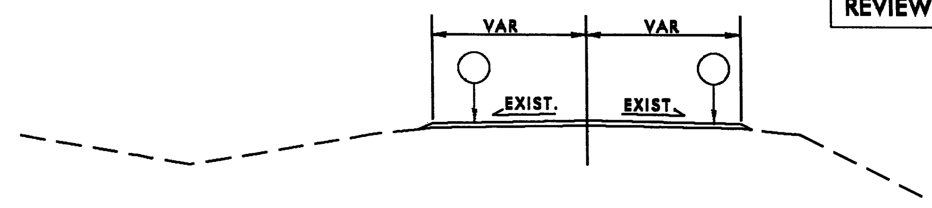
USE TYPICAL SECTION NO. 3

-L- STA. 19+70.00 TO -L- STA. 20+50.00

PROJECT REFERENCE NO.	SHEET NO.
B-4413	2-A
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

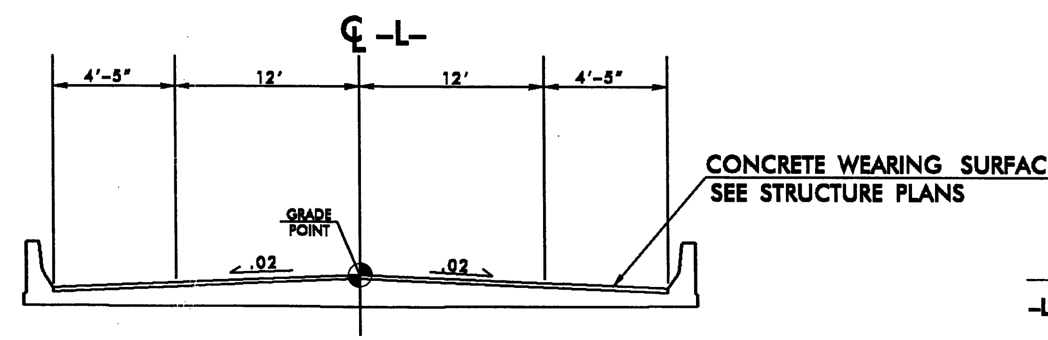
PAVEMENT DESIGN UNDER REVIEW BY CLARK MORRISON



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4

SR 1714 ON THE OFFSITE DETOUR



TYPICAL BRIDGE DETAIL NO. 1

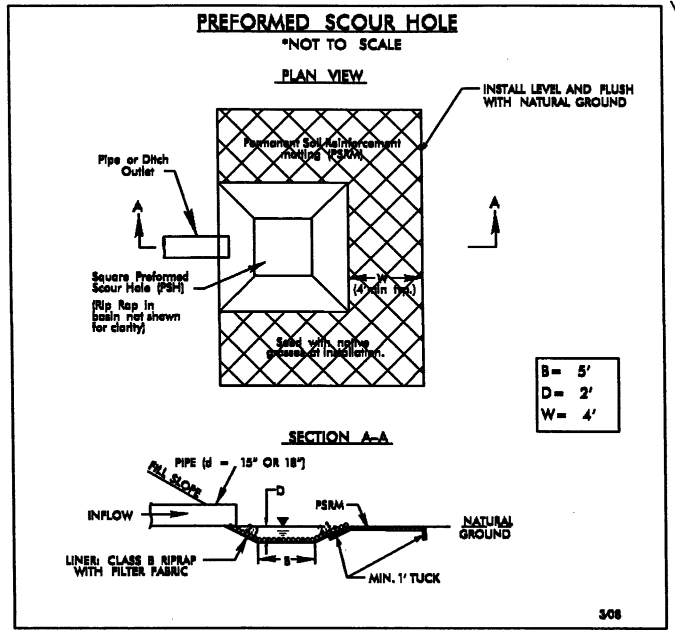
USE TYPICAL BRIDGE DETAIL NO. 1

-L- STA. 15+12.00 TO -L- STA. 16+42.00

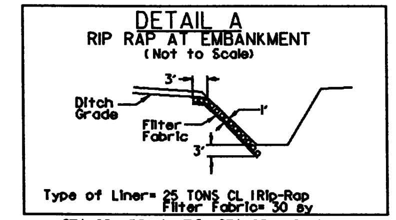
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4413	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

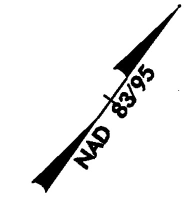
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

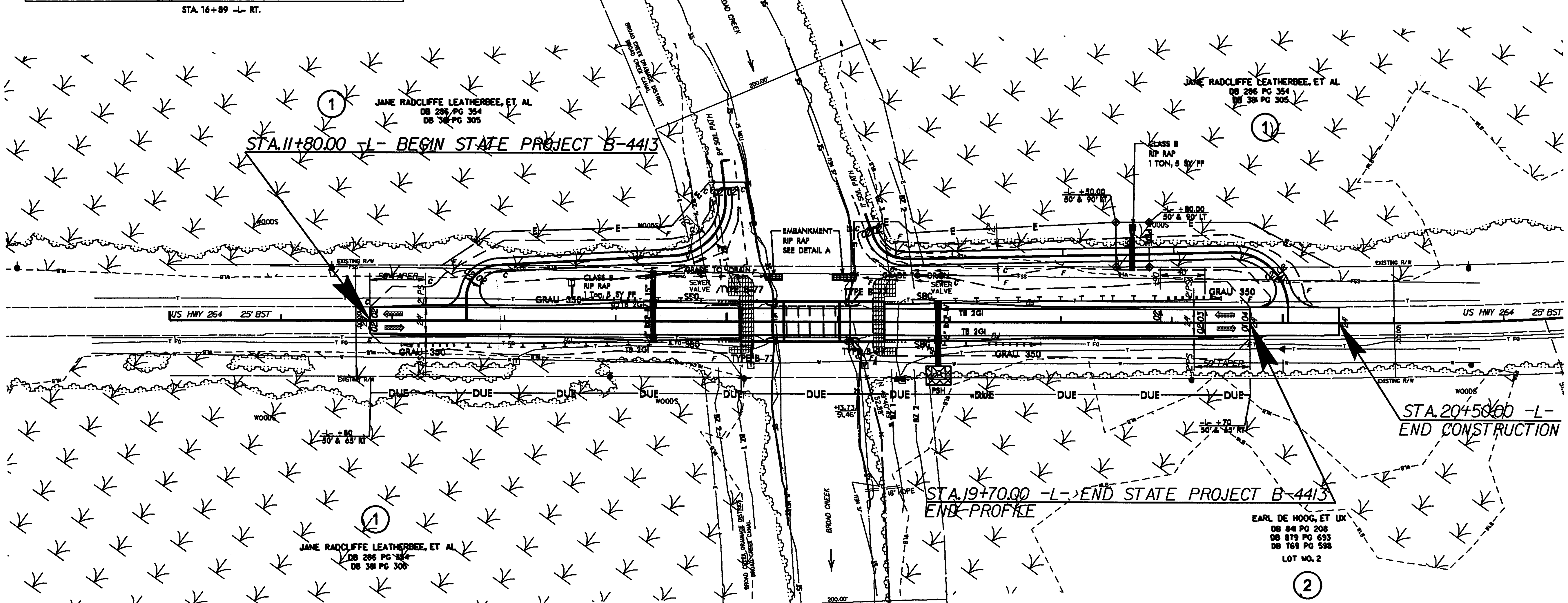


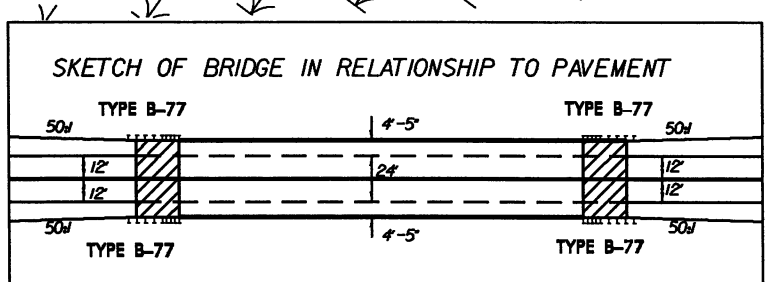
STA. 16+89 -L- RT.



STA. 13+50 -L- TO STA. 15+42 -L- LT.
STA. 16+16 -L- TO STA. 17+00 -L- LT.







SBG: SHOULDER BERM GUTTER

BEGIN SBG -L- STA. 14+30 TO BEGINNING OF BRIDGE LT. & RT.

BEGIN SBG END OF BRIDGE TO -L- STA. 16+94 LT. & RT.

FOR -L- PROFILE SEE SHEET 5
FOR -DR1- PROFILE SEE SHEET 5
FOR -DR2- PROFILE SEE SHEET 5
FOR STRUCTURES SEE SHEET S1 TO SX

8/17/99

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

PROJECT REFERENCE NO.	SHEET NO.
B-4413	5

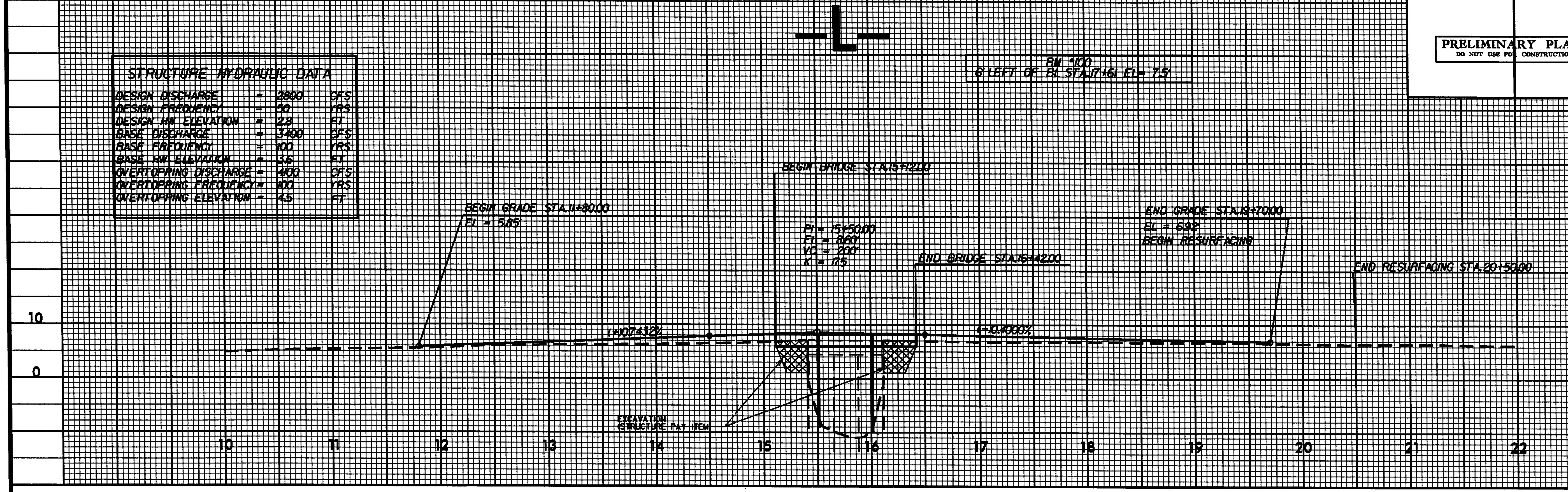
ROADWAY DESIGN ENGINEER

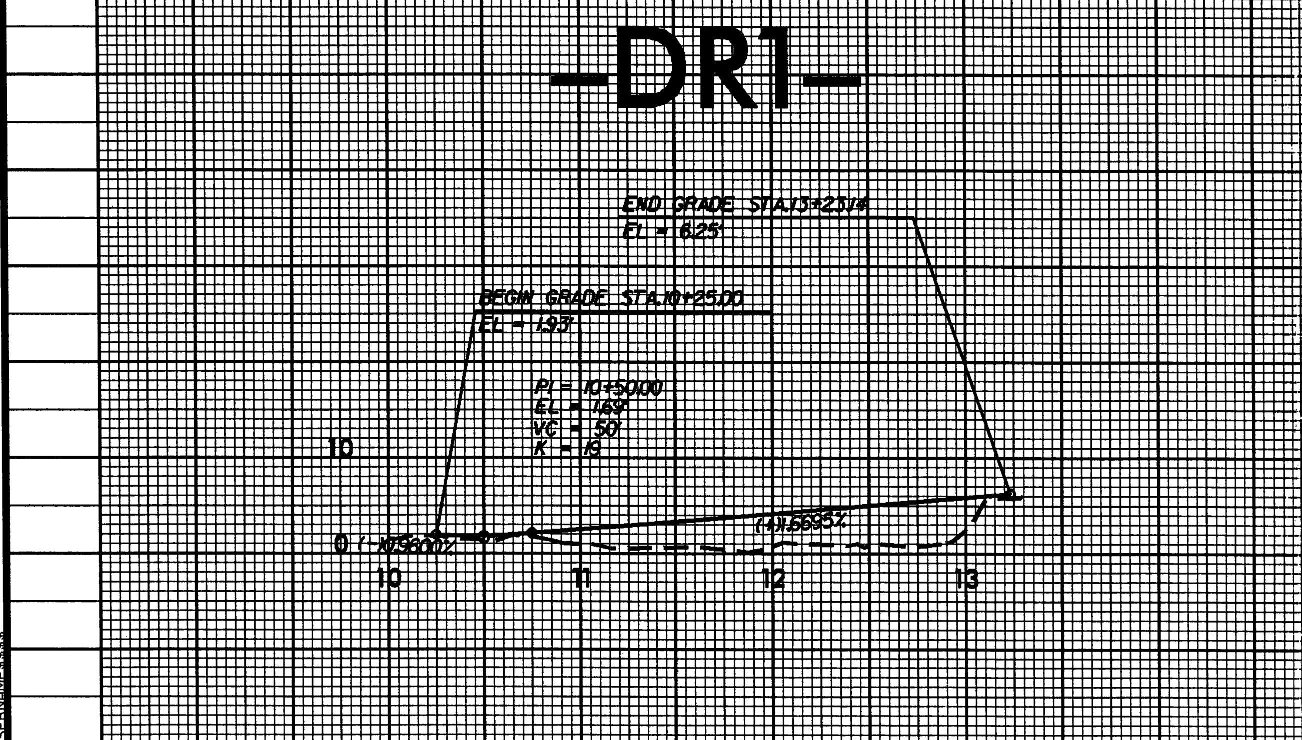
HYDRAULICS ENGINEER

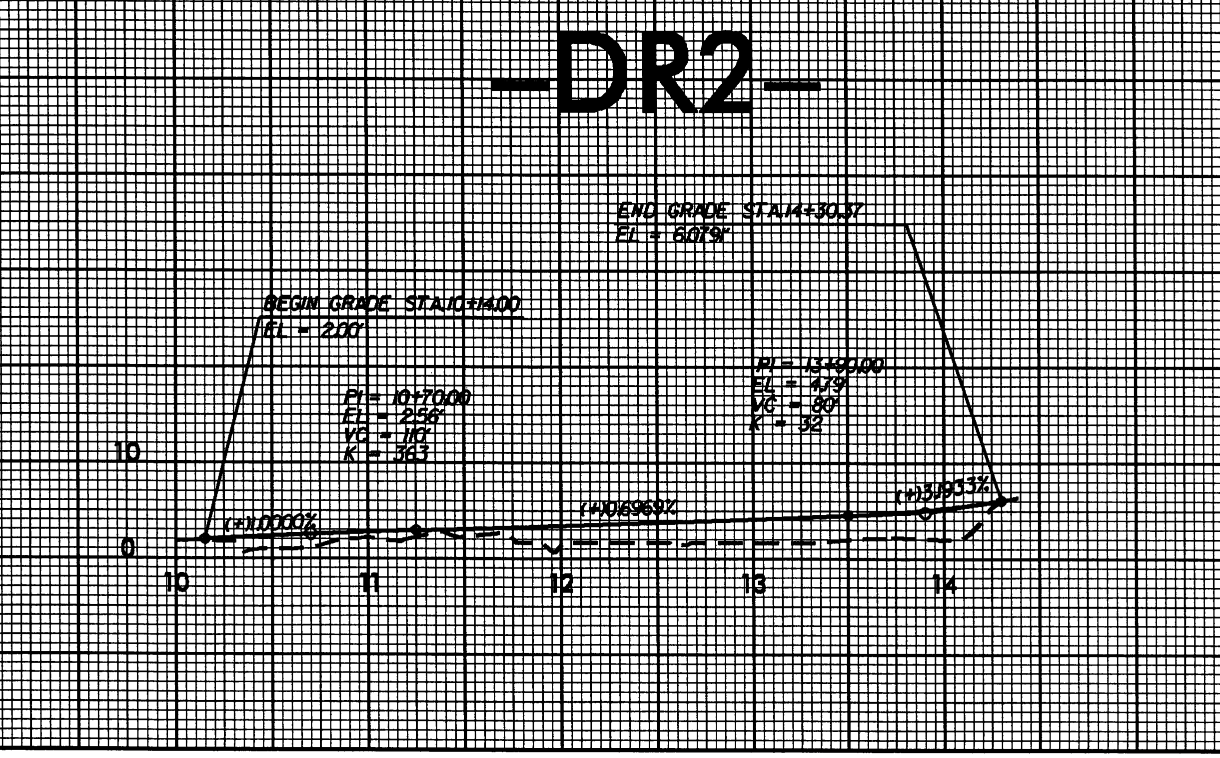
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	=	2800	CFS
DESIGN FREQUENCY	=	50	YRS
DESIGN HW ELEVATION	=	2.8	FT
BASE DISCHARGE	=	3400	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	3.6	FT
OVERTOPPING DISCHARGE	=	4100	CFS
OVERTOPPING FREQUENCY	=	100	YRS
OVERTOPPING ELEVATION	=	4.5	FT







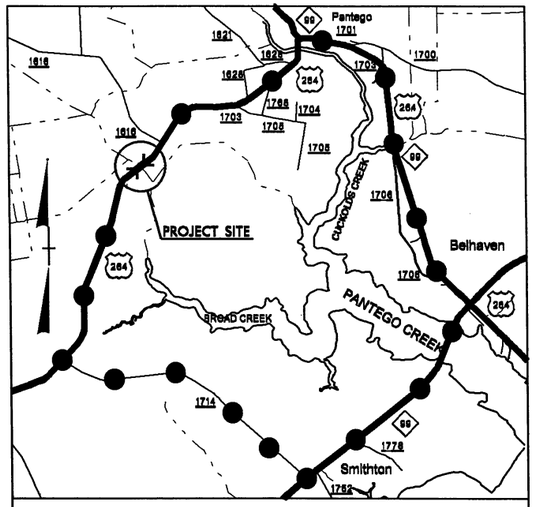
09/08/99

TIP PROJECT: B-4413

CONTRACT:

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

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



VICINITY MAP

OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

LOCATION: BRIDGE NO. 51 OVER BROAD CREEK ON US 264

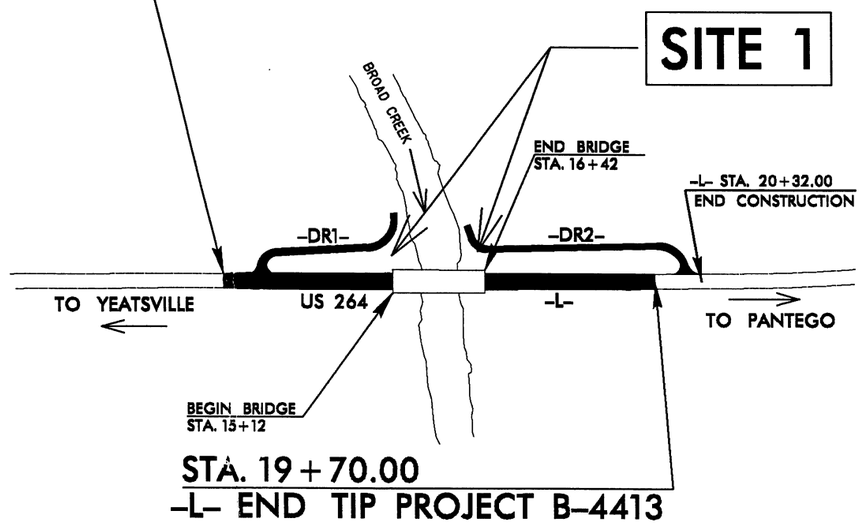
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4413	1	

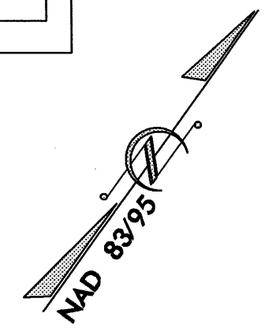
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33690.1.1	BRSTP-0264(24)	PE
33690.2.1	BRSTP-0264(24)	ROW, UTIL

Permit Drawing
Sheet 1 of 2

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

WETLAND /STREAM IMPACTS





THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS 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 2010 =	3,792
ADT 2030 =	6,100
DHV =	10 %
D =	60 %
T =	7 % *
V =	60 MPH
FUNC. CLASS. =	RURAL MINOR ARTERIAL

*(TTST 3% + DUAL 4%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4413	=	0.125 MI
LENGTH STRUCTURE TIP PROJECT B-4413	=	0.025 MI
TOTAL LENGTH TIP PROJECT B-4413	=	0.150 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: OCTOBER 15, 2010

LETTING DATE: OCTOBER 18, 2011

BRENDA MOORE, PE
PROJECT ENGINEER

THAD F. DUNCAN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

PROJECT REFERENCE NO.	SHEET NO.
B-4413	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

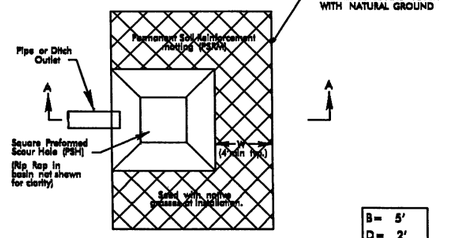
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 2 of 7

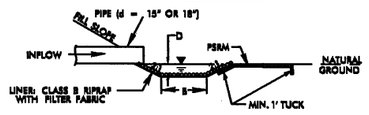
SITE 1

PREFORMED SCOUR HOLE
*NOT TO SCALE

PLAN VIEW

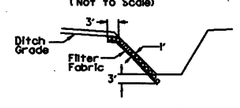


SECTION A-A



STA. 16+89 -L- RT.

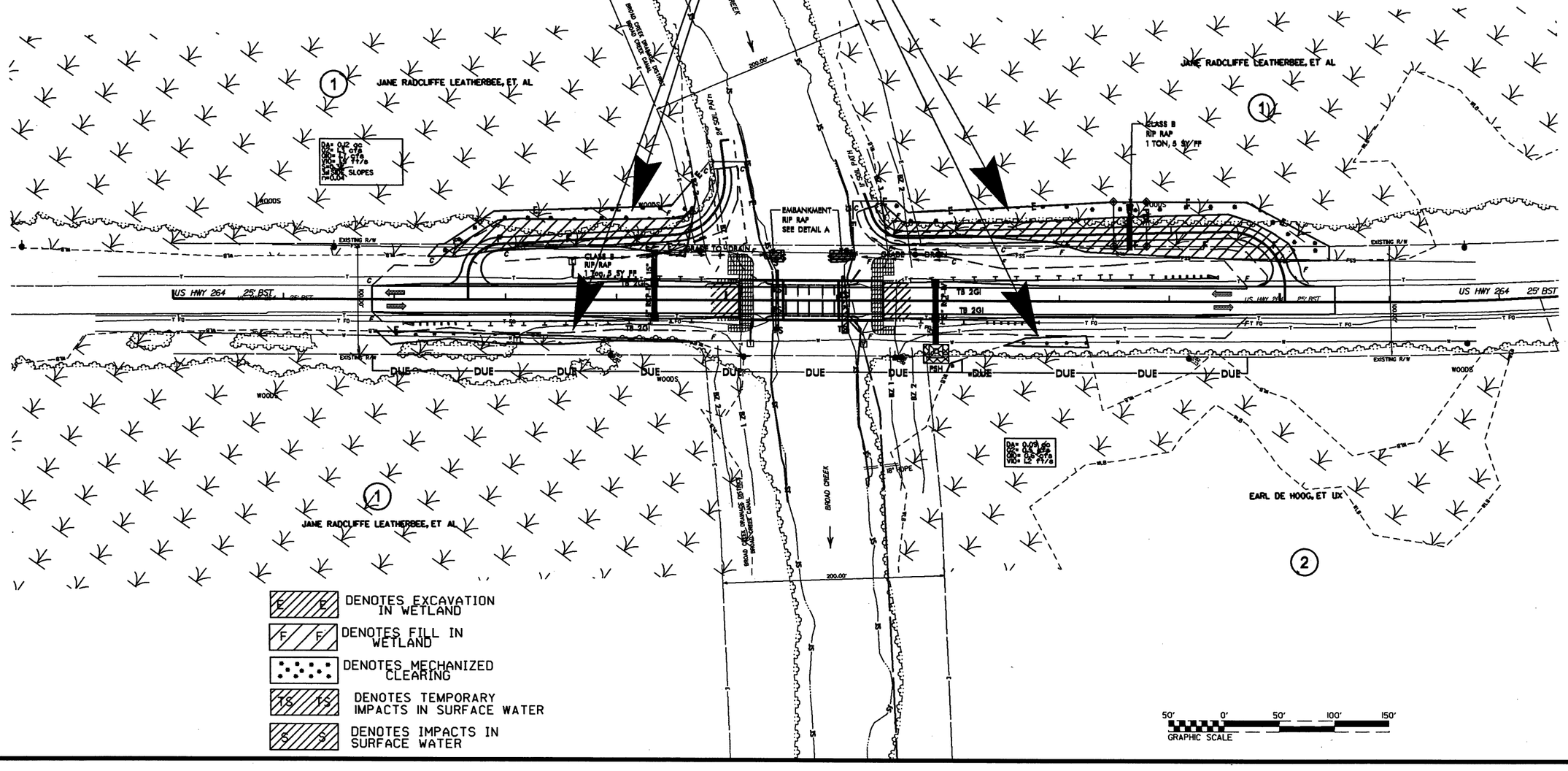
DETAIL A
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 25 TONS CL I Rip-Rap
Filter Fabric= 30 sy

STA. 15+32 -L- TO STA. 15+50 -L- LT.
STA. 15+94 -L- TO STA. 16+17 -L- LT.

NAD 83/95



DENOTES EXCAVATION IN WETLAND

DENOTES FILL IN WETLAND

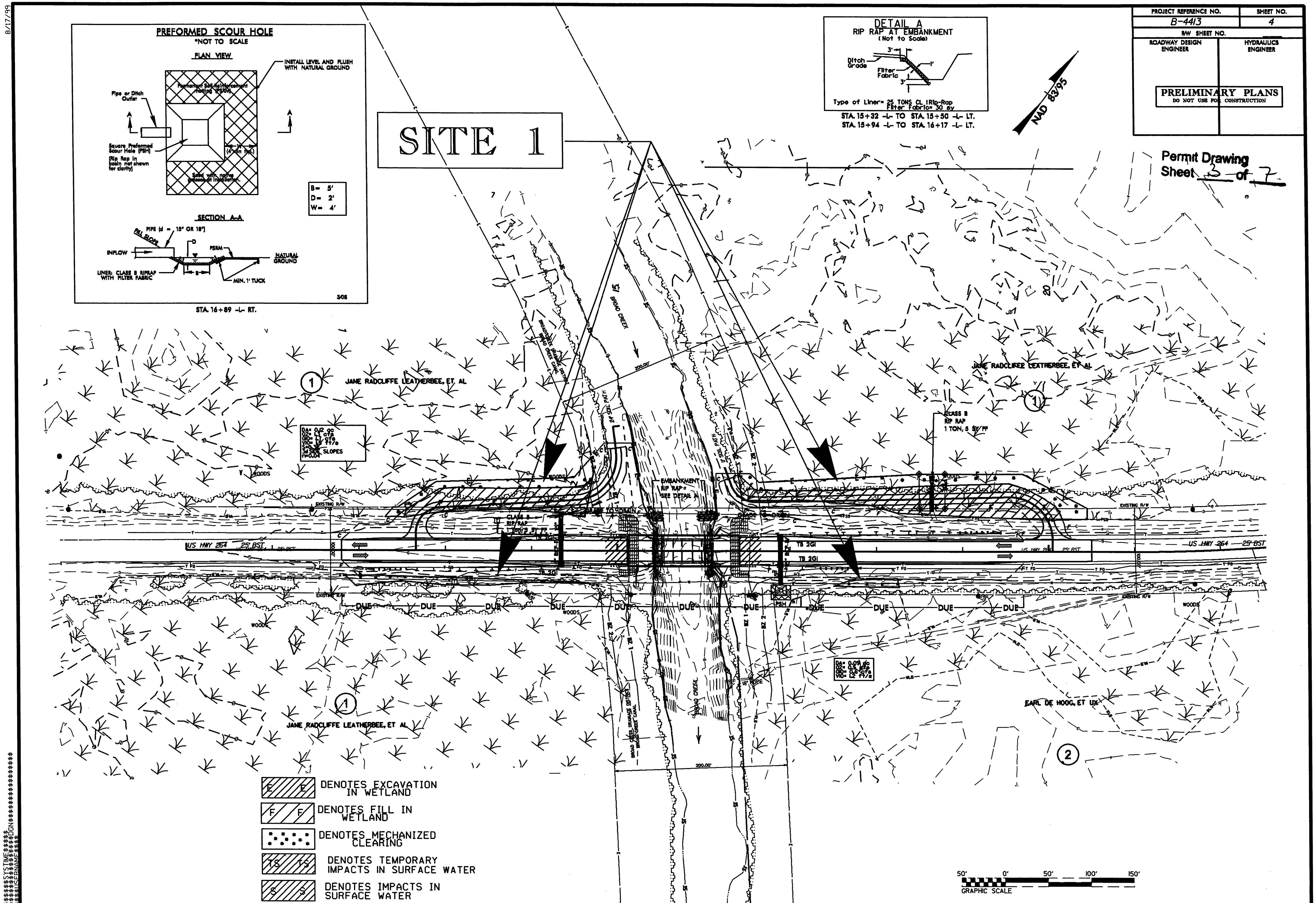
DENOTES MECHANIZED CLEARING

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER

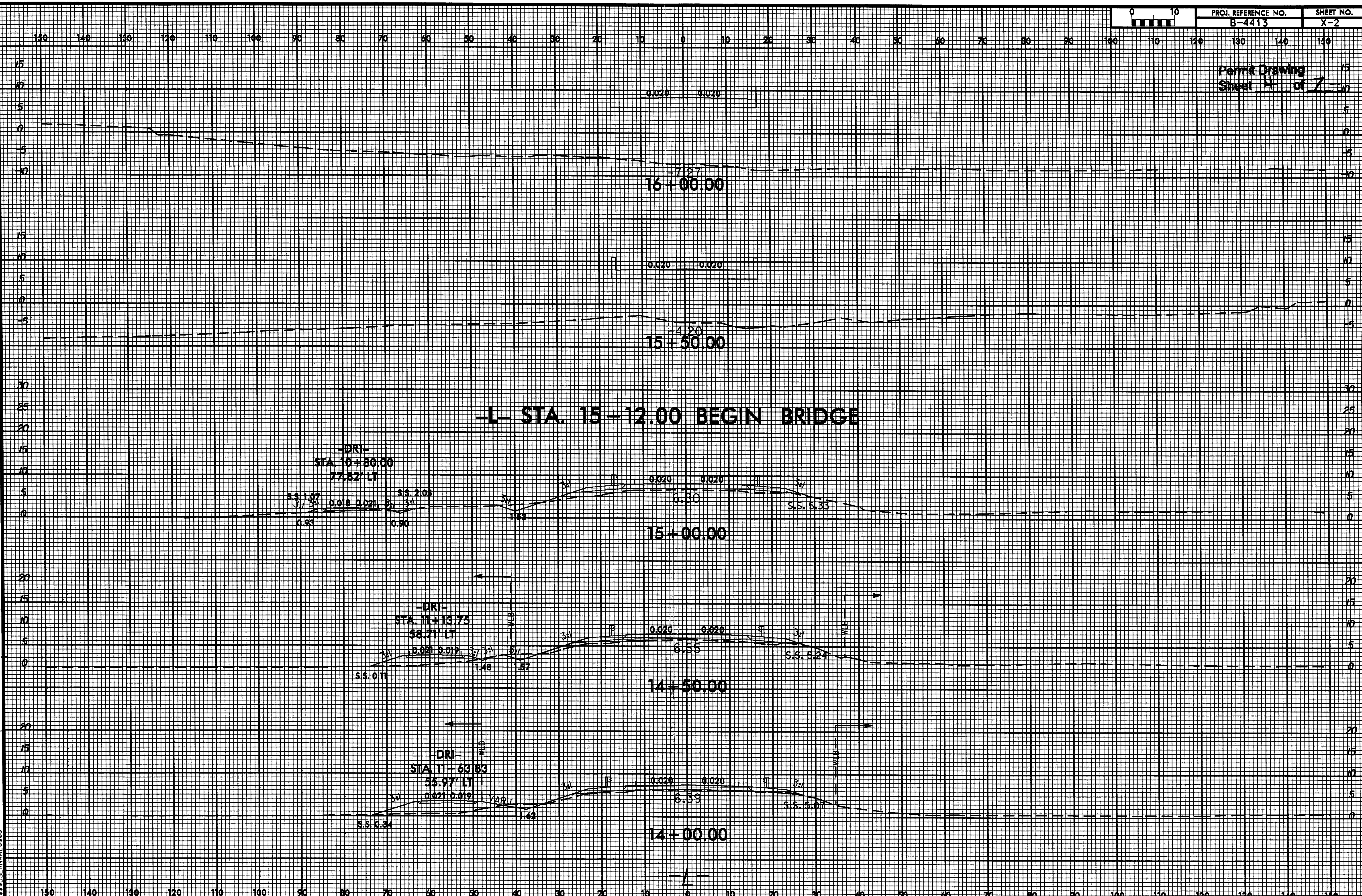
50' 0' 50' 100' 150'
GRAPHIC SCALE

8/17/99


PROJECT REFERENCE NO.
B-4413
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
Permit Drawing Sheet 3 of 7
NAD 83/95
PREFORMED SCOUR HOLE
*NOT TO SCALE
PLAN VIEW
INSTALL LEVEL AND FLUSH WITH NATURAL GROUND
Pipe or Ditch Outlet
Square Preformed Scour Hole (PSH)
(Rip Rap in basin not shown for clarity)
B= 5'
D= 2'
W= 4'
SECTION A-A
PIPE (d = 15" OR 18")
FILL SLOPE
INFLOW
PSRM
NATURAL GROUND
LINER: CLASS B RIPRAP WITH FILTER FABRIC
MIN. 1' TUCK
STA. 16+89 -L- RT.
DETAIL A
RIP RAP AT EMBANKMENT
(Not to Scale)
Ditch Grade
Filter Fabric
Type of Liner= 25 TONS CL I Rip-Rap
Filter Fabric= 30 SY
STA. 15+32 -L- TO STA. 15+50 -L- LT.
STA. 15+94 -L- TO STA. 16+17 -L- LT.
SITE 1
BROAD CREEK
JANE RADCLIFFE LEATHERBEE, ET AL
CLASS B RIP RAP 1 TON, 5 SY/FF
EMBANKMENT RIP RAP SEE DETAIL A
US HWY 264 25' BST
EXISTING R/W
WOODS
DUE
EARL DE HOOG, ET UX
DENOTES EXCAVATION IN WETLAND
DENOTES FILL IN WETLAND
DENOTES MECHANIZED CLEARING
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
50' 0' 50' 100' 150'
GRAPHIC SCALE

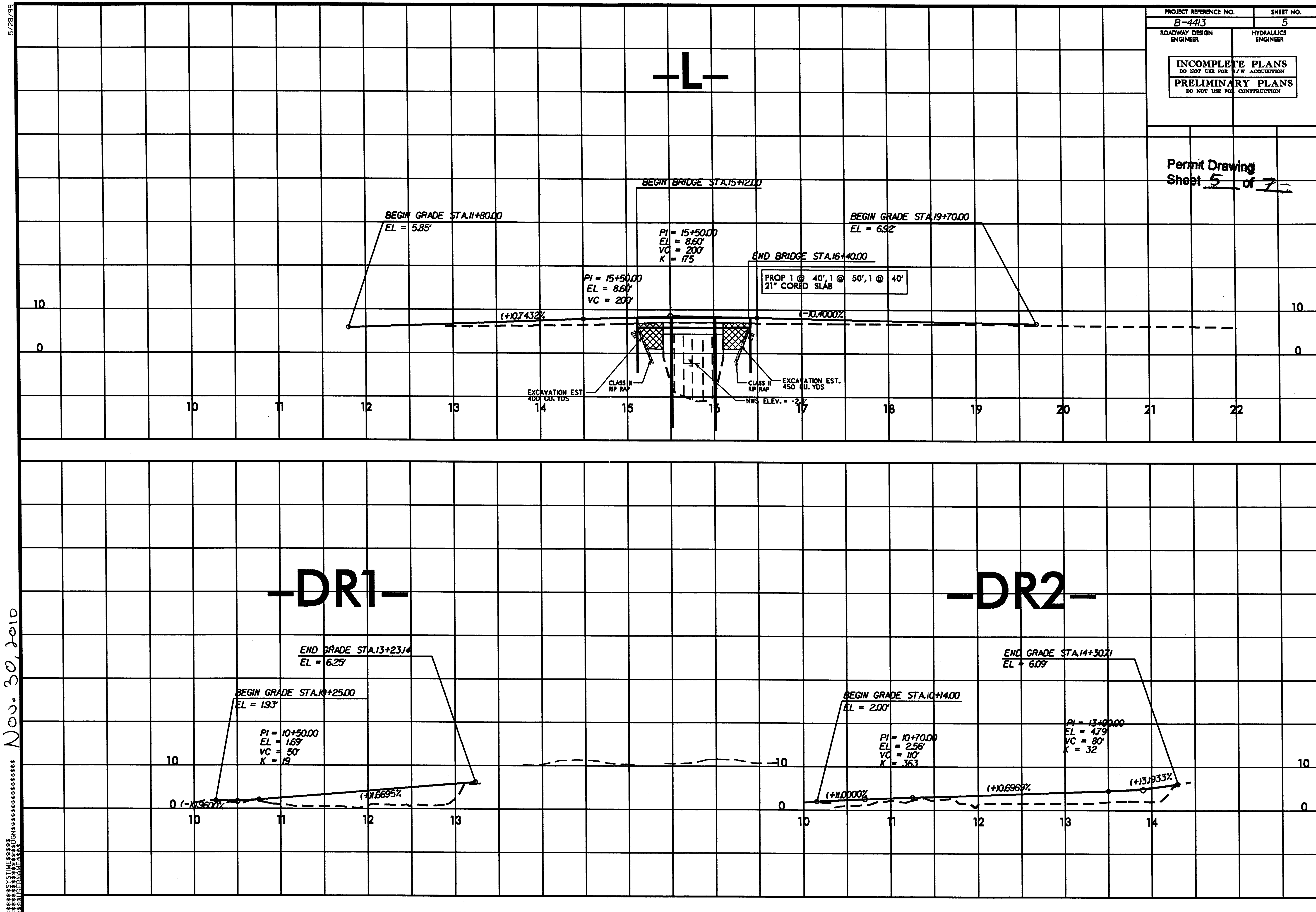
NOVEMBER 30, 2010
R:\Hydraulics\PERMITS_Environmental\Drawings\b4413_hyd_prm_wetimpacts.dgn
$$$$$SYSTIME$$$$$
$$$$$USERNAME$$$$$DGN$$$$$$$$$$$$$$$$$$$$

8/23/99



NOV. 30, 2010

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


5/28/99
PROJECT REFERENCE NO.
SHEET NO.
B-4413
5
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
Permit Drawing
Sheet 5 of 7
-L-
BEGIN BRIDGE STA.15+12.00
BEGIN GRADE STA.11+80.00
EL = 5.85'
PI = 15+50.00
EL = 8.60'
VC = 200'
K = 175
END BRIDGE STA.16+40.00
BEGIN GRADE STA.19+70.00
EL = 6.92'
PI = 15+50.00
EL = 8.60'
VC = 200'
PROP 1 @ 40', 1 @ 50', 1 @ 40'
21" CORED SLAB
(+)0.7432%
(-)0.4000%
EXCAVATION EST. 400 CU. YDS
CLASS II RIP RAP
CLASS II RIP RAP
EXCAVATION EST. 450 CU. YDS
NWS ELEV. = -2.8'
10
0
10
11
12
13
14
15
16
17
18
19
20
21
22
-DR1-
-DR2-
END GRADE STA.13+23.14
EL = 6.25'
BEGIN GRADE STA.10+25.00
EL = 1.93'
PI = 10+50.00
EL = 1.69'
VC = 50'
K = 19
(-)0.9600%
(+)1.6695%
END GRADE STA.14+30.71
EL = 6.09'
BEGIN GRADE STA.10+14.00
EL = 2.00'
PI = 10+70.00
EL = 2.56'
VC = 110'
K = 36.3
PI = 13+90.00
EL = 4.79'
VC = 80'
K = 32
(+)1.0000%
(+)0.6969%
(+)3.1933%
Nov. 30, 2010

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
1	Mrs. Jane R. Leatherbee	14 Trout Bropok Trail Kingston, MA 02364
2	Mr. Earl Dehoog	1108 Ross Road Bath, NC 27808

Permit Drawing
Sheet 6 of 7

NCDOT
DIVISION OF HIGHWAYS
BEAUFORT COUNTY
PROJECT: 33690.1.1 (B-4413)
REPLACE BR# 51 ON
US 264 OVER BROAD CREEK

SHEET OF

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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	12+44 to 14+72 -L- LT		0.12		0.01	0.06						
	12+00 to 15+00 -L- RT					0.04						
	16+45 to 21+21 -L- LT		0.21			0.13						
	17+42 to 18+26 -L- RT					0.01						
	15+39 / 16+14 -L-	Embankment Riprap						0.01		11		
	15+45 / 16+07 -L-	Exist Abuts Removal							0.01		58	
TOTALS:			0.33		0.01	0.24		0.01	0.01	11	58	

Surface water impacts due to proposed piers = 20 sq ft

Permit Drawing
Sheet 7 of 7

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
WBS - 33690.1.1 (B-4413)

SHEET 1/10/11

ATN Revised 3/31/05

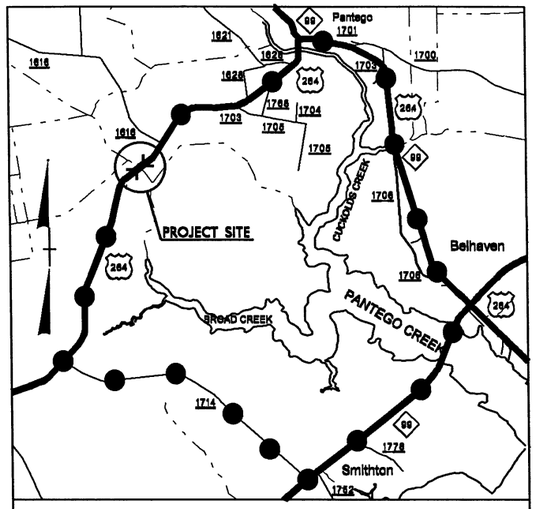
06/08/99

TIP PROJECT: B-4413

CONTRACT:

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

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



VICINITY MAP

OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

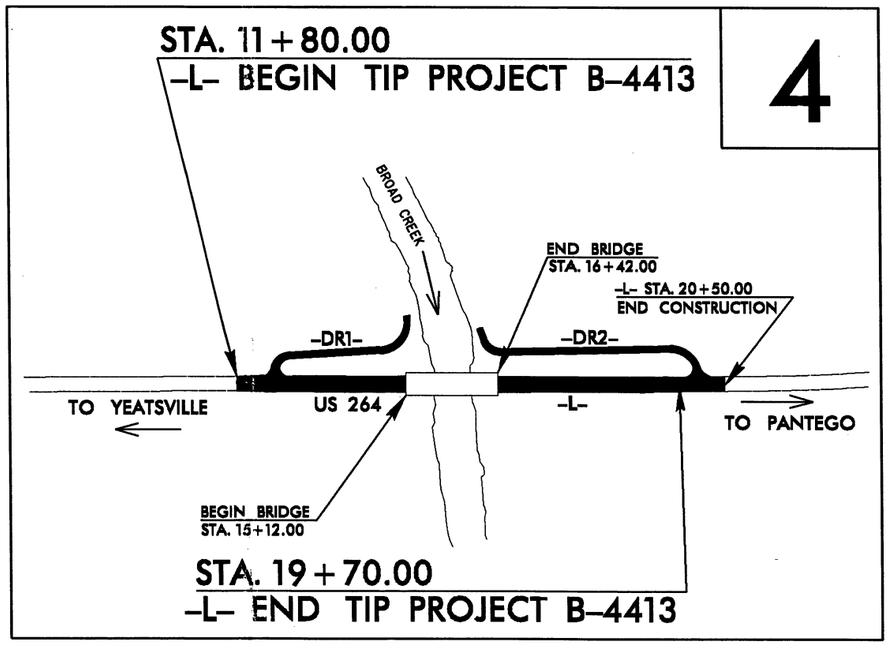
LOCATION: BRIDGE NO. 51 OVER BROAD CREEK ON US 264

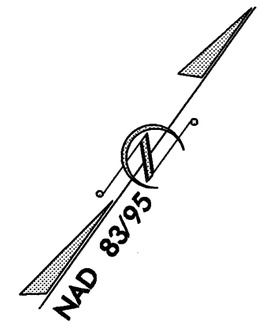
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4413	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33690.1.1	BRSTP-0264(24)	PE
33690.2.1	BRSTP-0264(24)	ROW, UTIL

Utility Permit Drawing
Sheet 1 of 3

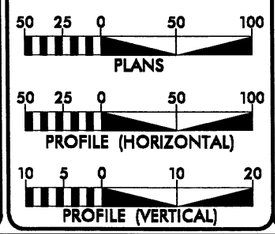




THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2010 = 3,792
ADT 2030 = 6,100
DHV = 10 %
D = 60 %
T = 7 % *
V = 60 MPH
FUNC. CLASS. = RURAL MINOR ARTERIAL
REGIONAL TIER
*(TTST 3% + DUAL 4%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4413 = 0.125 MI
LENGTH STRUCTURE TIP PROJECT B-4413 = 0.025 MI
TOTAL LENGTH TIP PROJECT B-4413 = 0.150 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: OCTOBER 1, 2010

LETTING DATE: OCTOBER 18, 2011

BRENDA MOORE, PE
PROJECT ENGINEER

THAD F. DUNCAN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

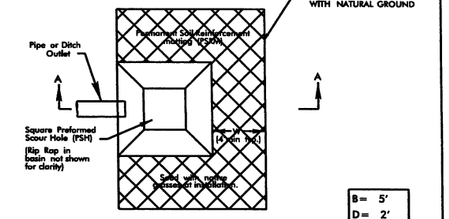
P.E.
STATE HIGHWAY DESIGN ENGINEER

8/17/99

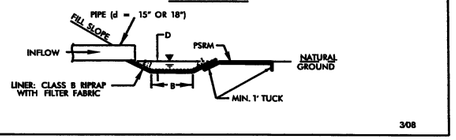
PREFORMED SCOUR HOLE

*NOT TO SCALE

PLAN VIEW

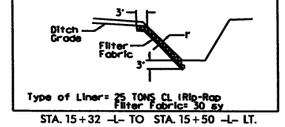


SECTION A-A



STA. 16+89 -L- RT.

DETAIL A
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 25 TONS CL I Rip-Rap
Filter Fabric= 30 sy

STA. 15+32 -L- TO STA. 15+50 -L- LT.
STA. 15+94 -L- TO STA. 16+17 -L- LT.

NAD 83/95

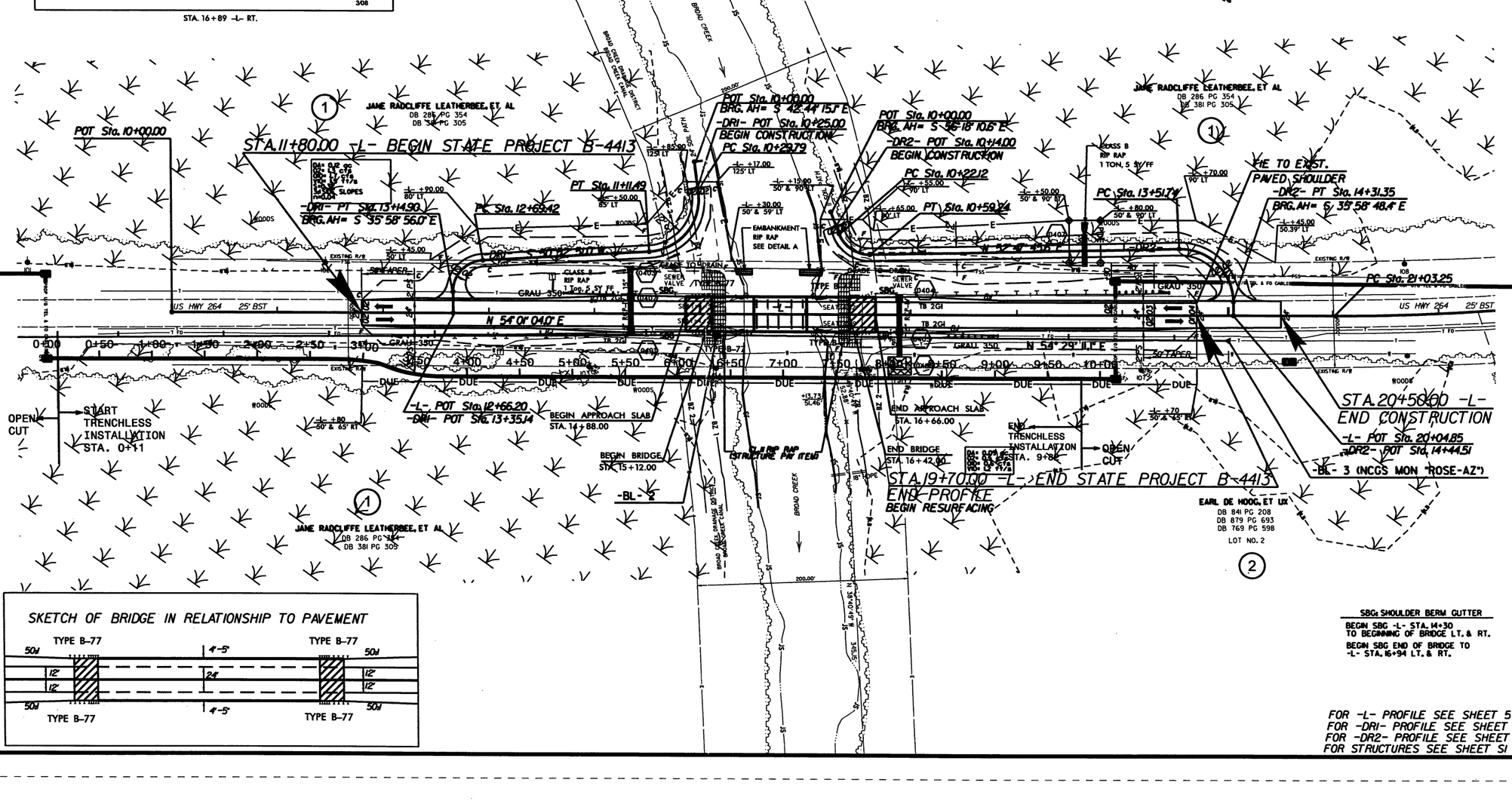
PROJECT REFERENCE NO.	SHEET NO.
B-4413	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

December 13, 2010 (B-4413)

UTILITY
Permit Drawing
Sheet 2 of 3

-DR1-		-DR2-	
PI Sta 10+83.05	PI Sta 12+97.82	PI Sta 10+43.48	PI Sta 14+02.82
Δ = 93° 37' 06" (RT)	Δ = 86° 54' 47" (LT)	Δ = 70° 54' 03.8" (LT)	Δ = 91° 13' 26" (RT)
D = 114° 35' 29.6"	D = 130° 59' 09.4"	D = 190° 59' 09.4"	D = 114° 35' 29.6"
L = 81.70'	L = 45.48'	L = 37.12'	L = 79.64'
T = 53.26'	T = 28.40'	T = 21.36'	T = 51.06'
R = 50.00'	R = 30.00'	R = 30.00'	R = 50.00'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS
RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS



SKETCH OF BRIDGE IN RELATIONSHIP TO PAVEMENT

SBG: SHOULDER BERM GUTTER
BEGIN SBG -L- STA. 14+30 TO BEGINNING OF BRIDGE LT. & RT.
BEGIN SBG END OF BRIDGE TO -L- STA. 16+94 LT. & RT.

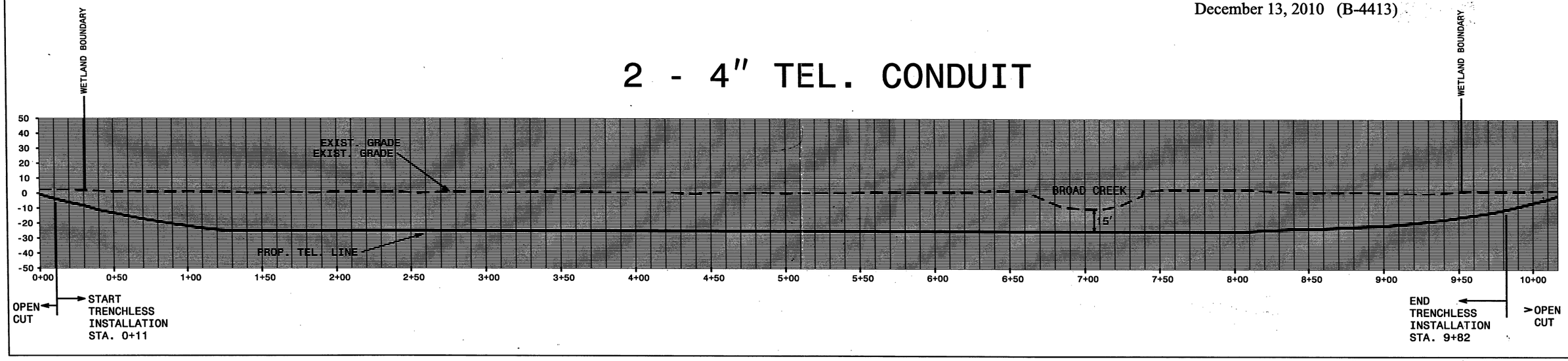
FOR -L- PROFILE SEE SHEET 5
FOR -DR1- PROFILE SEE SHEET 5
FOR -DR2- PROFILE SEE SHEET 5
FOR STRUCTURES SEE SHEET S1 TO SX

13-DEC-2010 15:04
R:\Utilities\Draw\Ut\Proj\B4413_Ut_NEU_UOput.dgn
$$$$USERNAME$$$$

UTILITY
Permit Drawing
Sheet 3 of 3

December 13, 2010 (B-4413)

2 - 4" TEL. CONDUIT



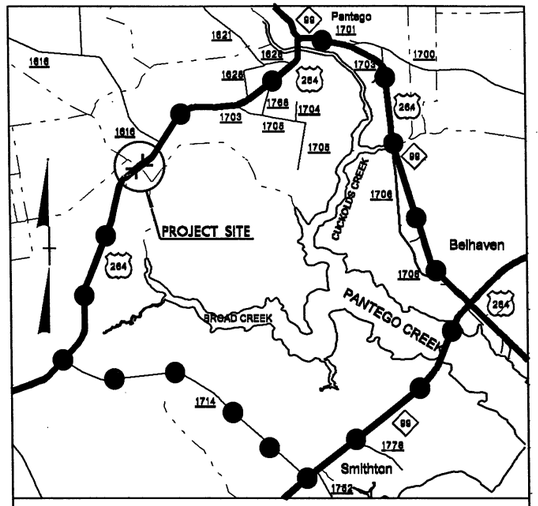
05/08/99

TIP PROJECT: B-4413

CONTRACT:

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$SYSNAME$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

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



VICINITY MAP

●-●-●-●-●-● OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BEAUFORT COUNTY

LOCATION: BRIDGE NO. 51 OVER BROAD CREEK ON US 264

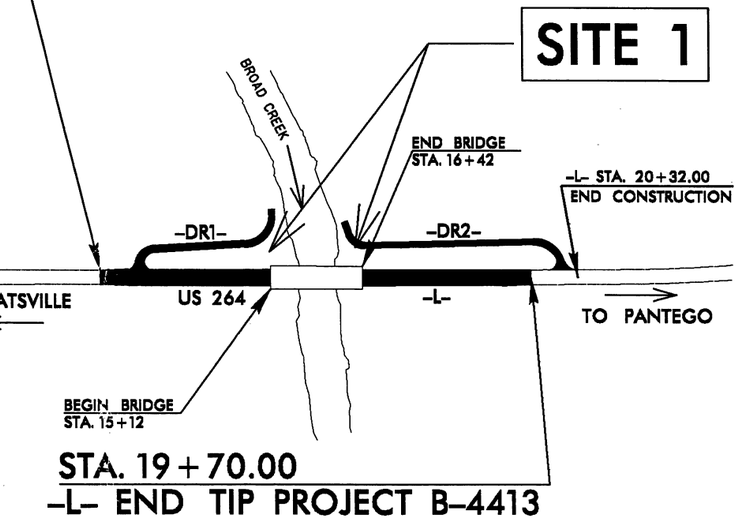
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4413	1	

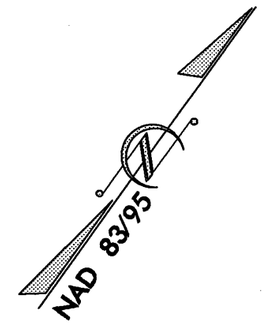
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33690.1.1	BRSTP-0264(24)	PE
33690.2.1	BRSTP-0264(24)	ROW, UTIL

Buffer Drawing
Sheet 1 of 1

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

BUFFER IMPACTS

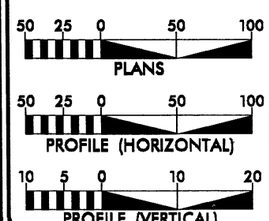




THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD __.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2010 = 3,792
ADT 2030 = 6,100
DHV = 10 %
D = 60 %
T = 7 % *
V = 60 MPH
FUNC. CLASS. = RURAL MINOR ARTERIAL
*(TTST 3% + DUAL 4%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4413 = 0.125 MI
LENGTH STRUCTURE TIP PROJECT B-4413 = 0.025 MI
TOTAL LENGTH TIP PROJECT B-4413 = 0.150 MI

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: OCTOBER 15, 2010

LETTING DATE: OCTOBER 18, 2011

BRENDA MOORE, PE
PROJECT ENGINEER

THAD F. DUNCAN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4413	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

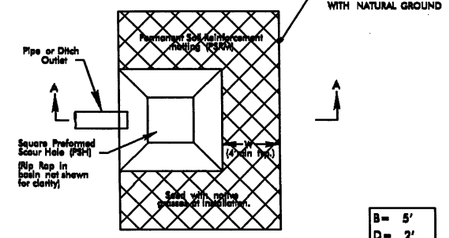
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Buffer Drawing Sheet 2 of 6

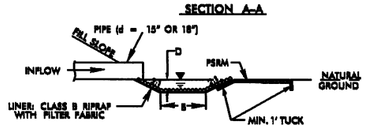
SITE 1

PREFORMED SCOUR HOLE
*NOT TO SCALE

PLAN VIEW

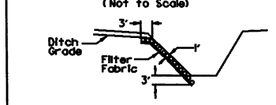


SECTION A-A



STA. 16+89 -L- RT.

DETAIL A
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= 25 TONS CL. 1 Rip-Rap
Filter Fabric= 30 SY

STA. 15+32 -L- TO STA. 15+50 -L- LT.
STA. 15+94 -L- TO STA. 16+17 -L- LT.

NAD 83/95

JANE RADCLIFFE LEATHERBEE, ET AL

EARL DE HOOG, ET UX

BROAD CREEK DRAINAGE DISTRICT BROAD CREEK CANAL

BROAD CREEK

EMBANKMENT RIP RAP SEE DETAIL A

CLASS B RIP RAP 1 TON, 5 SY/FF

US HWY 264 25' BST

TB 2GI

PSH

DUE

WOODS

EXISTING R/W

+80 50' & 65' RT

+70 50' & 45' RT

15" SLOPE

200.00'

ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2

50' 0' 50' 100' 150'
GRAPHIC SCALE

JANUARY 10, 2011
R:\Hydraulics\PERMITS_Environmental\Drawings\b4413_hyd_prm_buf impacts.dgn
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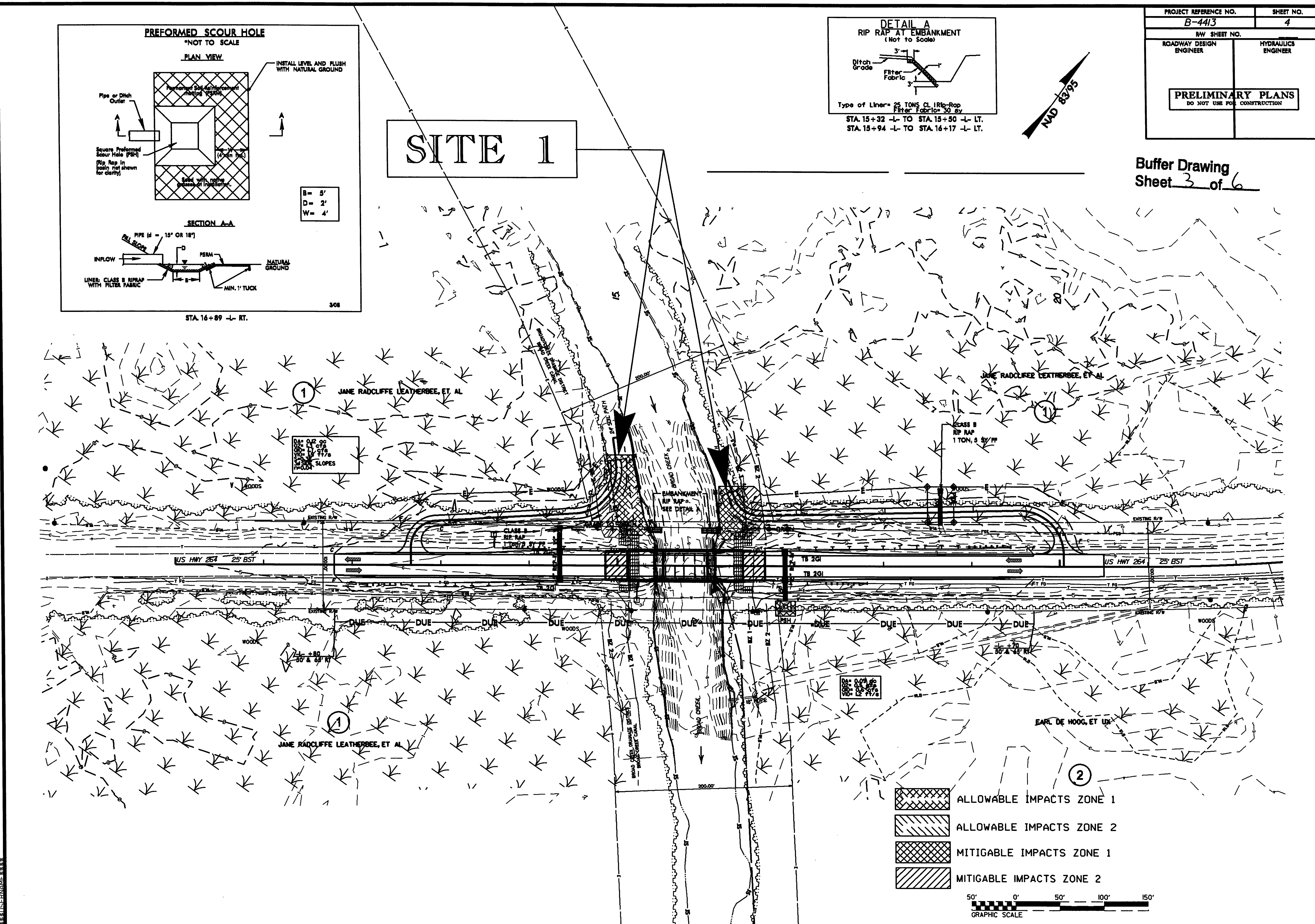
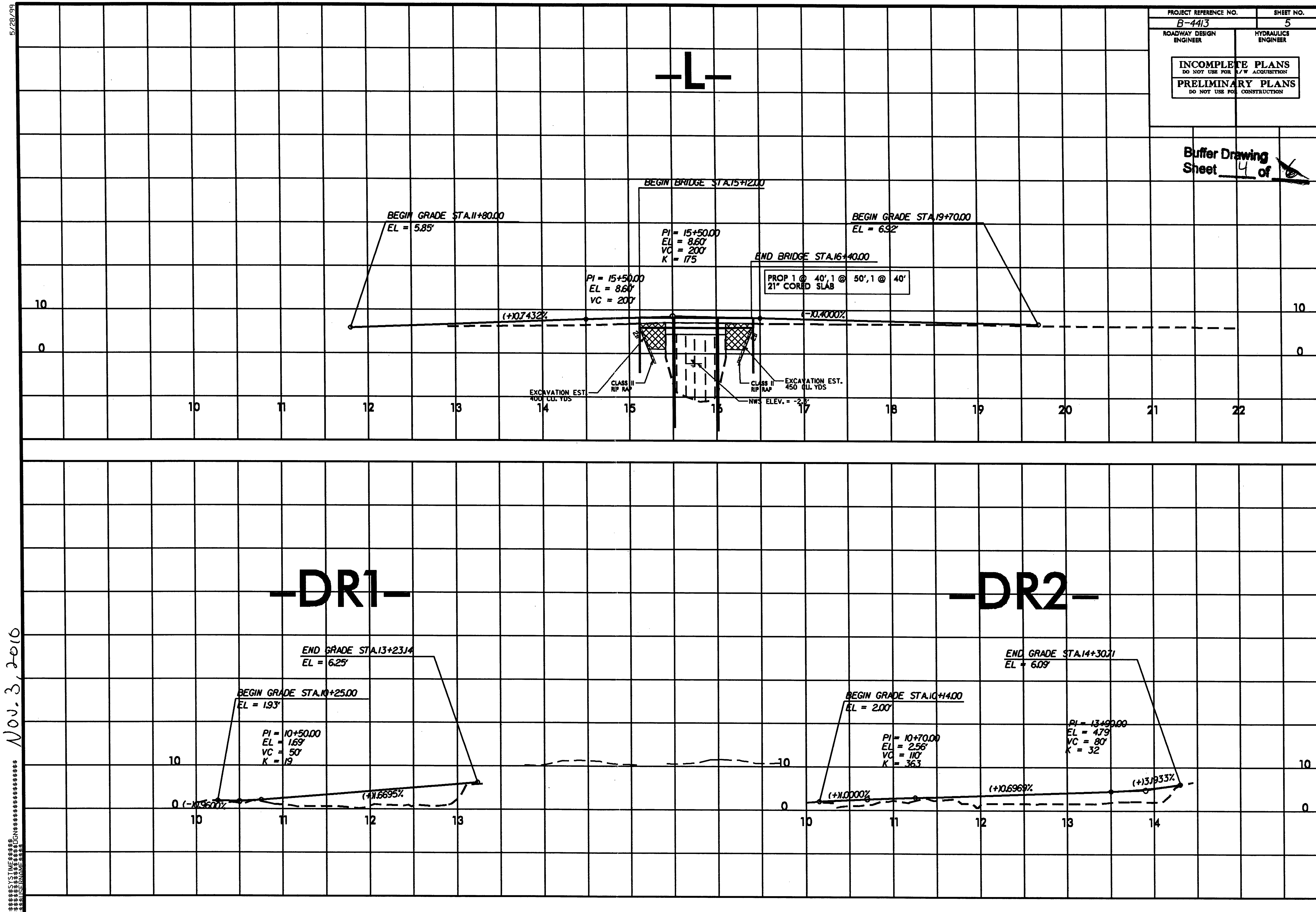
$$$$$$$SYSTIME$$$$$
$$$$$$$SYSDATE$$$$$



PROJECT REFERENCE NO.
B-4413
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
Buffer Drawing
Sheet 3 of 6
PREFORMED SCOUR HOLE
*NOT TO SCALE
PLAN VIEW
SECTION A-A
STA. 16+89 -L- RT.
B= 5'
D= 2'
W= 4'
DETAIL A
RIP RAP AT EMBANKMENT
(Not to Scale)
Ditch Grade
Filter Fabric
Type of Liner= 25 TONS CL I Rip-Rap
Filter Fabric= 30 sy
STA. 15+32 -L- TO STA. 15+50 -L- LT.
STA. 15+94 -L- TO STA. 16+17 -L- LT.
NAD 83/95
SITE 1
JANE RADCLIFFE LEATHERBEE, ET AL
EARL DE HOOG, ET UX
BROAD CREEK
US HWY 264
25' BST
EMBANKMENT RIP RAP SEE DETAIL
CLASS B RIP RAP 1 TON, 5 SY/FF
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2
GRAPHIC SCALE

8/17/99

JANUARY 10, 2011
R:\Hydraulics\PERMITS_Environmental\Drawings\b4413_hyd_prm_bufimpacts.dgn


5/28/99
PROJECT REFERENCE NO. B-4413
SHEET NO. 5
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
Buffer Drawing Sheet 4 of 6
-L-
BEGIN BRIDGE STA.15+12.00
BEGIN GRADE STA.11+80.00
EL = 5.85'
PI = 15+50.00
EL = 8.60'
VC = 200'
K = 175
BEGIN GRADE STA.19+70.00
EL = 6.92'
END BRIDGE STA.16+40.00
PI = 15+50.00
EL = 8.60'
VC = 200'
PROP 1 @ 40', 1 @ 50', 1 @ 40'
21" CORED SLAB
(+)0.7432%
(-)0.4000%
EXCAVATION EST. 400 CU. YDS
CLASS II RIP RAP
CLASS II RIP RAP
EXCAVATION EST. 450 CU. YDS
NWS ELEV. = -2.8'
10
0
10 11 12 13 14 15 16 17 18 19 20 21 22
-DR1-
-DR2-
END GRADE STA.13+23.14
EL = 6.25'
BEGIN GRADE STA.10+25.00
EL = 1.93'
PI = 10+50.00
EL = 1.69'
VC = 50'
K = 19
(-)0.9600%
(+)1.6695%
END GRADE STA.14+30.71
EL = 6.09'
BEGIN GRADE STA.10+14.00
EL = 2.00'
PI = 10+70.00
EL = 2.56'
VC = 110'
K = 363
PI = 13+90.00
EL = 4.79'
VC = 80'
K = 32
(+)1.0000%
(+)0.6969%
(+)3.1933%
10 11 12 13
10 11 12 13 14
Nov. 3, 2010
$$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

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	Road	14+85 to 15+11 -L- LT	X			218.0	809.0	1027.0					
		16+41 to 16+68 -L- LT											
1	Cored Slab Brg.	15+11 to 16+41 -L-		X		927.0		927.0					
1	Driveway	16+41 to 16+68 -L- LT			X				1130.0	782.0	1912.0		
1	Access Road	14+85 to 15+11 -L- LT			X	2225.0	1367.0	3592.0					
TOTAL:						3370.0	2176.0	5546.0	1130.0	782.0	1912.0		

Buffer Drawing
Sheet 5 of 6

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 33690.1.1 (B-4413)

1/10/2011
SHEET OF

Rev. May 2006

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS ZONE 1 (ft^2)	WETLANDS IN BUFFERS ZONE 2 (ft^2)
1	16+45 -L- LT TO		2.0	592.0
	16+62 -L- LT			
TOTAL:			2.0	592.0

Buffer Drawing Sheet 6 of 6

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

BEAUFORT COUNTY
PROJECT: 33690.1.1 (B-4413)

12/8/2010
SHEET OF

Rev. Jan 2009