STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

December 9, 2011

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue Room 208
Asheville, NC 28801-5006

ATTN: Ms. Lori Beckwith
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 13** for the proposed replacement of Bridge No. 75 and 76 over Right Prong Mud Creek and Left Prong Mud Creek on SR 1123 (Little River Road) in Henderson County, Federal Aid Project No. BRZ-1123 (11); Division 14; TIP No. B-4147; WBS 33496.1.1

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 75, a 68-foot single-span bridge over Right Prong Mud Creek and Bridge No. 76, a 21-foot single-span bridge over Left Prong Mud Creek on Little River Road (SR 1123), with a 160-foot two-span bridge at existing location. There are 148 linear feet of permanent impacts associated with the replacement of Bridges Nos. 75 and 76 due to the use of riprap for bank stabilization.

Comments from the North Carolina Wildlife Resources Commission (NCWRC) will be required prior to authorization by the Corps of Engineers. By copy of this letter and attachments, NCDOT hereby requests NCWRC review. NCDOT requests that NCWRC forward their comments to the Corps of Engineers and the NCDOT within 30 calendar days of receipt of this application.

Please see enclosed copies of the Pre-Construction Notification (PCN) Form, Stormwater Management Plan, Rapanos Form, Permit drawings and Design plans. The Categorical Exclusion (CE) was completed on February 4, 2008. Documents were distributed shortly thereafter. Additional copies are available upon request.

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

TELEPHONE: 919-707-5100
FAX: 919-212-5785

WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

This project calls for a letting date of July 17, 2012 and a review date of May 29, 2012; however the let date may advance as additional funding becomes available.

A copy of this permit application and its distribution list 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 Jennifer Harrod at (919) 707-6124.

Sincerely,

E. L. Fuch

for Gregory J. Thorpe, Ph.D., Manager
Project Development and Environmental Analysis

Cc: NCDOT Permit Application Standard Distribution List
File

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: 13	or General Permit (GP) number:	
1c. Has the N WP 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. 75 over Right Prong Mud Creek and Bridge No. 76 over Left Prong Mud Creek on Little River Road (SR 1123).
2b. County:	Henderson
2c. Nearest municipality / town:	Edneyville
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4147

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 i f applicable):	*not applicable*
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6124
3g. Fax no.:	(919) 212-5785
3h. Email address:	jwharrod@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: 35.264779 (DD.DDDDDD)	Longitude: - 82.486154 (-DD.DDDDDD)
1c. Property size:	0.002 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Right and Left Prong Mud Creek	
2b. Water Quality Classification of nearest receiving water:	C	
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: Residential development along roads interspersed with agriculture; forested along stream		
3b. List the total estimated acreage of all existing wetlands on the property: 0		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 159 linear feet		
3d. Explain the purpose of the proposed project: Bridge No. 76 is structurally deficient and Bridge No. 75 is functionally obsolete. Due to the required hydraulic opening for Bridge No. 76 and the spacing between the two bridges of 15 feet, it is not feasible or practical to replace Bridge No. 76 and not replace Bridge No. 75. One structure will replace both existing bridges and result in safer and more efficient traffic operations.		
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 68-foot bridge, Bridge No. 75, and a 21-foot bridge, Bridge No. 76, with a 160-foot, 2-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.		
4. Jurisdictional Determinations		
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments: We are requesting a final approved JD with this application.	☐ 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):	Agency/Consultant Company: Other:	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.		
5. Project History		
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☐ Yes	☒ No ☐ Unknown
5b. If yes, explain in detail according to "help file" instructions.		

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

C. Proposed Impacts Inventory

1. Impacts Summary

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

☐ Wetlands ☒ Streams - tributaries ☐ Buffers

☐ Open Waters ☐ Pond Construction

2. Wetland Impacts

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

2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)
Site 1 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
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**	X Permanent X 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	Bank Stabilization due to Bridge	Left Prong Mud Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	17	60
Site 2 ☒ P ☐ T	Bank Stabilization due to Ditch	Left Prong Mud Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	17	10
Site 3 ☒ P ☐ T	Bank Stabilization due to Bridge	Right Prong Mud Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	15	65
Site 4 ☒ P ☐ T	Bank Stabilization due to Ditch	Right Prong Mud Creek	☒ PER ☐ INT	☒ Corps ☐ DWQ	15	13
Site 5 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		

3h. **Total stream and tributary impacts**	148 Perm 0 Temp

3i. Comments:

4. Open Water Impacts

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

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 ☐ P ☐ T				
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
			4f. Total open water impacts	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			☐ Yes ☐ No		
B2 ☐ P ☐ T			☐ Yes ☐ No		
B3 ☐ P ☐ T			☐ Yes ☐ No		
			6h. **Total buffer impacts**		

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 71 feet longer than the two existing bridges allowing for a larger hydraulic opening; the proposed bridge will be at approximately the same grade as the existing structure; an off site detour will be used.

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

By replacing the existing bridges with a single structure on the existing alignment we are able to avoid a floodplain modification for Mud Creek and allows for less construction activities in the Mud Creek floodplain.

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: impacts are due to the use of riprap for bank stabilization and is not considered a loss of waters of the U.S.
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☐ Corps
2c. If yes, which mitigat ion 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:	linear feet
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold
4d. Buffer mitigation requested (DWQ only):	square feet
4e. Riparian wetland mitigation requested:	acres
4f. Non-riparian wetland mitigation requested:	acres
4g. Coastal (tidal) wetland mitigation requested:	acres

4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

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

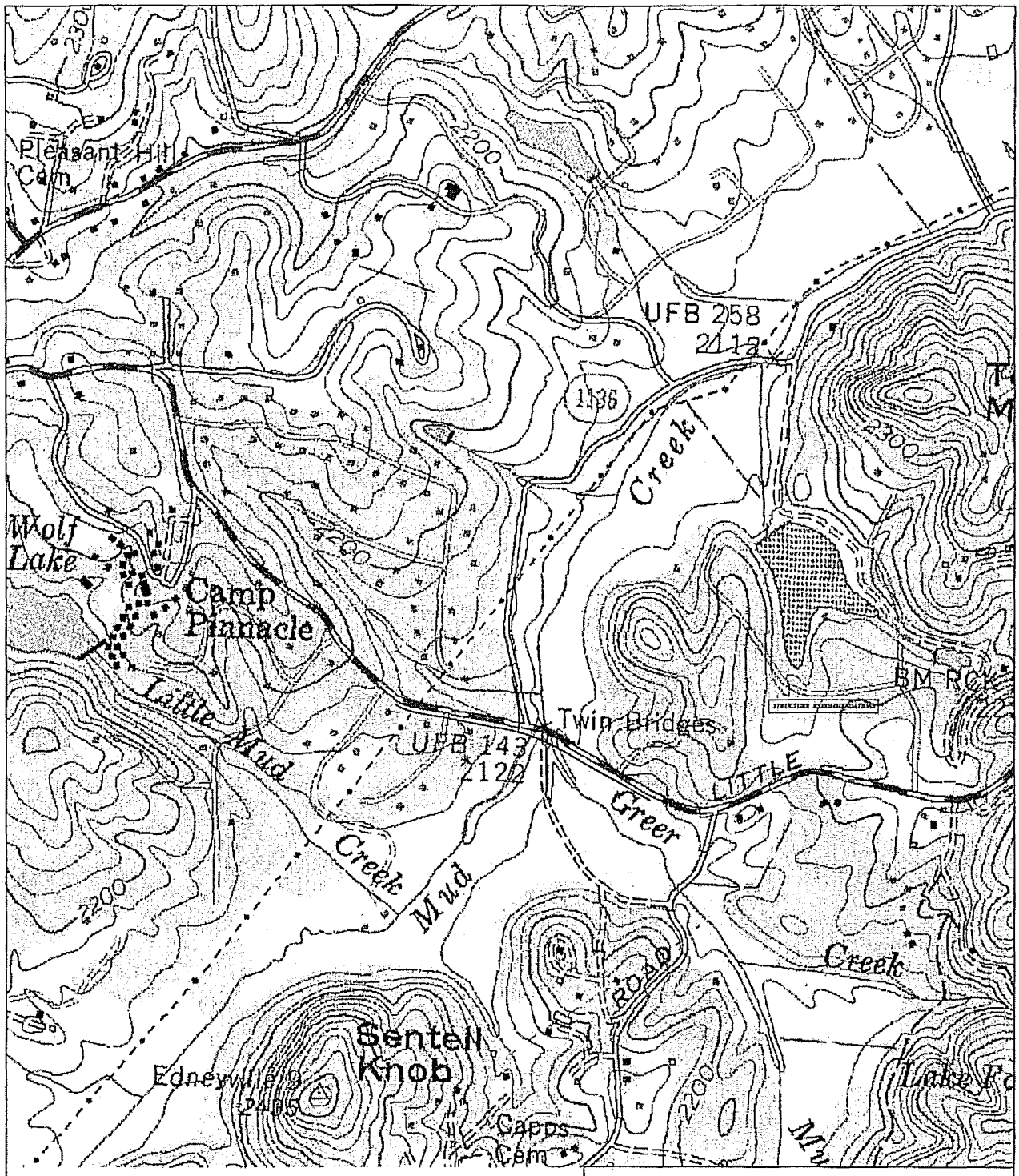
6. **Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ**				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?			☐ Yes ☒ No	
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that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

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	☐ Yes ☒ No
1b. If yes, then is a diffuse flow plan included? If not, explain why. Comments:	☐ Yes ☐ No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	☒ Yes ☐ No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: See attached permit drawings.	
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 Stormwater Permit is Pending
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No N/A
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No N/A

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, ind icate 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? USFWS web page of T/E species for Henderson County lists seven species. Habitat is present within the study area for the following species: Appalachian elktoe, Small whorled pogonia and White irisette. These species all have a biological conclusion of No Effect; NHP database of element occurrences		
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 - On May 29, 2007 the NCDOT met with HPO and the Federal Highway Administration to discuss effects on the Flat Rock Historic District; it was determined that this alternative would have "No Adverse Effect" on the Flat Rock Historic District.		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		

Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	E. L. Luck Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	12.8.11 Date



NOT TO SCALE

NCDOT

DIVISION OF HIGHWAYS

HENDERSON COUNTY

WBS: 33496.1.1 (B-4147)

BRGS 75 over RIGHT PRONG CREEK and 76 over LEFT PRONG CK ON SR 1129

SHEET OF 07/29/11

Permit Drawing
Sheet 1 of 7

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
4 and 7	F. G. Shealy	P.O. Box 476 Flat Rock, NC 28731
5	Mary Ann Baldwin Martha Rose Gordon	21 Alpen Rose Way Horseshoe, NC 28742
6	Michael & Pamela Cooper	P.O. Box 2526 Hendersonville, NC 28793
8	Hal M. Hunter	2520 Asheville Highway Hendersonville, NC 28791

NCDOT

DIVISION OF HIGHWAYS
HENDERSON COUNTY
WBS: 33496.1.1 (B-4147)
BRGS 75 over RIGHT PRONG CREEK and 76 over LEFT PRONG CK ON SR 1129

SHEET **OF** **07/29/11**

Permit Drawing
Sheet 2 of 7

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	20+41 to 21+25	Bridge										
		Bank Stabilization										
		Left Prong						< 0.01		60		
	20+92 LT	Ditch										
		Bank Stabilization								10		
2	21+25 to 22+02	Bridge										
		Bank Stabilization										
		Right Prong						< 0.01		65		
	21+84 RT	Ditch								13		
		Bank Stabilization										
TOTALS:			0.00	0.00	0.00	0.00	0.00	< 0.01	0.00	148	0	0

IMPACTS TO SURFACE WATER LEFT PRONG : LESS THAN 0.01 ACRES (120.95 SQ. FT.)
IMPACTS TO SURFACE WATER RIGHT PRONG : LESS THAN 0.01 ACRES (134.82 SQ. FT.)

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
Brgs 75 over Right Prong Creek and
76 over Left Prong Creek on SR 1123
HENDERSON COUNTY
WBS -33496.1.1 (B-4147)
SHEET REV. 11/4/2011

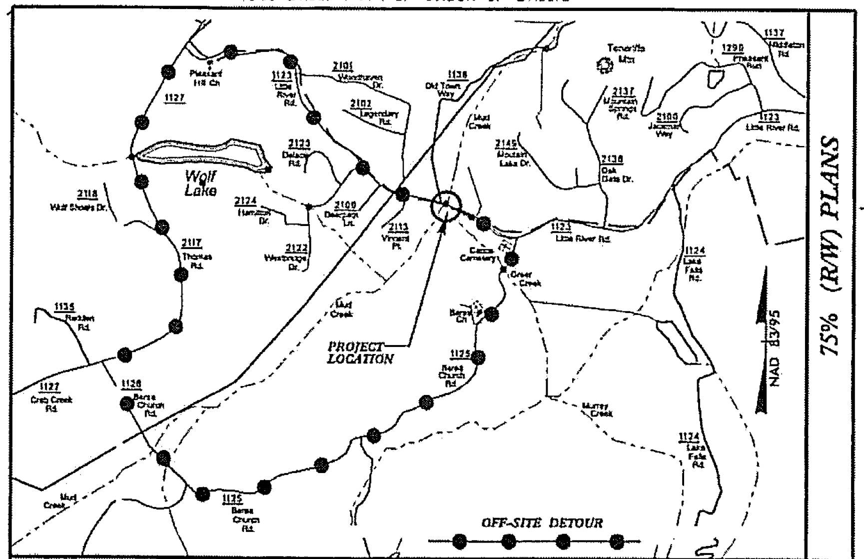
ATN Revised 3/31/05

Permit Drawing
Sheet 3 of 7

09/08/99

TIP PROJECT: B-4147

See Sheet 1-A For Index of Sheets



VICINITY MAP

75% (R/W) PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

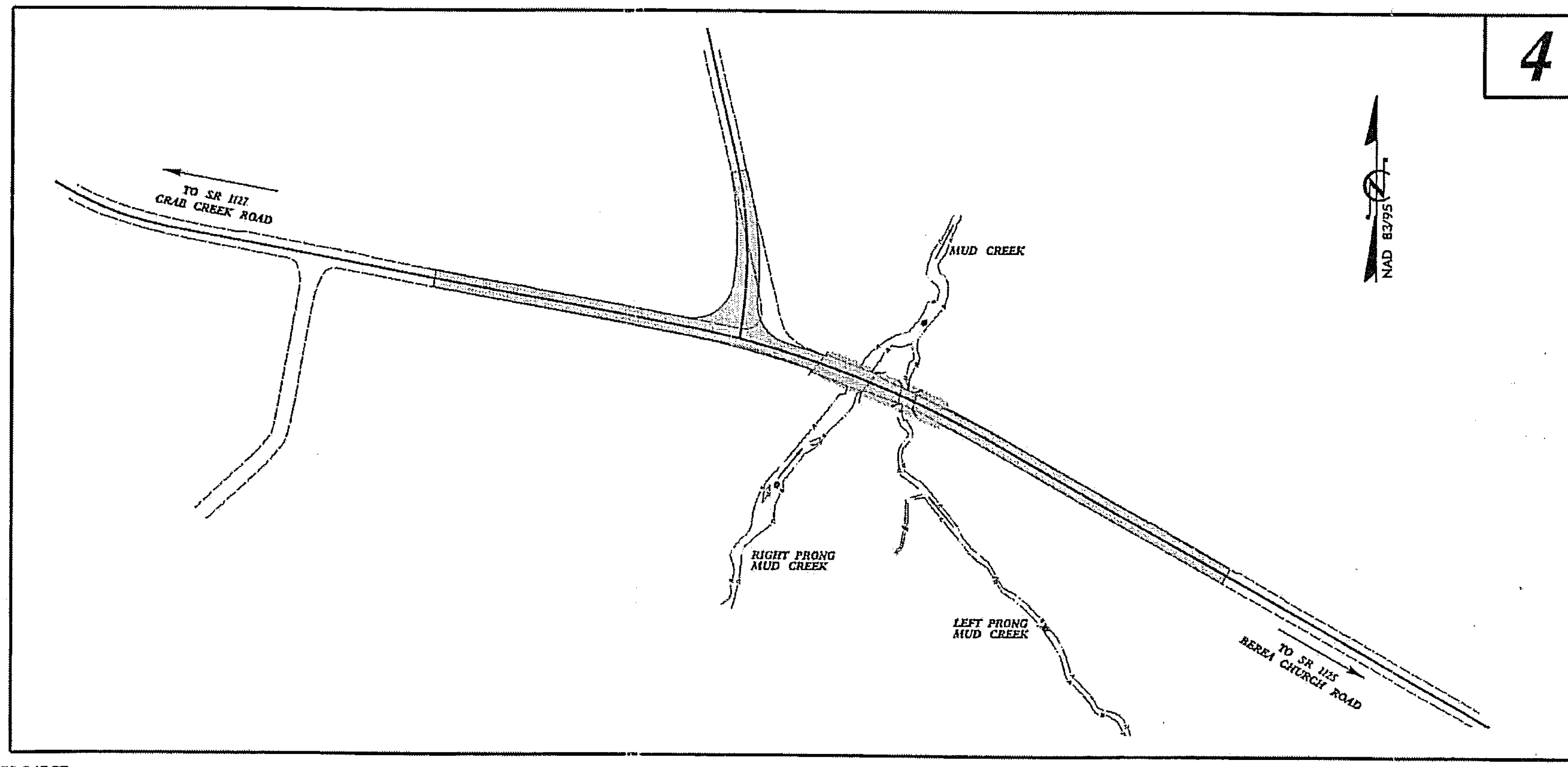
LOCATION: BRIDGE NO. 75 OVER RIGHT PRONG MUD CREEK
BRIDGE NO. 76 OVER LEFT PRONG MUD CREEK
ON SR 1123 (LITTLE RIVER ROAD)
TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4147	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33496.1.1	BRZ-1123(11)	PE
33496.2.1	BRZ-1123(11)	R/W & UTIL.

WETLAND AND STREAM IMPACTS

4



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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

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 2011 = 1595
ADT 2031 = 3515
DHV = 12 %
D = 55 %
T = 7 % *
V = 40 MPH
* TTST 1% + DUAL 6%
CLASSIFICATION: RURAL LOCAL
SUBREGIONAL TIER DESIGN

PROJECT LENGTH

TOTAL ROADWAY LENGTH TIP PROJECT B-4147 = 0.169mi
TOTAL STRUCTURE LENGTH TIP PROJECT B-4147 = 0.030mi
TOTAL LENGTH TIP PROJECT B-4147 = 0.199mi

WETHERILL ENGINEERING

Prepared for the North Carolina Department of Transportation in the Office of:
559 JONES FRANKLIN ROAD
SUITE 164
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 20, 2011
LETTING DATE:
JULY 17, 2012

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

NCDOT CONTACT
K. ZAK HAMIDI, PE
PROJECT ENGINEER-ROADWAY DESIGN

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

Permit Drawing
Sheet 4 of 7

5:38:06 PM
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8/25/2011

WETHERILL ENGINEERING
559 Jones Franklin Rd. Suite 164
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
B-4147	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

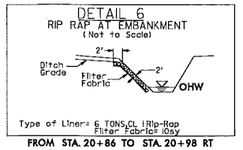
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

NAD 8395

DETAIL 6
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner: 6 TONS,CL I Rip-Rap
Filter Fabric 10oy

FROM STA. 20+86 TO STA. 20+98 RT
FROM STA. 21+77 TO STA. 21+88 LT

SEE DETAIL 6

SITE 1
LEFT PRONG

SITE 2
RIGHT PRONG

20+00
15+00
25+00
22+75.00
50.00
24+00.00
30.00

SR 1123 (LITTLE RIVER ROAD)
SR 1123 OLD TOWN WAY
EXISTING R/W
EXISTING 10'±
RETAIN
BST
WALK
CONC
NE
RRY
398
PDE
PUE
PI
WOODS

1 JAMES A. CHARLTON
DB 936 PG 151

MICHAEL D. JONES
DB 1184 PG 627

3 ROBERT WILLIAM HAWKINS
DB 566 PG 41

4 F. G. SHEALY FAMILY LIMITED PARTNERSHIP
DB 1043 PG 323
DB 1344 PG 666

5 MARY ANN BALDWIN & MARTHA ROSE GORDON
DB 845 PG 257
LOT 1

6 J. MICHAEL COOPER
DB SLD PG 2168

8 HAL M. HUNTER
DB 647 PG 557
DB 642 PG 845

TB
WE

INSET ENLARGED 200%

CLASS II RIP RAP
AS SHOWN IN STRUCTURE DRAWINGS

DENOTES IMPACTS IN SURFACE WATER

SEE SHEET 2-A FOR LAND LOCKED PROPERTIES
SEE SHEET 5 FOR -L- PROFILE
SEE SHEET 5 FOR -Y- PROFILE

2:45:03 PM
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11/8/2011

Permit Drawing
Sheet 5 of 11

559 Jones Franklin Rd. Suite 164
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Fax: 919 851 8107

WETHERILL ENGINEERING

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
B-4147	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

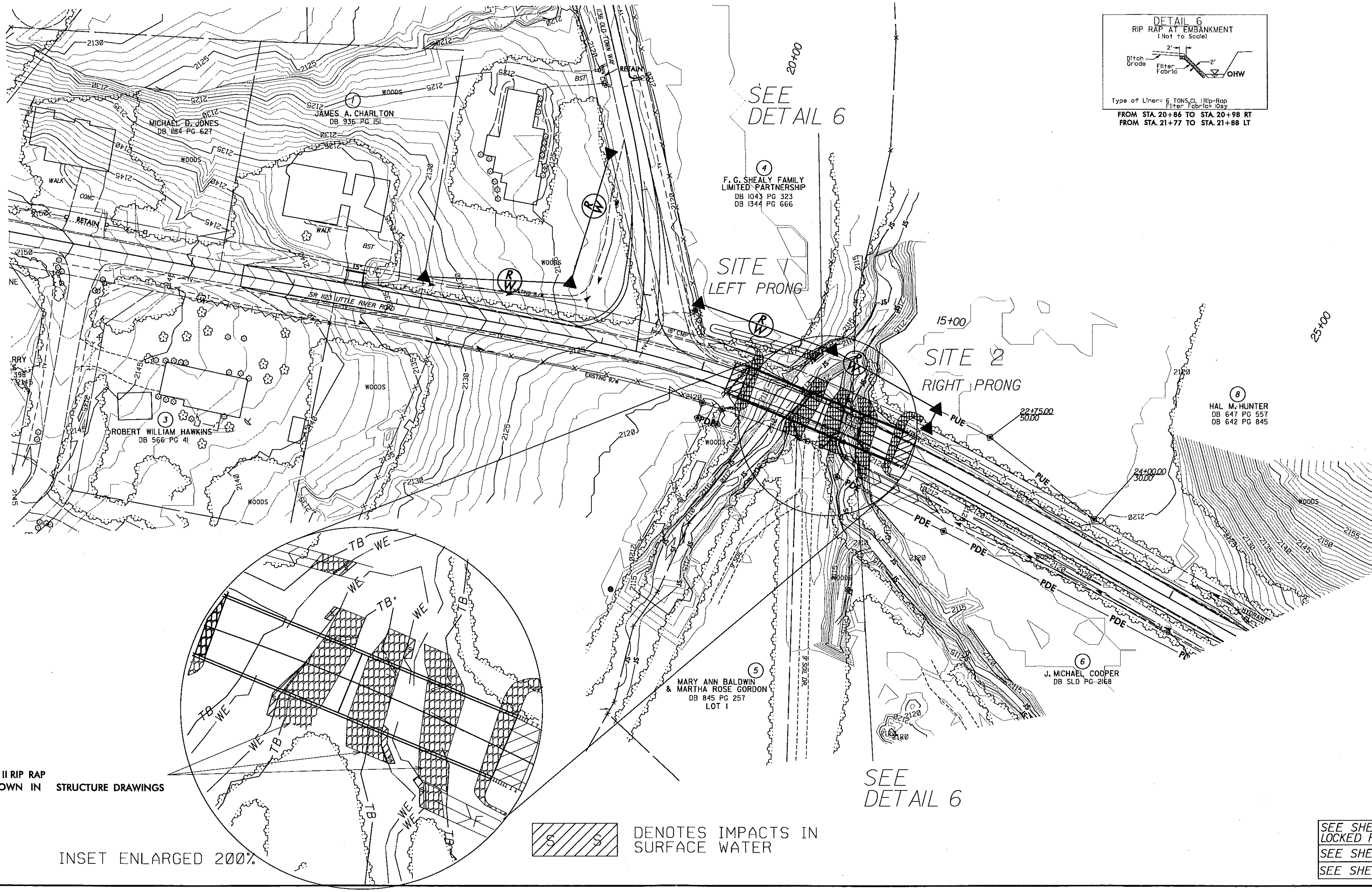
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

NAD 83/95



CLASS II RIP RAP
AS SHOWN IN STRUCTURE DRAWINGS

DENOTES IMPACTS IN SURFACE WATER

SEE SHEET 2-A FOR LAND LOCKED PROPERTIES
SEE SHEET 5 FOR -L- PROFILE
SEE SHEET 5 FOR -Y- PROFILE

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11/8/2011

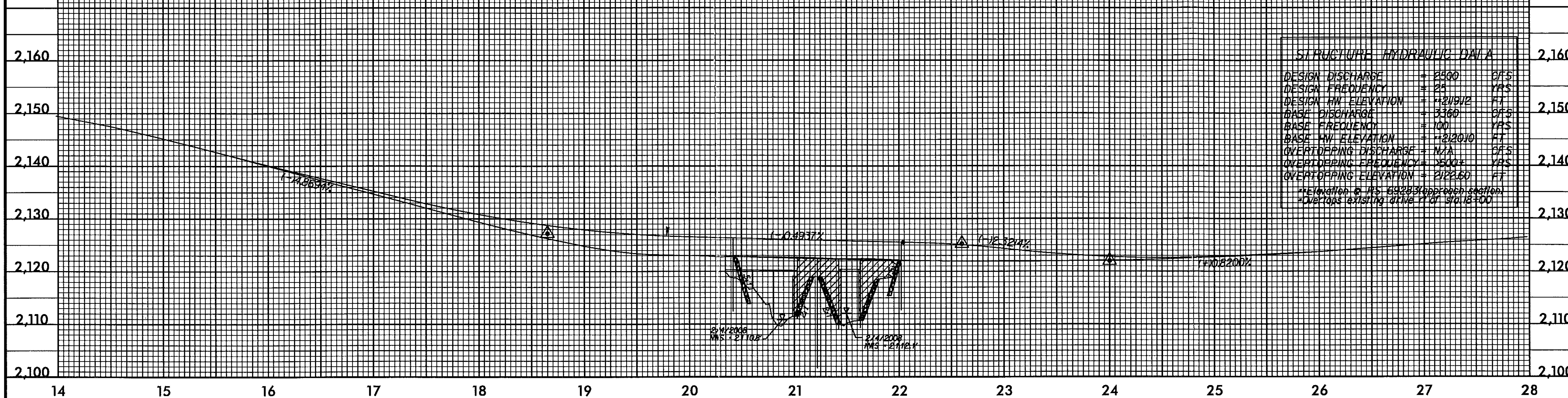
Permit Drawing
Sheet 6 of 7

359 Jones Franklin Rd. Suite 164 Raleigh, N.C. 27606 Bus: 919 851 8077 Fax: 919 851 8107
WETHERILL ENGINEERING
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
B-4147	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

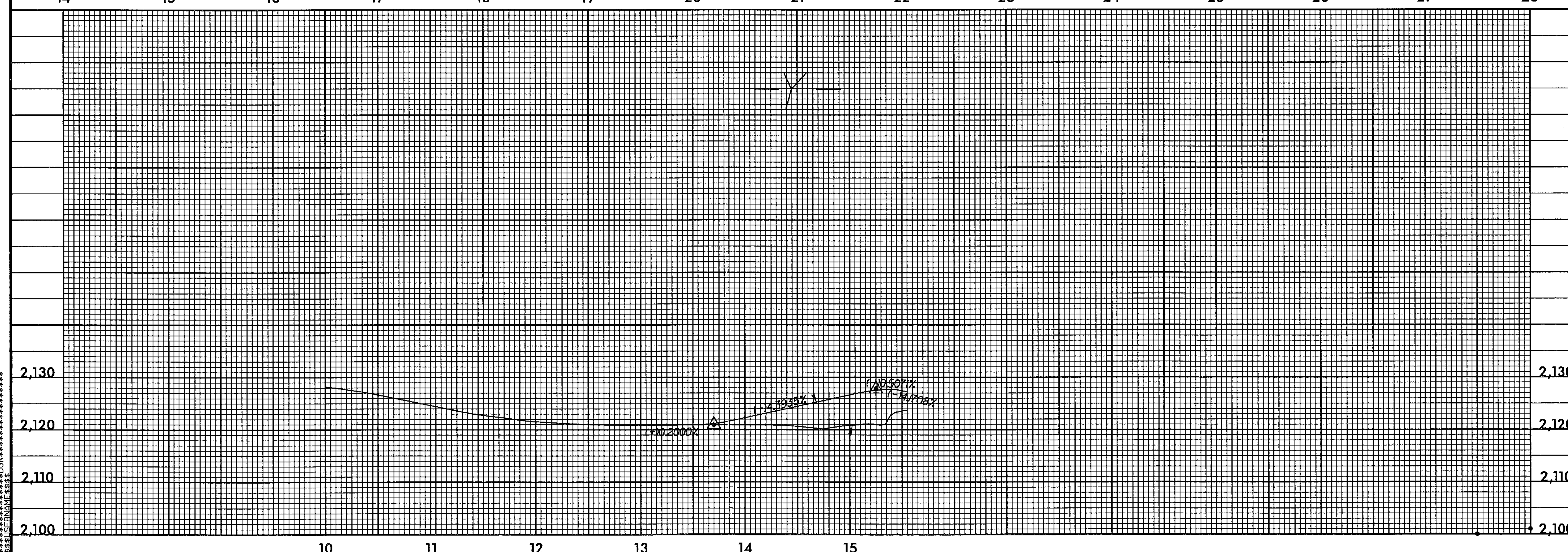
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	=	2500	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	**2119.12	FT
BASE DISCHARGE	=	3360	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	**2120.10	FT
OVERTOPPING DISCHARGE	=	N/A	CFS
OVERTOPPING FREQUENCY	=	>500+	YRS
OVERTOPPING ELEVATION	=	2122.60	FT

**Elevation @ RS 69283(approach section)
*Overtops existing drive rt of sta.18+00



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

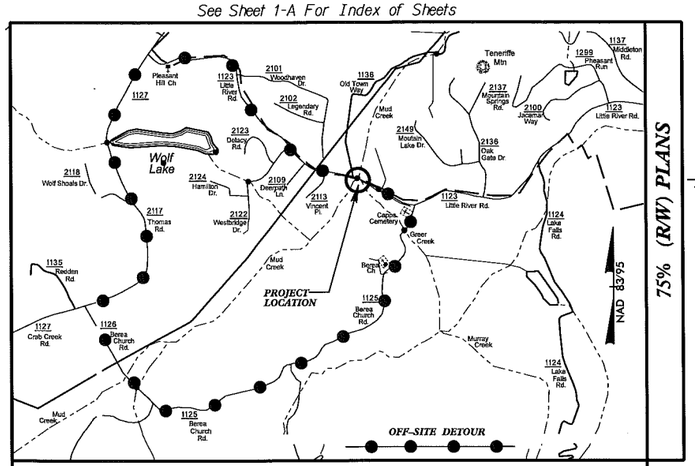
Permit Drawing
Sheet 7 of 7

09/08/99

TIP PROJECT: B-4147

CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

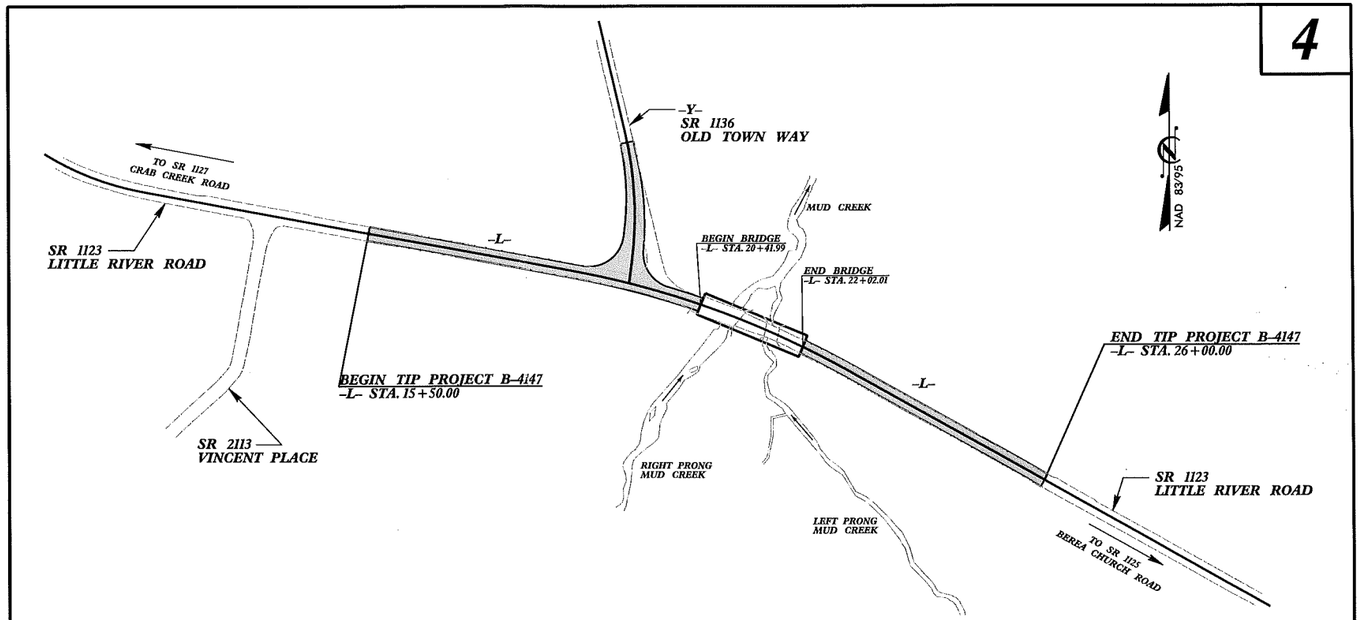
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4147	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33496.1.1	BRZ-1123(11)	PE
33496.2.1	BRZ-1123(11)	R/W & UTIL.

LOCATION: *BRIDGE NO. 75 OVER RIGHT PRONG MUD CREEK*
BRIDGE NO. 76 OVER LEFT PRONG MUD CREEK
ON SR 1123 (LITTLE RIVER ROAD)

TYPE OF WORK: *GRADING, PAVING, DRAINAGE & STRUCTURE*

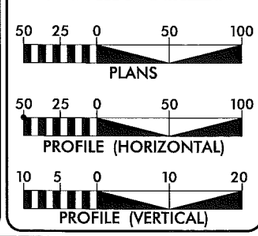
4



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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

GRAPHIC SCALES



DESIGN DATA

ADT 2011	=	1595
ADT 2031	=	3515
DHV	=	12 %
D	≤	55 %
T	=	7 % *
V	=	40 MPH

* TTST 1% + DUAL 6%

CLASSIFICATION: RURAL LOCAL

SUBREGIONAL TIER DESIGN

PROJECT LENGTH

TOTAL ROADWAY LENGTH TIP PROJECT B-4147	=	0.169mi
TOTAL STRUCTURE LENGTH TIP PROJECT B-4147	=	0.030mi
TOTAL LENGTH TIP PROJECT B-4147	=	0.199mi

Prepared for the North Carolina Department of Transportation in the Office of:

WETHERILL ENGINEERING
559 JONES FRANKLIN ROAD
SUITE 164
Raleigh, N.C. 27606
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Bus: 919 851 8077
Fax: 919 851 8107

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JUNE 17, 2011	EDWARD G. WETHERILL, PE *PROJECT ENGINEER*
LETTING DATE: JULY 17, 2012	BOB A. MAY, PE *PROJECT DESIGN ENGINEER*
NCDOT CONTACT	K. ZAK HAMIDI, PE *PROJECT ENGINEER-ROADWAY DESIGN*

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER *P.E.*

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7/29/2011

04/16/11

PROJECT REFERENCE NO.	SHEET NO.
B-4147	1-B

Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 23
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY:

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

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Curb Cut Future Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

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

EXISTING STRUCTURES:

MAJOR:

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

MINOR:

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

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

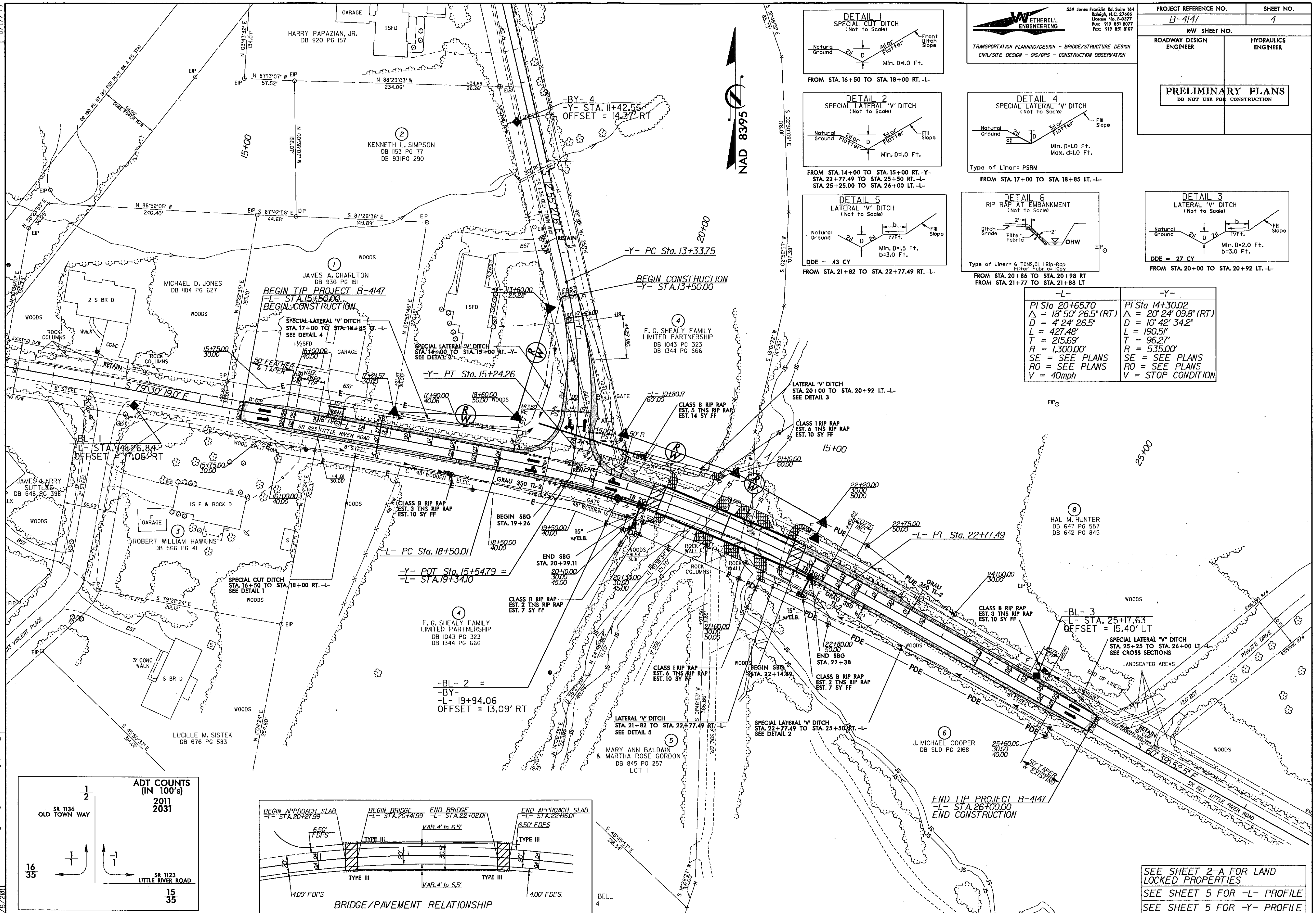
MISCELLANEOUS:

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

REVISIONS

R/W REVISION - CONVERTED CONSTRUCTION EASEMENT TO PERMANENT UTILITY EASEMENT ON PARCEL NO.8. BAM
R/W REVISION - UPDATED STATIONS AND OFFSET DISTANCES FOR RIGHT OF WAY FLAGGING. BAM
R/W REVISION - REVISED PARCEL NO.7 TO BE PARCEL NO.4. BAM

8/17/99



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION
PROJECT REFERENCE NO. B-4147
SHEET NO. 4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
DETAIL 1
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
4:1 or Flatter
Front Ditch Slope
Min. D=1.0 Ft.
FROM STA. 16+50 TO STA. 18+00 RT. -L-
DETAIL 2
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
2:1 or Flatter
3:1 or Flatter
Fill Slope
Min. D=1.0 Ft.
FROM STA. 14+00 TO STA. 15+00 RT. -Y-
STA. 22+77.49 TO STA. 25+50 RT. -L-
STA. 25+25.00 TO STA. 26+00 LT. -L-
DETAIL 4
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Min. D=1.0 Ft.
Max. d=1.0 Ft.
Type of Liner= PSRM
FROM STA. 17+00 TO STA. 18+85 LT. -L-
DETAIL 5
LATERAL 'V' DITCH
(Not to Scale)
Min. D=1.5 Ft.
b=3.0 Ft.
DDE = 43 CY
FROM STA. 21+82 TO STA. 22+77.49 RT. -L-
DETAIL 6
RIP RAP AT EMBANKMENT
(Not to Scale)
Ditch Grade
Filter Fabric
OHW
Type of Liner= 6 TONS,CL I Rip-Rap
Filter Fabric= 10sy
FROM STA. 20+86 TO STA. 20+98 RT
FROM STA. 21+77 TO STA. 21+88 LT
DETAIL 3
LATERAL 'V' DITCH
(Not to Scale)
Min. D=2.0 Ft.
b=3.0 Ft.
DDE = 27 CY
FROM STA. 20+00 TO STA. 20+92 LT. -L-
NAD 83/95
HARRY PAPAZIAN, JR.
DB 920 PG 157
KENNETH L. SIMPSON
DB 1153 PG 77
DB 931 PG 290
JAMES A. CHARLTON
DB 936 PG 151
MICHAEL D. JONES
DB 1184 PG 627
ROBERT WILLIAM HAWKINS
DB 566 PG 41
JAMES LARRY SUTTLES
DB 648 PG 398
LUCILLE M. SISTEK
DB 676 PG 583
F. G. SHEALY FAMILY LIMITED PARTNERSHIP
DB 1043 PG 323
DB 1344 PG 666
MARY ANN BALDWIN & MARTHA ROSE GORDON
DB 845 PG 257
LOT 1
J. MICHAEL COOPER
DB SLD PG 2168
HAL M. HUNTER
DB 647 PG 557
DB 642 PG 845
-BY- 4
-Y- STA. 11+42.55
OFFSET = 14.37' RT
-Y- PC Sta. 13+33.75
BEGIN CONSTRUCTION
-Y- STA.13+50.00
BEGIN TIP PROJECT B-4147
-L- STA.15+50.00
BEGIN CONSTRUCTION
-Y- PT Sta. 15+24.26
-BL- 1
-L- STA. 14+26.84
OFFSET = 17.05' RT
-L- PC Sta. 18+50.01
-Y- POT Sta. 15+54.79 =
-L- STA.19+34.10
-BL- 2 =
-BY-
-L- 19+94.06
OFFSET = 13.09' RT
-L- PT Sta. 22+77.49
-BL- 3
-L- STA. 25+17.63
OFFSET = 15.40' LT
END TIP PROJECT B-4147
-L- STA.26+00.00
END CONSTRUCTION
S 79°30' 19.0" E
S 60°39' 52.5" E
SR 1123 LITTLE RIVER ROAD
SR 1136 OLD TOWN WAY
SPECIAL LATERAL 'V' DITCH
STA. 17+00 TO STA. 18+85 LT. -L-
SEE DETAIL 4
SPECIAL LATERAL 'V' DITCH
STA. 14+00 TO STA. 15+00 RT. -Y-
SEE DETAIL 2
SPECIAL CUT DITCH
STA. 16+50 TO STA. 18+00 RT. -L-
SEE DETAIL 1
LATERAL 'V' DITCH
STA. 20+00 TO STA. 20+92 LT. -L-
SEE DETAIL 3
LATERAL 'V' DITCH
STA. 21+82 TO STA. 22+77.49 RT. -L-
SEE DETAIL 5
SPECIAL LATERAL 'V' DITCH
STA. 22+77.49 TO STA. 25+50 RT. -L-
SEE DETAIL 2
SPECIAL LATERAL "V" DITCH
STA. 25+25 TO STA. 26+00 LT. -L-
SEE CROSS SECTIONS
CLASS B RIP RAP
EST. 5 TNS RIP RAP
EST. 14 SY FF
CLASS I RIP RAP
EST. 6 TNS RIP RAP
EST. 10 SY FF
CLASS B RIP RAP
EST. 3 TNS RIP RAP
EST. 10 SY FF
CLASS B RIP RAP
EST. 2 TNS RIP RAP
EST. 7 SY FF
BEGIN SBG
STA. 19+26
END SBG
STA. 20+29.11
BEGIN SBG
STA. 22+14.89
END SBG
STA. 22+38
LANDSCAPED AREAS
PRIVATE DRIVE
ADT COUNTS
(IN 100's)
2011
2031
SR 1123
LITTLE RIVER ROAD
BEGIN APPROACH SLAB
-L- STA.20+27.99
BEGIN BRIDGE
-L- STA.20+41.99
END BRIDGE
-L- STA.22+02.01
END APPROACH SLAB
-L- STA.22+16.01
6.50' FDPS
4.00' FDPS
VAR. 4' to 6.5'
TYPE III
BRIDGE/PAVEMENT RELATIONSHIP

-L-	-Y-
PI Sta 20+65.70	PI Sta 14+30.02
Δ = 18° 50' 26.5" (RT)	Δ = 20° 24' 09.8" (RT)
D = 4° 24' 26.5"	D = 10° 42' 34.2"
L = 427.48'	L = 190.51'
T = 215.69'	T = 96.27'
R = 1,300.00'	R = 535.00'
SE = SEE PLANS	SE = SEE PLANS
RO = SEE PLANS	RO = SEE PLANS
V = 40mph	V = STOP CONDITION

SEE SHEET 2-A FOR LAND LOCKED PROPERTIES
SEE SHEET 5 FOR -L- PROFILE
SEE SHEET 5 FOR -Y- PROFILE

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11/8/2011

PROJECT REFERENCE NO.	SHEET NO.
B-4147	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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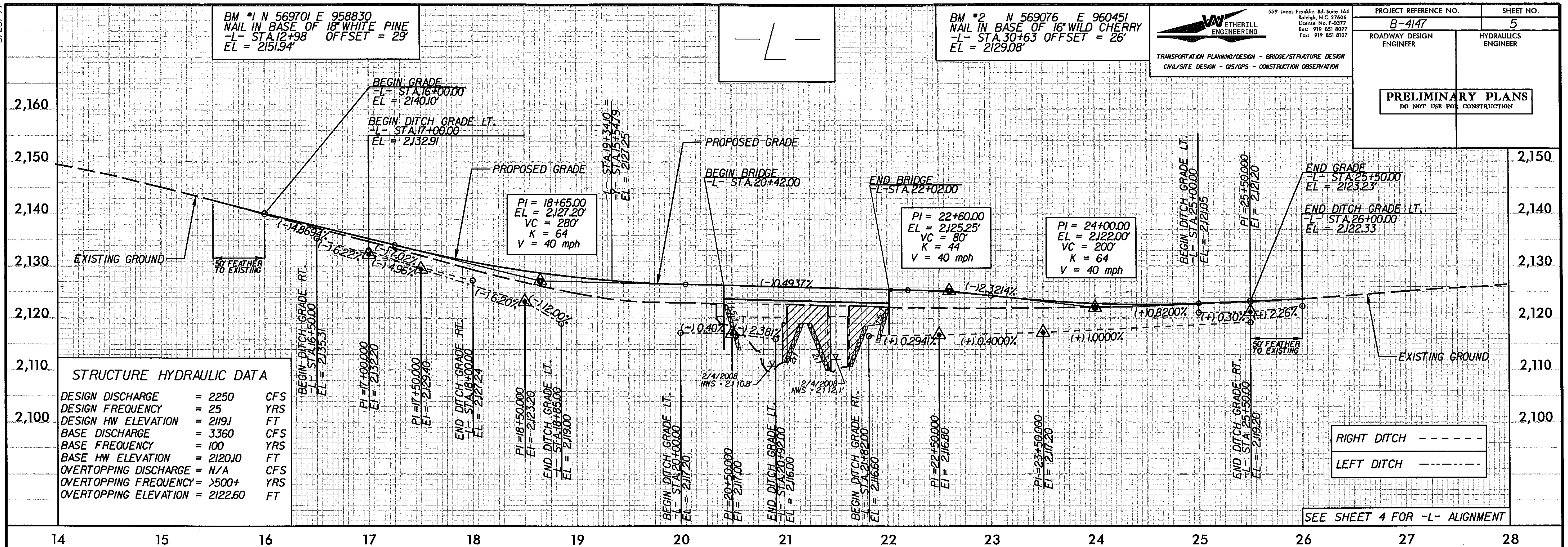
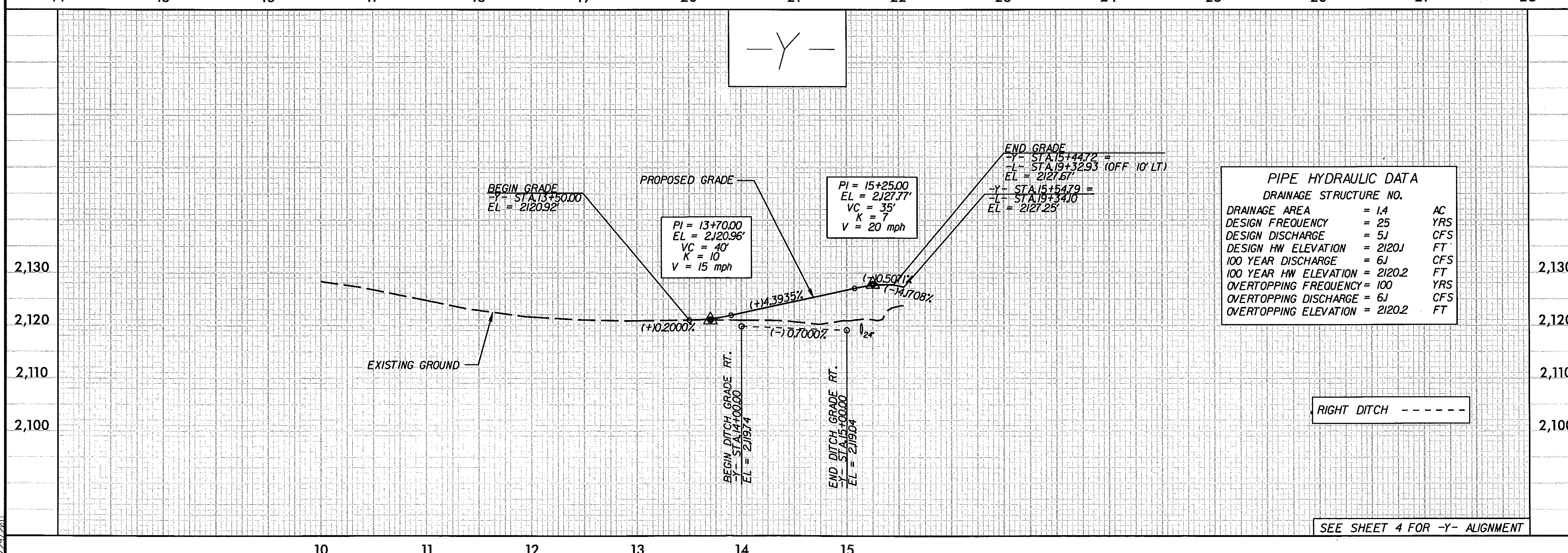
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 2250	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 2119.1	FT
BASE DISCHARGE	= 3360	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 2120.10	FT
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING FREQUENCY	= >500+	YRS
OVERTOPPING ELEVATION	= 2122.60	FT



PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.

DRAINAGE AREA	= 1.4	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 5.1	CFS
DESIGN HW ELEVATION	= 2120.1	FT
100 YEAR DISCHARGE	= 6.1	CFS
100 YEAR HW ELEVATION	= 2120.2	FT
OVERTOPPING FREQUENCY	= 100	YRS
OVERTOPPING DISCHARGE	= 6.1	CFS
OVERTOPPING ELEVATION	= 2120.2	FT

5/28/99

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7/29/2011

NCDOT Highway Stormwater Program

Released: July 2010 (DRAFT)

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

Version 1.1

Page of

General Project Information

Project No.:	33496.1.1 (B-4147)		**Date:**	4/5/2011			
City/Town:			**Designer:**	Max Price - Wetherill Eingineering			
County(ies):	Henderson County		**Project Manager:**	Marshall Clawson			
River Basin(s):	French Broad		**CAMA County?**	no	**TVA County?**	yes	
Primary Receiving Water:	Mud Creeks		**NCDWQ Stream Index:**				
NCDWQ Surface Water Classification for Primary Receiving Water		**Primary:**	Class C				
		Supplemental:					
Other Stream Classification:							
303(d) Stream?	no	**Type(s) of Impairment:**					
State Stormwater Permit Required?	no	**If yes, why?**					
Could the Project Impact Threatened or Endangered Species?			no				
Description:							
Anadromous Fish Present?	no						
Buffer Rules in Effect?	no		**Buffer Rules:**				

Existing Site

Description of Existing Project Area:	Rural two lane two way SR route
Average Daily Traffic (existing):	1595
Existing Cross Section:	2 - 10' travel lanes with shoulder section.
Surrounding Land Use:	farmland ,woods, some residential
General Comments:	Sub-Regional Tier Guidelines apply

Project Description

Description of Proposed Project:	Replace insufficient bridges		
Average Daily Traffic (proposed):	3515 (year 2031)		
Proposed Cross-Section:	2 - 10' travel lanes with shoulder section.		
Interchange Modification:		**Median Type:**	
Terminus:			
Terminus:			
Project Length (lin. miles/feet):	0.199 miles	**Added Impervious Area (ac.):**	insignificant, pavement width not increased
General Comments:			

NCDOT Highway Stormwater Program

Released: July 2010 (DRAFT)

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

Version 1.1

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)
21+22	Mud Creeek	Perennial	RPW	No	Class C	2 @ 80'; 33" Box Beam Bridge	no					

General Comments:

Constructability/Permitting/Commitments

Has the method of construction for proposed bridges and / or culverts been addressed? See CFI Checklist attached to field inspection letter.

Yes

Has the method of removal for bridge superstructure and substructure been discussed? See CFI Checklist attached to field inspection letter.

The existing bridges are crutch bent, steel girder, wooden deck structures. Section 402-2 will cover removal.

Is any additional right of way, construction easements, or drainage easements required other than those shown on the plans for the issues discussed above. If so, show location and limits (Specify temporary or permanent).

No

Does the proposed design take into consideration the constructability issues associated with constructing the roadway, drainage, structures, utilities, and maintaining traffic so that the right of way limits and permit application can be developed accordingly.

Yes

Have all environmental commitments been reviewed and can they be implemented?

See PDEA comments

Are historic properties and / or archeological sites clearly identified on the plans? Do the commitments clearly explain how the impacts to these sites will be avoided or minimized?

N/A

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Bridge No. 75 over Right Prong Mud Creek and Bridge No. 76 over Left Prong Mud Creek on Little River Road (SR 1123).

State: NC County/parish/borough: Henderson City: Edneyville

Center coordinates of site (lat/long in degree decimal format): Lat. 35.264779° N, Long. -82.486154° W.

Universal Transverse Mercator:

Name of nearest waterbody: Right Prong Mud Creek and Left Prong Mud Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: French Broad River

Name of watershed or Hydrologic Unit Code (HUC): 06010105

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Pick List *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.

☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Pick List *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 106 lf of Right Prong; 104 lf of Left Prong linear feet: width (ft) an d/or acres.
      Wetlands: 0 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

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[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.

[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: 11.02 **square miles**
Drainage area: **Pick List**
Average annual rainfall: ????? inches
Average annual snowfall: checked Asheville, NC: 15.2 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☒ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **10-15** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **5-10** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: Mud Creek (Right and Left Prong) flows directly to the French Broad River.
Tributary stream order, if known: 3 .

---

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 15-17 feet
Average depth: 3-8 feet
Average side slopes: **4:1 (or greater).**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: fairly stable.
Presence of run/riffle/pool complexes. Explain: run/pool sequence present.
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☒ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: water clarity is good and velocity is strong.
Identify specific pollutants, if known: .

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[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): less than 40 feet wide.
☐ Wetland fringe. Characteristics: .
☒ Habitat for:
☒ Federally Listed species. Explain findings: habitat for White irisette and Small whorled pogonia exists within the project study area; however the biological conclusion is No Effect; Marginal habitat exists within the psa for the Appalachian elktoe, according to the August 14, 2006 Survey Report, but no freshwater mussels were found in 2.0 manhours of survey time.
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:
Properties:
Wetland size: acres
Wetland type. Explain: .
Wetland quality. Explain: .
Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:
Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**
Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain: .
☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List.**
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): .
☐ Vegetation type/percent cover. Explain: .
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: li near feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Clear bed and bank, flowing water each site visit.
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☒ Tributary waters: **106 lf of Right Prong and 104 lf of Left Prong** linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
   - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   - ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   - ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: linear feet widt h (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): li near feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
- ☐ Non-wetland waters (i.e., rivers, streams): li near feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
- ☐ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name: .
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☐ Photographs: ☐ Aerial (Name & Date): .
  - or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .