STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

June 7, 2012

Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403

ATTN: Mr. Ronnie Smith
NCDOT Coordinator

Dear Sir:

Subject: **Application for a Section 404 Nationwide Permit No. 23 and Section 10 Permit** for the proposed Bridge No. 188 on SR 1316 over the Cape Fear River and Bridge No. 189 over an unnamed tributary of the Cape Fear River in Bladen County. Federal Aid Project No. BRZ-1316(6), TIP No. B-4712, WBS Element 37912.1.1.

The North Carolina Department of Transportation (NCDOT) proposes to replace the 1,473-foot 24-span Bridge No. 188 with a 1,570-foot, 14-span bridge and the 280-foot eight-span Bridge No. 189 with a 300-foot four-span bridge; both on a new alignment while maintaining traffic on the existing structures during construction. Overhead powerline utilities will be relocated away from the bridges and telephone lines will be adjusted. No permanent impacts to jurisdictional resources are proposed.

Please see enclosed copies of the Pre-Construction Notification (PCN), permit drawings, stormwater management plan, and design plans for the above referenced project. The Categorical Exclusion (CE) was completed in September 2011. Copies were distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of February 19, 2013 and a review date of January 1, 2013. The project schedule may be advanced if funding becomes available.

Regulatory Approvals

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that these activities be authorized by Nationwide Permit 23.

Section 401 Permit: We anticipate 401 General Certification number 3891 will apply to this project. All general conditions of the Water Quality Certification will be met and therefore NCDOT is not requesting written approval. NCDOT is providing two copies of this application to the NCDWQ for their review.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000
FAX: 919-250-4224

WEBSITE: WWW.NCDOT.GOV/DOH/PRECONSTRUCT/PE/

LOCATION:
CENTURY CENTER, BUILDING A
1000 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Section 10 Permit: Application is hereby made for a USACE Section 10 Permit as required for the above-described activities.

A copy of this permit application and its distribution list will be posted at the NCDOT Website at: http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html. If you have any questions or need additional information, please contact Tyler Stanton at tstanton@ncdot.gov or (919) 707-6156.

Sincerely,

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

"cc:" NCDOT Permit Application Standard Distribution List

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

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

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

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

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

☐ 401 Water Quality Certification – Express ☐ Riparian Buffer Authorization

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

2. Project Information

2a. Name of project:	Replacement of Bridges No. 188 and No. 189 on SR 1316 over Cape Fear River
2b. County:	Bladen
2c. Nearest municipality / town:	Tar Heel
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4712

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) 707-6156
3g. Fax no.:	(919) 250-4224
3h. Email address:	tstanton@ncdot.gov

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

B. Project Information and Prior Project History		
1. Property Identification		
1a. Property identification no. (tax PIN or parcel ID):	*not applicable*	
1b. Site coordinates (in decimal degrees):	Latitude: 34.7447 (DD.DDDDDD)	Longitude: - 78.7857 (-DD.DDDDDD)
1c. Property size:	9.4 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Cape Fear River	
2b. Water Quality Classification of nearest receiving water:	C	
2c. River basin:	Cape Fear	
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 at the site include maintained / disturbed roadside shoulder, agriculture and forested areas. Land use in the project vicinity is predominantly agriculture with some residential properties.		
3b. List the total estimated acreage of all existing wetlands on the property: 2.78		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 577		
3d. Explain the purpose of the proposed project: To replace a structurally deficient bridge (no. 188) and a functionally obsolete bridge (no. 189).		
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 1473-foot 24-span bridge (no. 188) with a 1570-foot, 14-span bridge and a 280-foot 8-span bridge (no. 189) with a 300-foot 4-span bridge; both on a new alignment while maintaining traffic on the existing structures during construction. Standard road building equipment, such as trucks, dozers, and cranes will be used. Overhead powerline utilities will be relocated away from bridges and telephone lines will be adjusted to provide clearance for the work bridges and equipment required to dismantle the existing bridge.		
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: USACE conducted an on-site jurisdictional determination (Action ID: SAW-2009-1877)	☒ 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): Lance Fontaine & Tyler Stanton	Agency/Consultant Company: NCDOT Other:	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. 28 April 2011 and a follow-up for utilities on 24 Oct. 2011		
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	Fill	Riverine	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.29
Site 1 ☐ P ☒ T	Fill	Riverine	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.03
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	
				2g. **Total wetland impacts**	0.00 Permanent 0.32 Temporary

2h. Comments: There will be 0.53 acre of hand clearing due to bridge construction and 0.60 acre of hand clearing due to utility relocations.

3. Stream Impacts

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

3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
					3h. **Total stream and tributary impacts**	X Perm X 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	Cape Fear River	Fill	River	0.06
O1 ☐ P ☒ T	UT to Cape Fear River	Fill	Stream	0.02
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
			4f. Total open water impacts	0.00 Permanent 0.08 Temporary

4g. Comments: Impacts due to piers are less than 0.01 acre

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 No. 188 is 97 feet longer than the existing bridge and the proposed Bridge No. 189 is 20 feet longer than the existing bridge; the proposed bridges will be at approximately the same grade as the existing structures; there will be no permanent fill or excavation in jurisdictional areas. Deck drains are limited to overbank area under bridge with no direct discharge into the river. Removal of existing road fill for longer bridge and increasing bridge opening will improve hydrological conveyance and wildlife passage, and reduce bridge opening velocities. Stream-side areas will be graded such that elevations match natural/undeveloped floodplain in project vicinity. Promotion of sheet flow and infiltration over grassed surfaces.

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

Construction will be both top-down and utilize temporary work pads and barges. There will be no permanent fill or excavation in jurisdictional areas. An in-water work moratorium for the protection of anadroumous fish in the Cape Fear River will be adhered to.

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 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

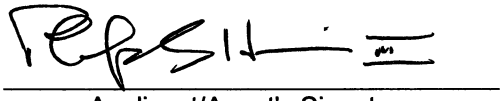
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.

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 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 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? NCNHP, USFWS website, field surveys		
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.)	06/04/2012 Date

STORMWATER MANAGEMENT PLAN

B-4712, State Project 37912.1.1 Date: 2/29/12
Bladen County
Hydraulics Project Engineer: R.C. Henegar, PE

ROADWAY DESCRIPTION

This project involves replacing Bridge No. 188 over Cape Fear River and Overflow Bridge No. 189 in Bladen County. The overall length of the project is 1.127 miles. The existing 23-foot paved road is a two-lane road with 12-foot grassed shoulders. Bridge No. 188 is a 1472.7 ft. twenty four span bridge (2@ 45.3; 1Truss Span @ 300.5; 1@ 61.3; 8@ 60; 11@ 45; 1@ 45.3) with a clear roadway width of 26 feet. Bridge No. 189 is a 280ft. eight span bridge (8@ 35) with a clear roadway width of 26 feet. The project will be a two-lane section with 12 foot lanes and 4 foot grassed shoulders. The replacement structure for Bridge No. 189 will be a 1570 ft. bridge with 14 spans (3@ 175' Steel Girders; 11@ 95' 54" Prestressed Girder) with a clear roadway width of 32 feet. The replacement structure for Bridge No. 189 will be a 300 ft. bridge with four spans (4@ 75') 45" Prestressed Girder with a clear roadway width of 32 feet.

ENVIRONMENTAL DESCRIPTION

This project is located in the Cape Fear River Basin. There is one river crossing on this project, which has a Class 'C' classification. This river is not on the 303(d) list. Wetlands will be impacted by the proposed project.

BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

There will be no direct discharge into the stream. Sheet flow will be utilized as much as practicable and discharged onto grassed surfaces.

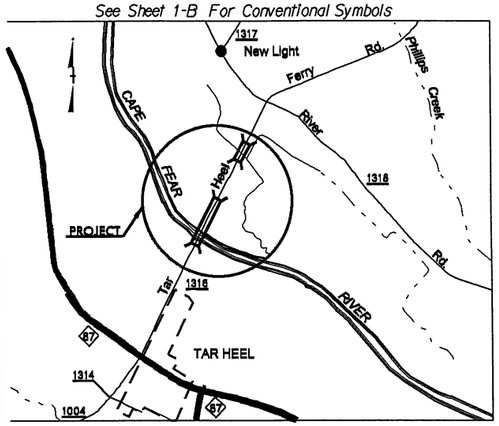
05/08/09

TIP PROJECT: B-4712

CONTRACT: C203038

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

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BLADEN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4712	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
37912.1.1	BRZ-1316(6)	P.E.
37912.2.1	BRZ-1316(6)	R/W & UTILITIES

LOCATION: BRIDGE NO. 188 AND NO. 189 OVER THE CAPE FEAR RIVER ON SR 1316

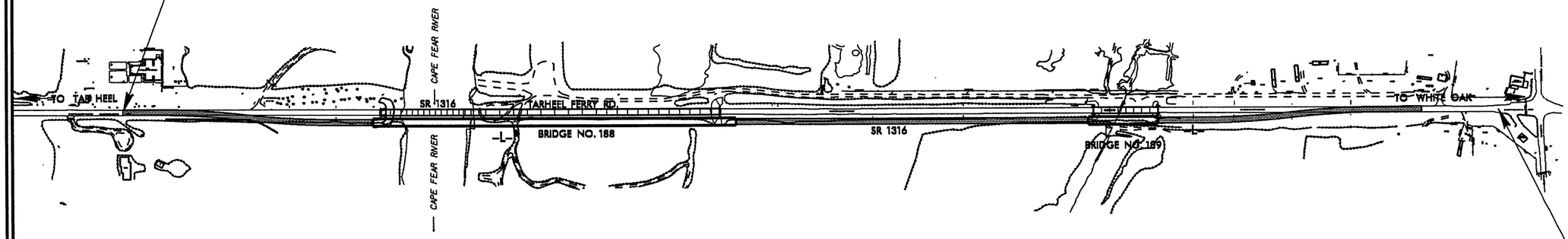
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURES

Permit Drawing
Sheet 1 of 13

NAD 83/95

WETLAND AND STREAM IMPACTS

BEGIN TIP PROJECT B-4712
-L- STA. 20+21.00



END TIP PROJECT B-4712
-L- STA. 79+70.00

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS PROJECT WAS DESIGNED USING THE SUB REGIONAL TIER GUIDELINES FOR BRIDGE PROJECTS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2013 = 3417
ADT 2033 = 5584
DHV = 13 %
D = 55 %
T = 18 % *
V = 60 MPH
* TTST =13% DUAL =5%
FUNC CLASS =
RURAL COLLECTOR
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4712	= 0.773 MILES
LENGTH STRUCTURES TIP PROJECT B-4712	= 0.354 MILES
TOTAL LENGTH TIP PROJECT B-4712	= 1.127 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 17, 2012

LETTING DATE:
FEBRUARY 19, 2013

GARY LOVERING, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

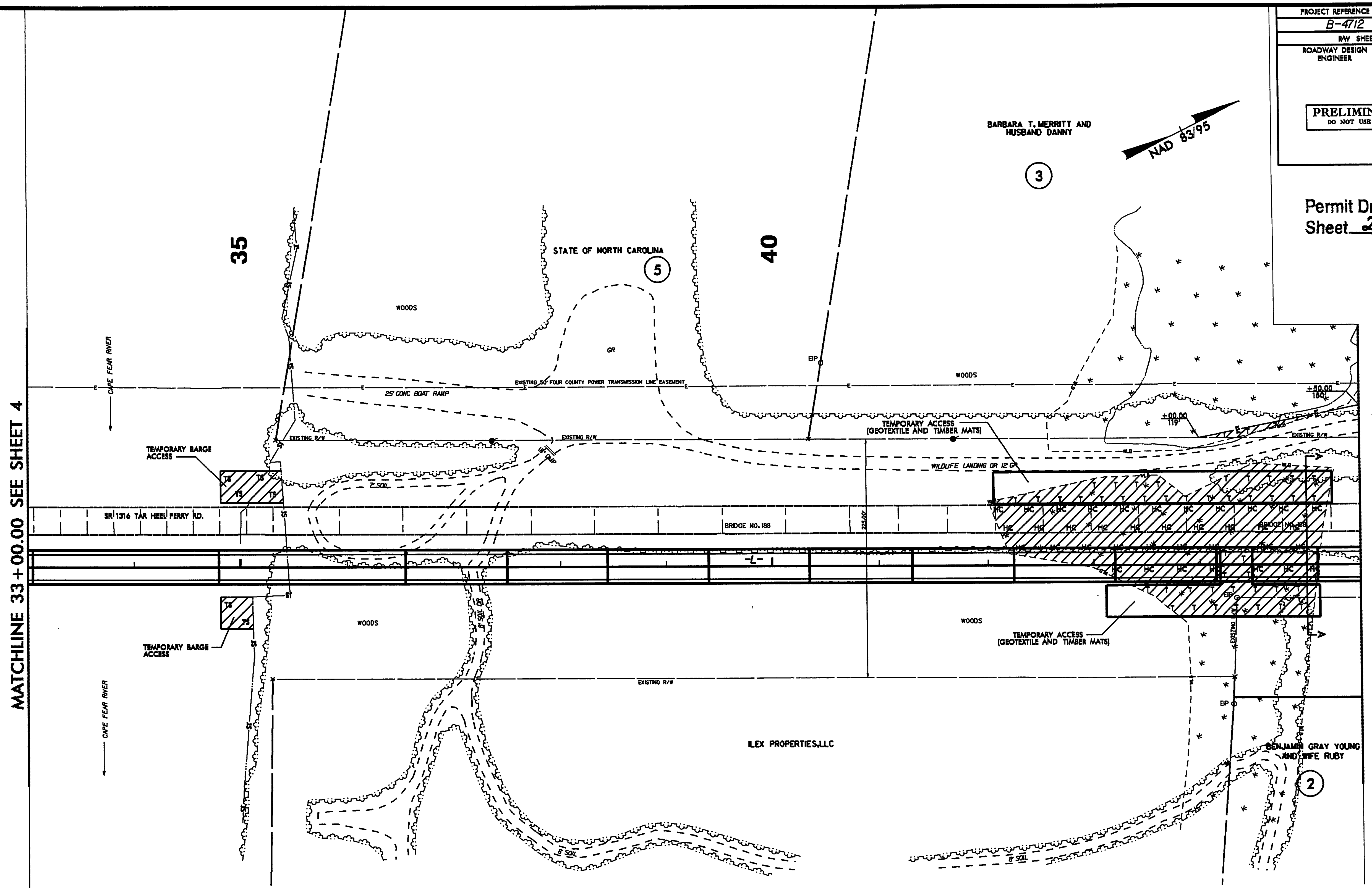
PROJECT REFERENCE NO.	SHEET NO.
B-4712	5

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 2 of 13



BARBARA T. MERRITT AND HUSBAND DANNY
NAD 83/95
3
35
40
STATE OF NORTH CAROLINA
5
WOODS
CAPE FEAR RIVER
EXISTING SO FOUR COUNTY POWER TRANSMISSION LINE EASEMENT
25' CONC BOAT RAMP
TEMPORARY BARGE ACCESS
TEMPORARY ACCESS (GEOTEXTILE AND TIMBER MATS)
SR 1316 TAR HEEL FERRY RD.
BRIDGE NO. 188
EXISTING R/W
MATCHLINE 33+00.00 SEE SHEET 4
MATCHLINE 45+50.00 SEE SHEET 6
ILEX PROPERTIES,LLC
BENJAMIN GRAY YOUNG AND WIFE RUBY
2

SITE

100' 0' 100'
GRAPHIC SCALE

HC HC — DENOTES HAND CLEARING

TS TS — DENOTES TEMPORARY IMPACTS IN SURFACE WATER

T T — DENOTES TEMPORARY FILL IN WETLAND

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4712	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 3 of 13

100' 0' 100'
GRAPHIC SCALE

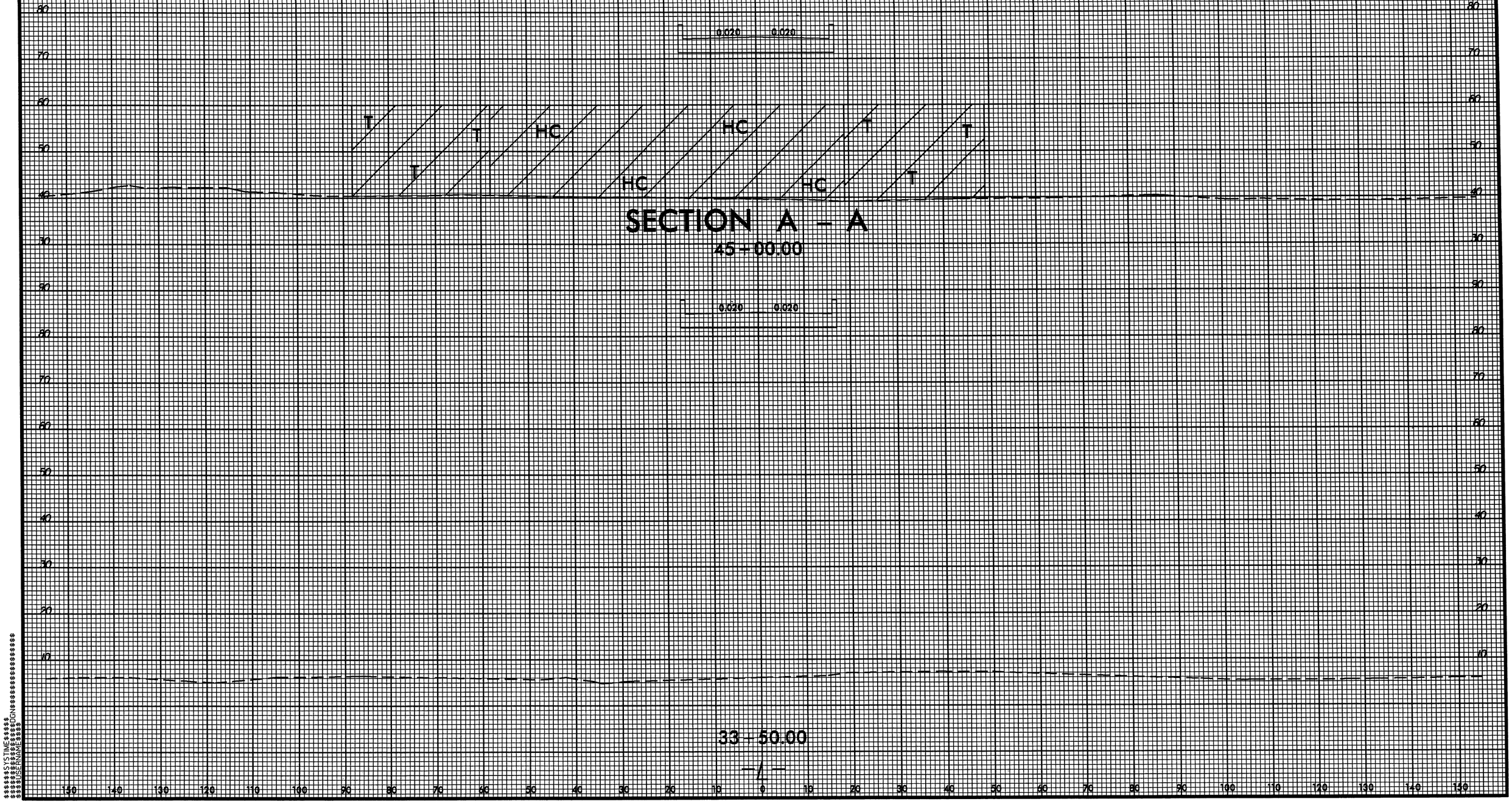
SITE

▨ HC HC DENOTES HAND CLEARING

▨ T T DENOTES TEMPORARY FILL IN WETLAND

▨ TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

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



8/23/99

PROJ. REFERENCE NO. B-4712

SHEET NO. X-32

Permit Drawing
Sheet 4 of 13

SECTION A – A

45 – 00.00

33 – 50.00

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

PROJECT REFERENCE NO.	SHEET NO.
B-4712	9

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 5 of 13

5/14/99

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

PROJECT REFERENCE NO.	SHEET NO.
B-4712	10

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 6 of 13

5/14/99

-L-

BM # 2 RR SPIKE IN BASE OF 18" CHESTNUT TREE
-BL- STA.29+38,148' LEFT
ELEVATION 45.33'

FOR -L- ALIGNMENT, SEE SHEET NO. 5

PROJECT REFERENCE NO.	SHEET NO.
B-4712	11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 7 of 13

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4712	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 8 of 13

8/17/99

REVISIONS

ALONSO SANCHEZ

HUSBAND DANNY

BARBARA T. MERRITT AND HUSBAND DANNY

3

NAD 83/95

DANNY MERRIT and wife BARBARA MERRITT

60

65

70

EXISTING 50' FOUR COUNTY POWER TRANSMISSION LINE EASEMENT

3 STR WIRE

EXISTING R/W

WILDLIFE LANDING DR 12' GR

TEMPORARY ACCESS (GEOTEXTILE AND TIMBER MATS)

BRIDGE NO. 189

SR 1316 TARHEEL FERRY RD 24' BST

EXISTING R/W

WOODS LINE

TEMPORARY ACCESS (GEOTEXTILE AND TIMBER MATS)

GWENDOLYN COUNCIL LEWIS

CONC DECK

GRASS

24" CABLE EXISTING R/W

15' SOIL DR

WOODS

BENJAMIN GRAY YOUNG AND WIFE RUBY

2

MATCHLINE 59+00.00 SEE SHEET 6

MATCHLINE 72+00.00 SEE SHEET 8

SITE

100' 0' 100'

GRAPHIC SCALE

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

T T DENOTES TEMPORARY FILL IN WETLAND

HC HC DENOTES HAND CLEARING

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

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4712	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 9 of 13

SITE

100' 0' 100'
GRAPHIC SCALE

TS ▨ TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
T ▨ T	DENOTES TEMPORARY FILL IN WETLAND
HC ▨ HC	DENOTES HAND CLEARING

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

PROJ. REFERENCE NO.	SHEET NO.
B-4712	X-45

Permit Drawing
Sheet 10 of 13

8/23/99

PROJECT REFERENCE NO.	SHEET NO.
B-4712	12

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 11 of 13

FOR -L- ALIGNMENT, SEE SHEET NO. 7

5/14/99

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

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	BENJAMIN G. YOUNG AND WIFE RUBY	756 McARTHUR ROAD FAYETTEVILLE, N.C. 28311
3	BARBARA T. & DANNY MERRITT	1340 S. BLADEN UNION ROAD FAYETTEVILLE, N.C. 28306

Permit Drawing
Sheet 12 of 13

NCDOT

DIVISION OF HIGHWAYS

BLADEN COUNTY

PROJECT: 37912.1.1 (B-4712)

REPLACE BRG#188 AND BRG#189 OVER THE CAPE FEAR RIVER ON SR 1316

SHEET OF 2/28/12

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	WETLAND IMPACTS: Temp. Fill In Wetlands (ac)	WETLAND IMPACTS: Excavation in Wetlands (ac)	WETLAND IMPACTS: Mechanized Clearing in Wetlands (ac)	WETLAND IMPACTS: Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	SURFACE WATER IMPACTS: Temp. SW impacts (ac)	SURFACE WATER IMPACTS: Existing Channel Impacts Permanent (ft)	SURFACE WATER IMPACTS: Existing Channel Impacts Temp. (ft)	SURFACE WATER IMPACTS: Natural Stream Design (ft)
	34+80-45+50-L-	BRIDGE 188		0.29			0.45		0.06			
		(OAL-1570')										
	62+00-64+50-L-	BRIDGE 189		0.03			0.08		0.02			
	OVERFLOW	(OAL- 300')										
TOTALS:				0.32			0.53		0.08			

STRUCTURES NOTED THAT LESS THAN 0.01 AC.WILL BE IMPACTED FROM BRIDGES

Permit Drawing
Sheet 13 of 13

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BLADEN COUNTY
WBS - 37912.1.1 (B-4712)

SHEET 4/23/2012

ATN Revised 3/31/05

B-4712 NEU Narrative

Utility Owners:

- **Power:** Four County EMC – (contact: Edward Pope 910-259-1854)
  Telecommunications Palmetto - Net – (contact Scott Temple 919-291-0813)

General Utility Relocation:

All utility lines inside the project limits will be adjusted as necessary or relocated away from the construction limits. The aerial power transmission pole line and underground telecommunication lines will be relocated or adjusted prior to the date of availability.

Existing Utilities:

- **Power:** the existing Four County EMC aerial power transmission pole line is on the west side of SR 1316 (Tarheel Ferry Road).

- **Telecommunications:** the existing Telephone Communication lines (fiber optic and copper cables) are underground on the west side of SR 1316 (Tarheel Ferry Road).

Proposed Utility Relocation:

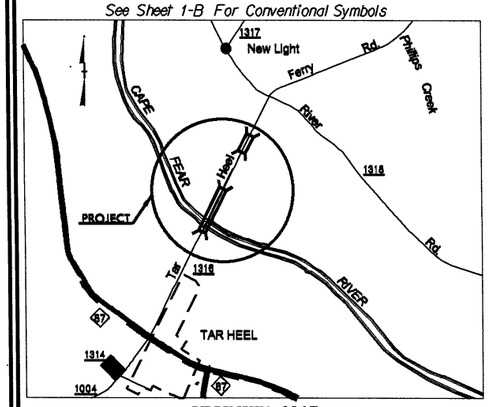
- **Power:** Four County EMC will install a new power transmission pole line further left of Line –L- 50' inside the PUE line on the west side of SR 1316 (Tarheel Ferry Road) from
- Sta. 22+50 to Sta. 56+78.

- **Telecommunications:** Palmetto Net will adjust the fiber optic and copper cables left of Line –L- on the west side of SR 1316 (Tarheel Ferry Road) from Sta. 30+76 to Sta. 31+41.

09/08/99

TIP PROJECT: B-4712

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BLADEN COUNTY

T.I.P. NO.	SHEET NO.
B-4712	UO-1

Utility Permit Drawing
Sheet 1 of 6

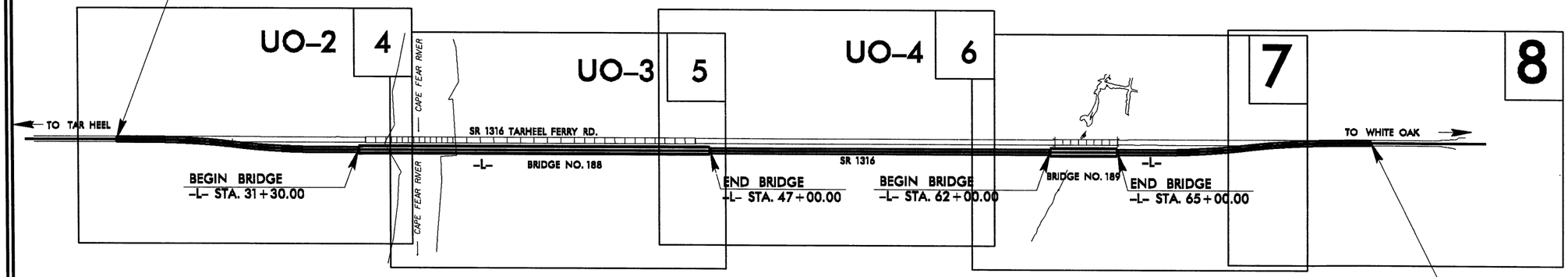
LOCATION: BRIDGE NOS. 12, 18 AND 42 OVER CAPE FEAR RIVER AND OVERFLOW ON NC 11

TYPE OF WORK: RELOCATE AERIAL TRANSMISSION POWER POLE LINES AND U/G TELECOMUNICATION FIBER OPTIC AND COPPER CABLES TO THE WEST SIDE OF SR 1316 (TARHEEL FERRY ROAD)

NAD 83/95

NEU UTILITIES RELOCATION PERMIT PLANS 12 /13 /11

BEGIN TIP PROJECT B-4712
-L- STA. 20+21.00

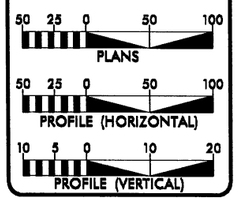


END TIP PROJECT B-4712
-L- STA. 76+38.00

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-4	UTILITIES BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT

(1) POWER - FOUR COUNTY EMC
(2) TELECOMMUNICATIONS - PALMETTO-NET

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION
1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. — UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. — UTILITIES SQUAD LEADER PROJECT ENGINEER
Eric Haugaard, P.E. — UTILITIES PROJECT DESIGNER

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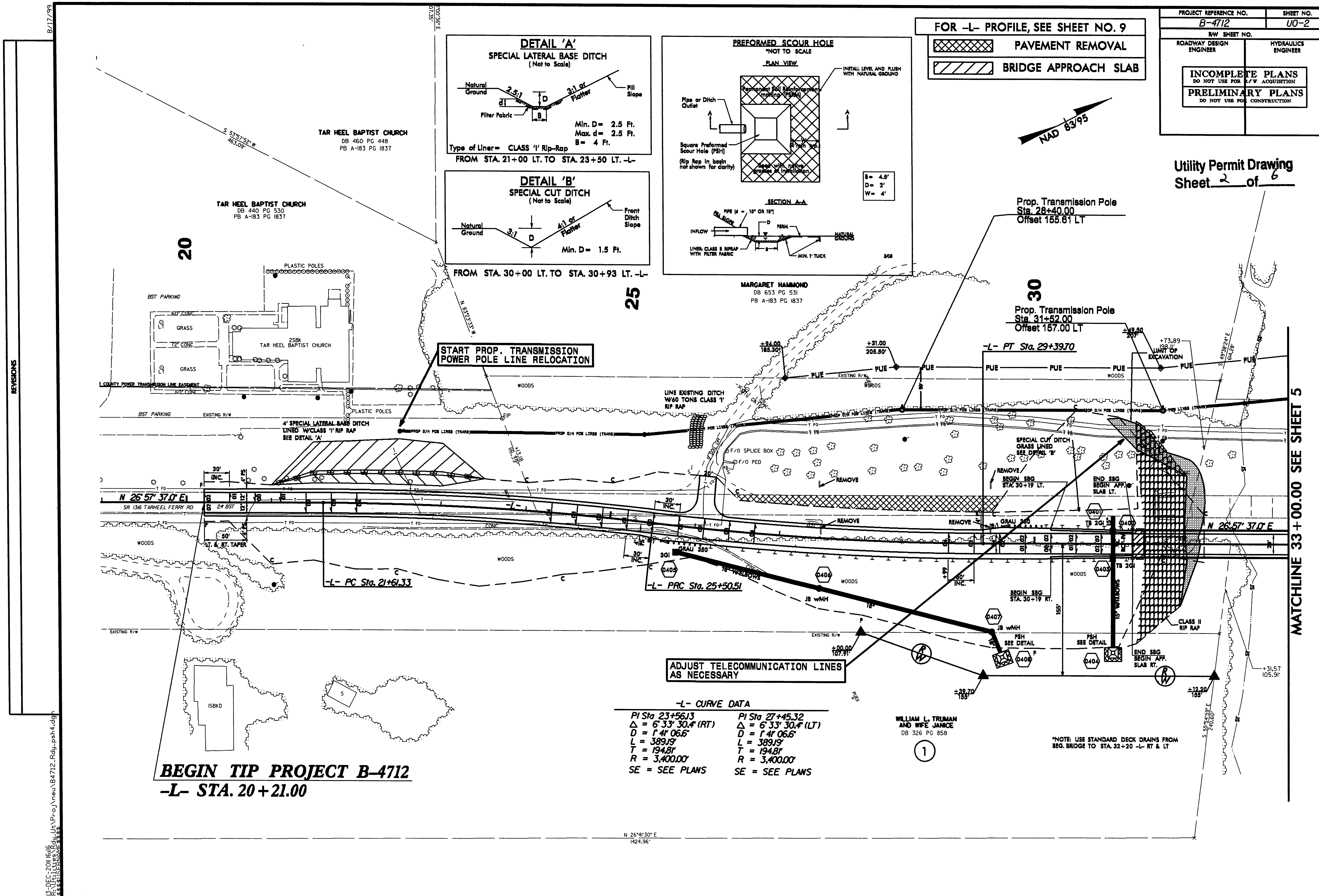
$$$$USERNAME$$$$



PROJECT REFERENCE NO. B-4712
SHEET NO. U0-2
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
FOR -L- PROFILE, SEE SHEET NO. 9
PAVEMENT REMOVAL
BRIDGE APPROACH SLAB
NAD 83/95
Utility Permit Drawing Sheet 2 of 6
DETAIL 'A'
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground
Filter Fabric
Fill Slope
3:1 or Flatter
Min. D= 2.5 Ft.
Max. d= 2.5 Ft.
B= 4 Ft.
Type of Liner= CLASS 'I' Rip-Rap
FROM STA. 21+00 LT. TO STA. 23+50 LT. -L-
DETAIL 'B'
SPECIAL CUT DITCH
(Not to Scale)
Natural Ground
Front Ditch Slope
4:1 or Flatter
Min. D= 1.5 Ft.
FROM STA. 30+00 LT. TO STA. 30+93 LT. -L-
PREFORMED SCOUR HOLE
*NOT TO SCALE
PLAN VIEW
SECTION A-A
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= 4.5'
D= 2'
W= 4'
TAR HEEL BAPTIST CHURCH
DB 460 PG 448
PB A-183 PG 1837
TAR HEEL BAPTIST CHURCH
DB 440 PG 530
PB A-183 PG 1837
MARGARET HAMMOND
DB 653 PG 531
PB A-183 PG 1837
WILLIAM L. TRUMAN AND WIFE JANICE
DB 326 PG 858
PLASTIC POLES
BST PARKING
GRASS
2SBK TAR HEEL BAPTIST CHURCH
WOODS
START PROP. TRANSMISSION POWER POLE LINE RELOCATION
4' SPECIAL LATERAL BASE DITCH LINED W/CLASS 'I' RIP RAP SEE DETAIL 'A'
LINE EXISTING DITCH W/60 TONS CLASS 'I' RIP RAP
Prop. Transmission Pole Sta. 28+40.00 Offset 155.61 LT
Prop. Transmission Pole Sta. 31+52.00 Offset 157.00 LT
-L- PT Sta. 29+39.70
-L- PC Sta. 21+61.33
-L- PRC Sta. 25+50.51
N 26°57' 37.0" E
SR 1316 TARHEEL FERRY RD
SPECIAL CUT DITCH GRASS LINED SEE DETAIL 'B'
BEGIN SBG STA. 30+19 LT.
BEGIN SBG STA. 30+19 RT.
END SBG BEGIN APP. SLAB LT.
END SBG BEGIN APP. SLAB RT.
REMOVE
LIMIT OF EXCAVATION
CLASS II RIP RAP
PSH SEE DETAIL
ADJUST TELECOMMUNICATION LINES AS NECESSARY
MATCHLINE 33+00.00 SEE SHEET 5
BEGIN TIP PROJECT B-4712
-L- STA. 20+21.00
-L- CURVE DATA
PI Sta 23+56.13
Δ = 6° 33' 30.4" (RT)
D = 1° 41' 06.6"
L = 389.19'
T = 194.81'
R = 3,400.00'
SE = SEE PLANS
PI Sta 27+45.32
Δ = 6° 33' 30.4" (LT)
D = 1° 41' 06.6"
L = 389.19'
T = 194.81'
R = 3,400.00'
SE = SEE PLANS
*NOTE: USE STANDARD DECK DRAINS FROM BEG. BRIDGE TO STA. 32+20 -L- RT & LT
N 26°41'30" E 1424.96'
REVISIONS
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4712	UO-3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

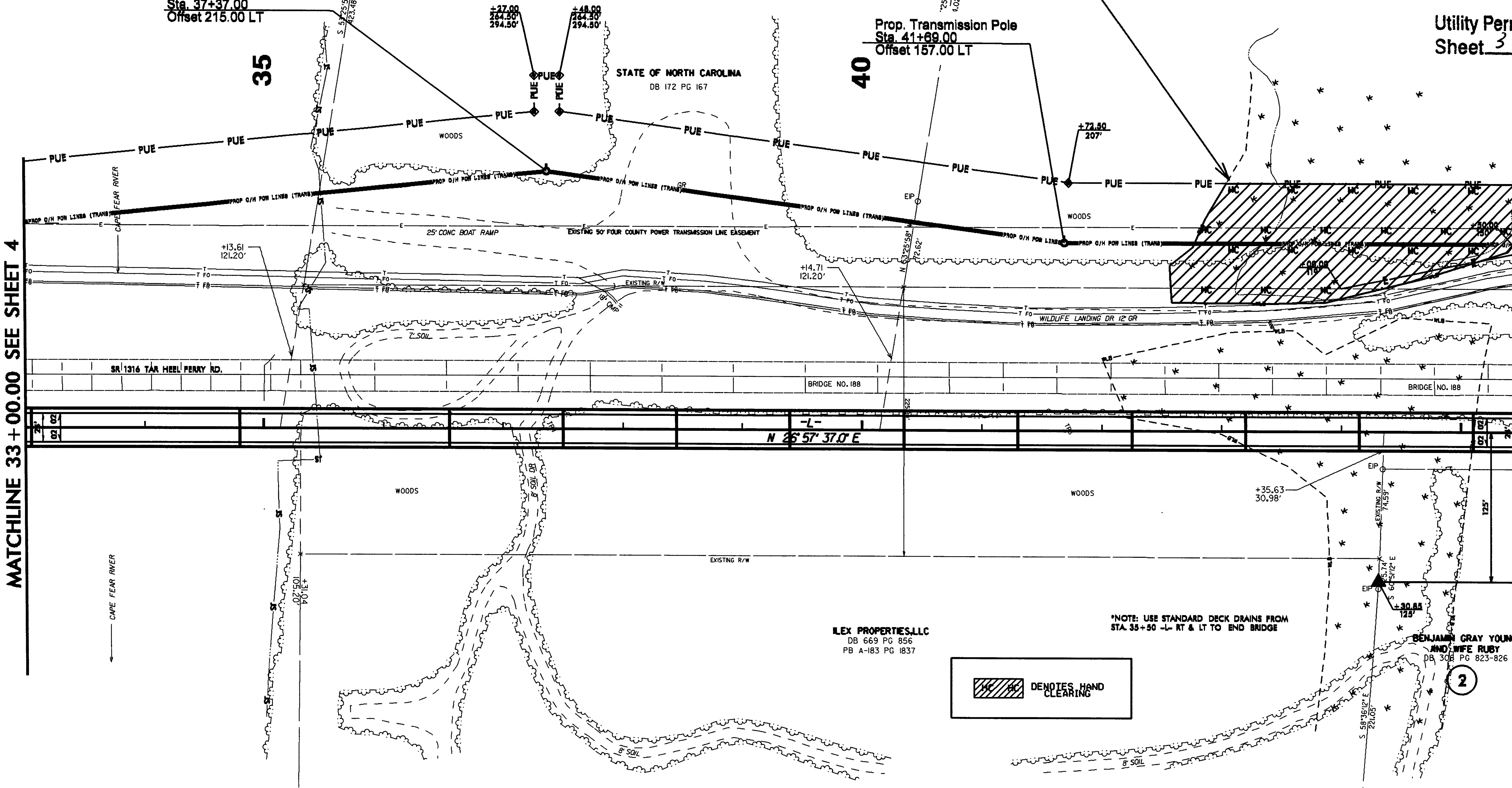
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FOR -L- PROFILE, SEE SHEET NO. 10

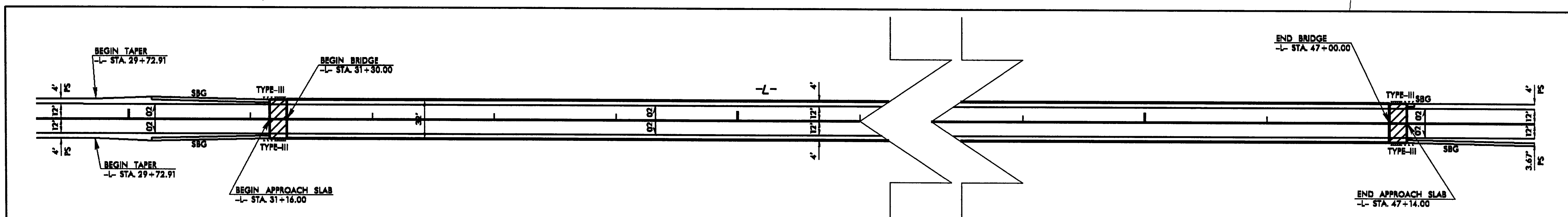
BRIDGE APPROACH SLAB

SITE 1
0.56 ACRES OF
HAND CLEARING

Utility Permit Drawing
Sheet 3 of 6



NAD 83/95
BARBARA T. MERRITT AND HUSBAND DANNY
DB 482 PG 661,663
DB 329 PG 771
3
Prop. Transmission Pole
Sta. 37+37.00
Offset 215.00 LT
Prop. Transmission Pole
Sta. 41+69.00
Offset 157.00 LT
35
40
STATE OF NORTH CAROLINA
DB 172 PG 167
WOODS
25' CONC BOAT RAMP
EXISTING 50' FOUR COUNTY POWER TRANSMISSION LINE EASEMENT
CAPE FEAR RIVER
SR 1316 TAR HEEL FERRY RD.
BRIDGE NO. 188
WILDLIFE LANDING DR 12 GR
-L-
N 26°57' 37.0" E
MATCHLINE 33+00.00 SEE SHEET 4
MATCHLINE 45+50.00 SEE SHEET 6
EXISTING R/W
ILEX PROPERTIES,LLC
DB 669 PG 856
PB A-183 PG 1837
*NOTE: USE STANDARD DECK DRAINS FROM STA. 35+50 -L- RT & LT TO END BRIDGE
DENOTES HAND CLEARING
BENJAMIN GRAY YOUNG AND WIFE RUBY
DB 308 PG 823-826
2



RELATIONSHIP OF BRIDGE NO. 188 TO PROPOSED PAVEMENT

REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
B-4712	UO-4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

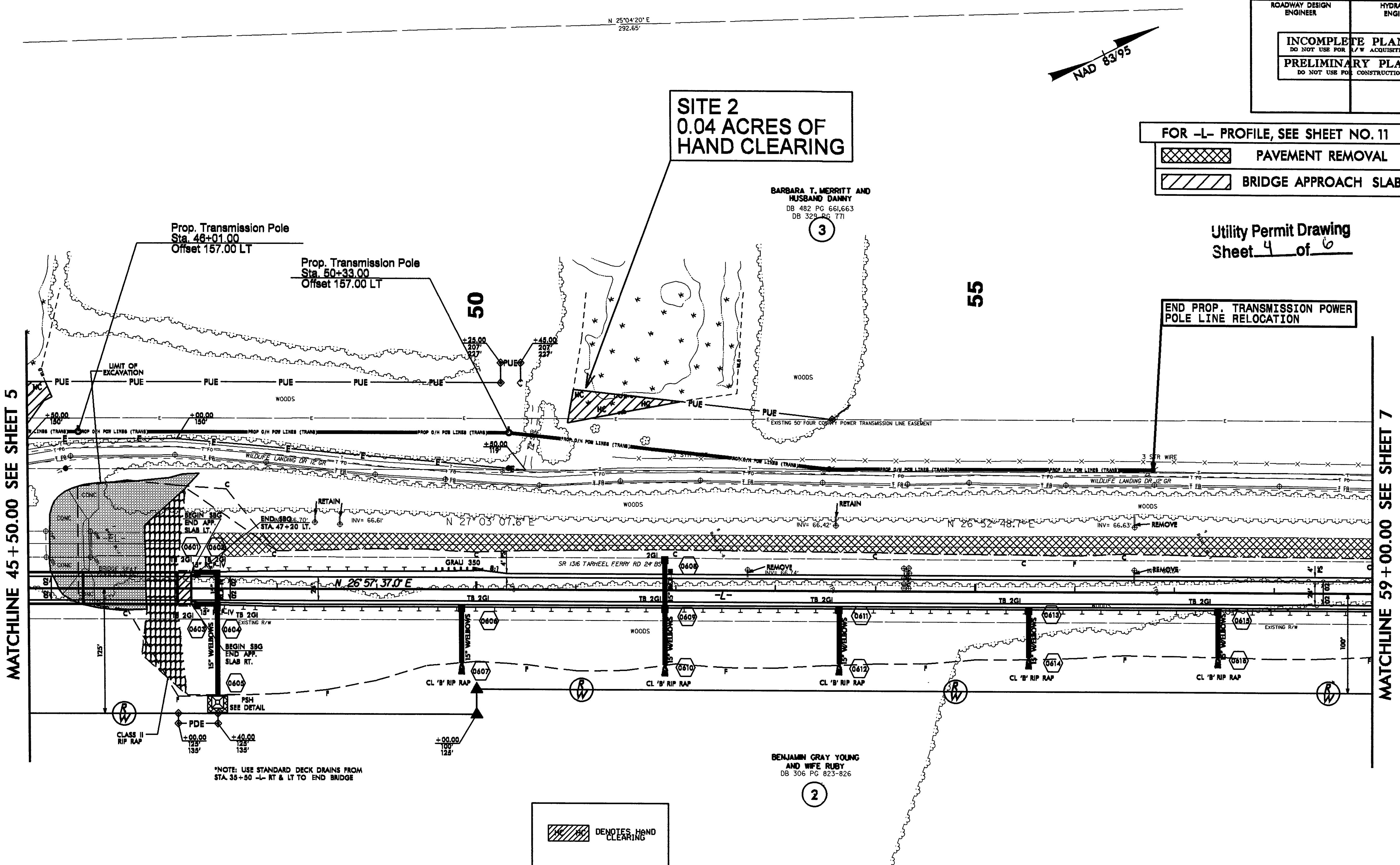
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

FOR -L- PROFILE, SEE SHEET NO. 11

PAVEMENT REMOVAL

BRIDGE APPROACH SLAB

Utility Permit Drawing
Sheet 4 of 6



N 25°04'20" E
292.65'
NAD 83/95
SITE 2
0.04 ACRES OF
HAND CLEARING
BARBARA T. MERRITT AND
HUSBAND DANNY
DB 482 PG 661,663
3
Prop. Transmission Pole
Sta. 46+01.00
Offset 157.00 LT
Prop. Transmission Pole
Sta. 50+33.00
Offset 157.00 LT
50
55
END PROP. TRANSMISSION POWER
POLE LINE RELOCATION
MATCHLINE 45+50.00 SEE SHEET 5
MATCHLINE 59+00.00 SEE SHEET 7
LIMIT OF EXCAVATION
PUE
WOODS
EXISTING 50' FOUR COUNTY POWER TRANSMISSION LINE EASEMENT
WILDLIFE LANDING DR
3 STR WIRE
N 27°03'07.6" E
N 26°52'48.7" E
N 26°57'37.0" E
SR 1316 TARHEEL FERRY RD
BEGIN SBG
END APP. SLAB LT.
END SBG
STA. 47+20 LT.
RETAIN
REMOVE
TB 2GI
15" WELBOWS
BEGIN SBG
END APP. SLAB RT.
CL 'B' RIP RAP
PSH
SEE DETAIL
PDE
CLASS II
RIP RAP
EXISTING R/W
*NOTE: USE STANDARD DECK DRAINS FROM
STA. 35+50 -L- RT & LT TO END BRIDGE
BENJAMIN GRAY YOUNG
AND WIFE RUBY
DB 306 PG 823-826
2
DENOTES HAND CLEARING

REVISIONS

8/17/99

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PROPERTY OWNERS

NAMES AND ADDRESSES

REFERENCE NO.	NAMES	ADDRESSES
03	BARBARA T. MERRITT AND HUSBAND DANNY	

Utility Permit Drawing
Sheet 5 of 6

NCDOT
DIVISION OF HIGHWAYS
BLADEN COUNTY
PROJECT: B-4712

BRIDGE NO. 188 AND NO. 189 OVER THE CAPE FEAR RIVER ON SR 1316

SHEET 1 OF 1 12/13/11

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
Site 1	42+57 to 45+75	Power Line					0.560					
Site 2	50+92 to 52+05	Power Line					0.040					
TOTALS:							0.600					

Utility Permit Drawing
Sheet 6 of 6

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

COUNTY
WBS - 37912.1.1 (B-4712)

SHEET 1 12/13/2011

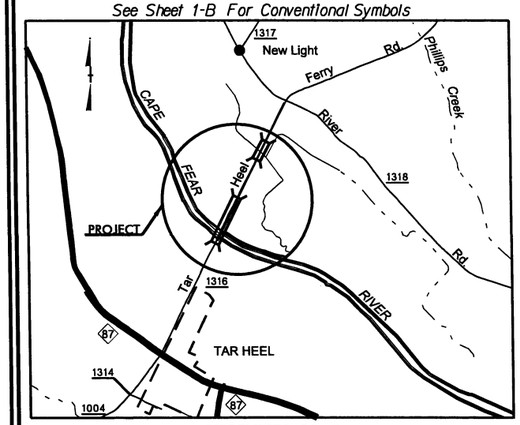
ATN Revised 3/31/05

09/08/99

TIP PROJECT: B-4712

CONTRACT: C203038

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BLADEN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4712	1	

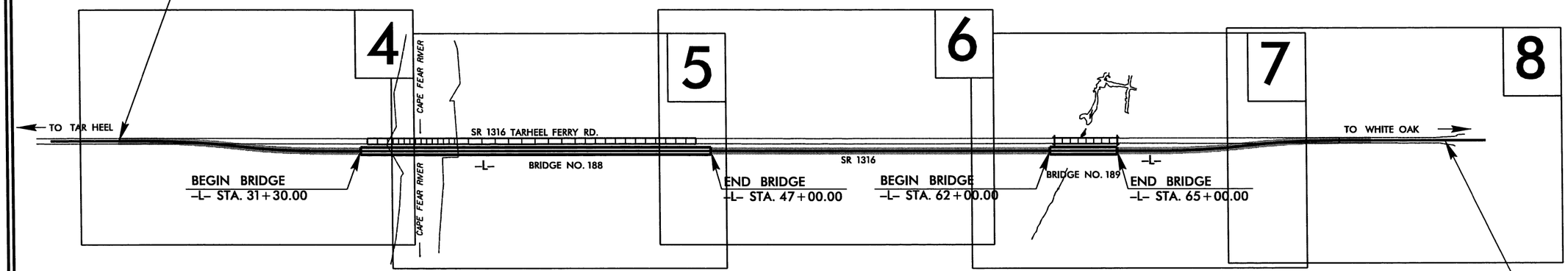
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
37912.1.1	BRZ-1316(6)	P.E.
37912.2.1	BRZ-1316(6)	R/W & UTILITIES

LOCATION: BRIDGE NO. 188 AND NO. 189 OVER THE CAPE FEAR RIVER ON SR 1316

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

NAD 83/95

BEGIN TIP PROJECT B-4712
-L- STA. 20+21.00



END TIP PROJECT B-4712
-L- STA. 79+70.00

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

THIS PROJECT WAS DESIGNED USING THE SUB REGIONAL TIER GUIDELINES FOR BRIDGE PROJECTS.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2013 = 3417
ADT 2033 = 5584
DHV = 13 %
D = 55 %
T = 18 % *
V = 60 MPH
* TTST =13% DUAL =5%
FUNC CLASS =
RURAL COLLECTOR
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4712	=	0.773 MILES
LENGTH STRUCTURES TIP PROJECT B-4712	=	0.354 MILES
TOTAL LENGTH TIP PROJECT B-4712	=	1.127 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 17, 2012

LETTING DATE:
FEBRUARY 19, 2013

GARY LOVERING, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

18-MAY-2012 11:13
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$$$$USERNAME$$$$

6/2/99

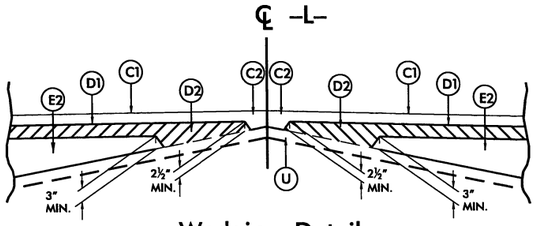
PROJECT REFERENCE NO.	SHEET NO.
B-4712	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

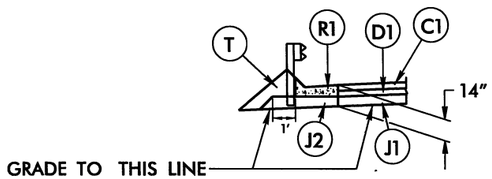
PAVEMENT SCHEDULE
FINAL DESIGN

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. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 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 GREATER THAN 5½" IN DEPTH OR LESS THAN 3" IN DEPTH.
J1	PROP. 8" AGGREGATE BASE COURSE.
J2	VARIABLE DEPTH AGGREGATE BASE COURSE.
R1	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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

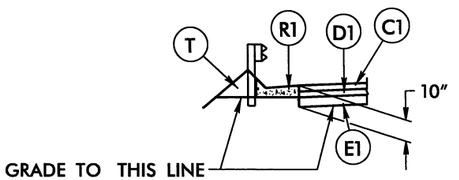


Wedging Detail



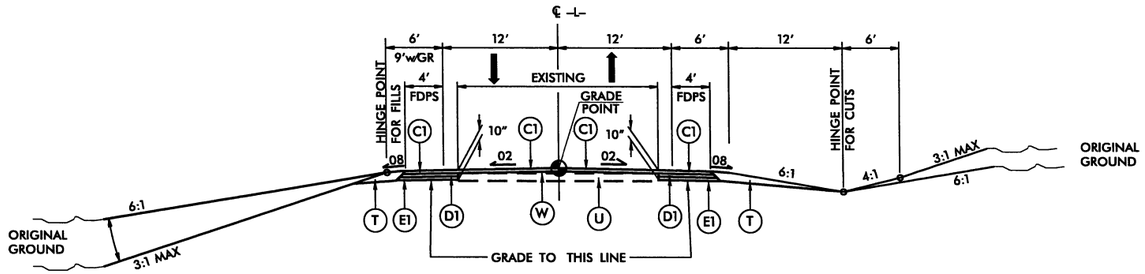
SHOULDER BERM GUTTER DETAIL

–L– STA. 30+19.00 TO –L– STA. 31+16.00 (BEGIN APPROACH SLAB) LT.
–L– STA. 47+14.00 (END APPROACH SLAB) TO –L– STA. 47+40.00 LT.
–L– STA. 61+24.00 TO –L– STA. 61+85.83 (BEGIN APPROACH SLAB) LT.
–L– STA. 65+14.17 (END APPROACH SLAB) TO –L– STA. 66+08.00 LT.
–L– STA. 30+19.00 TO –L– STA. 31+16.00 (BEGIN APPROACH SLAB) RT.
–L– STA. 47+14.00 (END APPROACH SLAB) TO –L– STA. 61+85.83 (BEGIN APPROACH SLAB) RT.
–L– STA. 65+14.17 (END APPROACH SLAB) TO –L– STA. 66+08.00 RT.



DETAIL SHOWING SHOULDER BERM GUTTER ON TOP OF SUBGRADE

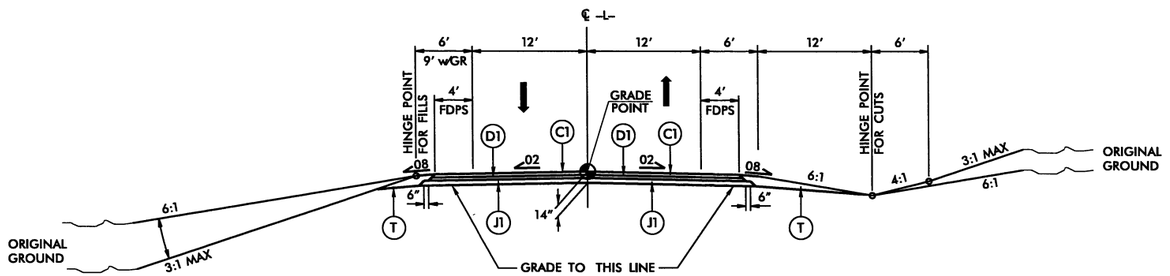
–L– STA. 70+79.00 TO –L– STA. 71+70.00 RT.



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

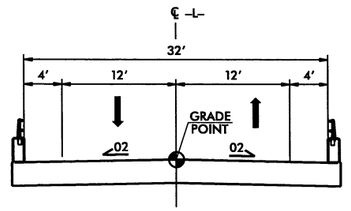
–L– STA. 20+21.00 TO –L– STA. 25+65.57
–L– STA. 70+61.85 TO –L– STA. 79+70.00



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

–L– STA. 25+65.57 TO –L– STA. 31+30.00 (BEGIN BRIDGE)
–L– STA. 47+00.00 (END BRIDGE) TO –L– STA. 62+00.00 (BEGIN BRIDGE)
–L– STA. 65+00.00 (END BRIDGE) TO –L– STA. 70+61.85



TYPICAL SECTION ON STRUCTURE

USE TYPICAL SECTION ON STRUCTURE

–L– STA. 31+30.00 (BEGIN BRIDGE) TO –L– STA. 47+00.00 (END BRIDGE)
–L– STA. 62+00.00 (BEGIN BRIDGE) TO –L– STA. 65+00.00 (END BRIDGE)

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$$$$SKETCHNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4712	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

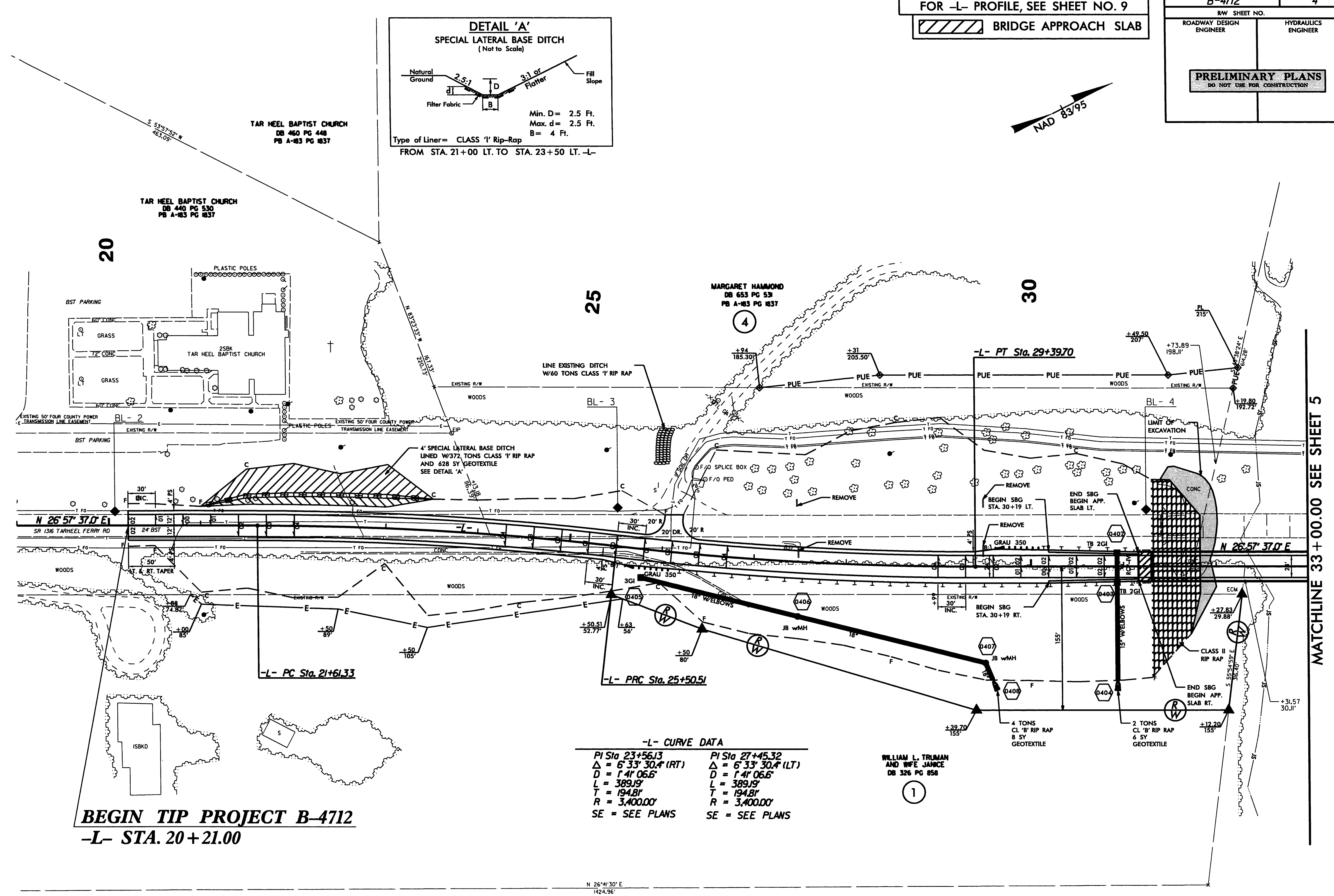
FOR -L- PROFILE, SEE SHEET NO. 9

BRIDGE APPROACH SLAB

REVISIONS

05/18/12 TLS - R/W REV. - ADDED RIGHT OF WAY AND TEMPORARY CONSTRUCTION EASEMENT TO PARCEL NO.1 AND INCORPORATED REVISED EXISTING RIGHT OF WAY AND UTILITY EASEMENT LINES.

8/17/99



-L- CURVE DATA

PI Sta 23+56.13	PI Sta 27+45.32
Δ = 6° 33' 30.4" (RT)	Δ = 6° 33' 30.4" (LT)
D = 1° 41' 06.6"	D = 1° 41' 06.6"
L = 389.19'	L = 389.19'
T = 194.81'	T = 194.81'
R = 3,400.00'	R = 3,400.00'
SE = SEE PLANS	SE = SEE PLANS

PROJECT REFERENCE NO.	SHEET NO.
B-4712	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

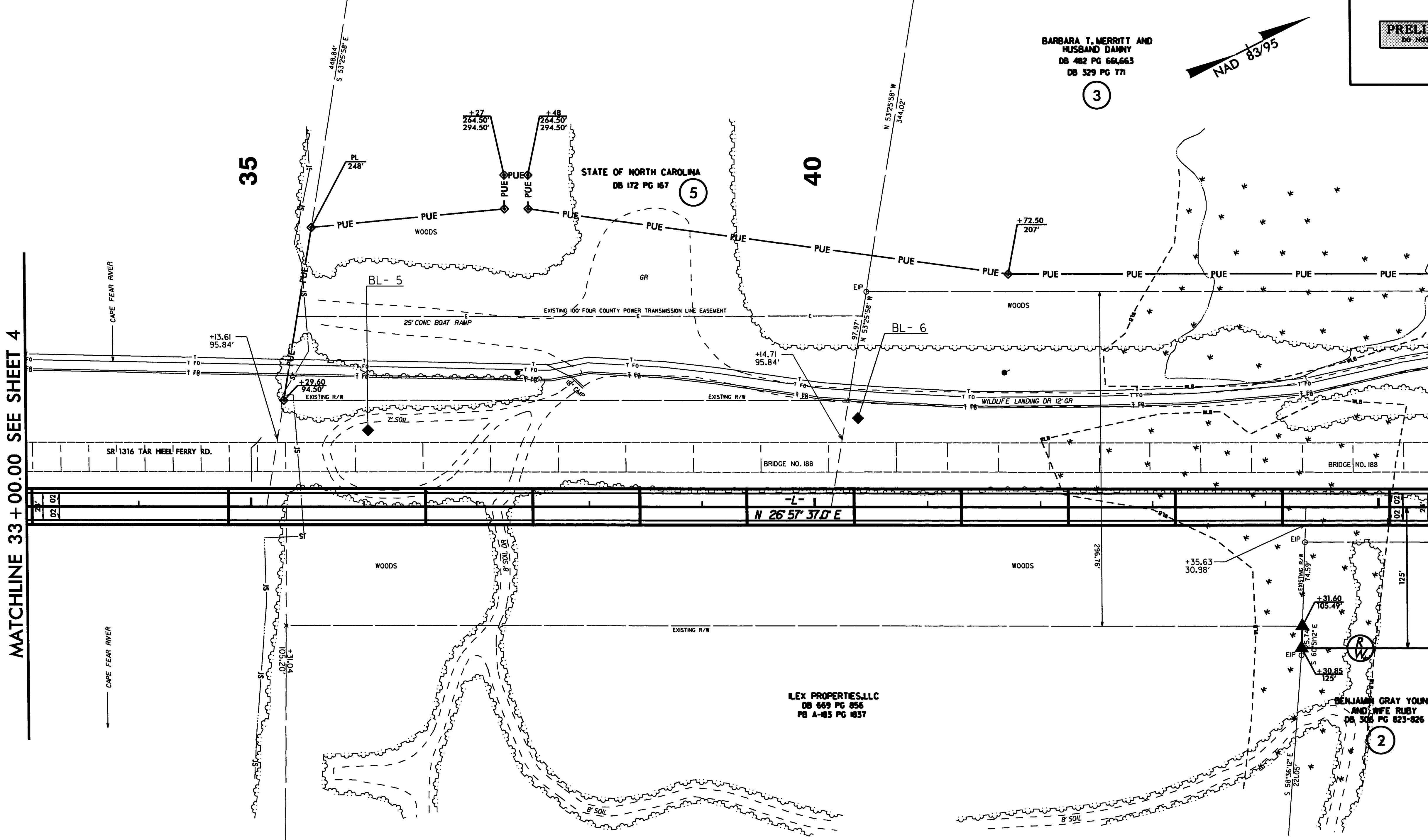
FOR -L- PROFILE, SEE SHEET NO. 10

BRIDGE APPROACH SLAB

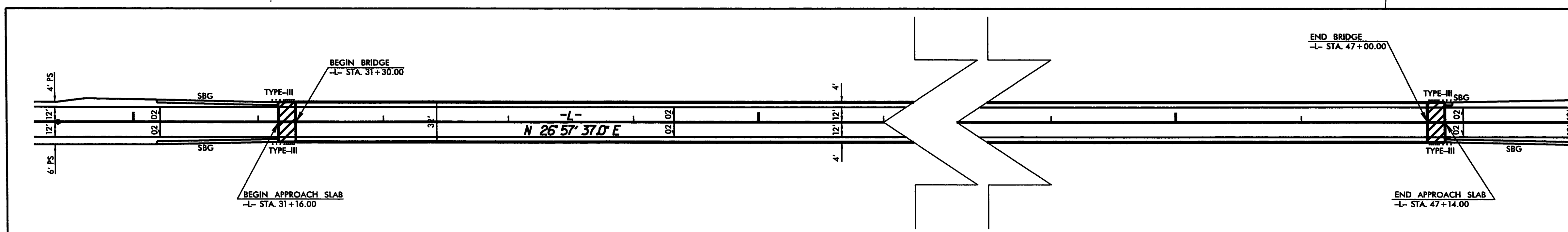
8/17/99

REVISIONS

05/18/12 TLS - R/W REV. - INCORPORATED REVISED EXISTING RIGHT OF WAY AND UTILITY EASEMENT LINES. REMOVED TCE ON PARCEL NO.3.



MATCHLINE 33+00.00 SEE SHEET 4
MATCHLINE 45+50.00 SEE SHEET 6
NAD 83/95
BARBARA T. MERRITT AND HUSBAND DANNY
DB 482 PG 664,663
DB 329 PG 771
3
STATE OF NORTH CAROLINA
DB 172 PG 167
5
35
40
WOODS
PUE
BL- 5
BL- 6
CAPE FEAR RIVER
25' CONC BOAT RAMP
EXISTING 100' FOUR COUNTY POWER TRANSMISSION LINE EASEMENT
EXISTING R/W
SR 1316 TAR HEEL FERRY RD.
BRIDGE NO. 188
-L-
N 26°57' 37.0" E
WILDLIFE LANDING DR 12' GR
ILEX PROPERTIES,LLC
DB 669 PG 856
PB A-183 PG 1837
BENJAMIN GRAY YOUNG AND WIFE RUBY
DB 306 PG 823-826
2



RELATIONSHIP OF BRIDGE N0. 188 TO PROPOSED PAVEMENT

PROJECT REFERENCE NO.	SHEET NO.
B-4712	6

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

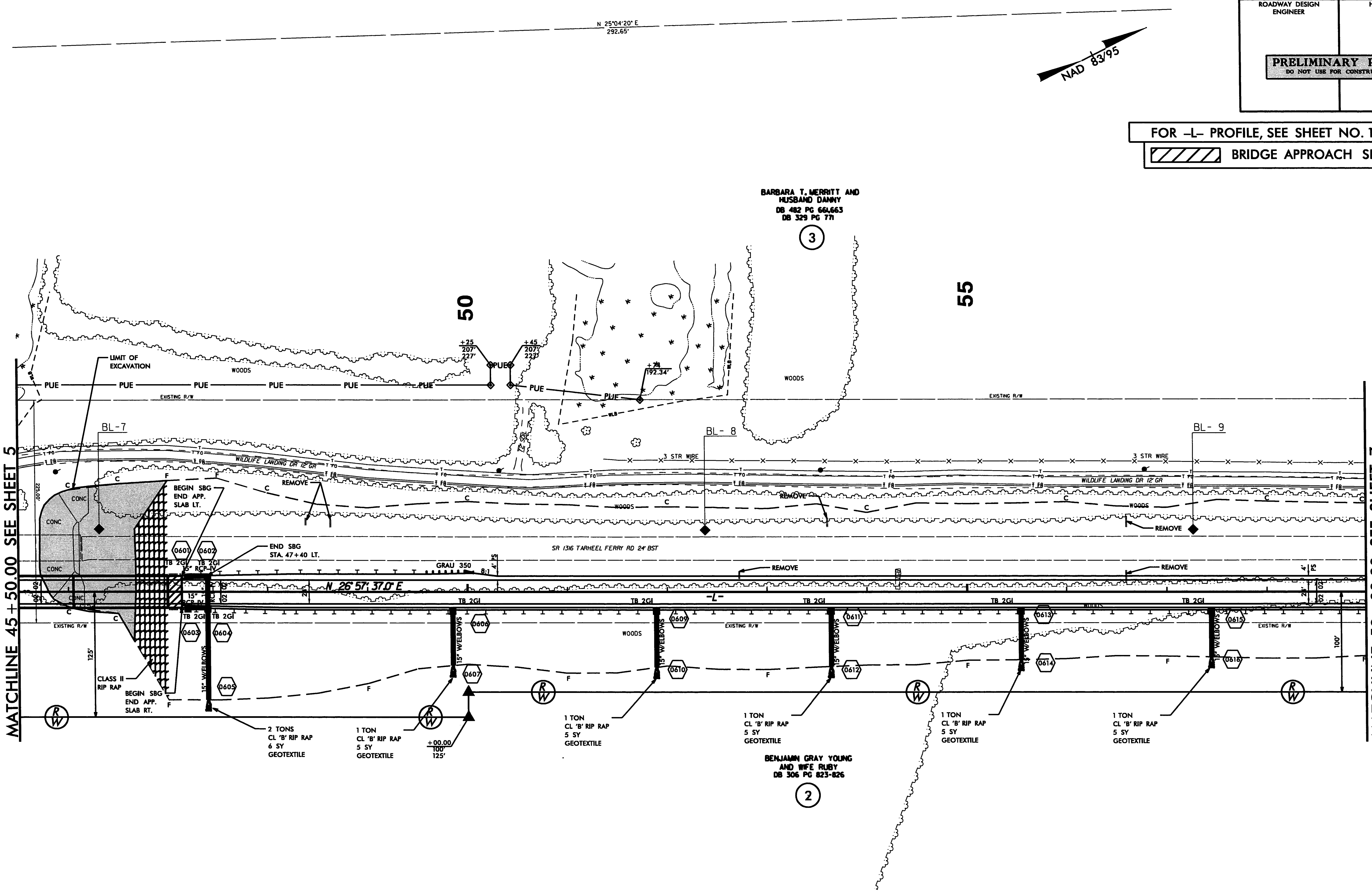
FOR -L- PROFILE, SEE SHEET NO. 11

BRIDGE APPROACH SLAB

REVISIONS

05/18/12 TLS - R/W REV. - INCORPORATED REVISED EXISTING RIGHT OF WAY AND UTILITY EASEMENT LINES. REMOVED TCE ON PARCEL NO.3.

8/17/99



N 25°04'20" E
292.65'
NAD 83/95
BARBARA T. MERRITT AND HUSBAND DANNY
DB 482 PG 661,663
DB 329 PG 771
3
50
55
WOODS
LIMIT OF EXCAVATION
PUE
EXISTING R/W
BL-7
BL-8
BL-9
3 STR WIRE
WILDLIFE LANDING DR 12' GR
REMOVE
BEGIN SBG END APP. SLAB LT.
END SBG STA. 47+40 LT.
SR 1316 TARHEEL FERRY RD 24' BST
GRAU 350
N 26°57'37.0" E
-L-
TB 2GI
15" RCP-IV
15" WELBOWS
CONC
CLASS II RIP RAP
BEGIN SBG END APP. SLAB RT.
2 TONS CL 'B' RIP RAP 6 SY GEOTEXTILE
1 TON CL 'B' RIP RAP 5 SY GEOTEXTILE
+00.00 100' 125'
BENJAMIN GRAY YOUNG AND WIFE RUBY
DB 306 PG 823-826
2
MATCHLINE 45+50.00 SEE SHEET 5
MATCHLINE 59+00.00 SEE SHEET 7

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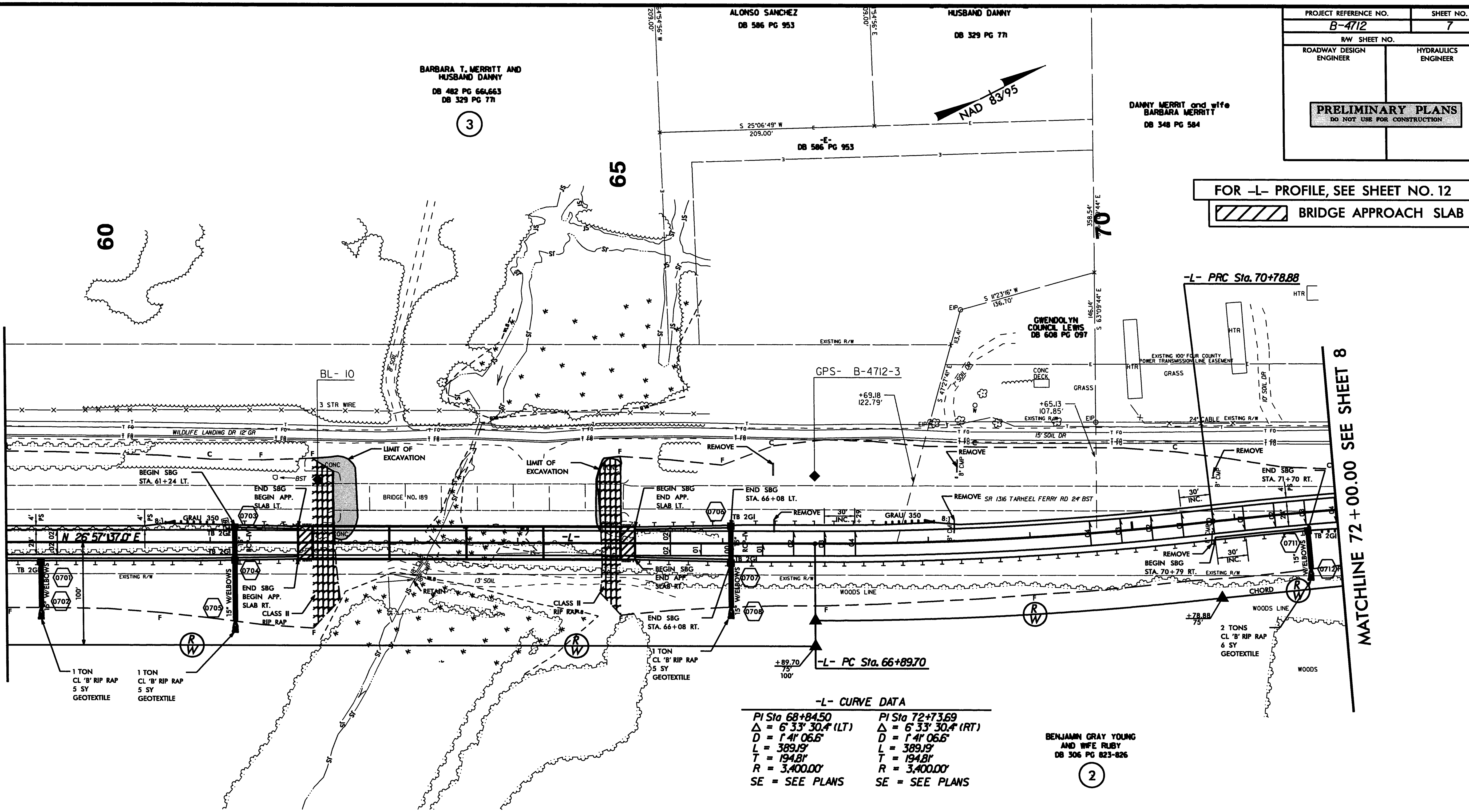
PROJECT REFERENCE NO.	SHEET NO.
B-4712	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

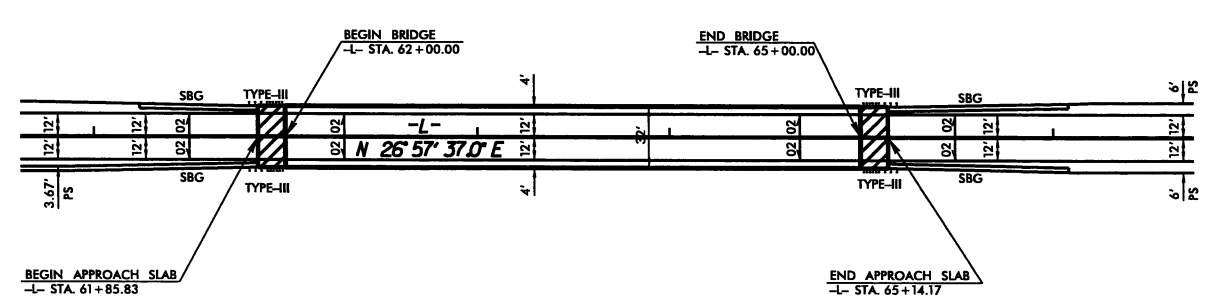
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FOR -L- PROFILE, SEE SHEET NO. 12

BRIDGE APPROACH SLAB



ALONSO SANCHEZ
DB 586 PG 953
HUSBAND DANNY
DB 329 PG 771
BARBARA T. MERRITT AND HUSBAND DANNY
DB 482 PG 664,663
DB 329 PG 771
DANNY MERRIT and wife BARBARA MERRITT
DB 348 PG 584
NAD 83/95
GWENDOLYN COUNCIL LEWIS
DB 608 PG 097
BENJAMIN GRAY YOUNG AND WIFE RUBY
DB 306 PG 823-826
MATCHLINE 59+00.00 SEE SHEET 6
MATCHLINE 72+00.00 SEE SHEET 8
GPS- B-4712-3
BL- 10
BRIDGE NO. 189
N 26° 57' 37.0" E
-L- PRC Sta. 70+78.88
-L- PC Sta. 66+89.70
SR 1316 TARHEEL FERRY RD 24' BST
WILDLIFE LANDING DR 12' GR
LIMIT OF EXCAVATION
BEGIN SBG STA. 61+24 LT.
END SBG STA. 66+08 LT.
END SBG STA. 66+08 RT.
BEGIN SBG STA. 70+79 RT.
END SBG STA. 71+70 RT.
1 TON CL 'B' RIP RAP 5 SY GEOTEXTILE
2 TONS CL 'B' RIP RAP 6 SY GEOTEXTILE
-L- CURVE DATA
PI Sta 68+84.50
Δ = 6° 33' 30.4" (LT)
D = 1° 41' 06.6"
L = 389.19'
T = 194.81'
R = 3,400.00'
SE = SEE PLANS
PI Sta 72+73.69
Δ = 6° 33' 30.4" (RT)
D = 1° 41' 06.6"
L = 389.19'
T = 194.81'
R = 3,400.00'
SE = SEE PLANS



RELATIONSHIP OF BRIDGE NO. 189 TO PROPOSED PAVEMENT

REVISIONS

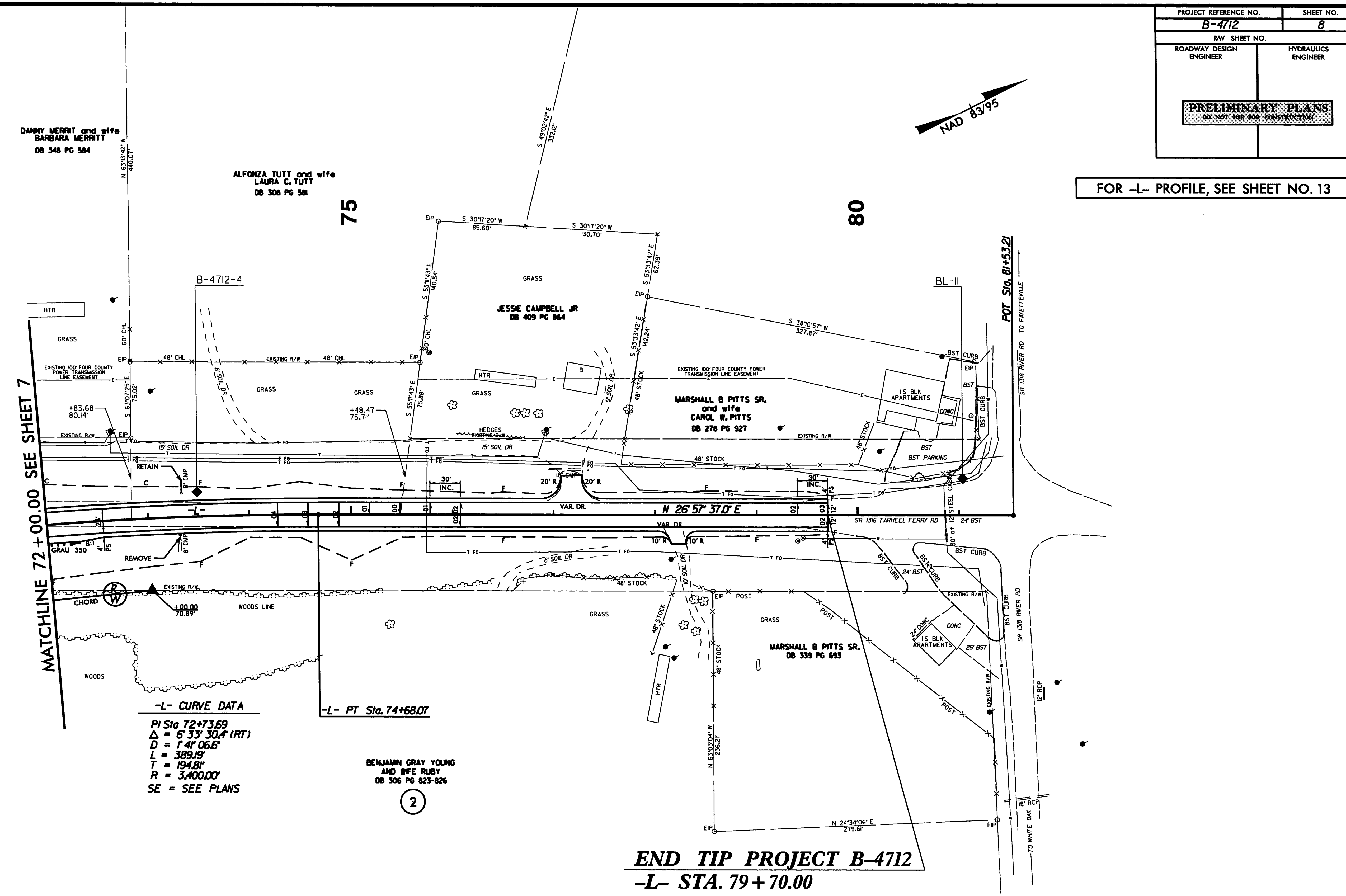
05/18/12 TLS - R/W REV.- INCORPORATED REVISED EXISTING RIGHT OF WAY AND UTILITY EASEMENT LINES.

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4712	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FOR -L- PROFILE, SEE SHEET NO. 13



NAD 83/95
75
80
DANNY MERRIT and wife BARBARA MERRITT
DB 348 PG 584
ALFONZA TUTT and wife LAURA C. TUTT
DB 308 PG 581
JESSIE CAMPBELL JR
DB 409 PG 864
MARSHALL B PITTS SR. and wife CAROL W. PITTS
DB 278 PG 927
MARSHALL B PITTS SR.
DB 339 PG 693
BENJAMIN GRAY YOUNG AND WIFE RUBY
DB 306 PG 823-826
MATCHLINE 72+00.00 SEE SHEET 7
B-4712-4
BL-11
POT Sta. 81+53.21
N 26°57' 37.0" E
SR 1316 TARHEEL FERRY RD
SR 1318 RIVER RD
TO FAYETTEVILLE
TO WHITE OAK
EXISTING 100' FOUR COUNTY POWER TRANSMISSION LINE EASEMENT
-L- CURVE DATA
PI Sta 72+73.69
Δ = 6° 33' 30.4" (RT)
D = 1° 41' 06.6"
L = 389.19'
T = 194.81'
R = 3,400.00'
SE = SEE PLANS
-L- PT Sta. 74+68.07
END TIP PROJECT B-4712
-L- STA. 79+70.00

REVISIONS

05/18/12 TLS - R/W REV.- INCORPORATED REVISED EXISTING RIGHT OF WAY AND UTILITY EASEMENT LINES.

8/17/99

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