



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

January 31, 2014

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

ATTN: Ms. Liz Hair  
NCDOT Coordinator

Dear Madam:

Subject: **Application for a Section 404 Nationwide Permit 23 and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 17 over Lake Creek on NC 210 in Bladen Co. TIP No. B-5117; Federal Aid Project No. BRSTP-0210 (19); Debit \$240 from WBS No. 42258.1.1

The North Carolina Department of Transportation (NCDOT) proposes to replace the 69-foot, 4-span Bridge No. 4 with a 105-foot, 3-span bridge on a new alignment east of the existing. Traffic will remain on-site during construction. Permanent impacts to jurisdictional resources include 0.15 acre of wetland fill, 0.06 acre of excavation, and 48 feet of stream impacts (36 feet due to pipe installation and 12 feet of bank stabilization).

Please see enclosed copies of the Pre-Construction Notification (PCN), Preliminary Jurisdictional Determination Form, EEP Acceptance Letter, permit drawings, stormwater management plan, and roadway plans for the above referenced project. The Categorical Exclusion (CE) was completed in February 2012 and distributed shortly thereafter.

This project calls for a letting date of August 19, 2014 and a review date of July 1, 2014. The project schedule may be advanced if funding becomes available.

### Regulatory Approvals

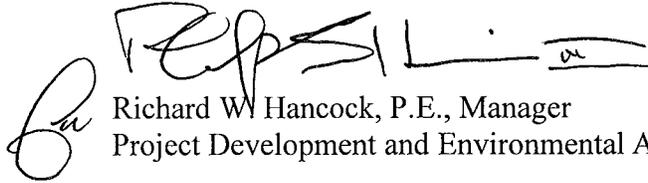
Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that the project be authorized by NW 23 for bridge construction.

Section 401 Permit: We anticipate 401 General Certification number 3891 will apply to this project. NCDOT is requesting written concurrence from the North Carolina Department of

Environmental and Natural Resources, Division of Water Resources. We are providing two copies of this application to the NCDWR for their approval.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links > Permit Applications*. A copy of the CE is also available at the above website address under *Quick Links > Environmental Documents*. Thank you for your assistance with this project. If you have any questions or need additional information, please contact Tyler Stanton at [tstanton@ncdot.gov](mailto:tstanton@ncdot.gov) or (919) 707-6156.

Sincerely,

A handwritten signature in black ink, appearing to read 'Richard W. Hancock', with a large, stylized initial 'R' on the left side.

Richard W Hancock, P.E., 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:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> 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?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input checked="" type="checkbox"/> 401 Water Quality Certification – Regular <span style="margin-left: 100px;"><input type="checkbox"/> Non-404 Jurisdictional General Permit</span> <input type="checkbox"/> 401 Water Quality Certification – Express <span style="margin-left: 100px;"><input type="checkbox"/> Riparian Buffer Authorization</span>		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### 2. Project Information

2a. Name of project:	Replacement of Bridge No. 17 over Lake Creek on NC 210
2b. County:	Bladen Co.
2c. Nearest municipality / town:	Ivanhoe
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-5117

#### 3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
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

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

<b>B. Project Information and Prior Project History</b>	
<b>1. Property Identification</b>	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 34.8501 (DD.DDDDDD) Longitude: - 78.5131 (-DD.DDDDDD)
1c. Property size:	6.06 acres
<b>2. Surface Waters</b>	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Lake Creek
2b. Water Quality Classification of nearest receiving water:	C;Sw
2c. River basin:	Cape Fear
<b>3. Project Description</b>	
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 and forested areas. Land use in the project vicinity is predominantly forested with some agriculture, and light residential development.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.60	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 197	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 69-foot, 4-span bridge with a 105-foot, 3-span bridge on a new alignment, east of the existing. Traffic will remain on-site during construction. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
<b>4. Jurisdictional Determinations</b>	
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:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input checked="" type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Tyler Stanton	Agency/Consultant Company: NCDOT Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. November 20, 2013	
<b>5. Project History</b>	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
<b>6. Future Project Plans</b>	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. If yes, explain.	

<b>C. Proposed Impacts Inventory</b>						
<b>1. Impacts Summary</b>						
1a. Which sections were completed below for your project (check all that apply):						
<input checked="" type="checkbox"/> Wetlands		<input checked="" type="checkbox"/> Streams - tributaries		<input type="checkbox"/> Buffers		
<input type="checkbox"/> Open Waters		<input type="checkbox"/> Pond Construction				
<b>2. Wetland Impacts</b>						
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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	Riverine	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	< 0.01	
Site 2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	Riverine	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	< 0.01	
Site 2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Excavation	Riverine	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	< 0.01	
Site 3 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	Riverine	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.15	
Site 3 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Excavation	Riverine	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.06	
<b>2g. Total wetland impacts</b>					0.21 Permanent 0.00 Temporary	
2h. Comments: There will be 0.04 ac of hand clearing in wetlands and proposed temporary impacts to wetlands of 0.01 acre of temporary fill in wetlands in the hand clearing areas for the installation of erosion control measures, including temporary silt fence and/or special sediment control fence.						
<b>3. Stream Impacts</b>						
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 4 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Pipe	Ut to Lake Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	2	36
Site 4 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bank Stabilization	Ut to Lake Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	2	12
Site 4 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Bank Stabilization	Ut to Lake Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	2	20
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>3h. Total stream and tributary impacts</b>						48 Perm 20 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 <input type="checkbox"/> P <input type="checkbox"/> T				
O1 <input type="checkbox"/> P <input type="checkbox"/> T				
O2 <input type="checkbox"/> P <input type="checkbox"/> T				
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
<b>4f. Total open water impacts</b>				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								
<b>5f. Total</b>								

5g. Comments:

5h. Is a dam high hazard permit required?	<input type="checkbox"/> Yes <input type="checkbox"/> 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?		<input type="checkbox"/> Neuse <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Other: <input type="checkbox"/> Catawba <input type="checkbox"/> Randleman			
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 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>6h. Total buffer impacts</b>					
6i. Comments:					

<b>D. Impact Justification and Mitigation</b>		
<b>1. Avoidance and Minimization</b>		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. The proposed bridge is 36 feet longer than the existing bridge. The removal of existing road fill for longer bridge and increasing bridge openings will improve hydrological conveyance and wildlife passage, and reduce bridge opening velocities.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Construction will be top-down. Best Management Practices for the Protection of Surface Waters, as well as, Best Management Practices for Construction and Maintenance Activities will be implemented.		
<b>2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State</b>		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input checked="" type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input checked="" type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation	
<b>3. Complete if Using a Mitigation Bank</b>		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
<b>4. Complete if Making a Payment to In-lieu Fee Program</b>		
4a. Approval letter from in-lieu fee program is attached.	<input checked="" type="checkbox"/> Yes	
4b. Stream mitigation requested:	36 linear feet	
4c. If using stream mitigation, stream temperature:	<input checked="" type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	0.21 acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
<b>5. Complete if Using a Permittee Responsible Mitigation Plan</b>		
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.

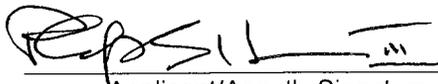
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
<b>6f. Total buffer mitigation required:</b>				

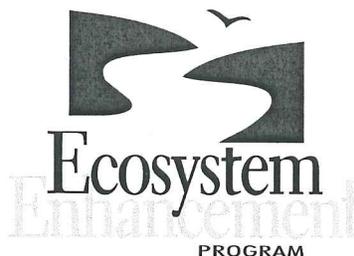
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).

6h. Comments:

<b>E. Stormwater Management and Diffuse Flow Plan (required by DWQ)</b>	
<b>1. Diffuse Flow Plan</b>	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If not, explain why. Comments:	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>2. Stormwater Management Plan</b>	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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?	<input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input checked="" type="checkbox"/> DWQ 401 Unit
<b>3. Certified Local Government Stormwater Review</b>	
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):	<input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>4. DWQ Stormwater Program Review</b>	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A
<b>5. DWQ 401 Unit Stormwater Review</b>	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A
5b. Have all of the 401 Unit submittal requirements been met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A

<b>F. Supplementary Information</b>	
<b>1. Environmental Documentation (DWQ Requirement)</b>	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>2. Violations (DWQ Requirement)</b>	
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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2b. Is this an after-the-fact permit application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
<b>3. Cumulative Impacts (DWQ Requirement)</b>	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.	
<b>4. Sewage Disposal (DWQ Requirement)</b>	
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	

<b>5. Endangered Species and Designated Critical Habitat (Corps Requirement)</b>		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input type="checkbox"/> Raleigh <input type="checkbox"/> 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		
<b>6. Essential Fish Habitat (Corps Requirement)</b>		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
<b>7. Historic or Prehistoric Cultural Resources (Corps Requirement)</b>		
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)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
<b>8. Flood Zone Designation (Corps Requirement)</b>		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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		
Richard W. Hancock, P.E. Applicant/Agent's Printed Name	 Applicant/Agent's Signature <small>(Agent's signature is valid only if an authorization letter from the applicant is provided.)</small>	01/24/2014 Date



December 19, 2013

Mr. Richard W. Hancock, P.E.  
Project Development and Environmental Analysis Unit  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Mr. Hancock:

Subject: EEP Mitigation Acceptance Letter:

**B-5117**, Replace Bridge Number 17 over Lake Creek on NC 210, Bladen County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream and riparian wetland mitigation for the subject project. Based on the information supplied by you on December 17, 2013, the impacts are located in CU 03030006 of the Cape Fear River basin in the Southern Inner Coastal Plain (SICP) Eco-Region, and are as follows:

Cape Fear 03030006 SICP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non- Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	36.0	0.21	0	0	0	0

\*Some of the stream and wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

This impact and associated mitigation need were under projected by the NCDOT in the 2013 impact data. EEP will commit to implement sufficient compensatory stream and riparian wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP. If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill  
EEP Asset Management Supervisor

cc: Mr. Ronnie Smith, USACE – Wilmington Regulatory Field Office  
Mr. Mason Herndon, Division of Water Quality, Fayetteville Office  
File: B-5117

*Restoring... Enhancing... Protecting Our State*



**U.S. ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT**

Action Id. **SAW-2013-02241**

County: **Bladen**

U.S.G.S. Quad: **Rowan**

**NOTIFICATION OF JURISDICTIONAL DETERMINATION**

Property Owner/Agent: **Mr. Tyler Stanton**

**NCDOT**

Address: **1598 Mail Service Center**

**Raleigh, North Carolina 27699**

Telephone No.:

Property description:

Size (acres) **~7**

Nearest Town **White Lake**

Nearest Waterway **Lake Creek**

River Basin **Cape Fear**

USGS HUC **03030006**

Coordinates **N 34.589458 W -78.297734**

Location description: **B-5117. The project area is located at Bridge Number 47 over the Lake Creek along NC 210, southeast of White Lake, Bladen County, North Carolina.**

**Indicate Which of the Following Apply:**

**A. Preliminary Determination**

**X Based on preliminary information, there may be waters of the U.S. including wetlands on the above described project area. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process ( Reference 33 CFR Part 331).**

**B. Approved Determination**

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

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

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

The waters of the U.S. including wetland on your project area have been delineated and the delineation has been verified by the Corps.

The waters of the U.S. including wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on September 29, 2010. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

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

The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Wilmington, NC at (910) 796-7215 to determine their requirements.

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact Ronnie Smith at 910-251-4829.

**C. Basis For Determination**

The site exhibits wetland criteria as described in the 1987 Corps Wetland Delineation Manual and appropriate regional supplement. The water bodies exhibit ordinary high water marks as indicated by the absence of vegetation in the stream channel and the presence of wrack lines and bed and banks.

**D. Remarks**

The review area has been revised and extended to the north to include the waterbody labeled UT to Lake Creek. The review area is shown on the attached map (Figure 3).

**E. Attention USDA Program Participants**

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

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

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

District Engineer, Wilmington Regulatory Division  
Attn: Ronnie Smith, Project Manager,  
Wilmington Regulatory Field Office  
69 Darlington Ave  
Wilmington, North Carolina 28403

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the District Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by January 19, 2014.

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

Corps Regulatory Official: Ronnie Smith

Date: November 20, 2013

**SMITH.RONNIE.D**  
**ALE.1281725242**

Digitally signed by  
SMITH.RONNIE.DALE.1281725242  
DN: c=US, o=U.S. Government,  
ou=DoD, ou=PKI, ou=USA,  
cn=SMITH.RONNIE.DALE.1281725242  
Date: 2013.11.20 14:13:30 -05'00'

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at <http://per2.nwp.usace.army.mil/survey.html> to complete the survey online.

Copy Furnished: Chris Rivenbark-NCDOT NES (Electronic Only)



**North Carolina Department of Transportation**  
**Highway Stormwater Program**  
**STORMWATER MANAGEMENT PLAN**  
**FOR LINEAR ROADWAY PROJECTS**



(Version 1.2; Released September 2011)

**Project/TIP No.:** B-5117                      **County(ies):** Bladen                      **Page** 1 **of** 1

**General Project Information**

<b>Project No.:</b>	B-5117	<b>Project Type:</b>	Bridge Replacement	<b>Date:</b>	9/12/2013
<b>NCDOT Contact:</b>	Galen W. Cail	<b>Contractor / Designer:</b>	Joe Dunneho		
<b>Address:</b>	1020 Birch Ridge Drive Raleigh, NC 27610	<b>Address:</b>	1020 Birch Ridge Drive Raleigh, NC 27610		
	<b>Phone:</b> 919-707-6711		<b>Phone:</b>	919-707-6717	
	<b>Email:</b> gcail@ncdot.gov		<b>Email:</b>	jwdunneho@ncdot.gov	
<b>City/Town:</b>	Ivanhoe	<b>County(ies):</b>	Bladen		
<b>River Basin(s):</b>	Cape Fear	<b>CAMA County?</b>	No		
<b>Primary Receiving Water:</b>	Lake Creek	<b>NCDWQ Stream Index No.:</b>	18-68-12-18		
<b>NCDWQ Surface Water Classification for Primary Receiving Water</b>	<b>Primary:</b>	Class C			
	<b>Supplemental:</b>	Swamp Waters (Sw)			
<b>Other Stream Classification:</b>	None				
<b>303(d) Impairments:</b>	None				
<b>Buffer Rules in Effect</b>	N/A				

**Project Description**

<b>Project Length (lin. Miles or feet):</b>	.388 Mi.	<b>Surrounding Land Use:</b>	Wooded and Agricultural areas		
	<b>Proposed Project</b>		<b>Existing Site</b>		
<b>Project Built-Upon Area (ac.)</b>	1.28 ac.		1.16 ac.		
<b>Typical Cross Section Description:</b>	Two - 12' Travel Lanes, 6' Grass Shoulders, 3:1 Side Slopes		Two - 10 ft. lanes with 6 ft. grass shoulders		
<b>Average Daily Traffic (veh/hr/day):</b>	<b>Design/Future:</b> 700 (2035)	<b>Existing:</b>	470 (2015)		

**General Project Narrative:**

Replace bridge # 47 over Lake Creek on NC 210 with a 3 span bridge. The approach work will consist of providing grass shoulders and guardrail. Bridge # 47 existing 4 span (1 @ 17'8", 1 @ 16'11", 1 @ 16'10", 1 @ 17'8") total length of 69' will be replaced with a 1 @ 25', 1 @ 50', 1 @ 30' 21" cored slab bridge. The new bridge reduces the number of bents in Lake Creek.

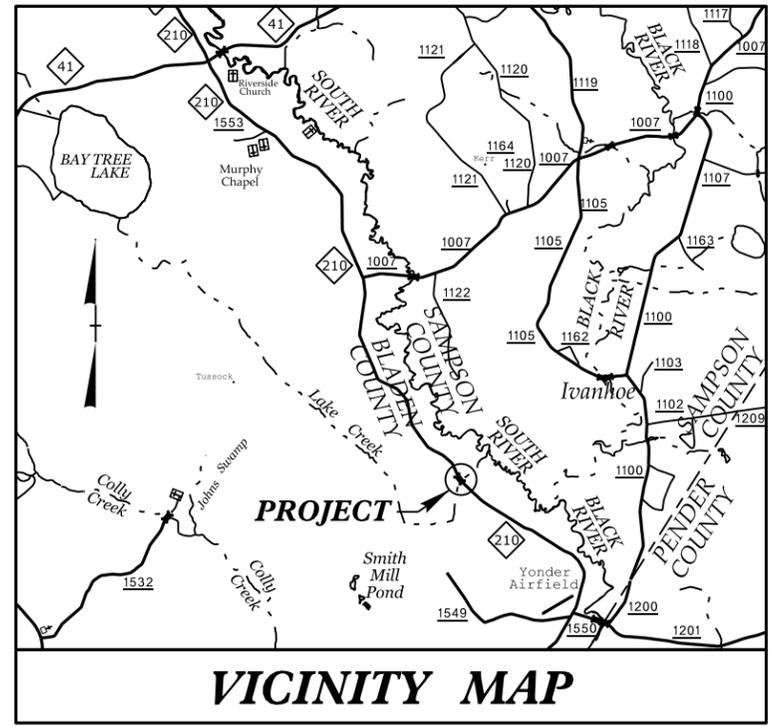
**Best Mgmt. Practices:**

- Promotion of sheet flow and infiltration with grassed shoulders except where shoulder berm gutter to 2 GI in the northeast and southeast quadrants of the bridge.
- Drainage systems outlet to rip rap pads
- Removal of existing roadway fill under the bridge will improve bridge conveyance and reduce bridge opening velocities.
- 3:1 side slopes used in the wetlands.
- 4:1 front slopes and 3:1 back slopes were used in the ditch section.

**References**

**TIP PROJECT: B-5117**  
  
**CONTRACT: C203459**

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



STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS  


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**BLADEN COUNTY**


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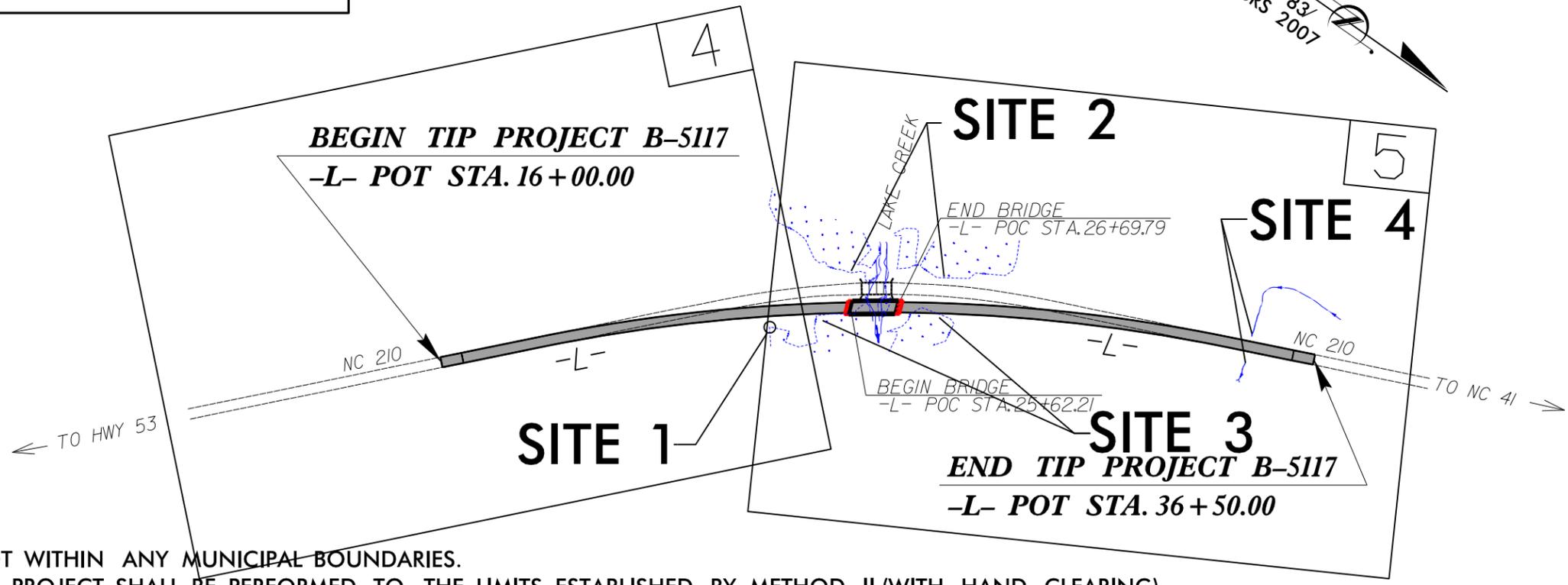
**LOCATION: BRIDGE NO. 47 ON NC 210 OVER LAKE CREEK**

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

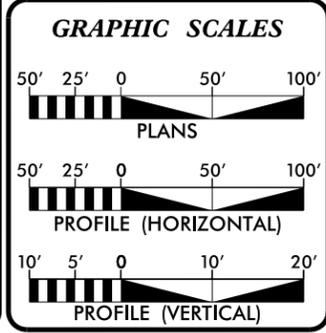
**WETLAND AND SURFACE WATER IMPACTS PERMIT**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5117	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42258.1.1	BRSTP-0210(19)	PE	
42258.2.1	BRSTP-0210(19)	RW & UTIL.	

**PERMIT DRAWING  
SHEET 1 OF 11**



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II (WITH HAND CLEARING).



**DESIGN DATA**

ADT 2014 = 460
ADT 2034 = 700
K = 11 %
D = 60 %
T = 32 % *
V = 60 MPH
FUNC. CLASS. = COLLECTOR
* TTST 22% DUAL 10%
REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY	TIP PROJECT B-5117	= 0.368 MI.
LENGTH STRUCTURE	TIP PROJECT B-5117	= 0.020 MI.
TOTAL LENGTH OF	TIP PROJECT B-5117	= 0.388 MI.

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

2012 STANDARD SPECIFICATIONS RIGHT OF WAY DATE: AUGUST 14, 2012  LETTING DATE: AUGUST 18, 2014	REKHA PATEL, P.E. PROJECT ENGINEER  MICHAEL W. LITTLE, P.E. PROJECT DESIGN ENGINEER
---	---

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

SIGNATURE: \_\_\_\_\_ P.E.



\$\$\$SYTIME\$\$\$\$\$  
 \$\$\$DON\$\$\$\$\$  
 \$\$\$SERNAME\$\$\$\$\$

PROJECT REFERENCE NO. <b>B-5117</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**PERMIT DRAWING  
SHEET 2 OF 11**

**NAD 83/NSRS 2007**

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

REVISIONS

10+00

15+00

20+00

CHESTER BARNHILL  
CLAUDIA H.

TRIPLE B LAND COMPANY LLC.

SLEEPY CREEK FARMS INC.

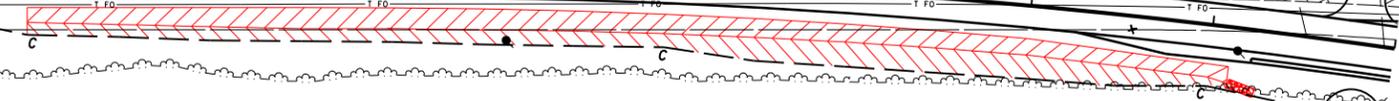
WOODS

WOODS

WOODS

TUE TUE TUE TUE TUE TUE

TO HWY 53  
NC 210  
237' BS1  
-L- N 46° 34' 09.3" W

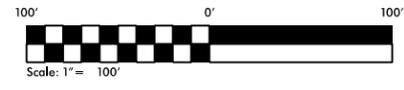


WOODS

WOODS

SITE 1

L.G. BEATTY ESTATE



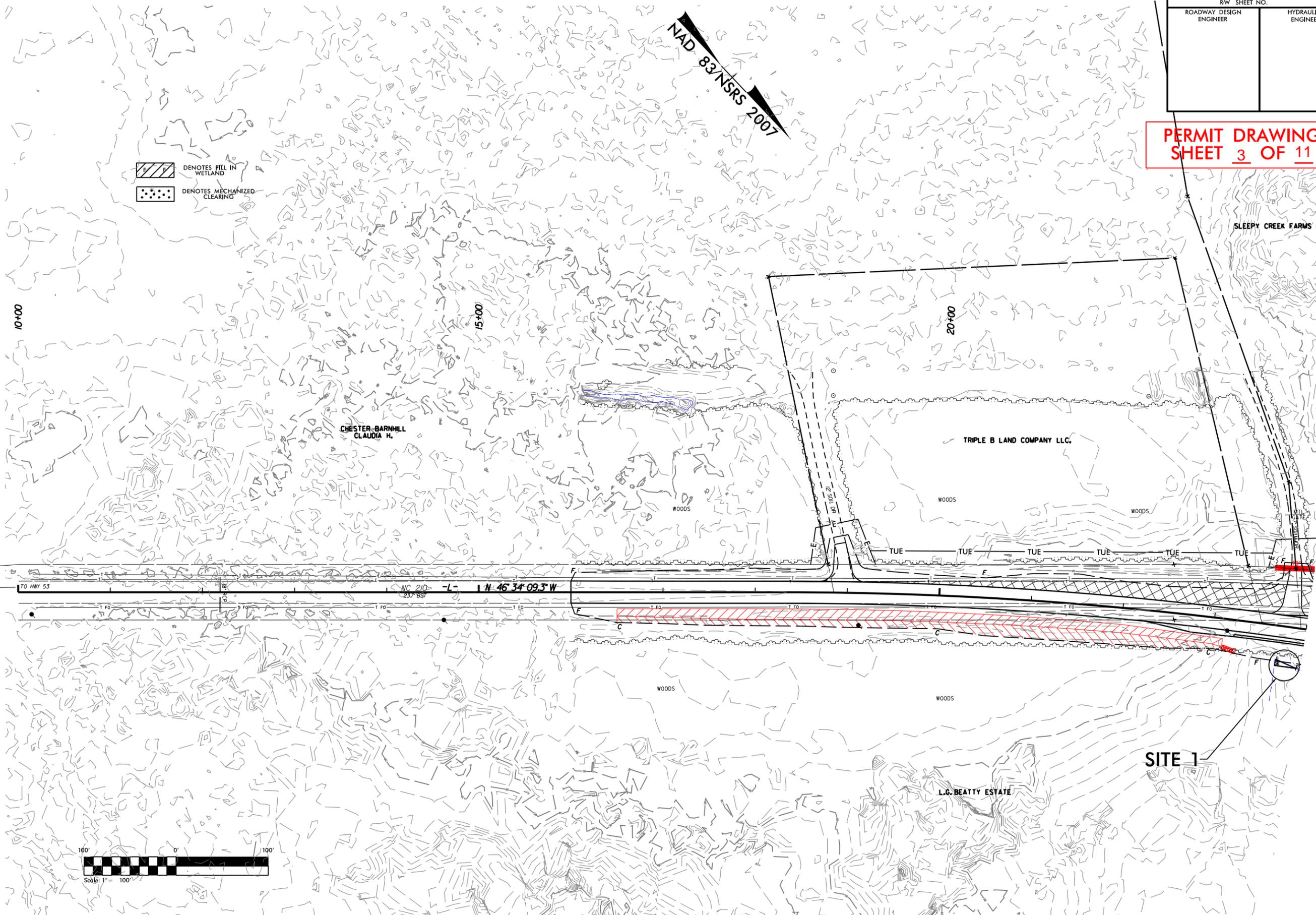
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PROJECT REFERENCE NO. <b>B-5117</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**PERMIT DRAWING  
SHEET 3 OF 11**

**NAD 83 NSRS 2007**

 DENOTES FILL IN WETLAND  
 DENOTES MECHANIZED CLEARING



REVISIONS

9/12/2013  
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**SITE 1**

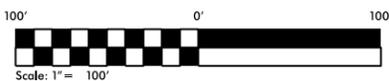
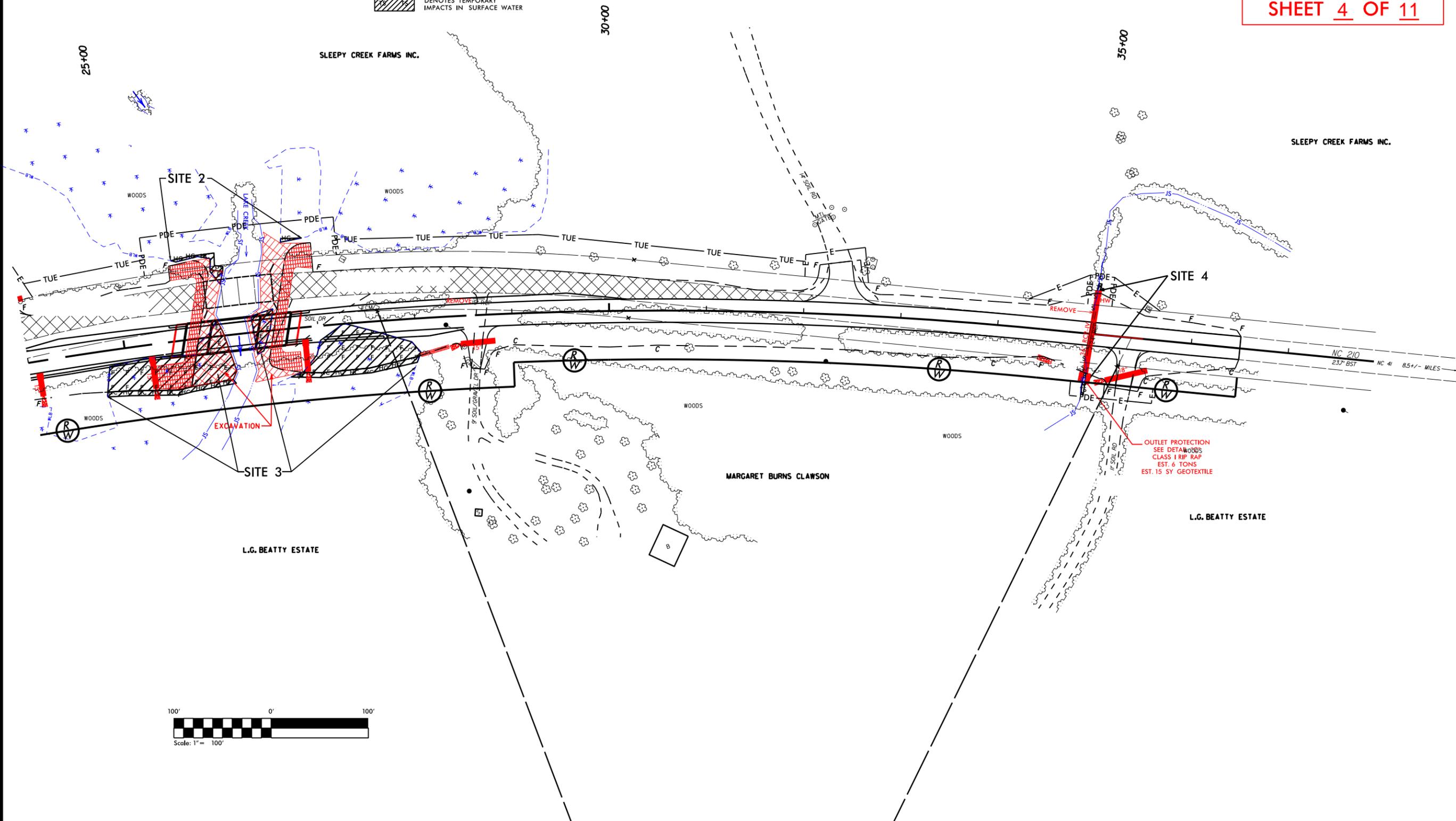
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

**PERMIT DRAWING  
SHEET 4 OF 11**

-  DENOTES EXCAVATION IN WETLAND
-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS



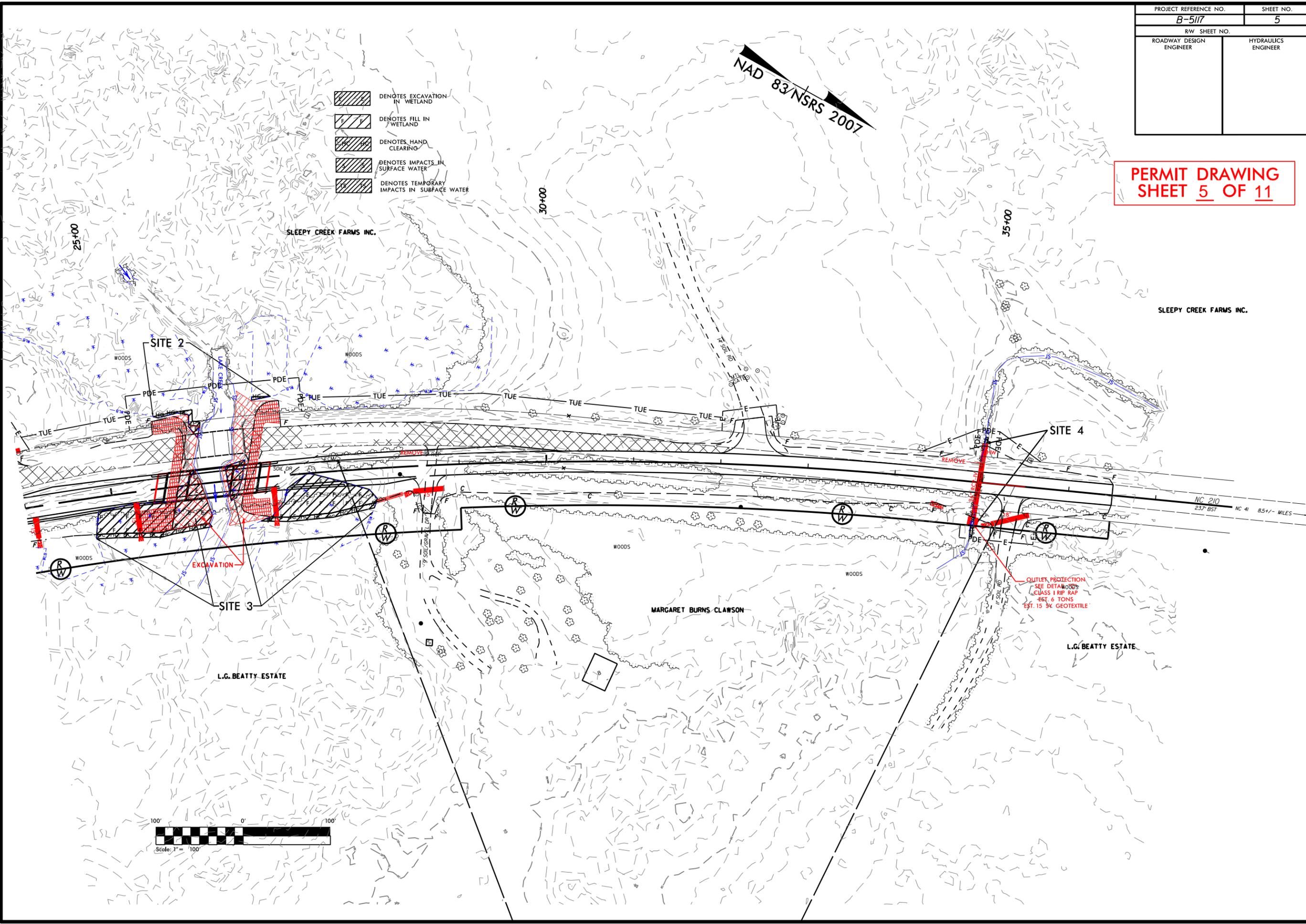
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PROJECT REFERENCE NO.	SHEET NO.
B-5117	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**PERMIT DRAWING  
SHEET 5 OF 11**

-  DENOTES EXCAVATION IN WETLAND
-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NAD 83/NSRS 2007



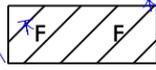
REVISIONS

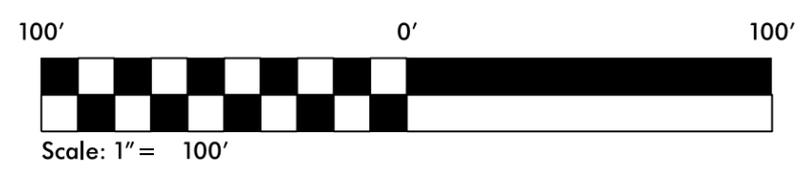
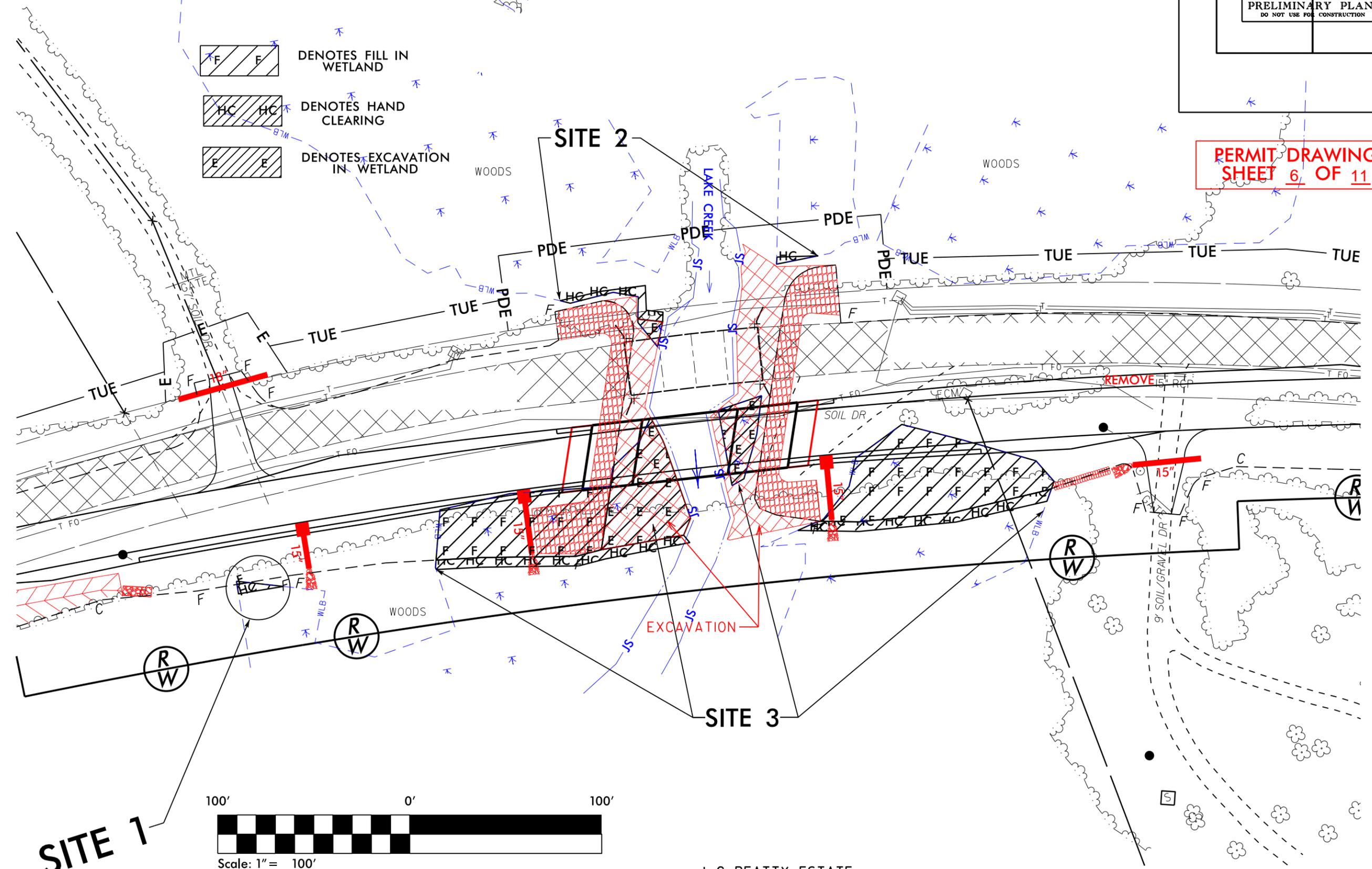
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PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING  
 SHEET 6 OF 11

-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING
-  DENOTES EXCAVATION IN WETLAND



L.G. BEATTY ESTATE

REVISIONS

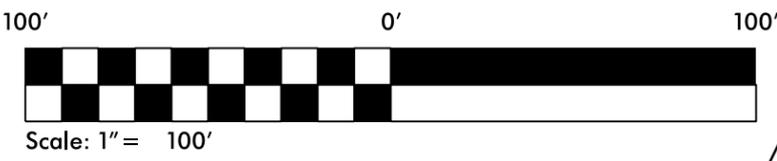
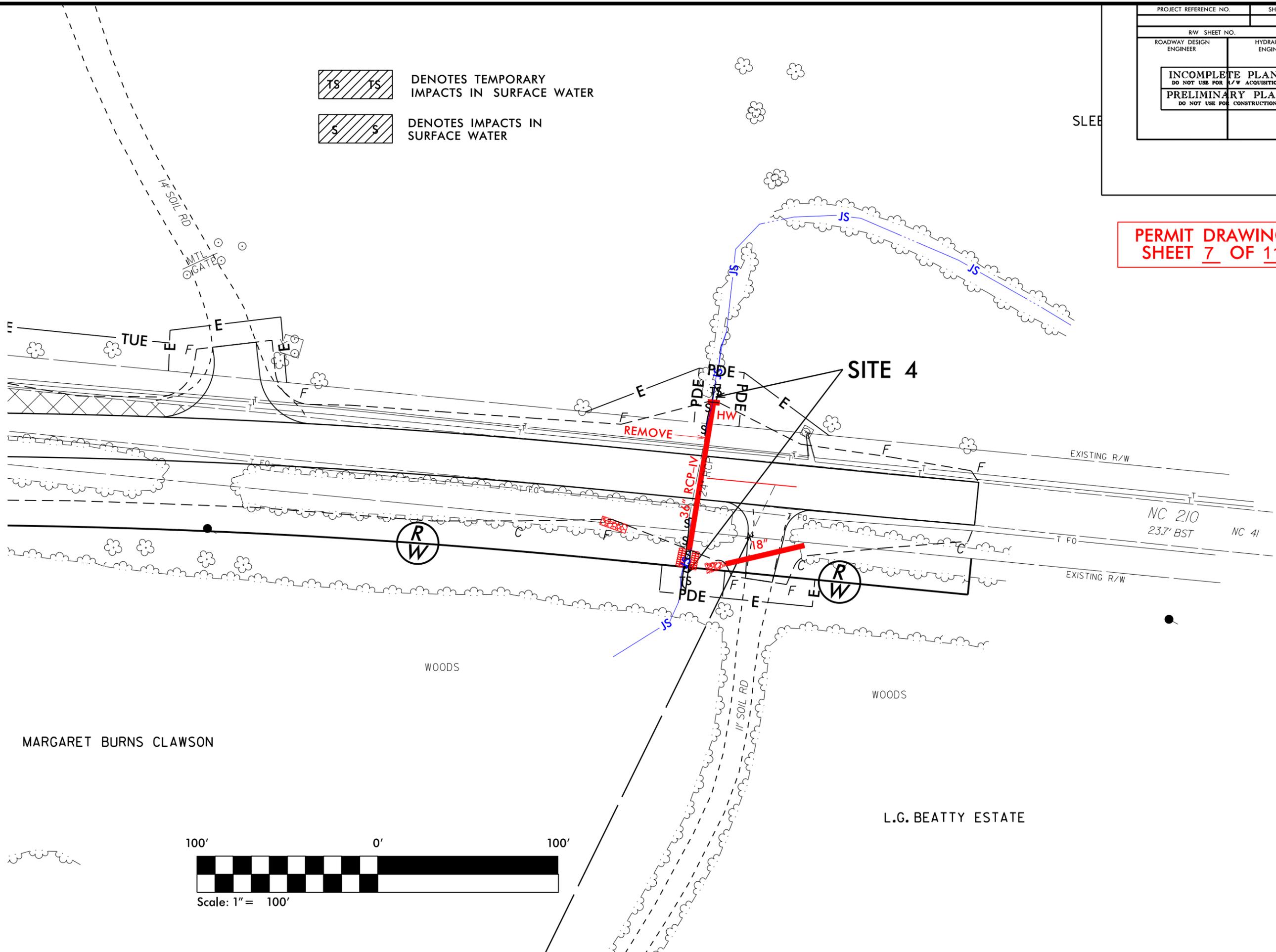
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8/17/99

PROJECT REFERENCE NO.	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**PERMIT DRAWING**  
**SHEET 7 OF 11**

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER  
 DENOTES IMPACTS IN SURFACE WATER



REVISIONS

12/16/2013  
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MARGARET BURNS CLAWSON

L.G. BEATTY ESTATE



8/23/99



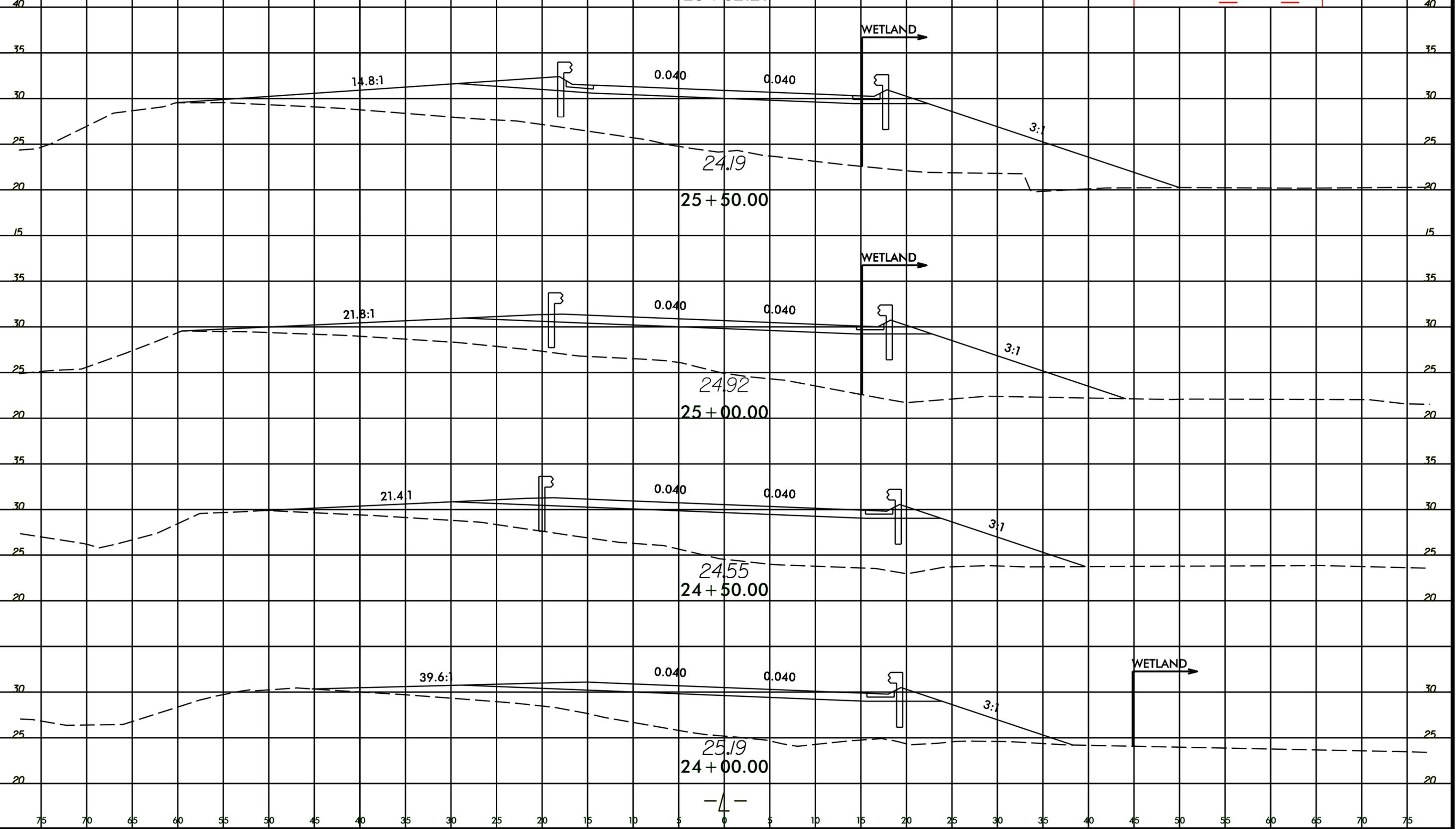
PROJ. REFERENCE NO.  
B-5117

SHEET NO.  
X-4

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

BEGIN BRIDGE  
25 + 62.21

PERMIT DRAWING  
SHEET 9 OF 11



9/10/2013  
ldlawson  
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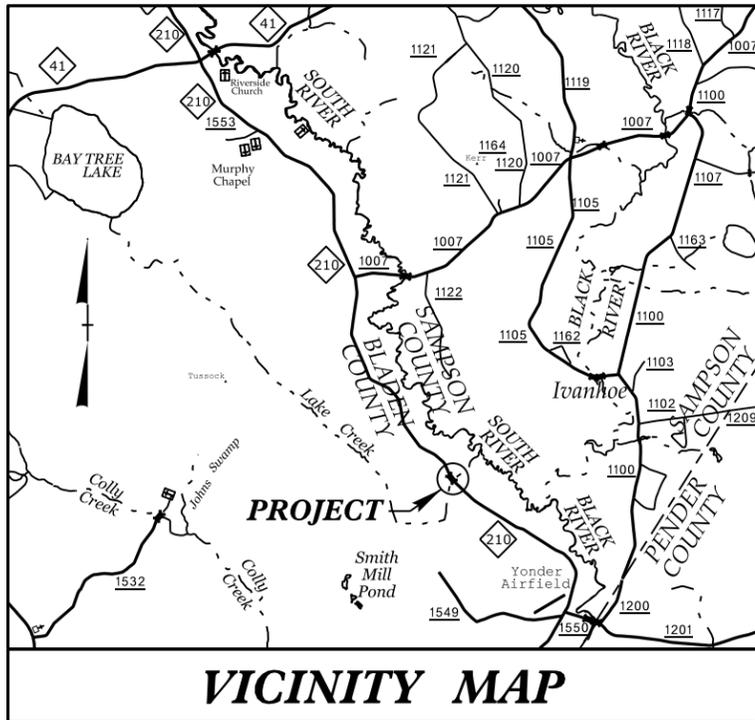
-4-





**TIP PROJECT: B-5117**

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



**VICINITY MAP**

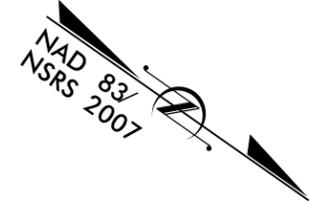
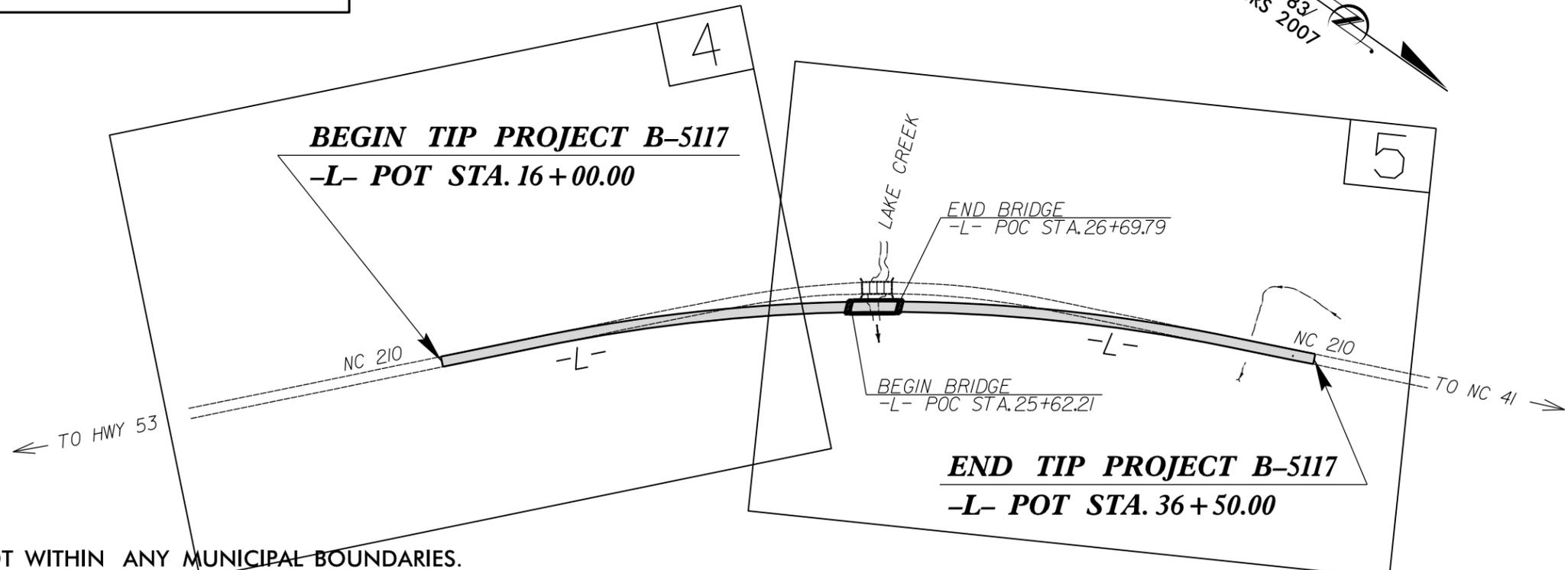
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BLADEN COUNTY**

**LOCATION: BRIDGE NO. 47 ON NC 210 OVER LAKE CREEK**

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5117	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42258.1.1	BRSTP-0210(19)	PE	
42258.2.1	BRSTP-0210(19)	RW & UTIL.	



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II (WITH HAND CLEARING).

**CONTRACT:**

<p><b>GRAPHIC SCALES</b></p> <p>50' 25' 0 50' 100'</p> <p>PLANS</p> <p>50' 25' 0 50' 100'</p> <p>PROFILE (HORIZONTAL)</p> <p>10' 5' 0 10' 20'</p> <p>PROFILE (VERTICAL)</p>	<p><b>DESIGN DATA</b></p> <p>ADT 2014 = 460</p> <p>ADT 2035 = 700</p> <p>DHV = 11 %</p> <p>D = 60 %</p> <p>T = 32 % *</p> <p>V = 60 MPH</p> <p>FUNC. CLASS. = COLLECTOR</p> <p>* TTST 22% DUAL 10%</p> <p>REGIONAL TIER</p>	<p><b>PROJECT LENGTH</b></p> <p>LENGTH ROADWAY TIP PROJECT B-5117 = 0.368 MI.</p> <p>LENGTH STRUCTURE TIP PROJECT B-5117 = 0.020 MI.</p> <p>TOTAL LENGTH OF TIP PROJECT B-5117 = 0.388 MI.</p>	<p>Prepared In the Office of:</p> <p><b>DIVISION OF HIGHWAYS</b></p> <p>1000 Birch Ridge Dr. Raleigh, NC 27610</p> <hr/> <p>2012 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: AUGUST 14, 2012</p> <p>LETTING DATE: AUGUST 19, 2014</p> <p>REKHA PATEL, P.E. PROJECT ENGINEER</p> <p>MICHAEL W. LITTLE, P.E. PROJECT DESIGN ENGINEER</p>	<p>HYDRAULICS ENGINEER</p> <p>SIGNATURE: _____ P.E.</p> <p>ROADWAY DESIGN ENGINEER</p> <p><b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION</p> <p>SIGNATURE: _____ P.E.</p>	
---	---	--	--	---	--

14-AUG-2012 14:07 R:\Roadway\Proj\5117\_rdy\_tsh.dgn \$\$\$USERNAME\$\$\$

04/16/11

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	○ EP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	MLB
Proposed Wetland Boundary	MLB
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	○
Well	○
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	▬
False Sump	▽

## RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

## RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	○
Proposed Right of Way Line with Concrete or Granite R/W Marker	△
Proposed Control of Access Line with Concrete C/A Marker	△
Existing Control of Access	△
Proposed Control of Access	△
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
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
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	▬
Single Tree	⊕
Single Shrub	⊕
Hedge	-----
Woods Line	-----

## VEGETATION:

Orchard	⊕
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	⊕
Storm Sewer	S

## UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
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	⊕
Telephone Booth	□
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	□
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	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	A/G Water

## TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	TV
Designated U/G TV Cable (S.U.E.*)	TV
Recorded U/G Fiber Optic Cable	TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	TV FO

## GAS:

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

## SANITARY SEWER:

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

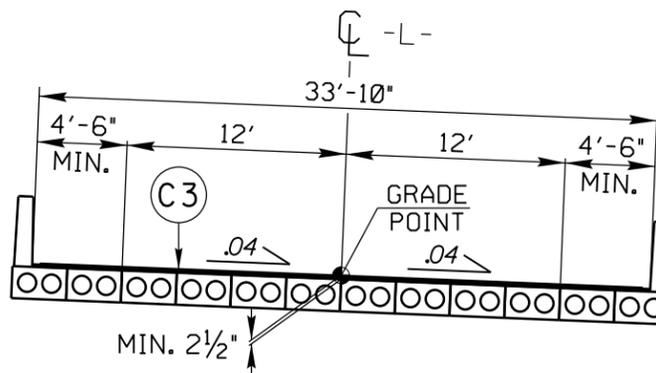
## MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	UTUL
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.

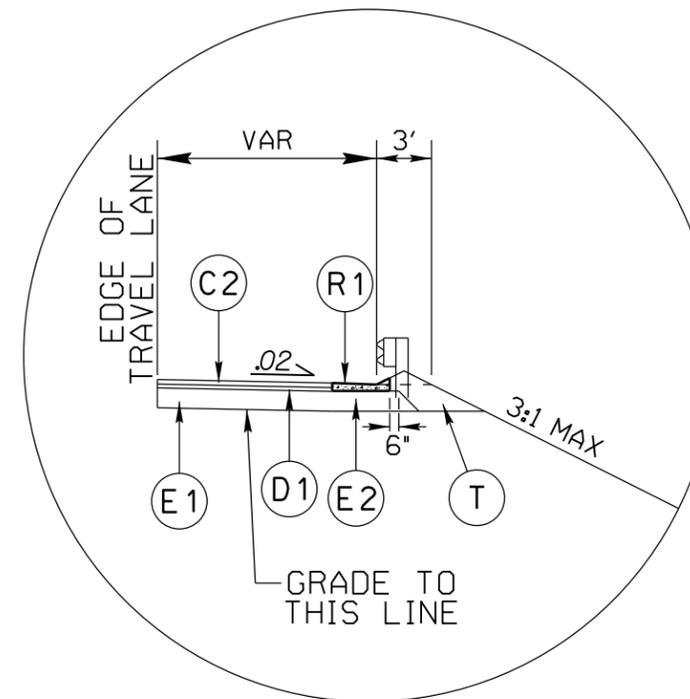
6/2/99

PROJECT REFERENCE NO. <b>B-5117</b>	SHEET NO. <b>2-A</b>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

PAVEMENT SCHEDULE	
C2	3" TYPE S9.5B
C3	VAR. DEPTH TYPE S9.5B
D1	2½" TYPE I19.0B
E1	5" TYPE B25.0B
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL



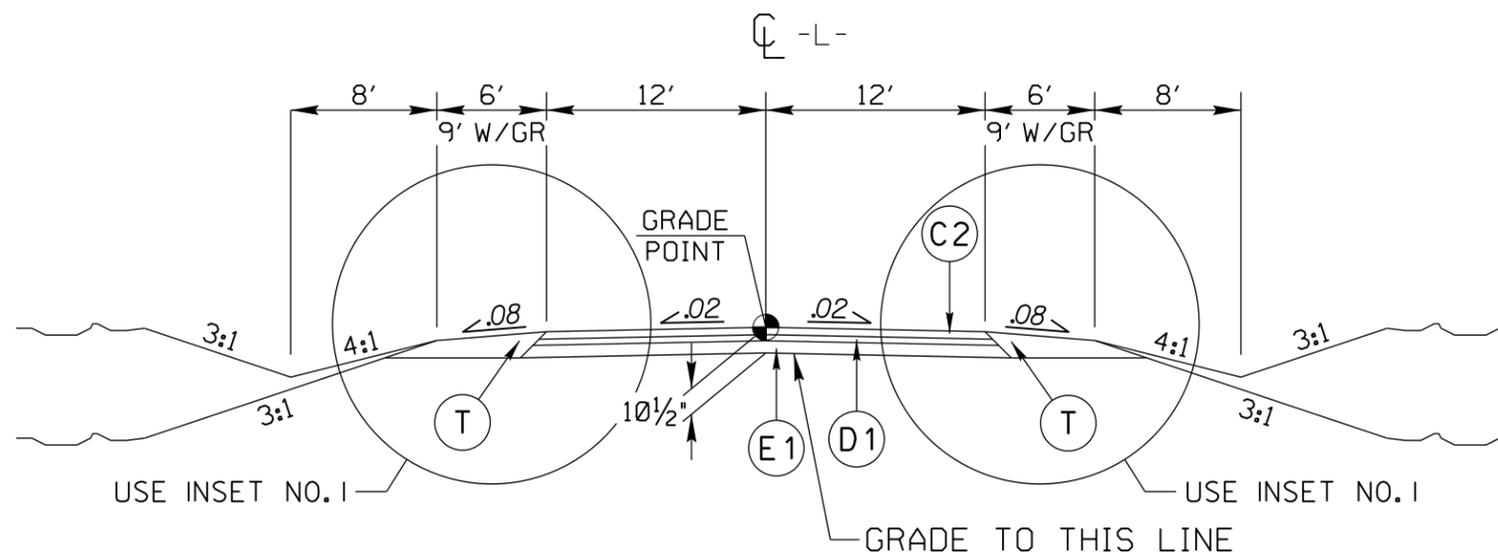
DETAIL SHOWING ASPHALT WEARING SURFACE ON CORED SLAB BRIDGE  
-L- STA. 25+62.21 TO -L- STA. 26+69.79



INSET NO. 1

INSET NO. 1

Use with Typical Section No. 2



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

-L- STA. 22+80.00 TO -L- STA. 25+62.21 (BEGIN BRIDGE)  
-L- STA. 26+69.79 (END BRIDGE) TO -L- STA. 30+00.00

USE INSET NO. 1 FOR:

-L- STA. 23+23.00 TO BEGIN OF APPROACH SLAB (RT.)  
-L- STA. 25+49 +/- TO BEGIN OF APPROACH SLAB (LT.) REVERSE  
END OF APPROACH SLAB TO -L- STA. 27+67.00 (RT.)  
END OF APPROACH SLAB TO -L- STA. 26+91 +/- (LT.) REVERSE

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PROJECT REFERENCE NO.	SHEET NO.
B-5117	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**-L- CURVE DATA**  
 PI Sta 26+49.09  
 $\Delta = 23^{\circ}06'05.4" (RT)$   
 $D = 1^{\circ}25'56.6"$   
 $L = 1612.79'$   
 $T = 817.50'$   
 $R = 4000.00'$   
 $SE = 04$   
 $RO = 120'$

**NAD 83/NSRS 2007**

10+00

15+00

20+00

4

SLEEPY CREEK FARMS INC.  
DB 239 PG 461  
PB 8 PG 52

1

CHESTER BARNHILL  
CLAUDIA H.  
DB 544 PG 519  
PB A-9 PG 90

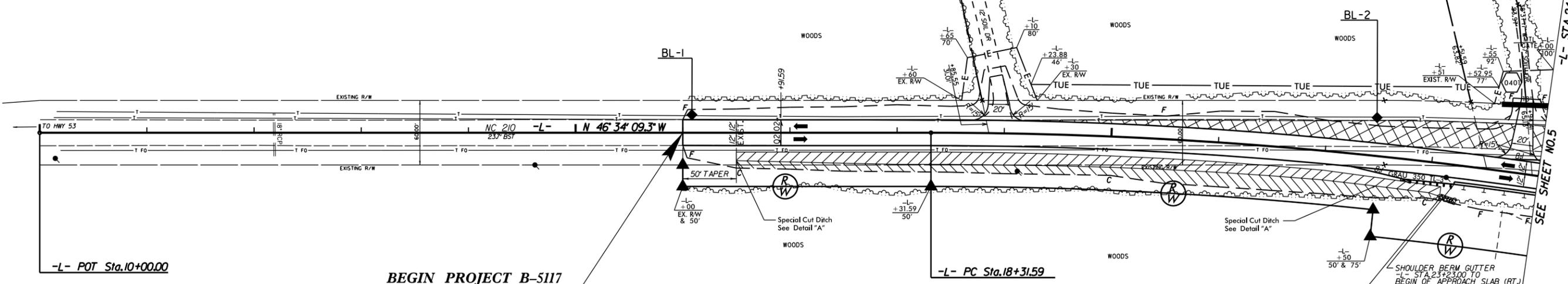
2

TRIPLE B LAND COMPANY LLC.  
DB 626 PG 902  
PB A-9 PG 90

3

L.G. BEATTY ESTATE  
DB 152 PG 10

REVISIONS

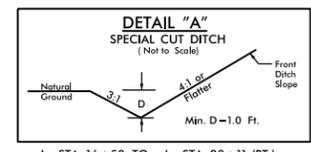


-L- POT Sta.10+00.00

**BEGIN PROJECT B-5117**  
-L- POT STA. 16 + 00.00

-L- PC Sta.18+31.59

5'x15'  
CLASS 4 RIP RAP PAD  
EST. 5 TONS  
19 SY GEOTEXTILE



-L- STA. 16 + 50 TO -L- STA. 23 + 11 (RT.)

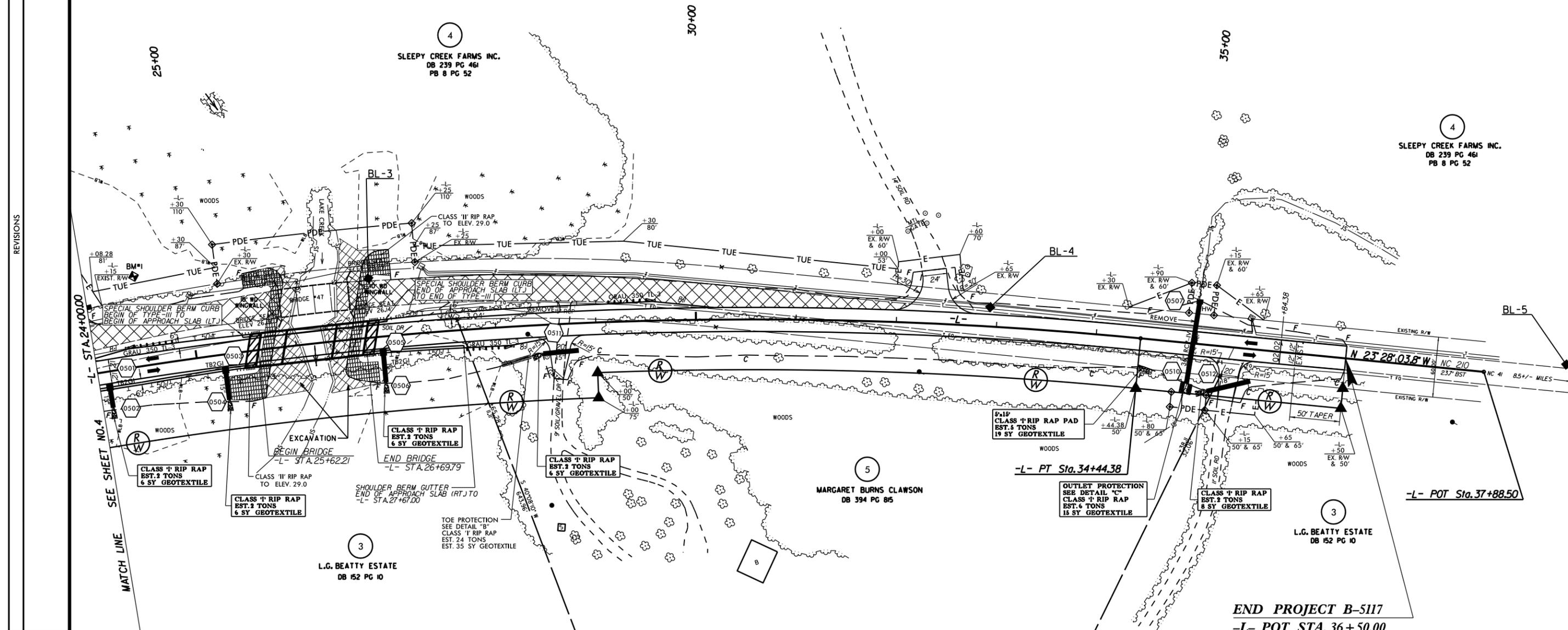
NOTE: SEE SHEET 6 FOR -L- PROFILE

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PROJECT REFERENCE NO. <b>B-5117</b>	SHEET NO. <b>5</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

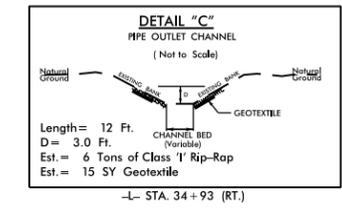
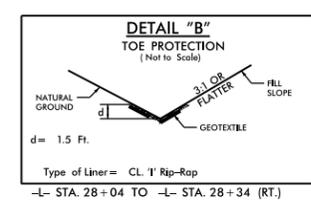
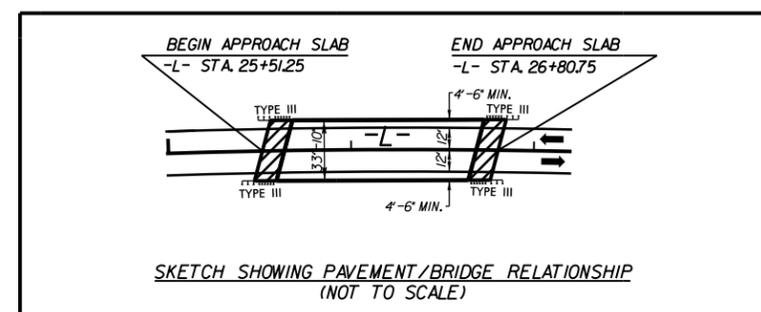
**-L- CURVE DATA**  
 PI Sta 26+49.09  
 $\Delta = 23^{\circ}06'05.4" (RT)$   
 $D = 125'56.6"$   
 $L = 1612.79'$   
 $T = 817.50'$   
 $R = 4000.00'$   
 $SE = .04$   
 $RO = 120'$

**NAD 83 NSRS 2007**



REVISIONS

SEE SHEET NO. 4  
MATCH LINE



NOTES: (1) SEE SHEET 6 FOR -L- PROFILE  
 (2) SEE SHEETS S-1 TO S- FOR STRUCTURE DETAILS

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