



PAT McCRORY  
*Governor*

NICHOLAS J. TENNYSON  
*Secretary*

November 3, 2015

Mr. Tom Steffens  
NCDOT Coordinator  
Washington Regulatory Field Office  
U. S. Army Corps of Engineers  
2407 W 5th Street  
Washington, NC 27889-1000

Mr. Stephen Lane  
NCDOT Coordinator  
N.C. Dept. of Environmental Quality  
Division of Coastal Management  
400 Commerce Avenue  
Morehead City, NC 28557

Dear Sirs:

Subject: Application for Section 10 and Section 404 Nationwide Permits (NWP) 23 and 12, Section 401 Water Quality Certification, Tar-Pamlico Riparian Buffer Authorization and CAMA General Permit for the replacement of Bridge No. 55 over Pantego Creek on US 264 in Pantego, Beaufort County; TIP B-5300; Federal Aid Project No. BRST-0264(53); Debit \$400 from WBS 46000.1.1.

The North Carolina Department of Transportation (NCDOT) proposes to replace existing Bridge No. 55 over Pantego Creek on US 264 in Pantego in Beaufort County. The project involves replacement of the existing 75-foot bridge and approaches with a new 95-foot double span bridge. The approach roadway will extend approximately 230 feet from the southern end of the new bridge and 174 feet from the northern end of the new bridge. The bridge will be crowned with a 2.5% cross-slope, with 12' travel lanes and 2'-3" shoulders and 5'-6" sidewalks, 28'-6" clear width and 42' (OTO width).

Please see enclosed copies of the Pre-Construction Notification (PCN), Preliminary Jurisdictional Determination Form, permit drawings, buffer drawings, utility drawings, stormwater management plan, and roadway plans for the project. A Programmatic Categorical Exclusion (PCE) was completed for this project on October 31, 2014 and distributed shortly thereafter. This project calls for a letting date of March 15, 2016 and a review date of January 26, 2016; however, the let date may advance as additional funding becomes available.

Project construction will require less 0.01 acre of permanent impact to surface water for placement of proposed bridge piers, and 0.01 acre of temporary impact for removal of existing piers. No impact to wetlands are anticipated. Bridge construction will also have allowable riparian buffer impact to 2,956 sq. ft. in Zone 1 and 2,174 sq. ft. in Zone 2. Utility work will require 0.04 acre of hand clearing in wetlands and allowable impacts to 1,551 sq. ft. of buffers in Zone 1 and 886 sq. ft. in Zone 2 associated with power poles and powerlines.



## **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. We are requesting issuance of NW 12 for utility relocations resulting from project construction.

Section 401 Permit: We anticipate 401 General Certification numbers 3891 and 3884 will apply to this project. Tar-Pamlico Riparian Buffer Authorization will also be needed for impact to riparian buffers.

Coastal Area Management Act: We further anticipate that the project qualifies for approval by the N.C. Division of Coastal Management under the General Permit for Replacement of Existing Bridges and Culverts.

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 PCE 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 Gordon Cashin at (919) 707-6107.

Sincerely,



*R* 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 checked="" type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 23 & 12 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 checked="" 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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

#### 2. Project Information

2a. Name of project:	Replacement of Bridge 55 over Pantego Creek on US 264
2b. County:	Beaufort
2c. Nearest municipality / town:	Pantego
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-5300

#### 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) 707-6107
3g. Fax no.:	(919) 431-2002
3h. Email address:	gcashin@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: 35.587494 (DD.DDDDDD) Longitude: -76.662776 (-DD.DDDDDD)
1c. Property size:	6.01 acres
<b>2. Surface Waters</b>	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Pantego Creek
2b. Water Quality Classification of nearest receiving water:	upstream: C, SW; downstream SC, NSW
2c. River basin:	Tar Pamlico River Basin
<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: Residential, urbanized, some forested	
3b. List the total estimated acreage of all existing wetlands on the property 0.30 acre.	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 380 feet	
3d. Explain the purpose of the proposed project: To replace a structurally deficient bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 75-foot bridge with a 95-foot bridge on the existing alignment with an off-site detour. 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: Requesting a preliminary JD at permitting	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): Gordon Cashin, Tyler Stanton	Agency/Consultant Company: NCDOT Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
<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 checked="" 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 type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>2g. Total wetland impacts</b>					0.0 Perm. 0.0 Temporary	
2h. Comments: 0.04 acre of wetlands will be handcleared for a utility power pole.						
<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 1 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Bridge pier removal	Pantego Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input checked="" type="checkbox"/> DWQ	60	0.01 ac
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	New bridge piers	Pantego Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input checked="" type="checkbox"/> DWQ	60	<0.01 ac
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
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		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <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>						<0.01 Perm 0.01 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				
O2 <input type="checkbox"/> P <input type="checkbox"/> T				
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
O4 <input type="checkbox"/> P <input type="checkbox"/> T				
<b>4f. Total open water impacts</b>				0.0 Permanent 0.0 Temporary

4g. Comments:

**5. Pond or Lake Construction**

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

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded
P1								
P2								
<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"/> Catawba	<input checked="" type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman	<input type="checkbox"/> 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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bridge	Pantego Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2956	2174
B2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Power lines	Pantego Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1551	886
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 longer than the existing bridge with fewer spans; the proposed bridge will be at approximately the same grade as the existing structure; an off site detour will be used.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Best Management Practices for the Protection of Surface Waters and Design Guidelines for Sensitive Watersheds will be implemented. An in-water work moratorium will be observed from February 15 <sup>th</sup> to June 30 <sup>th</sup> . Construction activities will adhere to guidelines outlined in Precautions for Construction in Areas Which May Be Used by the West Indian Manatee in North Carolina (2003 USFWS).		
<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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, explain: Due to the minimal amount of impacts, compensatory mitigation is not proposed.	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input 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 type="checkbox"/> Yes	
4b. Stream mitigation requested:	linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> 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:		
<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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments:	<input checked="" 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.	
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
<b>5. DWQ 401 Unit Stormwater Review</b>	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A
5b. Have all of the 401 Unit submittal requirements been met?	<input 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input checked="" 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? USFWS County Site, NC Natural Heritage site		
<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		
for <u>Richard Hancock</u> Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	<u>11-03-2015</u> Date



# APPLICATION for Major Development Permit

(last revised 12/27/06)

North Carolina DIVISION OF COASTAL MANAGEMENT

## 1. Primary Applicant/ Landowner Information

Business Name North Carolina Department Of Transportation (Ncdot)		Project Name (if applicable) B-5300	
Applicant 1: First Name Richard	MI W	Last Name Hancock	
Applicant 2: First Name	MI	Last Name	
<i>If additional applicants, please attach an additional page(s) with names listed.</i>			
Mailing Address 1598 Mail Service Center		PO Box	City Raleigh
		State NC	
ZIP 27699 1598	Country	Phone No. 919 - 707 - 6107 ext.	FAX No. - -
Street Address (if different from above)		City	State
		ZIP -	
Email gcashin@ncdot.gov			

## 2. Agent/Contractor Information

Business Name			
Agent/ Contractor 1: First Name	MI	Last Name	
Agent/ Contractor 2: First Name	MI	Last Name	
Mailing Address		PO Box	City
		State	
ZIP		Phone No. 1 - - ext.	Phone No. 2 - - ext.
FAX No.	Contractor #		
Street Address (if different from above)		City	State
		ZIP -	
Email			

&lt;Form continues on back&gt;

<b>3. Project Location</b>			
County (can be multiple) Beaufort	Street Address Bridge B-5300 on US 264	State Rd. # US 264	
Subdivision Name	City Pantego	State NC	Zip -
Phone No. - - ext.	Lot No.(s) (if many, attach additional page with list) , , , ,		
a. In which NC river basin is the project located? Tar-Pamlico	b. Name of body of water nearest to proposed project Pantego Creek		
c. Is the water body identified in (b) above, natural or manmade? <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Manmade <input type="checkbox"/> Unknown	d. Name the closest major water body to the proposed project site. Pantego Creek		
e. Is proposed work within city limits or planning jurisdiction? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	f. If applicable, list the planning jurisdiction or city limit the proposed work falls within.		

<b>4. Site Description</b>	
a. Total length of shoreline on the tract (ft.) 80 LF	b. Size of entire tract (sq.ft.) 21,780.00 sq. ft.
c. Size of individual lot(s) (If many lot sizes, please attach additional page with a list)	d. Approximate elevation of tract above NHW (normal high water) or NWL (normal water level) +/- 3' <input checked="" type="checkbox"/> NHW or <input type="checkbox"/> NWL
e. Vegetation on tract Brushy/woody vegetation on the over banks.	
f. Man-made features and uses now on tract Existing US 264	
g. Identify and describe the existing land uses <u>adjacent</u> to the proposed project site. Northeast, northwest and southwest quadrants have local business, southeast quadrant has woods and brushes.	
h. How does local government zone the tract? N/A	i. Is the proposed project consistent with the applicable zoning? (Attach zoning compliance certificate, if applicable) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
j. Is the proposed activity part of an urban waterfront redevelopment proposal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
k. Has a professional archaeological assessment been done for the tract? If yes, attach a copy. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA  If yes, by whom?	
l. Is the proposed project located in a National Registered Historic District or does it involve a National Register listed or eligible property? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	

<Form continues on next page>

m. (i) Are there wetlands on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
(ii) Are there coastal wetlands on the site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(iii) If yes to either (i) or (ii) above, has a delineation been conducted? <i>(Attach documentation, if available)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
n. Describe existing wastewater treatment facilities. N/A	
o. Describe existing drinking water supply source. N/A	
p. Describe existing storm water management or treatment systems. N/A	

<b>5. Activities and Impacts</b>	
a. Will the project be for commercial, public, or private use?	<input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Public/Government <input type="checkbox"/> Private/Community
b. Give a brief description of purpose, use, and daily operations of the project when complete. The existing six span 75' bridge is being replaced with a proposed 95' double span cored slab structure. The bridge will be crowned with 2.5% cross-slope, with 12' travel lanes and 2'-3" shoulders and 5'-6" sidewalks, 28'-6" Clear Width and 42' (OTO Width). Existing drainage patterns are being maintained. Runoff is being discharged as far away from the stream as practicable. No deck drains required. Drainage inlets have been added to minimize flow from the roadway onto the bridge deck.	
c. Describe the proposed construction methodology, types of construction equipment to be used during construction, the number of each type of equipment and where it is to be stored. The proposed bridge will be composed of pre-cast cored slab segments which will be delivered to the site by truck and will be placed by crane.	
d. List all development activities you propose. Replace bridge and grade roadway approaches and shoulders.	
e. Are the proposed activities maintenance of an existing project, new work, or both?	Both
f. What is the approximate total disturbed land area resulting from the proposed project?	0.5 <input type="checkbox"/> Sq.Ft or <input checked="" type="checkbox"/> Acres
g. Will the proposed project encroach on any public easement, public accessway or other area that the public has established use of?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
h. Describe location and type of existing and proposed discharges to waters of the state. The proposed inlets will collect water from the roadway and discharge into Pantego Creek.	
i. Will wastewater or stormwater be discharged into a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
If yes, will this discharged water be of the same salinity as the receiving water?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
j. Is there any mitigation proposed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
If yes, attach a mitigation proposal.	

**<Form continues on back>**

**6. Additional Information**

In addition to this completed application form, (MP-1) the following items below, if applicable, must be submitted in order for the application package to be complete. Items (a) – (f) are always applicable to any major development application. Please consult the application instruction booklet on how to properly prepare the required items below.

- a. A project narrative.
- b. An accurate, dated work plat (including plan view and cross-sectional drawings) drawn to scale. Please give the present status of the proposed project. Is any portion already complete? If previously authorized work, clearly indicate on maps, plats, drawings to distinguish between work completed and proposed.
- c. A site or location map that is sufficiently detailed to guide agency personnel unfamiliar with the area to the site.
- d. A copy of the deed (with state application only) or other instrument under which the applicant claims title to the affected properties.
- e. The appropriate application fee. Check or money order made payable to DENR.

f. A list of the names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail. Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management.

Name	Phone No.
Address	
Name	Phone No.
Address	
Name	Phone No.
Address	

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

\_\_\_\_\_

\_\_\_\_\_

- h. Signed consultant or agent authorization form, if applicable.
- i. Wetland delineation, if necessary.
- j. A signed AEC hazard notice for projects in oceanfront and inlet areas. (Must be signed by property owner)
- k. A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A 1-10), if necessary. If the project involves expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.

**7. Certification and Permission to Enter on Land**

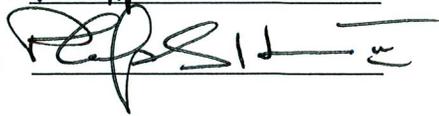
I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to the conditions and restrictions contained in the permit.

I certify that I am authorized to grant, and do in fact grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

Date 11/4/2015

Print Name Philip S. Harris III

Signature 

for Richard Hancock

- Please indicate application attachments pertaining to your proposed project.
- DCM MP-2 Excavation and Fill Information
  - DCM MP-3 Upland Development
  - DCM MP-4 Structures Information
  - DCM MP-5 Bridges and Culverts

# BRIDGES and CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

**1. BRIDGES**  This section not applicable

a. Is the proposed bridge:  
 Commercial  Public/Government  Private/Community

b. Water body to be crossed by bridge:  
Pantego Creek

c. Type of bridge (construction material):  
Concrete Cored Slab

d. Water depth at the proposed crossing at NLW or NWL:  
+/- 10' at NLW

e. (i) Will proposed bridge replace an existing bridge?  Yes  No  
If yes,  
(ii) Length of existing bridge: 75  
(iii) Width of existing bridge: 28.4  
(iv) Navigation clearance underneath existing bridge: NA  
(v) Will all, or a part of, the existing bridge be removed?  
(Explain) Existing bridge will be completely removed.

f. (i) Will proposed bridge replace an existing culvert?  Yes  No  
If yes,  
(ii) Length of existing culvert: \_\_\_\_\_  
(iii) Width of existing culvert: \_\_\_\_\_  
(iv) Height of the top of the existing culvert above the NHW or NWL: \_\_\_\_\_  
(v) Will all, or a part of, the existing culvert be removed?  
(Explain)

g. Length of proposed bridge: 95'

h. Width of proposed bridge: 42'

i. Will the proposed bridge affect existing water flow?  Yes  No  
If yes, explain:

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening?  Yes  No  
If yes, explain:

k. Navigation clearance underneath proposed bridge: NA

l. Have you contacted the U.S. Coast Guard concerning their approval?  Yes  No  
If yes, explain: Advance Approval requested September 10, 2015

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

n. Height of proposed bridge above wetlands: NA

**2. CULVERTS**  This section not applicable

a. Number of culverts proposed: \_\_\_\_\_

b. Water body in which the culvert is to be placed:

< Form continues on back >

c. Type of culvert (construction material):

---

d. (i) Will proposed culvert replace an existing bridge?  Yes  No

If yes,

(ii) Length of existing bridge: \_\_\_\_\_

(iii) Width of existing bridge: \_\_\_\_\_

(iv) Navigation clearance underneath existing bridge: \_\_\_\_\_

(v) Will all, or a part of, the existing bridge be removed? (Explain)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

e. (i) Will proposed culvert replace an existing culvert?  Yes  No

If yes,

(ii) Length of existing culvert(s): \_\_\_\_\_

(iii) Width of existing culvert(s): \_\_\_\_\_

(iv) Height of the top of the existing culvert above the NHW or NWL: \_\_\_\_\_

(v) Will all, or a part of, the existing culvert be removed? (Explain)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

f. Length of proposed culvert: \_\_\_\_\_

g. Width of proposed culvert: \_\_\_\_\_

h. Height of the top of the proposed culvert above the NHW or NWL.

\_\_\_\_\_

i. Depth of culvert to be buried below existing bottom contour.

\_\_\_\_\_

j. Will the proposed culvert affect navigation by reducing or increasing the existing navigable opening?  Yes  No

If yes, explain:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

k. Will the proposed culvert affect existing water flow?  Yes  No

If yes, explain:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3. EXCAVATION and FILL**

This section not applicable

a. (i) Will the placement of the proposed bridge or culvert require any excavation below the NHW or NWL?  Yes  No

If yes,

(ii) Avg. length of area to be excavated: \_\_\_\_\_

(iii) Avg. width of area to be excavated: \_\_\_\_\_

(iv) Avg. depth of area to be excavated: \_\_\_\_\_

(v) Amount of material to be excavated in cubic yards: \_\_\_\_\_

b. (i) Will the placement of the proposed bridge or culvert require any excavation within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

CW \_\_\_\_\_  SAV \_\_\_\_\_  SB \_\_\_\_\_

WL \_\_\_\_\_  None

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

c. (i) Will the placement of the proposed bridge or culvert require any high-ground excavation?  Yes  No

If yes,

(ii) Avg. length of area to be excavated: \_\_\_\_\_

(iii) Avg. width of area to be excavated: \_\_\_\_\_

(iv) Avg. depth of area to be excavated: \_\_\_\_\_

(v) Amount of material to be excavated in cubic yards: \_\_\_\_\_

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

(i) Location of the spoil disposal area: \_\_\_\_\_

(ii) Dimensions of the spoil disposal area: \_\_\_\_\_

(iii) Do you claim title to the disposal area?  Yes  No (If no, attach a letter granting permission from the owner.)

(iv) Will the disposal area be available for future maintenance?  Yes  No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

CW  SAV  WL  SB  None

If any boxes are checked, give dimensions if different from (ii) above. \_\_\_\_\_

(vi) Does the disposal area include any area below the NHW or NWL? ?  Yes  No

If yes, give dimensions if different from (ii) above. \_\_\_\_\_

e. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed below NHW or NWL?  Yes  No

If yes,

(ii) Avg. length of area to be filled: \_\_\_\_\_

(iii) Avg. width of area to be filled: \_\_\_\_\_

(iv) Purpose of fill: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

f. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

CW \_\_\_\_\_  SAV \_\_\_\_\_  SB \_\_\_\_\_

WL \_\_\_\_\_  None

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

g. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed on high-ground?  Yes  No

If yes,

(ii) Avg. length of area to be filled: \_\_\_\_\_

(iii) Avg. width of area to be filled: \_\_\_\_\_

(iv) Purpose of fill: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**4. GENERAL**

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

If yes, explain: See attached utility narrative

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

b. Will the proposed project require the construction of any temporary detour structures?  Yes  No

If yes, explain:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.*

< Form continues on back >

c. Will the proposed project require any work channels?  
 Yes  No

If yes, complete Form DCM-MP-2.

d. How will excavated or fill material be kept on site and erosion controlled?

NA

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

f. Will wetlands be crossed in transporting equipment to project site?  
 Yes  No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

g. Will the placement of the proposed bridge or culvert require any shoreline stabilization?  
 Yes  No

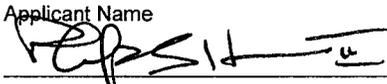
If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.



11/4/2015  
Date

B-5300  
Project Name

NCDOT  
Applicant Name

 for Richard Hancock  
Applicant Signature

**PRELIMINARY JURISDICTIONAL DETERMINATION FORM**

**BACKGROUND INFORMATION**

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

**B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:**  
Gordon Cashin, NCDOT, 1598 Mail Service Center, Raleigh, NC 27699-1598

**C. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAW-RG-L**

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:**  
TIP: B-5300 Description: Replace Bridge No. 55 over Pantego Creek on US  
264

**(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)**

State: NC County/parish/borough: Beaufort City: Pantego  
Center coordinates of site (lat/long in degree decimal format):  
Lat 35.587606 Long. -76.662696  
Universal Transverse Mercator: NA  
Name of nearest waterbody: Pantego Creek  
Identify (estimate) amount of waters in the review area:  
Non-wetland waters: See table, linear feet: 200  
Cowardin Class: Riverine  
Stream Flow: Perennial  
Wetlands: 0.30 acres.  
Cowardin Class: Forested

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: Pantego Creek  
Non-Tidal: Pantego Creek, upstream of the bridge

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

- Office (Desk) Determination Date:  
 Field Determination Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this

preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring “pre-construction notification” (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant’s acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply**

- checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant
- Data sheets prepared/submitted by or on behalf of the applicant/consultant
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24000;
- USDA Natural Resources Conservation Service Soil Survey  
Citation:
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): or  Other (Name & Date):
- Previous determination(s). File no. and date of response letter:
- Other information (please specify): Figure 3 and Tables 5 & 6 from the Natural Resources Technical Report showing jurisdictional areas.

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

\_\_\_\_\_  
Signature and date of  
Regulatory Project Manager  
(REQUIRED)

*Thal C. Ellett* 11/3/15  
\_\_\_\_\_  
Signature and date of  
person requesting preliminary JD  
(REQUIRED, unless obtaining  
the signature is impracticable)





North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN

FOR NCDOT PROJECTS



(Version 2.02; Released April 2015)

WBS Element: 46000.1.1      TIP No.: B-5300      County(ies): Beaufort      Page 1 of 1

General Project Information

WBS Element:	46000.1.1	TIP Number:	B-5300	Project Type:	Bridge Replacement	Date:	9/23/2015
NCDOT Contact:	Paul Jordan		Contractor / Designer:	Shirshant Sharma			
Address:	NCDOT Hydraulics Unit 1590 Mail Service Center Raleigh, NC - 27699-1590		Address:	2801 Yorkmont Road, Suite 100			
	Phone:	919-707-6700		Phone:	707-357-5511		
	Email:	pajordan@ncdot.gov		Email:	shirshant.sharma@amecfw.com		
City/Town:	Pantego		County(ies):	Beaufort			
River Basin(s):	Tar-Pamlico		CAMA County?	Yes			
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	500 ft	Surrounding Land Use:	Rural
Project Built-Upon Area (ac.)	Proposed Project		Existing Site
	0.5	ac.	0.4 ac.
Typical Cross Section Description:	(Approach) 2 - 12' lanes with Curb and Gutter (Bridge) 2 - 12' lane with 2.25' shoulders and 5.5' sidewalks		(Approach) 2 - 12' lanes with 2' shoulders LT, 5' shoulder RT (Bridge) 2 - 13' lanes with 5' Sidewalk
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	390	Year: 2014
	Existing:	530	Year: 2007

**General Project Narrative:**  
(Description of Minimization of Water Quality Impacts)

The existing six span 75' bridge is being replaced with a proposed 95' double span cored slab structure. The bridge will be crowned with 2.5% cross-slope, with 12' travel lanes and 2'-3" shoulders and 5'-6" sidewalks, 28'-6" Clear Width and 42' (OTO Width). Existing drainage patterns are being maintained. Runoff is being discharged as far away from the stream as practicable. No deck drains required. Drainage inlets have been added to minimize flow from the roadway onto the bridge deck.

Waterbody Information

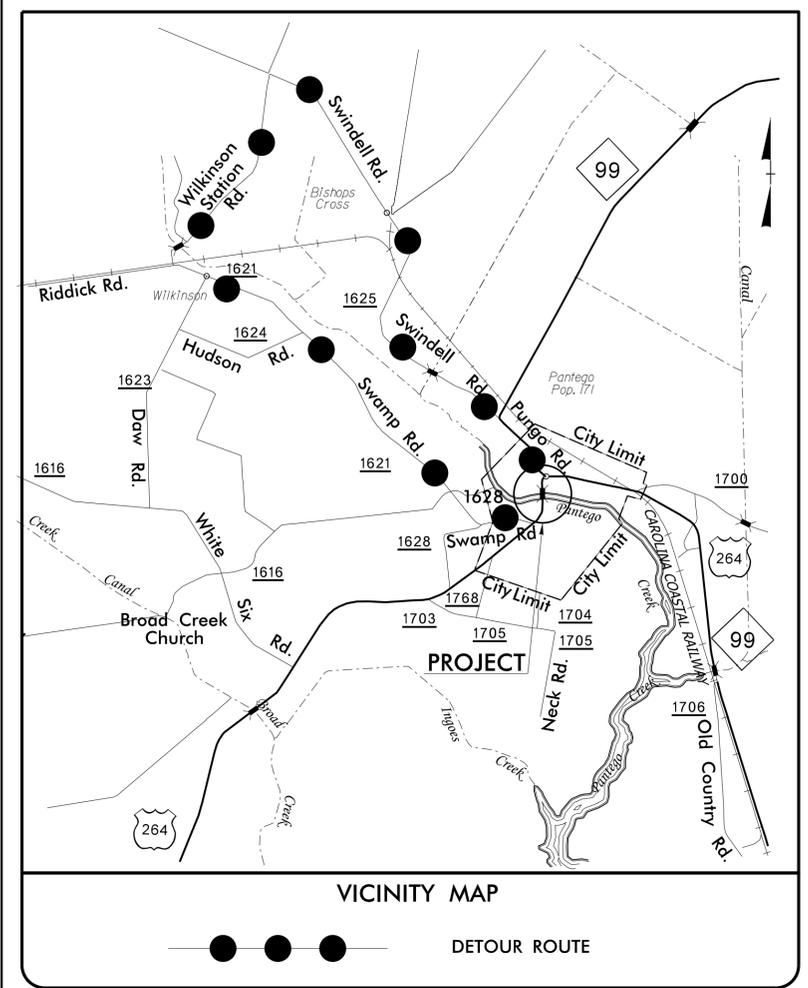
Surface Water Body (1):	Pantego Creek		NCDWR Stream Index No.:	29-34-34-(1), 29-34-34-(2)			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C		Class SC			
	Supplemental Classification:	Swamp Waters (Sw)		(NSW)			
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:				Buffer Rules in Effect:	Tar-Pamlico		
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
(If yes, provide justification in the General Project Narrative)							

9/30/2015

09/28/2015

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

**TIP PROJECT: B-5300**



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**BEAUFORT COUNTY**

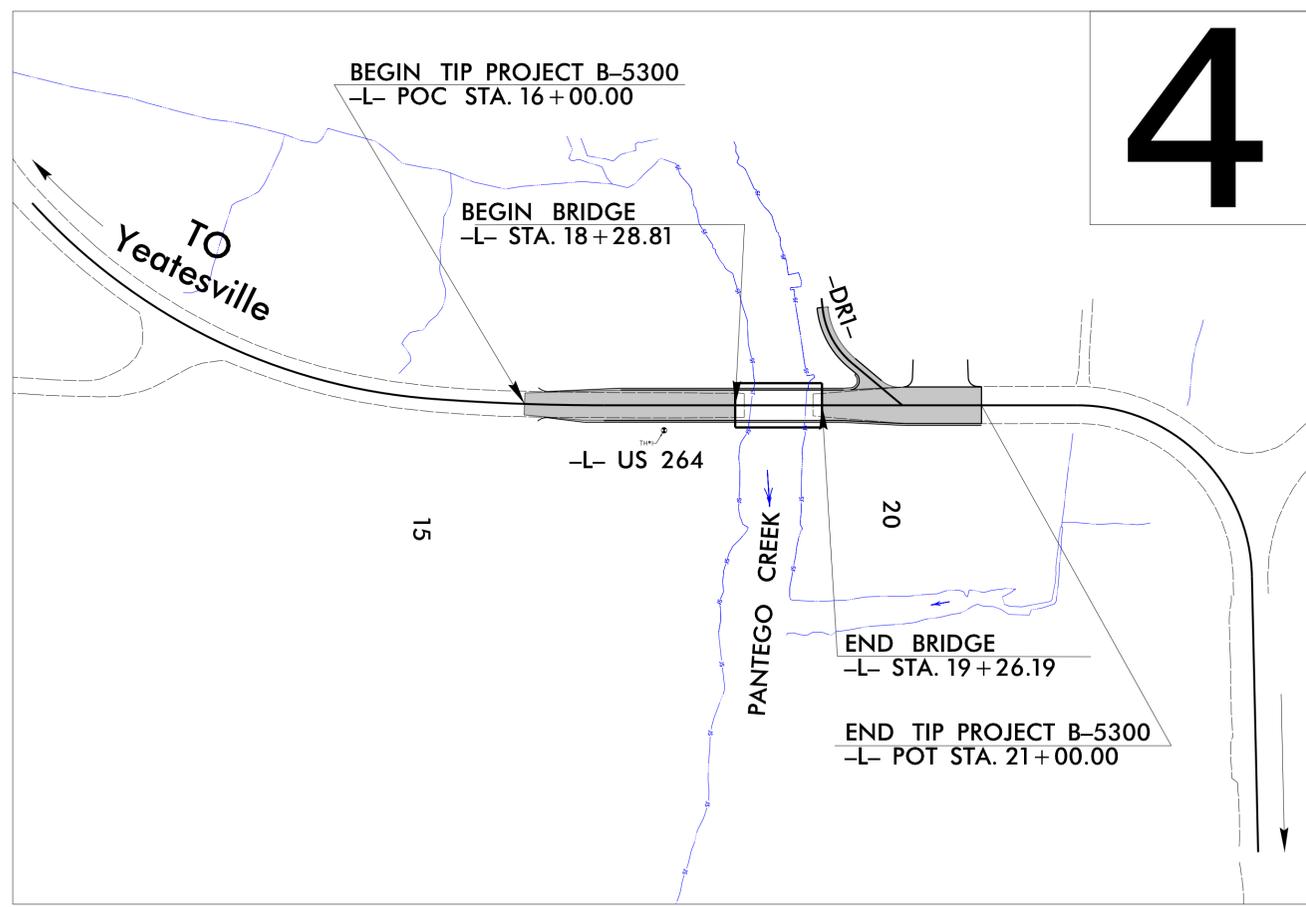
**LOCATION: REPLACE BRIDGE NO. 55 OVER PANTEGO CREEK ON US 264**

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

**WETLAND AND SURFACE WATER IMPACTS PERMIT**

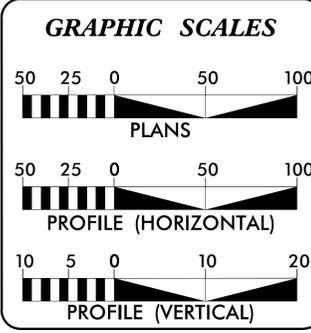
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5300	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46000.1.1	BRSTP-0264(53)	P.E.	
46000.2.2		R/W	
		CONST	

PERMIT DRAWING  
SHEET 1 OF 5



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

**CONTRACT:**



**DESIGN DATA**

ADT 2017 = 4474  
ADT 2037 = 7170

K = 10 %  
D = 60 %  
T = 14 % \*  
V = 30 MPH

\* TTST = 8% DUAL = 6%

FUNC CLASS = ARTERIAL  
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5300 = 0.077 MILES

LENGTH STRUCTURE TIP PROJECT B-5300 = 0.018 MILES

TOTAL LENGTH TIP PROJECT B-5300 = 0.095 MILES

Prepared in the Office of:  
**AMEC Foster Wheeler Environment & Infrastructure, Inc.**  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
MARCH 20, 2015

**LETTING DATE:**  
MARCH 15, 2016

**W. S. HOOD, PE**  
PROJECT ENGINEER

**BRAD TRIPP, PE**  
PROJECT DESIGN ENGINEER

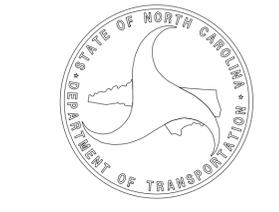
**GARY LOVERING, PE**  
PROJECT ENGINEER  
NCDOT ROADWAY DESIGN

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

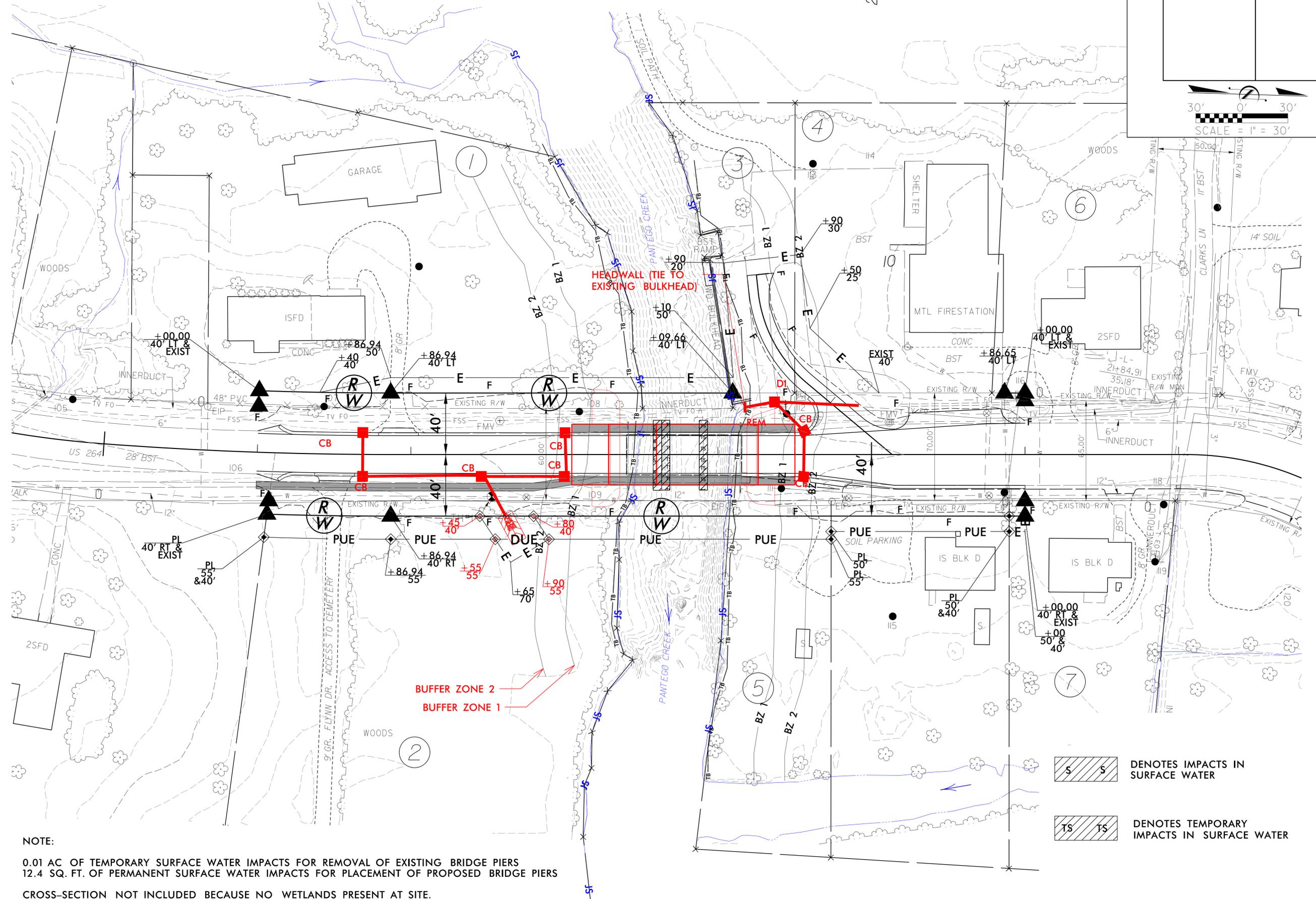
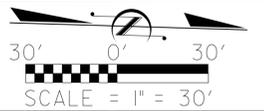
\$\$\$\$\$ SYSTEM \$\$\$\$\$\$  
\$\$\$\$\$ DGN \$\$\$\$\$\$  
\$\$\$\$\$ USER NAME \$\$\$\$\$\$



# WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING  
SHEET 3 OF 5

PROJECT REFERENCE NO. <b>B-5300</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**NOTE:**  
 0.01 AC OF TEMPORARY SURFACE WATER IMPACTS FOR REMOVAL OF EXISTING BRIDGE PIERS  
 12.4 SQ. FT. OF PERMANENT SURFACE WATER IMPACTS FOR PLACEMENT OF PROPOSED BRIDGE PIERS  
 CROSS-SECTION NOT INCLUDED BECAUSE NO WETLANDS PRESENT AT SITE.

**S S** DENOTES IMPACTS IN SURFACE WATER  
**TS TS** DENOTES TEMPORARY IMPACTS IN SURFACE WATER

9/30/2015

REVISIONS

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shurabshurab

5/28/99

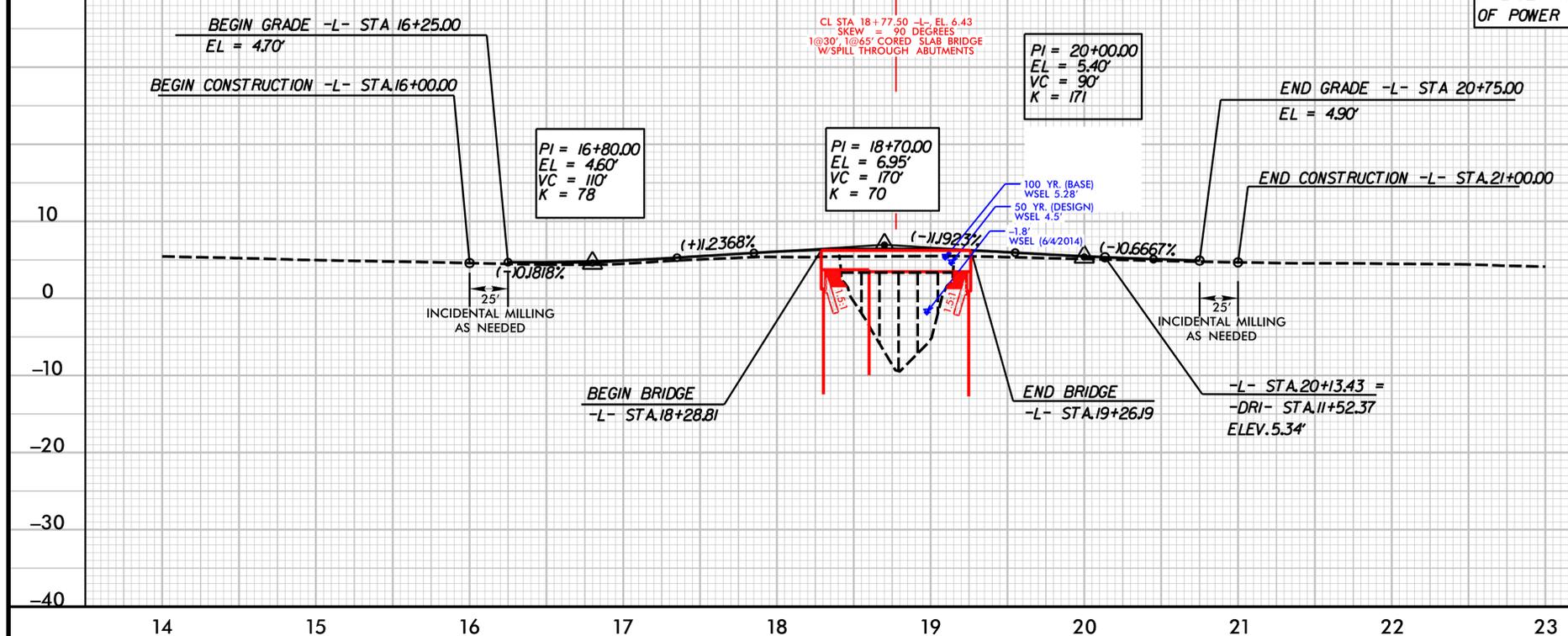


AMEC Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO. <b>B-5300</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

# -L-

BM-1, -BL- 30+32  
15' LT. ELEV. = 3.9'  
NAIL SET IN BASE  
OF POWER POLE



**BRIDGE HYDRAULIC DATA**

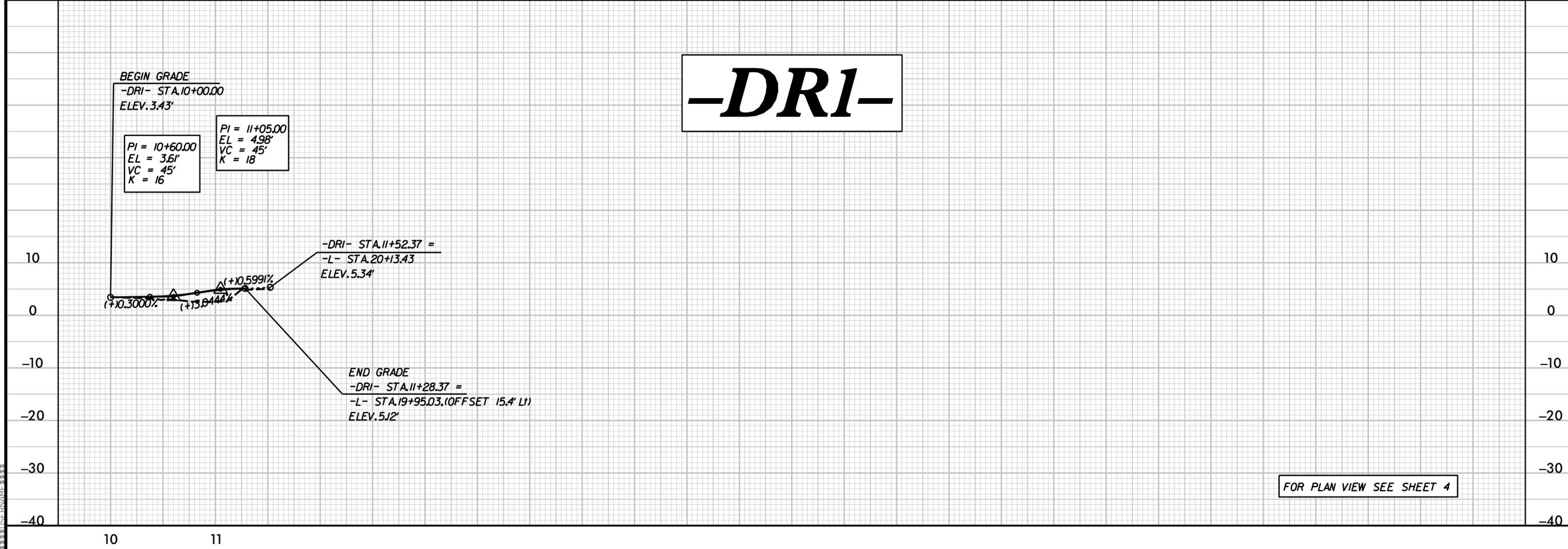
DESIGN DISCHARGE	2,389 cfs
DESIGN FREQUENCY	50 yr
DESIGN HW ELEVATION	4.5 ft
BASE DISCHARGE	3,050 cfs
BASE FREQUENCY	100 yr
BASE HW ELEVATION	5.28 ft
OVERTOPPING DISCHARGE	2,389 cfs
OVERTOPPING FREQUENCY	50 yr
OVERTOPPING ELEVATION	4.5 ft
DATE OF SURVEY	6/4/2014
W.S.ELEVATION	-1.8 ft
AT DATE OF SURVEY	

PERMIT DRAWING  
SHEET 4 OF 5

FOR PLAN VIEW SEE SHEET 4

9/30/2015

# -DRI-



FOR PLAN VIEW SEE SHEET 4

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9/30/2015

**WETLAND PERMIT IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS					
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)*	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)	
1	-L- 19+28 - 13+26'	Existing Bridge Piers											
1	-L- 19+28 - 13+26'	Proposed Bridge Piers						<0.01	0.010	0			
<b>TOTALS*:</b>								<0.01	0.010	0	0	0	

NOTES:  
 0.01 AC OF TEMPORARY SURFACE WATER IMPACTS FOR REMOVAL OF EXISTING PIERS AND CAUSEWAY  
 12.4 SQ. FT. OF PERMANENT SURFACE WATER IMPACTS FOR PLACEMENT OF PROPOSED BRIDGE PIERS.

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 9/21/2015  
 BEAUFORT COUNTY  
 BRIDGE NO 55 ON US 264  
 OVER PANTEGO CREEK  
 SHEET 5 OF 5

Revised 04/09/2013

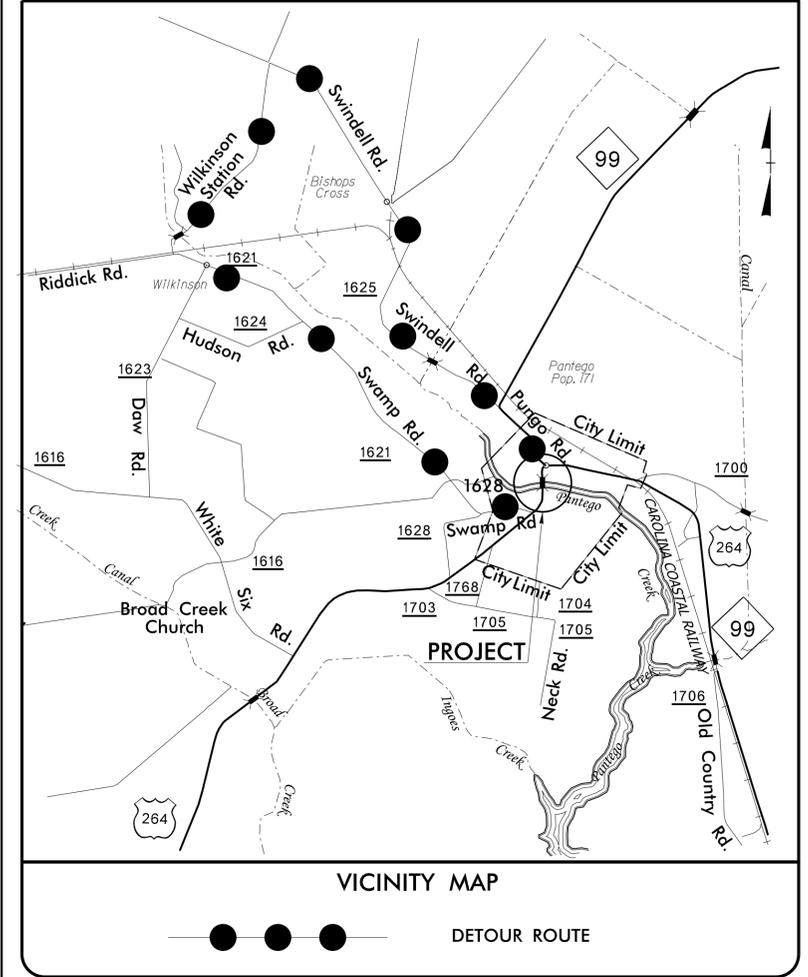
9/30/2015

09/28/2015

**TIP PROJECT: B-5300**

**CONTRACT:**

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



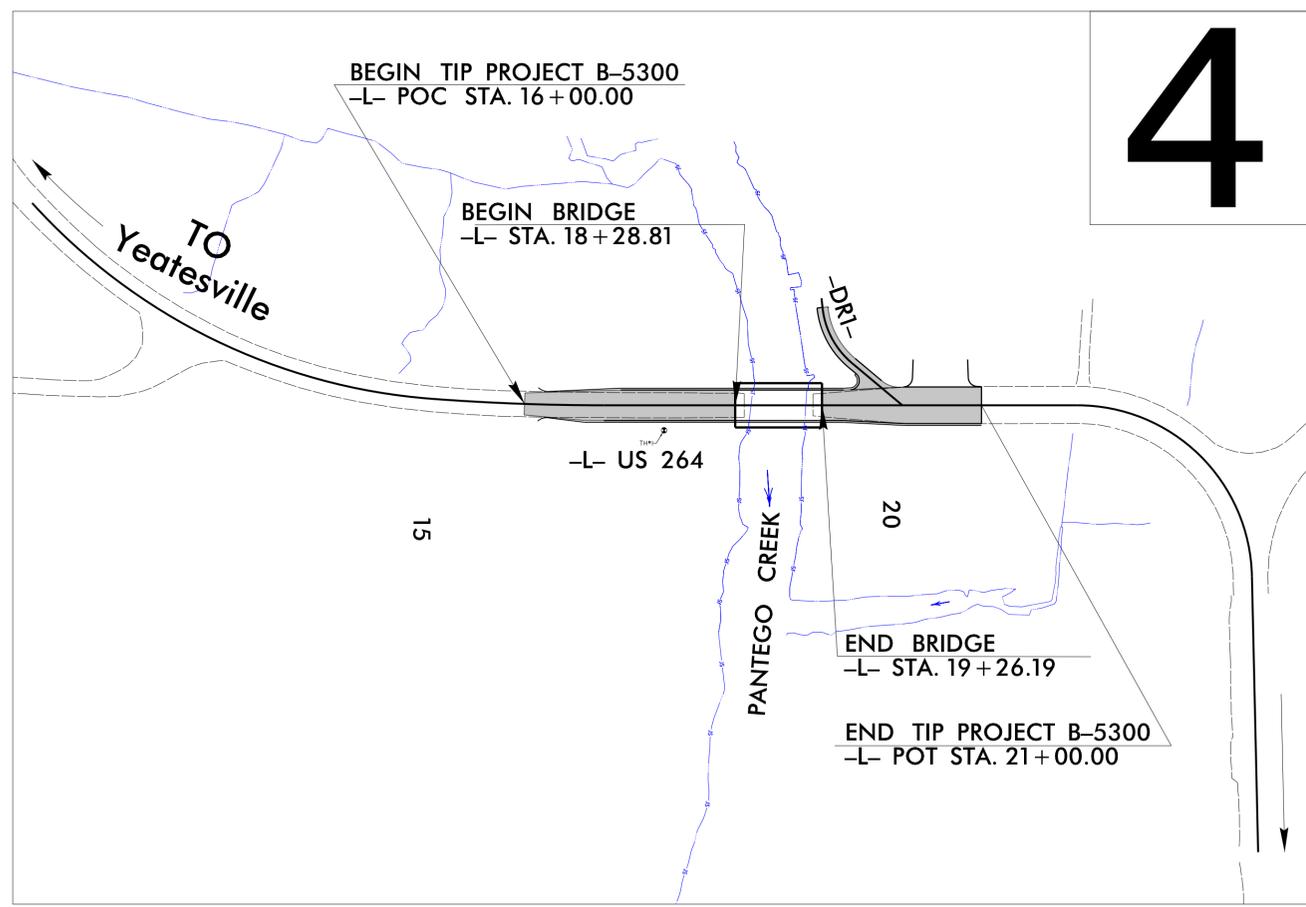
VICINITY MAP  
● ● ● DETOUR ROUTE

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**BEAUFORT COUNTY**

**LOCATION: REPLACE BRIDGE NO. 55 OVER PANTEGO CREEK ON US 264**

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

**BUFFER IMPACTS PERMITS**



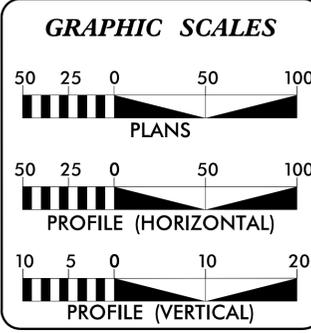
THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>B-5300</b>	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46000.1.1	BRSTP-0264(53)	P.E.	
46000.2.2		R/W	
		CONST	

Buffer Drawing  
Sheet 1 of 5



\$\$\$\$\$\$ SYSTEM \$\$\$\$\$\$ DGN \$\$\$\$\$\$ USERNAME \$\$\$\$\$\$



**DESIGN DATA**

ADT 2017 = 4474  
ADT 2037 = 7170  
K = 10 %  
D = 60 %  
T = 14 % \*  
V = 30 MPH  
\* TTST = 8% DUAL = 6%  
FUNC CLASS = ARTERIAL  
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5300 = 0.077 MILES  
LENGTH STRUCTURE TIP PROJECT B-5300 = 0.018 MILES  
TOTAL LENGTH TIP PROJECT B-5300 = 0.095 MILES

Prepared in the Office of:  
**AMEC Foster Wheeler Environment & Infrastructure, Inc.**  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
MARCH 20, 2015

**LETTING DATE:**  
MARCH 15, 2016

**W. S. HOOD, PE**  
PROJECT ENGINEER

**BRAD TRIPP, PE**  
PROJECT DESIGN ENGINEER

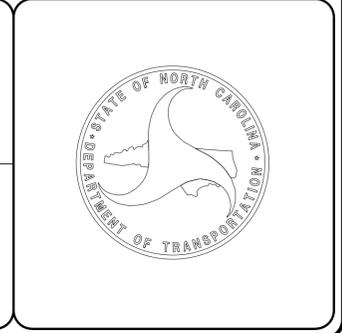
**GARY LOVERING, PE**  
PROJECT ENGINEER  
NCDOT ROADWAY DESIGN

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

9/30/2015

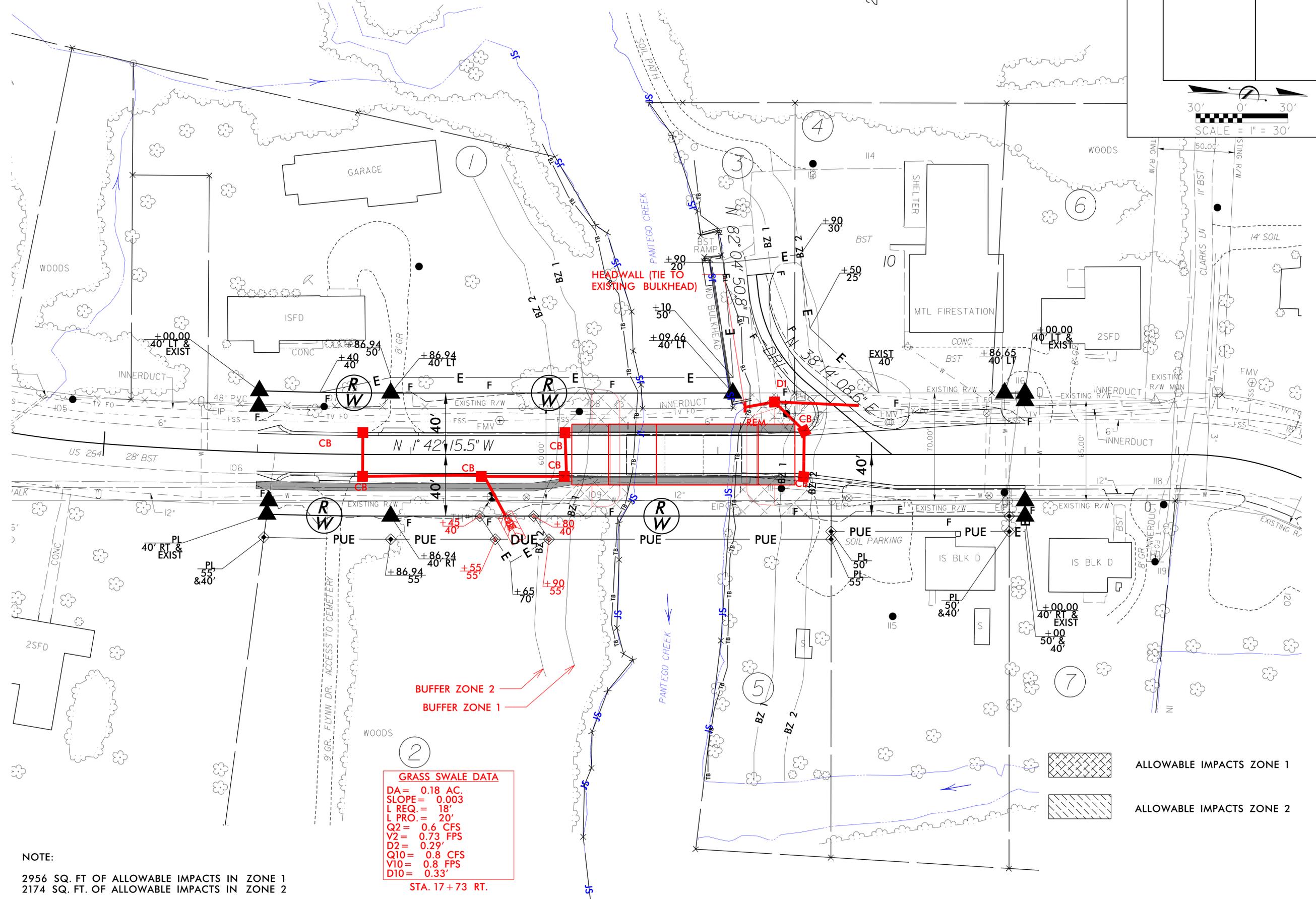
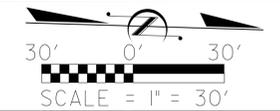
REVISIONS

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shurabshurab

# BUFFER IMPACTS PERMIT

Buffer Drawing  
Sheet 2 of 5

PROJECT REFERENCE NO. B-5300	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BUFFER ZONE 2  
 BUFFER ZONE 1

GRASS SWALE DATA	
DA =	0.18 AC.
SLOPE =	0.003
L REQ. =	18'
L PRO. =	20'
Q2 =	0.6 CFS
V2 =	0.73 FPS
D2 =	0.29'
Q10 =	0.8 CFS
V10 =	0.8 FPS
D10 =	0.33'
STA. 17 + 73 RT.	



ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2

**NOTE:**

2956 SQ. FT. OF ALLOWABLE IMPACTS IN ZONE 1  
 2174 SQ. FT. OF ALLOWABLE IMPACTS IN ZONE 2

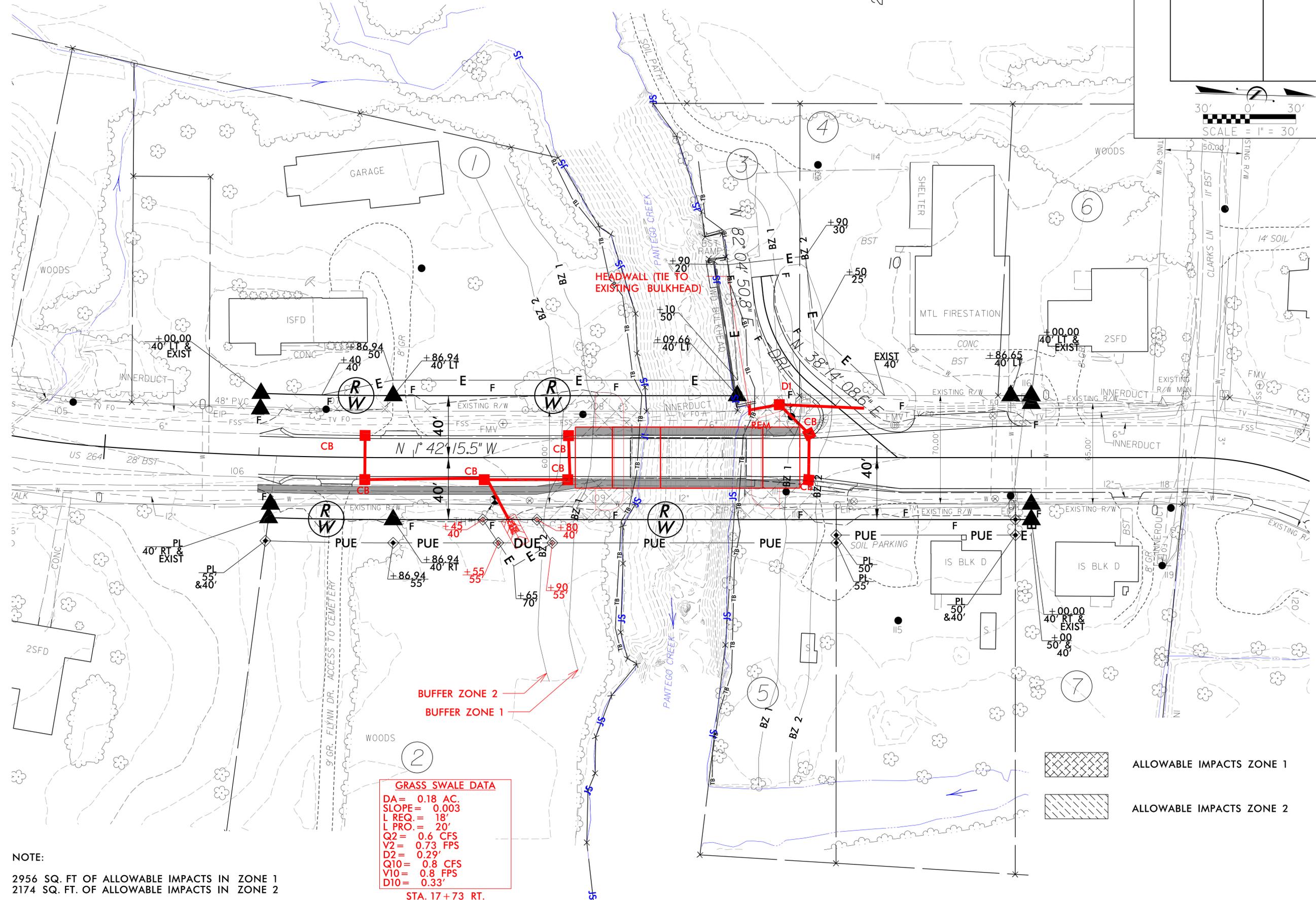
9/30/2015

REVISIONS

# BUFFER IMPACTS PERMIT

Buffer Drawing  
Sheet 3 of 5

PROJECT REFERENCE NO. B-5300	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BUFFER ZONE 2  
BUFFER ZONE 1

GRASS SWALE DATA	
DA =	0.18 AC.
SLOPE =	0.003
L REQ. =	18'
L PRO. =	20'
Q2 =	0.6 CFS
V2 =	0.73 FPS
D2 =	0.29'
Q10 =	0.8 CFS
V10 =	0.8 FPS
D10 =	0.33'
STA. 17 + 73 RT.	

NOTE:  
2956 SQ. FT. OF ALLOWABLE IMPACTS IN ZONE 1  
2174 SQ. FT. OF ALLOWABLE IMPACTS IN ZONE 2

	ALLOWABLE IMPACTS ZONE 1
	ALLOWABLE IMPACTS ZONE 2

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5/28/99

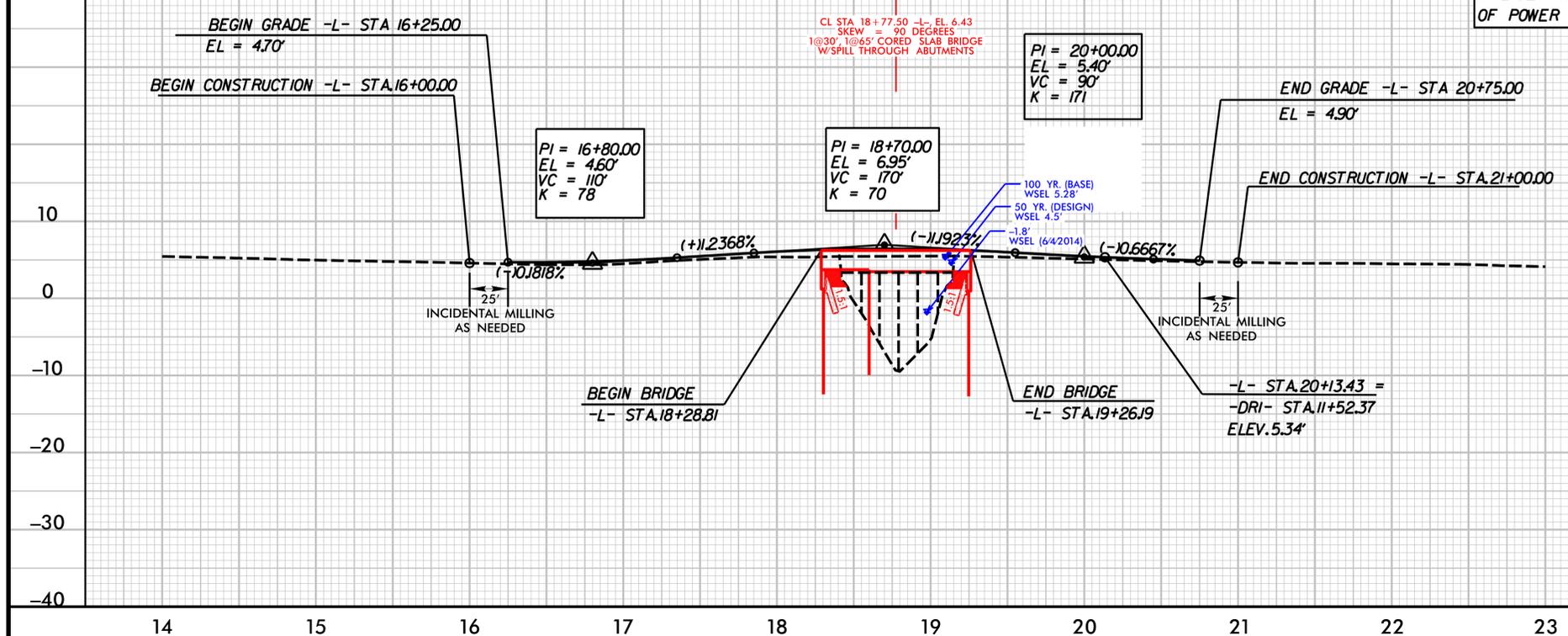


AMEC Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO. <b>B-5300</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

# -L-

BM-1, -BL- 30+32  
15' LT. ELEV. = 3.9'  
NAIL SET IN BASE  
OF POWER POLE



**BRIDGE HYDRAULIC DATA**

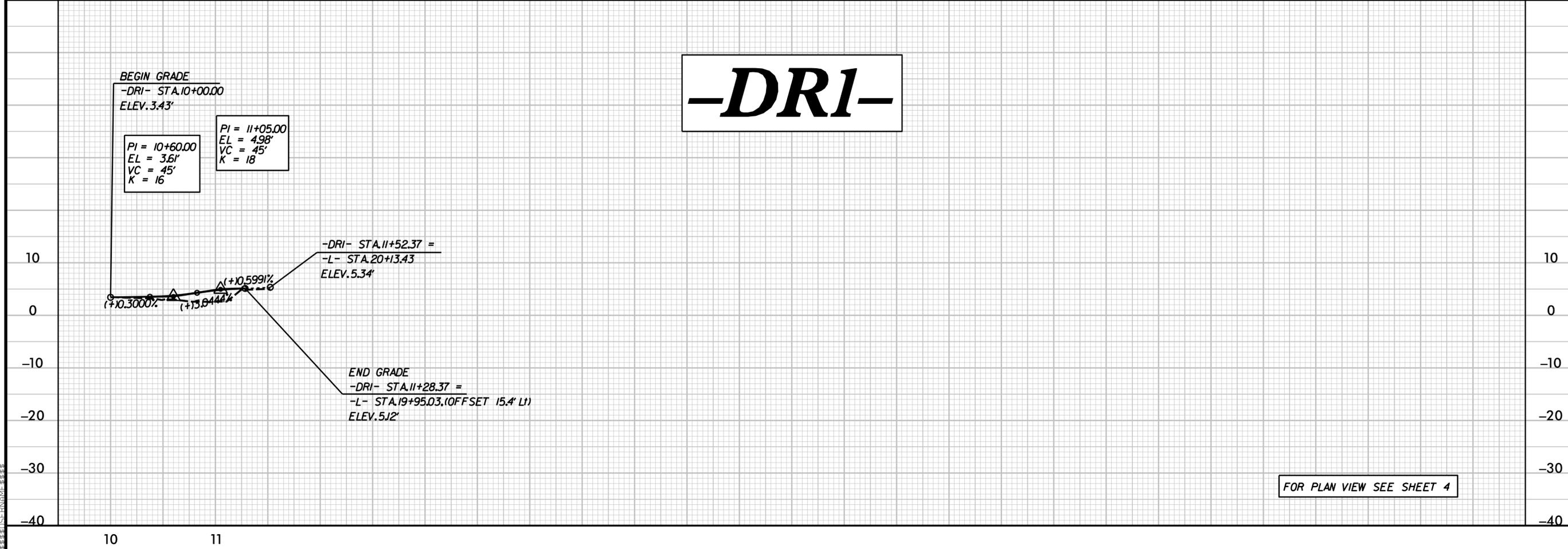
DESIGN DISCHARGE	2,389 cfs
DESIGN FREQUENCY	50 yr
DESIGN HW ELEVATION	4.5 ft
BASE DISCHARGE	3,050 cfs
BASE FREQUENCY	100 yr
BASE HW ELEVATION	5.28 ft
OVERTOPPING DISCHARGE	2,389 cfs
OVERTOPPING FREQUENCY	50 yr
OVERTOPPING ELEVATION	4.5 ft
DATE OF SURVEY	6/4/2014
W.S.ELEVATION AT DATE OF SURVEY	-1.8 ft

Buffer Drawing  
Sheet 4 of 5

FOR PLAN VIEW SEE SHEET 4

9/30/2015

# -DRI-



FOR PLAN VIEW SEE SHEET 4

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9/30/2015

### BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )		
1	Bridge	-L- 19+28 - 13+26'		X		2956.0	2174.0						
<b>TOTAL:</b>						2956.0	2174.0	0.0	0.0	0.0	0.0		

NOTE:  
 2956 SQ FT of allowable impacts in zone 1  
 2174 SQ FT of allowable impacts in zone 2

**Buffer Drawing  
 Sheet 5 of 5**

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
  
 42268  
 BEAUFORT COUNTY  
 BRIDGE NO 55 ON US 264  
 OVER PANTEGO CREEK  
 9/24/2015

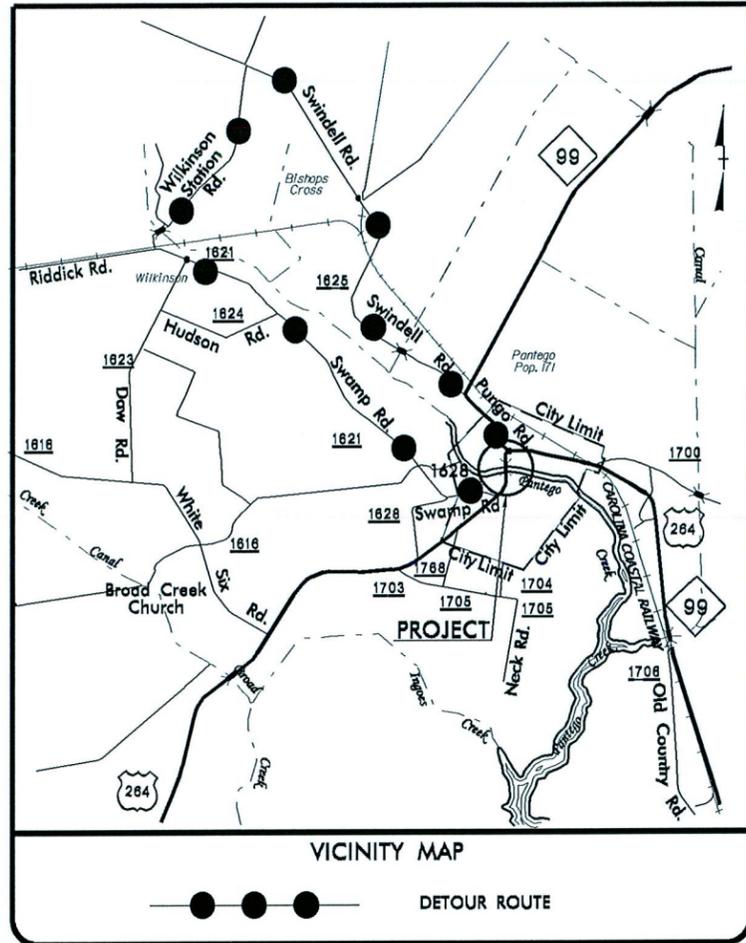
11/2/2015

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**TIP PROJECT: B-5300**

**CONTRACT:**

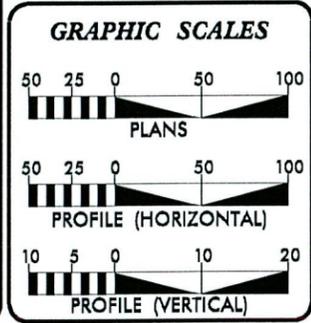
See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Symbols



VICINITY MAP  
● ● ● DETOUR ROUTE

**Revised  
11/2/15**

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.  
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF PANTEGO.



**DESIGN DATA**

ADT 2017 =	4474
ADT 2037 =	7170
K =	10 %
D =	60 %
T =	14 % *
V =	30 MPH
* TTST =	8% DUAL = 6%
FUNC CLASS =	ARTERIAL
SUBREGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5300 =	0.077 MILES
LENGTH STRUCTURE TIP PROJECT B-5300 =	0.018 MILES
TOTAL LENGTH TIP PROJECT B-5300 =	0.095 MILES

**amec**  
Prepared in the Office of:  
AMEC Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
MARCH 20, 2015

**LETTING DATE:**  
MARCH 21, 2017

**W. S. HOOD, PE**  
PROJECT ENGINEER

**BRAD TRIPP, PE**  
PROJECT DESIGN ENGINEER

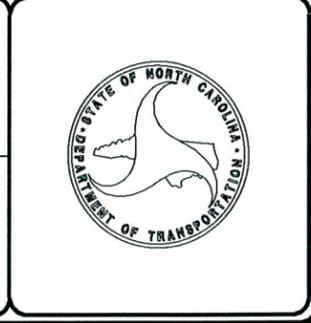
**GARY LOVERING, PE**  
PROJECT ENGINEER  
NCDOT ROADWAY DESIGN

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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

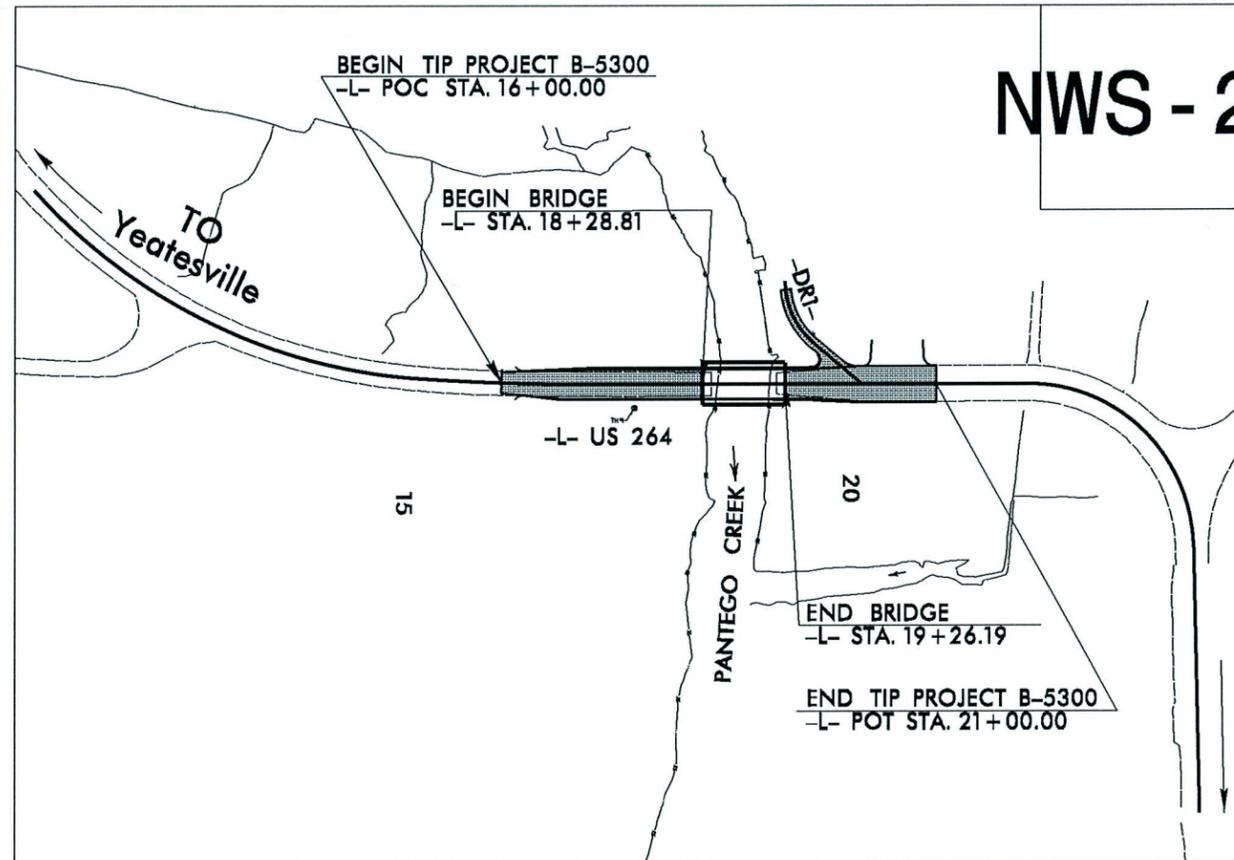


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**NWS PERMIT DRAWING PLANS  
BEAUFORT COUNTY**

LOCATION: REPLACE BRIDGE NO. 55 OVER PANTEGO CREEK ON US 264

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5300	NWS-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46000.1.1	BRSTP-0264(53)	P.E.	
46000.2.FS1	BRSTP-0264(53)	RW	

Utility Permit Drawing  
Sheet 1 of 6



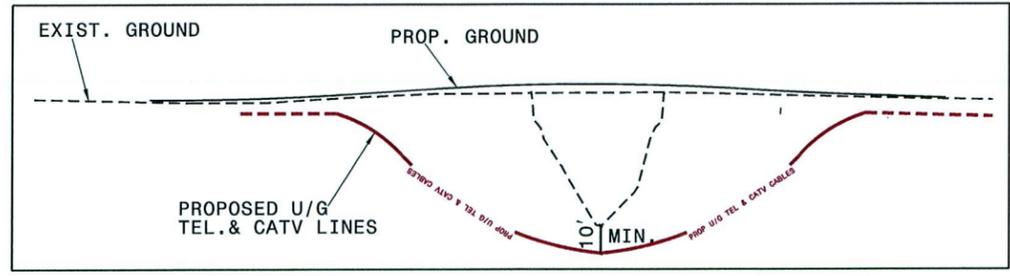
**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



11/2/2015

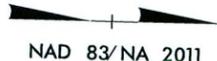
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02-NOV-2015 15:22  
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TYPICAL INSTALLATION OF PROP. U/G TELEPHONE & CATV LINES UNDER PANTEGO CREEK SUB GRADE



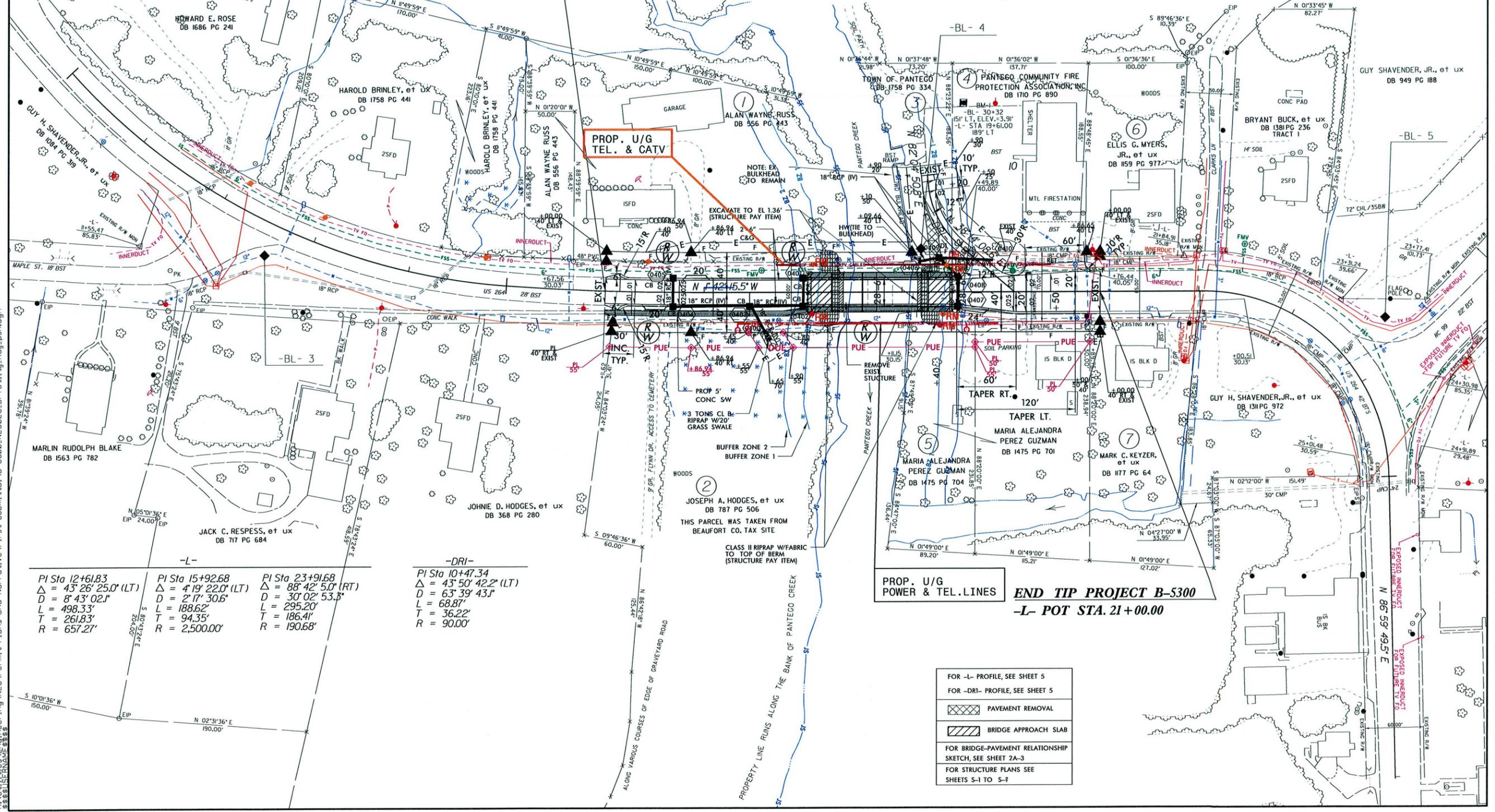
AMEC Environment & Infrastructure, Inc.  
4021 Sittrop Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO. B-5300	SHEET NO. NWS-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



Utility Permit Drawing  
Sheet 3 of 6

BEGIN TIP PROJECT B-5300  
-L- POC STA. 16+00.00



PI Sta 12+61.83 Δ = 43° 26' 25.0" (LT) D = 8' 43' 02.1" L = 498.33' T = 261.83' R = 657.27'	PI Sta 15+92.68 Δ = 4° 19' 22.0" (LT) D = 2' 17' 30.6" L = 188.62' T = 94.35' R = 2,500.00'	PI Sta 23+91.68 Δ = 88° 42' 5.0" (RT) D = 30' 02' 53.3" L = 295.20' T = 186.41' R = 190.68'
--	--	--

-DRI-
PI Sta 10+47.34 Δ = 43° 50' 42.2" (LT) D = 63° 39' 43.1" L = 68.87' T = 36.22' R = 90.00'

FOR -L- PROFILE, SEE SHEET 5	FOR -DRI- PROFILE, SEE SHEET 5
	PAVEMENT REMOVAL
	BRIDGE APPROACH SLAB
FOR BRIDGE-PAVEMENT RELATIONSHIP SKETCH, SEE SHEET 2A-3	
FOR STRUCTURE PLANS SEE SHEETS S-1 TO S-9	

02-NOV-2015 15:22

11/2/2015

8/17/99  
02-NOV-2015 16:23  
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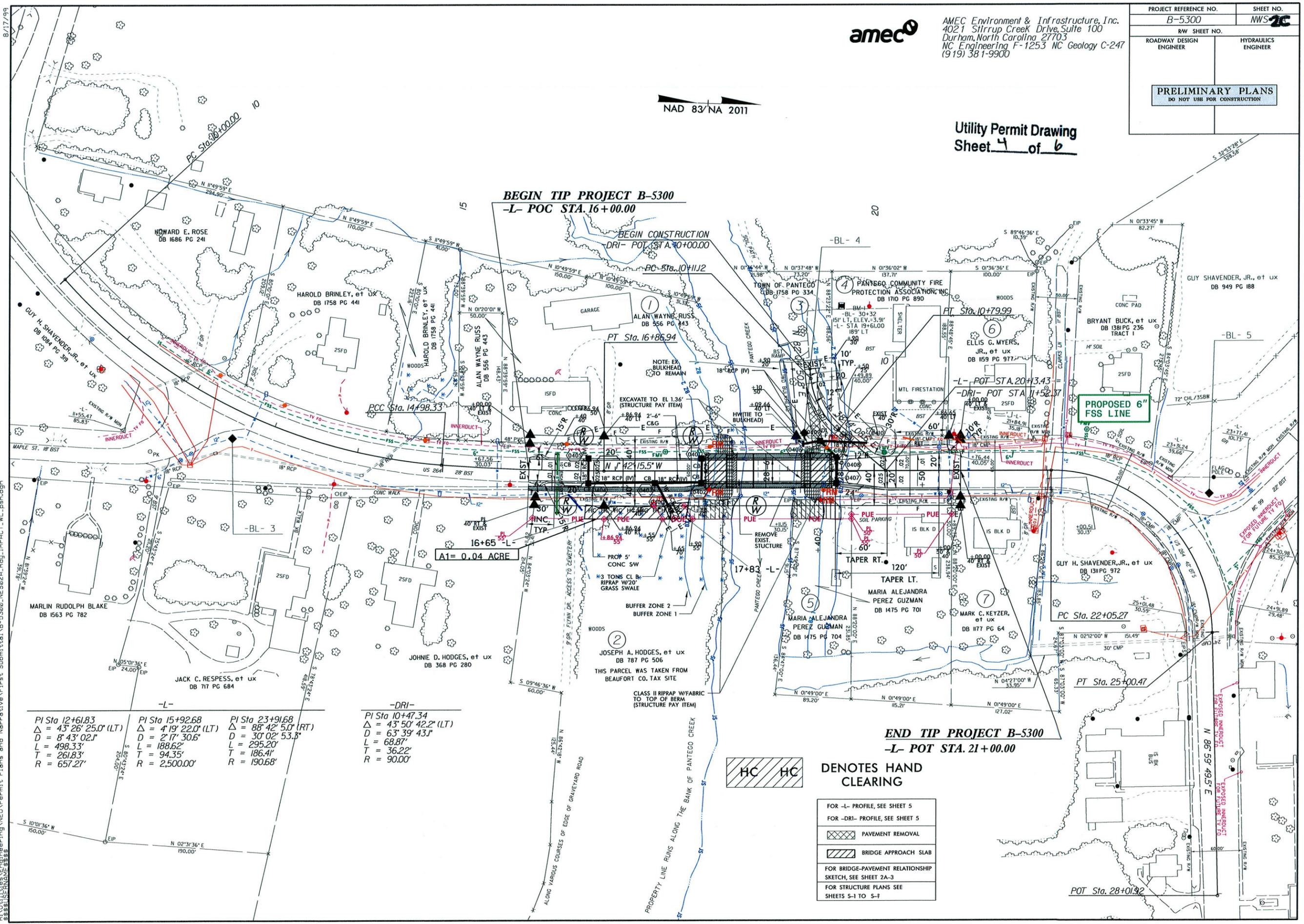


AMEC Environment & Infrastructure, Inc.  
4021 Sittrop Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO. B-5300	SHEET NO. NWS-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

NAD 83/NA 2011

Utility Permit Drawing  
Sheet 4 of 6



-L-		
PI Sta 12+61.83 Δ = 43° 26' 25.0" (LT) D = 8' 43' 02.1" L = 498.33' T = 261.83' R = 657.27'	PI Sta 15+92.68 Δ = 4° 19' 22.0" (LT) D = 2' 17' 30.6" L = 188.62' T = 94.35' R = 2,500.00'	PI Sta 23+91.68 Δ = 88° 42' 5.0" (RT) D = 30' 02' 53.3" L = 295.20' T = 186.41' R = 190.68'

-DRI-	
PI Sta 10+47.34 Δ = 43° 50' 42.2" (LT) D = 63' 39' 43.1" L = 68.87' T = 36.22' R = 90.00'	

END TIP PROJECT B-5300  
-L- POT STA. 21+00.00



DENOTES HAND CLEARING

- FOR -L- PROFILE, SEE SHEET 5
- FOR -DRI- PROFILE, SEE SHEET 5
- PAVEMENT REMOVAL
- BRIDGE APPROACH SLAB
- FOR BRIDGE-PAVEMENT RELATIONSHIP SKETCH, SEE SHEET 2A-3
- FOR STRUCTURE PLANS SEE SHEETS S-1 TO S-7

POT Sta. 28+01.92

11/2/2015

### WATER LINES OWNED BY BEAUFORT COUNTY SEWER LINES OWNED BY TOWN OF BELHAVEN

PREPARED IN THE OFFICE OF:



**THE WOOTEN COMPANY**  
ENGINEERING | PLANNING | ARCHITECTURE  
100 North Roper Avenue, Raleigh, NC 27603-1423  
TEL: (919) 875-8300 FAX: (919) 875-8305

PROJECT REFERENCE NO. **B-5300** SHEET NO. **UC-5**

DESIGNED BY: JRG  
DRAWN BY: TK  
CHECKED BY: JRG  
APPROVED BY: MDS

REVISIONS:  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
SEAL 37878  
ENGINEER JAMES R. GREGG

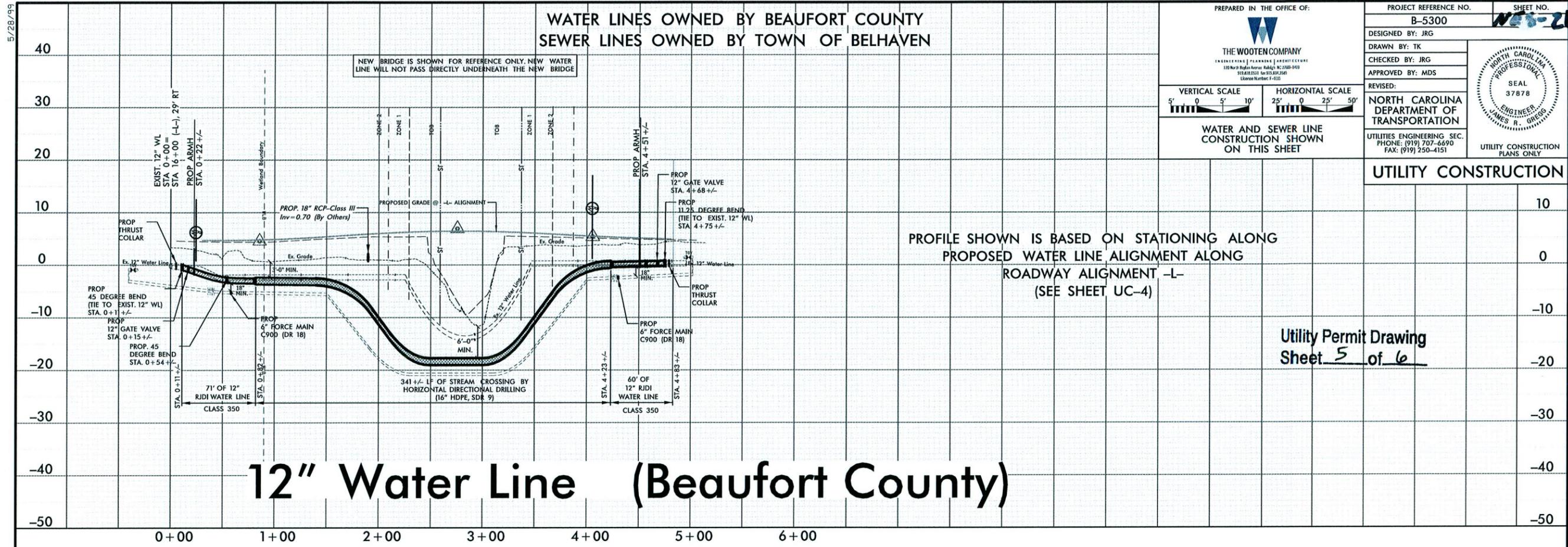
UTILITY ENGINEERING SEC.  
PHONE: (919) 707-6690  
FAX: (919) 250-4151

UTILITY CONSTRUCTION PLANS ONLY

VERTICAL SCALE: 5' = 1" (0, 5', 10')

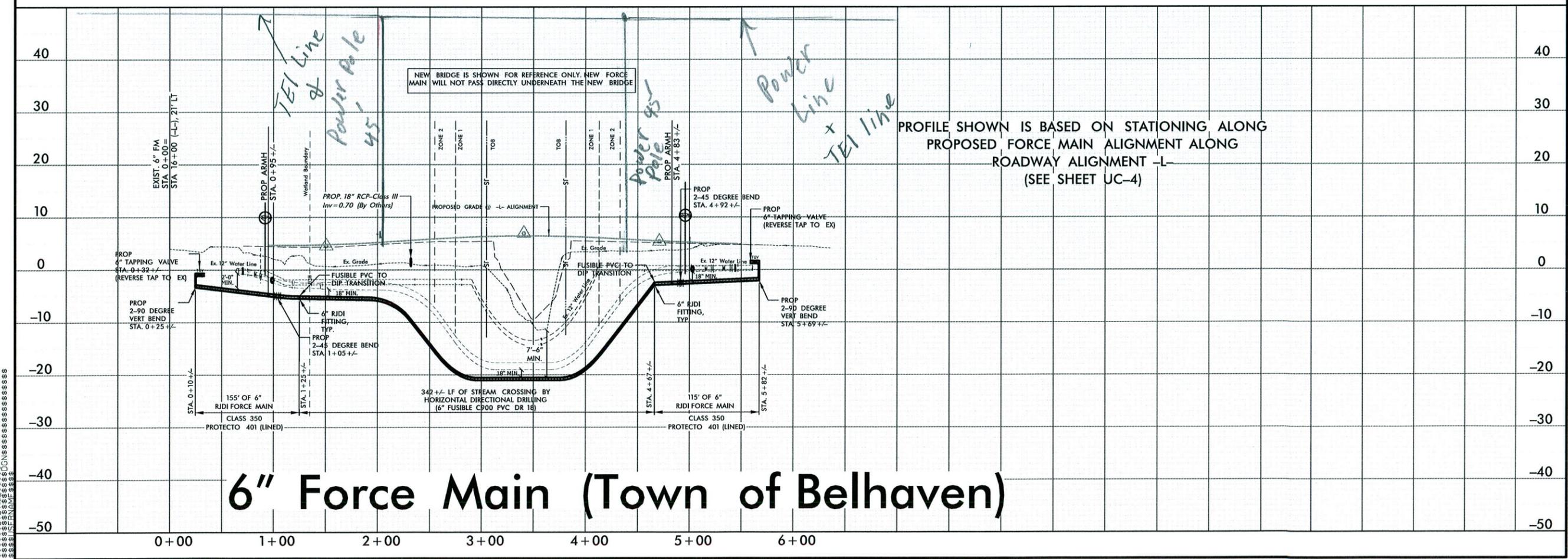
HORIZONTAL SCALE: 25' = 1" (0, 25', 50')

WATER AND SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET



## 12" Water Line (Beaufort County)

Utility Permit Drawing  
Sheet 5 of 6



## 6" Force Main (Town of Belhaven)

5/28/99  
CUSTOMER'S CONDITIONS

11/2/2015

**WETLAND PERMIT IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
A1	16+65 to 17+83-L-	AERIAL POWER LINE					0.04					
TOTALS:							0.00	0.04	0.00	0.00	0.00	0.00

Utility Permit Drawing  
 Sheet 6 of 6

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 Beaufort County  
 TIP PROJECT (B-5300)  
 Rev. 11/02/2015

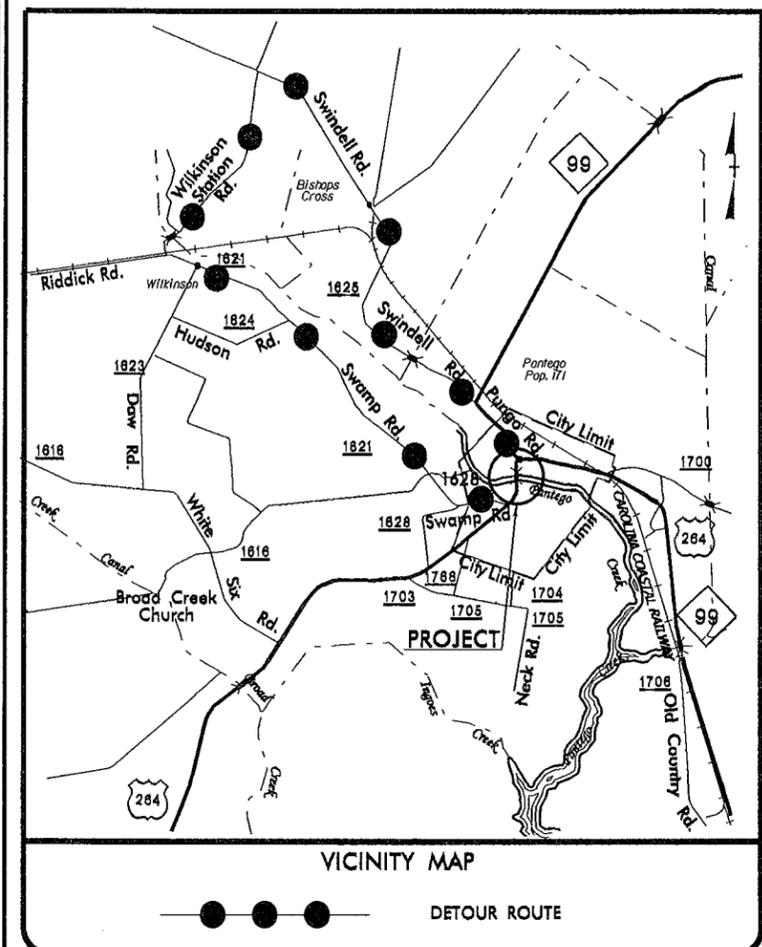
11/2/2015

24-SEP-2015 16:04 R:\Utilities\Engineering\NEU\Permit Plans and Narrative\First Submittal\B-5300\_Rdy\_tsh.dgn \$\$\$USERNAME\$\$\$

TIP PROJECT: B-5300

CONTRACT:

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



VICINITY MAP  
● ● ● DETOUR ROUTE

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

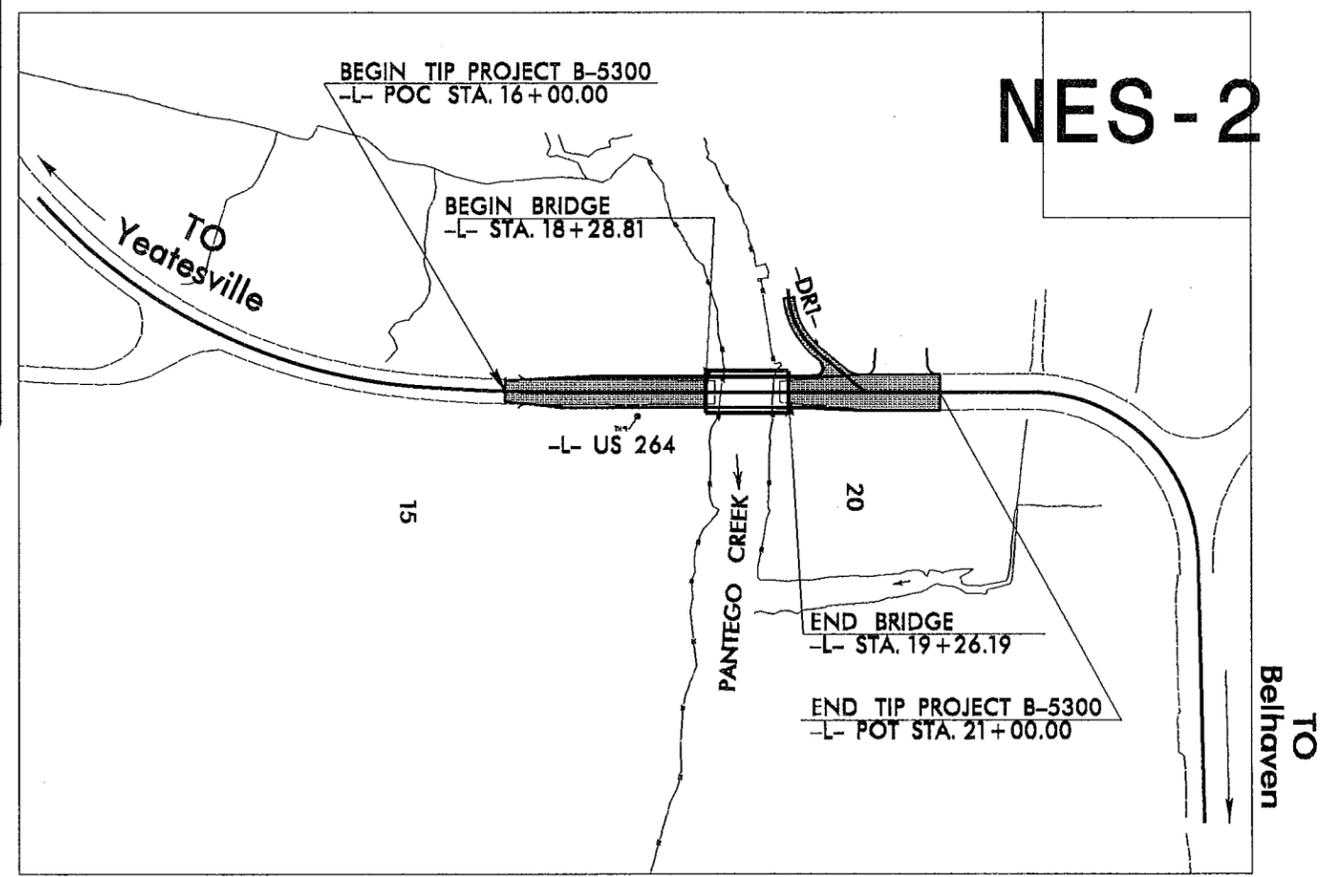
**NES PERMIT DRAWING PLANS  
BEAUFORT COUNTY**

LOCATION: REPLACE BRIDGE NO. 55 OVER PANTEGO CREEK ON US 264

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5300	NES-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46000.1.1	BRSTP-0264(53)	P.E.	
46000.2.FS1	BRSTP-0264(53)	R/W	

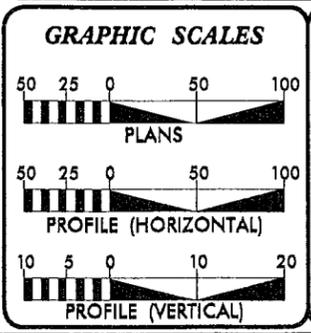
Utility  
Buffer Drawing  
Sheet 1 of 3



NES-2

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.  
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF PANTEGO.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2017 = 4474
ADT 2037 = 7170
K = 10 %
D = 60 %
T = 14 % *
V = 30 MPH
* TTST = 8% DUAL = 6%
FUNC CLASS = ARTERIAL
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5300 = 0.077 MILES
LENGTH STRUCTURE TIP PROJECT B-5300 = 0.018 MILES
TOTAL LENGTH TIP PROJECT B-5300 = 0.095 MILES

**amec**  
Prepared in the Office of:  
AMEC Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
MARCH 20, 2015

LETTING DATE:  
MARCH 21, 2017

W. S. HOOD, PE  
PROJECT ENGINEER

BRAD TRIPP, PE  
PROJECT DESIGN ENGINEER

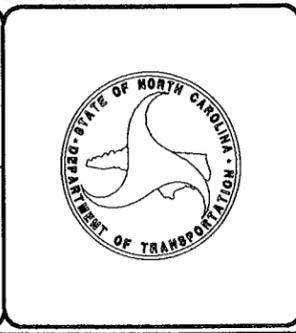
GARY LOVERING, PE  
PROJECT ENGINEER  
NCDOT ROADWAY DESIGN

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



11/2/2015

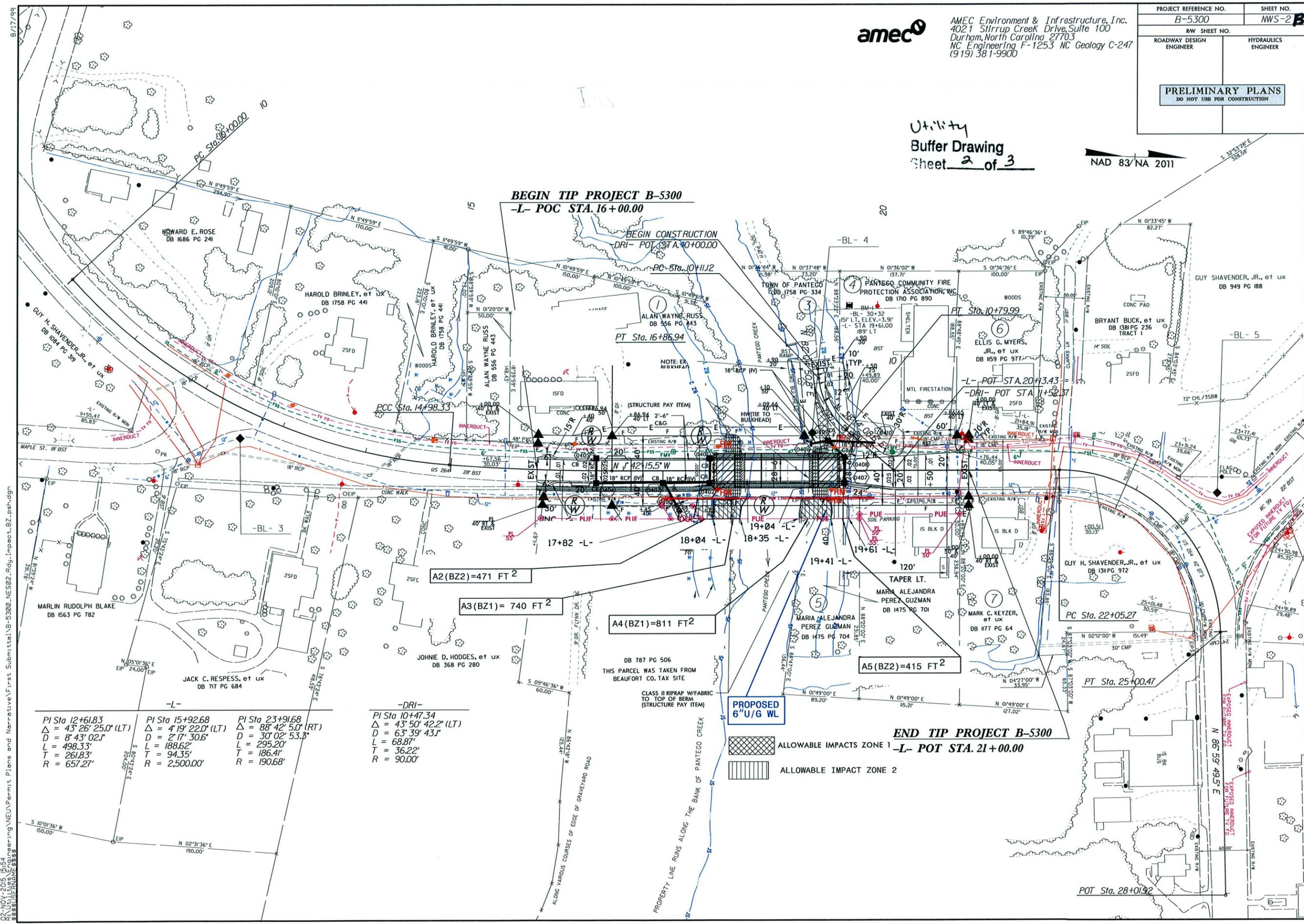


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4021 Sittrop Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO. B-5300	SHEET NO. NWS-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

Utility  
Buffer Drawing  
Sheet 2 of 3

NAD 83/NA 2011



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SSSUSE\FNM\SSS

<b>-L-</b>	<b>-L-</b>	<b>-L-</b>
PI Sta 12+61.83	PI Sta 15+92.68	PI Sta 23+91.68
Δ = 43° 26' 25.0" (LT)	Δ = 4° 19' 22.0" (LT)	Δ = 88° 42' 5.0" (RT)
D = 8' 43" 02.1"	D = 2' 17" 30.6"	D = 30' 02" 53.3"
L = 498.33'	L = 188.62'	L = 295.20'
T = 261.83'	T = 94.35'	T = 186.41'
R = 657.27'	R = 2,500.00'	R = 190.68'

<b>-DRI-</b>
PI Sta 10+47.34
Δ = 43° 50' 42.2" (LT)
D = 63' 39" 43.1"
L = 68.87'
T = 36.22'
R = 90.00'

A2 (BZ2) = 471 FT<sup>2</sup>

A3 (BZ1) = 740 FT<sup>2</sup>

A4 (BZ1) = 811 FT<sup>2</sup>

A5 (BZ2) = 415 FT<sup>2</sup>

PROPOSED 6" U/G WL

- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACT ZONE 2

END TIP PROJECT B-5300  
-L- POT STA. 21+00.00

POT Sta. 28+01.92

11/2/2015

## BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )		
A2	Power Line	17+82to 18+04-L-					471.0						
A3	Power Line	18+04 to 18+535 -L-				740.0							
A4	Power Line	19+04 to 19+41 -L-				811.0							
A5	Power Line	19+41 to 19+61 -L-					415.0						
<b>TOTALS:</b>						1551.0	886.0						

Utility  
Buffer Drawing  
Sheet 3 of 3

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

BEAUFORT COUNTY  
PROJECT: B-5300  
Rev. 11/02/2015

SHEET 1      OF 1

09/08/19

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BEAUFORT COUNTY**

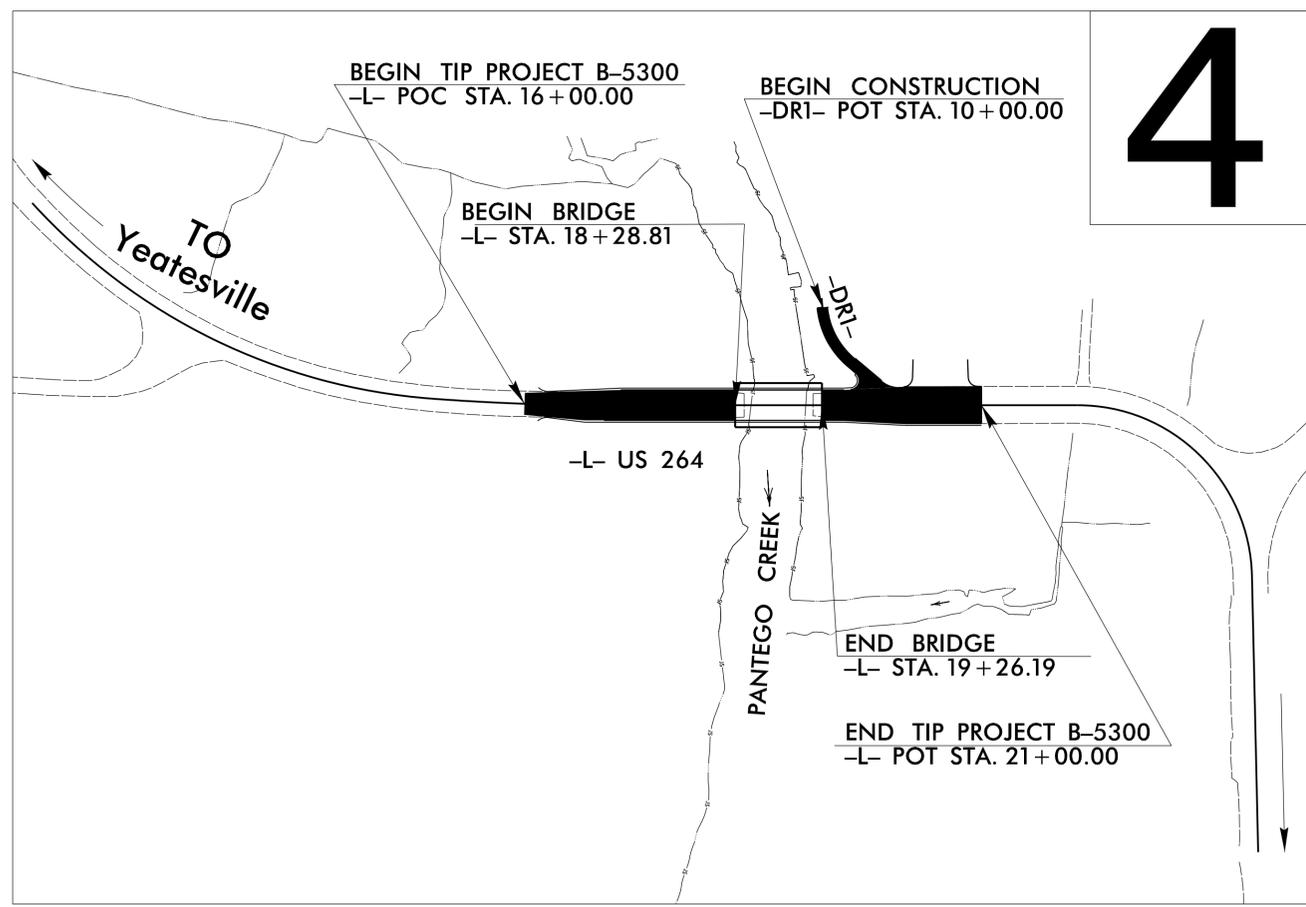
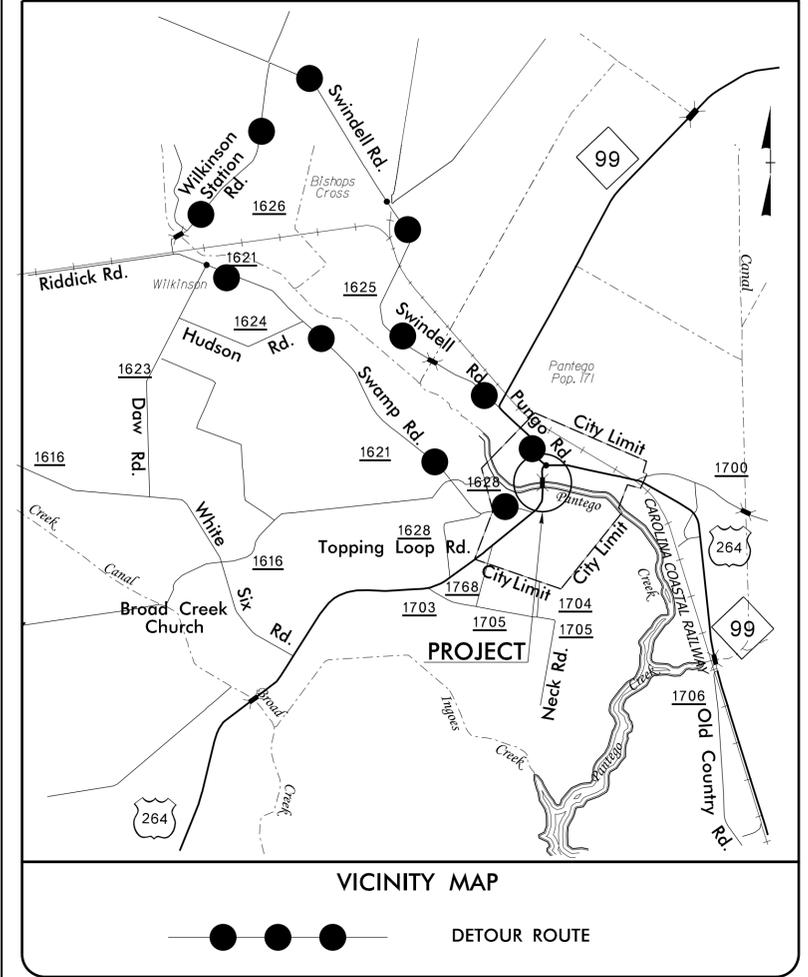
**LOCATION: REPLACE BRIDGE NO. 55 OVER PANTEGO CREEK ON US 264**

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>B-5300</b>	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46000.1.1	BRSTP-0264(53)	P.E.	
46000.2.2		RW/UTIL.	
46000.3.2		CONST.	
46000.3.3		CONST. (DETOUR)	

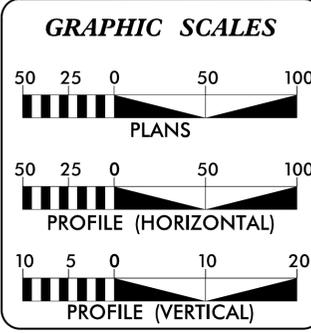
**TIP PROJECT: B-5300**

**CONTRACT: C203775**



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**DESIGN DATA**

ADT 2016 =	4,339
ADT 2036 =	7,035
K =	10 %
D =	60 %
T =	14 % *
V =	30 MPH
* TTST =	8% DUAL = 6%
FUNC CLASS =	ARTERIAL
SUBREGIONAL TIER	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5300 =	0.077 MILES
LENGTH STRUCTURE TIP PROJECT B-5300 =	0.018 MILES
TOTAL LENGTH TIP PROJECT B-5300 =	0.095 MILES

Prepared in the Office of:  
**AMEC Foster Wheeler Environment & Infrastructure, Inc.**  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

**2012 STANDARD SPECIFICATIONS**

**RIGHT OF WAY DATE:**  
MARCH 20, 2015

**LETTING DATE:**  
MARCH 15, 2016

**W. S. HOOD, PE**  
PROJECT ENGINEER

**BRAD TRIPP, PE**  
PROJECT DESIGN ENGINEER

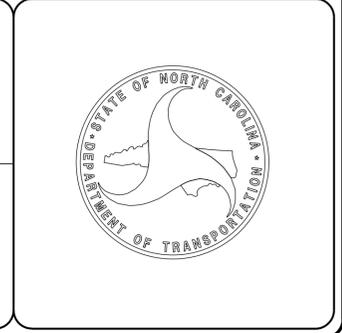
**GARY LOVERING, PE**  
PROJECT ENGINEER  
NCDOT ROADWAY DESIGN

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



18-OCT-2015 11:05  
R:\Roadway\Proj\B-5300\_Rdy\_t.sh.dgn  
Bill Hood AT LG19864

04/16/11

Note: Not to Scale

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

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



AMEC Foster Wheeler Environment & Infrastructure, Inc.  
4021 Sittrop Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO.	SHEET NO.
B-5300	1B

# 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	--- WLB
Proposed Wetland Boundary	--- WLB
Existing Endangered Animal Boundary	--- EAB
Existing Endangered Plant Boundary	--- EPB
Known Soil Contamination: Area or Site	☠
Potential Soil Contamination: Area or Site	☠?

## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
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 RW Marker	-----
Proposed Control of Access Line with Concrete CA 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	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

## VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

## EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

## 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	-----
Designated U/G Power Line (S.U.E.*)	-----

## 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	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

## 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	-----

## TV:

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

## GAS:

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

## SANITARY SEWER:

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

## MISCELLANEOUS:

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

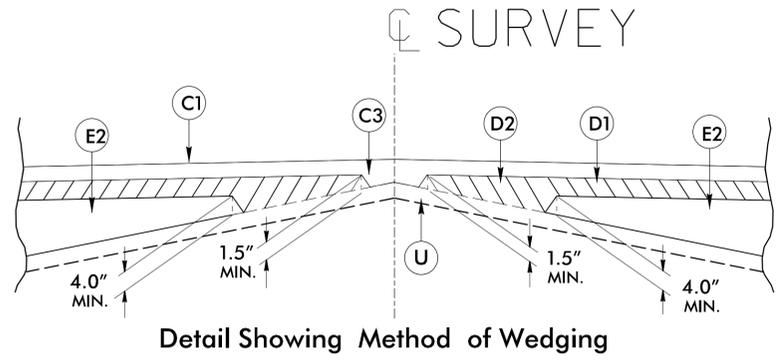
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

6/2/09

**PAVEMENT SCHEDULE**  
(FINAL PAVEMENT DESIGN APRIL 30, 2014)

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	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
C3	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 LESS THAN 1½" IN DEPTH OR GREATER THAN 2" IN DEPTH
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 4" IN DEPTH OR GREATER THAN 5½" IN DEPTH
L	BASE TO BE STABILIZED WITH 200 TO 400 LBS. PER SQ. YARD OF STABILIZER AGGREGATE MIXED WITH THE TOP 3" OF SUBGRADE SOIL AT LOCATIONS DIRECTED BY THE ENGINEER
R	2'-6" CONCRETE CURB AND GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W1	VARIABLE DEPTH ASPHALT PAVEMENT SEE STANDARD WEDGING DETAIL

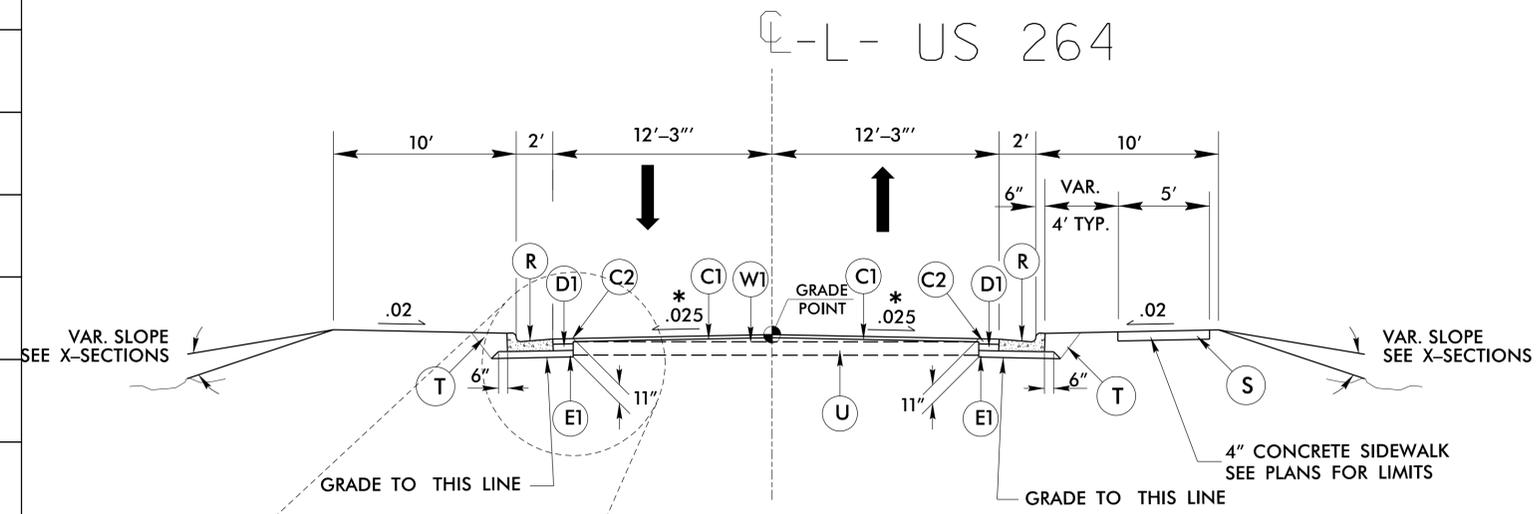
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



AMEC Foster Wheeler Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO. B-5300	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

\*.025 SUPERELEVATION CHOSEN FOR HYDRAULIC SPREAD

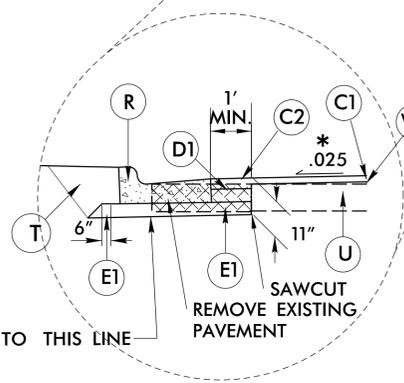


**TYPICAL SECTION NO. 1**

**USE TYPICAL SECTION NO. 1**

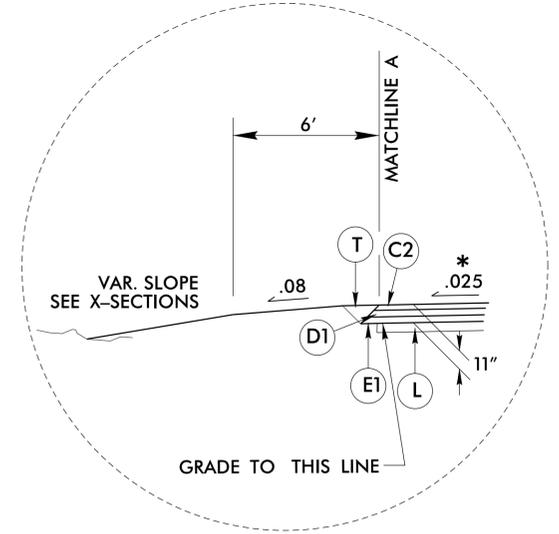
-L- STA. 16+00.00 TO -L- STA. 17+55.00

- NOTE:
- 1) TRANSITION FROM EXISTING PAVED SHOULDER TO PROPOSED CURB AND GUTTER SECTION (SEE PLAN)
  - 2) TRANSITION SIDEWALK FROM EXISTING SHOULDER AT -L- STA. 16+00.00 TO PROPOSED BERM



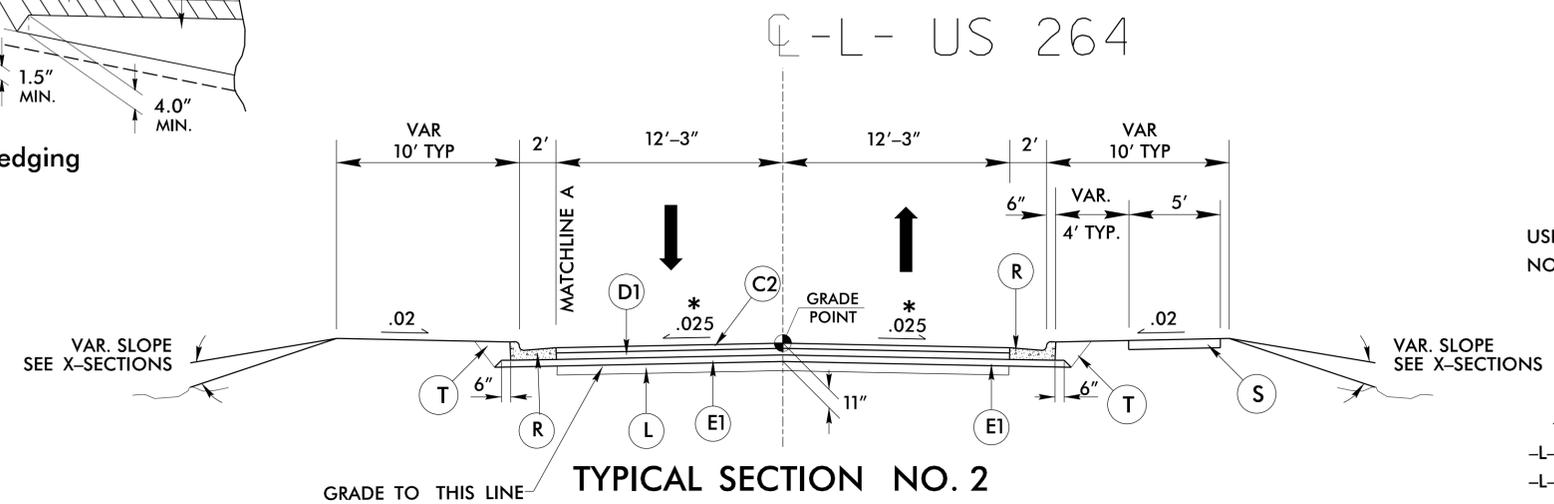
**INSET "A"**

USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1 -L- STA. 16+15.00 TO -L- STA. 17+55.00 LT & RT  
USE IN CONJUNCTION WITH TYPICAL SECTION NO. 3 -L- STA. 20+00.00 TO -L- STA. 21+00.00 RT



**INSET "B"**

USE IN CONJUNCTION WITH TYPICAL SECTION NO. 2 -L- STA. 19+26.19 (END BRIDGE) TO -L- STA. 20+00.00 LT



**TYPICAL SECTION NO. 2**

**USE TYPICAL SECTION NO. 2**

-L- STA. 17+55.00 TO -L- STA. 18+28.81 (BEGIN BRIDGE)  
-L- STA. 19+26.19 (END BRIDGE) TO -L- STA. 20+00.00

20-OCT-2015 11:20  
 R:\Projects\B-5300\_Rdy\_tjw.dgn  
 billboed

6/2/09

PAVEMENT SCHEDULE	
C1	1.5" S9.5B
C2	3" S9.5B
C3	VAR. S9.5B
D1	4" I19.0B
D2	VAR. I19.0B
E1	4" B25.0B
E2	VAR. B25.0B
L	STABILIZER AGGR.
R	2'-6" C & G
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W1	WEDGING

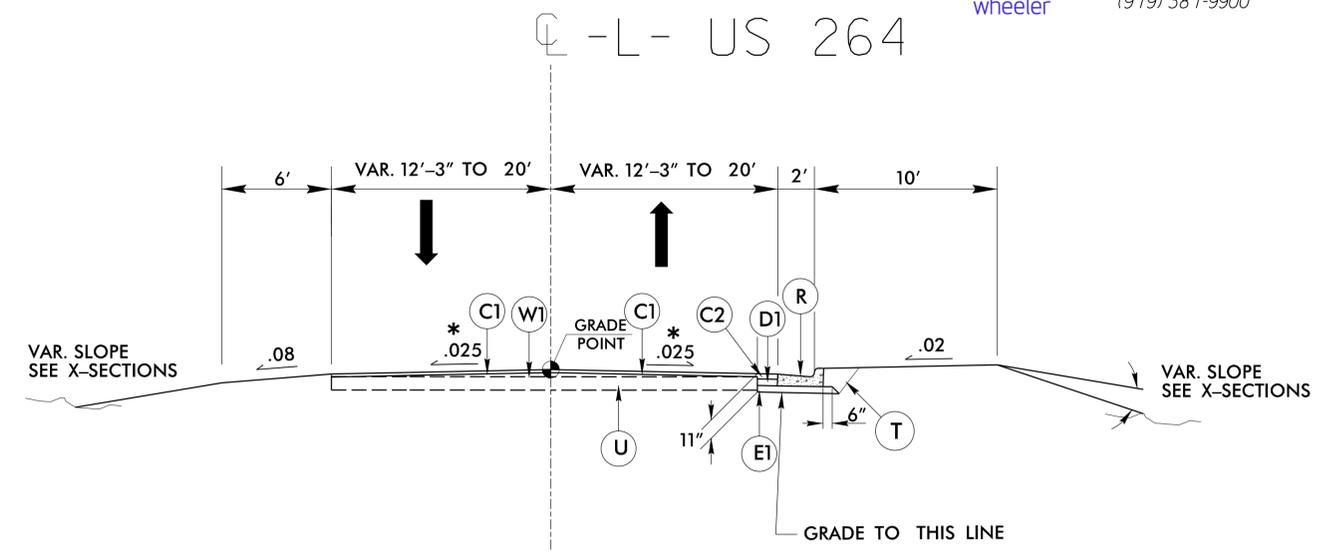


AMEC Foster Wheeler Environment & Infrastructure, Inc.  
 4021 Stirrup Creek Drive, Suite 100  
 Durham, North Carolina 27703  
 NC Engineering F-1253 NC Geology C-247  
 (919) 381-9900

PROJECT REFERENCE NO.	SHEET NO.
B-5300	2A-2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

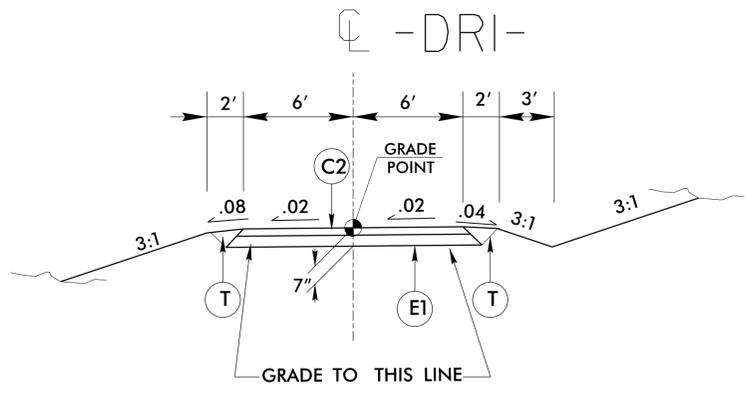
\*.025 SUPERELEVATION CHOSEN FOR HYDRAULIC SPREAD



**TYPICAL SECTION NO. 3**

**USE TYPICAL SECTION NO. 3**

-L- STA. 20+00.00 TO -L- STA. 21+00.00



**TYPICAL SECTION NO. 4**

**USE TYPICAL SECTION NO. 4**

-DRI- STA. 10+00.00 TO -DRI- STA. 11+29.20

20 OCT 2015 11:19  
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 billboed

6/2/09

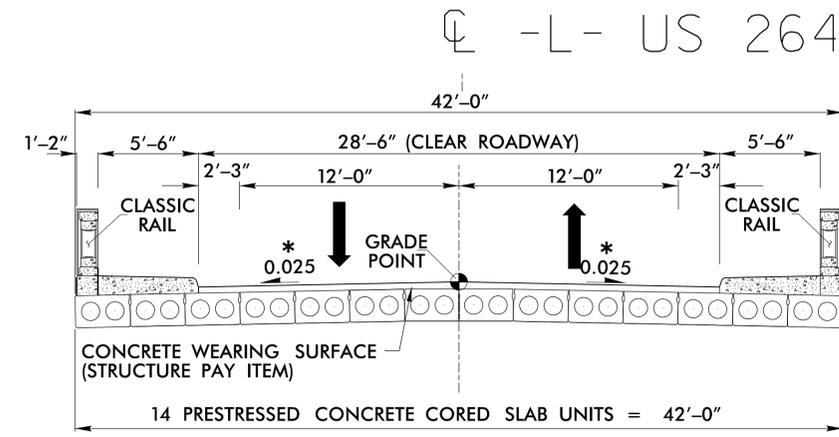


AMEC Foster Wheeler Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO. B-5300	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

\* .025 SUPERELEVATION CHOSEN  
FOR HYDRAULIC SPREAD

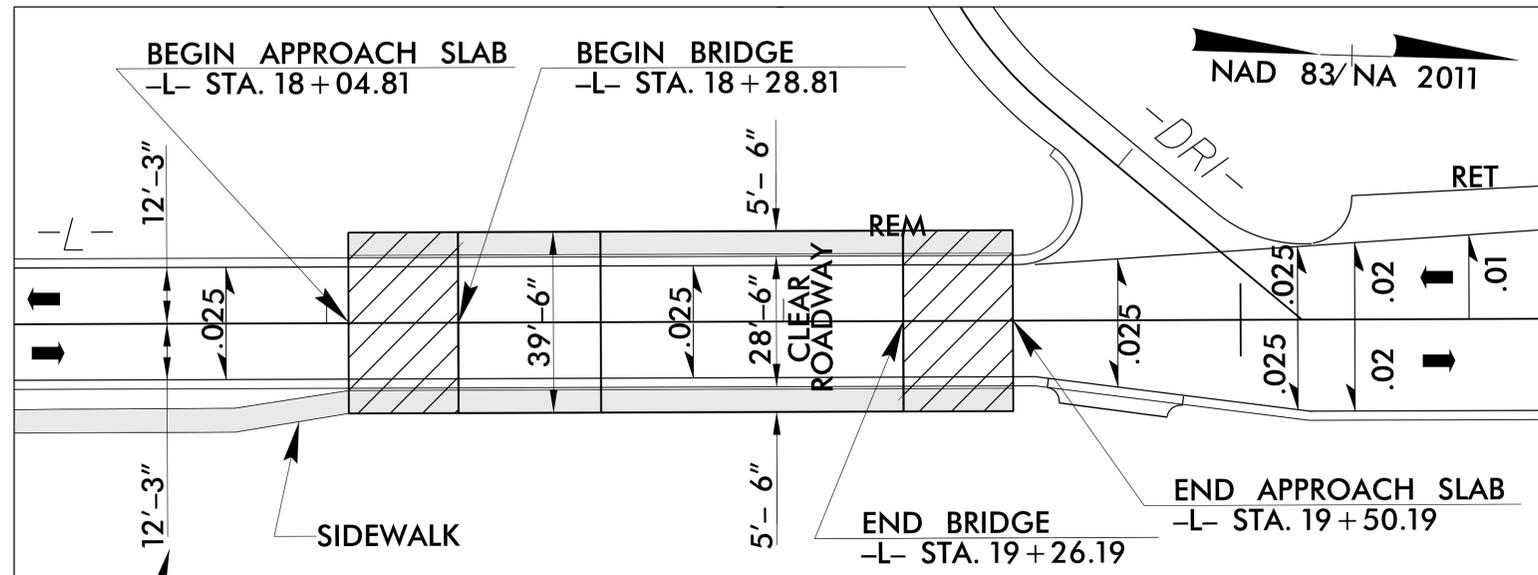


TYPICAL SECTION NO. 5  
CORED SLAB STRUCTURE WITH CLASSIC RAIL

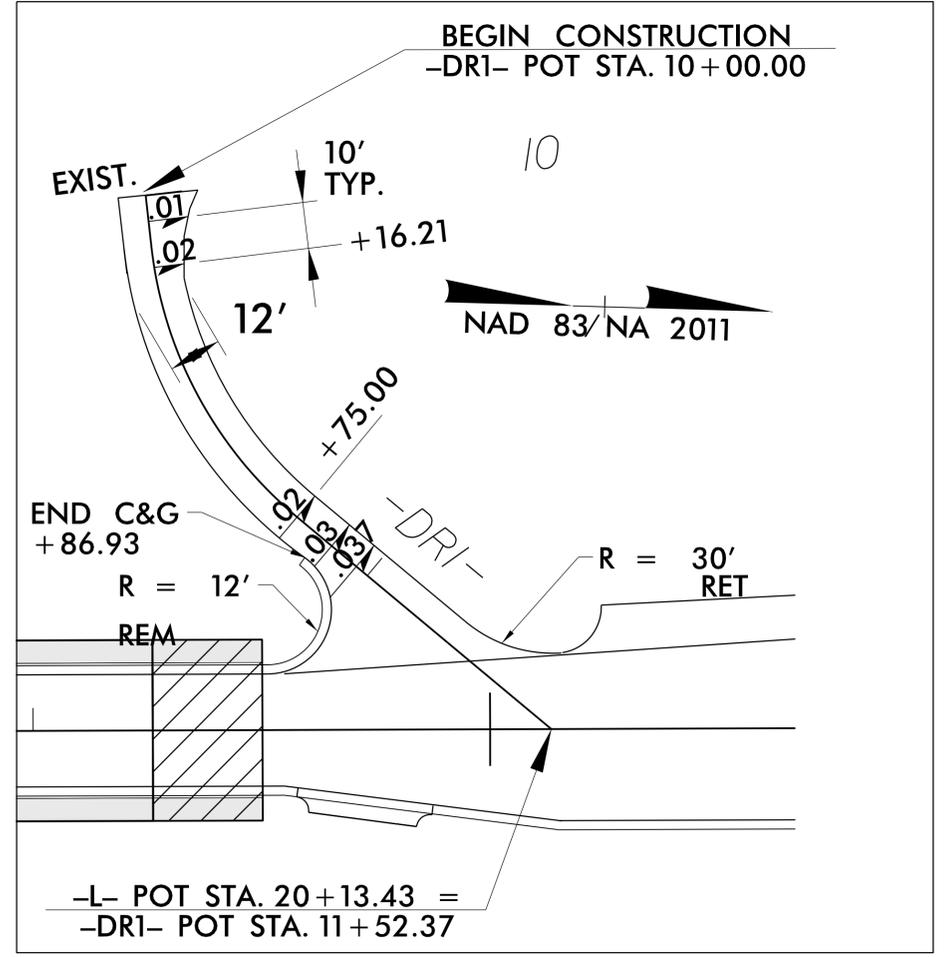
USE TYPICAL SECTION NO. 5

-L- STA. 18+28.81 BEGIN BRIDGE TO -L- STA. 19+26.19 END BRIDGE

SKETCH SHOWING BRIDGE-PAVEMENT RELATIONSHIP  
FOR -L- OVER PANTEGO CREEK (n.t.s.)



SKETCH SHOWING DETAIL FOR -DRI- (n.t.s.)



PROJECT: 2015 10/23 B-5300\_Rdy\_tup.dgn  
REVISED BY: P-1 07/18/14  
BILLBOARD



AMEC Foster Wheeler Environment & Infrastructure, Inc.  
4021 Stirrup Creek Drive, Suite 100  
Durham, North Carolina 27703  
NC Engineering F-1253 NC Geology C-247  
(919) 381-9900

PROJECT REFERENCE NO.	SHEET NO.
B-5300	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

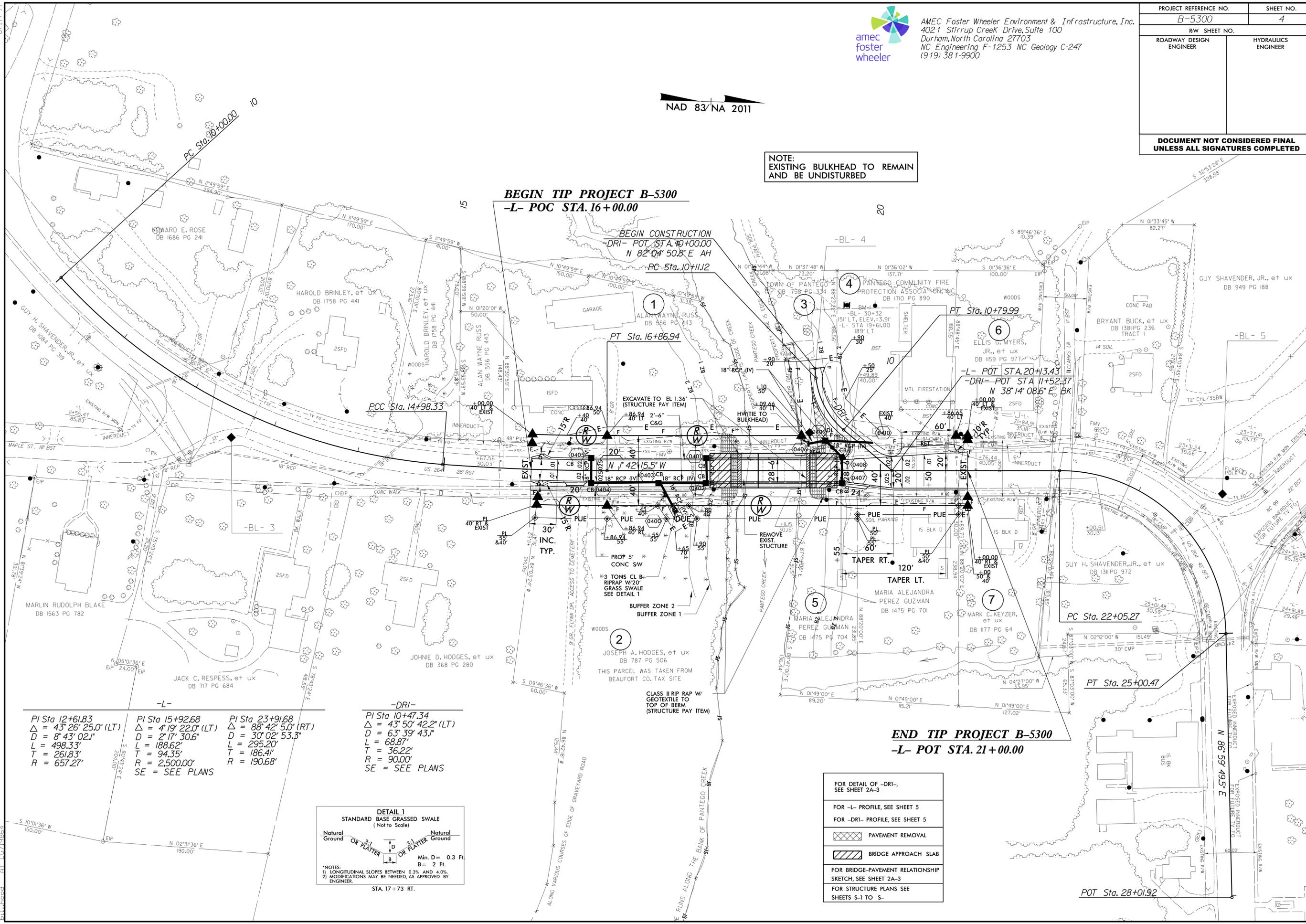
**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

NAD 83/NA 2011

NOTE:  
EXISTING BULKHEAD TO REMAIN  
AND BE UNDISTURBED

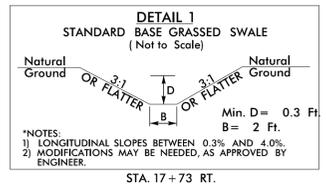
**BEGIN TIP PROJECT B-5300  
-L- POC STA. 16+00.00**

**END TIP PROJECT B-5300  
-L- POT STA. 21+00.00**



-L-		
PI Sta 12+61.83	PI Sta 15+92.68	PI Sta 23+91.68
$\Delta = 43' 26'' 25.0''$ (LT)	$\Delta = 4' 19'' 22.0''$ (LT)	$\Delta = 88' 42'' 5.0''$ (RT)
$D = 8' 43'' 02.1''$	$D = 2' 17'' 30.6''$	$D = 30' 02'' 53.3''$
$L = 498.33'$	$L = 188.62'$	$L = 295.20'$
$T = 261.83'$	$T = 94.35'$	$T = 186.41'$
$R = 657.27'$	$R = 2,500.00'$	$R = 190.68'$
	SE = SEE PLANS	

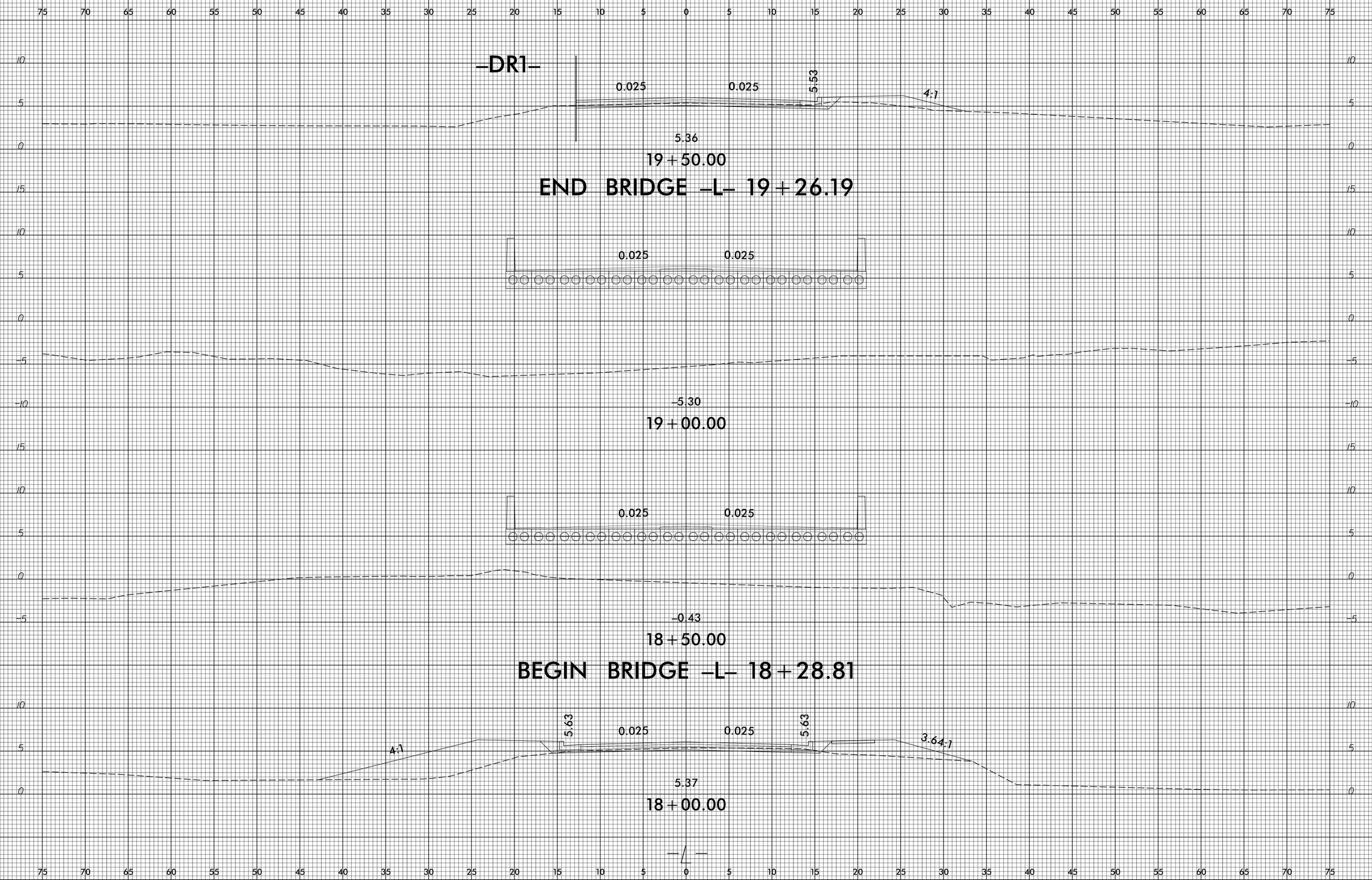
-DRI-	
PI Sta 10+47.34	$\Delta = 43' 50'' 42.2''$ (LT)
	$D = 63' 39'' 43.1''$
	$L = 68.87'$
	$T = 36.22'$
	$R = 90.00'$
	SE = SEE PLANS



FOR DETAIL OF -DRI-, SEE SHEET 2A-3
FOR -L- PROFILE, SEE SHEET 5
FOR -DRI- PROFILE, SEE SHEET 5
PAVEMENT REMOVAL
BRIDGE APPROACH SLAB
FOR BRIDGE-PAVEMENT RELATIONSHIP SKETCH, SEE SHEET 2A-3
FOR STRUCTURE PLANS SEE SHEETS S-1 TO S-

RD:\PROJECTS\2015\10-33\B-5300\RDY\esh.dgn  
 R:\F\ad\15-10-33\B-5300\RDY\esh.dgn  
 10/15/15 10:33 AM

8/23/99



20-OCT-2015 10:12  
R:\Roadway\X301\B5300\_Fdu\_xpl.L.dgn  
Plotting At 10/7/2014