



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

May 17, 2017

Raleigh Regulatory Field Office
US Army Corps of Engineers
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587

ATTN: Mr. Andy Williams
NCDOT Project Manager

Subject: **Application for Section 404 Nationwide Permits 3, 12, and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 53 over Drowning Creek on NC 73 in Montgomery/Moore Counties, North Carolina; TIP No. B-5362; Federal Aid Project No. BRSTP-0073(31); Debit \$270 from WBS No. 46077.1.1

Dear Sir,

The North Carolina Department of Transportation (NCDOT) proposes to replace the existing 97-foot, three-span bridge with a 145-foot, two-span bridge on existing alignment. Traffic will be maintained on an offsite detour. There will be 0.08 acre of permanent impact to riparian wetlands due to roadside fill and mechanized clearing. The filling of a small backwater section adjacent to Drowning Creek will account for 70 linear feet of permanent stream impact. The backwater section will be backfilled with rip rap to the bed elevation of the main channel.

Please see enclosed copies of the Pre-Construction Notification (PCN), stormwater management plan, permit drawings, utility drawings, and roadway plans for the above referenced project.

The Programmatic Categorical Exclusion (PCE) was completed in June 2016 and distributed shortly after. Additional copies are available at the NCDOT website:
<https://connect.ncdot.gov/resources/Environmental/>.

This project calls for a letting date of October 17, 2017 and a review date of August 29, 2017. The project schedule may be advanced if funding becomes available.

Regulatory Approvals

Section 404 Permit: We anticipate that the bridge replacement, including all approach work will be authorized under Section 404 Nationwide Permit (NWP) No. 3 and necessary utility relocations will be authorized under Section 404 NWP No. 12.

Section 401 Permit: We anticipate 401 Water Quality Certification numbers 4085 and 4086 will apply to this project. NCDOT is requesting written concurrence from the North Carolina Department of Environmental Quality, Division of Water Resources.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
NATURAL ENVIRONMENT SECTION
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

Telephone: (919) 707-6000
Fax: (919) 212-5785
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

A copy of this permit application and its distribution list will be posted at the NCDOT website at <https://connect.ncdot.gov/resources/Environmental/>. Should you have any questions regarding this information, please contact Jason Dilday at (919) 707-6111 or jldilday@ncdot.gov

Sincerely,

A handwritten signature in black ink, appearing to read 'PHS', with a long horizontal flourish extending to the right.

Philip S. Harris III, P.E., C.P.M., Manager
Natural Environment Section

cc: NCDOT Permit Application Standard Distribution List



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

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 3 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 <input type="checkbox"/> Non-404 Jurisdictional General Permit <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> Riparian Buffer Authorization		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

2. Project Information

2a. Name of project:	Replacement of Bridge No. 53 on NC 73 over Drowning Creek
2b. County:	Montgomery/Moore
2c. Nearest municipality / town:	Jackson Springs
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no:	B-5362

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) 707-6111
3g. Fax no.:	(919) 212-5785
3h. Email address:	jdilday@ncdot.gov

4. Applicant Information (if different from owner)	
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:	
5. Agent/Consultant Information (if applicable)	
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. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 35.187753 (DD.DDDDDD) Longitude: -79.648582 (-DD.DDDDDD)
1c. Property size:	0.8 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Drowning Creek
2b. Water Quality Classification of nearest receiving water:	WS-II; Sw, HQW
2c. River basin:	Lumber
3. Project Description	
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: The land use is primarily forested and agriculture.	
3b. List the total estimated acreage of all existing wetlands on the property: 2.5	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 250 feet perennial	
3d. Explain the purpose of the proposed project: To replace structurally deficient and functionally obsolete bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing the 97-foot, three-span bridge with a 145-foot, two-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments: Request to R. Smith made on 6/17/13 for PJD. No response received.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input checked="" type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: Other: RK&K
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
6. Future Project Plans	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. If yes, explain.	

C. Proposed Impacts Inventory						
1. Impacts Summary						
1a. Which sections were completed below for your project (check all that apply):						
<input checked="" type="checkbox"/> Wetlands		<input checked="" type="checkbox"/> Streams - tributaries		<input type="checkbox"/> Buffers		
<input type="checkbox"/> Open Waters		<input type="checkbox"/> Pond Construction				
2. Wetland Impacts						
If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.						
2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)	
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Mechanized Clearing	Riparian	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.03	
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	Riparian	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	0.05	
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 <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 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
2g. Total wetland impacts					0.08 Permanent	
2h. Comments: There will be 0.04 ac of hand clearing in wetlands due to bridge construction and 0.14 ac of hand clearing in wetlands due to utility relocation. Temporary fill in wetlands in hand clearing areas for installation of erosion control measures equals <0.01 acre.						
3. Stream Impacts						
If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.						
3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Fill	Drowning Creek (back water)	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	15	70 ft (0.03 ac)
Site 1 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Fill	Drowning Creek (back water)	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	15	5 ft (<0.01 ac)
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 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		
3h. Total stream and tributary impacts					70 ft Perm 5 ft Temp	

3i. Comments: Stream impacts due to backfill a backwater section of Drowning Creek to the bed elevation of the main channel

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)
O2 <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				

4f. Total open water impacts

4g. Comments:

5. Pond or Lake Construction

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

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded
P1								
P2								
5f. Total								

5g. Comments:

5h. Is a dam high hazard permit required?

Yes

No

If yes, permit ID no:

5i. Expected pond surface area (acres):

5j. Size of pond watershed (acres):

5k. Method of construction:

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

6a. Project is in which protected basin?			<input type="checkbox"/> Neuse <input type="checkbox"/> Catawba	<input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman	<input type="checkbox"/> Other: Jordan
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts					
6i. Comments:					

D. Impact Justification and Mitigation

1. Avoidance and Minimization

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

The proposed bridge will be longer than the existing bridge; the replacement bridge will be a 2-span, removing a bent in the water from the current 3-span bridge; the proposed bridge will be at approximately the same grade and alignment as the existing structure; the new bridges will have no deck drains or direct discharge to Drowning Creek. An off-site detour will be used during construction. See Stormwater Management Plan for more measures.

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

NCDOT Design Standards in Sensitive Waters will be implemented

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

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

Yes No

If no, explain: Compensatory mitigation is not proposed due to the minimal impact to jurisdictional resources

2b. If yes, mitigation is required by (check all that apply):

DWQ Corps

2c. If yes, which mitigation option will be used for this project?

- Mitigation bank
- Payment to in-lieu fee program
- Permittee Responsible Mitigation

3. Complete if Using a Mitigation Bank

3a. Name of Mitigation Bank: not applicable

3b. Credits Purchased (attach receipt and letter)

Type

Quantity

3c. Comments:

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached. Yes

4b. Stream mitigation requested: linear feet

4c. If using stream mitigation, stream temperature: warm cool cold

4d. Buffer mitigation requested (DWQ only): square feet

4e. Riparian wetland mitigation requested: acres

4f. Non-riparian wetland mitigation requested: acres

4g. Coastal (tidal) wetland mitigation requested: acres

4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

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

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? Yes No

6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.


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



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

6h. Comments:

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments: See attached permit drawings.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	<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
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	N/A
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
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A
5. DWQ 401 Unit Stormwater Review	
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

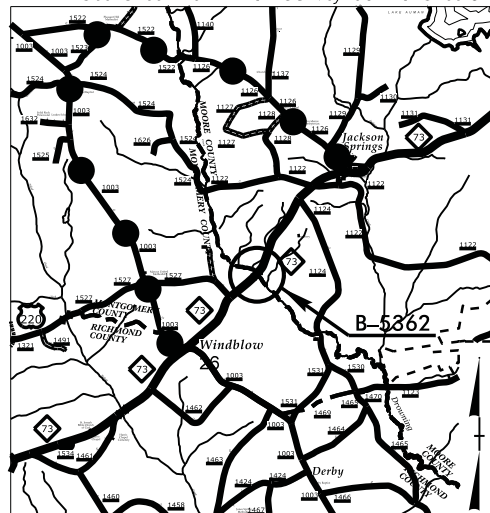
F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If you answered "yes" to 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
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	<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):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	<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.	
4. Sewage Disposal (DWQ Requirement)	
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. not applicable	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	<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? N.C. Natural Heritage Program database; USFWS-Raleigh Field Office website; biological surveys for protected species listed for Moore/Montgomery Counties. No habitat exists for the listed species. NCDOT will adhere to conditions of the programmatic biological opinion for the northern long-eared bat.		
6. Essential Fish Habitat (Corps Requirement)		
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		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	<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		
8. Flood Zone Designation (Corps Requirement)		
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		
<u>Philip S. Harris III, P.E., C.P.M.</u> Applicant/Agent's Printed Name	 <p>Colin Mellor Digitally signed by Colin Mellor DN: cn=Colin Mellor, o=NCDOT, ou=NES, email=cmellor@ncdot.gov, c=US Date: 2017.05.17 13:33:31 -04'00'</p> <p>Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)</p>	05-17-2017 Date

		North Carolina Department of Transportation Highway Stormwater Program STORMWATER MANAGEMENT PLAN FOR NCDOT PROJECTS					
(Version 2.06; Released June 2016)							
WBS Element: 46077.1.1		TIP No.: B-5362		County(ies): Montgomery Moore		Page 1 of 1	
General Project Information							
WBS Element:		46077.1.1		TIP Number:		B-5362	Project Type: Bridge Replacement
NCDOT Contact:		William (Bill) H. Elam, Jr., PE		Contractor / Designer:		Ernest J Hahn, PE	
		Address: 1590 Mail Service Center Raleigh, NC 27699-1590				Address: 1590 Mail Service Center Raleigh, NC 27699-1590	
		Phone: 919-707-6718				Phone: 919-707-6724	
		Email: belam@ncdot.gov				Email: ejhahn@ncdot.gov	
City/Town:				County(ies):		Montgomery	Moore
River Basin(s):		Lumber		CAMA County?		No	No
Wetlands within Project Limits?		Yes					
Project Description							
Project Length (lin. miles or feet):		0.082 miles		Surrounding Land Use:		rural; predominantly wetlands and forested	
Project Built-Up Area (ac.)		0.3 ac.		Proposed Project		Existing Site	
Typical Cross Section Description:		twelve-foot lanes with four-foot full depth paved shoulders and four-foot eleven-inch shoulders on the bridge				ten-foot lanes with variable width grass shoulders	
Annual Avg Daily Traffic (veh/hr/day):		Design/Future: 2100		Year: 2040		Existing: 1674	
						Year: 2017	
General Project Narrative: (Description of Minimization of Water Quality Impacts)		<p>This project consists of the replacement of bridge 53 over Drowning Creek and the associated roadway grade improvements along NC 73 in Montgomery and Moore counties. The existing structure is a 97-foot long, triple span bridge (1@32'-3", 1@32'-7", 1@32'-1") constructed in 1926, and the proposed replacement structure is a 145-foot long, double-span bridge (1@60'-0", 1@85'-0") at the existing location.</p> <p>The existing bridge had deck drains over Drowning Creek; spread calculations indicate deck drains will not be required for the proposed bridge. Instead, runoff from the proposed bridge will collect via shoulder berm gutter into a storm drain system and flow overland before reaching the waterbody. In addition, the proposed design reduces surface water impacts by reducing the number of interior bents from two to one. Roadway improvements are designed to minimize water quality impacts by promoting sheet flow and infiltration along grassed shoulders.</p> <p>Surface water impacts occur solely within a small backwater pool near the west bank which is proposed to be backfilled with rip rap to the bed elevation of the main channel; viz., 390 feet. The cumulative total area of impact equals approximately 0.03 acres of fill within wetlands, 0.07 acres of mechanized clearing within wetlands, 0.03 acres of permanent surface water impacts, and less than 0.01 acres of temporary surface water impacts. Existing channel impacts equals approximately 70 linear feet of permanent and 5 feet of temporary impacts.</p>					
Waterbody Information							
Surface Water Body (1):		Drowning Creek		NCDWR Stream Index No.:		14-2-(1)	
NCDWR Surface Water Classification for Water Body		Primary Classification:		Water Supply II (WS-II)			
		Supplemental Classification:		High Quality Waters (HQW)			
Other Stream Classification:							
Impairments:		None					
Aquatic T&E Species?		No		Comments: biological conclusion for Cape Fear Shiner (Notropis mekistocholas) is unresolved			
NRTR Stream ID:		Drowning Creek		Buffer Rules in Effect:		N/A	
Project Includes Bridge Spanning Water Body?		Yes		Deck Drains Discharge Over Buffer?		N/A	
						Dissipator Pads Provided in Buffer?	
		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)	

09/08/19

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



VICINITY MAP

●—●—● OFFSITE DETOUR

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

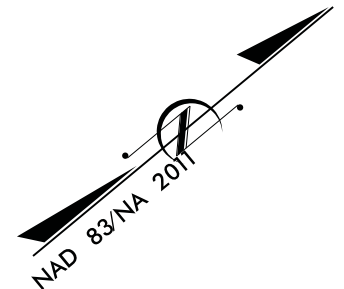
MONTGOMERY / MOORE COUNTIES

LOCATION: BRIDGE NO. 53 OVER DROWNING CREEK ON NC 73

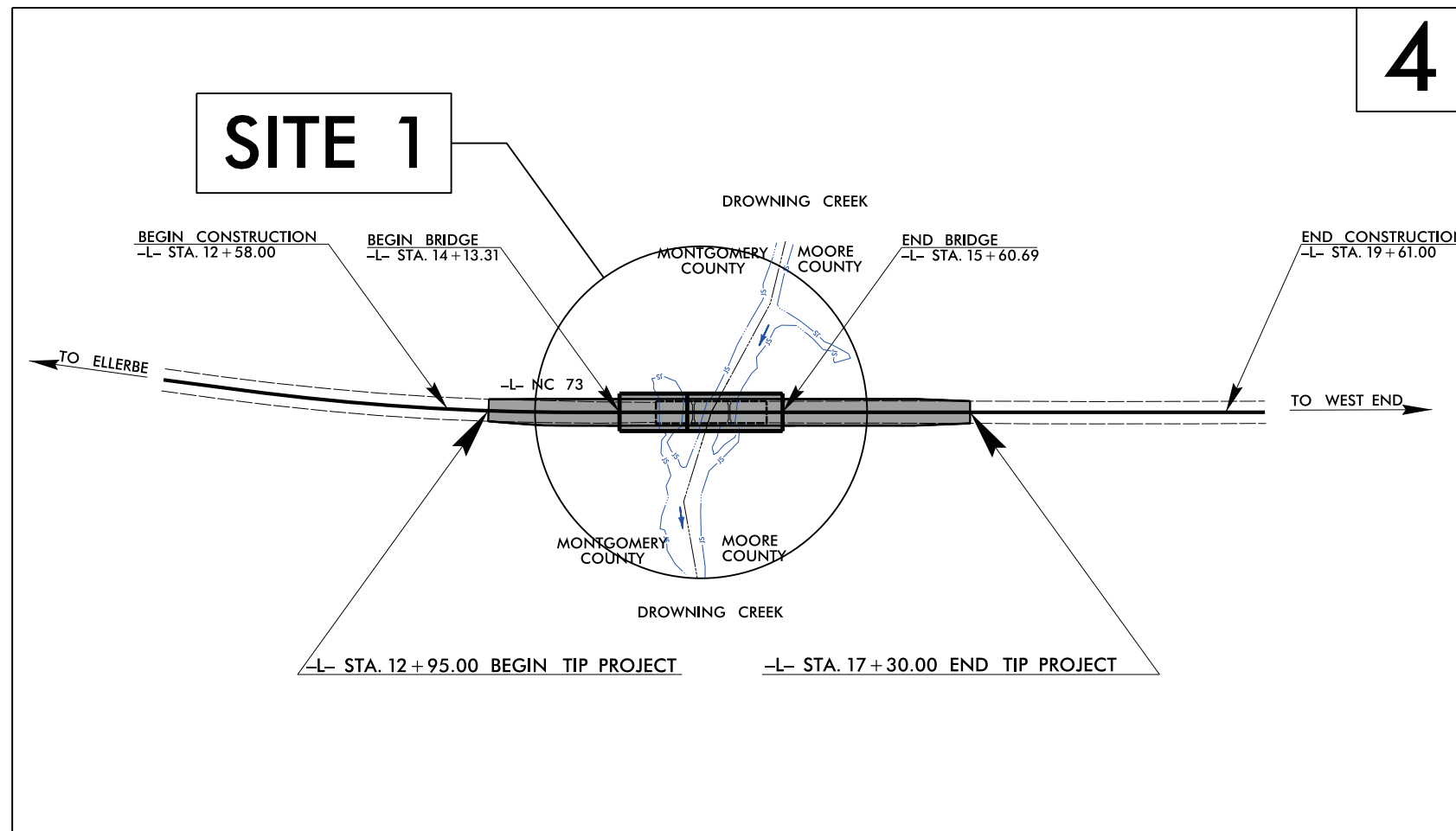
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5362	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46077.1.1	BRSTP-0073(31)	PE	
46077.2.1	BRSTP-0073(31)	R/W /UTIL.	



CONTRACT: TIP PROJECT: B-5362



4

**PERMIT DRAWING
 SHEET 1 OF 7**

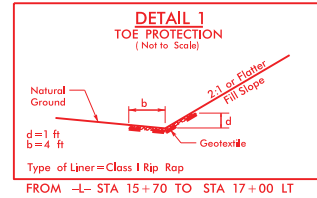
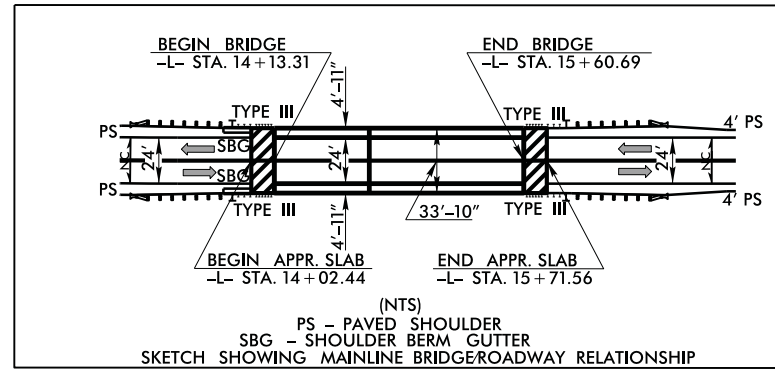
DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

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

<p>GRAPHIC SCALES</p> <p>50 25 0 50 100 PLANS</p> <p>50 25 0 50 100 PROFILE (HORIZONTAL)</p> <p>10 5 0 10 20 PROFILE (VERTICAL)</p>	<p>DESIGN DATA</p> <p>ADT 2017 = 1674 ADT 2040 = 2100</p> <p>K = 10 % D = 65 % T = 10 %* V = 55 MPH</p> <p>*TTST = 3% DUAL = 7%</p> <p>FUNC CLASS = MAJOR COLLECTOR "REGIONAL TIER"</p>	<p>PROJECT LENGTH</p> <p>LENGTH ROADWAY TIP PROJECT B-5362 = 0.054 MILES LENGTH STRUCTURE TIP PROJECT B-5362 = 0.028 MILES TOTAL LENGTH OF TIP PROJECT B-5362 = 0.082 MILES</p>	<p>Prepared in the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610</p> <p>2012 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: OCTOBER 21, 2016</p> <p>LETTING DATE: OCTOBER 17, 2017</p> <p>JAMES A. SPEER, PE PROJECT ENGINEER</p> <p>DANIEL W. GARDNER, JR., PE PROJECT DESIGN ENGINEER</p>	<p>HYDRAULICS ENGINEER</p> <p>SIGNATURE: _____ P.E.</p> <p>ROADWAY DESIGN ENGINEER</p> <p>SIGNATURE: _____ P.E.</p>	
--	---	--	---	---	--

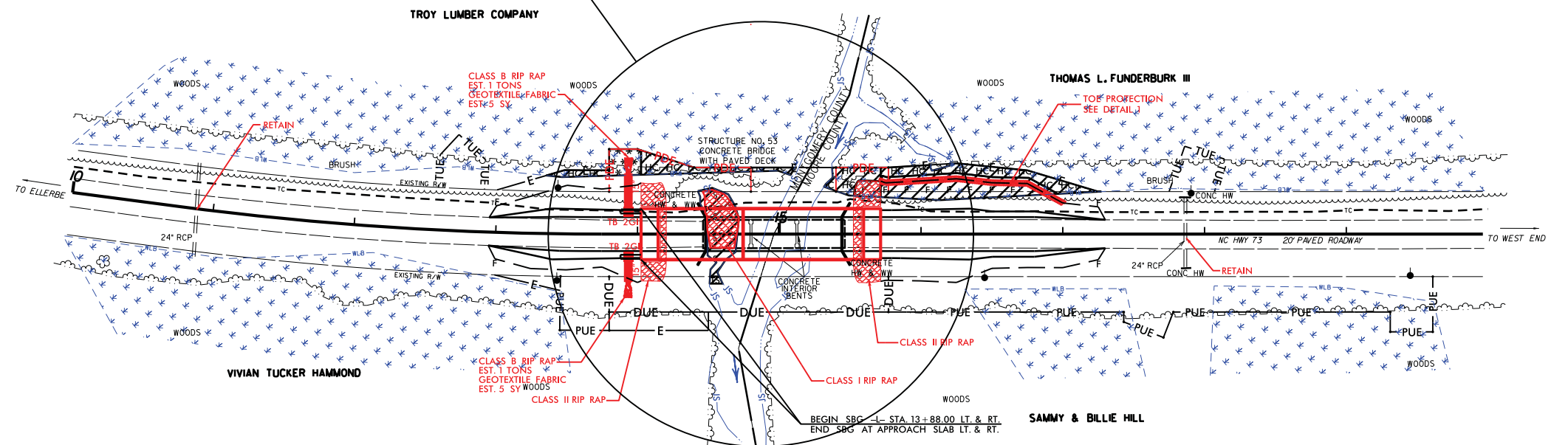
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 \$\$\$DDON\$\$\$
 \$\$\$SERNAME\$\$\$

PROJECT REFERENCE NO. B-5362	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

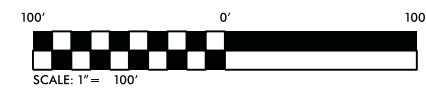


NAD 83/NA 2011

SITE 1



- MECHANIZED CLEARING
- HAND CLEARING
- FILL IN WETLANDS
- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS



**PERMIT DRAWING
SHEET 2 OF 7**

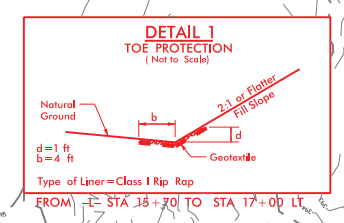
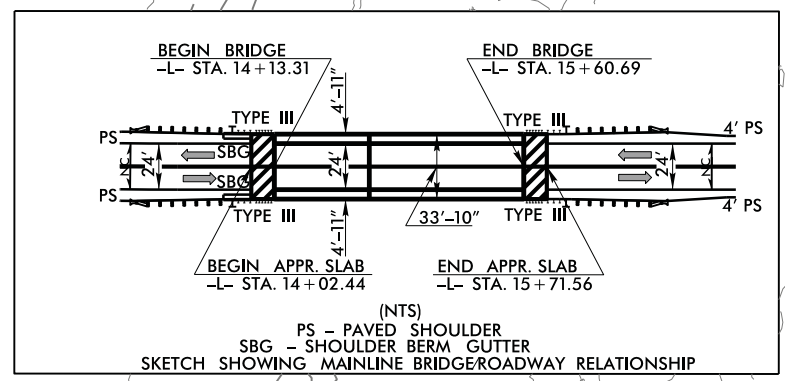
SEE SHEET 5 FOR -L- PROFILE
SEE SHEET S-1 THRU S-? FOR STRUCTURE PLANS

REVISIONS

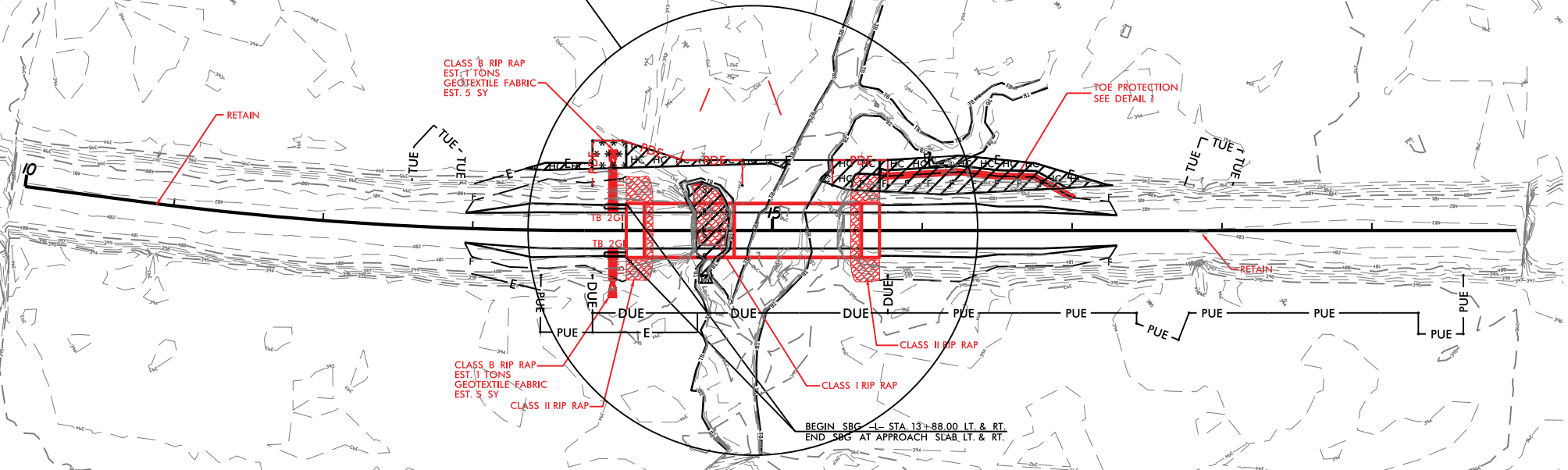
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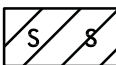

PROJECT REFERENCE NO. B-5362	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

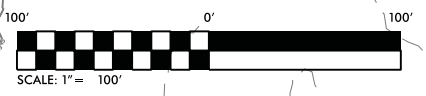
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



SITE 1



-  **HC HC** HAND CLEARING
-  ******* MECHANIZED CLEARING
-  **F F** FILL IN WETLANDS
-  **S S** SURFACE WATER IMPACTS
-  **TS TS** TEMPORARY SURFACE WATER IMPACTS



**PERMIT DRAWING
SHEET 3 OF 7**

SEE SHEET 5 FOR -L- PROFILE
SEE SHEET S-1 THRU S-2 FOR STRUCTURE PLANS

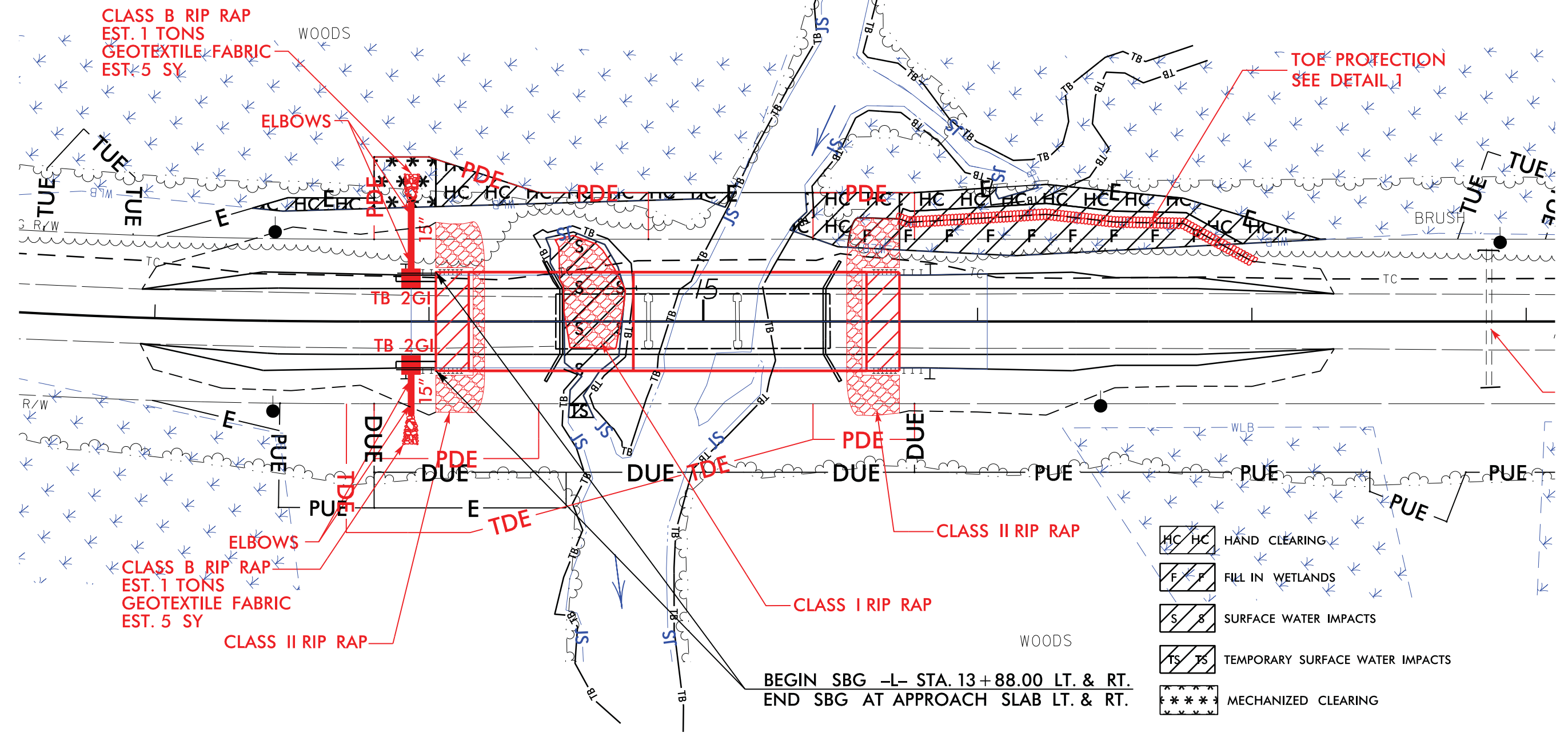
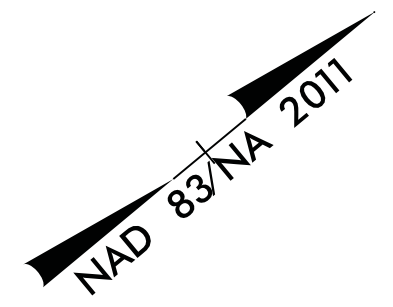
REVISIONS

5/12/2017
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\$\$\$\$CDGN\$\$\$\$
\$\$\$\$\$\$\$\$\$\$\$\$

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
	04
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITE 1 ENLARGEMENT



CLASS B RIP RAP
EST. 1 TONS
GEOTEXTILE FABRIC
EST. 5 SY

TOE PROTECTION
SEE DETAIL 1

CLASS B RIP RAP
EST. 1 TONS
GEOTEXTILE FABRIC
EST. 5 SY

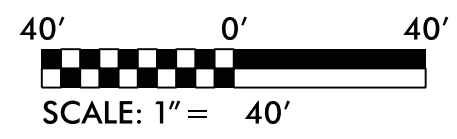
CLASS II RIP RAP

CLASS II RIP RAP

CLASS I RIP RAP

- HC HC HAND CLEARING
- F F FILL IN WETLANDS
- S S SURFACE WATER IMPACTS
- TS TS TEMPORARY SURFACE WATER IMPACTS
- *** MECHANIZED CLEARING

BEGIN SBG -L- STA. 13+88.00 LT. & RT.
END SBG AT APPROACH SLAB LT. & RT.



PERMIT DRAWING
SHEET 4 OF 7

REVISIONS

5/22/2017
 mkelley
 R:\Hydraulics\Environmental Drawings\B5362_Hyd_prm_wet_pah04BU.dgn

\$\$\$\$\$\$SYTIME\$\$\$\$\$\$
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 \$\$\$\$\$\$CADD\$\$\$\$\$\$
 \$\$\$\$\$\$PRINT\$\$\$\$\$\$

8/17/99

5/14/99

PERMIT DRAWING
SHEET 5 OF 7

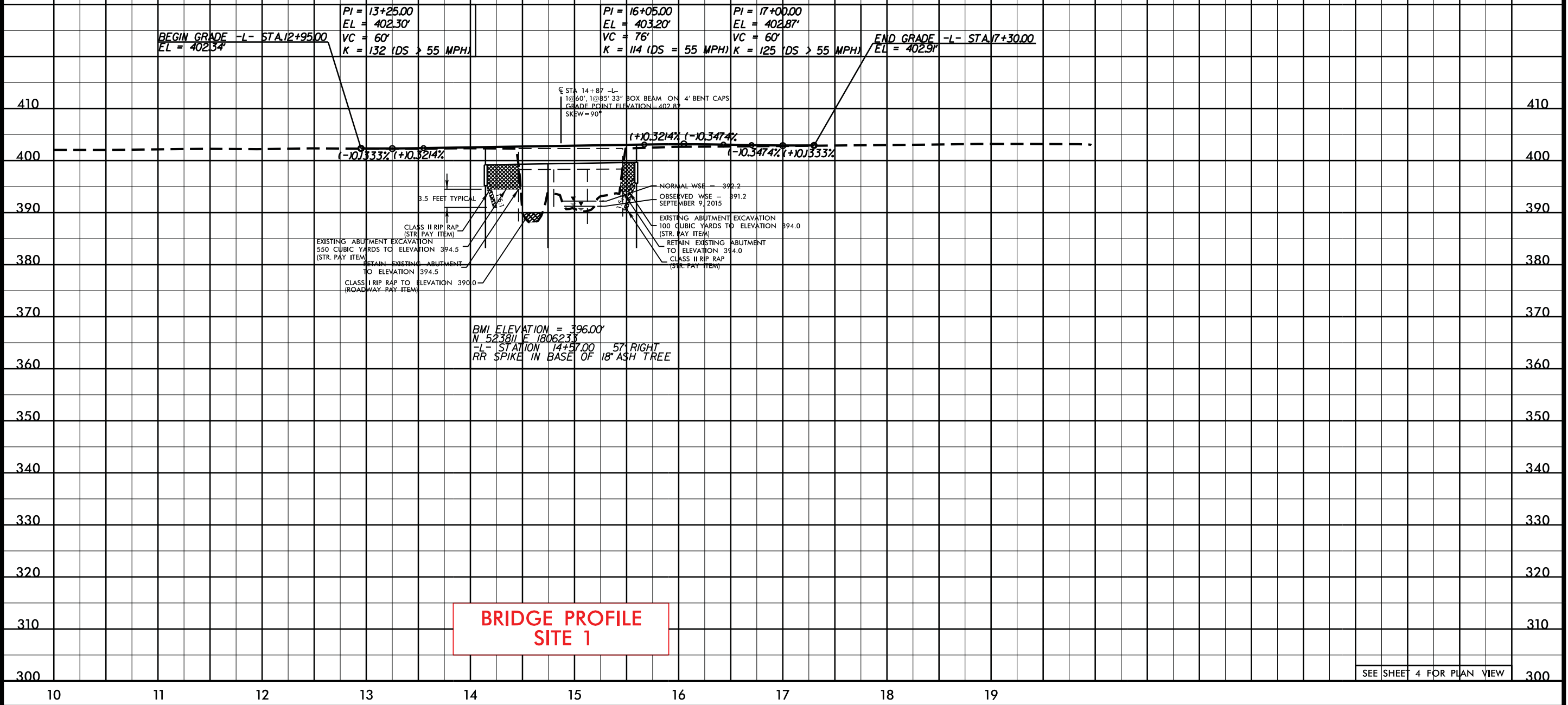
PROJECT REFERENCE NO. B-5362	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 1200 CFS
 DESIGN FREQUENCY = 50 YRS
 DESIGN HW ELEVATION = 396.40 FT
 BASE DISCHARGE = 1800 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 396.51 FT
 OVERTOPPING DISCHARGE = 16000 CFS
 OVERTOPPING FREQUENCY = 500+ YRS
 OVERTOPPING ELEVATION = 402.1 FT

DATE OF SURVEY = 9/9/15
 W.S. ELEVATION AT DATE OF SURVEY = 391.2 FT

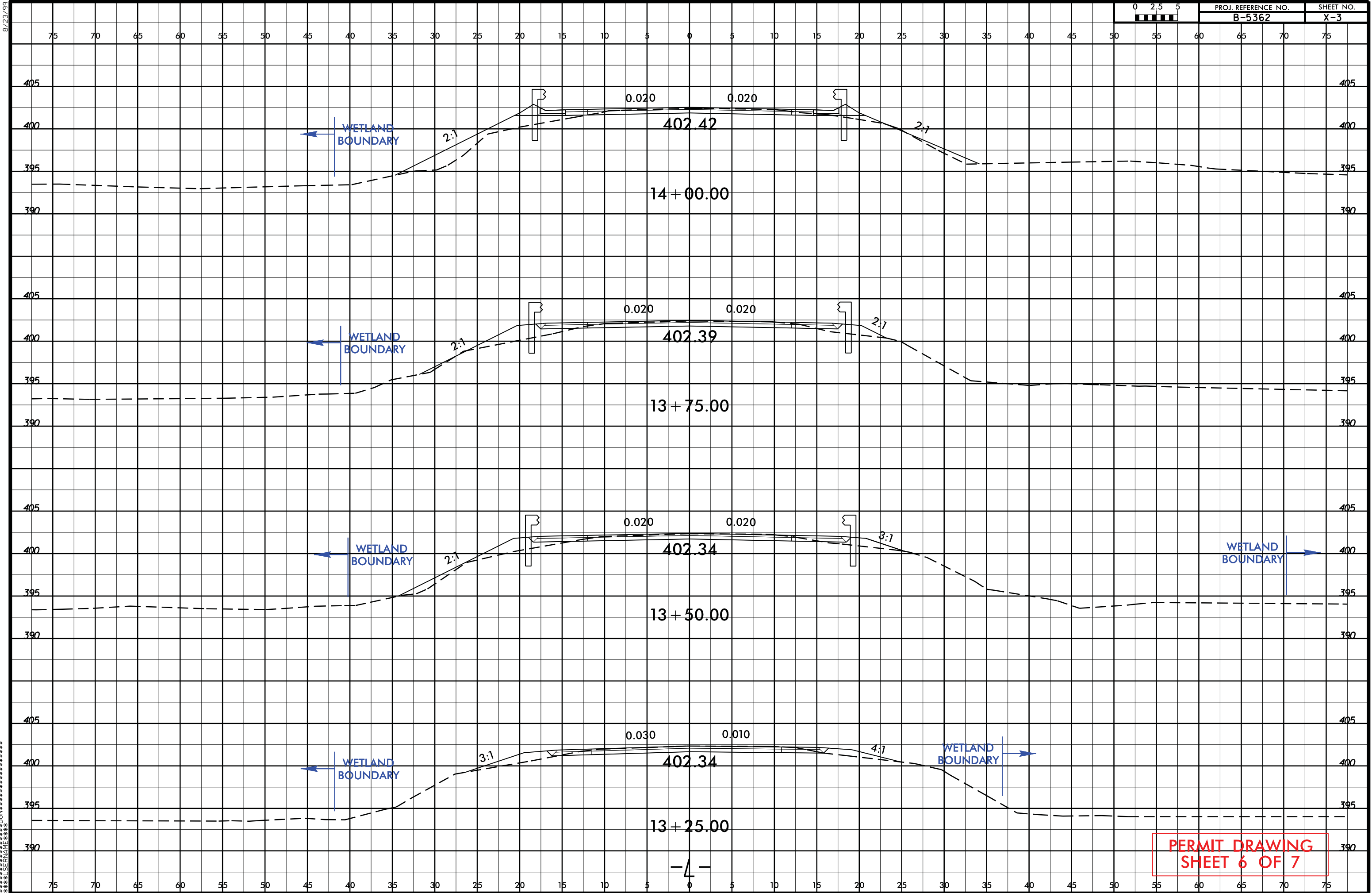
OVERTOPPING ELEVATION EQUALS NORMAL CROWN AT SAG LOCATION, STATION 10+00.00 -L-



**BRIDGE PROFILE
SITE 1**

SEE SHEET 4 FOR PLAN VIEW

5/12/2017
 R:\Hydraulics\PERMITS_Environmental\Drawings\B5362_Hyd_perm_wat_pfl.dgn
 \$\$\$\$\$SYTIME\$\$\$\$\$\$
 \$\$\$\$\$\$DGN\$\$\$\$\$\$
 \$\$\$\$\$\$PERMITS\$\$\$\$\$\$



PERMIT DRAWING
 SHEET 6 OF 7

5/12/2017
 R:\Hydro\GIS\Permits\Environmental Drawings\B5362_Hyd_Prm_wet_xcc.dgn
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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- 13+35 to 14+02.5 LT	Roadway					0.01					
	-L- 14+02.5 to 15+71.5	Bridge	< 0.01			0.03		0.03	< 0.01	70	5	
	-L-15+71.5 to 17+27 LT	Roadway	0.04				0.02					
TOTALS*:			0.05			0.03	0.04	0.03	< 0.01	70	5	

*Rounded totals are sum of actual impacts

NOTES: Temporary fill in wetland in areas of hand clearing for installation of erosion control measures = <0.01 ac.

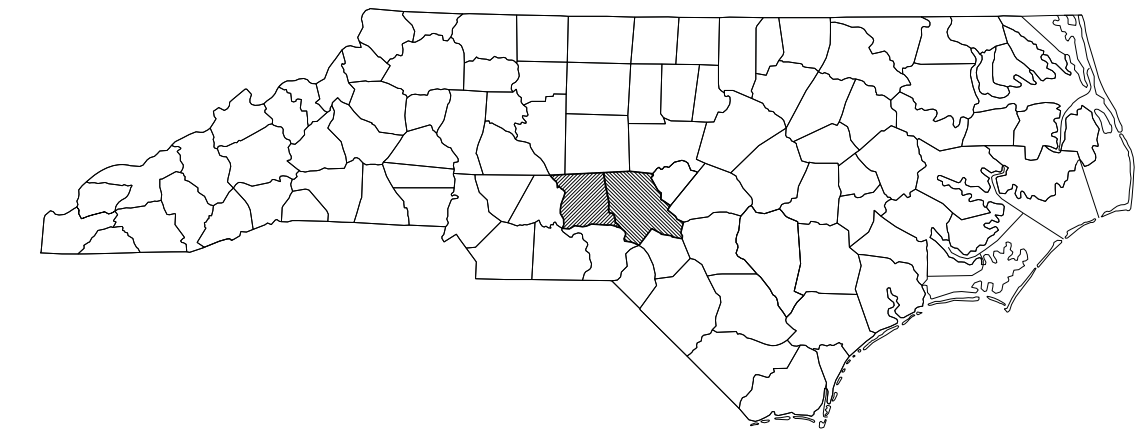
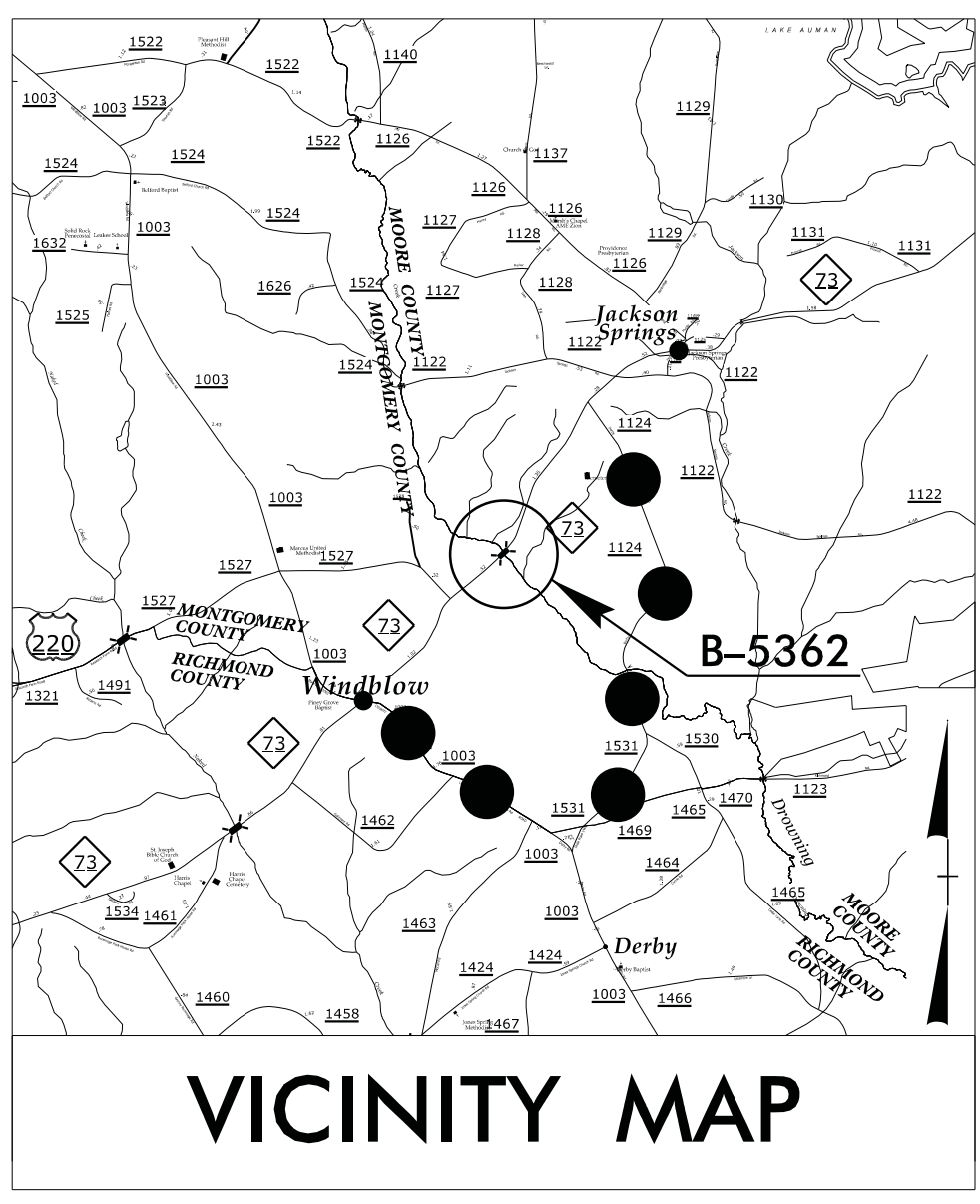
NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 September 20, 2016
 Montgomery and Moore Counties
 B-5362
 46077.1.1
 SHEET 7 OF 7

09.08/99

TIP PROJECT: B-5362

T.I.P. NO.	SHEET NO.
B-5362	UE-1

PERMIT DRAWING
SHEET 1 OF 3
UTILITIES

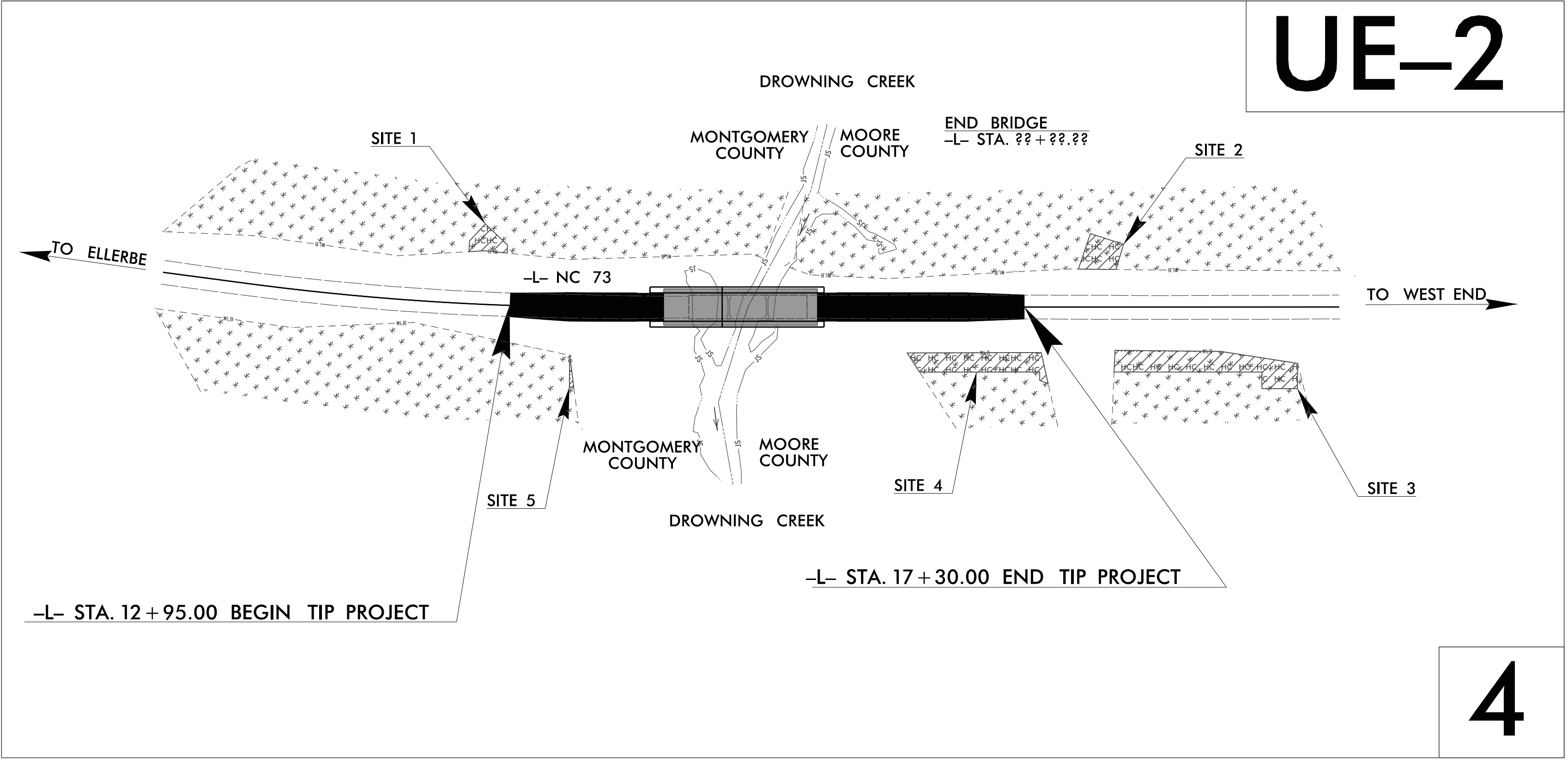
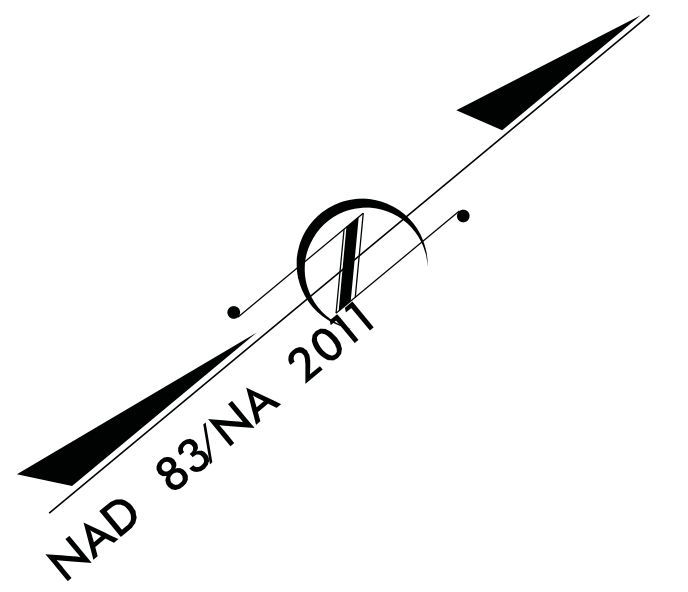


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY PERMIT DRAWINGS MONTGOMERY / MOORE COUNTIES

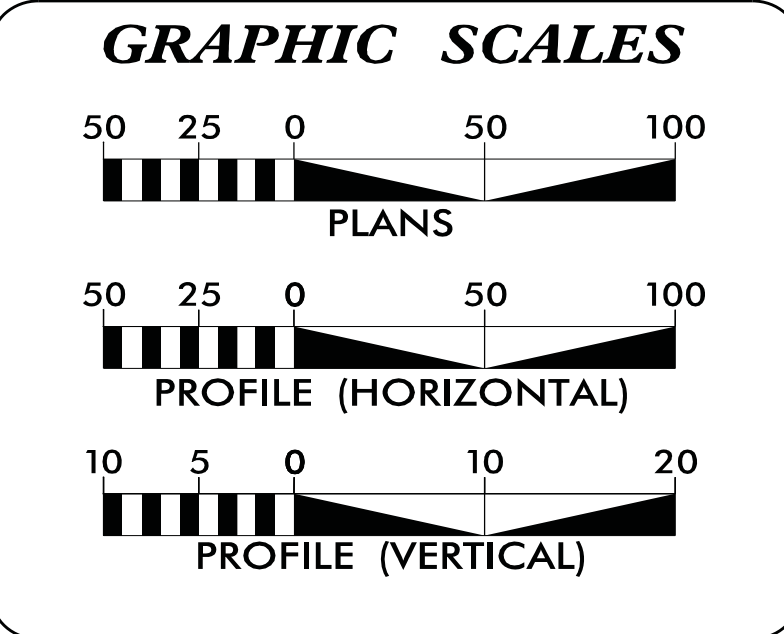
LOCATION: BRIDGE NO. 53 OVER DROWNING CREEK ON NC 73

WETLAND IMPACTS



UE-2

4



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UE-1	TITLE SHEET
UE-2	UBO PLAN SHEETS

UTILITY OWNERS WITH CONFLICTS

(A) TELEPHONE - BROADPLEX
(B) POWER DISTRIBUTION - DUKE ENERGY
(C) POWER DISTRIBUTION - PEE DEE EMC

PREPARED IN THE OFFICE OF:

WETHERILL ENGINEERING

1223 Jones Franklin Road
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

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

John D. Schriener, PLS PROJECT UTILITY COORDINATOR


**DIVISION OF HIGHWAYS
UTILITIES UNIT**
1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

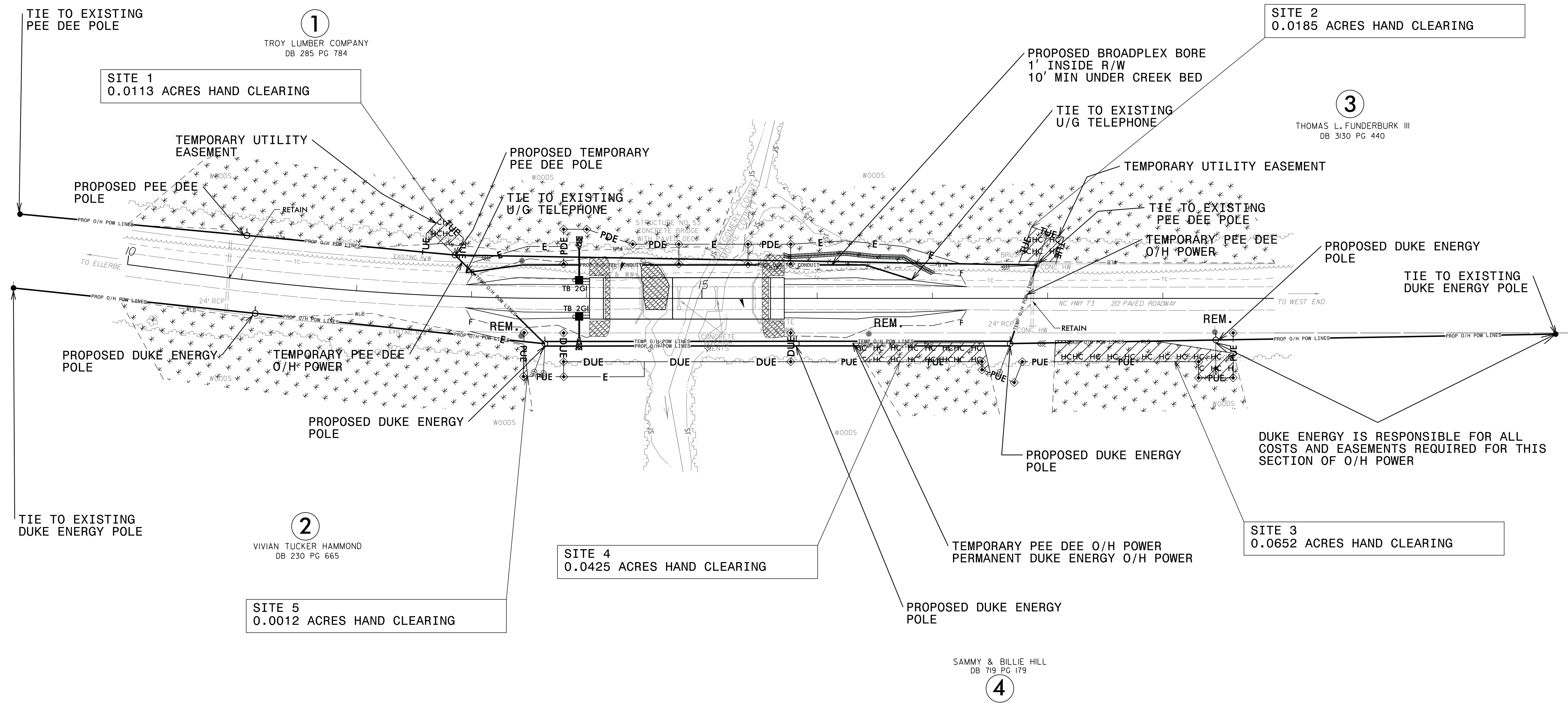
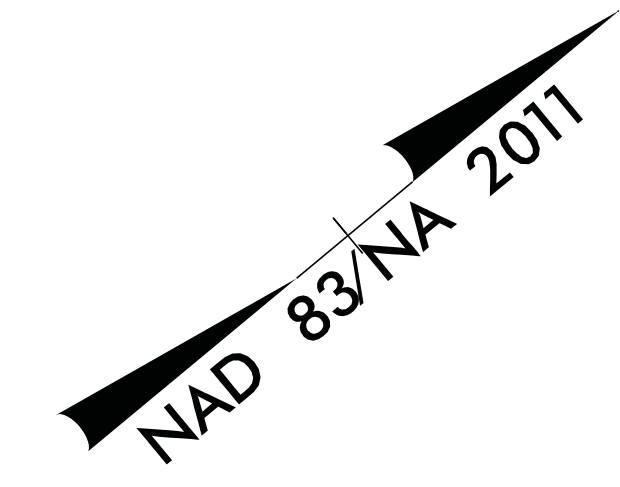
Donna Jackson UTILITIES REGIONAL ENGINEER
Don Proper UTILITIES PROJECT ENGINEER
Ed Reams UTILITIES AREA COORDINATOR
Tanga Sampson UTILITIES COORDINATOR

\$\$\$\$\$ SYSTEMS \$\$\$
\$\$\$\$\$ DGN \$\$\$
\$\$\$\$\$ USRNAME \$\$\$

UTILITY WETLAND IMPACTS

PERMIT DRAWING
SHEET 2 OF 3
UTILITIES

 DENOTES HAND CLEARING
HAND CLEARING ON ALL UTILITY IMPACTS



1
TROY LUMBER COMPANY
DB 285 PG 784
SITE 1
0.0113 ACRES HAND CLEARING

SITE 2
0.0185 ACRES HAND CLEARING

3
THOMAS L. FUNDERBURK III
DB 3130 PG 440

2
VIVIAN TUCKER HAMMOND
DB 230 PG 665

SITE 4
0.0425 ACRES HAND CLEARING

SITE 3
0.0652 ACRES HAND CLEARING

SITE 5
0.0012 ACRES HAND CLEARING

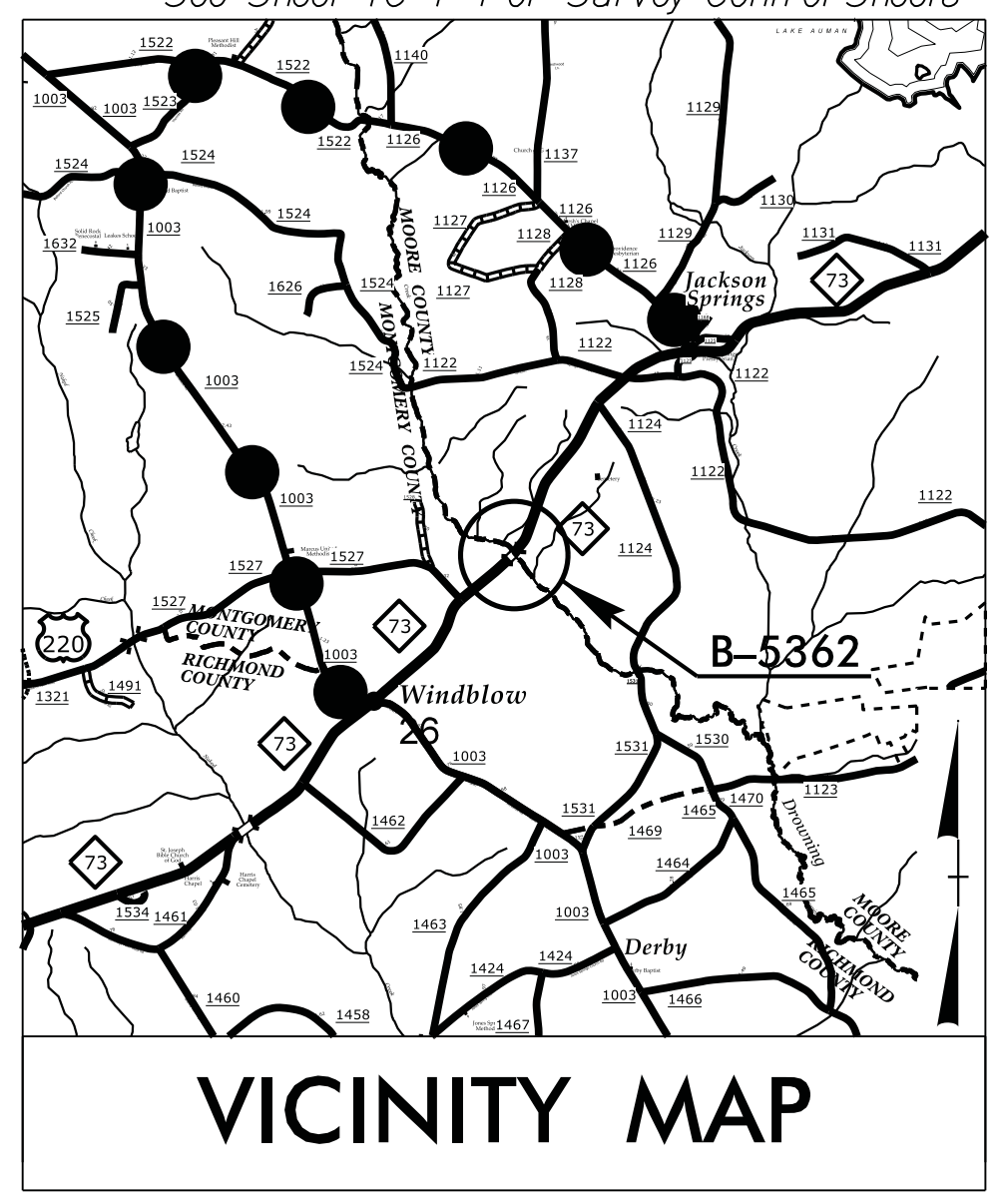
SAMMY & BILLIE HILL
DB 719 PG 179
4

DUKE ENERGY IS RESPONSIBLE FOR ALL COSTS AND EASEMENTS REQUIRED FOR THIS SECTION OF O/H POWER

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	12+84 LT	Power Pole & guy					0.01					
2	17+90 LT	Power Pole & guy					0.02					
3	18+06 to 19+61 RT	Power Lines					0.07					
4	16+30 to 17+50 RT	Power Lines					0.04					
5	13+64 RT	Power Pole & guy					0.00					
TOTALS:							0.14					

09/08/99

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



TIP PROJECT: B-5362

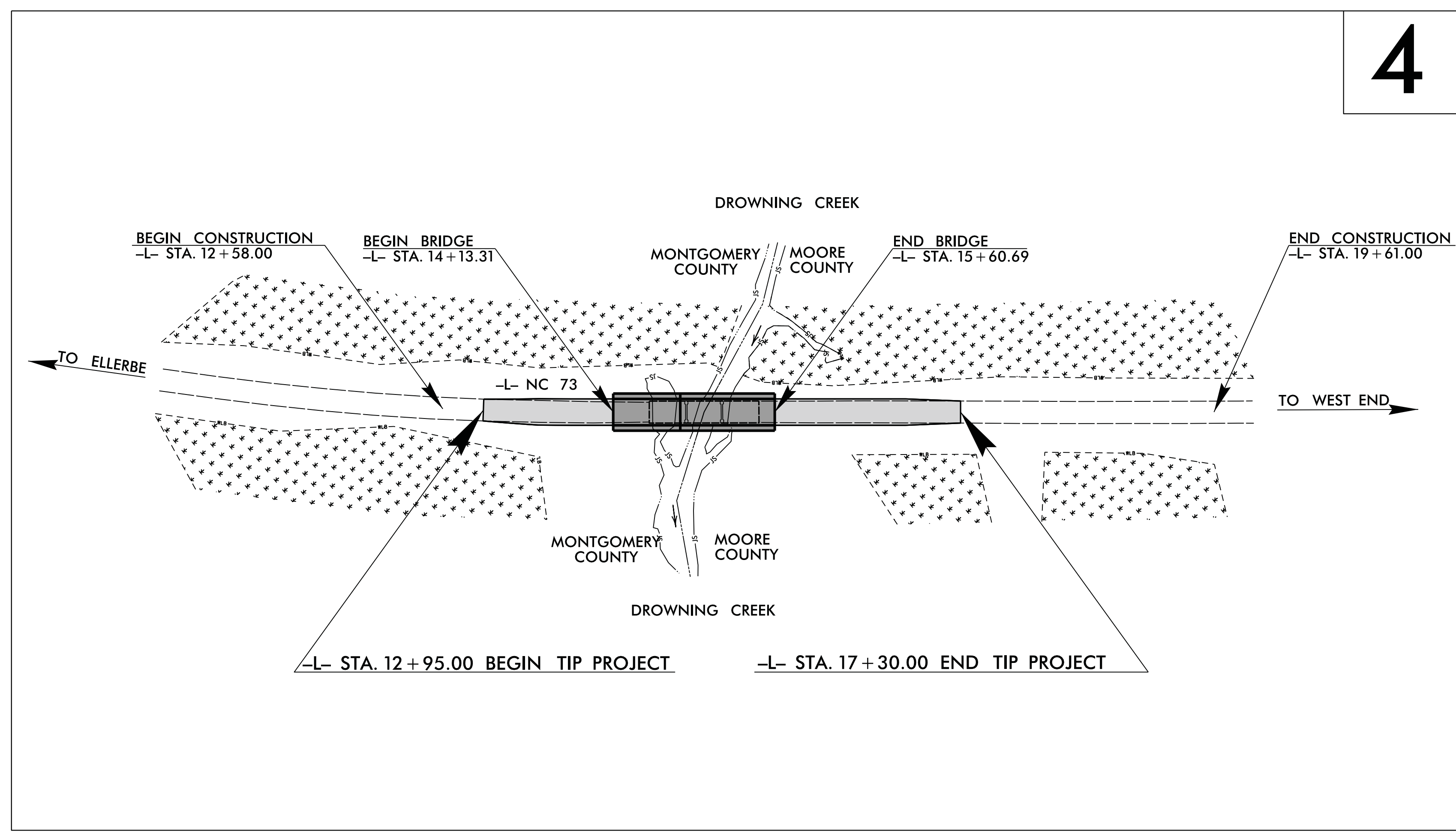
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

MONTGOMERY / MOORE COUNTIES

LOCATION: BRIDGE NO. 53 OVER DROWNING CREEK ON NC 73

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

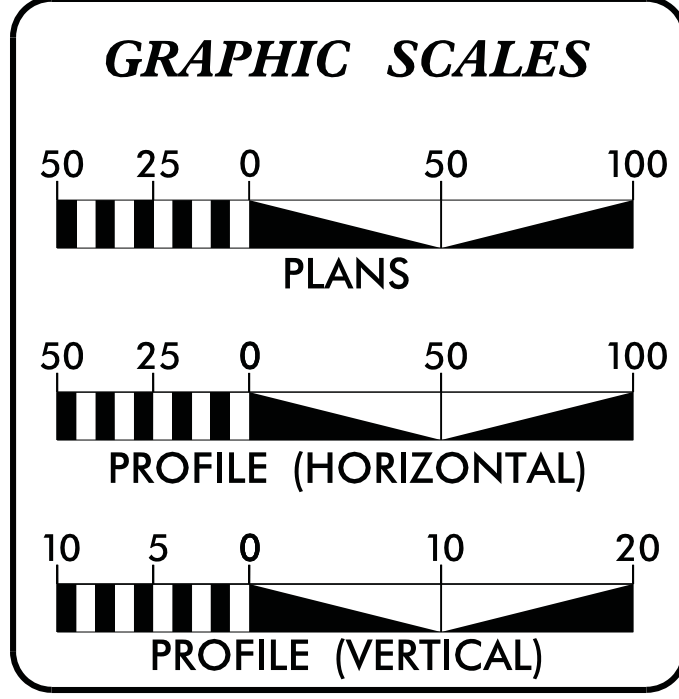
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5362	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46077.1.1	BRSTP-0073(31)	PE	
46077.2.1	BRSTP-0073(31)	R/W /UTILT.	



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

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2017 = 1674
ADT 2040 = 2100
K = 10 %
D = 65 %
T = 10 %*
V = 55 MPH
*TTST = 3% DUAL = 7%
FUNC CLASS = MAJOR COLLECTOR "REGIONAL TIER"

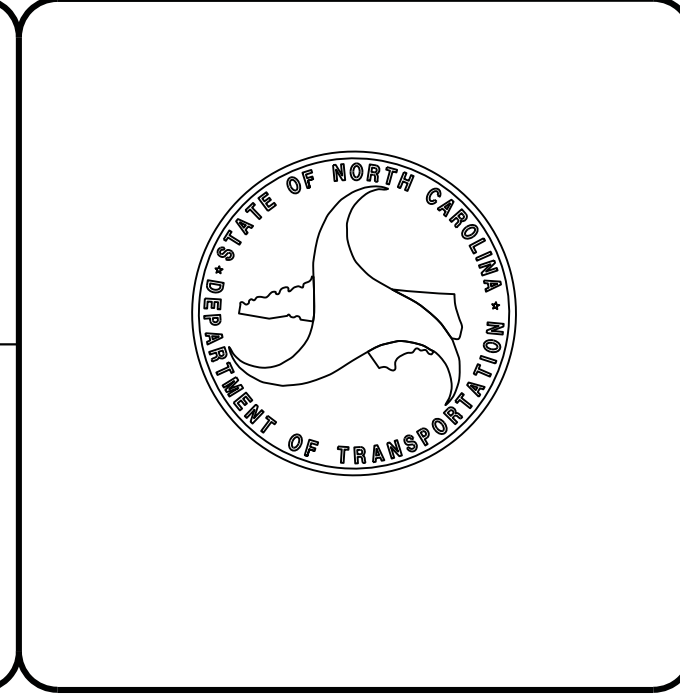
PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5362 = 0.054 MILES
LENGTH STRUCTURE TIP PROJECT B-5362 = 0.028 MILES
TOTAL LENGTH OF TIP PROJECT B-5362 = 0.082 MILES

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

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: OCTOBER 21, 2016	JAMES A. SPEER, PE PROJECT ENGINEER
LETTING DATE: OCTOBER 17, 2017	DANIEL W. GARDNER, JR., PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.



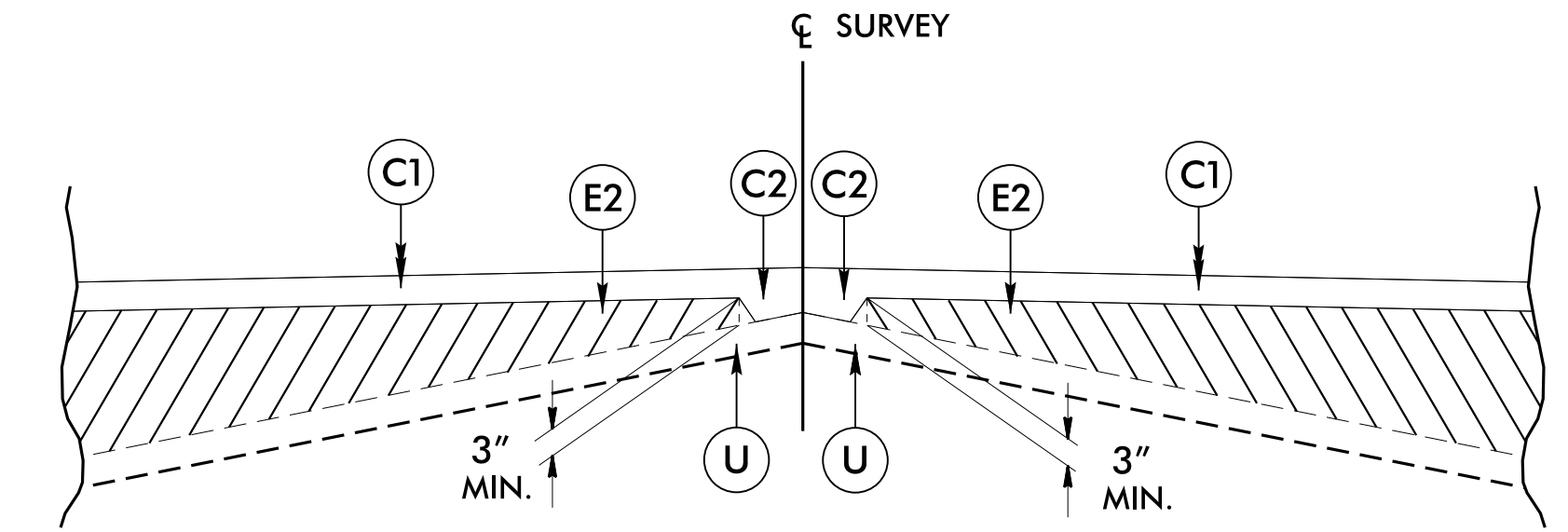
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6/2/99

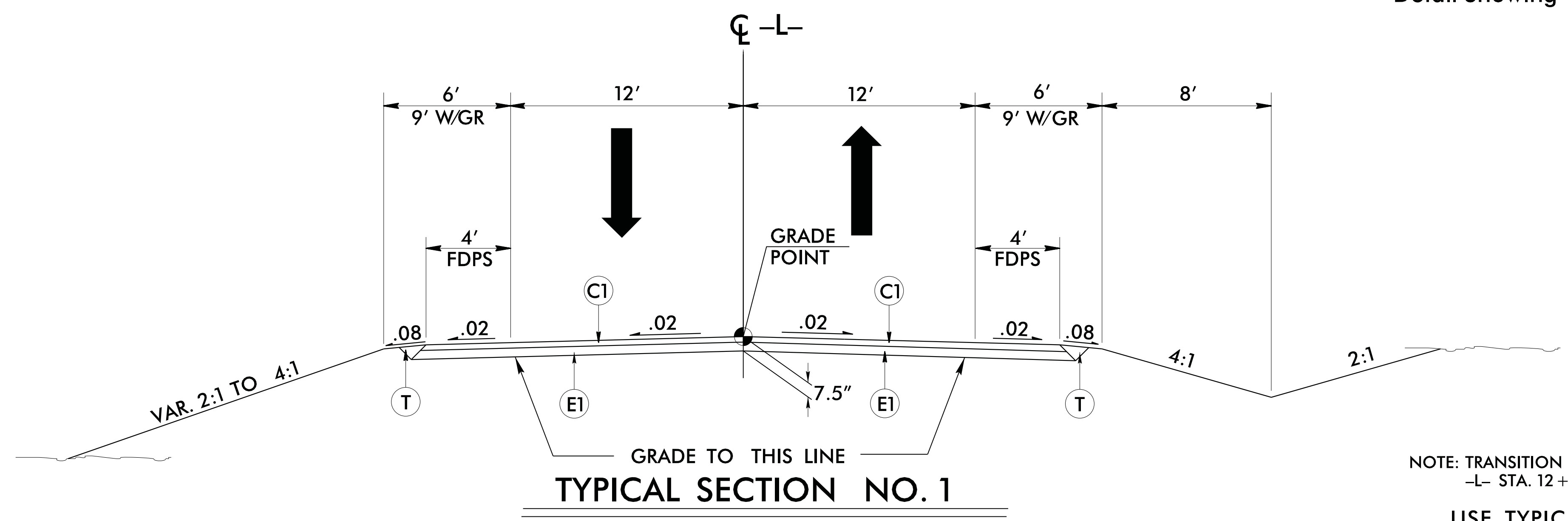
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
E1	PROP. APPROX. 4.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL).

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

PROJECT REFERENCE NO. B-5362	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



Detail Showing Method of Wedging

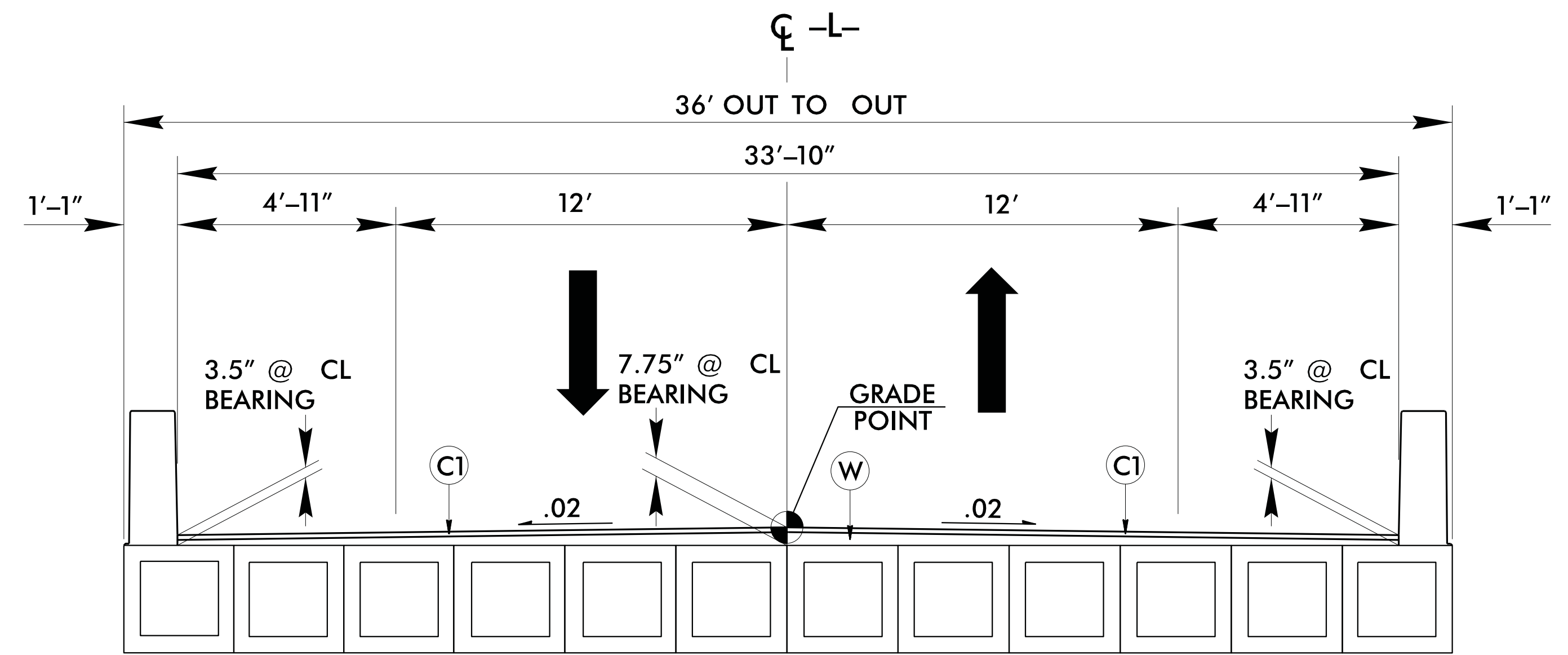


NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 1
-L- STA. 12+95.00 TO STA. 13+45.00

USE TYPICAL SECTION NO. 1 AS FOLLOWS

- L- STA 13+45.00 TO STA 14+13.31 (BEGIN BRIDGE)
- L- STA 15+60.69 (END BRIDGE) TO STA 16+80.00

NOTE: TRANSITION FROM TYPICAL SECTION NO. 1 TO EXISTING
-L- STA. 16+80.00 TO STA. 17+30.00



TYPICAL SECTION NO. 2

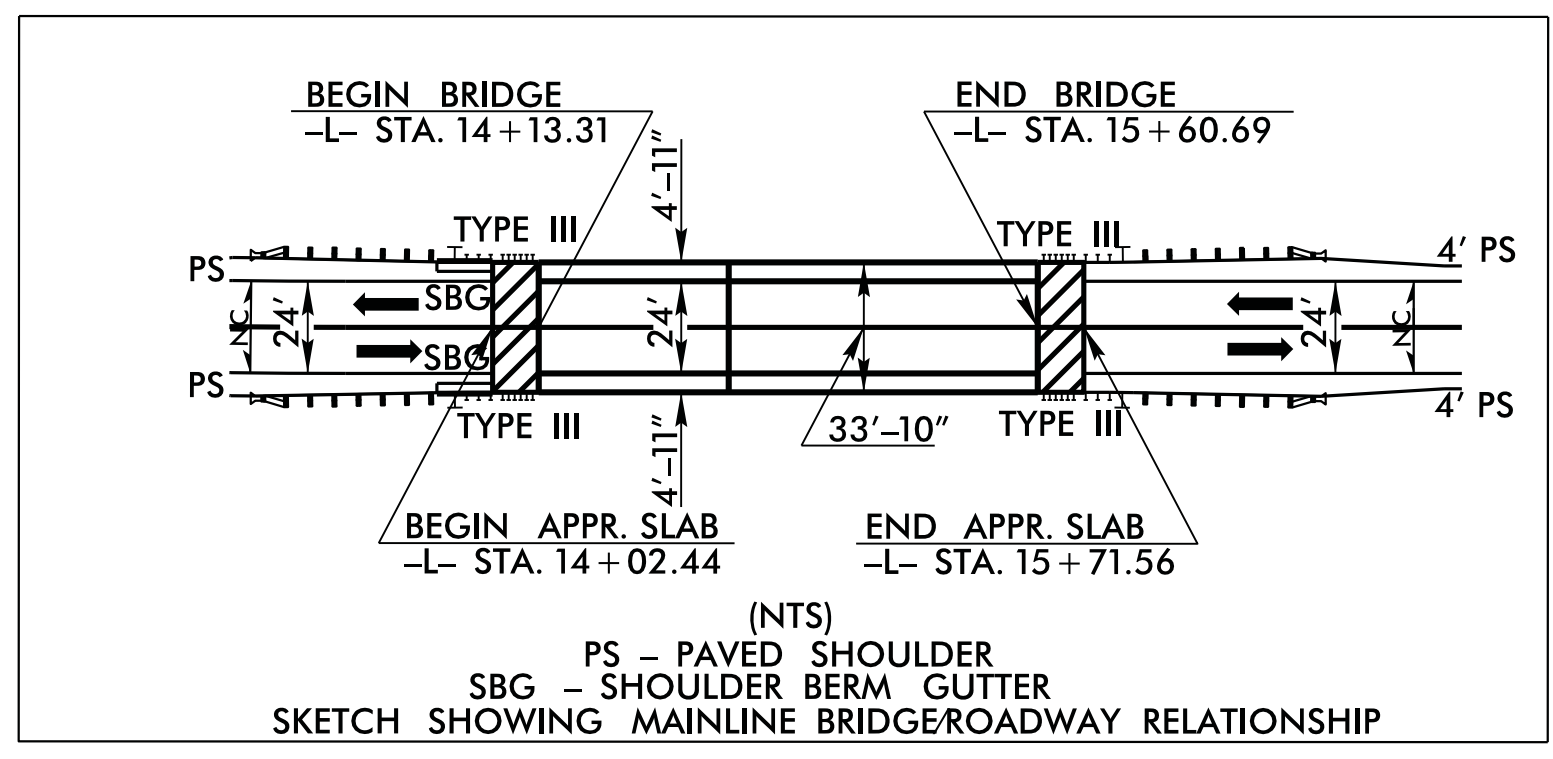
USE TYPICAL SECTION NO. 2 AS FOLLOWS

- L- STA. 14+13.31 (BEGIN BRIDGE) TO STA. 15+60.69 (END BRIDGE)

NOTE: NC 73 IS USED FREQUENTLY BY BICYCLISTS, EXISTING BICYCLE ROUTES ARE APPROXIMATELY 1.5 MILES NORTH ON JACKSON SPRINGS ROAD AND 1.5 MILES SOUTH ON WINDBLOW ROAD/DERBY ROAD.

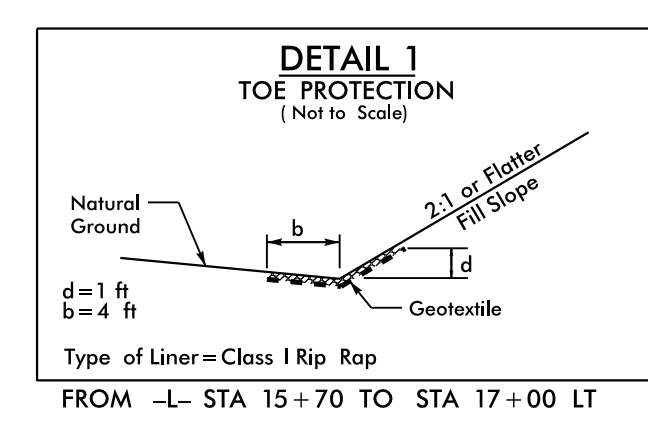
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PROJECT REFERENCE NO.	SHEET NO.
B-5362	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-L-

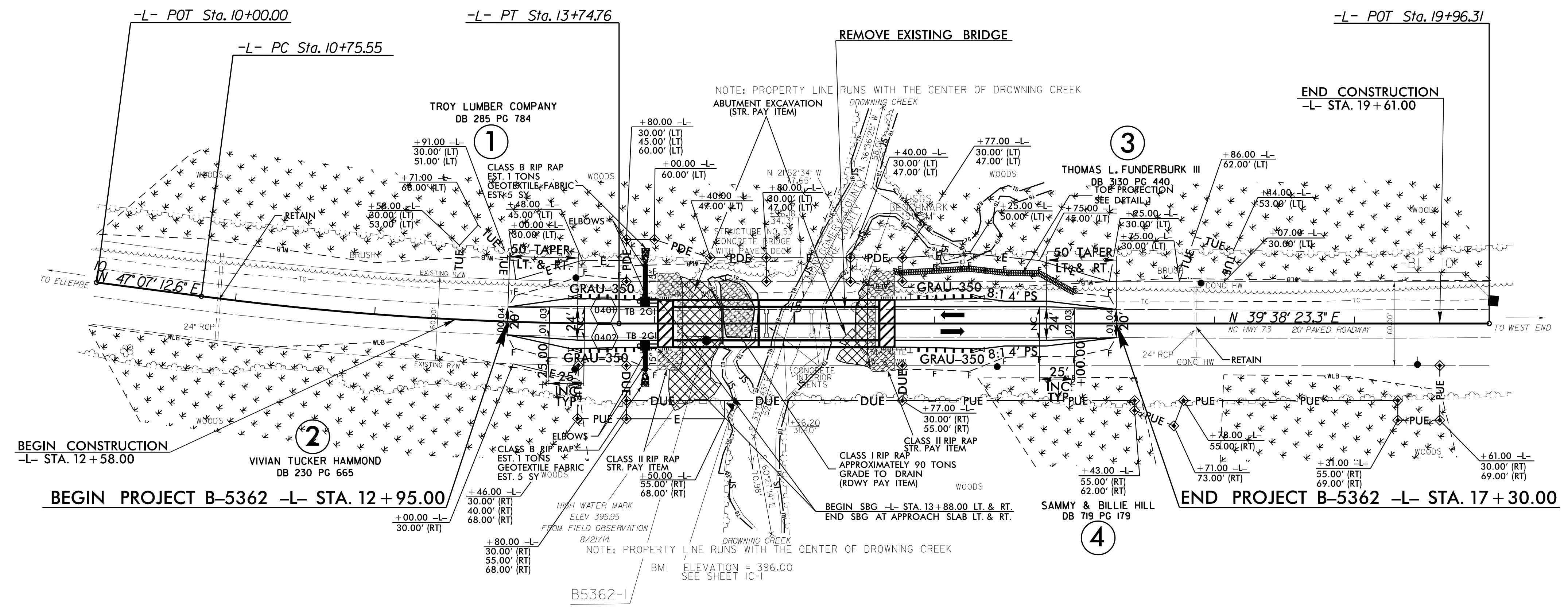
PI Sta 12+25.37
 $\Delta = 7^{\circ} 28' 49.3''$ (LT)
 $D = 2^{\circ} 30' 00.0''$
 $L = 299.21'$
 $T = 149.82'$
 $R = 2,291.83'$
 SE SEE PLANS



NAD 83/NA 2011

REVISIONS

B5362-2



21-OCT-2016 15:32 B5362-Rdy-psh.dgn

SEE SHEET 5 FOR -L- PROFILE
 SEE SHEET S-1 THRU S-? FOR STRUCTURE PLANS