



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JOSH STEIN  
GOVERNOR

DANIEL H. JOHNSON  
SECRETARY

June 18, 2026

MEMORANDUM TO: Division Environmental and Construction Units

FROM: *MAT* Michael A. Turchy, ECAP Group Leader  
Environmental Analysis Unit

SUBJECT: Environmental Permits for the Replacement of:  
Replacement of Bridge 308 over Shope Creek on Bull Creek Road (SR 2419)  
in Buncombe, Division 13, WBS DF18313.2011271.PR

Please find enclosed the following permits for this project:

Agency	Permit Type	Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Regional General Permit 50 Action ID: SAW-2026-00663 Dated June 18, 2026	May 25, 2030
NC Division of Water Resources Section 401 Water Quality Certification	General Certification No. 7679. Project ID: 20260431v1 <i>Written authorization not required.</i>	expires with above Permit

Work is authorized by the above-referenced documents and must be accomplished in strict accordance with the permitted plans.

The Environmental Coordination and Permitting Group (ECAP) or the Division Environmental Office must be consulted if any deviation from the permit(s) or accompanying drawings is required.

# 404 Permit (USACE)



DEPARTMENT OF THE ARMY  
 U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT  
 151 Patton Avenue, Room 208  
 Asheville, NC 28801-5006

June 18, 2026

Regulatory Division  
 SAW-2026-00663

North Carolina Department of Transportation  
 Attn: Mr. Michael A. Turchy  
 Environmental Coordination and Permitting Group Leader  
 1598 Mail Service Center  
 Raleigh, North Carolina 27699-1598  
 Sent Via Email: [maturchy@ncdot.gov](mailto:maturchy@ncdot.gov)

Dear Mr. Turchy,

This letter is in response to the application you submitted to the U.S. Army Corps of Engineers (USACE), Wilmington District, WRDA/Transportation Branch on April 6, 2026, for a Department of the Army general permit verification to replace a bridge that was damaged by **Hurricane Helene**. This project will replace **Bridge No. 308** over Shope Creek on SR 2419 in Buncombe County, North Carolina (35.6347, -82.4710) and has been assigned file number SAW-2026-00663. In order to perform this work, NCDOT proposes to conduct the following activities in waters of the U.S.:

**Summary of Proposed Impacts**

Impact ID #	NWP / GP #	Open Water (ac)		Wetland (ac)		Stream (lf)	
		Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
<b>Site 1 (Shope Creek)</b>	<b><u>RGP 50</u></b>					<b>123' (0.03 ac) / dewater</b>	<b>102' (0.02 ac) / bank stabilization and bank restoration</b>
Impact Totals		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>123' (0.03 ac)</b>	<b>102' (0.02 ac)</b>
Total Loss of waters of the U.S. (wetlands and/or open waters)			<b>0</b>	Total Loss of waters of the U.S.			<b>0</b>

We have reviewed the proposed activities in waters of the U.S. and have determined that these activities are authorized by Regional General Permit (RGP) 50 pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C § 1344). The proposed work must be accomplished in strict accordance with the following:

- enclosed terms, general conditions, and special conditions of RGP 50
- special conditions of the verification letter (see below)
- information in the PCN and attachments
- enclosed plans

If the extent of the project area and/or nature of the authorized impacts to waters are modified, a request detailing the proposed changes must be submitted to this office for written approval before work is initiated. Any deviation from the terms and conditions of the permit, the special conditions of this letter, the information contained in the PCN, or your submitted plans, may subject the permittee to enforcement action.

This verification is valid until **May 25, 2030**, unless the subject RGP is suspended, revoked, or is modified prior to that date such that the activity no longer complies with the terms and conditions of the RGP.

**Project Specific Special Conditions:**

1. This verification letter does not authorize you to take a federally listed species. In order to legally take a federally listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with “incidental take” provisions with which you must comply). The U.S. Fish and Wildlife Service (USFWS) issued a document titled, “Biological and Conference Opinions and Informal Consultations – Batch Format, Replace Multiple Crossing Structures Destroyed by Tropical Storm Helene in Buncombe, Madison, McDowell, Rutherford, and Yancey Counties, North Carolina, Service Log #25-236 through 25-248” on July 8, 2025. This document contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with incidental take for this project. Your authorization under this verification letter and RGP 50 is conditional upon your compliance with the mandatory terms and conditions associated with incidental take listed in this document for this project. Failure to comply with the terms and conditions associated with incidental take detailed in this document, where a take of a federally listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your verification letter and RGP 50. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its Opinion and with the ESA.
2. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this authorization letter in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this authorization letter, all conditions, and any authorized modifications. A copy of this authorization letter, all conditions, and any authorized modifications, shall be available at the project site during construction and maintenance of this project.

This general permit verification and any associated authorizations does not preclude the necessity to obtain any other Federal, State, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Lori Beckwith, Regulatory Project Manager of the WRDA/Transportation Branch at 828-230-0483, by mail at the above address, or by email at [loretta.a.beckwith@usace.army.mil](mailto:loretta.a.beckwith@usace.army.mil). Please take a moment to complete our customer satisfaction survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Sincerely,

A handwritten signature in black ink that reads "M. Scott Jones". The signature is written in a cursive style with a large, prominent "M" and "J".

M. Scott Jones, PWS  
WRDA / Transportation Branch Chief  
USACE, Wilmington District

Enclosures

## Excerpted from Biological Opinion, pursuant to 404 Condition 1:

115, and 424 (Buncombe County); structure 304 (temp) (Madison County); structure 058 (McDowell County); structure 036 (Rutherford County); and structures 009, 233, 193, 192, 157 056 (Yancey County). , as well as any associated tree clearing. Specifically, take of these species may occur as a result of flushing, wounding, or direct mortality during demolition activities (if applicable); or, for northern long-eared bat, Indiana bat, and tricolored bat, take may occur as a result of clearing suitable roost trees during times of year that these bats could be tree-roosting within the action area, which may similarly result in flushing, wounding, or direct mortality during clearing activities.

Incidental take of bats is difficult to measure or detect given that 1) the animals are small, cryptic, and generally difficult to observe, 2) finding dead or injured bats during or following project implementation is unlikely, and 3) some incidental take is in the form of non-lethal harm and not directly observable. Given this, the 1) maximum estimated tree clearing (for northern long-eared bat, Indiana bat, and tricolored bat only) and 2) number of structures replaced, are used as surrogate measures of take for this Opinion. Additionally, as discussed in the Environmental Baseline, no more than 1 individual of gray bat or 2 individuals of northern long-eared bat, Indiana bat, or tricolored bat (given structure and tree roosting) are estimated to be present within the action areas of each crossing structure.

Therefore, the incidental take permitted by the Opinion would be exceeded if:

1. \*Tree clearing amount exceeds 0.10 acre at a single structure location for the crossing structures listed at the beginning of section 7.2.
2. Any more than one structure is demolished/replaced per crossing structure, as listed at the beginning of section 7.2.

*\*For Indiana bat, northern long-eared bat, and tricolored bat only*

Exceedance of take as defined above will represent new information that was not considered in this Opinion and shall result in reinitiation of this consultation. The incidental take of gray bat, northern long-eared bat, and tricolored bat is expected to be in the form of harm, wounding, or death.

### 7.3 Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize take of Appalachian elktoe, gray bat, Indiana bat, northern long-eared bat, and tricolored bat. These non-discretionary measures reduce the level of take associated with project activities and include only actions that occur within the action area.

1. NCDOT shall ensure that the contractor(s) understands and follows the measures listed in the “Conservation Measures”, “Reasonable and Prudent Measures,” and “Terms and Conditions” sections of this Opinion.
2. NCDOT shall minimize the area of disturbance within the action areas to only the area necessary for the safe and successful implementation of the proposed actions.
3. NCDOT shall monitor and document any take numbers and the surrogate measures of take and report those to the Service in a batched format.

### 7.4 Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the Applicant must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting and/or monitoring requirements. When incidental take is anticipated, the terms and conditions must include provisions for monitoring project activities to determine the actual project effects on listed fish or wildlife species (50 CFR §402.14(i)(3)). These terms and conditions are nondiscretionary. If this conference opinion is adopted as a biological opinion following a listing or

designation, these terms and conditions will be non-discretionary.

1. NCDOT shall adhere to all measures as listed in the Avoidance and Minimization and Conservation Measures section as summarized in this Opinion.
2. The NCDOT will immediately inform the Service if the amount or extent of incidental take in the incidental take statement is exceeded.
3. When incidental take is anticipated, the Terms and Conditions must include provisions for monitoring project activities to determine the actual project effects on listed fish or wildlife species (50 CFR §402.14(i)(3)). In order to monitor the impact of incidental take, the NDOT must report the action impacts on the species to the Service according to the following:
  - a. The NCDOT will submit a report each year not later than September 30 identifying, per individual project (via Service Log # and NCDOT identifiers), the following for the preceding calendar year ending December 31:
    - i. Acreage of in-water impacts, if LAA for Appalachian elktoe.
    - ii. Acreage and dates of tree removal (if any), if LAA for bats (excepting gray bat).
    - iii. Dates of structure removal (if any), if LAA for bats.
    - iv. List of implemented AMMs and BMPs [as listed in Section 2.3].

## 8. Conservation Recommendations

Section 7(a)(1) of the Endangered Species Act directs Federal agencies to use their authorities to further the purposes of the Endangered Species Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

- **Eastern Hellbender:** Proximity to eastern hellbender occurrence records was noted for the following crossing structures: Buncombe County structures 308 (temp), 380 (temp), Madison County structure 304 (temp), and Yancey County structures 009, 056, 157, 192, 193, 233. Ahead of work at these locations, coordinate with the NCWRC and the Service to survey for/relocate any hellbender that may be within the action area and vulnerable to impacts from project work.
- **State Species of Concern:** Close proximity to several aquatic species with North Carolina designations was noted for crossing structures: 115 and 380 (temp) in Buncombe County; 058 in McDowell County; 036 in Rutherford County; and 009 and 056 in Yancey County. While these species are not currently afforded legal protection under the ESA, we recommend the most protective sediment and erosion control measures possible be used in waters occupied by these species, and we encourage you to coordinate any relocation efforts of such species with the NCWRC.
- **Refueling and Materials Storage:** Refuel construction equipment outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater) and protected with secondary containment. Store hazardous materials, fuel, lubricating oils, or other chemicals outside the 100-year floodplain or at least 200 feet from all water bodies (whichever distance is greater).
- **Provide Terrestrial Wildlife Passage:** Where riparian corridors suitable for wildlife movement occur adjacent to a project, a spanning structure that also spans a portion of the floodplain and provides or maintains a riprap-free level path underneath for wildlife passage would provide a safer roadway and facilitate wildlife passage. A 10-foot strip may be ideal, though smaller widths can also be beneficial. Alternatively, a “wildlife path” can be constructed with a top-dressing of finer stone (such as smaller aggregate or on-site alluvial material) to fill riprap voids if full bank plating is required. If a multi-barrel culvert is used, the low flow barrel(s) should accommodate the entire stream width and the other barrel should have sills to the floodplain level and be back-filled to

U.S. Army Corps of Engineers (USACE)

**CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT**

For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.

*Form Approved -  
OMB No. 0710-0003  
Expires 2027-10-31*

**The Agency Disclosure Notice (ADN)**

The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at [whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil](mailto:whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

**PURPOSE:** This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions.

Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, Wilmington District, Regulatory Office.

The certification can be submitted by email at [loretta.a.beckwith@usace.army.mil](mailto:loretta.a.beckwith@usace.army.mil) or by mail at the below address:

U.S. Army Corps of Engineers, Wilmington District  
Asheville Field Office  
Street Address: 151 Patton Avenue, Room 208  
Asheville, North Carolina 28801-5006

Corps Action Number: SAW-2026-00663

Permit Type: General Permit

General Permit Number and Name (if applicable): RGP 50

Name of Permittee: NCDOT, Division of Highways

Project Name: NCDOT/Hurricane Helene/DF18313.2011271/Br 308/SR 2419/Buncombe/Div 13

Project Location (physical address): Bridge 308 SR 2419 over Shope Creek Buncombe Co., NC

**PERMITTEE'S CERTIFICATION**

Date Work Started: \_\_\_\_\_

Date Work Completed: \_\_\_\_\_

Enclose photographs showing the completed project (if available).

I \_\_\_\_\_ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.

Name	Date	Signature
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401  
Certification  
(NCDWR)

*Written  
Authorization  
Not Required*

# Permitted Drawings



North Carolina Department of Transportation

Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN



(Version 3.02; Released April 23, 2024)

WBS Element: DF18313.2011271.F TIP/Proj No: DF18313.2011271.PR County(ies): Buncombe Page 1 of 2

General Project Information

WBS Element:	DF18313.2011271.PR	TIP Number:	DF18313.2011271.PR	Project Type:	Bridge Replacement	Date:	3/2/2026
NCDOT Contact:	Mike Sanderson (Division Environmental Officer)			Contractor / Designer:	TGS Engineers (David B. Petty, PE)		
	Address:	Highway Division 13 55 Orange Street Asheville, NC 28801			Address:	706 Hillsborough Street Suite 200 Raleigh NC, 27603	
	Phone:	828-250-3002			Phone:	919-773-8887 ext. 104	
	Email:	jmsanderson@ncdot.gov			Email:	dpetty@tgsengineers.com	
City/Town:	Asheville			County(ies):	Buncombe		
River Basin(s):	French Broad			CAMA County?	No		
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.117 miles	Surrounding Land Use:	Rural: wooded, farmland, low density residential					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	0.4	ac.	0.3	ac.				
Typical Cross Section Description:	Two 10' paved lanes (3 ft unpaved shoulders, plus 3 ft w/ guardrail)			Two 11 ft paved lanes (1 ft paved shoulders)				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	430	Year:	2045	Existing:	350	Year:	2025

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

NCDOT Project ID DF18313.2011271.PR involves the replacement of Bridge #100308 on SR-2419 (Bull Creek Rd) over Shope Creek in Buncombe County, NC northeast of Asheville. The bridge was damaged during Hurricane Helene in September 2024 and temporary repairs were made to reinstate the bridge after the storm. Proposed single-span (1@50'), 27 ft wide, 21" Cored Slab bridge with 6 ft. deep caps is to replace existing 25 ft long by 20 ft wide (timber floor on I-beams) single-span bridge.

Stormwater runoff from the existing bridge discharges under the bridge rails directly into Shope Creek. The proposed bridge will have no direct discharge into the stream. Runoff will flow to the southeast side of the proposed bridge and discharge over the roadway shoulder on the east side of the road at the end of the south approach where it will be diffused with riprap. All proposed stormwater runoff will be discharged as far away from the stream and at the lowest non-erosive velocities as practicable.

All impacts on the project have been minimized to the maximum extent practicable.



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



(Version 3.02; Released April 23, 2024)

WBS Element: DF18313.2011271.F    TIP/Proj No.: DF18313.2011271.PR    County(ies): Buncombe    Page 2 of 2

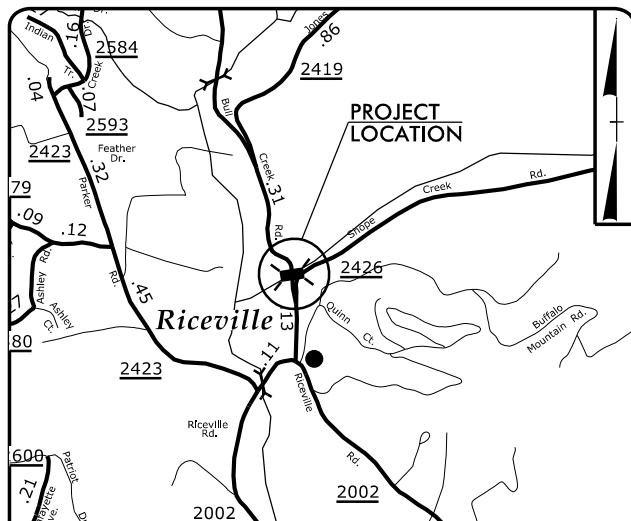
**General Project Information**

**Waterbody Information**

<b>Surface Water Body (1):</b>		Shope Creek		<b>NCDWR Stream Index No.:</b>		6-78-18-3	
<b>NCDWR Surface Water Classification for Water Body</b>			<b>Primary Classification:</b>		Class C		
			<b>Supplemental Classification:</b>		None		
<b>Other Stream Classification:</b>		None					
<b>Impairments:</b>		None					
<b>Aquatic T&amp;E Species?</b>				<b>Comments:</b>			
<b>NRTR Stream ID:</b>				<b>Buffer Rules in Effect:</b>		N/A	
<b>Project Includes Bridge Spanning Water Body?</b>		Yes		<b>Deck Drains Discharge Over Buffer?</b>		No	
<b>Deck Drains Discharge Over Water Body?</b>		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)					
<b>Surface Water Body (2):</b>				<b>NCDWR Stream Index No.:</b>			
<b>NCDWR Surface Water Classification for Water Body</b>			<b>Primary Classification:</b>				
			<b>Supplemental Classification:</b>				
<b>Other Stream Classification:</b>							
<b>Impairments:</b>							
<b>Aquatic T&amp;E Species?</b>				<b>Comments:</b>			
<b>NRTR Stream ID:</b>				<b>Buffer Rules in Effect:</b>			
<b>Project Includes Bridge Spanning Water Body?</b>				<b>Deck Drains Discharge Over Buffer?</b>			
<b>Deck Drains Discharge Over Water Body?</b>				(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)					
<b>Surface Water Body (3):</b>				<b>NCDWR Stream Index No.:</b>			
<b>NCDWR Surface Water Classification for Water Body</b>			<b>Primary Classification:</b>				
			<b>Supplemental Classification:</b>				
<b>Other Stream Classification:</b>							
<b>Impairments:</b>							
<b>Aquatic T&amp;E Species?</b>				<b>Comments:</b>			
<b>NRTR Stream ID:</b>				<b>Buffer Rules in Effect:</b>			
<b>Project Includes Bridge Spanning Water Body?</b>				<b>Deck Drains Discharge Over Buffer?</b>			
<b>Deck Drains Discharge Over Water Body?</b>				(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)					

PROJECT: DF18313.2011271.PR  
 CONTRACT: C205047

See Sheet 1A For Index of Sheets



VICINITY MAP (NTS)

RIGHT OF WAY PLANS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BUNCOMBE COUNTY**

**LOCATION: REPLACEMENT OF STRUCTURE #100308  
ON SR 2419 (BULL CREEK RD) OVER  
SHOPE CREEK**

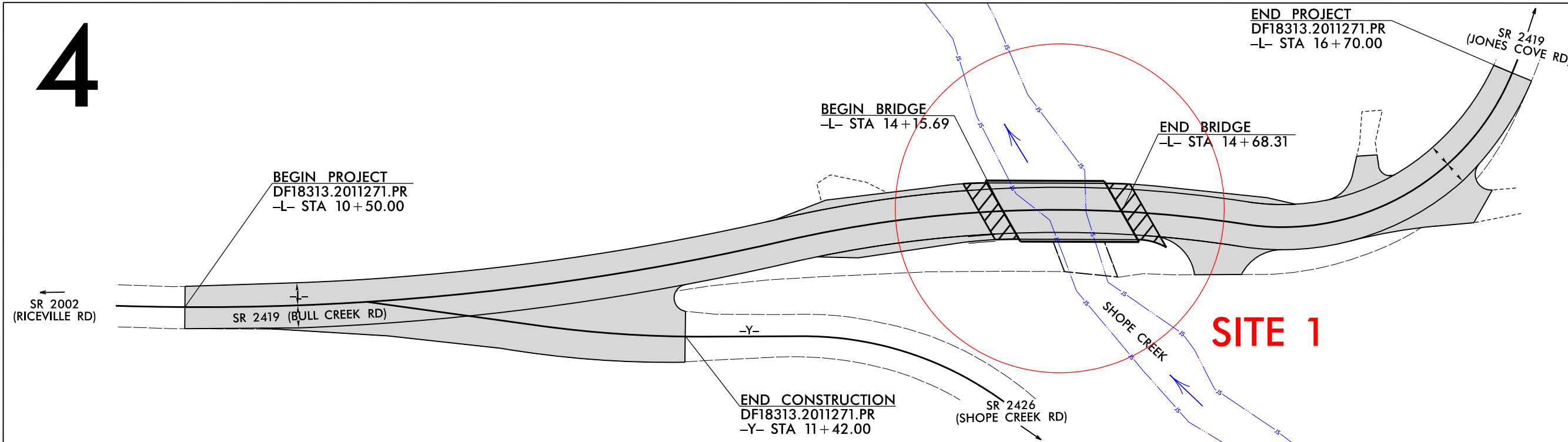
**TYPE OF WORK: GRADING, DRAINAGE,  
PAVING, & STRUCTURE**

**WETLAND AND SURFACE WATER IMPACTS PERMIT**

3-2-2026

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DF18313.2011271.PR	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
DF18313.2011271.PR		PE	
DF18313.2011271.PR		RW	
DF18313.2011271.PR		UTIL.	
DF18313.2011271.PR		CONST.	

PERMIT DRAWING  
SHEET 1 OF 5




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

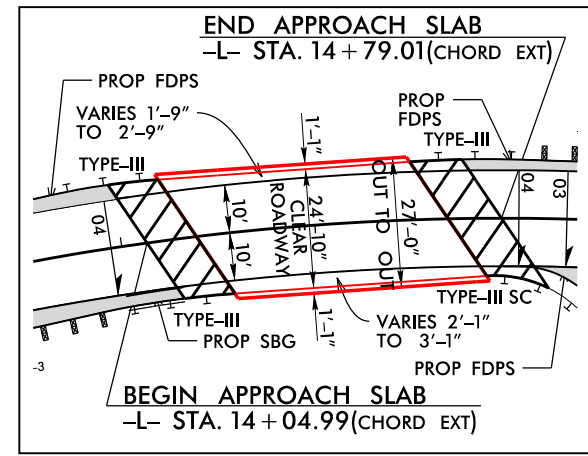
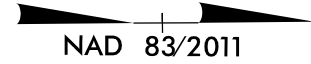
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

<p><b>GRAPHIC SCALES</b></p> <p>20 10 0 20 40 PLANS</p> <p>20 10 0 20 40 PROFILE (HORIZONTAL)</p> <p>4 2 0 4 8 PROFILE (VERTICAL)</p>	<p><b>DESIGN DATA</b></p> <p>ADT 2025 = 350 ADT 2045 = 430 V = 50 MPH TTST = 4% DUAL = 3% FUNC CLASS = LOCAL SUBREGIONAL TIER</p>	<p><b>PROJECT LENGTH</b></p> <p>LENGTH OF ROADWAY PROJECT DF18313.2011271.PR = 0.107 MILES LENGTH OF STRUCTURE PROJECT DF18313.2011271.PR = 0.010 MILES TOTAL LENGTH OF PROJECT DF18313.2011271.PR = 0.117 MILES</p>	<p>PLANS PREPARED BY:</p> <p><b>TGS ENGINEERS</b> TGS ENGINEERS 201 W. MARION ST SHELBY, NC 28150 PH (704) 478-0003 COMP. LICENSE NO. J C-0275</p> <p><b>BURNS</b> R.E. BURNS &amp; SONS CO P.O. BOX 7168 STATESVILLE, NC 28687 PH (704) 322-8858</p> <p>2024 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: MAR. 18, 2025</p> <p>LETTING DATE: MAR. 18, 2025</p>	<p>PLANS PREPARED FOR:</p> <p>NCDOT ALTERNATIVE DELIVERY UNIT 1020 BIRCH RIDGE DR RALEIGH, NC 27610</p> <p><b>JIMMY L. TERRY, PE</b> PROJECT ENGINEER</p> <p><b>MALLORY A. COLLINS, EI</b> PROJECT DESIGN ENGINEER</p> <p><b>SOLOMON MENGESHA</b> NCDOT CONTACT</p>	<p><b>HYDRAULICS ENGINEER</b></p> <p>SIGNATURE: _____ P.E.</p> <p><b>ROADWAY DESIGN ENGINEER</b></p> <p>SIGNATURE: _____ P.E.</p>	
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**PERMIT DRAWING  
SHEET 3 OF 5**

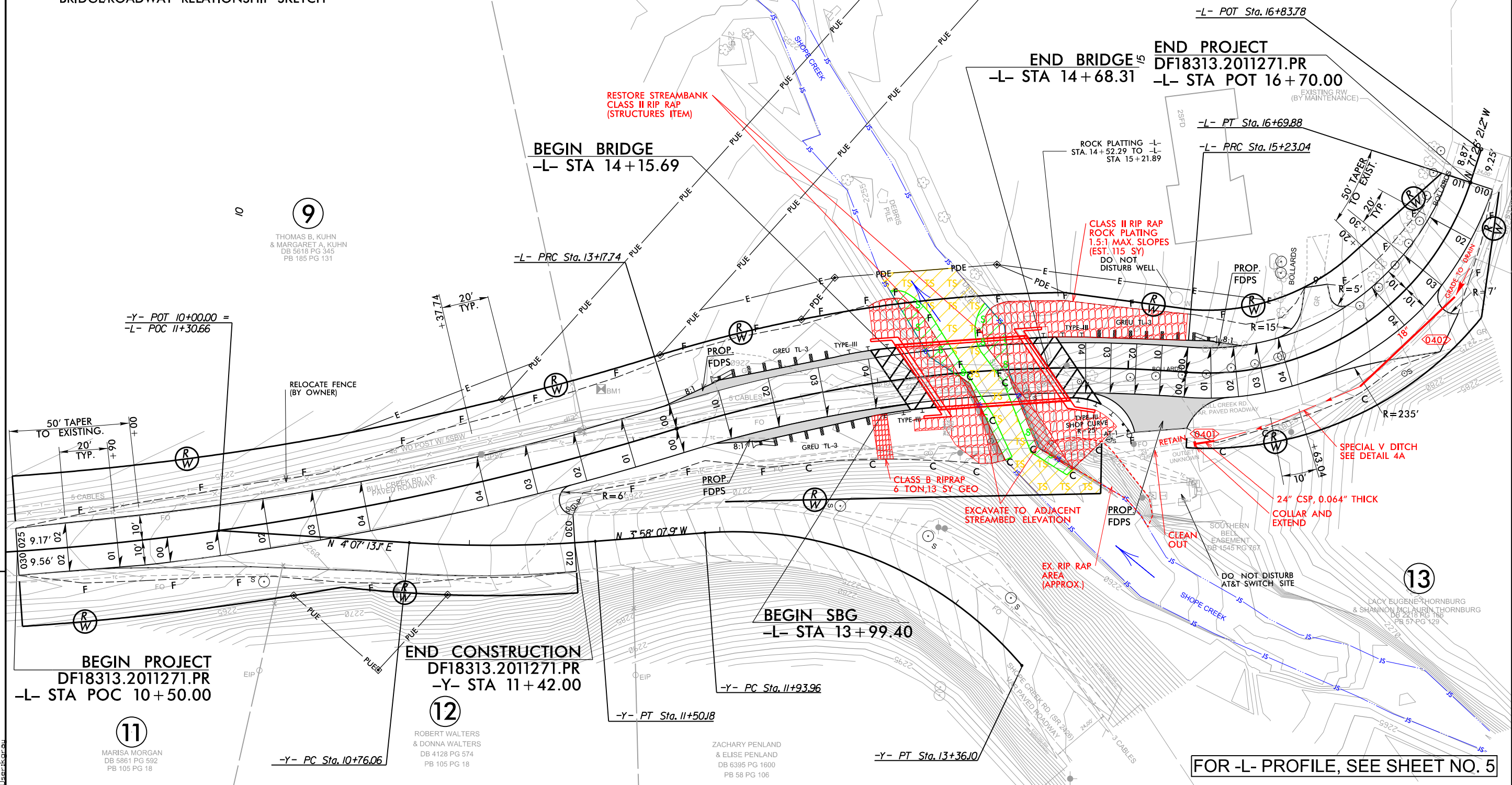
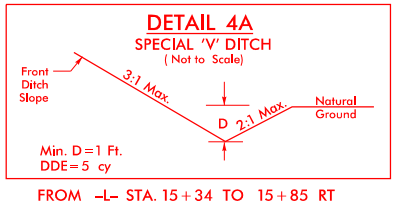
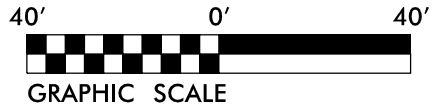
PROJECT REFERENCE NO. DF18313.2011271.PR	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 <b>TGS ENGINEERS</b> 201 W. MARION ST SHELBY, NC 28150 PH: (704) 476-0003 CORP. LICENSE NO.: C-0275	



**BRIDGE/ROADWAY RELATIONSHIP SKETCH**

 **SURFACE WATER IMPACTS**

 **TEMPORARY SURFACE WATER IMPACTS**



REVISIONS  
 3/2/2025 EDB Div 13 Group 15\Buncombe 100308\Hydraulics\PERMITS\Environmental\Drawings\100308\_Hyd\_perm\_psh\_04.dgn  
 8/17/99

**11**  
MARISA MORGAN  
DB 5061 PG 592  
PB 105 PG 18

**9**  
THOMAS B. KUHN  
& MARGARET A. KUHN  
DB 5616 PG 345  
PB 185 PG 131

**12**  
ROBERT WALTERS  
& DONNA WALTERS  
DB 4128 PG 574  
PB 105 PG 18

ZACHARY PENLAND  
& ELISE PENLAND  
DB 6395 PG 1600  
PB 58 PG 106

**13**  
LACY EUGENE THORNBURG  
& SHANNON MC LAURIN THORNBURG  
DB 2218 PG 168  
PB 57 PG 129

**FOR -L- PROFILE, SEE SHEET NO. 5**

5/28/99

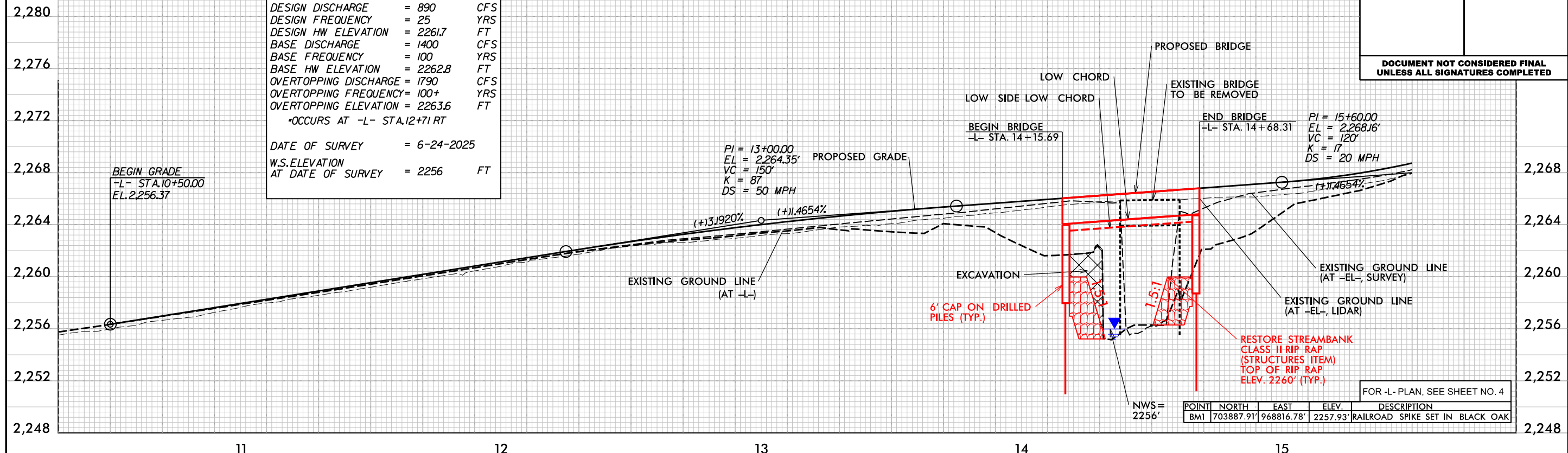
TGS ENGINEERS  
201 W. MARION ST  
SHELBY, NC 28150  
PH (704) 476-0003  
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO. DF18313.2011271.PR	SHEET NO. 05
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# PERMIT DRAWING SHEET 4 OF 5

**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE	= 890	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 2261.7	FT
BASE DISCHARGE	= 1400	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 2262.8	FT
OVERTOPPING DISCHARGE	= 1790	CFS
OVERTOPPING FREQUENCY	= 100+	YRS
OVERTOPPING ELEVATION	= 2263.6	FT
*OCCURS AT -L- STA.12+71 RT		
DATE OF SURVEY	= 6-24-2025	
W.S.ELEVATION AT DATE OF SURVEY	= 2256	FT



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

FOR -L- PLAN, SEE SHEET NO. 4

FOR -L- PLAN, SEE SHEET NO. 4

POINT	NORTH	EAST	ELEV.	DESCRIPTION
BM1	703887.91'	968816.78'	2257.93'	RAILROAD SPIKE SET IN BLACK OAK

X:\13\13006\EDB Div 13 Group 15\Buncombe 100308\Hydraulics\PERMITS\Environmental\Drawings\100308\_Hyd\_perm.pfl.dgn



FOR -L- PLAN, SEE SHEET NO. 4

POINT	NORTH	EAST	ELEV.	DESCRIPTION
BM1	703887.91'	968816.78'	2257.93'	RAILROAD SPIKE SET IN BLACK OAK

**WETLAND AND SURFACE WATER IMPACTS SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	Stream Name	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- 14+09 to 14+78 LT & RT	Bank Stabilization/Bank Restoration	Shope Creek						0.019		102		
1	-L- 14+07 to 14+90 LT & RT	Temporary Dewatering	Shope Creek							0.034		123	
<b>TOTALS:</b>				<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.019</b>	<b>0.034</b>	<b>102</b>	<b>123</b>	<b>0</b>

NOTES:  
 1. Estimate approximately 0.2 acres of greater than 3" DBH to be cleared.

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 3/2/2026  
 Buncombe County  
 DF18313.2011271.PR  
 Bridge #100308  
 SHEET 5 OF 5

Revised 2018 Feb