



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JOSH STEIN  
GOVERNOR

J.R. "JOEY" HOPKINS  
SECRETARY

September 8, 2025

MEMORANDUM TO: Division Environmental and Construction Units  
FROM: *MAT* Michael A. Turchy, ECAP Group Leader  
Environmental Analysis Unit  
SUBJECT: Environmental Permits for the Helene Damaged Bridge 464 over Cane Creek on SR 2782 (Whitaker Road) in Buncombe County, Division 13, WBS DF18313.2011421.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	Nationwide Permit 3, Action ID: SAW-2025-01430 Dated September 8, 2025	March 14, 2026*
NC Division of Water Resources Section 401 Water Quality Certification	Individual Water Quality Certification, ID: 20250960 v1 Dated August 18, 2025	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.

\*All 404 Nationwide Permits expire on March 14, 2026. Since new Nationwide Permits are not issued until the previous set expires, a one-year period exists between March 14, 2026, and March 14, 2027 to complete construction, or renew the permit under the new Nationwide Permit.

ECAP will coordinate with Division Environmental Staff to determine project completion timelines and initiate the renewal process, if necessary.

# 404 Permit (USACE)



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

September 8, 2025

Regulatory Division  
 SAW-2025-01430

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 July 22, 2025, for a Department of the Army general permit verification to replace an arched pipe that was destroyed by **Hurricane Helene** with a bridge. This project will replace **Bridge No. 464** over Cane Creek on SR 2782 in Buncombe County, North Carolina (35.5418, -82.3808) and has been assigned file number SAW-2025-01430. 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
Site 1 (Cane Creek)	<u>NWP 3</u>						84' / bank stabilization
							12' / bank stabilization at ditch outlet
Impact Totals		0	0	0	0		96'
Total Loss of waters of the U.S. (wetlands and/or open waters)			0	Total Loss of waters of the U.S.			0
Required wetland compensatory mitigation			0	Required stream compensatory mitigation			0

We have reviewed the proposed activities in waters of the U.S. and have determined that the activities are authorized by Nationwide Permit (NWP) 3 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 NWP general conditions
- enclosed NWP regional conditions
- 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 March 14, 2026, unless the subject NWP is suspended, revoked, or is modified prior to that date such that the activity no longer complies with the terms and conditions of the NWP.

**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, McDowell, Yancey Counties, North Carolina, Service Log #25-110 through 25-117” on February 11, 2025. This document contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with incidental take for the Gray bat and Northern long-eared bat. Your authorization under this verification letter and NWP 3 is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take listed in this document for the aforementioned species. 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 NWP 3. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its Opinion and with the ESA.

2. NCDOT 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

**Compliance Certification Form**

**File Number: SAW-2025-01430**

**County: Buncombe**

**Permittee: NCDOT, Mr. Michael Turchy**

**Project Name: NCDOT / Hurricane Helene / DF18313.2011421.PR / Br 464 / SR  
2782 / Buncombe / Div 13**

**Date Verification Issued: September 8, 2025**

**Project Manager: Lori Beckwith**

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

**US ARMY CORPS OF ENGINEERS  
Wilmington District  
Attn: Lori Beckwith  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006  
or  
loretta.a.beckwith@usace.army.mil**

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the USACE suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit, and mitigation (if applicable), has been completed in accordance with the terms and conditions of the said permit and verification letter, including all applicable conditions.

**Date Authorized Work Started:** \_\_\_\_\_ **Completed:** \_\_\_\_\_

Describe any deviations from permit (attach drawing(s) depicting the deviations):

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**\*Note: The description of any deviations on this form does not constitute approval by the USACE.**

\_\_\_\_\_  
**Signature of Permittee**

\_\_\_\_\_  
**Date**

401

Certification

(NCDWR)









for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]

6. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
7. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
8. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
9. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
10. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
11. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
12. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
13. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
14. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]



15. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization, including all non-commercial borrow and waste sites associated with the project, shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
16. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
17. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer (or whomever is the authorized agent if a non-NCDOT project) shall complete and return the "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0507]
18. Native riparian vegetation (i.e., herbaceous, trees, and shrubs native to your geographic region) must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0506(b)(2)]
19. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities. [15A NCAC 02H.0506(b)(3) and (c)(3)]
20. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within jurisdictional wetlands. [15A NCAC 2H.0506; 15A NCAC 2H.0507]
21. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3)]:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the North Carolina Sediment and Erosion Control Planning and Design Manual.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the North Carolina Sediment and Erosion Control Manual. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.



- c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the North Carolina Surface Mining Manual.
  - d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
22. Sediment and erosion control measures shall not be placed in wetlands or surface waters without prior approval from DWR. [15A NCAC 02H.0506(b)(3)]
23. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200]
24. Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the North Carolina Sediment and Erosion Control Manual, or for linear transportation projects, the NCDOT Sediment and Erosion Control Manual. All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times. For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the North Carolina Surface Mining Manual. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.
25. DWR approves the stormwater drainage design as shown in the 401 application, under the assumption that it meets the requirements of the NCDOT NPDES permit #NCS000250. These plans are enforceable by DWR. Changes to the approved plans are prohibited without prior approval from DWR. If sediment or other pollutants are found to be discharged from the stormwater outfalls, DWR may take enforcement action. NCDOT and DWR shall assess the damage to water quality standards and implement an appropriate action plan to address the impacts. The action plan shall provide an appropriate timeline for implementation as agreed upon by both DWR and NCDOT. This may require NCDOT to obtain a modification to its current 401 and 404 permits.



This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit that is current at the time this Certification is issued. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

This, the 18th day of August 2025

Signed by:  
  
3185423002EA45E...  
Faith Hardin, Supervisor  
401 & Buffer Transportation Permitting Branch

Electronic cc: Lori Beckwith, USACE Asheville Regulatory Field Office  
Mike Sanderson, Division 13 Environmental Officer  
Holland Youngman, USFWS  
Dave McHenry, NCWRC  
DWR 401 & Buffer Permitting Branch Electronic file

Filename: 20250960\_Ver 1\_Approval Letter\_20250818.docx





NORTH CAROLINA  
Environmental Quality

JOSH STEIN  
Governor

D. REID WILSON  
Secretary

RICHARD E. ROGERS, JR.  
Director

NCDWR Project No.: \_\_\_\_\_ County: \_\_\_\_\_

Applicant: \_\_\_\_\_

Project Name: \_\_\_\_\_

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

**Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

**Applicant's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Agent's Certification**

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Engineer's Certification**

\_\_\_\_\_ Partial      \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_

Date \_\_\_\_\_

Completed hard copies can be emailed to [kristilynn.carpenter@ncdenr.gov](mailto:kristilynn.carpenter@ncdenr.gov) or mailed to:  
NCDEQ Transportation Permitting  
1617 Mail Service Center  
Raleigh NC 27699-1617



# Permitted Drawings



General Project Information

WBS Element:	DF18313.2011389.PR	TIP Number:	100464	Project Type:	Bridge Replacement	Date:	5/8/2025
NCDOT Contact:	Marc Shown, PE		Contractor / Designer:		Justin Davenport, PE		
	Address: Hydraulics Unit 1000 Birch Ridge Drive Raleigh, NC 27610				Address: Moffatt & Nichol 4700 Falls of Neuse Rd, Suite 300 Raleigh, NC 27609		
	Phone: (919)707-6751				Phone: (919)334-7979		
	Email: <a href="mailto:mtshown@ncdot.gov">mtshown@ncdot.gov</a>				Email: <a href="mailto:jdavenport@moffattnichol.com">jdavenport@moffattnichol.com</a>		
City/Town:	Fairview		County(ies):		Buncombe		
River Basin(s):	French Broad		CAMA County?		No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.05	Surrounding Land Use:	RURAL, WOODS, AGRICULTURE				
	Proposed Project			Existing Site			
Project Built-Up Area (ac.)	0.2	ac.	0.1	ac.			
Typical Cross Section Description:	THE PROPOSED ROADWAY WILL BE A TWO-WAY ALIGNMENT WITH 11' TRAVEL LANES, 2' PAVED SHOULDERS, AND VARYING SLOPES. THE PROPOSED BRIDGE HAS AN OUT TO OUT OF 30' AND CLEAR ROADWAY OF 27'-10". THE BRIDGE WILL HAVE 11' TRAVEL LANES AND 2'-11" PAVED SHOULDERS.			THE EXISTING ROADWAY IS A TWO-WAY ALIGNMENT WITH 9' TRAVEL LANES, NO PAVED SHOULDER, AND 4:1 SLOPES. THE EXISTING BRIDGE HAS AN OUT TO OUT OF 18'-6".			

Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	N/A	Year:	N/A	Existing:	700	Year:	2025
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General Project Narrative:  
(Description of Minimization of Water Quality Impacts)

The project consists of the replacement of bridge # 100464 in Buncombe County. The existing bridge carries SR 2782 (Whitaker Road) Over Cane Creek between SR 2776 (Old Fort Rd) and Garren Creek Road. The Creek is called Cane Creek on the vicinity map, the final survey file, and at the NCDEQ Surface Waters Classification website and is referring to the same stream. The proposed structure for bridge # 100464 is 45' length x 30' width (10 -21" prestressed concrete cored slab units). The proposed alignment is at the same location as the existing alignment.

STORMWATER CONTROLS:

The proposed bridge does not utilize deck drains. Runoff from the bridge roadway and paved shoulders at the bridge approaches drains into concrete flume. The stormwater is then diffused at slope prior to discharging into Cane Creek. Shoulders will be paved. Bank Stabilization is planned to prevent erosion of the steambanks.

NOTE:

This is an emergency design bulid caused by Hurricane Helene.



North Carolina Department of Transportation

Highway Stormwater Program  
**STORMWATER MANAGEMENT PLAN**  
 FOR NCDOT PROJECTS



(Version 3.02; Released April 23, 2024)

WBS Element: DF18313.2011389.PR TIP/Proj No.: 100464 County(ies): Buncombe Page 2 of 2

General Project Information

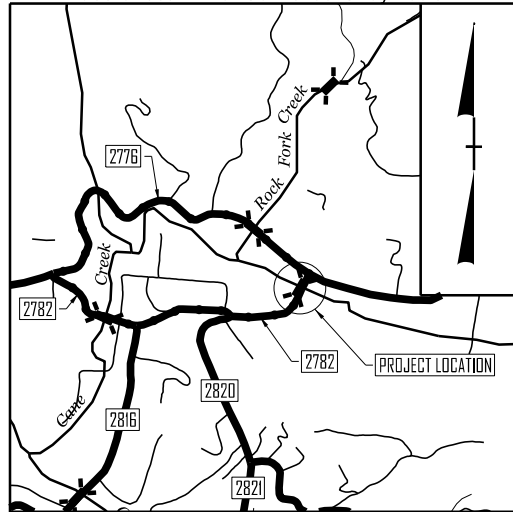
Waterbody Information

Surface Water Body (1):	Cane Creek		NCDWR Stream Index No.:	6-57-(1)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		Trout Waters (Tr)		
Other Stream Classification:					
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	Cane Creek		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	No
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)					
Surface Water Body (2):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?		(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)					
Surface Water Body (3):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?		(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)					

TIP PROJECT: 100464

CONTRACT: C205025

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



VICINITY MAP (NTS)

DETOUR ●—●—●—●—●

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## BUNCOMBE COUNTY

LOCATION: *REPLACE BRIDGE 100464 ON  
SR 2782 (WHITAKER RD)  
OVER CANE CREEK*

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

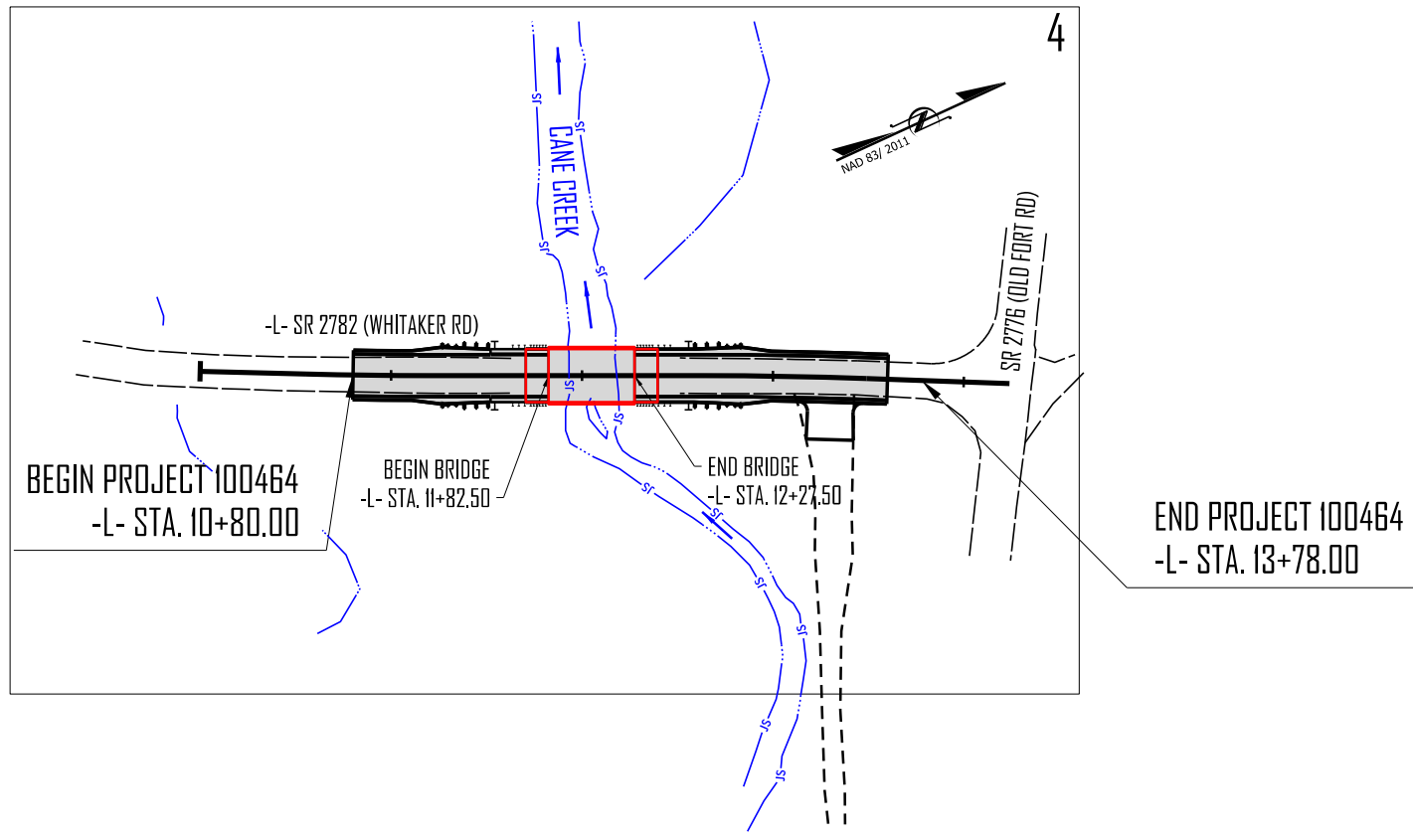
**WETLAND AND SURFACE WATER IMPACTS PERMIT**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	100464	11	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
DF18313.2011389.PR	N/A	PE	
DF18313.2011389.PR	N/A	RW	
DF18313.2011389.PR	N/A	UTIL	
DF18313.2011389.PR	N/A	CONST	



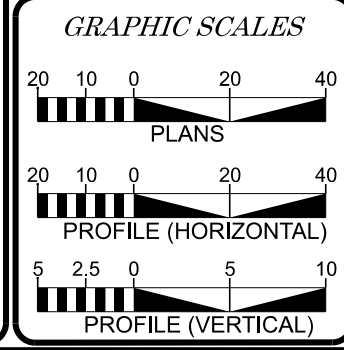
**PERMIT DRAWING  
SHEET 1 OF 5**

TO BLUE RIDGE DEV RD



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

**INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION**  
**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



**DESIGN DATA**  
ADT 2025 = 700

T = 6 % \*  
V = 30 MPH  
\* TTST = 4 DUAL 2  
FUNC CLASS = LOCAL  
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH OF ROADWAY TIP PROJECT 100464 = 0.047 MILES  
LENGTH OF STRUCTURE TIP PROJECT 100464 = 0.009 MILES  
TOTAL LENGTH OF TIP PROJECT 100464 = 0.056 MILES

Prepared in the Office of:  
**moffatt & nichol**  
4700 FALLS OF NEUSE ROAD, SUITE 300  
RALEIGH, NORTH CAROLINA 27609  
(919) 781-4829 VOICE (919) 781-4889 FAX  
NC LICENSE NO.: F-0105

2024 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
JANUARY 21, 2025

**LETTING DATE:**  
JANUARY 21, 2025

**TRENT HUFFMAN, PE**  
PROJECT ENGINEER

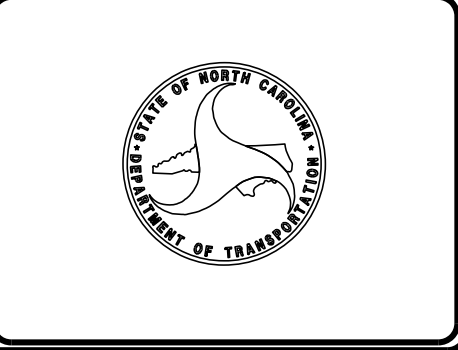
**CAMERON CLAYTON, PE**  
PROJECT DESIGN ENGINEER

**BYRON KYLE, PE**  
NCDOT CONTACT

**HYDRAULICS ENGINEER**

\_\_\_\_\_  
SIGNATURE: \_\_\_\_\_  
ROADWAY DESIGN ENGINEER

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








# PERMIT DRAWING SHEET 4 OF 5

100464  
005

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
WAKE COUNTY



ROADWAY DESIGN UNIT  
ROADWAY DESIGN  
ENGINEER

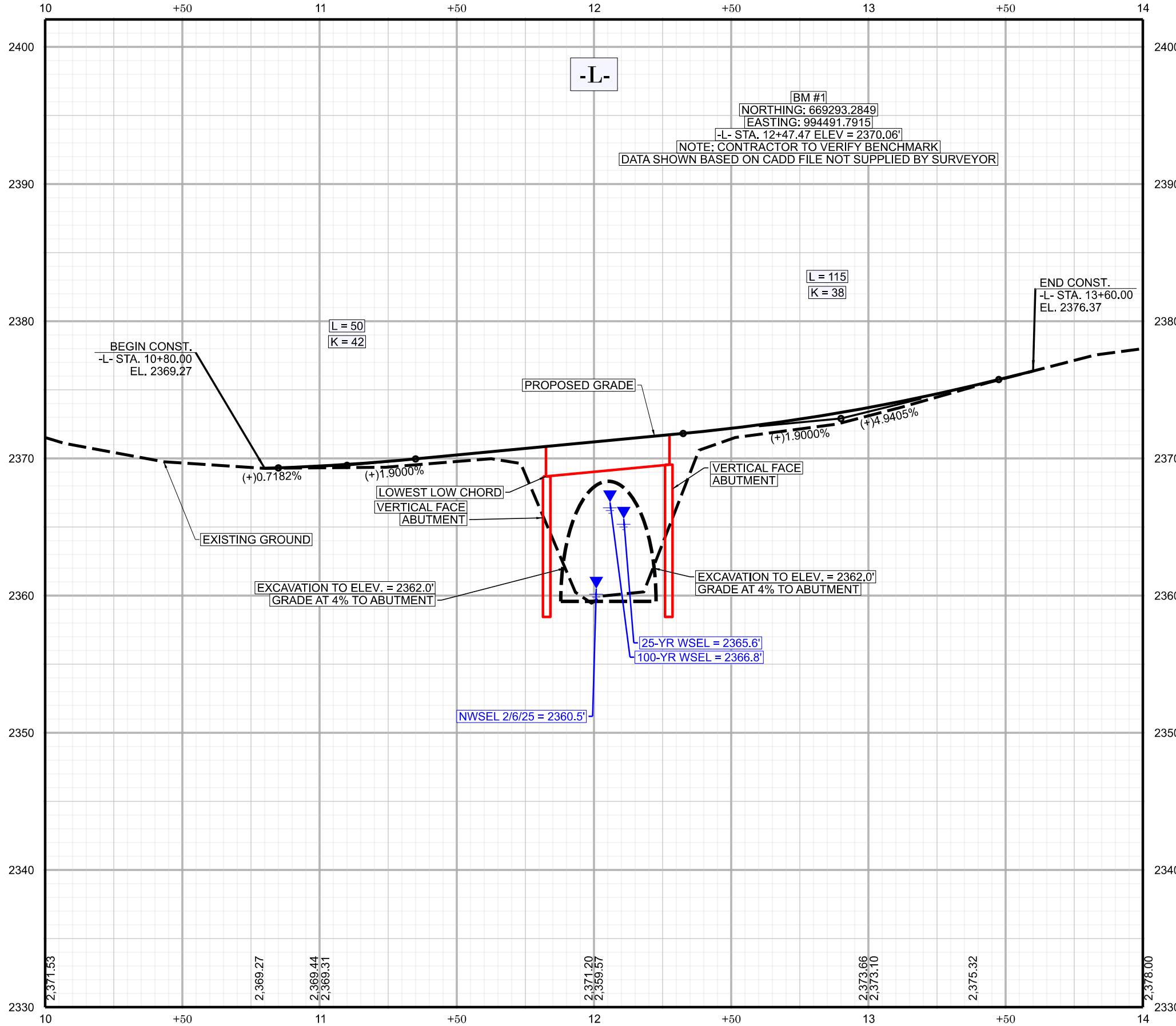
HYDRAULICS  
ENGINEER

INCOMPLETE PLANS  
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PREPARED BY  
**moffatt & nichols**

4750 FALLS OF NEUSE ROAD, SUITE 300  
RALEIGH, NORTH CAROLINA 27609  
1918 FIVE POINTS BLVD., SUITE 1000, RALEIGH, NC 27605  
NC LICENSE NO. 75-0125



### BRIDGE -L- 12+05 HYDRAULIC DATA

DESIGN DISCHARGE	= 860 C.F.S.
FREQUENCY OF DESIGN FLOOD	= 25 YRS.
DESIGN HIGH WATER ELEVATION	= 2365.6'
DRAINAGE AREA	= 4.25 SQ. MI.
BASIC DISCHARGE (Q100)	= 1,300 C.F.S.
BASIC HIGH WATER ELEVATION	= 2366.8'

### OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE	= 2,700 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	= 500+ YRS.
OVERTOPPING FLOOD ELEVATION	= 2370.4' *

\*OT OCCURS AT RIGHT SHOULDER AT -L- STA. 10+80

FOR -L- PLAN, SEE SHEET 004

REVISIONS

**WETLAND AND SURFACE WATER IMPACTS 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- 11+93 LT to 12+19 RT	Bank Stabilization						0.02		84		
1	-L- 12+14 RT to 12+26 RT	Riprap at Embankment						< 0.01		12		
<b>TOTALS*:</b>								0.02		96	0	0

\*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 5/7/2025  
 BUNCOMBE COUNTY  
 100464  
 DF18313.2011389.PR  
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