STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

August 7, 2023

MEMORANDUM TO: Mr. Brandon Jones, P.E.
Division 5 Engineer

FROM: Dennis Jernigan, P.E.
NCTA Interim Chief Engineer

DocuSigned by:
F33D97B5AFE34BE...

SUBJECT: Triangle Expressway Southeast Extension (Complete 540) from NC 55 Bypass in Apex to US 64/264 (I-87) in Knightdale, Wake and Johnston Counties; Federal Aid No. STP-0540(19), STP-0540(20), and STP-0540(21); WBS Nos. 37673.1.TA1, 35516.1.TA1, and 35517.1.TA1; STIP Project Nos. R-2721, R-2828, and R-2829

Attached are the modified US Army Corps of Engineers (USACE) Phased Section 404 Individual Permit, NC Division of Water Resources (NCDWR) Section 401 Individual Water Quality Certification, Neuse Riparian Buffer Authorization, and Non-404 Jurisdictional Wetlands and Waters Permit for the construction of the Triangle Expressway Southeast Extension (Complete 540) from NC 55 Bypass in Apex to US 64/264 (I-87) in Knightdale, Wake and Johnston Counties. STIP Nos. R- 2721, R-2828, and R-2829. ***This change is based on the August 3, 2023 email requesting modification of the permit regarding Permit Site 41 on the R-2828 section of the project. There are no changes to the mitigation requirements.*** Subject to any requisite permit modifications, all environmental permits have been received for the construction of the final design sections of this project.

A copy of this permit package is posted on the NCDOT website at:
https://xfer.services.ncdot.gov/pdea/PermIssued

cc: w/o attachment (see website for attachments)
Mr. Ron Davenport, P.E. Contracts Management
Mr. Clarence Coleman, P.E., FHWA
Mrs. Heather Montague, Division 5
Mr. Mark Craig, P.E., Division 5
Mr. Boyd Tharrington, P.E., Director of Field Support
Mr. Corey McLamb, P.E., Division 4
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Mr. Mateen Alinaghian, Utilities Unit
Mr. Stephen Morgan, P.E., Hydraulics Unit
Mr. Brian Hanks, P.E., Structures Management Unit
Mr. Mark Staley, Roadside Environmental
Mr. John Jamison, Environmental Policy Unit
Ms. Beth Harmon, NCDMS
Ms. Deanna Riffey, Natural Environment Unit-Environmental Coordination & Permitting

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TURNPIKE AUTHORITY
1578 MAIL SERVICE CENTER
RALEIGH, NC 27699-1578

Telephone: (919) 707-2700
Fax: (919) 715-5511
Customer Service: 1-877-368-4968

Website: ncdot.gov

Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

From:	Alsmeyer, Eric C CIV USARMY CESAW (USA)
To:	Ridings, Rob; Thomson, Nicole J
Cc:	Abi Sheffey; Riffey, Deanna; Matthews, Monte K CIV USARMY CESAW (USA)
Subject:	[External] RE: Complete 540, R2828, Modification 12 Request; Permit Site 41; DA# SAW-2009-02240
Date:	Friday, August 4, 2023 12:52:31 PM
Attachments:	image001.png 230803_Site 41 Mod drawings_R-2828_Complete540_Wake .pdf

Nikki: Reference the Department of the Army (DA) permit issued to the North Carolina Department of Transportation (NCDOT) on October 24, 2019, and subsequently modified, last on June 21, 2023. This permit authorized the discharge of fill material into waters of the United States for construction of the Triangle Expressway Southeast Extension (Complete 540) from NC 55 Bypass in Apex to US 64/264 (I-87) in Knightdale, Wake and Johnston Counties. Sections included within this permit are R-2721, R-2828, and R- 2829. Currently, only STIPs R-2721A&B and R-2828 are authorized for construction; STIP R-2829 has not yet been through final design, has not completely minimized impacts to waters and wetlands, nor has a final compensatory mitigation plan.

On August 3, 2023, the U.S. Army Corps of Engineers (Corps) received a request from NCDOT to modify the standard permit for the R-2828 project (Mod12), to adjust Impacts at Permit Site 41, Bridge Structure 9. The temporary work trestle bridge at Permit Site 41 was recently removed and some of the bank stabilization originally called for and permitted at this site was determined to not be needed. Another bank location at the site was originally permitted for only temporary impacts, but now requires permanent bank stabilization. There was significant scour at this bank location revealed after the temporary work structure has been removed, some of which was influenced by beaver activity in the area. Riprap for stabilization will not be placed in the thalweg of the channel.

The proposed changes are as follows:

- Limited area of bank stabilization:
  - Increase of 57 linear feet, 0.01 acre, of bank stabilization.
- Reduction of temporary stream impacts:
  - Decrease of 57 linear feet, 0.016 acre of temporary stream impacts

The Corps has completed the evaluation of your request and has determined that it is appropriate and reasonable, and that no public notice is required for this modification. Therefore, the permit is modified as requested and as shown on the attached drawings. No additional compensatory mitigation is required.

All conditions of the permit, including the permit expiration date of December 31, 2024, remain in effect as written.

This electronic copy is your official Department of the Army authorization; no paper

copy will be mailed.

Please reply or call if you have any questions or if I may serve you in any other way.

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at https://regulatory.ops.usace.army.mil/customer-service-survey/.

Eric

Eric Alsmeyer
Project Manager

Regulatory Division Office
US Army Corps of Engineers, Wilmington District
3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587
Office Tel: (919) 554-4884, x23 (I am working out of the office most days of the week, but I try to check my voicemails daily)
Regulatory Homepage:
http://www.saw.usace.army.mil/Missions/RegulatoryPermitProgram.aspx

---

From: Ridings, Rob <rob.ridings@deq.nc.gov>
Sent: Friday, August 4, 2023 10:56 AM
To: Thomson, Nicole J <njthomson2@ncdot.gov>; Alsmeyer, Eric C CIV USARMY CESAW (USA) <Eric.C.Alsmeyer@usace.army.mil>
Cc: Abi Sheffey <asheffey@SAGEECOLOGICAL.COM>; Riffey, Deanna <driffey@ncdot.gov>
Subject: [Non-DoD Source] RE: Complete 540, R2828, Modification Request Permit Site 41

Here is the 401 Infield mod for R-2828 attached.
Feel free to forward as needed.
Have a great weekend,

Rob Ridings
Environmental Specialist
401/Buffer Transportation Permitting (DOT Divisions 4-5)
Division of Water Resources, NC Department of Environmental Quality
NEW EMAIL: rob.ridings@deq.nc.gov
919-707-8786

From: Thomson, Nicole J <njthomson2@ncdot.gov>
Sent: Thursday, August 3, 2023 3:21 PM
To: Alsmeyer, Eric C SAW <Eric.C.Alsmeyer@usace.army.mil>; Ridings, Rob <rob.ridings@deq.nc.gov>
Cc: Abi Sheffey <asheffey@SAGEECOLOGICAL.COM>; Riffey, Deanna <driffey@ncdot.gov>
Subject: Complete 540, R2828, Modification Request Permit Site 41

Eric & Rob –

As you are aware, the North Carolina Department of Transportation (NCDOT) applied for a phased Section 404 Individual Permit, Section 401 Individual Water Quality Certification (WQC), Neuse River Riparian Buffer Authorization, Non-404 Jurisdictional Wetlands and Waters Permit for the subject project in September 2018. The project, also known as Complete 540, encompasses three NCDOT Transportation Improvement Plan (TIP) projects: R-2721 (NC-55 Bypass to US-401), R-2828 (east of US-401 to I-40 Interchange) and R-2829 (east of I-40 to US 64/264). Revised permit applications were submitted in February 2019 and the NCDWR 401 and USACE 404 Permits were issued in February and October of 2019. Additionally, NCDOT received a modified 401 WQC for the Complete 540 Project on January 30, 2020, April 23, 2020, June 1, 2020, December 29, 2020, March 9, 2021, April 8, 2021, November 1, 2021, May 18, 2022, July 22, 2022, February 15, 2023 , June 19, and July 19, 2023 from the NC Division of Water Resources (NCDWR) and a modified Department of the Army authorization #SAW-2009-02240 on February 4, 2020 (revision issued on February 7, 2020), April 29, 2020, January 7, 2021, March 19, 2021, March 3, 2022, July 1, 2022, and September 13, 2022, February 17, 2023, June 21, 2023, and July 19, 2023.

You were previously made aware of adjustments to Permit Site 41 at Bridge Structure 9. The temporary work trestle bridge was recently removed and per an earlier agency review, some of the bank stabilization originally called for and permitted at this Permit Site were ultimately determined to not be needed (concurred upon by both of you during the agency site walkthrough). Now there is a bank location originally permitted for temporary impacts that the JV wishes to convert to permanent bank stabilization. There was significant scour realized at this bank location now that the temporary work structure has been removed, some of which was influenced by beaver activity in the area. The attached permit drawings clearly identify the bank stabilization locations which were <u>not</u> installed and the new location where it is needed.

The proposed changes are as follows:

- Limited area of bank stabilization:
  - Increase of 0.01 acre of bank stabilization.
  - Increase of 57 linear feet of bank stabilization.
- Reduction of temporary stream impacts:
  - Decrease of 0.016 acre of temporary stream impacts
  - Decrease of 57 linear feet of temporary stream impacts

Revised Table 4. R-2828 Jurisdictional Resources Impacts

Riparian Wetlands Temp./ Perm. (ac)	Non-Riparian Wetlands Perm. (ac)	Isolated Wetlands (ac)	Ponds (ac)	Isolated Ponds (ac)	Streams (lf)			Riparian Buffer (sq ft) Zone 1/2
					Perm.	Temp.	Structure* Stab.	
4.85 / 19.55	0.07	0.25	8.32	n/a	16,842	1,772	2,122	2,609,814/ 830,157

As the proposed changes are for bank stabilization only (i.e. rip rap will not be placed in thalweg of

the channel), the Department is not proposing any compensatory mitigation for these requested changes.

Thank you for your time in reviewing these changes and please let me know if you have any questions.

Thanks!
Nik

Nicole Thomson, PWS

North Carolina Turnpike Authority
North Carolina Department of Transportation

919-754-7806

1 South Wilmington Street
Raleigh, NC 27601
1578 Mail Service Center
Raleigh, NC 27699-1578

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
RICHARD E. ROGERS, JR.
Director

NORTH CAROLINA
Environmental Quality

North Carolina Division of Water Resources
Transportation Permitting Unit
In-Field Minor 401 Water Quality Certification Modification

Project Name/ TIP Project No.: R-2828; NC Hwy 540_ Date: _____**August 4, 2023**_____

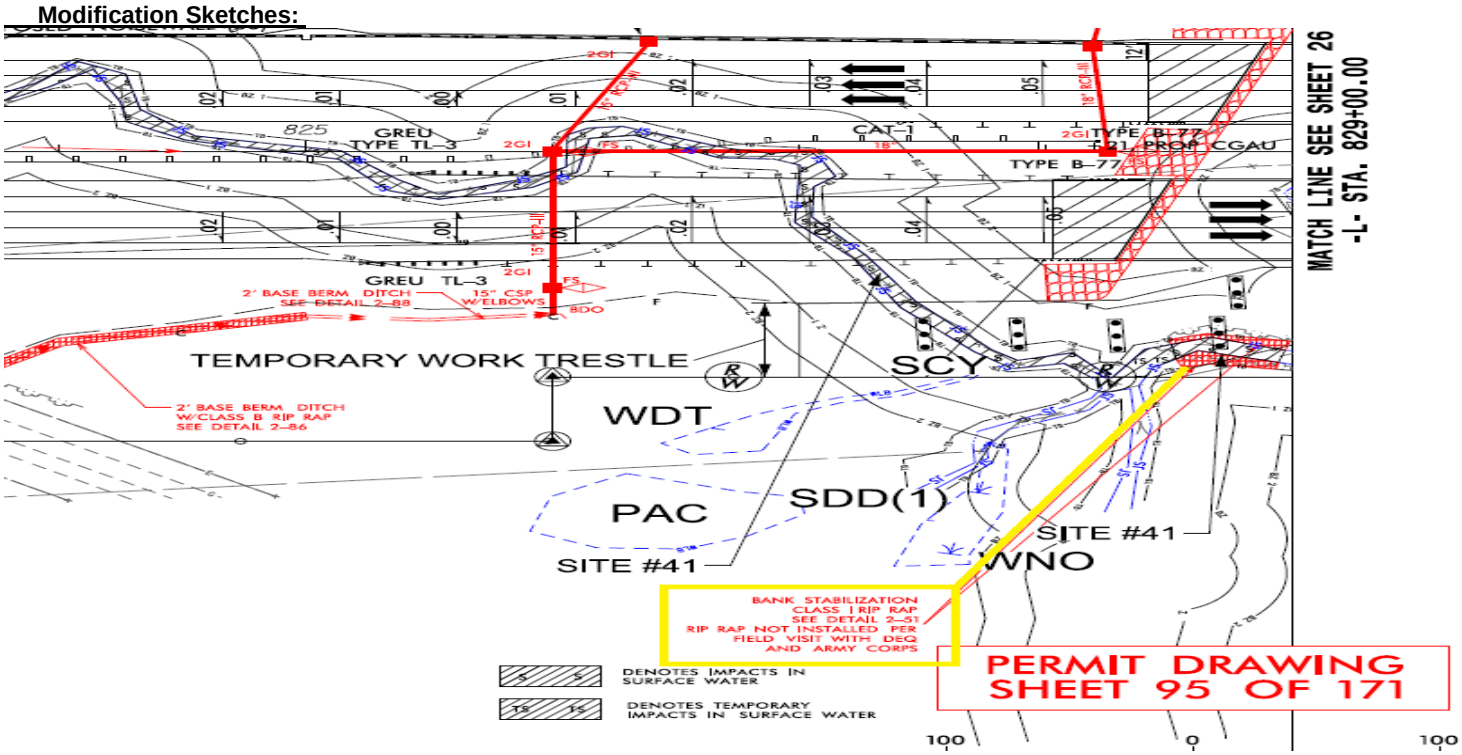
DOT Division: _5_____ County: __ ___Wake___DWR Project No. **20181249 ver 14** Permit Type: WQC#4179
DOT Field Staff: ___ Nicole Thomson___ DWR Field Staff: _____Rob Ridings_____

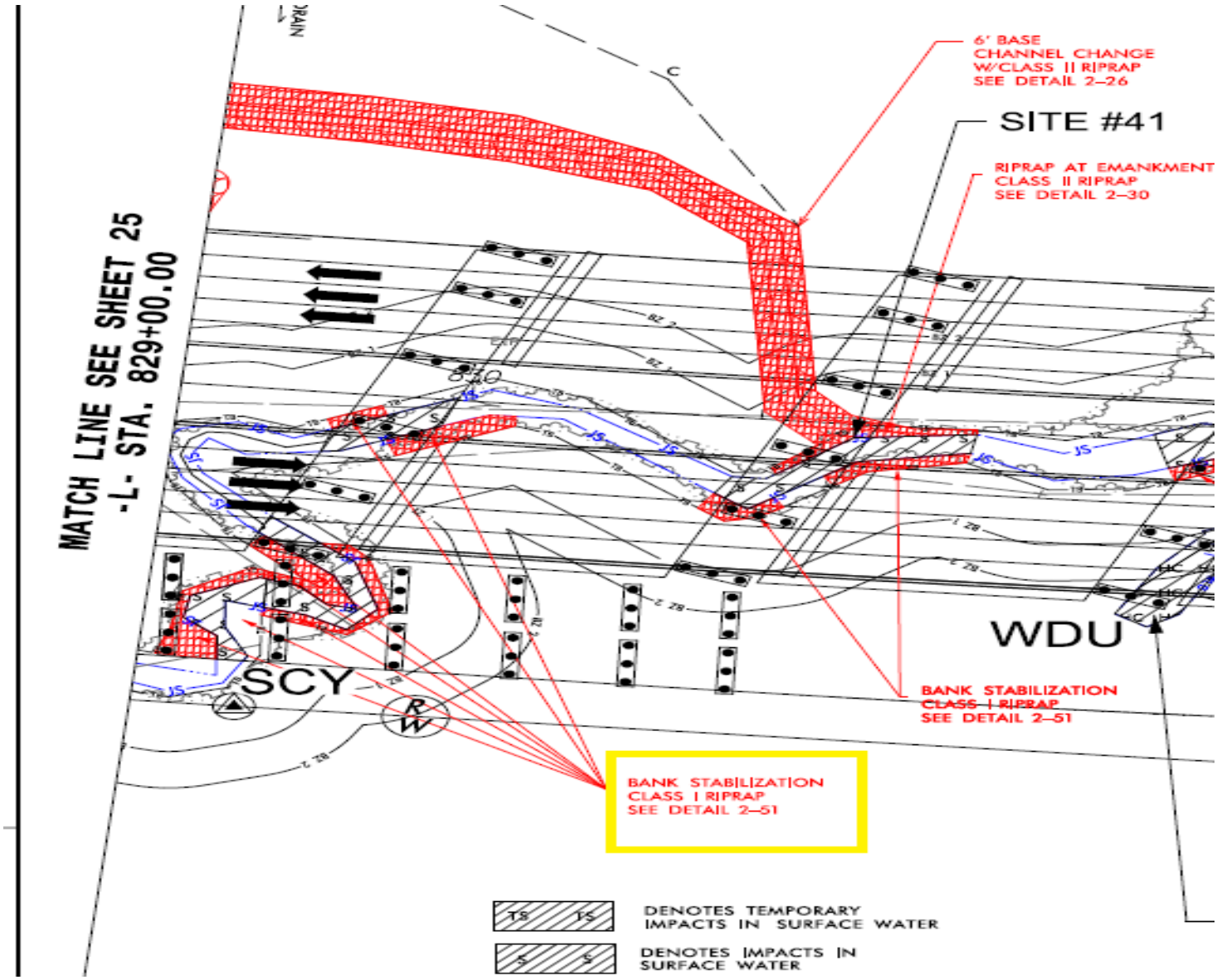
Modification Description

Site 41: The temporary work trestle bridge was recently removed and per an earlier agency review, some of the bank stabilization originally called for and permitted at this Permit Site were ultimately determined to not be needed (concurred upon by both of you during the agency site walkthrough). Now there is a bank location originally permitted for temporary impacts that the JV wishes to convert to permanent bank stabilization. There was significant scour realized at this bank location now that the temporary work structure has been removed, some of which was influenced by beaver activity in the area. This change was discussed agency field review July 11, 2023.

NCDOT (Turnpike Authority) formally requested in-field mod via email dated August 3, 2023. This change results in an increase in 57 linear feet of bank stabilization impact. (While results in a 57 feet decrease in temporary impact.) This impact needs no mitigation as it is not in thalweg but for bank protection.

Modification Sketches:





This in-field modification is requred for the following reason(s):

- The information contained in the application or presented in support thereof is incorrect in the following manner:

_____

_____

- **Conditions under which the original certification was issued have changed in the following manner:**

_ NCTA and Agencies have concerns at Permit Site 41 regarding banks eroding underneath the temporary structures. Significant erosion has been an issue on this stream's banks.

This in-field modification is valid only if issued by an authorized agent of the Division of Water Resources, Transportation Permitting Unit [1.]

This in-field modification authorizes the NCDOT to
___Increase Bank Stabilization impacts by 57 linear feet, while decreasing the temporary impact by the same amount. This is for Site 41 on section R-2828 of the Complete 540 Project.

In WAKE County. The project shall be constructed as described in the Modification Description and Sketch on Page 1 of this document dated_**08/04/2023**_ to improve/construct the section of _NC 540__that extends from_____NC 55_____to_____I-40_____. The approved design is that described in the Modification Description and Modification Sketch on Page 1 of this document dated _**06/19/2023**__. Any further changes to the original Water Quality Certification dated **February 15, 2019, modified January 30, 2020, April 20, 2020, June 1, 2020, December 29, 2020, March 9, 2021, April 8, 2021, November 1, 2021, May 18, 2022, July 22, 2022, February 15, 2023, June 21, 2023, and July 19, 2023** may require a formal written modification request.

The description of the proposed action provides adequate assurance that the proposed action in the _____Neuse_____River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Section 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth. Should your project change, you are required to notify the DWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all conditions. For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state, or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Modification Approval shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit. .

Conditions(s) of Modification Approval:

1. **As-built drawings of the proposed action shall be submitted to the NC DWR Transportation Permitting Unit within 30 days of completion of the action.**
2. **All the authorized action activities and conditions of the certification associated with the original Water Quality Certification dated_02/15/2019___ and all other corresponding modification still apply except where superseded by this certification.**
3. **Modified Site (#41, section R-2828) shall be constructed in manner requested by NCTA in accordance with the request dated August 3, 2023 and in manner with the referenced Agency field reviews. Any variation will require an additional modification.**

Failure to construct the proposed action as described in the Modification Description and Sketch on this document and/or violations of any condition herein set forth may result in revocation of this modification approval and may result in criminal and/or civil penalties. This modification approval shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. If the Corps of Engineers requires a formal written modification to the 404 permit for the proposed action, the NC DWR must require a formal written modification to the 401 WQC, and therefore, this in-field modification is invalid. If additional (wetland, stream, buffer) impacts for

this project (now or in the future) exceed (one acre, 150 linear feet, or one-third of an acre/150 linear feet, respectively), or if mitigation is required above and beyond the current mitigation requirement for this project, this in-field modification is invalid and a formal written modification is required.

This in-field modification is effective upon the date the last party signs this document. This in-field modification is made upon mutual agreement between DOT and DWR as indicated by the signatures below and is, therefore, not subject to appeal by either party. Appeals by third parties must be made within sixty (60) days of notification pursuant to the contested case provisions of the Administrative Procedure Act, NC Gen. Stat. §150B-23 et seq.

DWR Field Staff Signature: DocuSigned by: Robert Ridings 80ECA32C7C38490...

Date: 8/4/2023

DOT Field Staff Signature: DocuSigned by: nicole Thomson 768FCFF5084D43B...

Date: 8/4/2023

[1] – An authorized agent of the Transportation Permitting Unit is defined as DWR staff that are DOT-funded and review and issue 401 Water Quality Certification for DOT projects. These staff include Central Office and Regional Office personnel.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2828	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
35516.3.GV1	NHP-0540(043)	DESIGN-BUILD
35516.2.3	NHP-0540(043)	R/W
35516.2.TA1	NHP-0540(043)	R/W

Permit Drawing Package
Last Revised on 07/26/2023

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

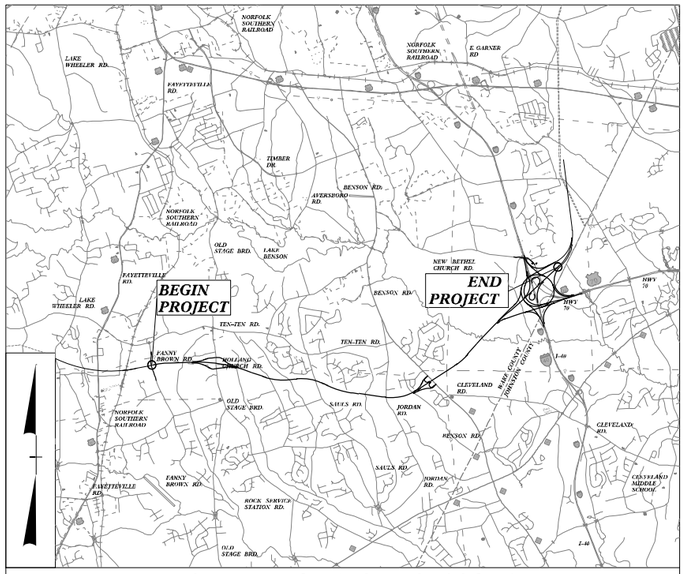
WAKE & JOHNSTON COUNTY

LOCATION: TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION FROM EAST OF US 401 TO EAST OF I-40

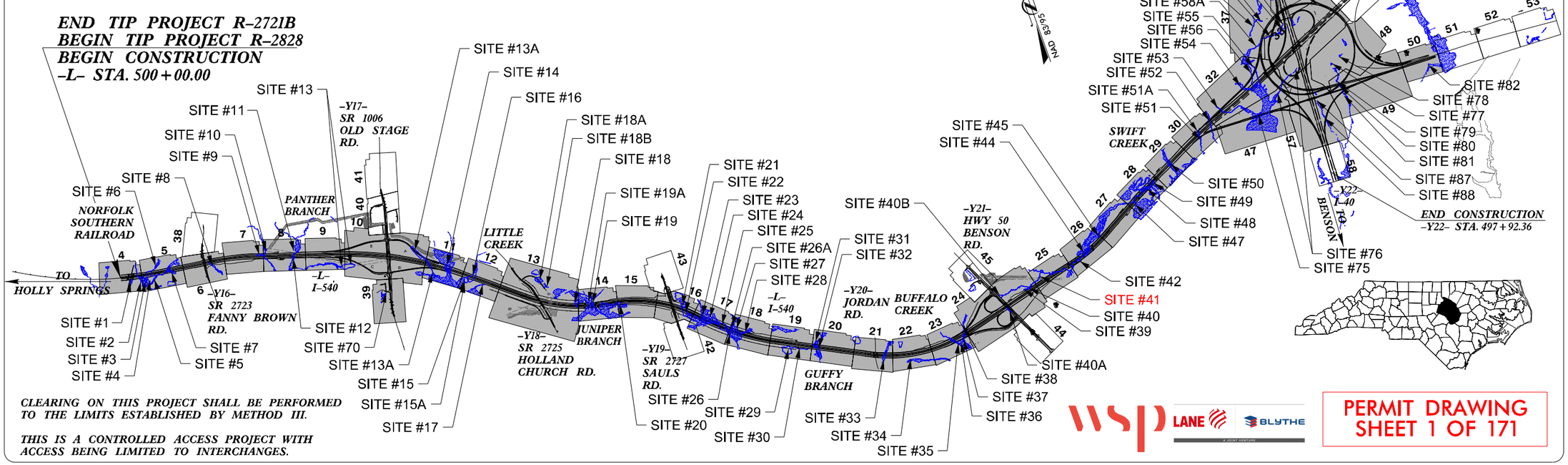
TYPE OF WORK: DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK CONTAINED IN THE REQUEST FOR PROPOSALS

WETLAND AND SURFACE WATER IMPACTS PERMIT

PACKAGE R-2828
DATE: JULY 26, 2023



VICINITY MAP (NOT TO SCALE)



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

PERMIT DRAWING
SHEET 1 OF 171

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2018 = NA
ADT 2040 = 53,400
DHV = 12 %
D = 65 %
T = 11 % *
V = 75 MPH
*(TTST 4 + DUAL 7)

FUNCTIONAL CLASS: FREEWAY

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT R-2828 = 8.055 Miles

LENGTH OF STRUCTURE PROJECT R-2828 = 0.562 Miles

TOTAL LENGTH OF TIP PROJECT R-2828 = 8.617 Miles

NCDOT CONTACT: DESIGN BUILD PROJECT ENGINEER - TRANSPORTATION PROGRAM MANAGEMENT UNIT

Prepared in the Office of
WSP USA
434 FAYETTEVILLE STREET
SUITE 1900
RALEIGH, N.C. 27601
PHONE: 919.836.4000
FAX: 1.919.836.4099
LICENSE NO. F-0165
FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: SEPT. 09, 2019

LETTING DATE: DEC. 11, 2019

DANIEL BRIDGES, PE
PROJECT ENGINEER

RONYELL THIGPEN, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

TIP PROJECT: R-2828

CONTRACT: C204197

09/08/99

2/7/2022
G:\projectwise\pb\projectwiseint\vidya.mohandas\d0348956\R2828_hyd_prm_wet_psh_01.dgn
USVM04388

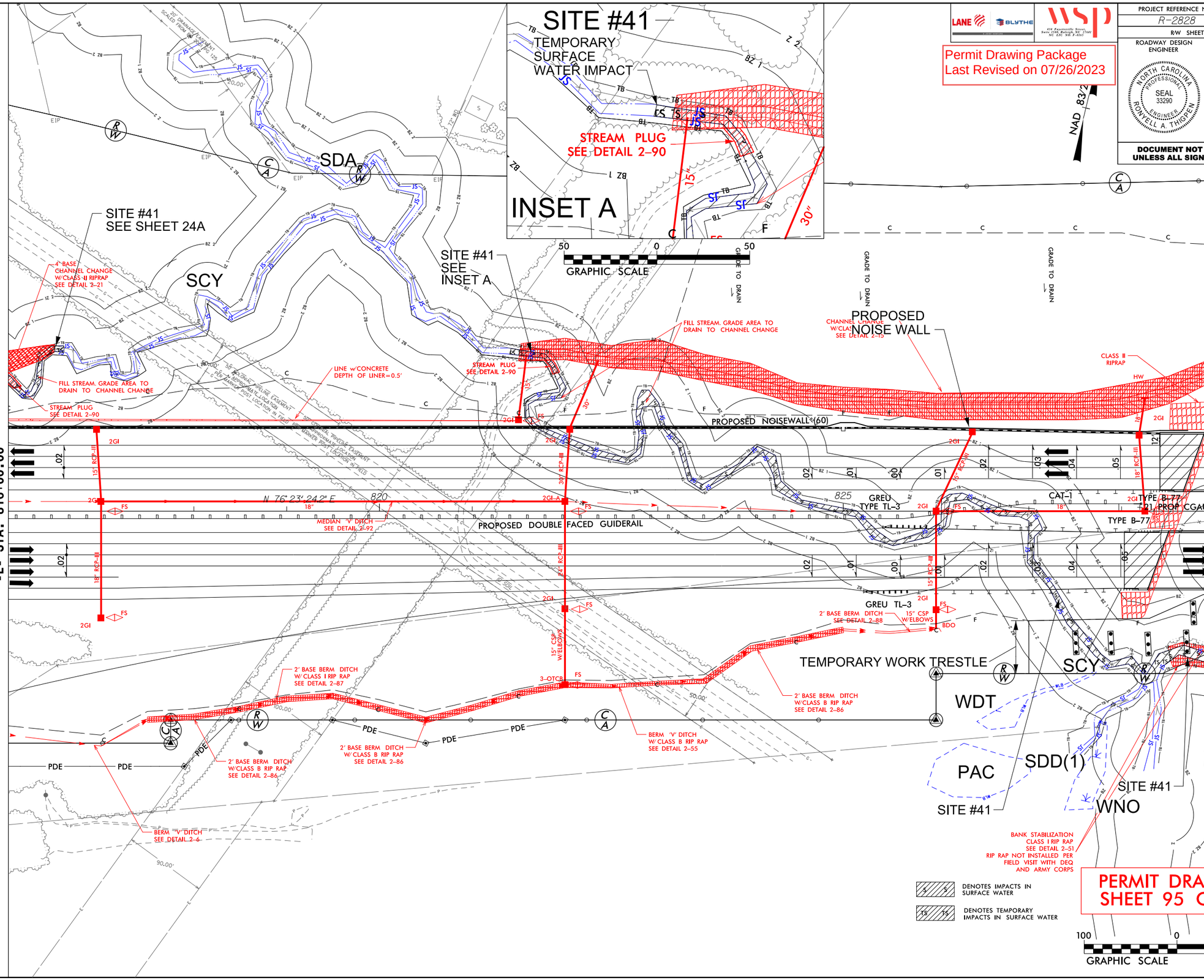
PROJECT REFERENCE NO.	SHEET NO.
R-2828	25
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 33290 ENGINEER RONNELL A. THIGPEN

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 043232 ENGINEER VIDYA MOHANDAS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Permit Drawing Package
Last Revised on 07/26/2023



PERMIT DRAWING
SHEET 95 OF 171

REVISIONS

8/17/99

7/17/2023
c:\pwworkingdir\pwise\pb\projectwiseint\vidya.mohandas\d0348956\R2828_hyd_prm_wet_psh_25_cont.dgn
USER: 01388

PROJECT REFERENCE NO.	SHEET NO.
R-2828	25
R/W SHEET NO.	

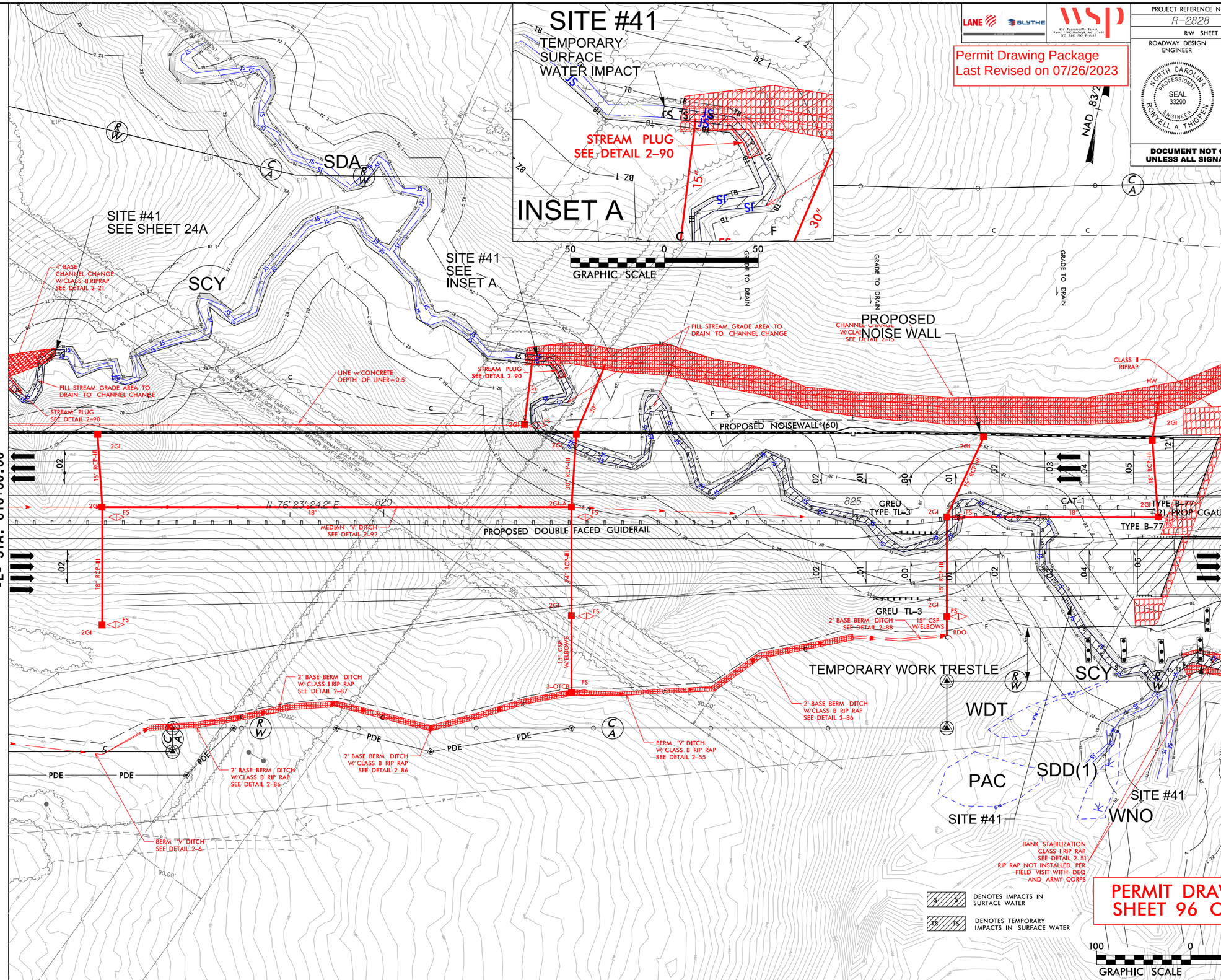
ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 33290 ENGINEER RONNELL A. THIGPEN

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 043232 ENGINEER VIDYA MOHANDAS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LANE BLYTHE WSP 434 Fayetteville Street, Suite 2100, Raleigh, NC 27601 NC LIC: NR P-0161

Permit Drawing Package
Last Revised on 07/26/2023



PERMIT DRAWING
SHEET 96 OF 171

REVISIONS

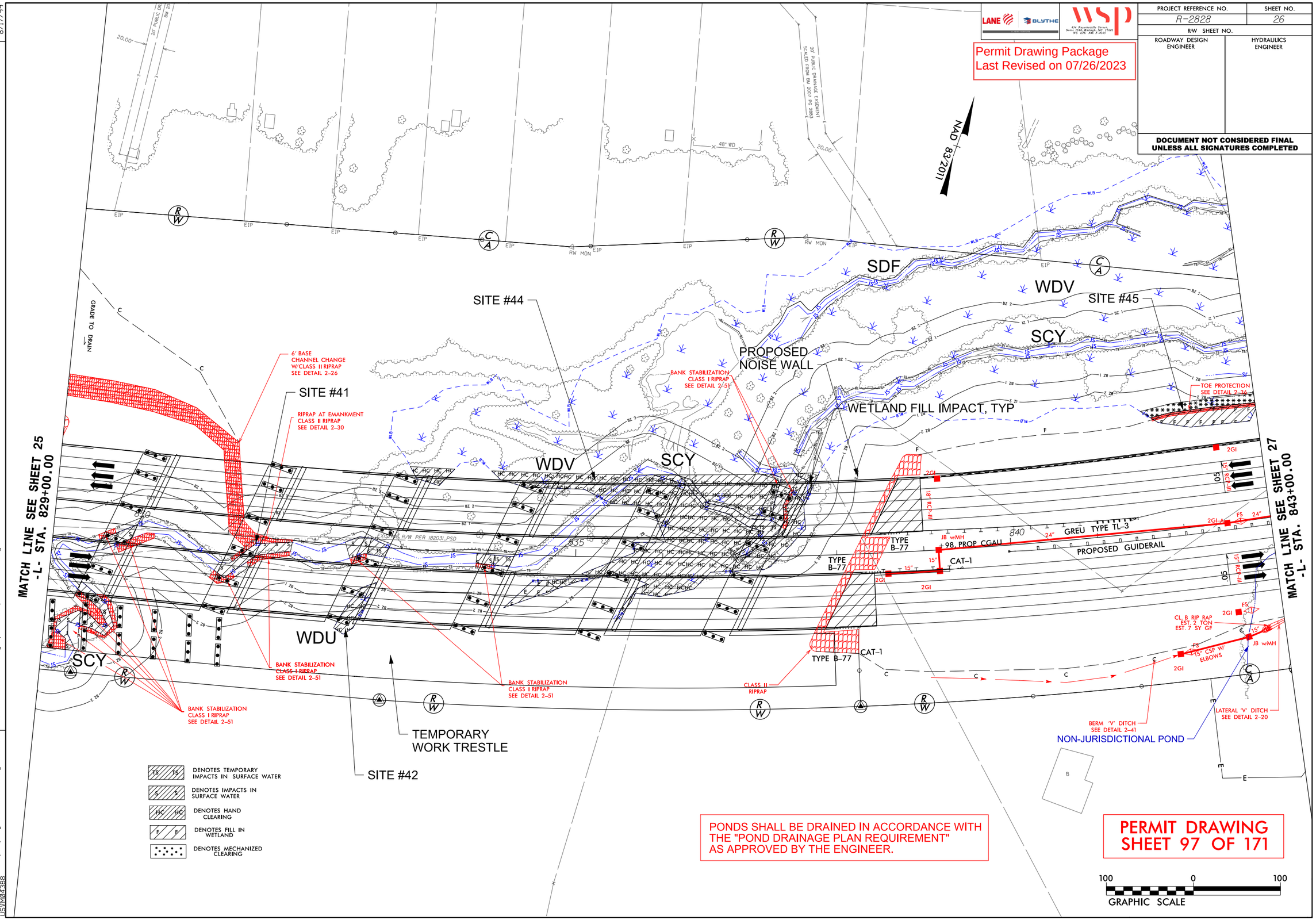
8/17/99

7/17/2023
c:\pwworkingdir\pwidot\pwise\pb\projectwiseint\vidya.mohandas\d0348956\R2828_hyd_prm_wet_psh_25_cont.dgn
USMOHA388

PROJECT REFERENCE NO.	SHEET NO.
R-2828	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Permit Drawing Package
Last Revised on 07/26/2023



PONDS SHALL BE DRAINED IN ACCORDANCE WITH THE "POND DRAINAGE PLAN REQUIREMENT" AS APPROVED BY THE ENGINEER.

PERMIT DRAWING SHEET 97 OF 171

REVISIONS

8/17/99

7/19/2023
C:\SS\projectwise\pb\projectwisent\vidya.mohandas\d0348956\R2828_hyd_prm_wet_psh_26_cont.dgn
USTM04388

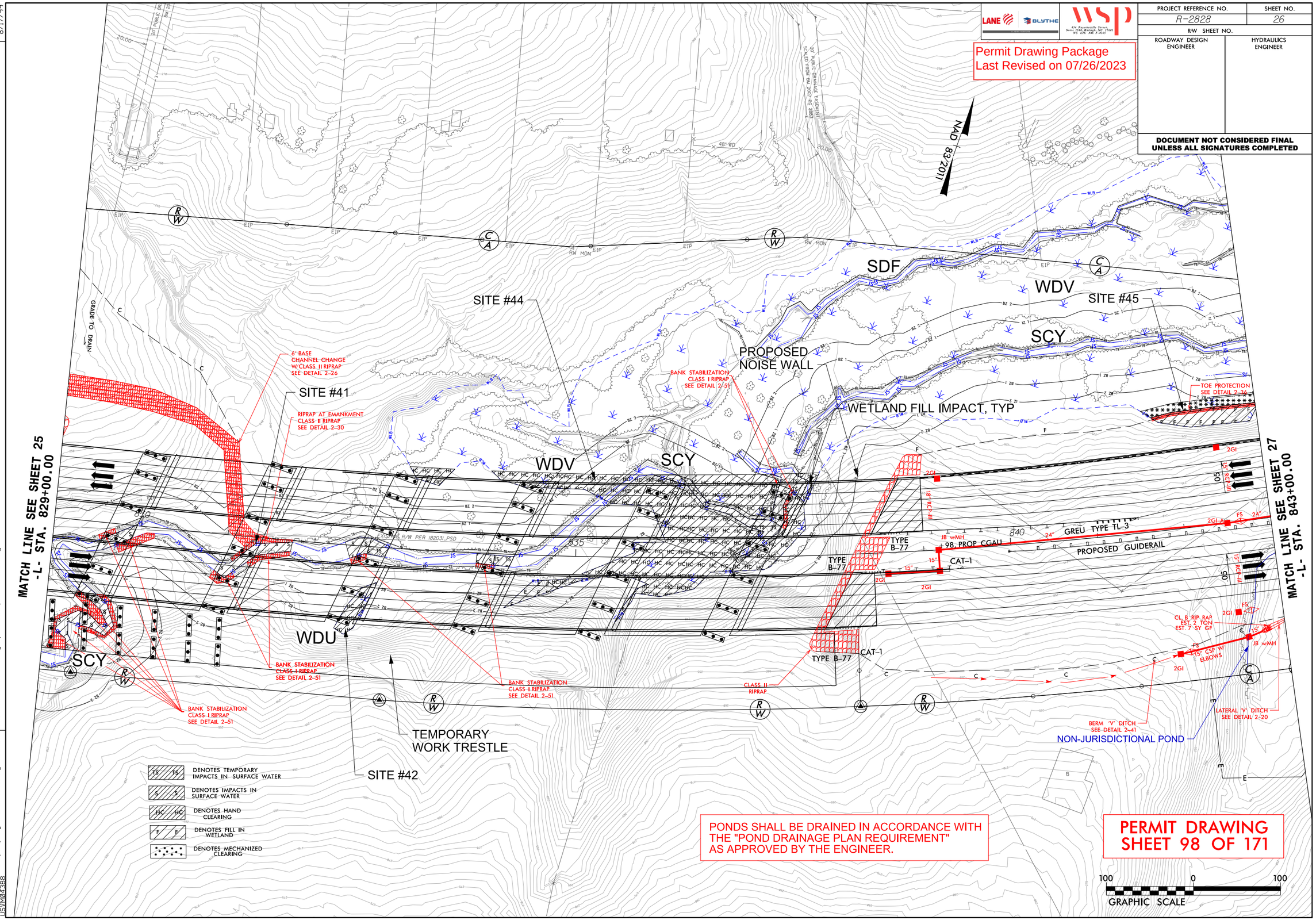
PROJECT REFERENCE NO.	SHEET NO.
R-2828	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

LANE BLYTHE

WSP 434 Fayetteville Street, Suite 2100, Raleigh, NC 27601 NC LIC. NO. F-0161

Permit Drawing Package
Last Revised on 07/26/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PONDS SHALL BE DRAINED IN ACCORDANCE WITH THE "POND DRAINAGE PLAN REQUIREMENT" AS APPROVED BY THE ENGINEER.

PERMIT DRAWING SHEET 98 OF 171

REVISIONS

8/17/99

7/19/2023
cstevens@mjwise\pb\projectwisent\vidya.mohandas\d0348956\R2828_hyd_prm_wet_psh_26_cont.dgn
USER:M02388

Permit Drawing Package
Last Revised on 02/24/20

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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*	503+27 (RT)	RDWY Fill (WCD)	0.161									
2	505+24, 505+63 (LT)	9'x8' RCBC (SBP)						0.03	0.002	519.00	20.000	
2	505+24, 505+63 (LT)	9'x8' RCBC Pipe Stabil. (SBP)						0.01		95.00		
3	506+50 (RT)	42" RCP(WCE(1),WCE(2),SBR)	0.546			0.007		0.00	0.000	90.00	10.000	
3	506+50 (RT)	42" RCP Pipe Stabilization (SBR)						0.00		35.00		
4	508+50 (LT)- 511+70 (RT)	Drain Pond (PM)						1.57				
5**	508+60-515+40 (RT)	RDWY Fill (WCF) / Stream (SBR)	0.033					0.03		462.00		
6	512+15 (LT)	RDWY Fill (WCH) / Stream (SBU)	0.018		0.009	0.035		0.02	0.004	173.00	33.000	
7	515+32 (LT) - 520+00 (LT)	RDWY Fill (WCI) / Stream (SBS)	0.673		0.067	0.054		0.00		27.00		
8	529+75 - 531+00 (RT)	Roadway Fill (WCJ)	0.118			0.010						
9	545+63 - 548+40	Roadway Fill (WCL)	0.220									
10	548+68 (LT)-549+40 (RT)	6'x8' RCBC (SBY, WCM)				0.003		0.05	0.002	485.00	18.000	
10	548+68 (LT)-549+40 (RT)	Culvert Stabilization (SBY)						0.01		77.00		
10	548+68 (LT)-549+40 (RT)	Bank Stabilization (SBY)						0.00		14.00		
11	557+67 (RT)-559+60 (LT)	9'x8' RCBC (WCQ, SBX)	0.077			0.043		0.08	0.004	484.00	22.000	
11	557+67 (RT)-559+60 (LT)	9'x8' RCBC Culvert Stabil. (SBX)						0.01		70.00		
11	557+67 (RT)-559+60 (LT)	Bank Stabilization (SBX)						0.00		7.00		
12	558+00 (RT)	Roadway Fill (WCR)	0.055									
13	Ramp Quad C (-Y17-)	Drain Pond (PN)						1.04				
13	Ramp Quad C (-Y17-)	Roadway Fill (WCV)	0.020			0.005						
13**	Ramp Quad C (-Y17-)	Roadway Fill (WCW)	0.043									
13A	Ramp Quad A (-Y17-)	Drain Pond (PP)						1.01				
13A	Ramp Quad A (-Y17-)	Roadway Fill WCZ(2)	0.400	0.001								
SHEET 1 SUBTOTALS***:			**2.36**	**0.00**	**0.08**	**0.16**	**0.00**	**3.88**	**0.01**	**2538**	**103**	**0**

NOTES:
*Represents an isolated wetland impact (also non-riparian)
**Represents any non-riparian wetland impact
***Rounded totals are sum of actual impacts

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
03/04/2020
WAKE & JOHNSTON
TIP NO. R-2828
WBS NO. 37673.1.TA2

Permit Drawing Package
Last Revised on 02/24/20

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
14	609+07 (LT)-610+38 (RT)	Roadway Fill (WCZ(1))	1.284			0.271						
14	609+07 (LT)-610+38 (RT)	10'x8' RCBC (SCC)						0.02	0.001	322.00	10.000	
14	609+07 (LT)-610+38 (RT)	Culvert Stabilization (SCC)						0.01		78.00		
14	609+07 (LT)-610+38 (RT)	10'x8' RCBC (SCK)						0.02	0.001	257.00	10.000	
14	609+07 (LT)-610+38 (RT)	Culvert Stabilization (SCK)						0.00		26.00		
15	616+50 (RT)	Drain Pond PQ, WCZ(2)						0.35				
15A	616+50 (RT)	Energy Dissipator (WCZ(2)	0.000			0.002						
16	618+00 (RT)	Drain Pond (PR)						1.01				
17	622+30 - 622+54 (RT)	Roadway Fill (WCZ(1))	0.014			0.005						
18	653+75 - 655 + 50 (LT)	Roadway Fill (WDB)	0.356			0.037						
18A	-Y18A- 15+00 - 17+50	Roadway Fill (WDD)	0.196			0.096						
18B	-Y18A- 19+50	18" RCP (SCF)						0.01	0.001	47.00	10.000	
18B	-Y18A- 19+50	18" RCP Pipe Stabil. (SCF)						0.01		17.00		
19	BRIDGE	Bank Stabilization (SCG)						0.00	0.003	10.00	17.000	
19A	BRIDGE	Roadway Fill (WDB)	0.033			0.020	0.853					
20	662+00 - 671+00	Roadway Fill (WDB)	2.000			0.117						
21	689+00 - 691+00 (LT)	Roadway Fill (WDF)	0.186		0.018	0.049						
22	690+00 - 691+75 (RT)	Drain Pond (PU)						0.87				
23	692+20 - 703+00	Roadway Fill (WDG(1))	2.754		0.375	0.261						
24	699+00 - 700+00 (LT)	Drain Pond (PW)						0.12				
25	703+00 - 705+40	Drain Pond (PV)						0.93				
26	697+00 -709+00	Roadway Fill (SCL)						0.06	0.001	1047.00	10.000	
26	697+00 -709+00	Culvert Stabilization (SCL)						0.00		30.00		
SHEET 2 SUBTOTALS***:			**6.823**	**0.000**	**0.394**	**0.858**	**0.853**	**3.404**	**0.007**	**1834.000**	**57.000**	**0.000**

NOTES:
*Represents an isolated wetland impact (also non-riparian)
** Represents an isolated wetland impact
***Rounded totals are sum of actual impacts

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
03/04/2020
WAKE & JOHNSTON
TIP NO.R-2828
WBS NO. 37673.1.TA2

Revised 2018 Feb

Permit Drawing Package
Last Revised on 02/16/21

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND 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)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
26A	707+50	Roadway Fill (SCM)						0.01	0.002	266.00	35.000	
26A	707+50	Culvert Stabilization (SCM)						0.00		65.00		
27	705+75 - 714+00	Roadway Fill (WDH)	2.443		0.030	0.236						
28	711+00 - 714+00 (LT)	Roadway Fill (SCN)						0.01	0.001	156.00	10.000	
29	726+50 - 728+00 (RT)	Drain Pond (PY)						1.40				
30	728+00 - 734+50 (RT)	Channel Change (SCQ)						0.06		673.00		
31	736+00	Roadway Fill (WDJ, SCQ)	0.375			0.092		0.03	0.007	130.00	58.000	
32	736+70 (LT) - 738+00 (RT)	2 @ 8'x9' RCBC (SCP)						0.07	0.016	379.00	92.000	
32	736+70 (LT) - 738+00 (RT)	Culvert Stabilization (SCP)						0.01		44.00		
32	736+70 (LT) - 738+00 (RT)	Bank Stabilization (SCP)						0.00		29.00		
33	759+00 (RT) - 759+82 (LT)	Roadway Fill (WDM)	0.392			0.030						
34	767+65 (RT)	Roadway Fill (WDN)				0.001						
35	782+00 (LT)	9'x8' RCBC (SCT)						0.05	0.004	441.00	37.000	
35	782+00 (LT)	Culvert Stabilization (SCT)						0.01		47.00		
35	782+00 (LT)	Bank Stabilization (SCT)						0.00		18.00		
36	782+00 - 787+20	Roadway Fill (WDO)	0.707		0.002	0.060						
37	785+90 (RT) - 787+70 (LT)	48" RCP (SCV)						0.03	0.003	394.00	20.000	
37	785+90 (RT) - 787+70 (LT)	Pipe Stabilization (SCV)						0.00		37.00		
38	788+00 (LT)	Roadway Fill (WDP)				0.006						
39	812+00 - 813+00 (LT)	Roadway Fill (WDS)	0.080									
40	812+90 - 813+37 (LT)	Channel Change (SDB)						0.01		54.00		
40	813+50 (LT)	Channel Change (SDC)						0.01		93.00		
40A*	-Y21- 40+00 (LT)	Roadway Fill (WDR)	0.091									
40B	-Y21- 44+40 (RT)	Roadway Fill (SCZ)						0.00	0.001	52.00	13.000	
SHEET 3 SUBTOTALS***:			**4.09**	**0.00**	**0.03**	**0.43**	**0.00**	**1.70**	**0.03**	**2878**	**265**	**0**

NOTES:
*Represents an isolated wetland impact (also non-riparian)
**Represents any non-riparian wetland impact
***Rounded totals are sum of actual impacts

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
03/04/2020
WAKE & JOHNSTON
TIP NO.R-2828
WBS NO. 37673.1.TA2

Permit Drawing Package
Last Revised on 07/26/2023

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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)
41	813+50 (LT) - 829+50 (RT)	Channel Change (SCY)						0.21	0.03	1453	130	
41	-Y21- 44+50 (RT)	18" CSP (SCY)						< 0.01		58		
41	-Y21- 44+50 (RT)	Pipe Stabilization (SCY)						< 0.01		21		
41	829+50 (LT) - 834+00 (RT)	Bank Stabilization (SCY)						0.09		340		
42	BRIDGE 832+50 (RT)	Work Trestle (WDU)					0.02					
44	BRIDGE	Bridge****	0.02		0.02		0.54		0.05		238	
44	BRIDGE	Bank Stabilization						0.01		44		
45	841+78 - 843+00 (LT)	Roadway Fill (WDV)	0.05			0.03						
47	856+50 - 861+50	Roadway Fill (WDV)	0.37			0.05						
48	861+40 - 866+30	Work Trestle (WDV)	0.02			< 0.01	0.65					
49	867+50 - 868+50	Work Trestle (WDY)	< 0.01				0.17					
50	876+00	14'X8' RCBC (SDJ)						0.03	< 0.01	318	46	
50	876+00	Culvert Stabilization (SDJ)						< 0.01		42		
50	876+00	Bank Stabilization (SDJ)						< 0.01		48		
50A	875+50 - 877+00	Roadway Fill (WDZ)	0.56			0.09						
51	890+00	42" RCP (SDK)						< 0.01	< 0.01	32	10	
51	890+00	Pipe Stabilization (SDK)						< 0.01		21		
51A	890+00	Roadway Fill (WEA)	0.29									
52	895+00	60" RCP (SDL)						0.05	< 0.01	588	20	
52	895+00	Pipe Stabilization (SDL)						< 0.01		39		
53	900+50 (LT) - 906+50 (RT)	42" RCP (SDM)						0.05	< 0.01	948	20	
53	900+50 (LT) - 906+50 (RT)	Pipe Stabilization (SDM)						< 0.01		47		
54	911+00 (LT) - 913+75 (RT)	Roadway Fill (WEC)	1.88			0.10						
SHEET 4 SUBTOTALS***:			3.19		0.02	0.27	1.38	0.47	0.09	3999.00	464.00	

NOTES:
*Represents an isolated wetland impact (also non-riparian)
**Represents any non-riparian wetland impact
***Rounded totals are sum of actual impacts
****Impacts are rounded to the nearest hundreds

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
03/04/2020
WAKE & JOHNSTON
TIP NO.R-2828
WBS NO. 37673.1.TA2

Permit Drawing Package
Last Revised on 02/24/20

WETLAND AND SURACE WATER IMPACTS SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	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)
55	914+00 (RT)-918+50 (LT)	2@ 9'x9' RCBC (SDW)						0.12	< 0.01	834	10	
55	914+00 (RT)-918+50 (LT)	Culvert Stabilization (SDW)						< 0.01		18		
55	914+00 (RT)-918+50 (LT)	Bank Stabilization (SDW)						< 0.01		4		
56	Y22SLIPRPB 38+50 (LT)	Channel Change (SDV)						0.02	< 0.01	518	10	
57	-Y22RPB- 25+42 (LT)	54" RCP (SDT)						0.01	< 0.01	113	10	
57	-Y22RPB- 25+42 (LT)	Pipe Stabilization (SDT)						< 0.01		22		
57A	-Y22RPB- 26+50 (LT)	Channel Change (SDS)						< 0.01	< 0.01	72	10	
58	Y22FLYBD 46+50-47+75	42" RCP (SDT)						0.01	< 0.01	196	20	
58	Y22FLYBD 46+50-47+75	Pipe Stabilization (SDT)						< 0.01		47		
58A	Y22FLYCC 123+00-127+00	54" RCP (SDT)						0.05	< 0.01	485	20	
58A	Y22FLYCC 123+00-127+00	Pipe Stabilization (SDT)						< 0.01		57		
59	Y22FLYCC 119+00 (RT)	15" CSP (SDX)						< 0.01		17	15	
59	Y22FLYCC 119+00 (RT)	Pipe Stabilization (SDX)						< 0.01	< 0.01	75		
59A	Y22FLYCC 119+00 (RT)	Roadway Fill (WEJ)	< 0.01			< 0.01						
70	-Y17- 28+50	24" Pipe Stabilization SCB(1)						< 0.01	< 0.01	20	10	
72	REMOVED	Non-Jurisdictional Pond (PAB)										
73	Y22FLYBD 34+70 (RT)	30" RCP Extension (SDR)						< 0.01	< 0.01	10	10	
73	Y22FLYBD 34+70 (RT)	Pipe Stabilization (SDR)						< 0.01		57		
75	Y22FLYCC 34+00-41+00	Bridge (WEC, SDV)	0.03			0.02	1.56		0.01		254	
76	Y22FLYCC 143+00 (RT)	42" RCP (WEC, SDO)	< 0.01			< 0.01		0.08	< 0.01	1101	10	
77	Y22FLYCC 71+00 (615' LT)	Roadway Fill (WEY)	0.06									
78	REMOVED	60" RCP Pipe Removal (SET)										
79	Y22FLYBD 83+00 (LT)	54" RCP (SET)						0.04	< 0.01	563	20	
79	Y22FLYBD 83+00 (LT)	Pipe Stabilization (SET)						< 0.01		44		
SHEET 5 SUBTOTALS***:			0.09			0.03	1.56	0.36	0.02	4253	399	0

NOTES:
*Represents an isolated wetland impact (also non-riparian)
**Represents any non-riparian wetland impact
***Rounded totals are sum of actual impacts

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
03/04/2020
WAKE & JOHNSTON
TIP NO.R-2828
WBS NO. 37673.1.TA2

Permit Drawing Package
Last Revised on 07/26/2023

WETLAND AND SURACE 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)
80	-Y22FLYBD- 83+50 (RT)	Roadway Fill (WEV)	0.03									
81	-Y22RPDE- 29+50 (RT)	Roadway Fill (WEU)	0.04									
82	-Y22FLYBD- 113+30 (RT)	HSB Outlet SEH, (WFN(2))				0.05			< 0.01		10	
82	-Y22FLYBD- 113+30 (RT)	12" Pipe Stabil. (SEH)						< 0.01		15		
82A	-Y22SEC2- 382+00 - 386+00 (LT)	Channel Change (SEM)						0.04	< 0.01	422	20	
83	-Y22SEC2- 396+50 (LT)	Channel Change (SEK, WFF)				< 0.01		< 0.01	< 0.01	28	13	
84	-Y22SEC2- 405+00 (LT)	60" CMP & 72" WSP (SEL)							< 0.01		10	
84	-Y22SEC2- 405+00 (LT)	Pipe Stabilizatoin (SEL)						< 0.01		37		
85	-Y22SEC2- 416+00 (LT)	30" RCP Pipe Extension (SEV)						< 0.01	< 0.01	59	10	
85	-Y22SEC2- 416+00 (LT)	Pipe Stabilizatoin (SEV)						< 0.01		19		
87	-Y22SEC2- 474+20 (LT)	42" Pipe (SES)							< 0.01		10	
87	-Y22SEC2- 474+20 (LT)	Pipe Stabilization (SES)						< 0.01		10		
88	-Y22SEC2 (LT) - 80+00 (LT)	48" RCP (SES)						0.02	< 0.01	244	20	
88	-Y22SEC2 (LT) - 80+00 (LT)	Pipe Stabilizatoin (SES)						< 0.01		30		
91	Y22FLYCC 121+30/121+90 (RT)	Haul Road (SDQ)							0.01		66	
92	Y22RPB 23+65/24+85 (LT)	Ex. Piers & Bridge Demolition (WEL, SDS)		0.05					< 0.01		92	
93	Y22RPB 26+27 (LT)	Ex. Piers & Bridge Demolition (WEK, SDS)		< 0.01					< 0.01		35	
	SHEET 1 SUBTOTALS		2.36	< 0.01	0.08	0.16		3.88	0.01	2538	103	
	SHEET 2 SUBTOTALS		6.82		0.39	0.86	0.85	3.40	< 0.01	1834	57	
	SHEET 3 SUBTOTALS		4.09		0.03	0.43		1.70	0.03	2878	265	
	SHEET 4 SUBTOTALS		3.19		0.02	0.27	1.38	0.47	0.09	3999	464	
	SHEET 5 SUBTOTALS		0.09			0.03	1.56	0.36	0.02	4253	399	
TOTALS***:			16.62	0.05	0.52	1.79	3.79	9.89	0.20	16366	1574	0

NOTES:
*Represents an isolated wetland impact (also non-riparian)
**Represents any non-riparian wetland impact
***Rounded totals are sum of actual impacts

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
03/04/2020
WAKE & JOHNSTON
TIP NO.R-2828
WBS NO. 37673.1.TA2

Revised 2018 Feb

From:	Thomson, Nicole J
To:	Alsmeyer, Eric C SAW; Ridings, Rob
Cc:	Abi Sheffey; Riffey, Deanna
Subject:	Complete 540, R2828, Modification Request Permit Site 41
Date:	Thursday, August 3, 2023 3:21:00 PM
Attachments:	R-2828 Stream and Wetland Impact Drawing .pdf image001.png

Eric & Rob –

As you are aware, the North Carolina Department of Transportation (NCDOT) applied for a phased Section 404 Individual Permit, Section 401 Individual Water Quality Certification (WQC), Neuse River Riparian Buffer Authorization, Non-404 Jurisdictional Wetlands and Waters Permit for the subject project in September 2018. The project, also known as Complete 540, encompasses three NCDOT Transportation Improvement Plan (TIP) projects: R-2721 (NC-55 Bypass to US-401), R-2828 (east of US-401 to I-40 Interchange) and R-2829 (east of I-40 to US 64/264). Revised permit applications were submitted in February 2019 and the NCDWR 401 and USACE 404 Permits were issued in February and October of 2019. Additionally, NCDOT received a modified 401 WQC for the Complete 540 Project on January 30, 2020, April 23, 2020, June 1, 2020, December 29, 2020, March 9, 2021, April 8, 2021, November 1, 2021, May 18, 2022, July 22, 2022, February 15, 2023 , June 19, and July 19, 2023 from the NC Division of Water Resources (NCDWR) and a modified Department of the Army authorization #SAW-2009-02240 on February 4, 2020 (revision issued on February 7, 2020), April 29, 2020, January 7, 2021, March 19, 2021, March 3, 2022, July 1, 2022, and September 13, 2022, February 17, 2023, June 21, 2023, and July 19, 2023.

You were previously made aware of adjustments to Permit Site 41 at Bridge Structure 9. The temporary work trestle bridge was recently removed and per an earlier agency review, some of the bank stabilization originally called for and permitted at this Permit Site were ultimately determined to not be needed (concurred upon by both of you during the agency site walkthrough). Now there is a bank location originally permitted for temporary impacts that the JV wishes to convert to permanent bank stabilization. There was significant scour realized at this bank location now that the temporary work structure has been removed, some of which was influenced by beaver activity in the area. The attached permit drawings clearly identify the bank stabilization locations which were <u>not</u> installed and the new location where it is needed.

The proposed changes are as follows:

- Limited area of bank stabilization:
  - Increase of 0.01 acre of bank stabilization.
  - Increase of 57 linear feet of bank stabilization.
- Reduction of temporary stream impacts:
  - Decrease of 0.016 acre of temporary stream impacts
  - Decrease of 57 linear feet of temporary stream impacts

Revised Table 4. R-2828 Jurisdictional Resources Impacts

Riparian	Non-					Riparian Buffer

Wetlands Temp./ Perm. (ac)	Riparian Wetlands Perm. (ac)	Isolated Wetlands (ac)	Ponds (ac)	Isolated Ponds (ac)	Streams (lf)			(sq ft) Zone 1/2
					Perm.	Temp.	Structure* Stab.	
4.85 / 19.55	0.07	0.25	8.32	n/a	16,842	1,772	2,122	2,609,814/ 830,157

As the proposed changes are for bank stabilization only (i.e. rip rap will not be placed in thalweg of the channel), the Department is not proposing any compensatory mitigation for these requested changes.

Thank you for your time in reviewing these changes and please let me know if you have any questions.

Thanks!
Nik

Nicole Thomson, PWS

North Carolina Turnpike Authority
North Carolina Department of Transportation

919-754-7806

1 South Wilmington Street
Raleigh, NC 27601
1578 Mail Service Center
Raleigh, NC 27699-1578