Docusign Envelope ID: ED1FD1AA-D799-8943-804A-1C05E2DFDD1D

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

November 4, 2026

U.S. Army Corps of Engineers
Raleigh Regulatory Field Office
3331 Heritage Trade Dr., Suite 105
Wake Forest, NC 27587

ATTN: Mr. Eric Alsmeyer
NCDOT Coordinator

N.C. Division of Water Resources
Transportation Permitting Branch 1617
Mail Service Center
Raleigh, NC 27699-1617

ATTN: Mr. Rob Ridings
NCDOT Coordinator

SUBJECT: Request for Modification of the Phased Section 404 Individual Permit and Section 401 Individual Water Quality Certification, Neuse River Riparian Buffer Authorization for the construction of the Triangle Expressway Southeast Extension 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

REFERENCE: USACE Section 404 Authorization SAW-2009-02240, issued October 24, 2019, modified February 4, 2020 (corrected revision issued February 7, 2020), April 29, 2020, January 7, 2021, March 19, 2021, March 3, 2022, July 1, 2022, September 13, 2022, February 17, 2023, June 21, 2023, July 19, 2023, August 4, 2023, August 11, 2023, December 13, 2023, January 22, 2024, May 29, 2024, October 28, 2024, December 13, 2024, May 19, 2025, June 6, 2025, August 26, 2025, October 8, 2025, October 27, 2025, October 31, 2025, December 3, 2025, December 4, 2025, March 18, 2026, and October 7, 2026.

NCDWR Water Quality Certification Number 4179 and Neuse River Riparian Buffer Authorization, issued February 15, 2019, modified January 30, 2020, April 20, 2020 (corrected revision issued 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, 2023, July 19, 2023, August 4, 2023, August 11, 2023, December 12, 2023, January 22, 2024, May 29, 2024, October 7, 2024, December 10, 2024, May 15, 2025, June 2, 2025, August 20,

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TURNPIKE AUTHORITY
1599 MAIL SERVICE CENTER
RALEIGH, NC 27699-1599

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

Website: www.ncdot.gov

Location:
2501 AERIAL CENTER PARKWAY
SUITE 200
MORRISVILLE, NC 27560

Docusign Envelope ID: ED1FD1AA-D799-8943-804A-1C05E2DFDD1D

2025, October 2, 2025, October 24, 2025, October 30, 2025, December 1, 2025, December 5, 2025, March 17, 2026, and October 6, 2026.

Dear Sirs:

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), and Neuse River Riparian Buffer Authorization, and 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 (US 401 to I-40), and R-2829 (I-40 to US 64/264 (I-87)). The permit and previous modification dates are listed in the reference section above.

We are requesting a modification to Section 404 Authorization (SAW-2019-02240) and the associated 401 Individual Water Quality Certification (Permit No. 20181249). This request is prompted by conditions observed during several field meetings, as well as the need to further clarify the construction sequence over the Neuse River Greenway. This permit modification will result in changes to the permanent wetland impacts from mechanized clearing to permanent fill in wetlands where field conditions have required adjustments from the previously permitted impacts (Site 38), and the addition of temporary wetland impacts to account for a temporary work area of disturbance (Site 39). Also attached is a revision to the Neuse River and Greenway Safety Plan incorporating additional construction phasing detail for protection of the greenway traffic from overhead construction work.

Details of the revised impacts are outlined below and depicted on the updated permit drawing sheets. For ease of review, all modified impacts areas are shown in bold font in this submittal.

Summary of Impacts

Revised impacts for final design for R-2829B include: 1.032 acres of temporary riparian wetland impacts and 9.135 acres of permanent riparian wetland impact (Revised Table 5). There is no change to the stream or buffer impacts on the project due to this modification.

Docusign Envelope ID: ED1FD1AA-D799-8943-804A-1C05E2DFDD1D

Revised Table 5. R-2829B Jurisdictional Resources Impacts

Riparian Wetlands Temp./ Perm. (ac.)	Non-Riparian Wetlands Perm. (ac.)	Ponds (ac.)	Streams (lf)			Mitigable Riparian Buffer (sq. ft.) Zone 1/ Zone 2
			Perm.	Temp.	Bank Stab.[2]	
1.032[1]/ **9.135**	0.459	14.104	8,485	1,134	1,483	**Allowable:** 93,428/54,468 **Mitigable**: 592,965/391,158

[1] Includes 0.398 acres of hand clearing.
[2] Includes countersunk riprap pads, which do not count toward mitigation

Impacts to Jurisdictional Resources

Revisions to proposed impacts are summarized below and reflected in the updated Table 20, which details site specific impacts to wetlands. There are no changes to Table 21 or Table 22 impacts in this modification request. The revised permit drawings identify the station number, structure size and type, jurisdictional feature name and associated impact type for each location. All impacts occur within the Neuse River Basin (HUC 03020201). Detailed revisions are provided below.

Site 38: WJJ(2)

During a field meeting between NCTA, the USACE, DWR, and the Contractor (FlatironDragados), it was observed that off-site stormwater flow was continuously eroding the proposed slope and toe protection past the terminus of SR 2601 (Clifton Road). At that meeting, it was agreed that a permit modification should be documented to show additional rip rap in the mechanized clearing to stabilize the area and capture off-site flow. To ensure permanent stabilization, the rip rap will be placed to the Right of Way boundary, resulting in a small additional permanent fill in wetlands (0.003 acre) not previously account for as mechanized clearing.

- Permanent Fill in Wetland Impact: 0.156 ac (previously 0.128 ac – increase of 0.028 ac)
- Mechanized Clearing Impact: 0.066 ac (previously 0.091 ac – decrease of 0.025 ac)

Site 39: WJJ(1)

During a field visit, it was observed that an area of wetland within the Temporary Drainage Easement was disturbed. Therefore, a modification is proposed documenting this disturbed area as Temporary Fill in Wetlands impacts. No permanent fill is planned within this area. The area is stabilized and no additional temporary work will be performed in this area.

- Temporary Fill in Wetland Impact: 0.011 ac (previously 0 ac – increase of 0.011 ac)

Neuse River and Greenway Trail User Safety Plan:

As the construction of the project has progressed, it has become necessary to further define the construction staging of the Neuse River Greenway Trail. Modifications and clarifications to the construction sequencing narrative in the Neuse River Safety Plan Sheets NEUSE-02 and NEUSE-03 include more specific instructions regarding the

Docusign Envelope ID: ED1FD1AA-D799-8943-804A-1C05E2DFDD1D

requirement for installation of overhead protection (stay in place forms, overhead jacks and plywood flooring) prior to routing greenway traffic beneath active bridge superstructure work areas. It was further clarified that no overhead work would be performed over the active greenway without overhead protection in place.

Revised Table 20. R-2829B Wetland Impacts

Permit Drawing Site Number	NRTR Label	NCWAM Type	Riparian or Non-riparian	Impact Type	Permanent Fill (ac.)	Temporary Impacts (ac.)	Excavation (ac.)	Mechanized Clearing (ac.)	Hand Clearing (ac.)
1	WHH	Headwater Forest	Non-riparian	Roadway Fill	0.143	-	-	-	-
2	WHQ	Headwater Forest	Riparian	Excavation	-	-	0.021	0.031	-
3	WHR	Headwater Forest	Riparian	Fill Pond	0.037	-	-	-	-
4	WRV	Headwater Forest	Riparian	Ditch Excavation	0.043	-	0.040	-	-
5	WAAH	Headwater Forest	Riparian	Fill	0.095	-	-	-	-
6	WHS	Headwater Forest	Riparian	Ditch	0.024	-	-	0.003	-
7	WHP	Headwater Forest	Riparian	2@ 6'x8' RCBC	0.027	-	-	-	-
7A	WHM	Non-tidal Freshwater Marsh	Riparian	Ditch Excavation	-	-	-	0.038	-
9	WIC	Headwater Forest	Riparian	Roadway Fill	0.052	-	-	-	-
10*	WIG	Headwater Forest	Riparian	O/H Power Lines	-	-	-	-	0.002
11	WIH	Headwater Forest	Non-riparian	Roadway Fill	0.053	-	-	-	-
13	WHG	Headwater Forest	Riparian	Ditch Excavation	-	-	0.002	0.006	-
14	WIP	Headwater Forest	Non-riparian	Channel Realignment	0.036	-	0.021	0.030	-
14	WIQ	Headwater Forest	Non-riparian	Channel Realignment	0.044	-	0.011	-	
17	WIU	Non-tidal Freshwater Marsh	Riparian	Roadway Fill	0.118	-	-	0.031	-
18	WIW	Non-tidal Freshwater Marsh	Riparian	Bridge Causeway	0.615	-	0.028	0.113	-
19	WIV	Headwater Forest	Riparian	Bridge/Channel Change	0.066	-	0.133	0.115	-
20	WIX	Non-tidal Freshwater Marsh	Riparian	Roadway Fill	0.001	-	0.001	0.021	-
21	WIY	Headwater Forest	Non-riparian	Roadway Fill	0.089	-	-	0.032	-
22	WIZ	Headwater Forest	Riparian	Roadway Fill	0.181	-	-	-	-

Docusign Envelope ID: ED1FD1AA-D799-8943-804A-1C05E2DFDD1D

Revised Table 20. R-2829B Wetland Impacts

Permit Drawing Site Number	NRTR Label	NCWAM Type	Riparian or Non-riparian	Impact Type	Permanent Fill (ac.)	Temporary Impacts (ac.)	Excavation (ac.)	Mechanized Clearing (ac.)	Hand Clearing (ac.)
22	WJA	Headwater Forest	Riparian	Roadway Fill	0.002	-	0.003	0.036	-
23	WJB	Headwater Forest	Riparian	Roadway Fill	-	-	-	0.011	-
24	WJD	Headwater Forest	Riparian	1@6'x8' RCBC	0.357	-	0.039	0.044	-
25	WJF	Bottomland Hardwood Forest	Riparian	1@6'x8' RCBC	1.232	-	0.039	0.102	-
25	WJF	Bottomland Hardwood Forest	Riparian	1@6'x8' RCBC	0.209	-	0.042	0.156	-
27	WJH	Headwater Forest	Riparian	Roadway Fill	0.271	-	-	-	-
31	WJK	Headwater Forest	Riparian	Roadway Fill	0.616	-	-	0.014	-
31*	WJK	Headwater Forest	Riparian	O/H Power Lines	-	-	-	-	0.006
32	WJJ(1)	Bottomland Hardwood Forest	Riparian	Bridge	0.008	0.623	-	0.270	0.390
32	WJJ(1)	Bottomland Hardwood Forest	Riparian	Roadway Fill	0.013	-	-	0.034	-
32	WJJ(1)	Bottomland Hardwood Forest	Riparian	1@10'x8' RCBC	0.218	-	0.048	0.101	-
32	WJL	Headwater Forest	Riparian	Roadway Fill/Channel Change	0.407	-	0.094	0.119	-
32	WJJ(1)	Bottomland Hardwood Forest	Riparian	Roadway Fill	0.346	-	0.037	0.069	-
32	WJL	Headwater Forest	Riparian	Roadway Fill	0.018	-	-	-	-
33	WJJ(1)	Bottomland Hardwood Forest	Riparian	1@6'x8' RCBC	-	-	0.052	0.083	-
34	WJJ(2)	Non-tidal Freshwater Marsh	Riparian	Roadway Fill	1.052	-	-	0.120	-
35	WJX	Headwater Forest	Riparian	Roadway Fill	0.144	-	-	-	-

Docusign Envelope ID: ED1FD1AA-D799-8943-804A-1C05E2DFDD1D

Revised Table 20. R-2829B Wetland Impacts

Permit Drawing Site Number	NRTR Label	NCWAM Type	Riparian or Non-riparian	Impact Type	Permanent Fill (ac.)	Temporary Impacts (ac.)	Excavation (ac.)	Mechanized Clearing (ac.)	Hand Clearing (ac.)
35	WJS	Headwater Forest	Riparian	Roadway Fill	0.007	-	-	0.005	-
38	WJJ(2)	Bottomland Hardwood Forest	Riparian	1@9'x6' RCBC Extension	**0.156**	**-**	**-**	**0.066**	-
39	WJJ(1)	Bottomland Hardwood Forest	Riparian	1@9'x6' RCBC Extension	0.508	**0.011**	0.003	0.142	-
			Total		**7.188**	**0.634**	**0.614**	**1.792**	**0.398**
			Total Riparian		**6.823**	**0.634**	**0.582**	**1.730**	**0.398**
			Total Non-Riparian		**0.365**	**-**	**0.032**	**0.062**	**-**

* Utility Impacts

Compensatory Mitigation:

Compensatory mitigation for these additional unavoidable riparian wetland impacts for R-2829B will be provided by a Private Mitigation Bank. Included in this permit modification request is the acceptance letter from the Private Mitigation Bank. Below is a summary of the proposed impacts.

Revised Table 28. R-2829B Proposed Compensatory Mitigation[1]

Mitigation Type	Riparian Wetlands Perm. (ac.)	Non-Riparian Wetlands Perm. (ac.)	Stream (lf)	Riparian Buffer Calculation (sq. ft.)		Riparian Buffer Total (sq. ft.)
				Zone 1	Zone 2	
Neuse River Basin (HUC 03020201)	**9.135 (+.003)**	0.459 (0)	7,002	506,154 (0)	352,126 (0)	858,280 (0)

[1] Mitigation ratios not applied

Compensatory riparian wetland mitigation for R-2829B will be provided by NCDOT credit purchases from Falling Creek Umbrella Mitigation Bank from the Falling Creek Site sponsored by Wildland Holdings. NCDOT has requested additional wetland mitigation of 0.003 acre from the Falling Creek Site to cover the revised total of 9.135 acres (previously 9.132 acres).

Revised Table 28B below shows the impacts associated with R-2829B and the wetland mitigation credits from Falling Creek Umbrella Mitigation Bank.

Docusign Envelope ID: ED1FD1AA-D799-8943-804A-1C05E2DFDD1D

Revised Table 28B R-2829B Compensatory Riparian Wetland Mitigation Bank

Site Name	Wetland Type	Bank Name	Purchased Wetland Mitigation Credits (ac)	Wetland Impacts (ac)	Wetland Mitigation Required (ac)
Falling Creek	Riparian	Falling Creek Umbrella Mitigation Bank	18.270	9.135	18.270

Regulatory Approvals

Section 404:
We are requesting a modification to the USACE Permit Number SAW-2009-02240 Section 404 Individual Permit for the above-described activities.

Section 401:
We are requesting a modification to the Section 401 Individual WQC Permit Number 4179 from NCDWR and the Neuse Riparian Buffer Authorization.

The individual permit modification package for the Complete 540 project (STIP Projects R-2721, R-2828, and R-2829) is available at: https://xfer.services.ncdot.gov/pdea/EnvironmentalPermits/I-540%20(R-2721%20R-2828%20R-2829)/R-2721A_R-2721B_R-2828_R-2829A_R-2829B%20Wake%20Johnston/

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Deanna Riffey at driffey@ncdot.gov or (919) 707-6151.

Sincerely,

DocuSigned by:
Alan Shapiro
B149124683BD45D...

Alan Shapiro, P.E.
Chief Engineer
North Carolina Turnpike Authority

cc: NCDOT Permit Application Standard Distribution List

Neuse Wetland Credits Statement of Availability

November 3, 2026

Attn: Mr. Brad Chilton
NCDOT
1000 Birch Ridge Road
Raleigh, NC 27610

RE: Availability of Riparian Wetland Credits for the "R-2829B Mod" project
Bank Name: Falling Creek Umbrella Mitigation Bank
Bank Sites: Falling Creek Mitigation Site
Bank Sponsor: Wildlands Holdings III, LLC
USACE Action ID No.: SAW-2015-00940
Permittee: NCDOT
Riparian Wetland Credits Needed: 0.006 acres
Riparian Wetland Credits Available: 2.815 acres
Neuse 03020201 River Basin

Dear Mr. Chilton,

Wildlands Holdings III, LLC, owned and operated by Wildlands Engineering, Inc., currently has sufficient stream and riparian wetland credits from the **Falling Creek Umbrella Mitigation Bank: Falling Creek Mitigation Site** to satisfy the stream and/or wetland mitigation requirements related to the above-mentioned project. The project is located within the Neuse River Basin of the service area (HUC 03020201) of the Bank.

This letter is simply a statement of availability of credits as of the date written. It is neither a guarantee of future credit availability, nor a guarantee of credit pricing. Credits are sold on a first come, first serve basis at the Bank's price at the time an invoice is requested. Please note that these credits have been reserved and paid for in advance by the NCDOT.

Final transfer of the credits will be made upon receipt of a copy of the US Army Corps of Engineers Compensatory Mitigation Responsibility Transfer Form approving the Stream and/or wetland mitigation purchase from the Bank and upon receipt of your payment to Wildlands Holdings III, LLC.

We appreciate the opportunity to assist you with your mitigation requirements. Please contact me at (704) 332-7754 x301 or cbrunick@wildlandseng.com if you have any questions or need any additional information.

Sincerely,

Camden Brunick

Camden M. Brunick
Wildlands Engineering, Inc.
Mitigation Credit Sales
cbrunick@wildlandseng.com
O: (704) 332-7754 ext. 301
M: (919) 219-6162

09/08/59

TIP PROJECT: R-2829B

CONTRACT: C204825

$$$$$$SYSTIME$$$$$$

$$$$$$USERNAME$$$$$$

$$$$$$DGN$$$$$$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

PERMIT DRAWING
SHEET 1 OF 112

WETLAND AND SURFACE WATER IMPACTS PERMIT

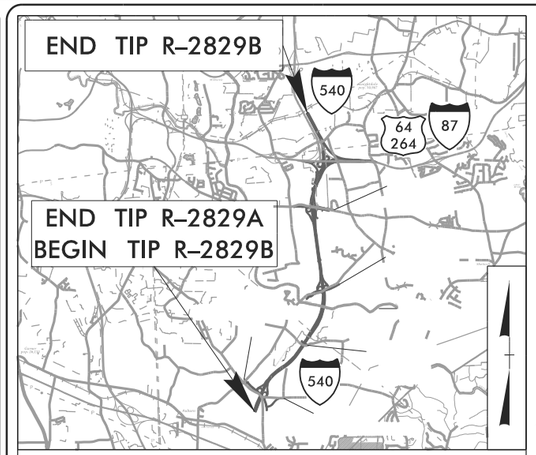
REVISED 10/15/2026

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2829B	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
35517.3.TA2	N/A	DESIGN-BUILD
35517.3.TAGV2	0540048	DESIGN-BUILD

LOCATION: TRIANGLE EXPRESSWAY SOUTHEAST EXTENSION FROM SOUTH OF SR 2542 (ROCK QUARRY ROAD) TO I-87/US 64/US 264

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES, SIGNING, AND SIGNALS



VICINITY MAP
(Not to Scale)



END TIP PROJECT R-2829B
-LB- STA. 1531+41.23

BEGIN TIP PROJECT R-2829B
-L- STA. 1185+15.00
TIE TO TIP PROJECT R-2829A
-LI- STA. 1185+19.02

-L- POT STA. 1289+00.00 =
-LB- POT STA. 1288+76.82

-Y27-
(SR 2542)
ROCK QUARRY RD.

-Y27B-
(SR 2555)
AUBURN KNIGHTDALE RD.

-Y30-
(SR 1007)
POOLE RD.

-Y30C-

-Y27A-
(SR 5204)
OLD BAUCOM RD.

-Y29-
(SR 2555)
AUBURN KNIGHTDALE RD.

-Y28-
(SR 2552)
BATTLE BRIDGE RD.

-Y28B-

-Y29A-

-Y30H-

-Y31A-

-Y30A-

-Y30E-

-Y30D-

-Y30G-

-Y31B-

-Y31RPB-

-Y31RPBD-

-Y31-

RALEIGH CITY LIMITS

NEUSE RIVER

NEUSE RIVER GREENWAY TRAIL

HINTON'S CREEK

FUTURE GREENWAY

-DUKE_DW-

KNIGHTDALE CITY LIMITS

SITE 1
SITES 3-6
SITE 2
SITE 7A
SITE 7
SITE 24
SITE 25
SITE 27
SITE 29
SITE 31
SITE 34
SITE 36
SITE 35
SITE 8
SITE 10
SITE 11
SITE 37
SITE 19
SITE 21
SITE 17
SITE 14
SITE 9
SITE 12
SITE 16
SITE 15
SITE 18
SITE 20
SITE 22
SITE 23
SITE 32
SITE 33
SITE 28
SITE 38
SITE 39

★ PROPOSED SIGNAL

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

SITE OMISSION NOTE

SITE 13
SITE 26
SITE 30

NO LONGER HAVE ANY IMPACTS, THEREFORE THESE SHEETS HAVE BEEN REMOVED

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 20 10 0 10 20

DESIGN DATA

ADT 2025 = 34,800
ADT 2045 = 66,600
K = 12%
D = 60/65%
T = 10% *
V = 75 MPH
* TTST = 4% DUAL = 6%
FUNC CLASS = INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2829B = 5.967 MILES
LENGTH STRUCTURE TIP PROJECT R-2829B = 0.595 MILES
TOTAL LENGTH TIP PROJECT R-2829B = 6.562 MILES

Prepared in the Office of:
ICE of CAROLINAS, PLLC
ICE of Carolinas, PLLC
4505 Falls of Neuse Road Suite 110
Raleigh, North Carolina 27609
Phone: 804-822-0333
License #: P-0696

Prepared for:
NORTH CAROLINA TURNPIKE AUTHORITY
1000 Birch Ridge Dr., Raleigh NC 27610

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: 8/29/2023

LETTING DATE: 8/29/2023

BRIAN LUSK, P.E.
PROJECT ENGINEER

RON McCOLLUM, P.E.
NCTA CONTACT
EASTERN DEPUTY CHIEF ENGINEER

HYDRAULICS ENGINEER

_____ P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

_____ P.E.
SIGNATURE:

NORTH CAROLINA Turnpike Authority

PERMIT DRAWING
SHEET 103 OF 112

REVISED 10/15/2026

GRAPHIC SCALE 100' 0' 100' 200' 300'

WETLAND EXCAVATION
FILL IN WETLAND
MECHANIZED CLEARING (GRUBBING)
SURFACE WATER IMPACTS
TEMPORARY SURFACE WATER IMPACTS

ICE of CAROLINAS, PLLC
ICE of Carolinas, PLLC
4925 Faringdon Place, Suite 110
Raleigh, North Carolina 27609
Phone: 919.741.8337
License #C-4202

PROJECT REFERENCE NO.	SHEET NO.
R-2828B	40
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83

MATCHLINE -Y31RPD- STA. 54+00.00 SEE SHEET 21

-Y31RPD-

-Y31RPD-ST Sta. 25+83.39

-Y31RPD-TS Sta. 30+91.96

-Y31RPD-SC Sta. 32+41.96

-Y31RPD-PCC Sta. 37+14.18

SITE 39

SEE PERMIT DRAWING SHEET 105 OF 112 FOR ENLARGEMENT

WJJ (1)

SHL

-Y31FLYDB-POC Sta. 3+90.99=
-Y31- Sta.66+95.87

-Y31FLYDB-SC Sta. 24+38.24

-Y31FLYDB-SRS Sta. 22+88.24

-Y31FLYDB-CS Sta. 21+38.24

-Y31FLYDB-SC Sta. 18+30.61

-Y31FLYDB-TS Sta. 16+80.61

-Y31FLYDB- CS Sta. 13+53.32

-Y31FLYDB- ST Sta. 15+03.32

-Y31FLYDB- SC Sta. 9+24.67

-Y31FLYDB-ST Sta. 7+74.67=
-Y31-POT Sta. 93+43.14
OFF=58.07° LT

-Y31-
Due East

MATCHLINE -Y31RPD- STA. 24+50.00 SEE SHEET 41

MATCHLINE -Y31FLYDB- STA. 35+00.00 SEE SHEET 21

-Y31RPC-

-Y31RPC-ST Sta. 38+69.48=
-Y31-POT Sta. 279+08.51
OFF=70.04° RT

-Y31RPC-CS Sta. 35+69.48

SAAL

SHL

SITE 38

SEE PERMIT DRAWING SHEET 104 OF 112 FOR ENLARGEMENT

WJJ (2)

SITE 34

3125 JOYCE C. LILES
3127 TERRY L & RANDALL H & TIMOTHY C FERRELL
3123 HOPE MILL INC
3122 RAMON A. MEJIA

FOR –Y31RPC– CURVE DATA SEE SHT. 3A–2
FOR –Y31RPD– CURVE DATA SEE SHT. 3A–2
FOR –Y31FLYDB– CURVE DATA SEE SHT. 3A–2

FOR –Y31RPC– PROFILE SEE SHT. 79
FOR –Y31RPD– PROFILE SEE SHTS. 80 & 81
FOR –Y31FLYDB– PROFILE SEE SHT. 82

GRAPHIC SCALE 50 25 0 50 100
PLANS

8/17/99

PERMIT DRAWING
SHEET 104 OF 112

SITE 38 ENLARGEMENT

GRAPHIC SCALE 40′ 0′ 40′ 80′ 120′

REVISED 10/15/2026

F F	FILL IN WETLAND
* * *	MECHANIZED CLEARING (GRUBBING)
S S	SURFACE WATER IMPACTS
TS TS	TEMPORARY SURFACE WATER IMPACTS

ICE of CAROLINAS, PLLC
ICE of Carolinas, PLLC
4505 Falls of Neuse Road. Suite 110
Raleigh, North Carolina 27609
Phone: 803-822-0333
License #: P-0999

PROJECT REFERENCE NO.	SHEET NO.
R-2829B	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83

80+00

" ALONG CURVE GUARDRAIL POST

COLLAR

REMOVE DI

RETAIN 24" RCP-III

24" RCP-III WITH DEFLECTION

-Y31RPC-

TIE WWF TO WING WALL

2GI-A

CL II RIP RAP BANK STABILIZATION DETAIL BP-1

SAAL

WWF -Y31RPC- F20.00 EX. RW

RETAIN AND EXTEND 1@9'x6' RCBC

PROP. WW FENCE

TOE PROTECTION SEE DETAIL W

SHL

BZ 1

BZ 2

Q10= 18.4 CFS
V10= 1.6 FPS

LAT. 2' BASE DITCH SEE DETAIL A

-Y31RPC-CS Sta. 35+69.48

-Y31RPC-ST Sta. 38+69.48=
-Y31-POT Sta.79+08.51
OFF=70.04' RT

35 LF OF OUTLET CHANNEL IMPROVEMENTS SEE DITCH DETAIL -Y31RPD- 40+05

SITE 38

WLB

SR 2601

EXISTING R/W

$DATE$ $TIME$
$FILEABBREV$
$USERNAME$$$$

8/17/99

PERMIT DRAWING
SHEET 105 OF 112

SITE 39
ENLARGEMENT

REVISED 10/15/2026

GRAPHIC SCALE 40′ 0′ 40′ 80′ 120′

E E	WETLAND EXCAVATION
F F	FILL IN WETLAND
* * *	MECHANIZED CLEARING (GRUBBING)
S S	SURFACE WATER IMPACTS
TS TS	TEMPORARY SURFACE WATER IMPACTS

NAD 83

ICE of CAROLINAS, PLLC
ICE of Carolinas, PLLC
4505 Falls of Neuse Road. Suite 110
Raleigh, North Carolina 27609
Phone: 803-822-0333
License #: P-0999

PROJECT REFERENCE NO.	SHEET NO.
R-2829B	
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SHL

25 LF OF INLET CHANNEL IMPROVEMENTS SEE DITCH DETAIL –Y31RPD– 40+05

SITE 39

STD. 2′ BASE DITCH SEE DETAIL I

–Y31RPD–PCC Sta. 37+14

Q10 = 28.7 CFS
V10 = 1.3 FPS

TOE PROTECTION SEE DETAIL W

CL B RIP R
EST. 5 TO
EST. 16 SY

RAP
NS
GF 15″
ELBOWS

2GI 15″ RCP–III

RETAIN AND EXTEND 9′X6′ RCBC

REMOVE DI

MOVE

2GI 15″ RCP–III

ADJUST 2GI

RETAIN

RETAIN

9′X6′ RCBC

40+00

20+00

–Y31FLYDB–CS Sta. 21+38.24

–Y31FLYDB–SC Sta. 18+30.61

–Y31FLYDB–TS

SHOULDER BERM GUTTER

VEGETATION

$DATE$ $TIME$
$FILEABBREV$
$USERNAME$$$$

REVISIONS
5/2/2025: REVISED T-TURNAROUND, DRIVEWAYS, AND ROW AT PARCEL 3720

PERMIT DRAWING
SHEET 106 OF 112

REVISED 10/15/2026

GRAPHIC SCALE 100' 0' 100' 200' 300'

- WETLAND EXCAVATION
- FILL IN WETLAND
- MECHANIZED CLEARING (GRUBBING)
- SURFACE WATER IMPACTS
- TEMPORARY SURFACE WATER IMPACTS

FLATIRON FLOYD SMITH COMPANY

ICE of CAROLINAS, PLLC

PROJECT REFERENCE NO.	SHEET NO.
R-2828B	40
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83

MATCHLINE -Y31RPD- STA. 54+00.00 SEE SHEET 21

MATCHLINE -Y31RPD- STA. 24+50.00 SEE SHEET 41

MATCHLINE -Y31FLYDB- STA. 35+00.00 SEE SHEET 21

MATCHLINE -Y31RPC- STA. 25+60.00 SEE SHEET 21

SITE 39

SEE PERMIT DRAWING SHEET 105 OF 112 FOR ENLARGEMENT

SITE 38

SEE PERMIT DRAWING SHEET 104 OF 112 FOR ENLARGEMENT

SITE 34

WJJ (1)

WJJ (2)

SHL

SAAL

-Y31RPD- 90+00 40+00 25+00 30+00 35+00 20+00 15+00 10+00 95+00

-Y31RPD-PCC Sta. 37+14.18

-Y31RPD-SC Sta. 32+41.96

-Y31RPD-TS Sta. 30+19.96

-Y31RPD-ST Sta. 25+85.39

-Y31FLYDB- 70+00 75+00 80+00 85+00 90+00

-Y31FLYDB-POC Sta. 34+90.99=
-Y31- Sta.66+95.81

-Y31FLYDB-SC Sta. 24+38.24

-Y31FLYDB-SRS Sta. 22+88.24

-Y31FLYDB-CS Sta. 21+38.24

-Y31FLYDB-SC Sta. 18+30.61

-Y31FLYDB-TS Sta. 16+80.61

-Y31FLYDB- CS Sta. 13+53.32

-Y31FLYDB- ST Sta. 12+03.32

-Y31FLYDB- SC Sta. 9+24.67

-Y31FLYDB-ST Sta. 7+47.67=
-Y31-POT Sta. 93+43.54
OFF=58.01' LT

-Y31RPC- 30+00 35+00

-Y31RPC-CS Sta. 35+69.48

-Y31RPC-ST Sta. 38+69.48=
-Y31-POT Sta. 279+08.5
OFF=70.04' RT

-Y31- Due East

N 88°46' 37" W -Y31RPD-

LAT. 2' BASE DITCH SEE DETAIL A

LAT. 2' BASE DITCH SEE DETAIL C

LAT. 2' BASE DITCH SEE DETAIL B

TRENCHLESS INSTALLATION 42" WELDED STEEL (NOT SUBMITTED)

FLOWABLE FILL

PLUG

REMOVE DI

RETAIN DI

ALL DRIVEWAY RADII 10' UNLESS NOTED OTHERWISE.

PAVEMENT REMOVAL

FOR DITCH DETAILS SEE SHTS. 2D-1 THRU 2D-5

FOR –Y31RPC– CURVE DATA SEE SHT. 3A-2
FOR –Y31RPD– CURVE DATA SEE SHT. 3A-2
FOR –Y31FLYDB– CURVE DATA SEE SHT. 3A-2

FOR –Y31RPC– PROFILE SEE SHT. 80
FOR –Y31RPD– PROFILE SEE SHTS. 81 & 82
FOR –Y31FLYDB– PROFILE SEE SHT. 83
FOR –Y31– PROFILE SEE SHT. 86

GRAPHIC SCALE
50 25 0 50 100
PLANS

WETLAND AND SURACE WATER IMPACTS SUMMARY

				WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Wetland and/or Stream ID	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- 1197+22/1198+69, M	ROADWAY FILL	WHH	0.143									
2	-Y27-RPD- 18+86/20+85, LT	EMB. EXCAVATION	WHQ			0.021	0.031						
3	-Y27-RPA- 12+57/22+32, RT	FILL (POND)	WHR, PAH	0.037					7.078				
4	-Y27-RPA- 21+68/23+22, RT	DITCH EXCAVATION	WRV, SOR	0.043		0.040				0.002		34	
5	-Y27-RPA- 13+89/17+08, RT	FILL	WAAH	0.095									
6	-Y27-RPA- 11+97/12+09, RT	DITCH	WHS,SAAM	0.024			0.003			0.002		11	
6	-Y27-RPA- 11+81/12+99, RT	FILL	SGJ						0.022		160		
7	-L- 1241+61/1242+00, RT	BANK STABILIZATION	SGK						0.006	0.005	28	23	
7	-L- 1242+00/1242+30, RT	STRUCTURE STABILIZATION	SGK						0.006		39		
7	-L- 1243+18, M	2 @ 6'x8' RCBC	WHP, SGK	0.027					0.054	0.005	406	23	
7	-L- 1244+17/1244+44, LT	STRUCTURE STABILIZATION	SGK						0.013		55		
7	-L- 1244+19/1244+91, LT	STRUCTURE STABILIZATION	SGJ						0.009	0.009	44	47	
7A	-L- 1240+99/1241+32, RT	DITCH EXCAVATION	WHM				0.038						
8	-L- 1253+21/1253+29, LT	BANK STABILIZATION	SGJ						0.003	0.006	32	42	
8	-L- 1253+21/1253+29, LT	DITCH EXCAVATION	SGJ						0.001	0.001	7	7	
9	-L- 1268+92/1269+46, LT	ROADWAY FILL	WIC	0.052									
10	-Y28- 14+75, LT/RT	BANK STABILIZATION	SGJ						0.004	0.008	32	57	
11	-L- 1276+60/1277+19 RT	ROADWAY FILL	WIH	0.053									
12	-L- 1288+28/1288+34, LT	BANK STABILIZATION	SGI						0.004	0.003	22	17	
12	-L- 1288+34/1288+15, LT	STRUCTURE STABILIZATION	SGI						0.008		48		
12	-L- 1288+18, M	3 @ 7'x8' RCBC	SGI						0.087	0.023	408	105	
12	-L- 1288+11/1288+06, RT	STRUCTURE STABILIZATION	SGI						0.007		26		
12	-L- 1288+06/1288+28, RT	BANK STABILIZATION	SGI						0.014	0.002	61	5	
13	-Y27- 25+62, LT	DITCH EXCAVATION	WHG			0.002	0.006						
14	-LB- 1315+04 TO 1315+72 LT	CHANNEL REALIGNMENT	WIP, SGR	0.036		0.021	0.030		0.005		58		
14	-LB- 1316+80 TO 1320+05 M	CHANNEL REALIGNMENT	WIQ, SGR	0.044		0.011			0.036		442		
15	-LB- 1320+03 TO 1321+42 M	BRIDGE	Neuse River						0.005	0.009	20	51	
15	-LB- 1320+87 TO 1321+76 M	BRIDGE CAUSEWAY	Neuse River							0.300		220	
15	-LB- 1319+95 TO 1321+83 M	BANK STABILIZATION	Neuse River						0.050	0.058	203	30	
16	-LB- 1323+35 TO 1323+55 RT	DITCH	SGT						0.002	0.001	10	12	
TOTALS*:				0.554	0.000	0.095	0.108	0.000	7.414	0.434	2101	684	

*Rounded totals are sum of actual impacts

NOTES:

SITE 15 WETLAND WIR IS NON-404

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
10/14/2024
(REV 7/18/2025, 10/14/2025, 9/14/2026)
WAKE COUNTY

R-2829B

WETLAND AND SURACE WATER IMPACTS SUMMARY

				WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Wetland and/or Stream ID	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)
17	-Y29RPA- 28+45 TO 27+03 LT	ROADWAY FILL	WIU	0.118			0.031						
18	-LB- 1343+75 TO 1348+35 M**	BRIDGE CAUSEWAY	SGU, WIW	0.615		0.028	0.113			0.007		73	
18	-LB- 1345+30 TO 1346+41 M	BANK STABILIZATION	SGU						0.071	0.016	306	36	
19	-Y29RPA- 19+91 TO 22+80 M ***	BRIDGE/CHANNEL CHANGE	WIV	0.066		0.133	0.115						
20	-LB- 1348+26 TO 1354+79 M	ROADWAY FILL	SGV, WIX	0.001		0.001	0.021		0.036	0.001	793	12	
21	-LB- 1373+42 TO 1374+06 RT	ROADWAY FILL	WIY	0.089			0.032						
22	-LB- 1377+53 TO 1382+16 M	ROADWAY FILL	SGY, WIZ	0.181					0.021		309		
22	-LB- 1381+13 TO 1381+24 LT	COUNTERSUNK RIPRAP	SGY						0.002	0.001	28	10	
22	-LB- 1381+15 TO 1381+55 LT	ROADWAY FILL	WJA	0.002		0.003	0.036						
22	-LB- 1377+53 TO 1380+76 RT	ROADWAY FILL (POND)	PAI						1.679				
23	-LB- 1390+22 TO 1390+64 RT	ROADWAY FILL	WJB				0.011						
23	-LB- 1388+53 TO 1394+71 M	ROADWAY FILL (POND)	PAK						4.543				
24	-LB- 1404+10 TO 1405+75 M	1 @ 6'x8' RCBC	SHA, WJD	0.357		0.039	0.044		0.023		290		
24	-LB- 1404+71 TO 1404+82 RT	COUNTERSUNK RIPRAP	SHA						0.001	0.001	15	11	
25	-LB- 1412+45 TO 1415+37 M	1 @ 6'x8' RCBC	SHB, WJD	1.232		0.039	0.102		0.003		48		
25	-LB- 1413+94 LT	COUNTERSUNK RIPRAP	SHB							0.001	8	13	
25	-Y30A- 10+58 TO 12+97 M	1 6'x8'	SHD	0.209		0.042	0.156						
27	-Y30- 22+73 TO 37+02 M	ROADWAY FILL	SHC	0.271					0.171		1804		
27	-Y30- 22+79 RT	COUNTERSUNK RIPRAP	SHC						0.001	0.001	10	10	
28	-Y30- 36+94 TO 37+96 M	2 @ 12'x11'	SHC						0.041		174		
28	-Y30- 37+24 TO 37+64 LT	COUNTERSUNK RIPRAP	SHC						0.029	0.003	83	9	
28	-Y30- 37+21 TO 38+01 RT	CHANNEL CHANGE	SHC						0.015		39		
28	-Y30A- 21+58 TO 22+00 M	3 @ 12'x11'	SHC						0.022		48		
28	-Y30A- 21+64 TO 21+94 RT	COUNTERSUNK RIPRAP	SHC						0.015		30		
28	-Y30A- 21+37 TO 22+00 RT	BANK STABILIZATION	SHC						0.031	0.005	65	10	
29	-Y30RPD- 25+73 TO 25+06 LT	ROADWAY FILL	SHE						0.024		173		
29	-LB- 1431+22 TO 1432+16 M	ROADWAY FILL (POND)	POND WJI						0.106				
TOTALS*:				3.141	0.000	0.285	0.661	0.000	6.834	0.036	4223	184	

*Rounded totals are sum of actual impacts

NOTES:

** SITE 18 Mechanized clearing total has been calculated for the worst-case scenario of losing entire wetland WIW

*** SITE 19 There will be temporary fill placed in the 0.003 ac. under the causeway which will be removed post-construction

SITE 26 CONTAINS NO WET IMPACTS AND HAS BEEN OMITTED FROM SUMMARY

SITE 30 CONTAINS NO WET IMPACTS AND HAS BEEN OMITTED FROM SUMMARY

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

10/14/2024 (REV 07/18/2025)
WAKE COUNTY

R-2829B

WETLAND AND SURACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	Wetland and/or Stream ID	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)
31	-LB- 1453+07 TO 1454+88 M	ROADWAY FILL	WJK	0.616			0.014						
32	-LB- 1456+41 TO 1461+83 M	BRIDGE / BANK STABILIZATION	SHC, WJJ(1)	0.008	0.623		0.270	0.39	0.02	0.009	195	74	
32	-LB- 1454+75 TO 1456+43 RT	ROADWAY FILL	WJJ(1)	0.013			0.034						
32	-Y31FLYDB- 51+90 TO 54+62 M	1 @ 10'x8' RCBC	SHC, WJJ(1)	0.218		0.048	0.101		0.032		255		
32	-Y31RPB- 23+56 TO 27+29 M	RDY FILL/CHANNEL CHANGE	SHC, WJL	0.407		0.094	0.119		0.045	0.002	319	14	
32	-Y31LPB- 17+74 TO 23+16 M	ROADWAY FILL	SHC, WJJ(1)	0.346		0.037	0.069		0.100	0.001	967	11	
32	-Y31LPB- 18+26 TO 18+67 RT	ROADWAY FILL	WJL	0.018									
33	-Y31RPB- 21+60 TO 24+06 M	1 @ 6'x8' RCBC	SHH, WJJ(1)			0.052	0.083		0.007	0.001	127	11	
34	-Y31RPC- 21+40 TO 26+00 M	ROADWAY FILL	WJJ(2)	1.052			0.120						
35	-Y31LPD- 19+31 TO 21+97 M	ROADWAY FILL	SHM, WJX	0.144						0.002		16	
35	-Y31LPD- 18+56 TO 19+86 LT	ROADWAY FILL (POND)	PAM						0.698				
35	-Y31RPD- 55+77 TO 56+11 LT	ROADWAY FILL	WJS	0.007			0.005						
36	-LB- 1516+53 TO 1516+56 LT	42" RCP-III	SAAJ								13		
36	-LB- 1516+45 TO 1516+56 LT	COUNTERSUNK RIPRAP	SAAJ						0.004		37	10	
37	-Y29- 8+37 TO 8+54 LT	RIPRAP AT EMBANKMENT	Neuse River						0.003	0.005	26	37	
38	-Y31- 76+81 TO 79+47 RT	1@9'x6' RCBC EXTENSION	SHL, WJJ(2)	**0.156**			**0.066**		0.013		31		
38	-Y31- 77+71 TO 78+03 RT	COUNTERSUNK RIPRAP	SHL						0.009		33		
38	-Y31- 77+16 TO 77+48 RT	BANK STABILIZATION	SHL						0.006	0.021	32	78	
38	-Y31- 76+91 TO 77+28 RT	ROADWAY FILL	SAAL						0.005		46		
39	-Y31RPD- 36+61 TO 40+84 RT	1@9'x6' RCBC EXTENSION	SHL, WJJ(1)	0.508	**0.011**	0.003	0.142		0.014		55		
39	-Y31RPD- 39+93 TO 40+03 RT	COUNTERSUNK RIPRAP	SHL						0.004	0.002	25	15	
	PAGE 110 TOTALS			0.554		0.095	0.108		7.414	0.434	2101	684	
	PAGE 111 TOTALS			3.141		0.285	0.661		6.834	0.036	4223	184	
TOTALS*:				**7.188**	**0.634**	0.614	**1.792**	0.390	15.209	0.513	8485	1134	

*Rounded totals are sum of actual impacts

NOTES:

WETLAND WIT (former Site 37) ON PSH 32 HAS BEEN REMOVED AND OMITTED FROM WETLAND IMPACT SUMMARY

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
10/14/2024 (REV 07/18/2025, 10/14/2025, 9/14/2026 & 10/15/2026)
WAKE COUNTY

R-2829B

NEUSE RIVER & NEUSE RIVER GREENWAY TRAIL USER SAFETY PLAN

NC 540 (R-2829B)

Triangle Expressway Southeast Extension

from south of SR 2542 (Rock Quarry Road) to I-87/US 64/US 264

SUBMITTED
7/22/2025
REV 9/29/2026



Submitted by

FLATIRON

FRED SMITH COMPANY CONSTRUCTION

In partnership with

ICE of CAROLINAS, PLLC

NC 540 Triangle Expressway Southeast Extension (R-2829B)
from south of SR 2542 (Rock Quarry Road) to I-87 / US 64 / US 264

Neuse River and Neuse River Greenway Trail Safety Plan

The R-2829B project includes construction activities at, across and above the Neuse River and the existing Neuse River Greenway Trail. This plan provides details of the safety measures to be incorporated into the construction operations to ensure that users of both the Neuse River and the Neuse River Greenway Trail are informed of ongoing construction hazards and are protected from construction activities while passing through the construction area.

General Safety Procedures and Precautions:

Throughout the duration of construction, the Flatiron-Fred Smith JV will have the following measures in place for both the Neuse River and the Neuse River Greenway Trail:

- Flatiron-Fred Smith JV will comply with all Contract and RFP requirements while implementing this safety plan.

- As required per Division One of the NCDOT Standard Specifications Section 108-3, modified by the RFP, Flatiron-Fred Smith JV will provide a Site Specific Safety Plan (SSSP) prior to starting any work. The SSSP with spill control and response plan will be provided to all on-site staff and shall include details on spill prevention and cleanup, marine operations, and emergency/crisis management.

- This plan shall be reviewed annually, at a minimum, by Flatiron-Fred Smith JV and NCDOT to determine if any adjustments need to be made to improve the functionality of the plan or address any changes on-site.

- Regular safety inspections of all equipment will be performed monthly to ensure everything is in proper condition and working order.

- Flatiron-Fred Smith JV will have monitors and/or flaggers to direct river and greenway users away from active or hazardous construction areas and activities.

- Unless work is being performed outside of the allowable public use of the greenway (dawn to dusk), if an overhead operation is ongoing without a greenway trail detour or river user diversion in place, Flatiron-Fred Smith JV will have monitors / flaggers on each side of the construction zone to stop construction work while users pass beneath an overhead operation.

  The greenway and river traffic will be shifted to the proposed detour / portage routes when any unprotected overhead work is ongoing in an area. When the new bridge girders are in place, the stay in place decking is installed, and the overhangs with plywood protection are installed, this will prevent materials from falling onto the active portions of the greenway trail or Neuse River.

- In the event of a storm being forecast in the area that could result in localized flooding or overtopping the temporary access causeway, Flatiron-Fred Smith JV will remove all materials and equipment in advance of the storm.

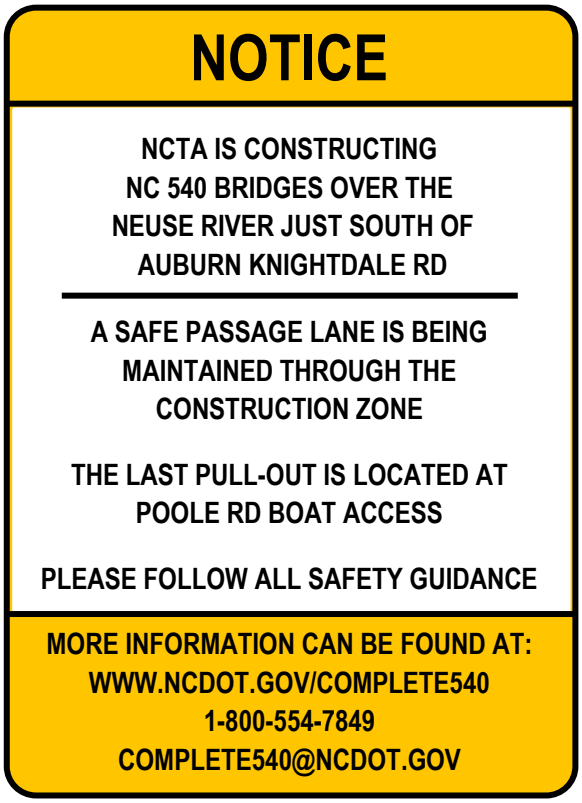
Neuse River Specific Safety Precautions:

Paddlers or other users of the Neuse River waterway will be protected from construction operations as follows:

- Advanced warning Signage will be installed and maintained by Flatiron-Fred Smith JV at the following canoe / kayak access points upstream and downstream of the project location:

    - Lower Milburnie Dam (1101 Old Milburnie Rd, Raleigh, NC 27604)
    - Anderson Point Boat Access (20 Anderson Point Drive, Raleigh, NC 27610)
    - Poole Road Boat Access (6501 Poole Rd, Raleigh, NC 27610)
    - Mial Plantation Road Access (near 6008 Mial Plantation Rd, Raleigh, NC 27610)
    - Hwy 42 Boat Launch (2075 NC Highway 42 E, Clayton, NC)
    - Town of Smithfield Boat Ramp (200 N Front St, Smithfield, NC 27577)

    The signs will be similar to the image below:



- Ring Buoys will be staged on each side of the river shoreline both immediately upstream and downstream of the construction zone for emergency rescue operations. Each ring

buoy will be equipped with a minimum of 100 feet of rescue line and a throw bag, mounted on a 4x4 timber post.

- Buoys and signage will be installed in the river to direct river users through the safe portion of the waterway (see sketch NEUSE-01).

- The buoys and signage will provide a safe perimeter around the proposed construction access causeway on the northern bank of the river to warn against unauthorized access to the causeway and work area by river users.

- Signage will direct river users if the river passage is open or closed. The passage will be open when it is safe to pass under the proposed bridge construction and there are no overhead activities ongoing. The passage will be closed and require canoe portage when active overhead operations such as bridge girder erection, stay in place form placement or overhang protection installation and removal. A portage route will be cleared and signed to allow for safe portage around the active construction. The portage route will be chosen to minimize the height of the bank to traverse during normal water elevations. In addition, during these closed times, Flatiron-Fred Smith JV will have monitors and flaggers further directing river users of the proper portage route.

- The Flatiron-Fred Smith JV will communicate to NCDOT / NCTA Communications and Marketing Department (CAMD) at least forty-five (45) days in advance of any construction activities that impact use of the Neuse River.

Neuse River Greenway Trail Specific Safety Precautions:

Users of the Neuse River Greenway Trail will be protected from construction operations as follows:

- The Flatiron-Fred Smith JV shall inform NCDOT Division 5 and NCTA at least forty-five (45) days in advance of any construction activities that impact use of the Neuse River Greenway Trail.

- A temporary trail detour route will be constructed and used to divert trail traffic away from active overhead construction activities (see sketches NEUSE-02 through NEUSE-04).

- Prior to beginning construction, orange safety fence will be placed on both sides of the existing greenway trail to keep greenway users on the trail and away from adjacent construction activities and equipment. The limits of the orange safety fence are shown on Figure NEUSE-02 and shall be turned 90 degrees and tied to the nearest tree to “funnel” users between the runs of safety fence. Orange safety fence to be maintained and/or reinstalled at the end of each shift where trail is being used for construction access.

- During the first phase of the bridge construction, trail traffic can be maintained on the existing trail while Bridge Spans C through I are completed. The temporary greenway trail alignment and a portion of the permanent greenway alignment revisions will be constructed during this phase of bridge construction. Paved trail surface to be maintained throughout this phase.

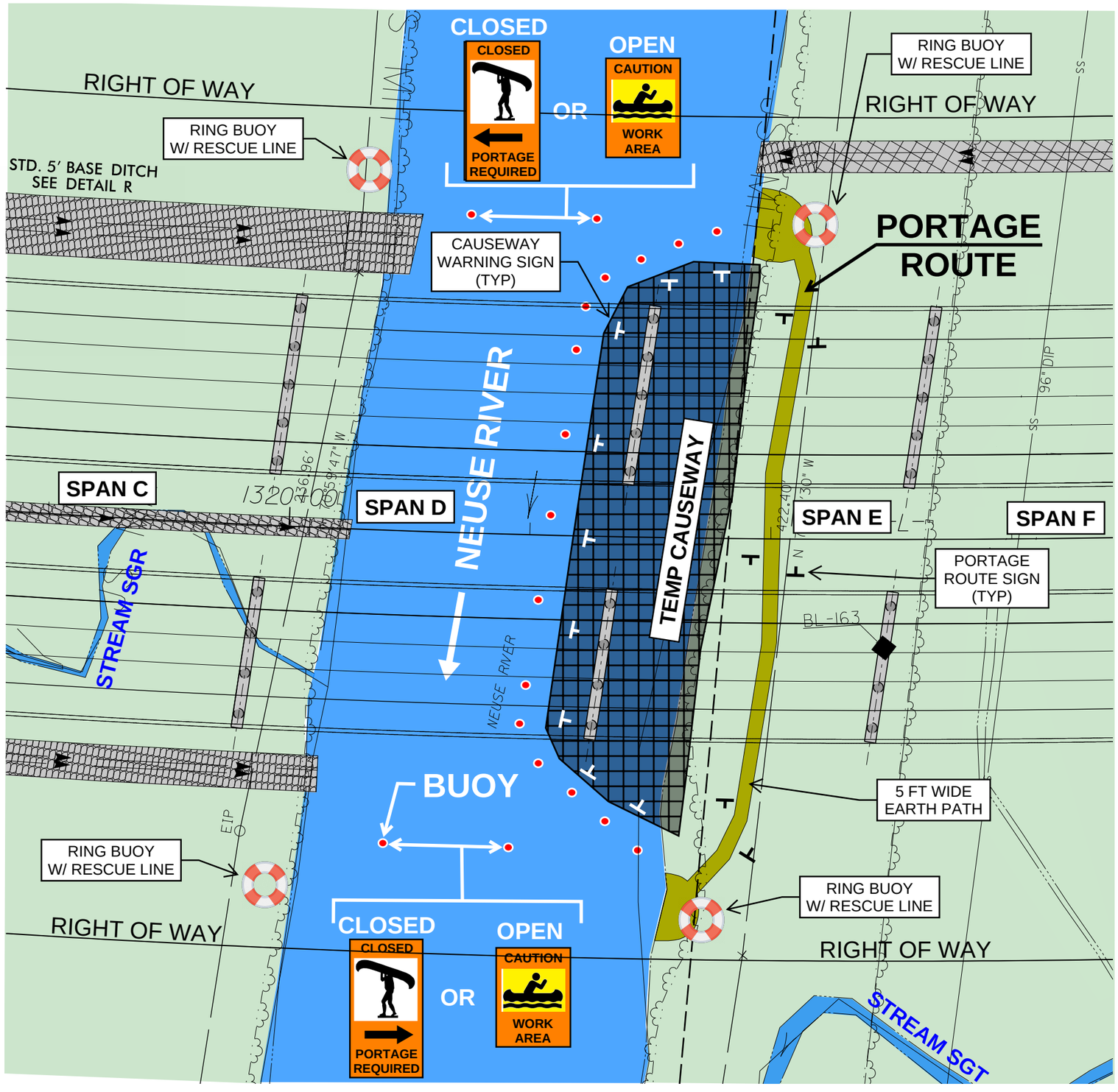
- Once the girders, metal stay-in-place forms and overhang falsework plywood flooring for Span C of the bridge are completed, the orange safety fencing will be added to the temporary and permanent trail alignment and greenway trail traffic will be switched to the temporary detour route under Span C. Once greenway trail traffic is switched under Span C, overhead construction can commence on Span A as well as the remainder of the permanent greenway alignment revisions.

- Bridge overhang protection removal over the Neuse River Greenway Trail will be done when the trail is closed at night between dusk and dawn.

- With the greenway traffic relocated, the construction of Bridge Spans A and B can be completed and the greenway trail traffic will be shifted to the revised permanent greenway alignment. Orange safety fence is to be placed and maintained along the revised permanent greenway trail for the remainder of the construction contract as well as any portion of the existing trail that remains in use through the construction area.

- The Flatiron-Fred Smith JV shall coordinate installation and removal of greenway protective measures with NCDOT Division 5 and NCTA when crossing the trail. No obstructions that impede the use of the trail shall be left in place after crossing the trail.

Details of the proposed user routing for both the Neuse River and the Neuse River Greenway Trail are provided on the following Figures NEUSE-01 through NEUSE 04.



SAFETY PLAN
R-2829B

NEUSE-01

PADDLE ACCESS:

1. PRIOR TO CONSTRUCTION OF BRIDGE SPAN D, PADDLER TRAFFIC WILL BE ROUTED THROUGH THE SOUTHERN SIDE OF THE RIVER USING FLOATING BUOYS AND CAUTION SIGNAGE AS SHOWN BELOW.

2. DURING LIFTING OF SPAN D BEAMS OR OTHER OVERHEAD OPERATIONS FOR SPAN D, THE RIVER WILL BE CLOSED TO PADDLERS USING THE "PORTAGE REQUIRED" SIGNAGE. NO CONSTRUCTION ACTIVITY IN SPAN E IS ALLOWED WHEN THE PORTAGE ROUTE IS IN USE.

3. PLACE RING BUOYS FOR EMERGENCY USE AT EACH PORTAGE LANDING AND ON OPPOSITE SIDE OF RIVER..

CAUTION SIGNAGE:



CAUSEWAY WARNING SIGN

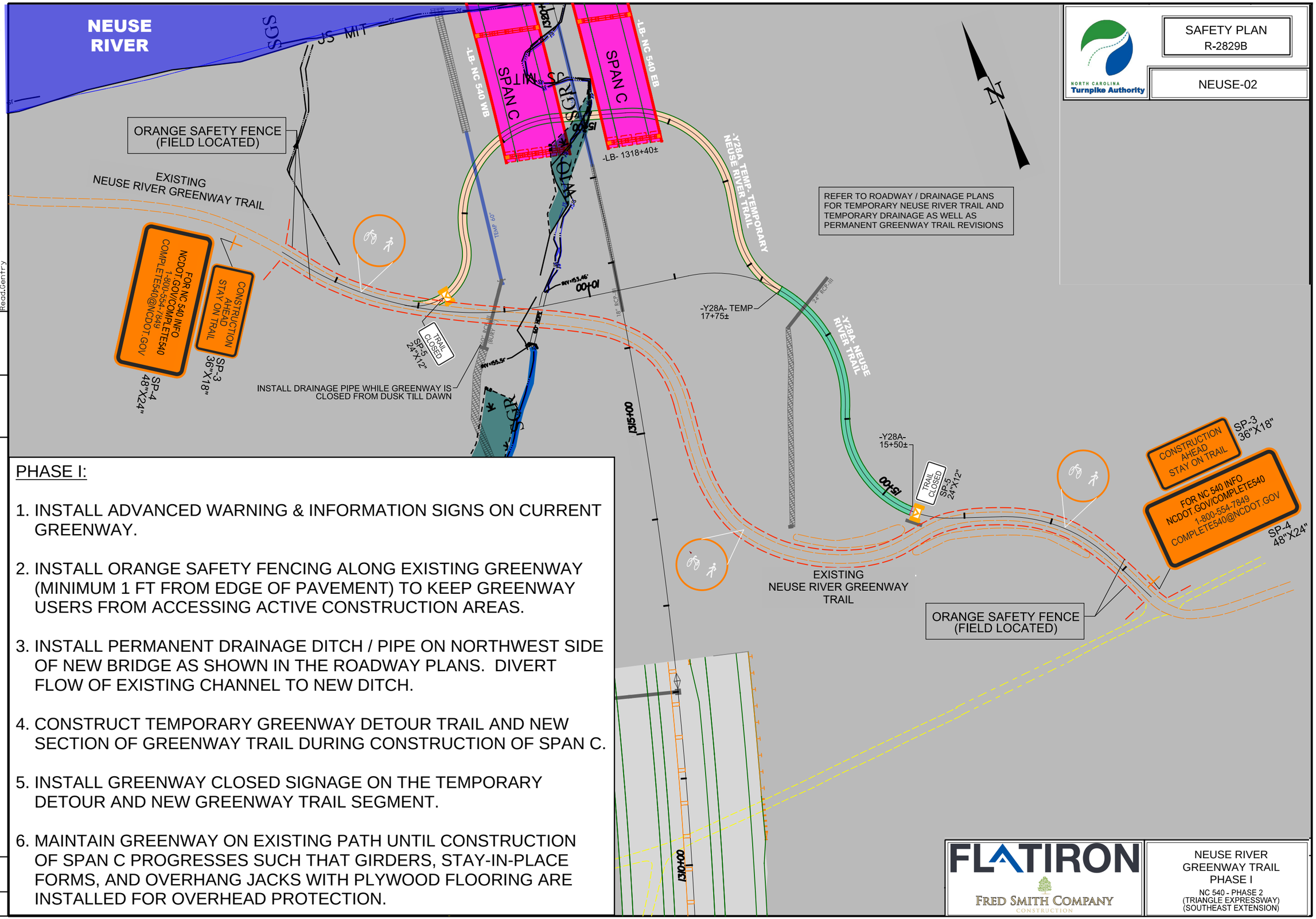


PORTAGE ROUTE SIGN

FLATIRON
FRED SMITH COMPANY
CONSTRUCTION

NEUSE RIVER ACCESS

NC 540 - PHASE 2
(TRIANGLE EXPRESSWAY)
(SOUTHEAST EXTENSION)



PHASE I:

1. INSTALL ADVANCED WARNING & INFORMATION SIGNS ON CURRENT GREENWAY.
2. INSTALL ORANGE SAFETY FENCING ALONG EXISTING GREENWAY (MINIMUM 1 FT FROM EDGE OF PAVEMENT) TO KEEP GREENWAY USERS FROM ACCESSING ACTIVE CONSTRUCTION AREAS.
3. INSTALL PERMANENT DRAINAGE DITCH / PIPE ON NORTHWEST SIDE OF NEW BRIDGE AS SHOWN IN THE ROADWAY PLANS. DIVERT FLOW OF EXISTING CHANNEL TO NEW DITCH.
4. CONSTRUCT TEMPORARY GREENWAY DETOUR TRAIL AND NEW SECTION OF GREENWAY TRAIL DURING CONSTRUCTION OF SPAN C.
5. INSTALL GREENWAY CLOSED SIGNAGE ON THE TEMPORARY DETOUR AND NEW GREENWAY TRAIL SEGMENT.
6. MAINTAIN GREENWAY ON EXISTING PATH UNTIL CONSTRUCTION OF SPAN C PROGRESSES SUCH THAT GIRDERS, STAY-IN-PLACE FORMS, AND OVERHANG JACKS WITH PLYWOOD FLOORING ARE INSTALLED FOR OVERHEAD PROTECTION.

NORTH CAROLINA Turnpike Authority

SAFETY PLAN
R-2829B

NEUSE-02

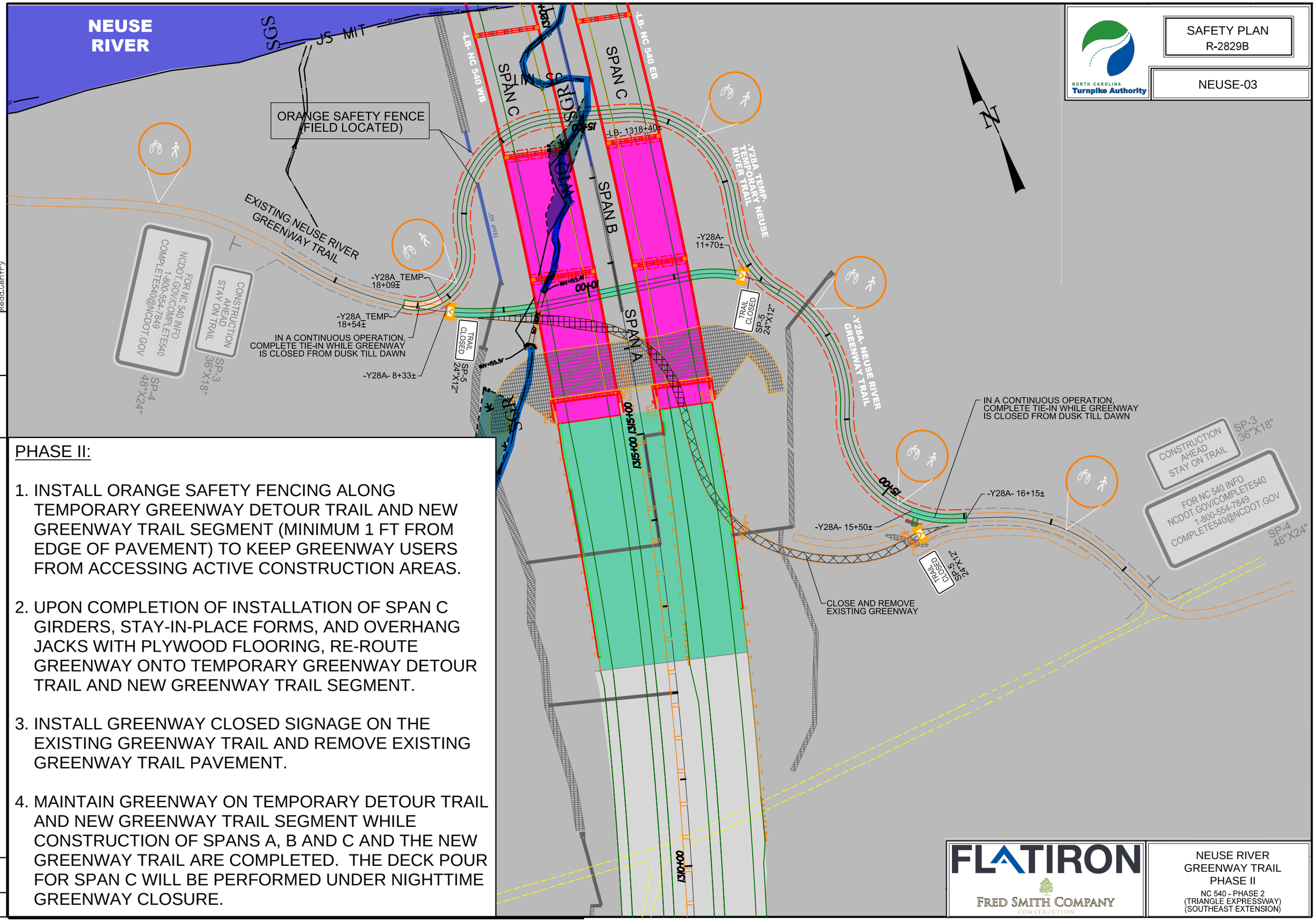
REVISIONS

NO.	DATE	DESCRIPTION	REVISED BY	CHECKED BY
1	6-16-25	Y28 & Y28A NEUSE RIVER GREENWAY TRAIL ALIGNMENTS REVISED	CEO	GMK
2	7-21-25	Y28A & Y28A TEMP NEUSE RIVER GREENWAY TRAIL ALIGNMENTS REVISED	KRG	GMK

7/21/2025
c:\bms\ice-eng-pw-01\dms59256\R-2829B TMP 07 AREA 04 PHASE 01.dgn
Read,Gentry

FLATIRON
FRED SMITH COMPANY
CONSTRUCTION

NEUSE RIVER
GREENWAY TRAIL
PHASE I
NC 540 - PHASE 2
(TRIANGLE EXPRESSWAY)
(SOUTHEAST EXTENSION)



PHASE II:

1. INSTALL ORANGE SAFETY FENCING ALONG TEMPORARY GREENWAY DETOUR TRAIL AND NEW GREENWAY TRAIL SEGMENT (MINIMUM 1 FT FROM EDGE OF PAVEMENT) TO KEEP GREENWAY USERS FROM ACCESSING ACTIVE CONSTRUCTION AREAS.

2. UPON COMPLETION OF INSTALLATION OF SPAN C GIRDERS, STAY-IN-PLACE FORMS, AND OVERHANG JACKS WITH PLYWOOD FLOORING, RE-ROUTE GREENWAY ONTO TEMPORARY GREENWAY DETOUR TRAIL AND NEW GREENWAY TRAIL SEGMENT.

3. INSTALL GREENWAY CLOSED SIGNAGE ON THE EXISTING GREENWAY TRAIL AND REMOVE EXISTING GREENWAY TRAIL PAVEMENT.

4. MAINTAIN GREENWAY ON TEMPORARY DETOUR TRAIL AND NEW GREENWAY TRAIL SEGMENT WHILE CONSTRUCTION OF SPANS A, B AND C AND THE NEW GREENWAY TRAIL ARE COMPLETED. THE DECK POUR FOR SPAN C WILL BE PERFORMED UNDER NIGHTTIME GREENWAY CLOSURE.

NORTH CAROLINA Turnpike Authority

SAFETY PLAN
R-2829B

NEUSE-03

REVISIONS

NO.	DATE	DESCRIPTION	REVISED BY	CHECKED BY
1	6-16-25	Y28 & Y28A NEUSE RIVER GREENWAY TRAIL ALIGNMENTS REVISED	CEO	GMK
2	7-21-25	Y28A & Y28A TEMP NEUSE RIVER GREENWAY TRAIL ALIGNMENTS REVISED	KRG	GMK

7/21/2025
c:\bms\ice-eng-pw-01\dms59256\R-2829B TMP 07A AREA 04 PHASE 02.dgn
Read.Gentry

FLATIRON
FRED SMITH COMPANY CONSTRUCTION

NEUSE RIVER
GREENWAY TRAIL
PHASE II
NC 540 - PHASE 2
(TRIANGLE EXPRESSWAY)
(SOUTHEAST EXTENSION)

NEUSE RIVER

SAFETY PLAN
R-2829B

NORTH CAROLINA Turnpike Authority

NEUSE-04

SPAN A
SPAN B
SPAN C

-LB- NC 540 EB
-LB- NC 540 WB

CLOSE AND REMOVE TEMPORARY GREENWAY

-Y28A TEMP- TEMPORARY NEUSE RIVER TRAIL

-Y28A- NEUSE RIVER GREENWAY TRAIL

IN A CONTINUOUS OPERATION, COMPLETE TIE-IN WHILE GREENWAY IS CLOSED FROM DUSK TILL DAWN

TRAIL CLOSED

SP-5 24"X12"

-Y28A- 7+70±

-Y28A- 8+33±

-Y28A- 11+70±

-Y28A- 10+75±

ORANGE SAFETY FENCE (FIELD LOCATED)

CONSTRUCTION AHEAD STAY ON TRAIL

SP-3 36"X18"

FOR NC 540 INFO NCDOT.GOV/COMPLETE540 1-800-554-7849 COMPLETE540@NCDOT.GOV

SP-4 48"X24"

WIP

N

PHASE III:

1. UPON COMPLETION OF SPANS A AND B OF THE BRIDGE, INCLUDING DECK POURS, RE-ROUTE GREENWAY ONTO PERMANENT GREENWAY TRAIL ALIGNMENT.

2. REMOVE TEMPORARY GREENWAY TRAIL AND TRAIL CLOSED SIGNAGE.

3. AFTER PROJECT COMPLETION, REMOVE ADVANCED WARNING AND INFORMATION SIGNS AND ORANGE SAFETY FENCE FROM TRAIL.

REVISIONS

NO.	DATE	DESCRIPTION	REVISED BY	CHECKED BY
1	6-16-25	Y28 & Y28A NEUSE RIVER GREENWAY TRAIL ALIGNMENTS REVISED	CEO	GMK
2	7-21-25	Y28A & Y28A TEMP NEUSE RIVER GREENWAY TRAIL ALIGNMENTS REVISED	KRG	GMK

7/21/2025
c:\bms\ice-eng-pw-01\dms59256\R-2829B TMP 07B AREA 04 PHASE 03.dgn
Read.Gentry

FLATIRON
FRED SMITH COMPANY CONSTRUCTION

NEUSE RIVER GREENWAY TRAIL PHASE III
NC 540 - PHASE 2
(TRIANGLE EXPRESSWAY)
(SOUTHEAST EXTENSION)