



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

May 1, 2019

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

ATTN: Mr. Dave Bailey  
NCDOT Coordinator

Subject: **Request for Modification and Extension to the Section 404 Individual Permit and Section 401 Water Quality Certification** for the proposed Greensboro Eastern Loop from US 70 Relocation to SR 2303 (Lawndale Drive), Guilford County, Division 7. Debit \$570 from WBS Element No. 34821.1.5, TIP Nos. U-2525B and U-2525C.

Reference: USACE Individual Permit Action ID SAW-2005-21386, dated April 15, 2014.  
USACE Individual Permit Modification Action ID SAW-2005-21386, October 31, 2014.  
USACE Individual Permit Modification Action ID SAW-2005-21386, December 4, 2014.  
USACE Individual Permit Modification Action ID SAW-2005-21386, March 12, 2015.  
USACE Individual Permit Modification Action ID SAW-2005-21386, July 24, 2015.  
USACE Individual Permit Modification Action ID SAW-2005-21386, March 18, 2016.  
USACE Individual Permit Modification Action ID SAW-2005-21386, August 11, 2016.  
USACE Individual Permit Modification Action ID SAW-2005-21386, December 19, 2016.  
USACE Individual Permit Modification Action ID SAW-2005-21386, November 28, 2017.  
NCDWR Project No. 20130918, Certification No. 3978, February 6, 2014.  
NCDWR Project No. 20130918\_v2, Modification to Certification No. 3978, June 24, 2014.  
NCDWR Project No. 20130918\_v3, Modification to Certification No. 3978, October 15, 2014.  
NCDWR Project No. 20130918\_v4, Modification to Certification No. 3978, December 11, 2014.  
NCDWR Project No. 20130918\_v5, Modification to Certification No. 3978, March 18, 2015.  
NCDWR Project No. 20130918\_v6, Modification to Certification No. 3978, July 21, 2015.  
NCDWR Project No. 20130918\_v7, Modification to Certification No. 3978, March 18, 2016.  
NCDWR Project No. 20130918\_v8, Modification to Certification No. 3978, August 12, 2016.  
NCDWR Project No. 20130918\_v9, Modification to Certification No. 3978, December 20, 2016.  
NCDWR Project No. 20130918\_v10, Modification to Certification No. 3978, December 8, 2017.

Dear Sir:

The purpose of this letter is to request a modification and extension of the United States Army Corps of Engineers (USACE) Section 404 Individual Permit and North Carolina Division of Water Resources Section 401 Certification for the above referenced project.

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1598

*Telephone:* (919) 707-6000  
*Fax:* (919) 212-5785  
*Customer Service:* 1-877-368-4968

*Location:*  
1000 BIRCH RIDGE DRIVE  
RALEIGH, NC 27699

*Website:* [www.ncdot.gov](http://www.ncdot.gov)

The NCDOT is requesting approval for additional impacts at U-2525C, Permit Site 20. The fill slope at this site extends further from the roadway than originally anticipated. Therefore, the reinforced concrete pipe (RCP) carrying this stream will need to be approximately 22 linear feet (lf) longer than previously permitted to accommodate the slope. Bank stabilization at the outlet is reduced from 30 lf to 15 lf due to right of way constraints. Impact number changes resulting from this modification are presented in this application in **red**.

Please see the enclosed revised Division of Mitigation Services (DMS) mitigation acceptance letter (dated April 26, 2019) and revised permit drawings for the above-referenced project reflecting this modification.

In addition to this modification, the Section 404 Individual Permit and 401 Water Quality Certification currently have an expiration date of December 31, 2019. Since this project was phased into two sections (B and C) and the original permit issued was only good for 5 years, the work in jurisdictional areas will not be completed by this expiration date. Therefore, the NCDOT is requesting an extension of the permit authorization for U-2525 through 2023.

### IMPACTS TO WATERS OF THE U.S.

Please see the revised Table 3 and site description below reflecting the modification at U-2525C Permit Site 20.

**Table 3. U-2525C Final Stream Impacts (Revised)**

Site	Stream Name & Intermittent (I) or Perennial (P)	Stream ID	Impact Type	Impact Length (linear feet)	Temporary Impacts (acres) (feet)	Mitigation Requirement (linear feet)
1	UT to Jordan Branch (P)	SBV2	Perm. Fill	41	--	USACE
			Bank Stabilization	5	--	--
			Temp. Fill	--	<0.01 (5')	--
2	UT to North Buffalo Creek (P)	SI	Perm. Fill	362	--	USACE & DWR
			Bank Stabilization	--	--	--
			Temp. Fill	--	-	--
3	UT to North Buffalo Creek (I)	SG	Perm. Fill	61	--	USACE
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (10')	--
4	UT to North Buffalo Creek (P)	SI	Perm. Fill	780	--	USACE & DWR
			Bank Stabilization	45	--	--
			Temp. Fill	--	<0.01 (6')	--
			Loss of Function	568	--	USACE (@0.5:1)
4A	UT to North Buffalo Creek (I)	SJ	Perm. Fill	405	--	USACE
			Bank Stabilization	--	--	--
			Temp. Fill	--	--	--
5	UT to UT at Camp Herman (I)	SBT	Perm. Fill	--	--	--
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (28')	--
6	N/A (wetland only)	--	--	--	--	--
7	N/A (wetland only)	--	--	--	--	--

**Table 3. continued**

Site	Stream Name & Intermittent (I) or Perennial (P)	Stream ID	Impact Type	Impact Length (linear feet)	Temporary Impacts (acres) (feet)	Mitigation Requirement (linear feet)
8	UT to UT at Camp Herman (P)	SBS	Perm. Fill	489	--	USACE & DWR
			Bank Stabilization	16	--	--
			Temp. Fill	--	<0.01 (14')	--
9	UT to Reedy Fork/Townsend Lake (I/P)	SBO/SBP	Perm. Fill (P)	93	--	USACE & DWR
			Perm Fill (I)	342	--	USACE
			Bank Stabilization (P)	18	--	--
			Temp. Fill	--	--	--
9A	UT to Reedy Fork/Townsend Lake (P)	SBN	Perm. Fill	52	--	USACE
			Bank Stabilization	--	--	--
			Temp. Fill	--	--	--
10	UT to Reedy Fork/Townsend Lake (P)	SBP	Perm. Fill	2126	--	USACE & DWR
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (63')	--
10A	UT to Reedy Fork/Townsend Lake (P)	SBQ	Perm. Fill	283	--	USACE
			Bank Stabilization	20	--	--
			Temp. Fill	--	<0.01 (32')	--
11	N/A (wetland only)	--	--	--	--	--
12	UT to Richland Creek (P)	SBA	Perm. Fill	284	--	USACE & DWR
			Bank Stabilization	24	--	DWR
			Temp. Fill	--	<0.01 (15')	--
13	UT to Reedy Fork/Townsend Lake (P)	SBW	Perm. Fill	791	--	USACE & DWR
			Bank Stabilization	--	--	--
			Temp. Fill	--	0.02 (122')	--
13A	UT to Reedy Fork/Townsend Lake (P)	SBV	Perm. Fill	225	--	USACE
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (15')	--
13B	UT to Reedy Fork/Townsend Lake (I)	SBU	Perm. Fill	225	--	USACE
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (16')	--
14	UT to Reedy Fork/Townsend Lake (I)	SBJ	Perm. Fill	364	--	USACE
			Bank Stabilization	71	--	--
			Temp. Fill	--	<0.01 (20')	--
15	UT to Reedy Fork/Townsend Lake (P)	SBL	Perm. Fill	518	--	USACE & DWR
			Bank Stabilization	--	--	--
			Temp. Fill	--	0.01 (88')	--
15A	UT to Reedy Fork/Townsend Lake (P)	SBM	Perm. Fill	169	--	USACE
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (57')	--
16	UT to Reedy Fork/Townsend Lake (I)	SBK	Perm. Fill	--	--	--
			Bank Stabilization	--	--	--
			Temp. Fill	--	0.01 (46')	--

**Table 3. continued**

Site	Stream Name & Intermittent (I) or Perennial (P)	Stream ID	Impact Type	Impact Length (linear feet)	Temporary Impacts (acres) (feet)	Mitigation Requirement (linear feet)
17	UT to Richland Creek/Lake (P)	SBF	Perm. Fill	410	--	USACE & DWR
			Bank Stabilization	26	--	--
			Temp. Fill	--	<0.01 (51')	--
17A	UT to Richland Creek/Lake (I)	SBU3	Perm. Fill	--	--	--
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (56')	--
18	UT to Richland Creek/Lake (P)	SBE	Perm. Fill	551	--	USACE & DWR
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (15')	--
18A	UT to Richland Creek/Lake (I)	SBI	Perm. Fill	80	--	USACE
			Bank Stabilization	--	--	--
			Temp. Fill	--	<0.01 (10')	--
19	UT to Richland Creek/Lake (P)	SBF	Perm. Fill	775	--	USACE & DWR
			Bank Stabilization	40	--	--
			Temp. Fill	--	0.02 (150')	--
			Loss of Function	183	--	USACE (@0.5:1)
19A	UT to Richland Creek/Lake (P)	SBH	Perm. Fill	61	--	USACE
			Bank Stabilization	32	--	--
			Temp. Fill	--	0.01 (21')	--
20	UT to Richland Creek/Lake (I)	SBG	Perm. Fill	<b>616</b>	--	USACE
			Bank Stabilization	<b>15</b>	--	--
			Temp. Fill	--	<0.01 (18')	--
21	UT to Richland Creek/Lake (P)	SBD	Perm. Fill	632	--	USACE & DWR
			Bank Stabilization	--	--	--
			Temp. Fill	--	0.04 (78')	--
22	UT to Richland Creek/Lake (P)	SBC	Perm. Fill	745	--	USACE & DWR
			Bank Stabilization	10	--	--
			Temp. Fill	--	<0.01 (3')	--
23	UT to Richland Creek/Lake (P)	SBB	Perm. Fill	424	--	USACE & DWR
			Bank Stabilization	19	--	--
			Temp. Fill	--	<0.01 (47')	--
<b>Total New Temporary Impacts:</b>				--	<b>0.17 (956')</b>	--
Total Permanent Impacts:				<b>12,245</b>	<b>0.01 (30')</b>	--
Permanent Impacts Requiring DWR Mitigation:				<b>9,004</b>	--	--
Permanent Impacts Requiring USACE Mitigation:				<b>11,904</b>	--	--
Loss of Function Impacts Requiring USACE Mitigation:				<b>751</b>	--	--
<b>Total Impacts Requiring Mitigation:</b>				<b>12,655</b>	--	†

† – Final mitigation requirement will be up to the USACE and DWR

**Permit Site 20 (Revised):** The proposed roadway will result in **616 lf** of permanent stream impacts, <0.01 ac (18 lf) of temporary stream impacts, and **15 lf** of steam bank stabilization to stream SBG. Flow from this stream will be carried in a 30” RCP and extended with a 48” RCP at the outlet (not buried).

### COMPENSATORY MITIGATION

U-2525 Compensation:

Please see the mitigation tables below. Table 6 has been revised to account for the modification at U-2525C, Permit Site 20. The change has been captured in the most recent DMS mitigation acceptance letter.

**Table 5. U-2525B Required Compensatory Mitigation Summary (Final)**

	Stream Length (ft)	Riparian Wetland Acreage (ac)
Impacts Requiring Mitigation	10,193	7.55
Onsite Mitigation Credits	2,055	
Total Mitigable Impacts Less Onsite Mitigation	8,138	7.55
Required DMS Mitigation	5,161 @ 2:1	7.53 @ 2:1
	2,977 @ 1:1	0.02 @ 1:1
Total DMS Mitigation	13,299	15.08

**Table 6. U-2525C Required Compensatory Mitigation Summary (Final) (Revised)**

	Stream Length (ft)	Riparian Wetland Acreage (ac)
Impacts Requiring Mitigation	12,655	2.81 <sup>1</sup>
Required DMS Mitigation	11,904 @ 2:1	2.81 @ 2:1
	751 @ 0.5:1	
Total DMS Mitigation	24,183.5	5.62

<sup>1</sup> – Total impacts requiring mitigation for U-2525C is 2.96 ac, however 0.15 ac of Permit Site 1 was previously mitigated for as mechanized clearing under U-2525B - Permit Site 21

### REGULATORY APPROVALS

Section 404: Application is hereby made for a modification and extension to of the USACE Individual 404 Permit as required for the above-described activities and the previously permitted activities under U-2525B and U-2525C.

Section 401: We are hereby requesting a modification to the 401 Water Quality Certification from the N. C. Division of Water Resources for the above described activities.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: <http://connect.ncdot.gov/resources/Environmental>. If you have any questions or need additional information, please call Erin Cheely at (919) 707-6108.

Sincerely,

*Carla Dagnino*

*for*

Philip S. Harris III, P.E., C.P.M.  
Environmental Analysis Unit Head

cc:  
NCDOT Permit Application Standard Distribution List



NORTH CAROLINA  
Environmental Quality

May 31, 2019

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

TIM BAUMGARTNER  
Director

Mr. Philip S. Harris, III, P.E., CPM  
Environmental Analysis Unit  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

**TIP Number U-2525B/C**, Greensboro Eastern Loop from US 70 Relocation to SR 2303 (Lawndale Drive), Guilford County

Reference: USACE 404 Individual Permit issued July 24, 2015 and Individual Modification issued November 28, 2017 (USACE Action ID 2005-21386)

NCDWR 401 Water Quality Certification (WQC) issued July 21, 2015 and Modification issued December 8, 2017 (NCDWR ID 2013-0918)

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the additional stream mitigation for the subject project. Based on the USACE 404 Individual permit modification issued on May 28, 2019, the stream impacts are located in CU 03030002 of the Cape Fear River Basin in the Central Piedmont (CP) Eco-Region, and are as follows:

**Table 1 – Additional Impacts (feet / acres)**

Cape Fear 03030002 CP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1 (3:1)	Zone 2 (1.5:1)
Impacts (feet/acres)	0	0	26.0	0	0	0	0	0

\*NOTE: Some of the stream impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

These impacts and associated mitigation needs were not projected by the NCDOT in the 2019 impact data. DMS is currently providing stream, riparian and buffer wetland mitigation for the impacts associated with this project located in cataloging unit 03030002 of the Cape Fear River basin as required by the 404 and 401 permits issued in 2015 and modifications issued in 2017, as shown in the below table (in mitigation credits):



**Table 2 – Current Permitted Impacts and Associated Mitigation Requirements provided by DMS (based on 2015 and 2017 permits) and Revised Anticipated Impacts (based on mitigation request)**

Impact Type	Total Permitted Impacts (feet / acre / sq ft)	Mitigation Provided by DMS per Issued Permits (Credits)	Additional Impact (for approval)	Revised Total Impacts*
Stream	20,771.0	37,438.50	26.0	20,797.0
Riparian Wetland	10.36	20.70	0	10.36
Riparian Buffer	142.0	213.0	0	142.0

\*Some of the additional wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details. DMS will provide the amount of mitigation as determined by the regulatory agencies.

This impact and associated mitigation need were under projected by the NCDOT in the 2019 impact data. DMS will commit to implement sufficient compensatory mitigation credits to offset the additional impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the In-Lieu Fee Instrument dated July 28, 2010. **This mitigation acceptance letter replaces the mitigation acceptance letters that was issued on September 3 and October 7, 2013, November 21, 2014, June 16, 2015, November 18, 2016, November 3, 2017 and April 26, 2019.**

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-707-8420.

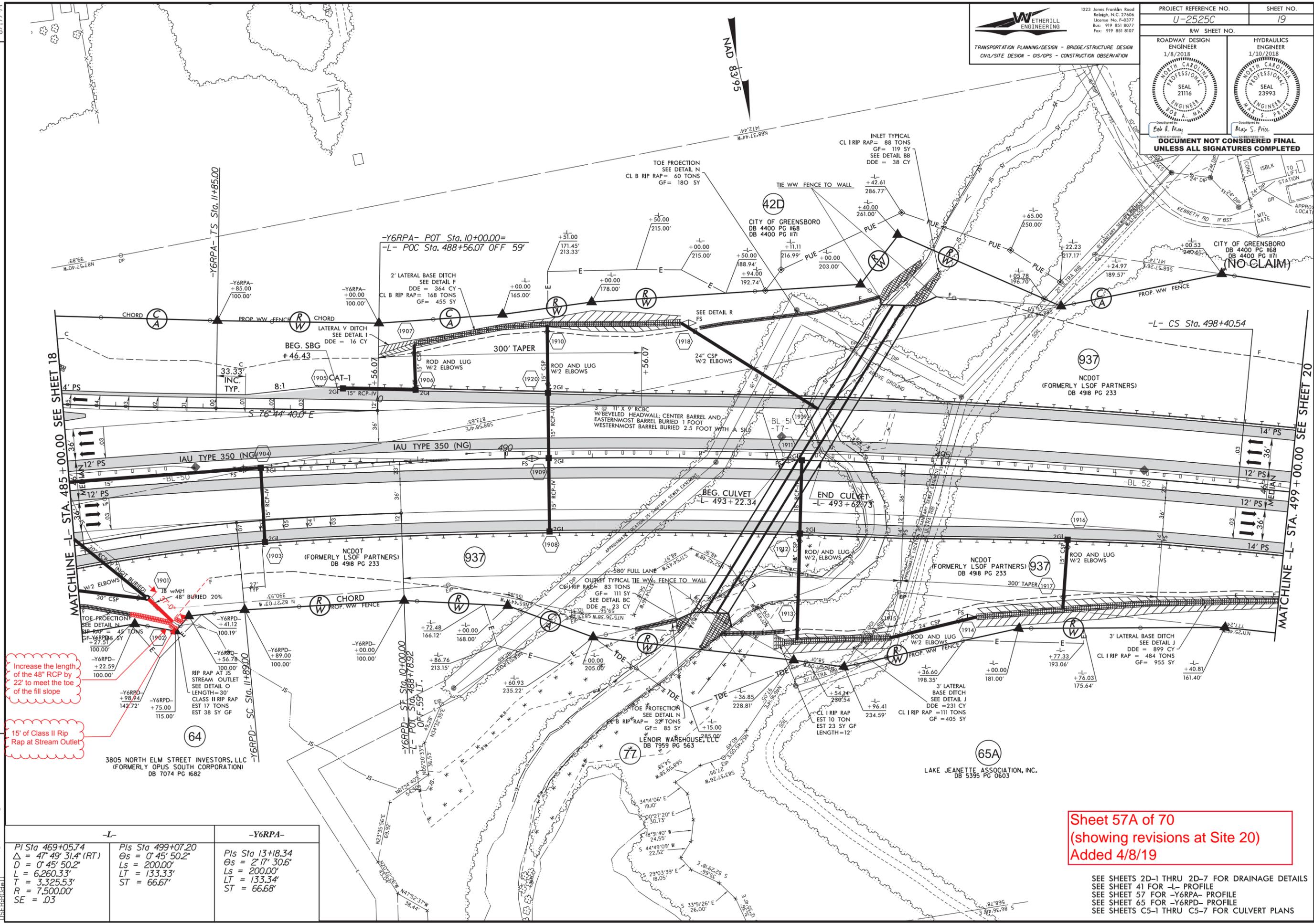
Sincerely,



for James B. Stanfill  
 DMS Asset Management Supervisor

Cc: Mr. David Bailey, USACE – Raleigh Regulatory Field Office  
 Ms. Amy Chapman, NCDWR  
 File: U-2525B/C Additional 2 Revised





Increase the length of the 48" RCP by 22' to meet the toe of the fill slope  
15' of Class II Rip Rap at Stream Outlet

-L-	-Y6RPA-
PI Sta 469+05.74 $\Delta = 47^\circ 49' 31.4" (RT)$ $D = 0' 45' 50.2"$ $L = 6,260.33'$ $T = 3,325.53'$ $R = 7,500.00'$ $SE = .03$	PIs Sta 499+07.20 $\Theta_s = 0' 45' 50.2"$ $L_s = 2' 17' 30.6"$ $L_s = 200.00'$ $LT = 133.33'$ $ST = 66.67'$
PIs Sta 13+18.34 $\Theta_s = 2' 17' 30.6"$ $L_s = 200.00'$ $LT = 133.34'$ $ST = 66.68'$	

Sheet 57A of 70  
(showing revisions at Site 20)  
Added 4/8/19

SEE SHEETS 2D-1 THRU 2D-7 FOR DRAINAGE DETAILS  
SEE SHEET 41 FOR -L- PROFILE  
SEE SHEET 57 FOR -Y6RPA- PROFILE  
SEE SHEET 65 FOR -Y6RPD- PROFILE  
SEE SHEETS C5-1 THRU C5-7 FOR CULVERT PLANS

12/27/2017 12:25:25e...rdy\_psh...19.dgn

**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)
14	415+71/418+52 (L)	Bank Stabilization						< 0.01		71		
15	429+04/431+89 (L)	1@8'x8' RCBC	0.60		0.04	0.03		0.08	0.01	518	88	
15A	429+08/431+25 (L)	Roadway						0.02	< 0.01	169	57	
16	439+20/442+23 (L)	Roadway	< 0.01			0.01			0.01		46	
16	439+20/442+23 (L)	Pond						0.93				
17	463+00/470+25 (L)	72" conc.						0.05	< 0.01	410	51	
17	465+74/466+06 (L)	Bank Stabilization						< 0.01		26		
17A	462+70/463+24	Temp Impacts							< 0.01		56	
18	16+16/21+69 (Y6)	Roadway						0.05	< 0.01	551	15	
18A	14+36/14+72 (Y6)	Roadway						< 0.01	< 0.01	80	10	
19	469+29/473+17 (L)	1@8'x8', 1@8'x8', 2@72" EXT						0.12	0.02	775	150	
19	473+05/473+17 (L)	Bank Stabilization						< 0.01		40		
19	472+77/473+38 (L)	Loss of Function						0.02		183		
19A	32+24/33+21 (Y6)	dual 60" conc.						0.03	0.01	61	21	
19A	32+92/33+13 (Y6)	Bank Stabilization						< 0.01		32		
20	481+94/486+19 (L)	Roadway						0.07	< 0.01	616	18	
20	481+94/486+19 (L)	Bank Stabilization						< 0.01		15		
21	491+15/494+96 (L)	3@11'x11' RCBC	0.11		0.05	0.10		0.19	0.04	632	78	
22	505+06/510+10 (L)	Roadway	0.02					0.08	< 0.01	745	3	
22	505+06/505+11 (L)	Bank Stabilization						< 0.01		10		
23	527+89/531+24 (L)	Roadway	0.02			0.01		0.04	< 0.01	424	47	
23	530+94/531+11 (L)	Bank Stabilization						< 0.01		19		
<b>Total impacts from previously permitted sites (1,2,3,11, &amp; 12)</b>			<b>0.51</b>		<b>0.04</b>	<b>0.06</b>		<b>0.12</b>	<b>0.01</b>	<b>777</b>	<b>30</b>	
Total new impacts			1.94		0.15	0.25		3.02	0.17	12219	956	
<b>TOTAL IMPACTS FOR U-2525C*:</b>			<b>2.45</b>		<b>0.20</b>	<b>0.32</b>		<b>3.14</b>	<b>0.18</b>	<b>12996</b>	<b>986</b>	

\*Rounded totals are sum of actual impacts

Totals on this sheet include the summed amounts from previous sheet

NOTES:

Actual wetland impact numbers			
Previously Permitted	0.508	0.044	0.062
New Impacts	1.939	0.154	0.254
<b>TOTAL IMPACTS</b>	<b>2.447</b>	<b>0.198</b>	<b>0.316</b>

Revised Sheet 70 of 70  
April 8, 2019

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
10/23/2017  
Guilford County  
U-2525C