



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

December 10, 2019

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

Attn: Rob Ridings  
NCDOT Project Coordinator

Subject: **Modification Request for Section 401 Water Quality Certification and Neuse Riparian Buffer Authorization** for Interstate 40 Widening and Improvements from I-440/US 64 (Exit 301) to just north of SR 1525 (Cornwallis Road), including improvements to NC 42 and SR 1010 (Cleveland Road) in Wake and Johnston Counties, Federal Aid Project No. IMNHF-040-4(139)301; TIPS I-5111 and I-4739, Division 5; Debit \$570 from WBS Element 42346.3.1.

Dear Mr. Ridings,

The North Carolina Department of Transportation (NCDOT), applied for permits for the subject project on May 7, 2019. The North Carolina Division of Water Resources issued 401 Water Quality Certification for the project on July 10, 2019 (NCDWR Project No. 20190593).

It has come to our attention that several proposed riparian buffer impact areas needed revisions. These areas were visited in the field by staff from NCDOT, RK&K, and S.T. Wooten on December 2, 2019. This matter has already been brought to your attention by NCDOT Division 5 staff.

Attached are revised buffer drawings depicting the affected areas. These revisions reflect additional impacts to mitigable Buffer Zone 1 areas following Division 5 staff field reviewing of the top of banks and edge of transportation facility areas at each location. The following sheets have been modified:

- Buffer drawing 1 of 52: titlesheet
- Buffer drawing 23 of 52: plansheet 31 reflecting revisions to Sites 23A and 23B
- Buffer drawing 24 of 52: plansheet 32 reflecting a revision to Sites 26A
- Buffer drawing 47 of 52: summary table
- Buffer drawing 51 of 52: summary table

The following impacts were revised:

- Site 23A: previous mitigable zone 1 impact total: 8,260 sqft; new mitigable zone 1 impact total: 10,192 sqft (difference of 1932 sqft)
- Site 23B: previous mitigable zone 1 impact total: 635 sqft; new mitigable zone 1 impact total: 1,037 sqft (difference of 402 sqft)

**MAILING ADDRESS:**  
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ENVIRONMENTAL ANALYSIS UNIT  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-707-6000  
FAX: 919-212-5785  
WEBSITE: [NCDOT.GOV](http://NCDOT.GOV)

**LOCATION:**  
CENTURY CENTER, BUILDING A  
1000 BIRCH RIDGE DRIVE  
RALEIGH NC, 27610-4328

- Site 26A: previous mitigable zone 1 impact total: 233 sqft; new mitigable zone 1 impact total: 422 sqft (difference of 189 sqft)
- Overall total project previous mitigable zone 1 impact total: 299,329 sqft; new mitigable zone 1 impact total: 301,854 sqft (difference of 2,525 sqft)

Please note that due to rounding of the impacts at these sites as well as the others, the overall increase difference for these sites is 2,523 sqft, however the table shows 2,525 sqft.

These new drawings have revision dates of 12/4/2019.

**Compensatory Mitigation**

NCDOT has requested the appropriate additional mitigation from the N.C. Division of Mitigation Services. The revised acceptance letter will be provided once it is received by the Department.

**REGULATORY APPROVALS**

**Section 401:** We are requesting modification of the Section 401 Individual Water Quality Certification and Neuse Riparian Buffer Authorization from NCDWR. We are providing this modification request to NCDWR, for their approval. Authorization to debit the \$570.00 Permit Modification Fee from WBS 42346.3.1 is hereby given.

A copy of this request and its distribution list will be posted at <https://xfer.services.ncdot.gov/pdea/PermApps/>.

If you have any questions or need additional information, please contact Gordon Cashin at [gcashin@ncdot.gov](mailto:gcashin@ncdot.gov) or 919-707-6107.

Sincerely,

DocuSigned by:

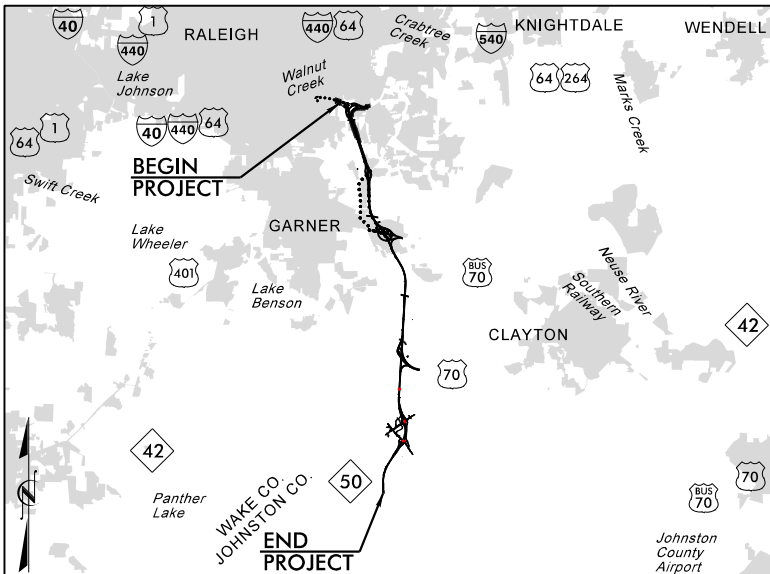
*Mack C. Rivenbark III*

AAAD1248B309416...

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

09/08/99

See Sheet 1-B For Plan Sheet Symbols



VICINITY MAP (NTS)

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

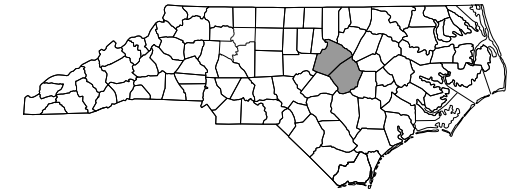
# WAKE & JOHNSTON COUNTIES

**LOCATION: I-40 FROM I-440 /US 64 (EXIT 301) TO JUST NORTH OF SR 1525 (CORNWALLIS ROAD), INCLUDING IMPROVEMENTS TO NC 42 AND SR 1010 (CLEVELAND ROAD).**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, WIDENING, RESURFACING & STRUCTURES**

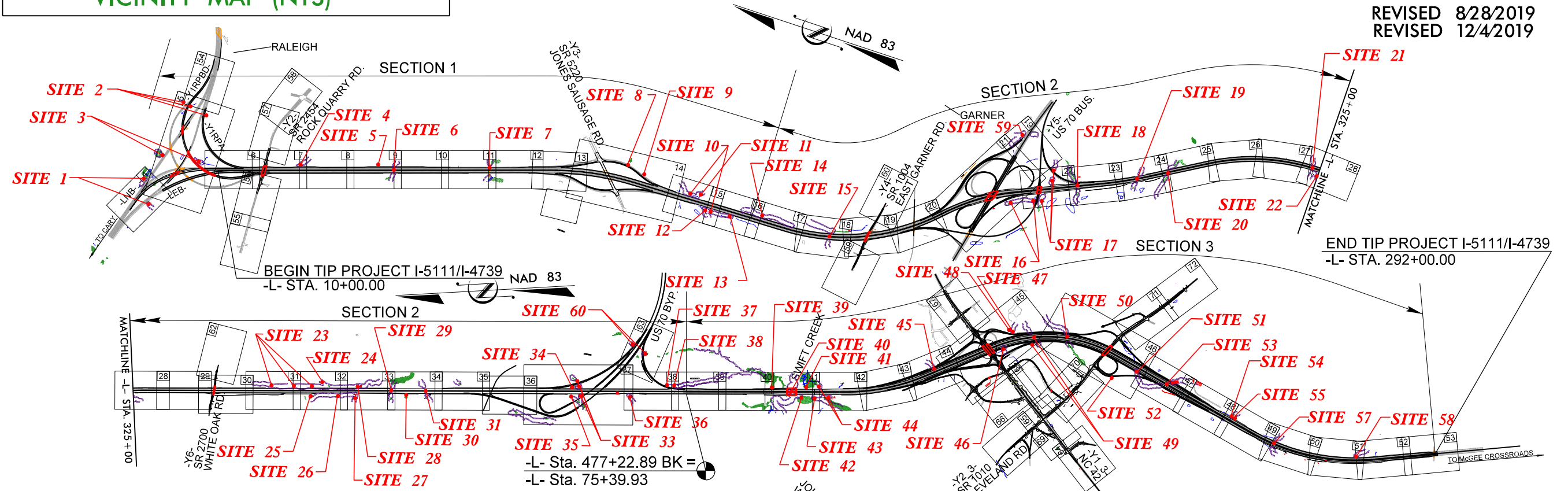
## BUFFER IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5111 /I-4739	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42346.3.1	IMNHF-040-4(139)301	PE	



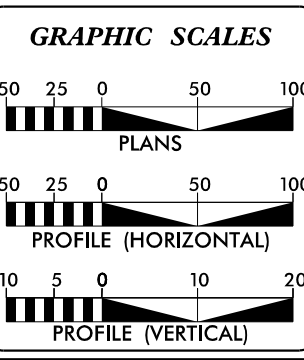
BUFFER DRAWING  
SHEET 1 OF 52

REVISED 8/28/2019  
REVISED 12/4/2019



- NOTES:
1. A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITIES OF RALEIGH & GARNER.
  2. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III MODIFIED.
  3. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**DESIGN DATA**

ADT 2018 =	106,200
ADT 2040 =	137,200
DHV =	65%
D =	9%
T =	9% *
V =	70 MPH & 75 MPH **

FUNC CLASS:  
URBAN INTERSTATE  
\* (TTST 5% + DUAL 4%)  
\*\* DESIGN SPEED CHANGES AT US 70 BUS

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT I-5111 /I-4739.....	12.950 miles
LENGTH STRUCTURE TIP PROJECT I-5111 /I-4739.....	0.094 miles
TOTAL LENGTH OF PROJECT I-5111 /I-4739.....	13.044 miles

**NCDOT CONTACT**

*K. Zak Hamidi, P.E.*  
PROJECT ENGINEER - DESIGN-BUILD UNIT

**PLANS PREPARED BY:**

**RK&K** RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE, SUITE 350  
RALEIGH, NORTH CAROLINA 27609  
NC LICENSE NO. F-0112

FOR NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

2018 STANDARD SPECIFICATIONS

LETTING DATE:  
JUNE 19, 2018

**S.T. WOOTE**

Brandon J. McInnis, P.E.  
PROJECT ENGINEER

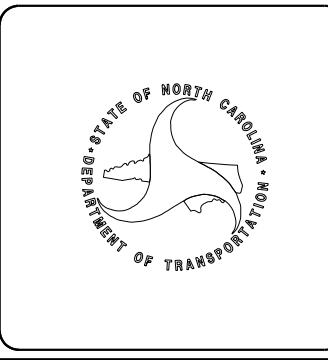
Mary E. Yahl, P.E.  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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



TIP PROJECT: I-5111 /I-4739

CONTRACT: C204134

12/4/2019 R:\Hydraulics\PERMITS\_Environmental\Drawings\4C\5111\_I-4739\_Hyd\_buf\_t.sh.dgn

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12/4/2018  
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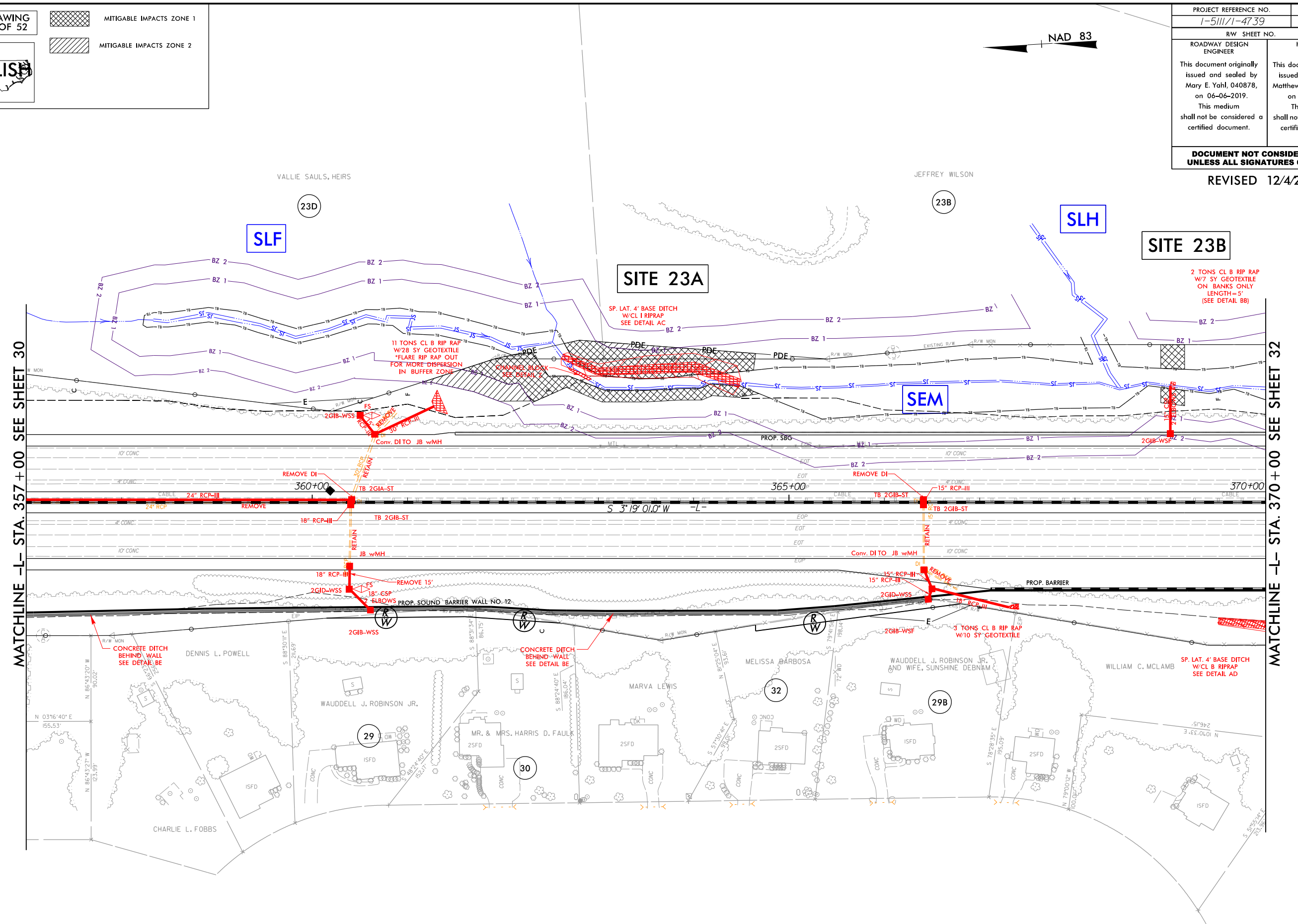
**BUFFER DRAWING SHEET 23 OF 52**

**ENGLISH**

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

PROJECT REFERENCE NO. 1-5111/1-4739	SHEET NO. 31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
This document originally issued and sealed by Mary E. Yahl, 040878, on 06-06-2019. This medium shall not be considered a certified document.	This document originally issued and sealed by Matthew L. Cook, 27434, on 06-06-2019. This medium shall not be considered a certified document.
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MATCHLINE -L- STA. 357 + 00 SEE SHEET 30

MATCHLINE -L- STA. 370 + 00 SEE SHEET 32

SNK

**RK&K**

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8/17/99

**BUFFER DRAWING SHEET 24 OF 52**

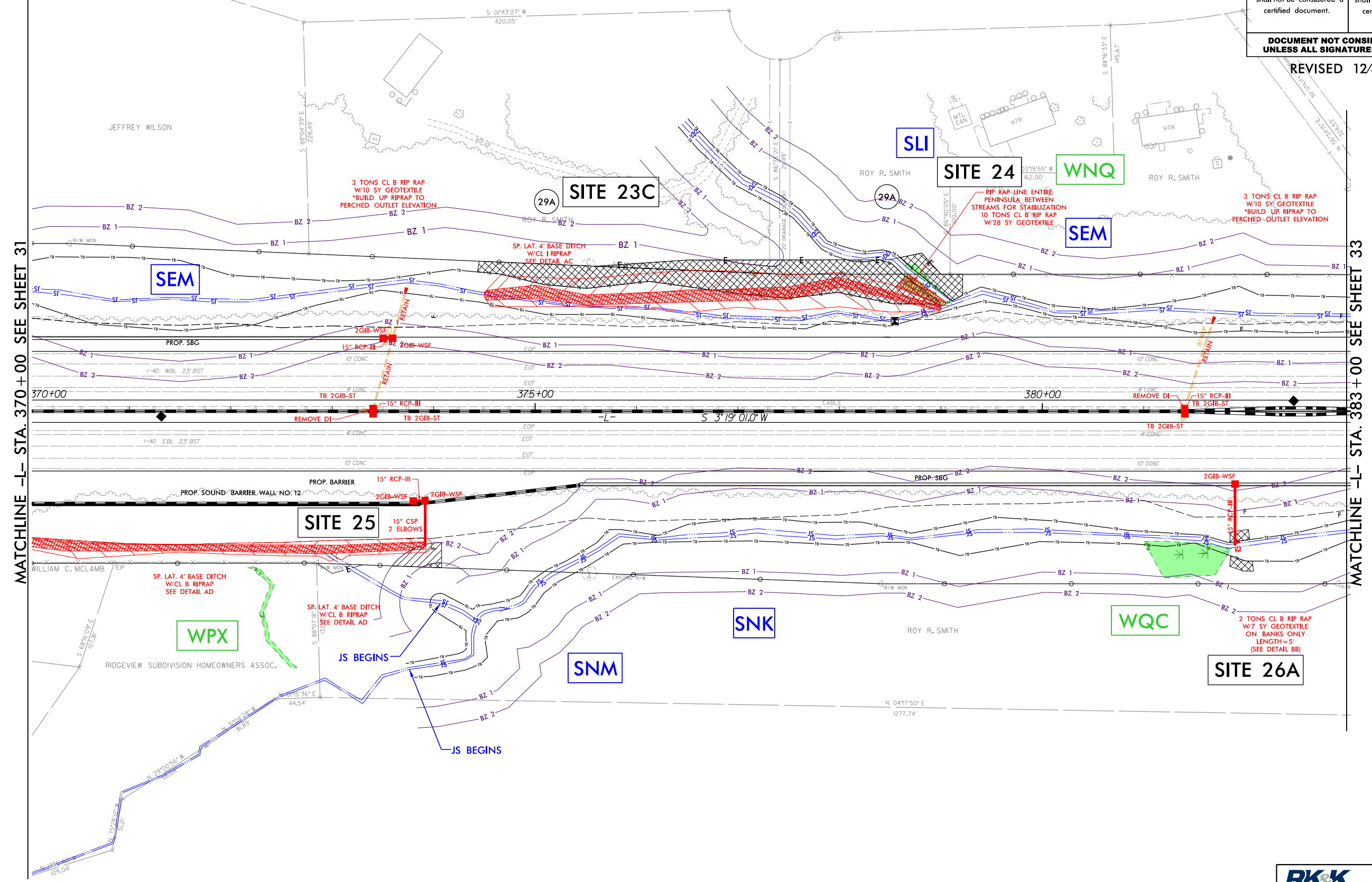
**ENGLISH**

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

NAD 83

PROJECT REFERENCE NO. 1-5111/1-4739	SHEET NO. 32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER This document originally issued and sealed by Mary E. Yahl, 040878, on 06-06-2019. This medium shall not be considered a certified document.	HYDRAULICS ENGINEER This document originally issued and sealed by Matthew L. Cook, 27434, on 06-06-2019. This medium shall not be considered a certified document.
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MATCHLINE -L- STA. 370+00 SEE SHEET 31

MATCHLINE -L- STA. 383+00 SEE SHEET 33

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## RIPARIAN BUFFER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )		
14A	-L- 168+89-169+89 LT	BANK STABILIZATION - SRM			X				1658	946	2604		
14B	-L- 172+50-172+88 LT	BANK STABILIZATION - SRM			X				1824	1680	3504		
14C	-L- 175+81-176+98 LT	BANK STABILIZATION - SRM			X				2795	277	3071		
15	-L- 186+18-188+55 LT	ROADWAY FILL - SRJ			X				0	90	90		
16A	-Y5RPD- 22+19-22+50 RT	EXIST. 24" CMP PLUG			X				2032	2231	4263		
16B	-Y5RPD- 24+79 RT	EXIST. 15" CMP PLUG			X				613	306	918		
16C	-Y5RPC- 53+20 LT	60" RCP - SCF, WQF	X			1489	0	1489					
17	-Y5RPC- 54+38-55+47 RT, -L- 250+27 LT, -Y5RPA- 21+91-23+05 RT	BANK STABILIZATION - SOE, WQV	X						12126	3903	16028		
18	-L- 256+39-257+51 LT & RT	DITCH, 66" WSP- SOI, WSD	X			6922	3626	10548					
19	-L- 272+67-275+51 LT & RT	DITCH, 66" WSP - SNF	X			8722	5049	13771					
20	-L- 281+93-284+50 LT & RT	CHANNEL CHANGE - SNH, WQE, WRX	X			3953	956	4909					
21	-L- 322+40-323+33 LT & RT	CHANNEL CHANGE, 72" RCP, SNY	X			8579	4452	13031					
22	-L- 323+52-325+32 RT	CHANNEL CHANGE - SOC			X				3438	1054	4493		
23A	-L- 361+15-364+65 LT	CHANNEL CHANGE - SLF / SEM			X				10192	2082	12274		
23B	-L- 368+90-369+15 LT	BANK STABILIZATION - SEM			X				1037	0	1037		
23C	-L- 374+40-378+99 LT	CHANNEL CHANGE - SEM			X				11509	228	11738		
24	-L- 378+63-379+21 LT	BANK STABILIZATION - SLI			X				1108	0	1108		
25	-L- 373+59-374+08 RT	ROADWAY FILL/ DITCH - SNM			X				61	775	836		
26A	-L- 381+90 RT	BANK STABILIZATION - SNK			X				422	0	422		
26B	-L- 385+01-385+81 RT	ROADWAY FILL - SNK			X				1025	0	1025		
	-L- 385+80-386+06 RT	BANK STABILIZATION - SNK			X				712	0	712		
27	-L- 386+06-386+88 RT	BANK STABILIZATION - SNO	X			1765	1079	2844					
28	-L- 387+14-387+47 LT	60" WSP - SEM			X				1116	0	1116		
<b>TOTALS*:</b>						<b>31431</b>	<b>15161</b>	<b>46592</b>	<b>51667</b>	<b>13572</b>	<b>65239</b>	<b>0</b>	<b>0</b>

NOTES:

REVISED 12/4/2019

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
APRIL 2019  
WAKE / JOHNSTON  
I-5111 / I-4739  
42346.3.1

SHEET 47 OF 52

## RIPARIAN BUFFER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )		
39	ONLY IN PERMIT SET												
40	-L- 99+00-107+44 LT & RT	BRIDGE		X		14449	7030	21479	1104	2993	4097		
41	ONLY IN PERMIT SET												
42	-L- 106+42-107+44 RT	ROADWAY FILL - SDN, WEN			X				7169	5126	12295		
43	-L- 109+63-114+04 RT	ROADWAY FILL - SEO			X				7471	4557	12028		
44	-L- 110+99-115+29 LT & RT	60" RCP, DITCH - SEQ, WEO(1)	X						12849	6061	18910		
45	-L- 143+25-145+12 LT	48" CSP - SEU	X						11384	6539	17923		
46	-L- 164+25-164+78 RT	30" CSP / 36" RCP - SEA, WOE	X						10987	7345	18332		
47	-Y1RPA- 16+15-17+72 RT	54" CSP - SLV	X			5350	2012	7362					
48	ONLY IN PERMIT SET												
49	-L- 170+95-175+40 LT & RT	66" WSP / 66" RCP - SLU, WC, WOB	X						20163	9924	30087		
50	-L- 178+00-184+97 LT&RT	60" CSP, CHANNEL CHANGE - SLS,WOA	X						38684	25634	64318		
51	-L- 199+51-205+31	ROADWAY FILL, 66" RCP - SLR, WNZ	X						17316	9930	27247		
52	ONLY IN PERMIT SET												
53	-L- 209+51-217+29 LT & RT	54" RCP / 66" RCP - MILL BRANCH	X						27804	17778	45582		
54	-L- 232+37-234+37 LT	54" WSP - SJ, WI, WJ	X			8694	5213	13907					
55	ONLY IN PERMIT SET												
56	ONLY IN PERMIT SET												
57	-L- 246+11-248+25 LT & RT	60" WSP - SDD, WFF	X						15680	9394	25074		
58	-L- 269+75-270+63 LT	36" WSP - SQ	X						10972	7749	18721		
<b>TOTALS*:</b>						<b>28492</b>	<b>14255</b>	<b>42747</b>	<b>181583</b>	<b>113030</b>	<b>294613</b>	<b>0</b>	<b>0</b>

<b>PROJECT TOTALS*:</b>						<b>116816</b>	<b>55819</b>	<b>172635</b>	<b>301854</b>	<b>166946</b>	<b>468800</b>	<b>0</b>	<b>0</b>
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NOTES:

REVISED 8/28/2019  
12/4/2019

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
APRIL 2019  
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