



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

October 01, 2020

Regulatory Division

SUBJECT: DA# SAW-2009-00556; I-40; TIPs I-5111/I-4739

North Carolina Department of Transportation (NCDOT)
Environmental Analysis Unit
Attn: Philip S. Harris, PhD., P.E., C.P.M.
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Dr. Harris:

Reference the Department of the Army permit issued to the North Carolina Department of Transportation (NCDOT) on December 23, 2019, and subsequently modified on February 11, 2020, and June 11, 2020. The permit authorizes the discharge of fill material into waters of the United States, for construction of the I-40 improvements, TIPs I-4111 and I-4739, from I-440/US 64 in Raleigh, to SR 1010 (Cleveland Road) in Clayton, Wake and Johnston Counties, North Carolina.

Also, please reference your August 31, 2020 letter, submitting a revised modification request for the permit, to authorize changing a 0.04-acre portion of the permanent wetland impact at Site 44, to temporary impact, due to a construction design change that minimizes wetland impacts. In addition, total permanent wetland fill increases by 0.04 acre to 0.78 acre, and total temporary wetland impact increases by 0.07 acre to 0.24 acre, due to an inadvertent under-reporting of wetland impacts for Site 44, and a change from permanent excavation to temporary excavation. The proposed design change and revised wetland impact totals are shown on the submitted revised permit drawings 7, 91, 92, 93, 93A, 124, and 125, revised in July or August 2020, attached.

We have reviewed the requested design modification and determined that it is appropriate and reasonable. We have also determined that no public notice is required for these modifications, since revised impacts are minimization of the previously approved impacts. Therefore, the permit is hereby modified to include the change requested in the August 31, 2020 revision submittals. The revised total impacts are as follows: permanent impacts to 0.89 acre of wetlands, 7,665 linear feet of stream, and 0.58 acre of ponds, and temporary impacts to .017 acre of wetlands, and 1,582 linear

feet of stream. There is no net change to total permanent wetland impacts; therefore, there is no change in the required wetland mitigation.

Special Condition 1 and 14 is modified as follows:

1. Work Limits: All work authorized by this permit shall be performed in strict compliance with the original and revised permit drawings (original submitted on May 7, 2019, and mod drawings last revised on December 12, 2019, May 28, 2020, July 2020, and August 2020), which are a part of this permit. The Permittee shall ensure that the construction design plans for this project do not deviate from the permit plans attached to this authorization. Any modification to the attached permit plans must be approved by the U.S. Army Corps of Engineers (Corps) prior to any active construction in waters or wetlands.

All other conditions of the permit, including the permit expiration date of December 31, 2024, remain applicable.

Should you have any questions, please call Mr. Eric Alsmeyer at (919) 554-4884, extension 23.

FOR THE COMMANDER

SMITH.RONNIE.D
ALE.1281725242

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Date: 2020.10.01 09:28:46 -04'00'

Ronnie Smith
Assistant Regulatory Chief
Wilmington District

Enclosures

Copies Furnished (by email):

Ms. Amy Chapman
Division of Water Quality
North Carolina Department of
Environment and Natural Resources
1650 Mail Service Center
Raleigh, NC 27699-1650

Mr. Clarence Coleman
Federal Highway Administration
310 New Bern Ave., Rm 410
Raleigh, North Carolina 27601-1442

Mr. Chris Rivenbark
North Carolina Department of Transportation
Division of Highways
1598 Mail Service Center
Raleigh, North Carolina 27699-1598



NORTH CAROLINA
Environmental Quality

ROY COOPER

Governor

MICHAEL S. REGAN

Secretary

S. DANIEL SMITH

Director

September 16, 2020

Mr. Philip S. Harris, III, P.E., CPM
Natural Environment Section Head
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: MODIFICATION of 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act (NEUSE BUFFER RULES, with ADDITIONAL CONDITIONS for Proposed widening of I-40 from I-440 to SR 1525 plus improvements to NC 42 and SR 1010 in Wake and Johnston Counties; Federal Aid Project No. IMNHF-040-4(139)301; State Project No. 42346.3.1; TIP Nos. I-5111 & I-4739. NCDWR Project No. 20190593 ver 5

Dear Mr. Harris:

Attached hereto is a copy of Certification No. 4196 issued to The North Carolina Department of Transportation (NCDOT) originally dated July 10, 2019 and modified September 4, 2019, January 22, 2020, June 3, 2020 and September 16, 2020.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

DocuSigned by:

Amy Chapman

PC9886312BCD474...
S. Daniel Smith, Director
Division of Water Resources

Attachments

Electronic copy only distribution:

Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Heather Montague, Division 5 Environmental Officer
Chris Rivenbark, NC Department of Transportation
Nikki Thomson, NCDOT Division 5
File Copy



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

MODIFICATION of 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and NEUSE BUFFER RULES, with ADDITIONAL CONDITIONS

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500 and 15A NCAC 2B.0233. This certification authorizes the NCDOT to impact 1.15 acres of jurisdictional wetlands, 9248 linear feet of jurisdictional streams and 643971 square feet of protected riparian buffers in Wake & Johnston Counties. The project shall be constructed pursuant to the modification request dated August 31, 2020. The authorized Revised impacts are as described below:

Site 44 Revised Wetland Impacts in the Neuse River Basin

Excavation Impact: Reduced 0.04 acres

Temporary Impact: Increase 0.04 acres

Revised Neuse Riparian Buffer Impacts SITE 17

Site 17	Zone 1 Impact (sq ft)	<i>minus</i> Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)		Zone 2 Impact (sq ft)	<i>minus</i> Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
OLD Permit	12126	37	12089	36267		3903	0	3903	5854
NEW Mod	12732	37	12695	38085		5068	0	5068	7602

Zone 1 Mitigation: $38085 - 36267 = 1818$ sqft increase

Zone 2 Mitigation: $7602 - 5854 = 1748$ sqft increase

Revised Neuse Riparian Buffer Impacts SITE 44

Site 44	Zone 1 Impact (sq ft)	<i>minus</i> Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)		Zone 2 Impact (sq ft)	<i>minus</i> Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
OLD Permit	12849	3043	9806	29418		6061	871	5190	7785
NEW Mod	12849	3110	9739	29217		6826	2145	4681	7021

Zone 1 Mitigation: 29418-29217 = +201 sqft surplus

Zone 2 Mitigation: 7785-7021 = +764 sqft surplus

Neuse Riparian Buffer Mitigation Summary for this Modification:

Zone 1: 1818 increase – 201 surplus = 1617 sqft increase

Zone 2: 1748 increase - 764 surplus = 984 sqft increase

The application provides adequate assurance that the discharge of fill material into the waters of 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 Sections 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.

This approval is only valid for the purpose and design that you submitted in your modification dated May 28, 2020. Should your project change, you are required to notify the NCDWR 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 the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). Additional buffer impacts may require compensatory mitigation as described in 15A NCAC 2B.0233. 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 Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition of Certification:

1. Compensatory mitigation for impacts riparian buffers in the Neuse Basin shall be required. For this modification the Zone 1 buffer mitigation requirement increased 1617 square feet, and the Zone 2 buffer mitigation requirement increased 984 square feet. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Division of Mitigation Services (DMS). Mitigation for unavoidable impacts to Neuse Riparian Buffers shall be provided in the Neuse River Basin and done in accordance with 15A NCAC 2B .0295. The DMS has indicated in a letter dated September 11, 2020 that they will assume responsibility for satisfying the additional compensatory mitigation requirements for the above-referenced project, in accordance with DMS's Mitigation Banking Instrument signed June 14, 2016.

2. All conditions in previous versions of this Certification dated July 10, 2019, September 4, 2019, January 22, 2020 and June 3, 2020 still apply.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Bill F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This the 16th day of September 2020

DIVISION OF WATER RESOURCES

DocuSigned by:

9C9886312DCD474...

S. Daniel Smith, Director

WQC No. 4196



NORTH CAROLINA
Environmental Quality

ROY COOPER

Governor

MICHAEL S. REGAN

Secretary

S. DANIEL SMITH

Director

NCDWR Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

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

Applicant's Certification

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

Signature: _____ Date: _____

Agent's Certification

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

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

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

Signature _____ Registration No. _____
Date _____

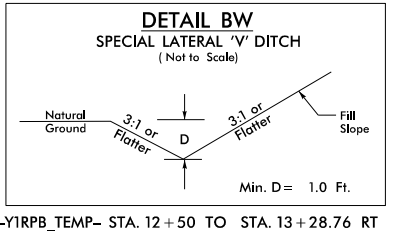
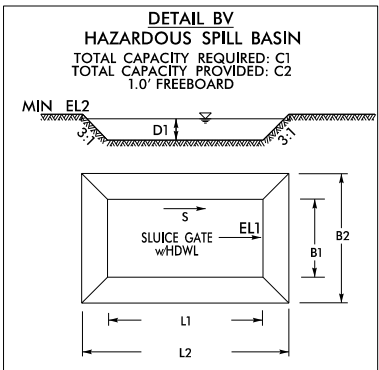
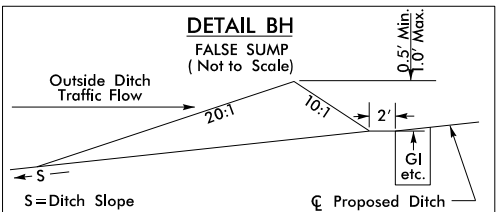
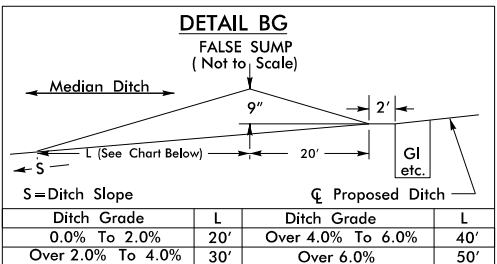
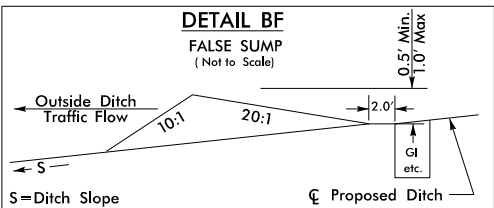
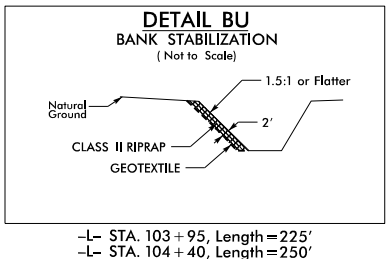
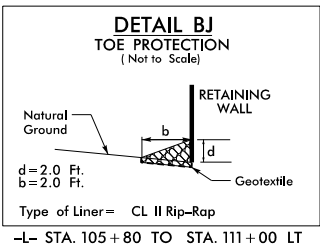
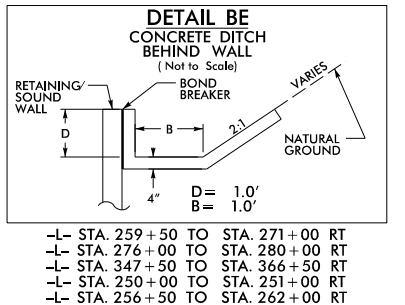
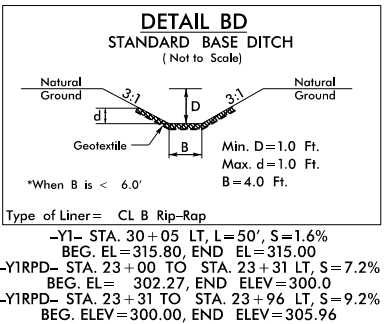
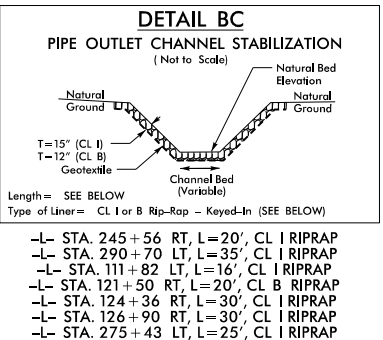
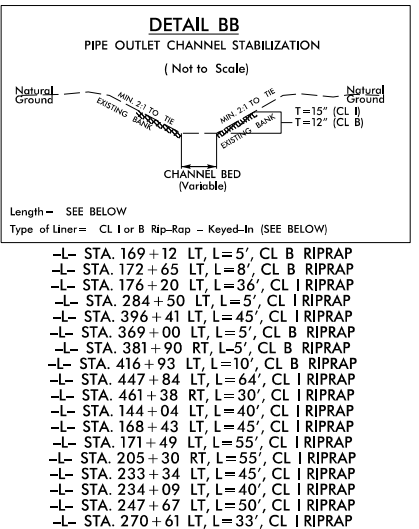
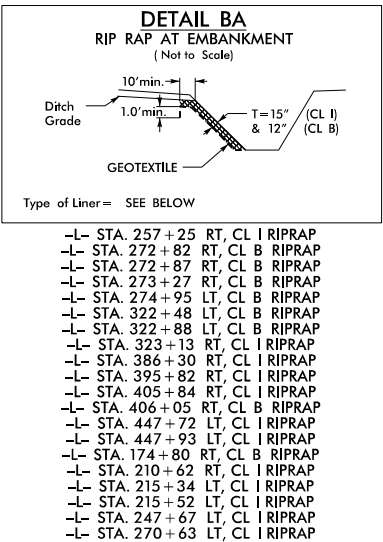
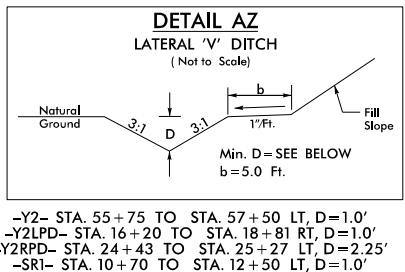
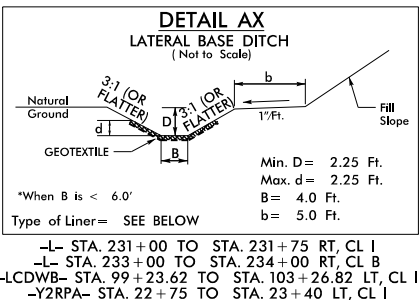
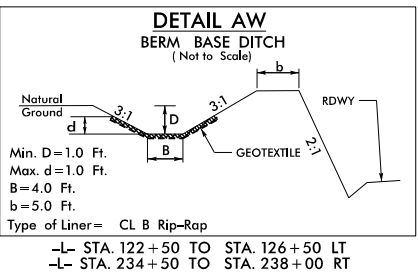
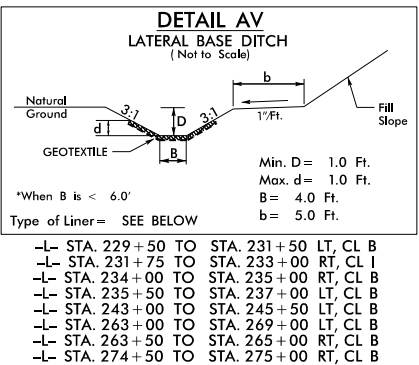
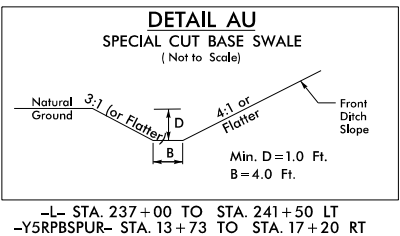
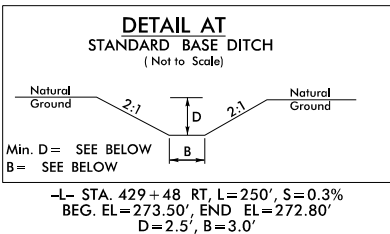
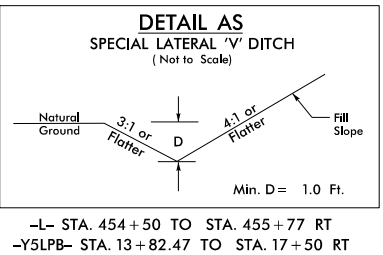
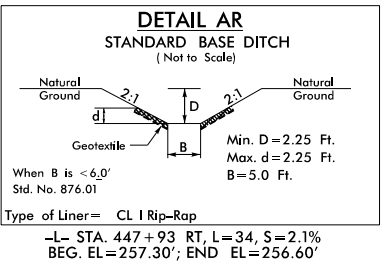


North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

PROJECT REFERENCE NO.	SHEET NO.
1-5111/1-4739	2D-6
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 7 OF 125

REVISED 08/1/2020



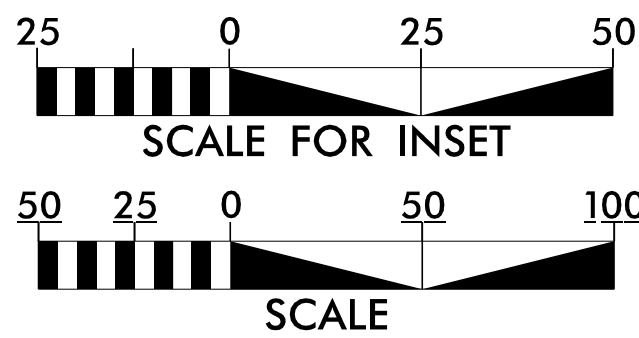
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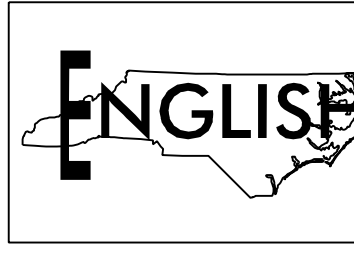
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8/17/99



PERMIT DRAWING
SHEET 91 OF 125

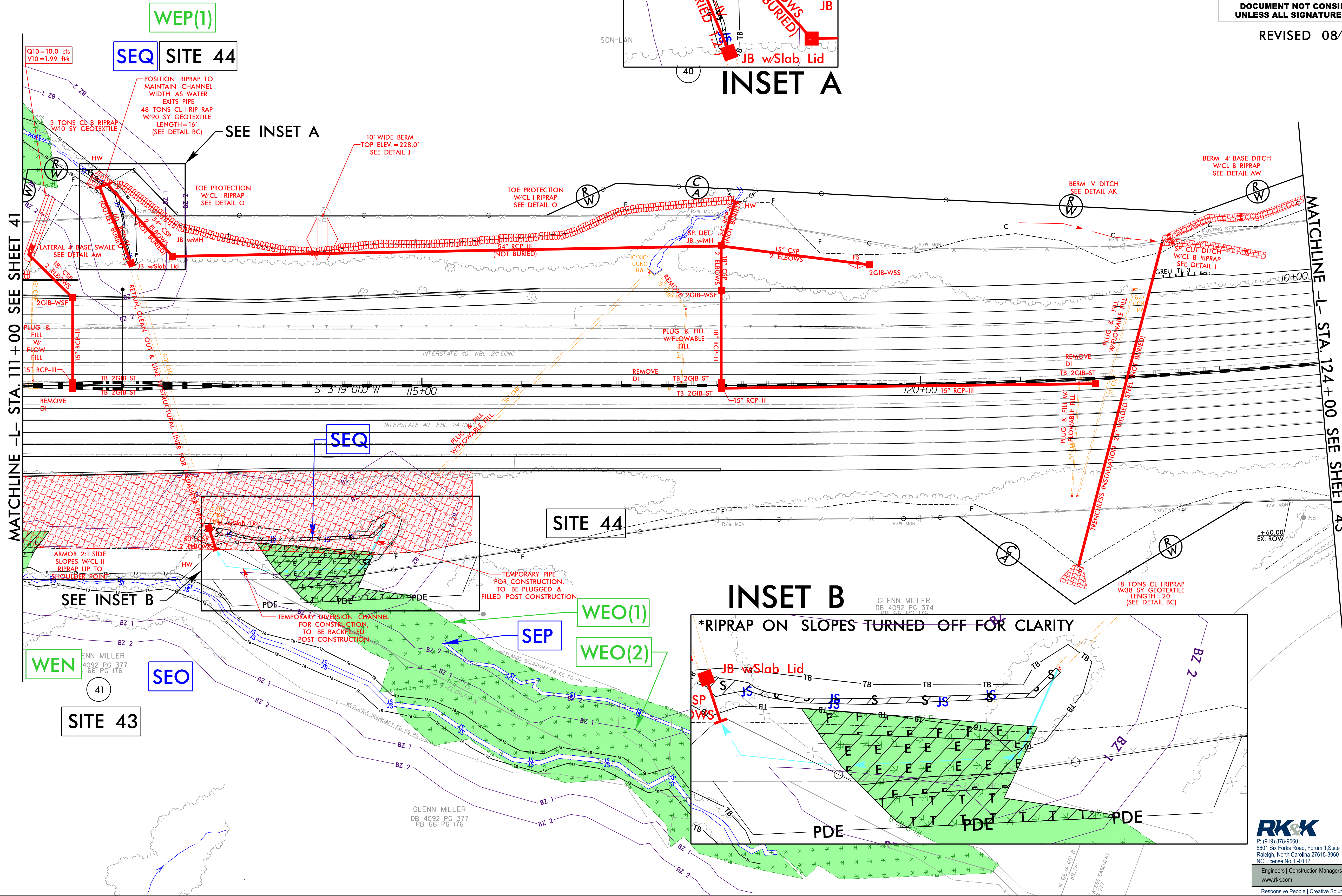


- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

NAD 83

PROJECT REFERENCE NO.	SHEET NO.
1-5111/1-4739	42
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISED 08/11/2020

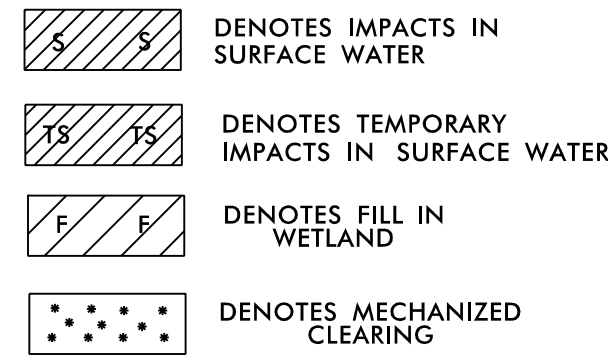


P: (919) 878-9560
8601 Six Forks Road, Suite 100
Raleigh, North Carolina 27615-3960
NC License No. F-0112

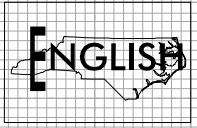
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5/14/99
8/1/2020
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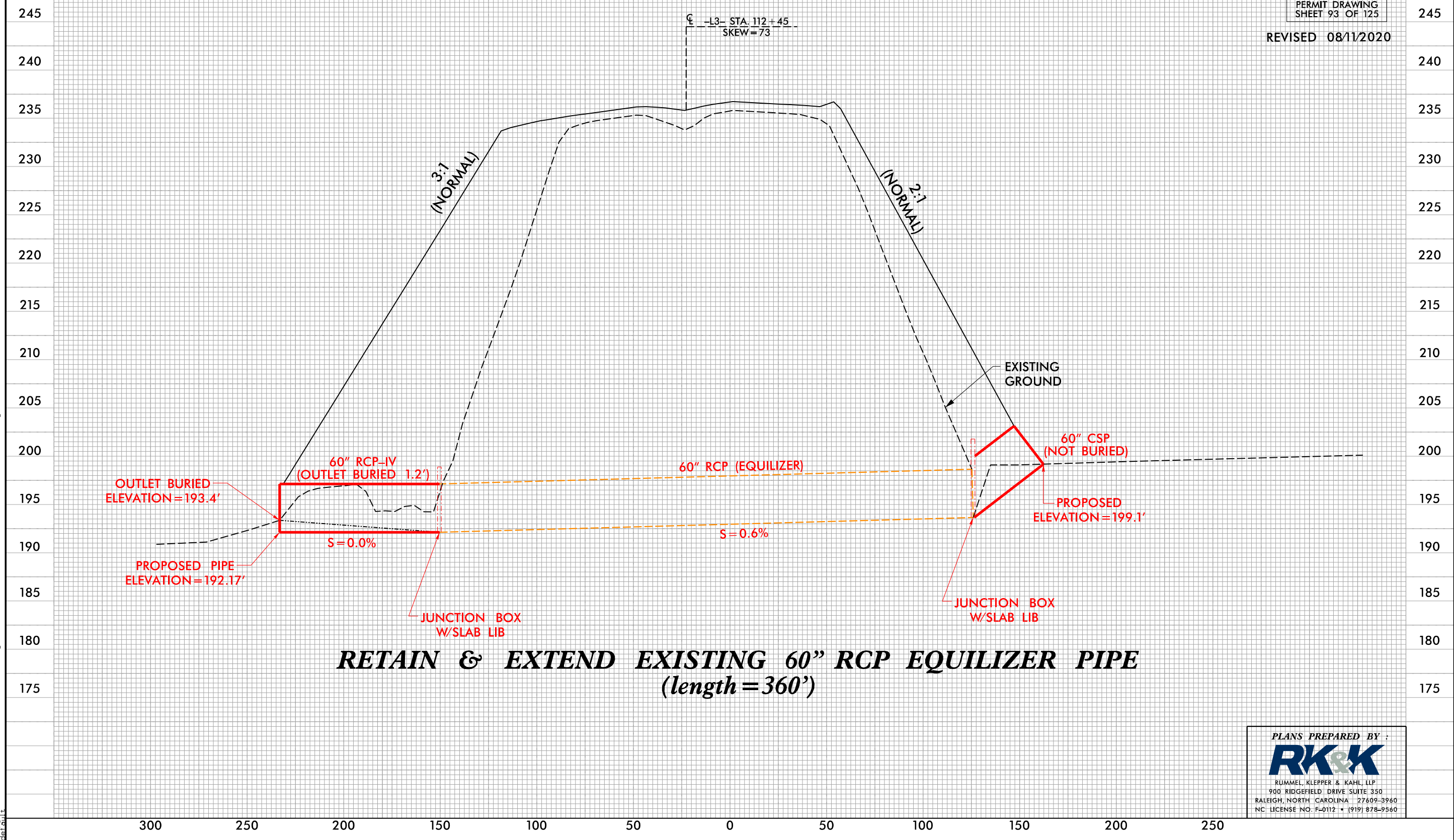


PROJECT REFERENCE NO.		SHEET NO.
1-5111/1-4739		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	

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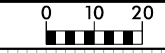
PERMIT DRAWING
SHEET 93 OF 125

REVISED 08/11/2020



PLANS PREPARED BY :
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO: F-0112 • (919) 878-9560

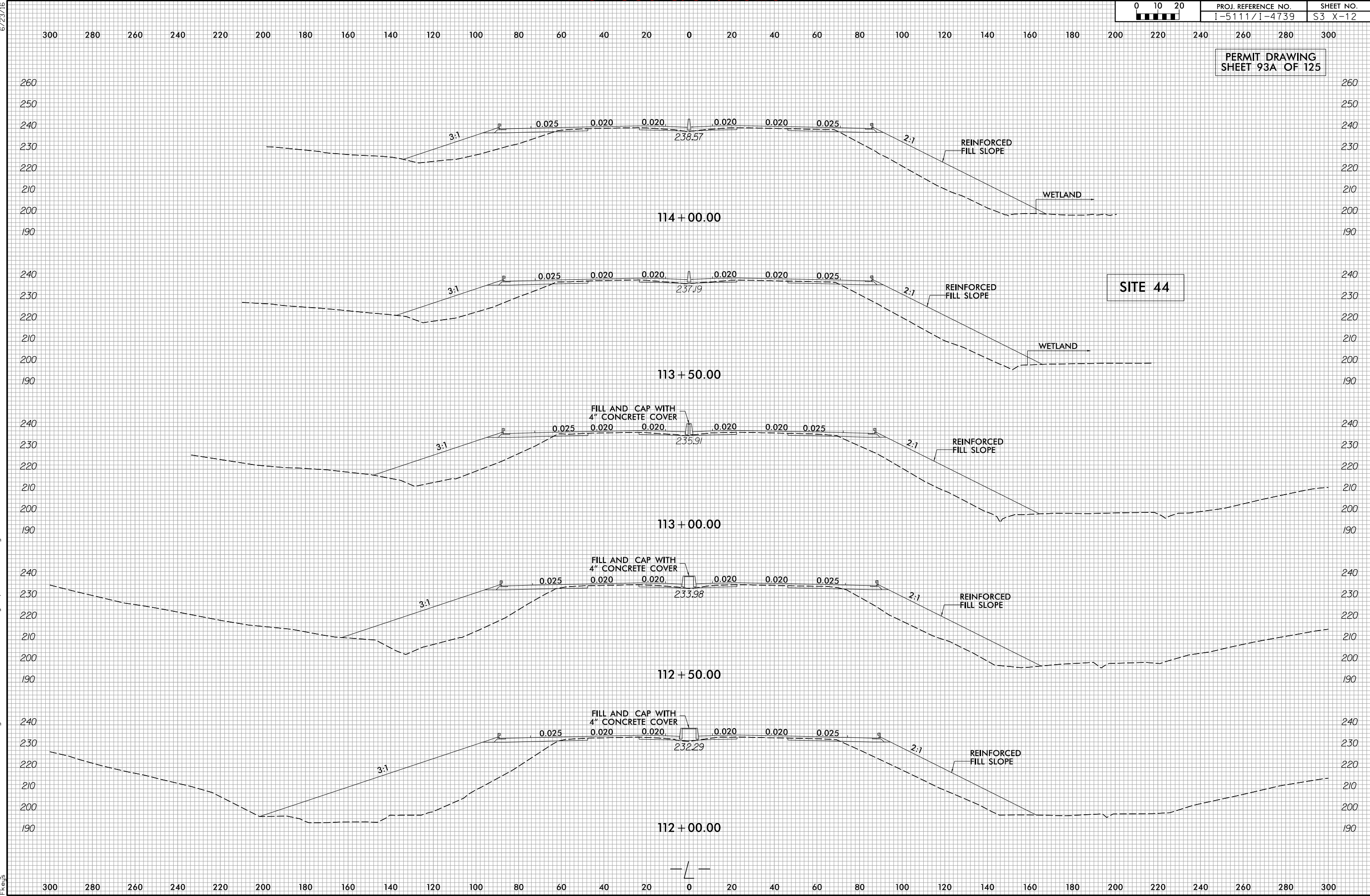
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PROJ. REFERENCE NO.	SHEET NO.
I-5111/1-4739	S3 X-12

PERMIT DRAWING
SHEET 93A OF 125

8/1/2020
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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)
39A	-L- 98+30-99+62 LT	ROADWAY FILL - WEM	0.07			0.02						
39B	-L- 101+93-102+66 LT	ROADWAY FILL - WEM	0.01			0.01						
40	-L- 103+59-104+95 LT & RT	BANK STABILIZATION - SDG						0.14	< 0.01	334	10	
41	-L- 107+69-109+35 LT	ROADWAY FILL - WEP(1)				0.02						
42	-L- 104+95-108+09 RT	ROADWAY FILL - SDN, WEN	0.29	0.01		0.05		0.02		200		
43	-L- 110+24-110+66 RT	ROADWAY FILL - SEO							< 0.01		40	
44	-L- 111+78-114+64 LT & RT	60" RCP, ROADWAY FILL- SEQ, WEO(1)	0.04	0.03	0.04**			0.02		269		
	-L- 111+58-111+85 LT	BANK STABILIZATION - SEQ						< 0.01	< 0.01	16	11	
45	-L- 144+01-144+56 LT	48" CSP - SEU						0.01		154		
	-L- 143+75-144+08 LT	BANK STABILIZATION - SEU						< 0.01	< 0.01	40	11	
46	-L- 164+25-164+78 RT	30" CSP / 36" RCP - SEA, WOE	0.02					0.01		168		
47	-Y1RPA- 16+63-17+14 RT	54" CSP - SLV						< 0.01		62		
	-Y1RPA- 16+58-16+65 RT	BANK STABILIZATION - SLV						< 0.01	< 0.01	45	11	
48	-Y1RPA- 16+66-17+11 RT	ROADWAY FILL, RIPRAP - SLW						< 0.01	< 0.01	14	51	
49	-L- 171+49-174+67 LT & RT	66" WSP / 66" RCP - SLU, WC, WOB	0.06					0.03		284		
	-L- 171+40-174+63 LT & RT	BANK STABILIZATION - SLU						< 0.01	< 0.01	64	30	
50	-LCDWB- 64+67-68+61 LT & RT	60" CSP, CHANNEL CHANGE - SLS,WOA	0.05	0.02				0.06	< 0.01	588	57	
51	-Y2RPA3- 23+20-23+82 LT	ROADWAY FILL - WNZ	0.02									
	-Y2RPA3- 20+23-23+20	ROADWAY FILL - PBL						0.58				
	-L- 199+51-205+31	ROADWAY FILL, 66" RCP - SLR						0.02		230		
	-Y2RPD3- 15+76-16+19 LT	BANK STABILIZATION- SLR						< 0.01	< 0.01	55	15	
52	-Y2RPD3- 23+65-24+43 LT	DITCH, ROADWAY FILL - WGG		0.01		0.02						
53	-L- 210+53-215+65 LT	54" RCP / 66" RCP - MILL BRANCH						0.06	< 0.01	401	7	
	-L- 210+21-210+61 RT	BANK STABILIZATION - MILL BRANCH						< 0.01	< 0.01	29	17	
TOTALS*:			0.55	0.08	0.04	0.13		0.98	0.03	2953	260	0

NOTES:

*Rounded totals are sum of actual impacts

** Site 44 excavation in wetlands is temporary

REVISED 08/28/2019, 12/12/19, 7/2/20, 8/11/20

NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

AUGUST 2020

WAKE AND JOHNSTON

I-5111_I-4739

SHEET124OF125

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)
54	-L- 232+69-233+35 LT	54" WSP - SJ, WI	0.06					< 0.01		82		
	-L- 233+33-233+44 LT	BANK STABILIZATION - SJ						< 0.01	< 0.01	45	10	
55	-L- 233+94-234+19 LT	48" RCP - SK, WJ	< 0.01					< 0.01		78		
	-L- 234+02-234+11 LT	BANK STABILIZATION - SK						< 0.01	< 0.01	40	10	
56	-L- 246+22-246+77 RT	CHANNEL CHANGE - SEE						< 0.01	< 0.01	102	10	
57	-L- 246+73-247+65	60" WSP - SDD, WFF	0.01					0.02	< 0.01	238	10	
	-L- 247+59-247+78 LT	BANK STABILIZATION - SDD						< 0.01	< 0.01	55	9	
58	-L- 269+75-270+63 LT	36" WSP - SQ						< 0.01		100		
	-L- 270+58-270+85 LT	BANK STABILIZATION - SQ						< 0.01	< 0.01	33	27	
TOTALS*:			0.09					0.06	< 0.01	773	76	0
PROJECT TOTALS*:			0.78	0.17	0.11	0.16		1.55	0.22	7665	1582	

NOTES:

*Rounded totals are sum of actual impacts

REVISÉ 08/28/2019, 12/12/19, 4/22/20, 7/2/20, 8/11/20

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DIVISION OF HIGHWAYS
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WAKE AND JOHNSTON
I-5111_I-4739

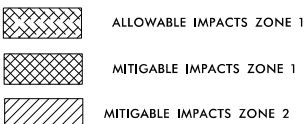
Revised 8/31/2020

8/17/99

BUFFER DRAWING
SHEET 18 OF 52



REVISED 08/04/2020



MATCHLINE -L- STA. 243+00 SEE SHEET 21

MATCHLINE -L- SEE SHEET 21

MATCHLINE
-Y5RPC- STA. 62+00
SEE SHEET 61

MATCHLINE
-Y5RPA- STA. 23+00
SEE SHEET 61

SOE

SITE 17

SOI

WSD

SITE 17

SOE

MATCHLINE
-Y5RPA- STA. 16+50
SEE SHEET 23

MATCHLINE
-L- STA. 256+00
SEE SHEET 23

SCF WQF SITE 16C

18 TONS CL I RIPRAP
W/38 SY GEOTEXTILE
LENGTH=20'
(SEE DETAIL BC)

SITE 17

WQV

SOE

WFF

RK&K

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8/17/99

BUFFER DRAWING
SHEET 34 OF 52

ENGLISH

MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2

NAD 83

PROJECT REFERENCE NO.	SHEET NO.
1-5111/1-4739	42
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISED 08/11/2020

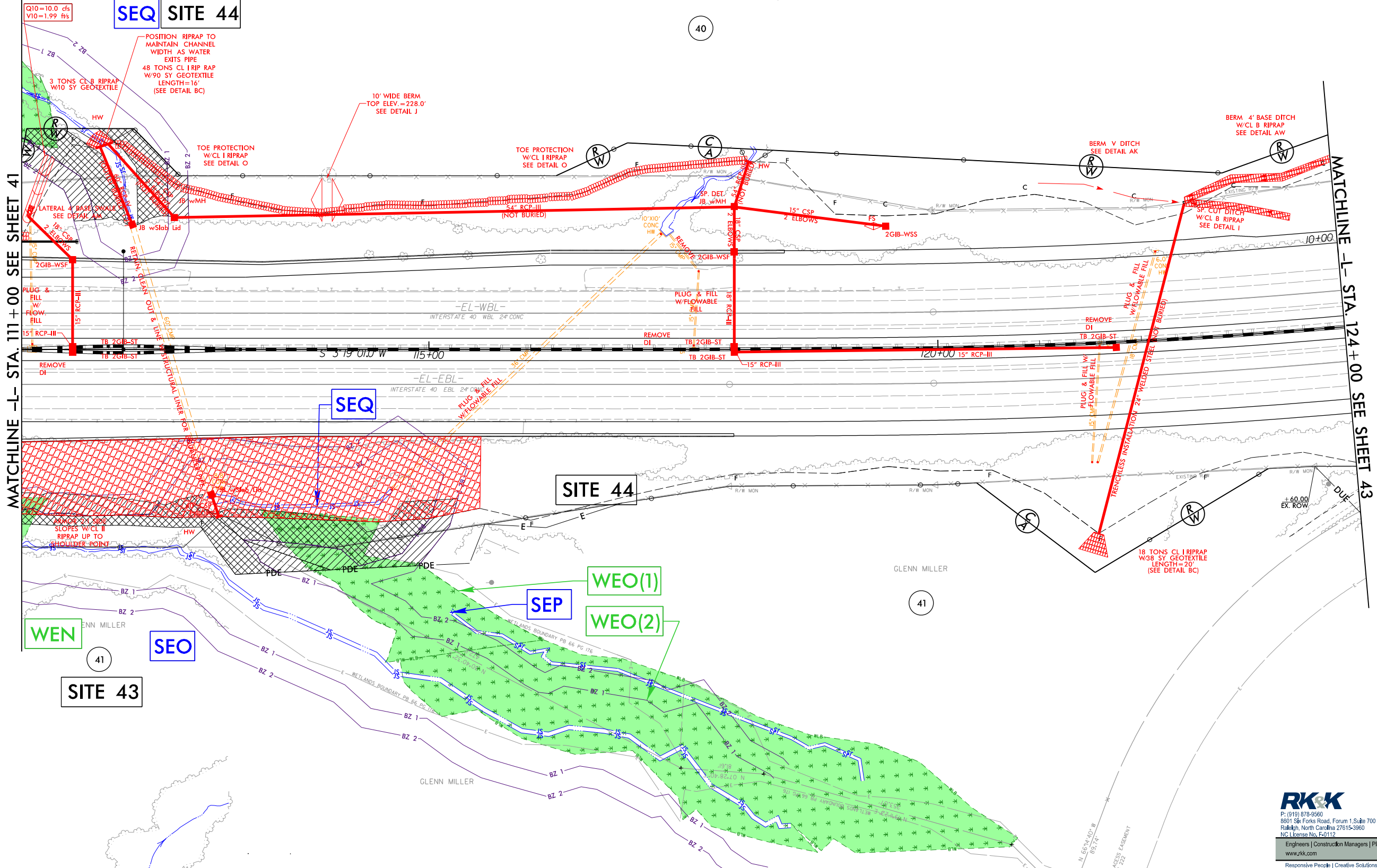
SON-LAN CLASSIC DEVELOPMENT COMPANY, LLC

40

WEP(1)
SEQ SITE 44

MATCHLINE -L- STA. 111+00 SEE SHEET 41

MATCHLINE -L- STA. 124+00 SEE SHEET 43



RIPARIAN BUFFER IMPACTS SUMMARY													
			IMPACTS									BUFFER REPLACEMENT	
Site No.	Station (From/To)	Structure Size / Type	TYPE			ALLOWABLE			MITIGABLE				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)
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						12732	5068	17800		
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		
TOTALS*:						31431	15161	46592	52273	14737	67011	0	0

NOTES:

REVISED 12/12/2019
8/3/2020

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42346.3.1
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RIPARIAN BUFFER IMPACTS SUMMARY													
			IMPACTS									BUFFER REPLACEMENT	
Site No.	Station (From/To)	Structure Size / Type	TYPE			ALLOWABLE			MITIGABLE				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)
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- SEQ, WEO(1) ¹	X						12849	6826	19675		
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		
TOTALS*:						28492	14255	42747	181583	113795	295378	0	0

PROJECT TOTALS*:	116816	55819	172635	302460	168876	471336	0	0
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NOTES:
1. SEQ under fill slope RT is a total take, 765sf of Mitigable BZ2 Impacts accounted for in totals but not hatched in plan view due to location outside PDE

REVISED 8/28/2019
12/12/2019
7/2/2020
8/11/2020

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SHEET51OF52

WETLANDS IN BUFFER IMPACTS SUMMARY

			WETLANDS IN BUFFERS	
SITE NO.	STATION (FROM/TO)		ZONE 1 (ft²)	ZONE 2 (ft²)
42	-L- 106+08-107+45 RT		2367	3001
43	-L- 109+63-111+26 RT		1618	840
44	-L- 113+34-114+92 RT		3110	2145
49	-L- 174+33 RT		1439	
50	-L- 183+49 RT		680	
54	-L- 232+68-234+16 LT		1926	902
57	-L- 246+36-246+93 LT		379	204
TOTAL:			11519	7092

PROJECT TOTALS:	19641	8829
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REVISED 8/28/19
7/2/20
8/11/20