

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**BUFFER DRAWING
SHEET 1 OF 13**

DATE: 11/28/2023

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5777C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44648.3.4	N/A	DESIGN-BUILD	

CRAVEN COUNTY

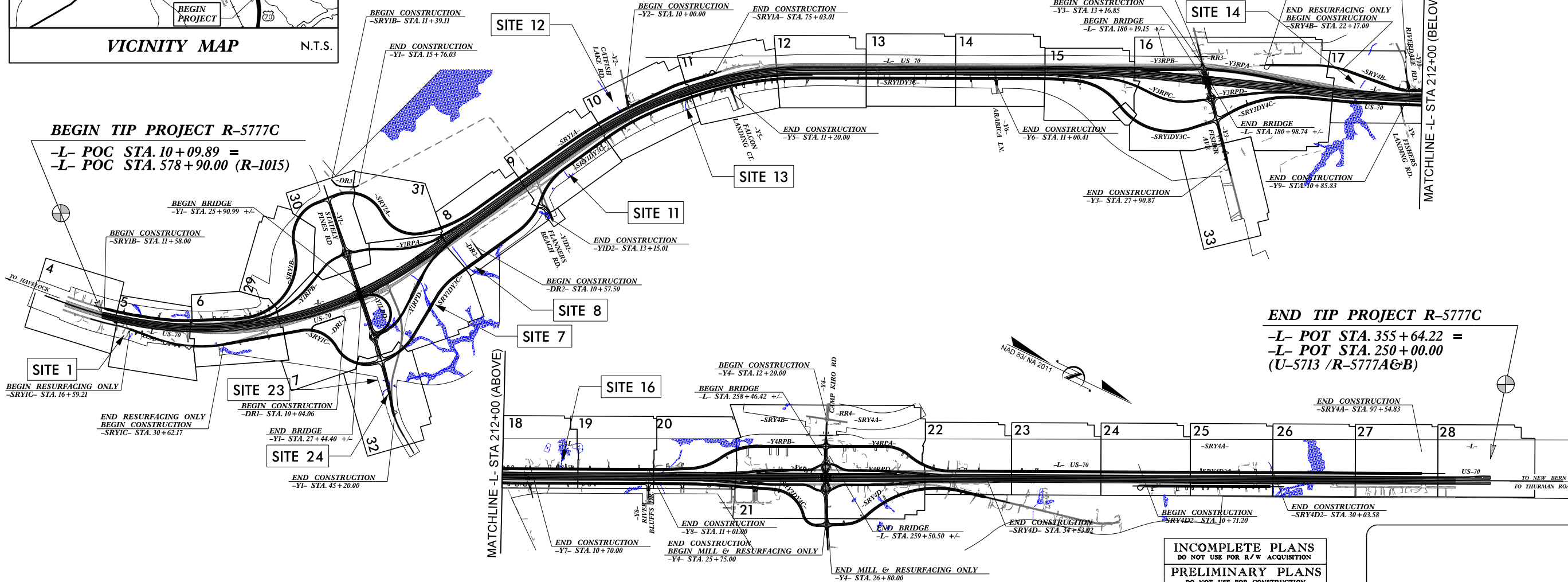
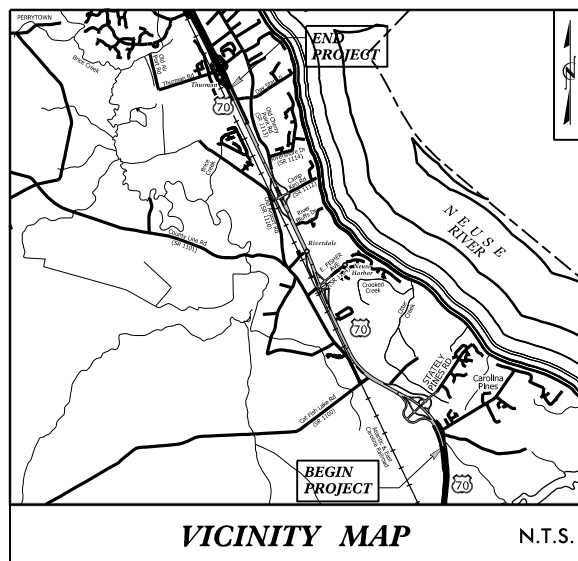
LOCATION: U.S. 70 FROM THE HAVELOCK BYPASS TO EAST OF S.R. 1116 (THURMAN ROAD)

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

BUFFER IMPACTS PERMIT

TIP PROJECT: R-5777C

CONTRACT: C204695

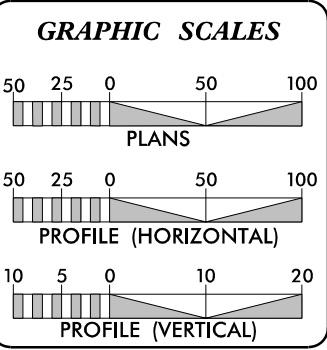


BEGIN TIP PROJECT R-5777C
-L- POC STA. 10+09.89 =
-L- POC STA. 578+90.00 (R-1015)

END TIP PROJECT R-5777C
-L- POT STA. 355+64.22 =
-L- POT STA. 250+00.00
(U-5713 /R-5777A&B)

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF THE CITY OF NEW BERN
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2019 =	31,800
ADT 2045 =	41,800
K =	9%
D =	55%
T =	8%*
V =	75 MPH
* (TTST=3%+ DUAL 5%)	
FUNC. CLASSIFICATION =	INTERSTATE STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5777C =	6.486 MILES
LENGTH STRUCTURE TIP PROJECT R-5777C =	0.058 MILES
TOTAL LENGTH OF TIP PROJECT R-5777C =	6.544 MILES

NCDOT CONTACT: BYRON KYLE
NCDOT - DESIGN-BUILD UNIT

PLANS PREPARED FOR THE NCDOT BY:

Balfour Beatty

2018 STANDARD SPECIFICATIONS

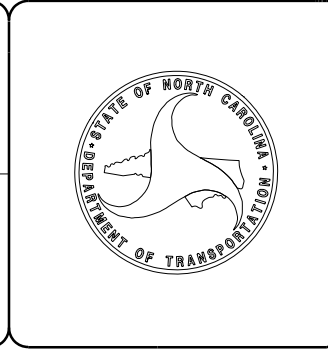
RIGHT OF WAY DATE:
JANUARY 17, 2023

LETTING DATE:
JANUARY 17, 2023

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



11/28/2023 R-5777C-Hyd_prm_buf_psh_01.dgn inarvey

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

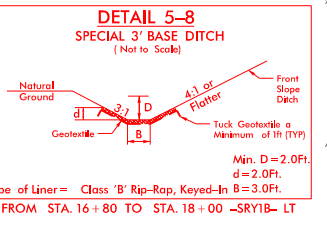
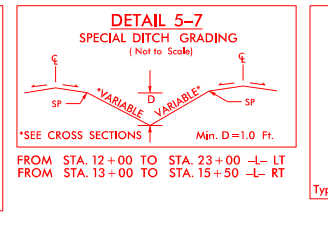
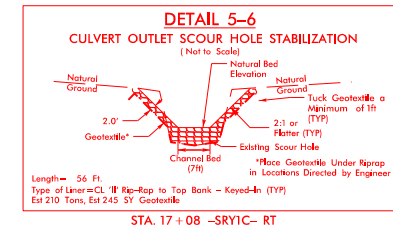
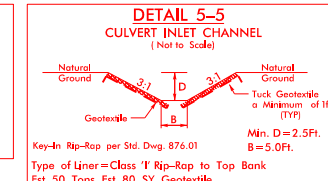
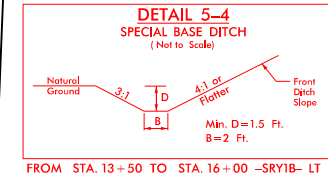
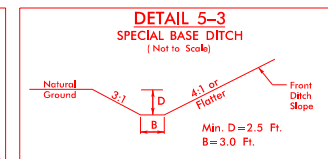
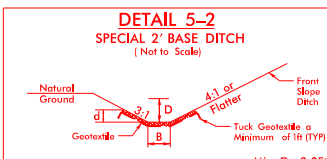
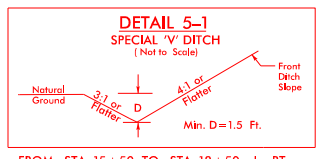
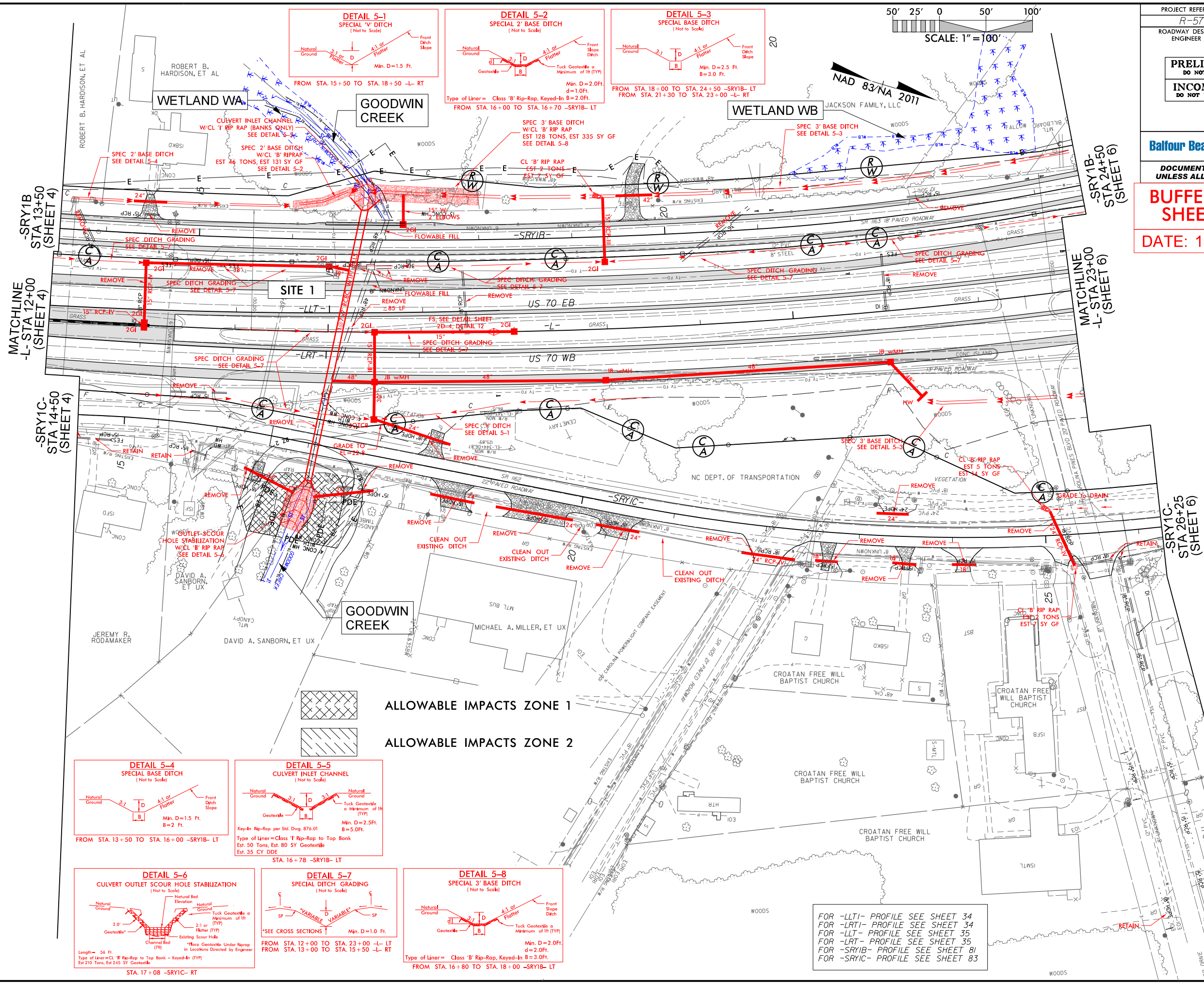
INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION

Balfour Beatty **stv**

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

BUFFER DRAWING
SHEET 2 OF 13

DATE: 11/28/2023



FOR -LTI- PROFILE SEE SHEET 34
FOR -LRTI- PROFILE SEE SHEET 34
FOR -LRT- PROFILE SEE SHEET 35
FOR -SRY1B- PROFILE SEE SHEET 81
FOR -SRY1C- PROFILE SEE SHEET 83

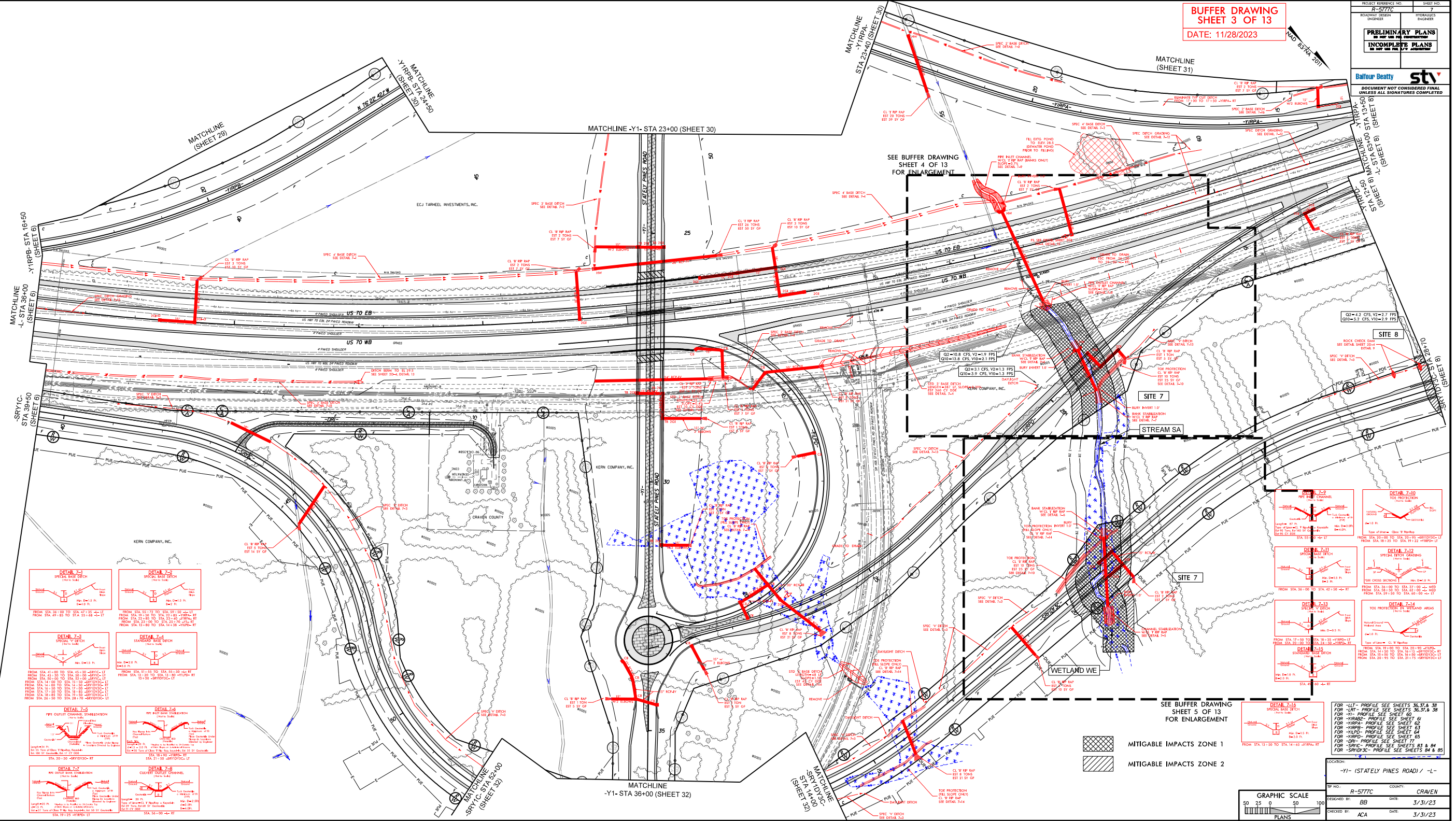
11/28/2023 R-5777C_Hyd_prm_buf_psh_05.dgn

6/2/99

1/28/2023
R-5777C_Hgd.prm.buf.pln_07.dgn

**BUFFER DRAWING
SHEET 3 OF 13**
DATE: 11/28/2023

PROJECT REFERENCE NO. R-5777C	SHEET NO. 7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION INCOMPLETE PLANS DO NOT USE FOR THE FIELD	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Balfour Beatty st CONSULTANTS	



DETAIL 7-1
SPECIAL BASE DITCH
FROM STA 28+00 TO STA 28+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-2
SPECIAL BASE DITCH
FROM STA 29+00 TO STA 29+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-3
SPECIAL BASE DITCH
FROM STA 30+00 TO STA 30+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-4
STANDARD BASE DITCH
FROM STA 31+00 TO STA 31+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-5
PPF CULVERT CHANNEL STABILIZATION
FROM STA 32+00 TO STA 32+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-6
PPF CULVERT CHANNEL STABILIZATION
FROM STA 33+00 TO STA 33+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-7
PPF CULVERT CHANNEL STABILIZATION
FROM STA 34+00 TO STA 34+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-8
PPF CULVERT CHANNEL STABILIZATION
FROM STA 35+00 TO STA 35+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-9
SPECIAL BASE DITCH
FROM STA 36+00 TO STA 36+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-10
SPECIAL BASE DITCH
FROM STA 37+00 TO STA 37+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-11
SPECIAL BASE DITCH
FROM STA 38+00 TO STA 38+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-12
SPECIAL BASE DITCH
FROM STA 39+00 TO STA 39+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-13
SPECIAL BASE DITCH
FROM STA 40+00 TO STA 40+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-14
SPECIAL BASE DITCH
FROM STA 41+00 TO STA 41+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

DETAIL 7-15
SPECIAL BASE DITCH
FROM STA 42+00 TO STA 42+15
HW: 4.0 FT
V: 1.0 FT
SLOPE: 1:1

SEE BUFFER DRAWING SHEET 5 OF 13 FOR ENLARGEMENT

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

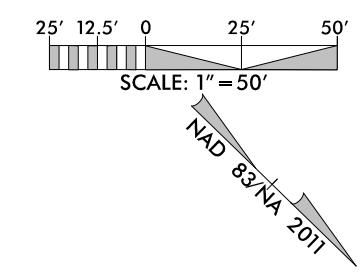
GRAPHIC SCALE
0 25 50 100
PLANS


FOR -LIT- PROFILE SEE SHEETS 36.57 & 38
FOR -LRT- PROFILE SEE SHEETS 36.57 & 38
FOR -M- PROFILE SEE SHEET 60
FOR -HARD- PROFILE SEE SHEET 60
FOR -HARD- PROFILE SEE SHEET 62
FOR -HARD- PROFILE SEE SHEET 63
FOR -HARD- PROFILE SEE SHEET 64
FOR -HARD- PROFILE SEE SHEET 65
FOR -HARD- PROFILE SEE SHEET 66
FOR -SRV- PROFILE SEE SHEETS 83 & 84
FOR -SRV- PROFILE SEE SHEETS 84 & 85


LOCATION:
-Y1- (STATELY PINES ROAD) / -L-

BY NO. R-5777C COUNTY: CRAVEN
DESIGNED BY: BB DATE: 3/31/23
CHECKED BY: ACA DATE: 3/31/23

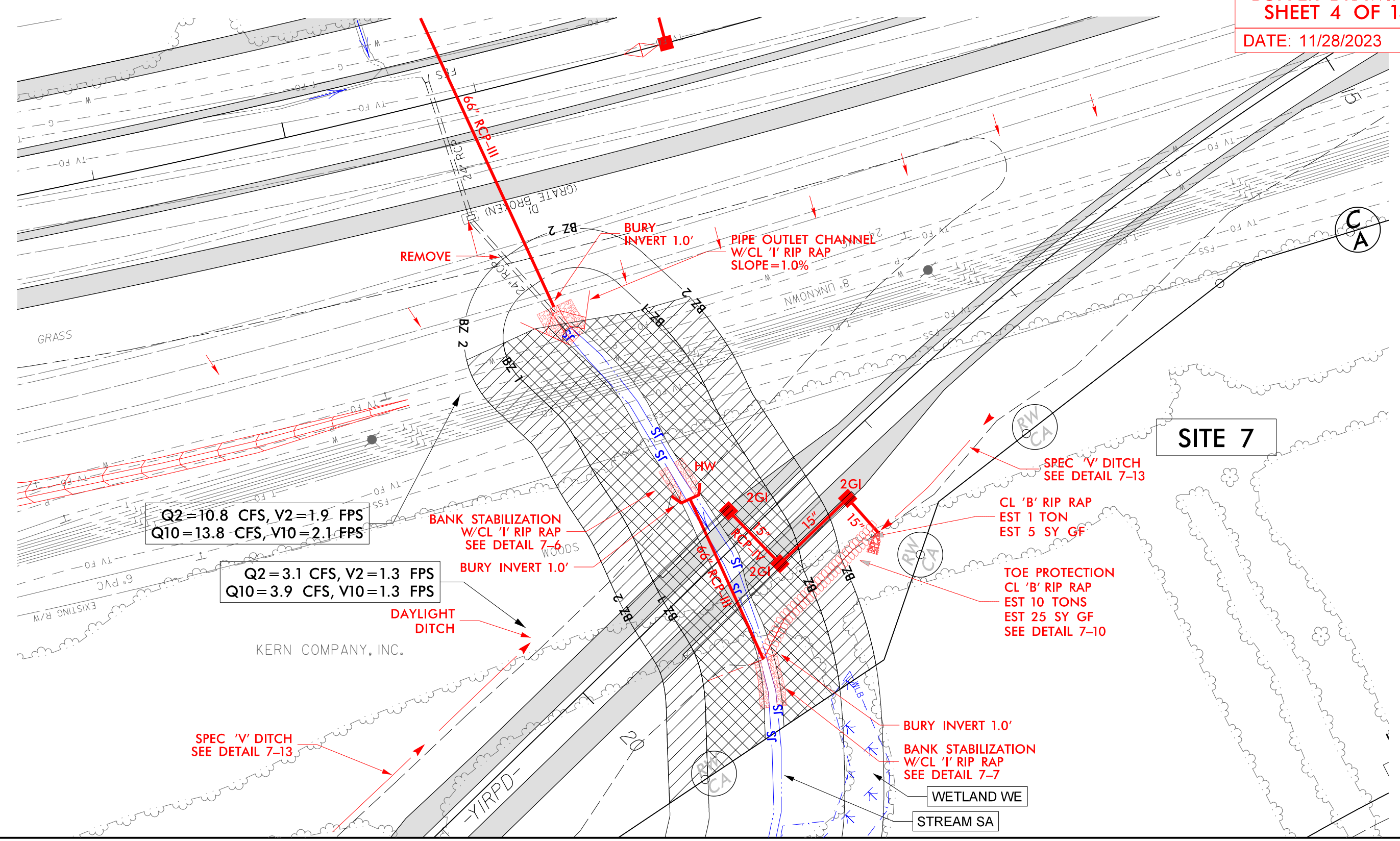
PROJECT REFERENCE NO. R-5777C	SHEET NO.
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



 MITIGABLE IMPACTS ZONE 1

 MITIGABLE IMPACTS ZONE 2

BUFFER DRAWING
SHEET 4 OF 13
DATE: 11/28/2023



Q2=10.8 CFS, V2=1.9 FPS
Q10=13.8 CFS, V10=2.1 FPS

Q2=3.1 CFS, V2=1.3 FPS
Q10=3.9 CFS, V10=1.3 FPS

KERN COMPANY, INC.

SITE 7

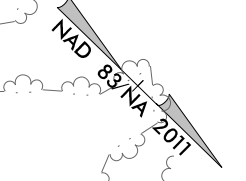
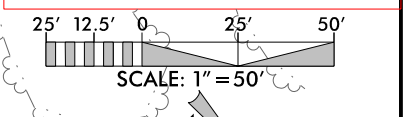
PROJECT REFERENCE NO. R-5777C	SHEET NO.
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

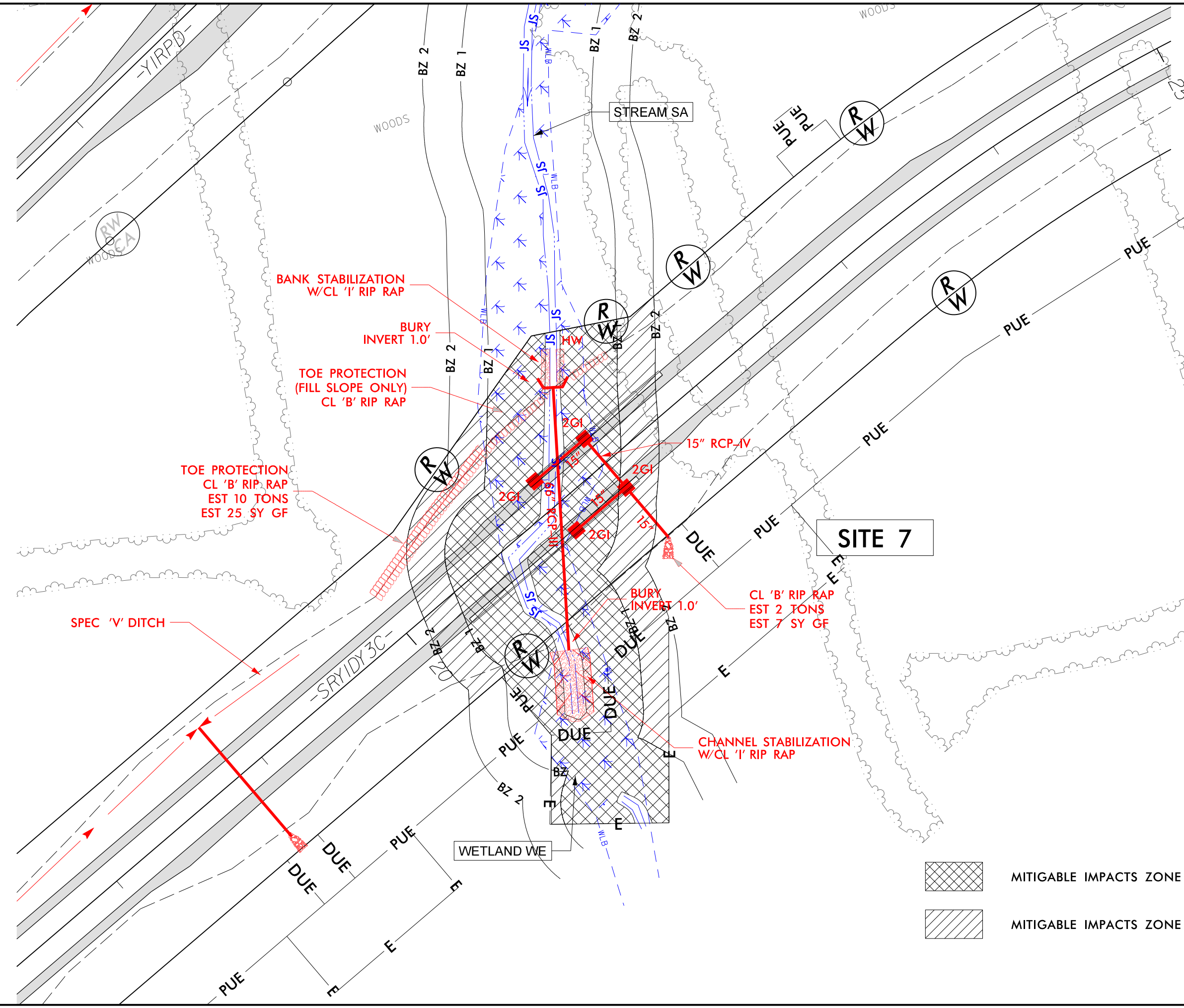
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

BUFFER DRAWING
SHEET 5 OF 13

DATE: 11/28/2023

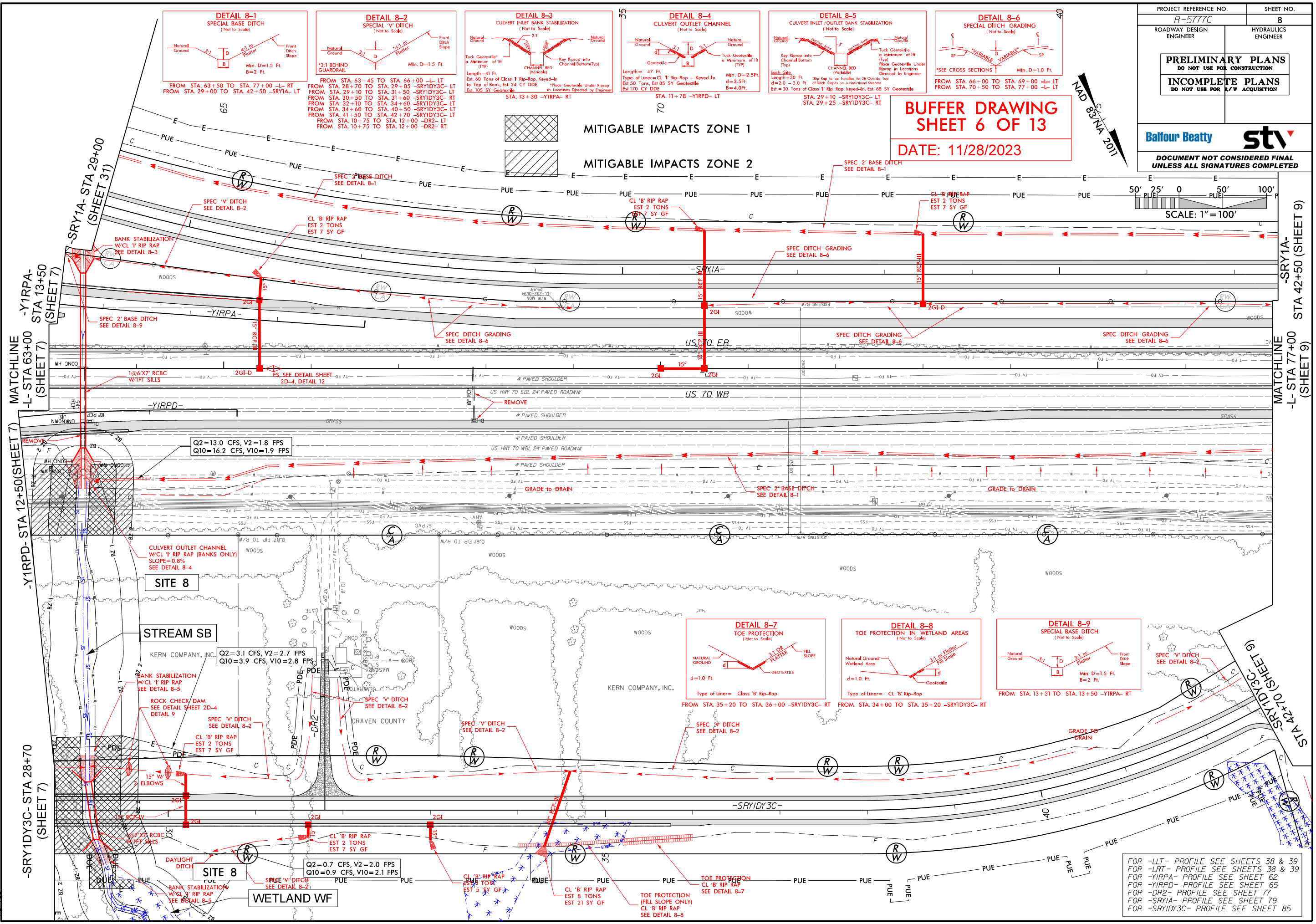
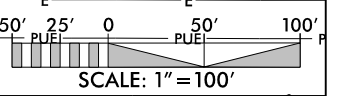
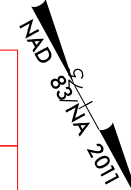


8/17/99
11/28/2023
R-5777C-Hyd.prm_buf_psh_07-2-V1.rvt.dgn



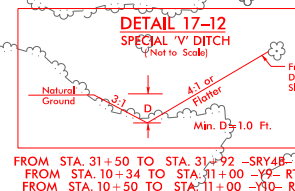
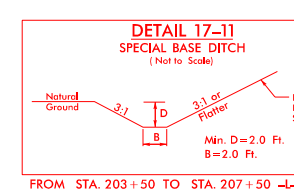
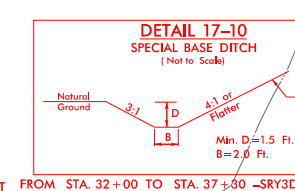
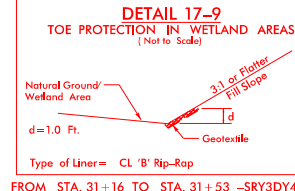
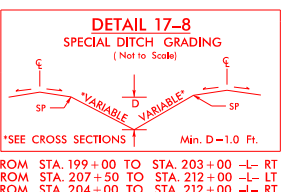
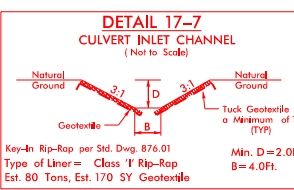
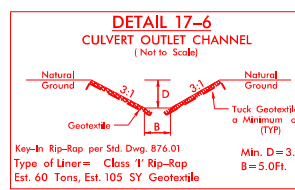
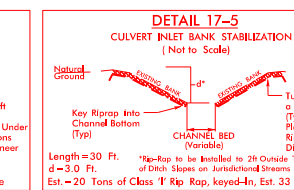
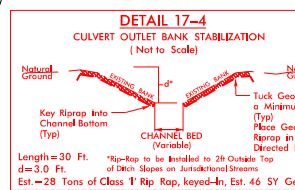
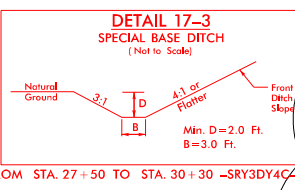
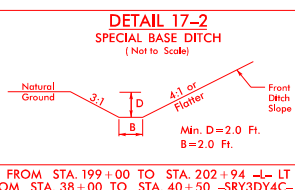
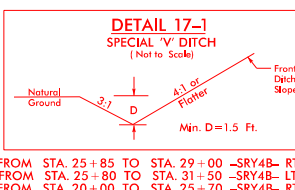
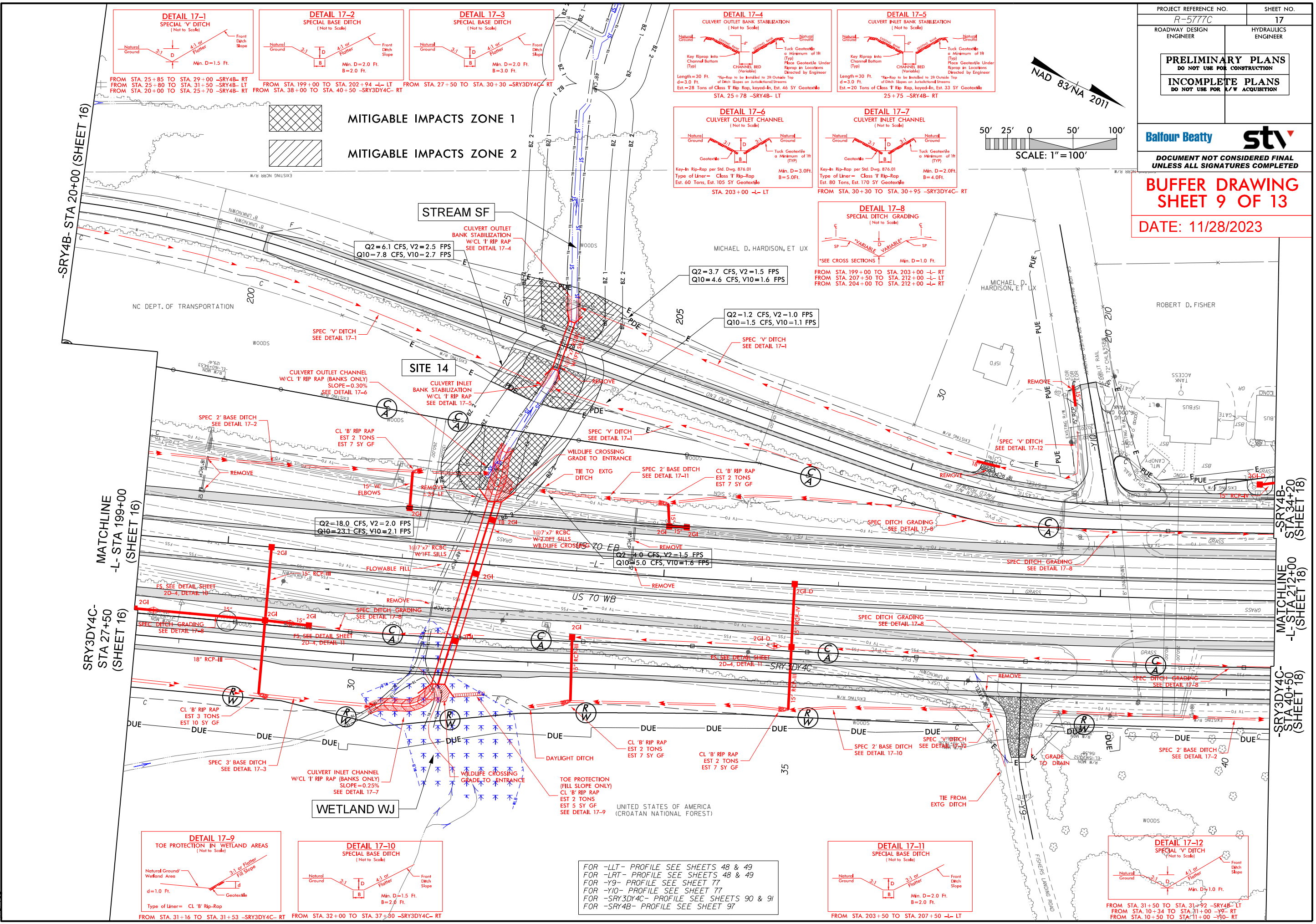
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2

BUFFER DRAWING
SHEET 6 OF 13
DATE: 11/28/2023



11/28/2023 R-5777C-Hyd_prm_buf_psh_08.dgn

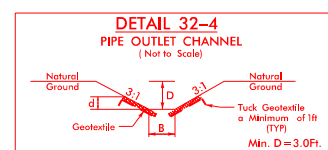
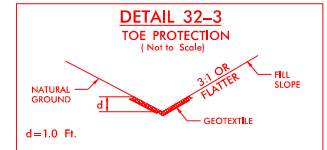
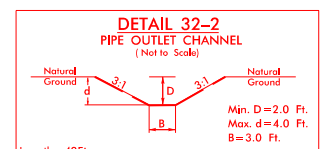
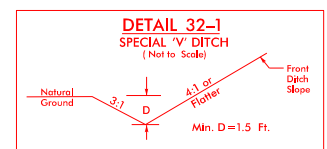
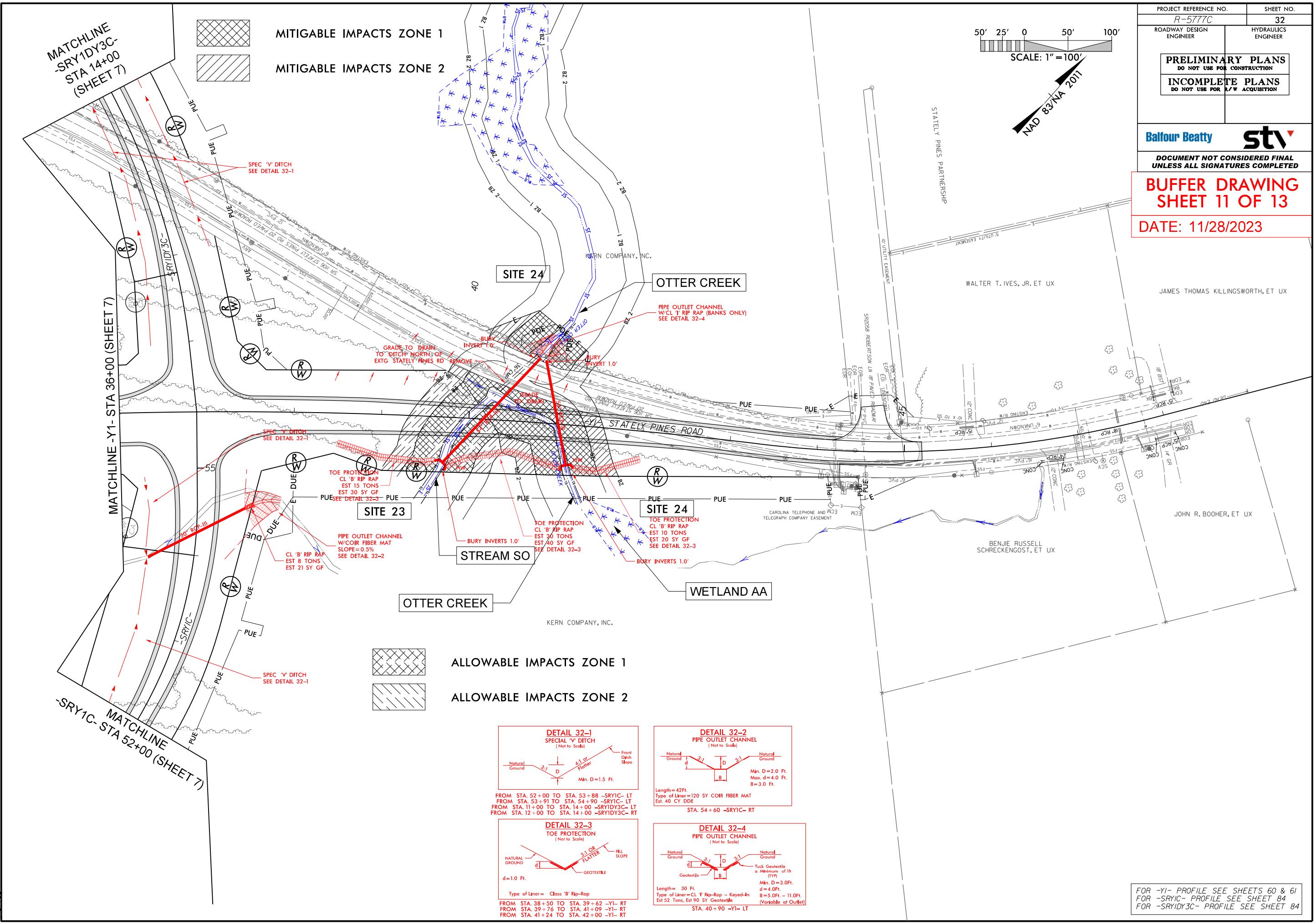
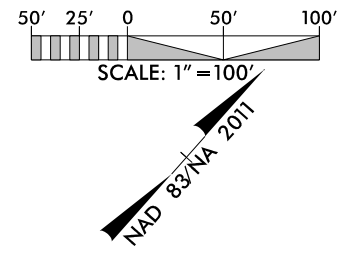
FOR -LLT- PROFILE SEE SHEETS 38 & 39
 FOR -LRT- PROFILE SEE SHEETS 38 & 39
 FOR -Y1RPA- PROFILE SEE SHEET 62
 FOR -YIRPD- PROFILE SEE SHEET 65
 FOR -DR2- PROFILE SEE SHEET 77
 FOR -SRY1A- PROFILE SEE SHEET 79
 FOR -SRY1DY3C- PROFILE SEE SHEET 85



FOR -LL- PROFILE SEE SHEETS 48 & 49
FOR -LRT- PROFILE SEE SHEETS 48 & 49
FOR -Y9- PROFILE SEE SHEET 77
FOR -Y10- PROFILE SEE SHEET 77
FOR -SRY3DY4C- PROFILE SEE SHEETS 90 & 91
FOR -SRY4B- PROFILE SEE SHEET 97

PROJECT REFERENCE NO. R-5777C	SHEET NO. 32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
Balfour Beatty stv	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BUFFER DRAWING
SHEET 11 OF 13
DATE: 11/28/2023



FOR -Y1- PROFILE SEE SHEETS 60 & 61
FOR -SR1C- PROFILE SEE SHEET 84
FOR -SR1DY3C- PROFILE SEE SHEET 84

11/28/2023 R-5777C-Hyd_prm_buf_psh_32.dgn

RIPARIAN BUFFER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			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)		
1	14+10 to 15+38-L-RT	1 at 7'x7' RCBC	X			4758	2305	7063					
7	18+24 to 20+07-Y1RPD- 19+87 to 22+25-SRY1DY3C-	66" RCP 66" RCP	X X						14313	9408	23721		
8	62+80 to 63+97-L-RT 28+49 to 29+83-SRYIDY3C-	1 at 6'x7' RCBC 1 at 7'x7' RCBC	X X						4861	3266	8127		
11	48+69 to 49+86-SRY1DY3C-RT	36" RCP	X			4005	2651	6656					
12	93+83 to 95+19-L-LT 94+34 to 95+54-L-RT	60" RCP 60" RCP	X X						9660	6127	15787		
13	103+16 to 104+48-L-RT	48" RCP	X			3543	2211	5754					
14	25+08 to 26+34-SRY4B- 202+36 to 203+83-L-LT	1 at 7'x7' RCBC 1 at 7'x7' RCBC	X X						5956	3775	9731		
16	219+82 to 221+07-L-LT	54" RCP	X			3971	2586	6557					
23	39+00 to 40+40-Y1-	54" RCP	X			5493	3518	9011					
24	39+74 to 41+77-Y1-	54" RCP	X						10314	3869	14183		
TOTALS*:						21770	13271	35041	78092	44871	122963	0	0

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 11-28-2023
 CRAVEN COUNTY
 R-5777C
 44648.3.4

