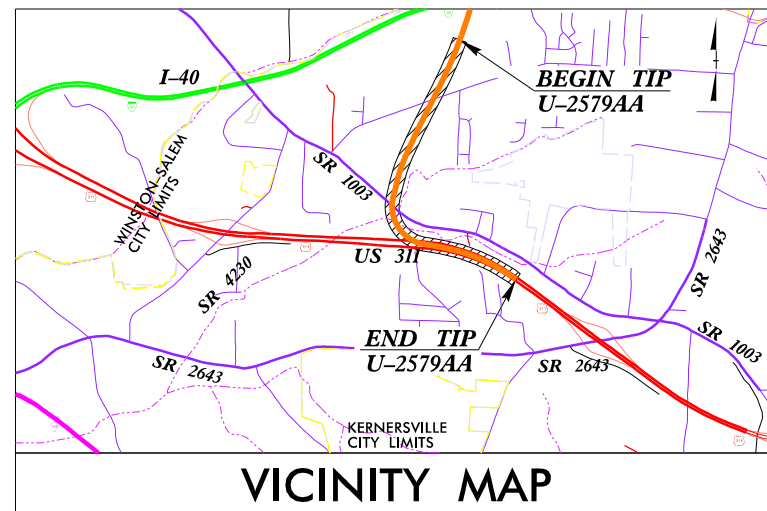


TIP PROJECT: U-2579AA

CONTRACT:

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

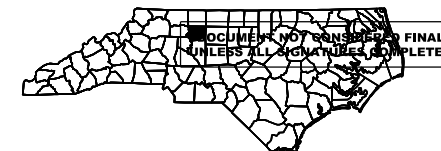
FORSYTH COUNTY

**LOCATION: WINSTON-SALEM NORTHERN BELTWAY EASTERN SECTION
(FUTURE I-74) FROM US 311 TO I-40**

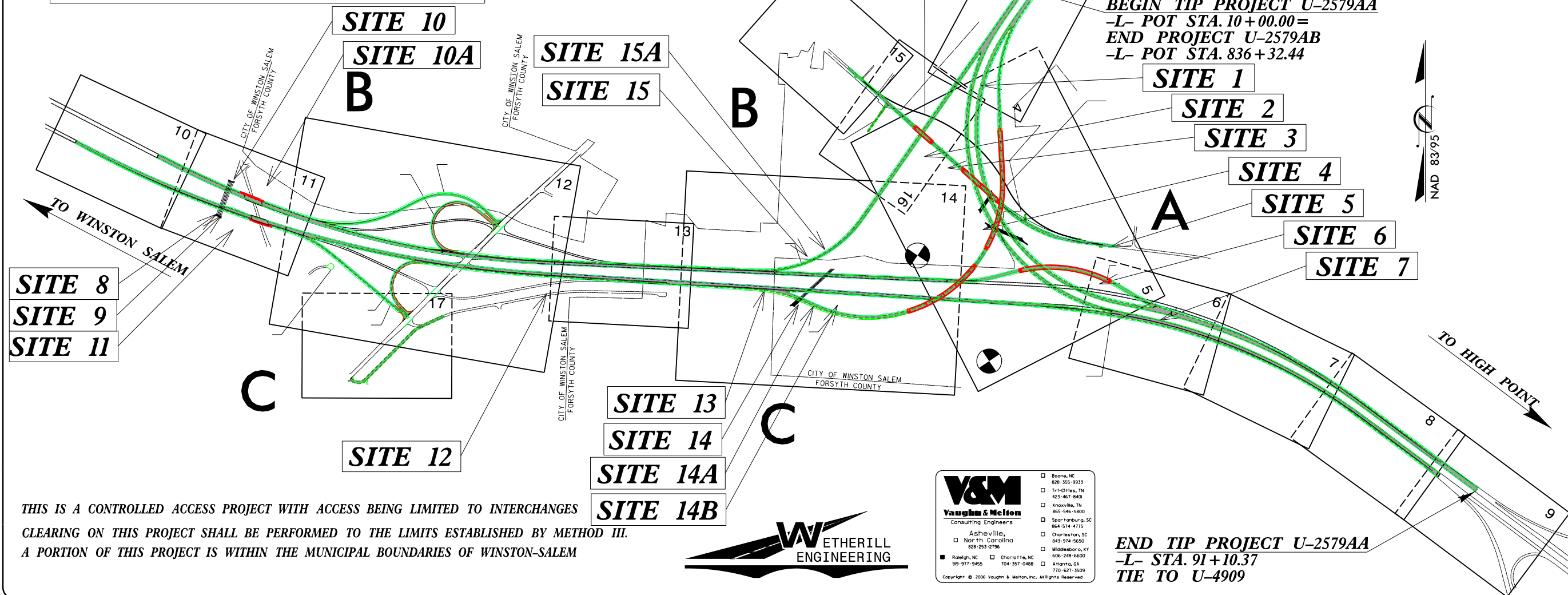
TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

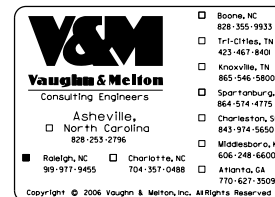
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEET
N.C.	U-2579AA	1	
STATE PROJ.NO.	F.A.PROJ.NO.	DESCRIPTION	
34839.1.7		PE	
		ROW, UTIL.	
		CONST	



PERMIT DRAWING
SHEET 1 OF 32

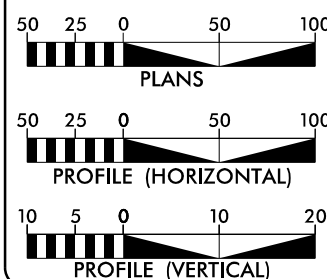


THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF WINSTON-SALEM



END TIP PROJECT U-2579AA
-L- STA. 91+10.37
TIE TO U-4909

GRAPHIC SCALES



DESIGN DATA

ADT 2020 = 10,733
ADT 2040 = 16,400
K = 9 %
D = 60 %
T = 7 % *
V = 70 MPH
* (TTST = 4% & DUAL = 3%)
CLASS = INTERSTATE
TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-2579AA	=	1.524 MILES
LENGTH OF STRUCTURES TIP PROJECT U-2579AA	=	0.012 MILES
TOTAL LENGTH TIP PROJECT U-2579AA	=	1.536 MILES

Prepared in the Office of:

VAUGHN & MELTON, INC

3509 Haworth Dr. #100, Raleigh NC, 27609 Phone (919)-977-9455

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE
AUGUST 17, 2018

LETTING DATE:
SEPTEMBER 15, 2020

NCDOT CONTACT:

JOHN LANSFORD, PE
PROJECT ENGINEER

KEITH BRIDGERS
PROJECT DESIGN ENGINEER

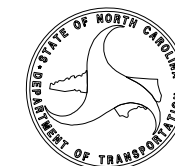
TATIA L. WHITE. PE, PLS

HYDRAULICS ENGINEER

SIGNATURE:

**ROADWAY DESIGN
ENGINEER**

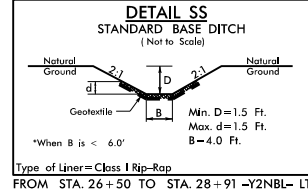
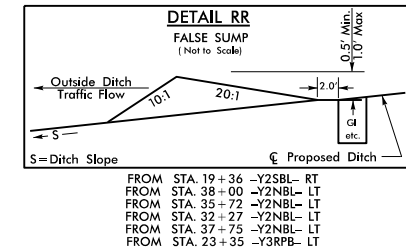
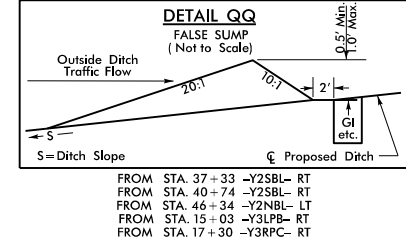
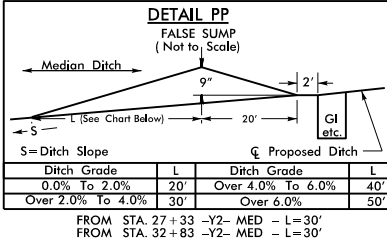
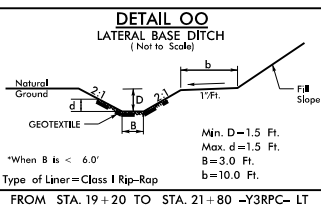
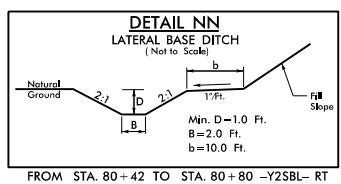
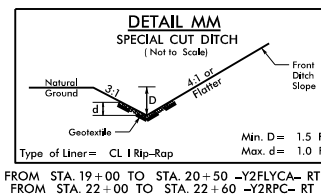
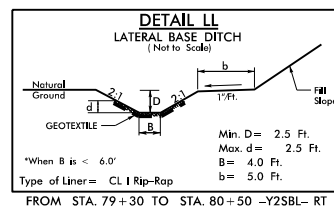
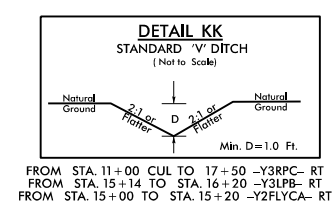
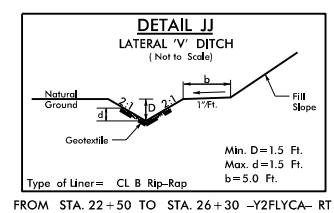
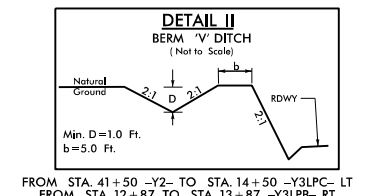
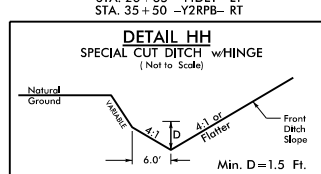
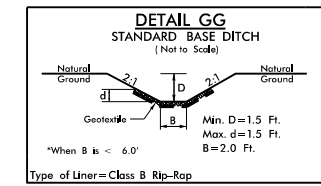
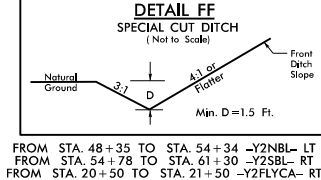
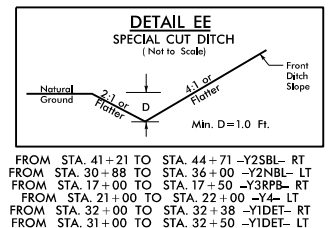
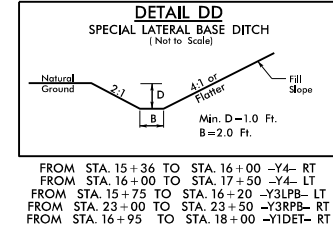
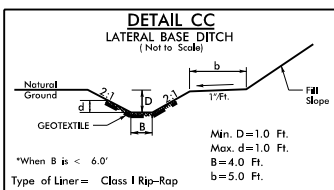
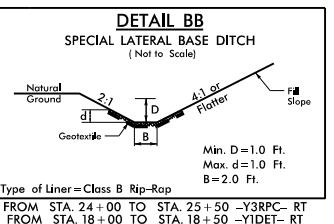
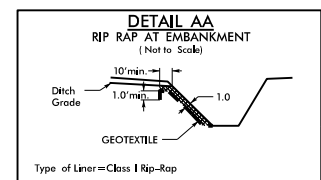
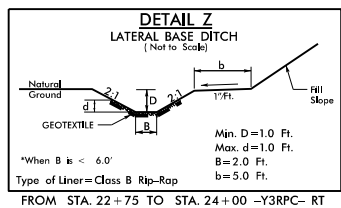
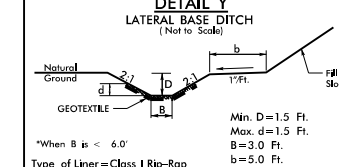
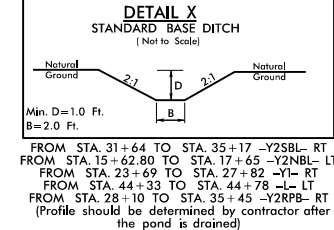
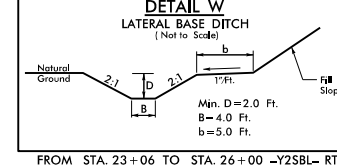
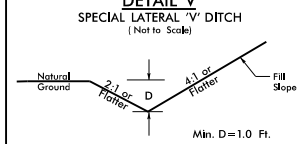
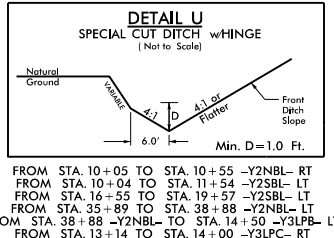
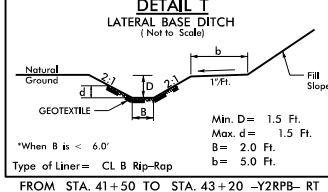
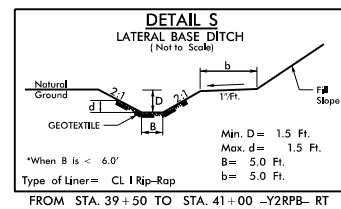
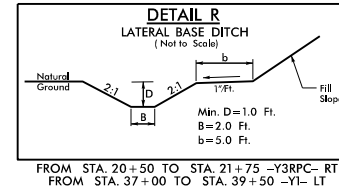
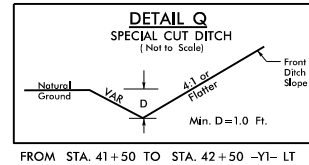
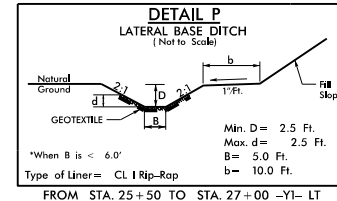
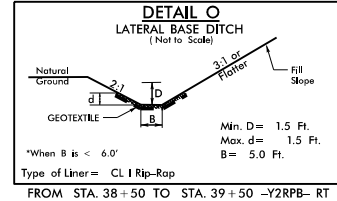
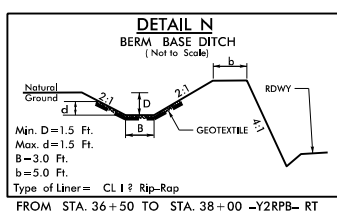
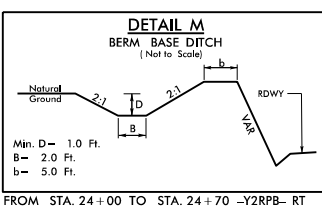
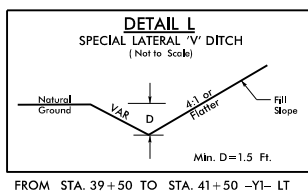
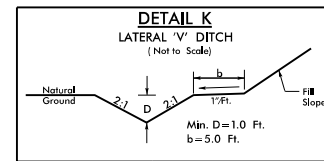
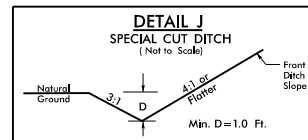
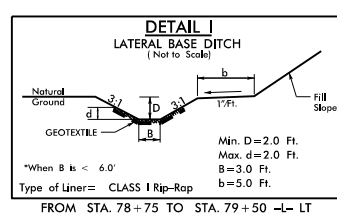
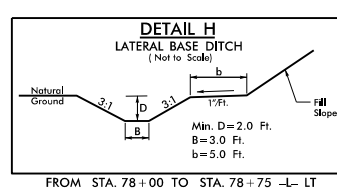
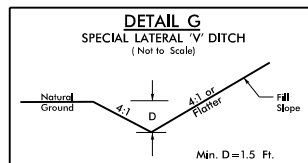
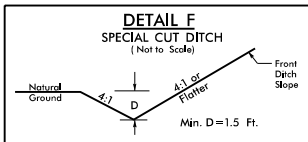
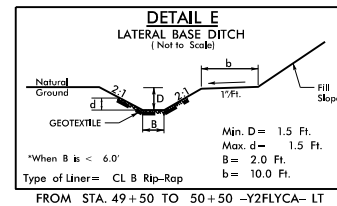
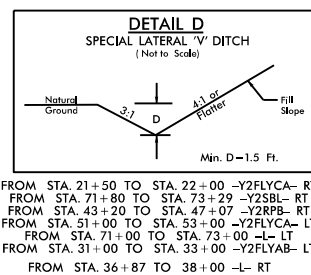
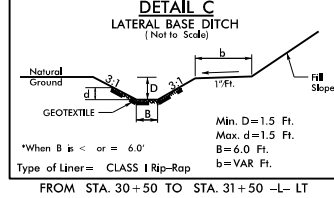
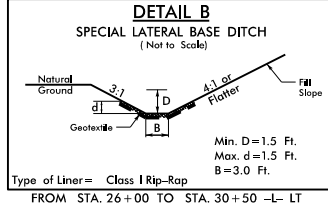
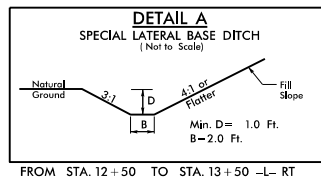
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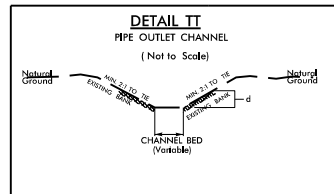


INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION

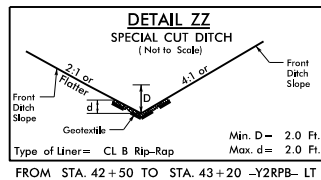
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING SHEET 2 OF 32

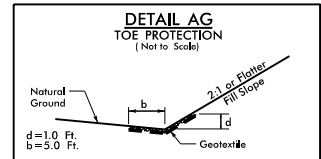




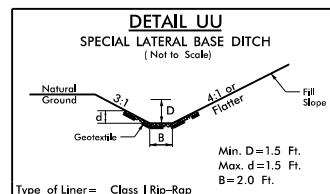
STA. 18+81 -Y2NBL- LT; 3 TON CL I; d=3 Ft; L=8 Ft
STA. 21+62 -Y2NBL- LT; 4 TON CL I; d=3 Ft; L=8 Ft
STA. 22+95 -Y2NBL- LT; 4 TON CL I; d=3 Ft; L=8 Ft
STA. 54+35 -L- RT; 16 TON CL I; d=5 Ft; L=35 Ft



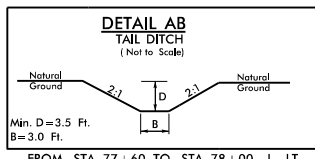
FROM STA. 42+50 TO STA. 43+20 -Y2RPB- LT



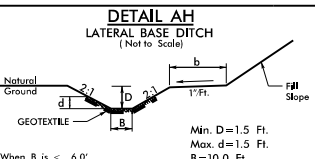
FROM STA. 15+75 TO STA. 17+50 -Y2FLYCA- RT
FROM STA. 22+63 TO 23+63 -Y2RPC- RT
FROM STA. 54+50 TO 55+00 -L- RT



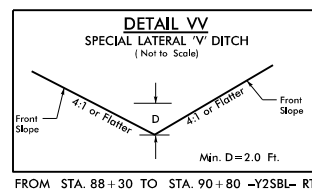
FROM STA. 50+50 TO STA. 51+00 -Y2FLYCA- LT



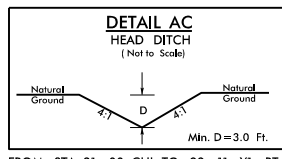
FROM STA. 77+60 TO STA. 78+00 -L- LT



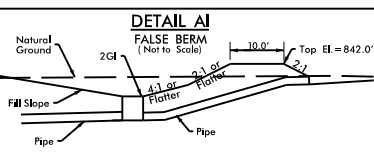
FROM STA. 52+50 TO STA. 53+00 -L- RT
FROM STA. 53+10 TO STA. 54+30 -L- RT



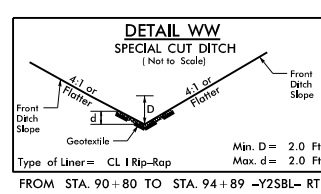
FROM STA. 88+30 TO STA. 90+80 -Y2SBL- RT



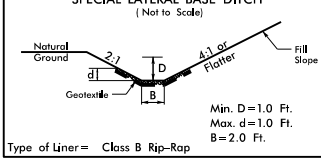
FROM STA. 21+00 CUL TO 22+11 -Y1- RT
STA. 26+78 -Y2RPB- RT



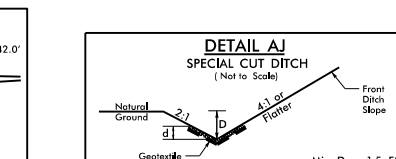
FROM STA. 26+40 TO STA. 27+50 -Y2RPB- RT



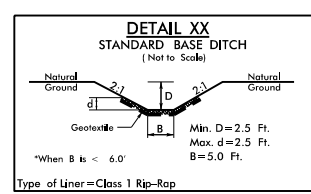
FROM STA. 90+80 TO STA. 94+89 -Y2SBL- RT



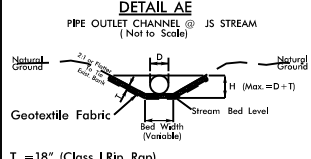
FROM STA. 15+53 TO STA. 17+50 -Y3RPB- LT



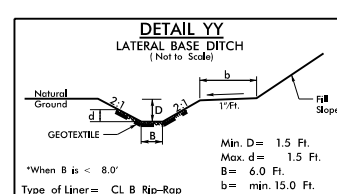
FROM STA. 15+00 TO STA. 16+30 -Y1DET- LT



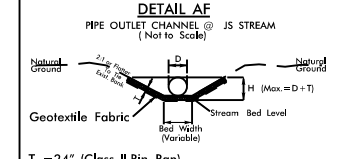
FROM STA. 23+50 TO STA. 25+50 -Y1- LT
FROM STA. 19+00 TO STA. 27+30 -Y1DET- RT



AT STA. 57+59 -Y2FLYCA- LT

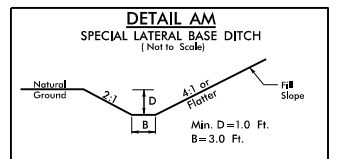


FROM STA. 40+86 TO 42+50 -Y2RPB- LT

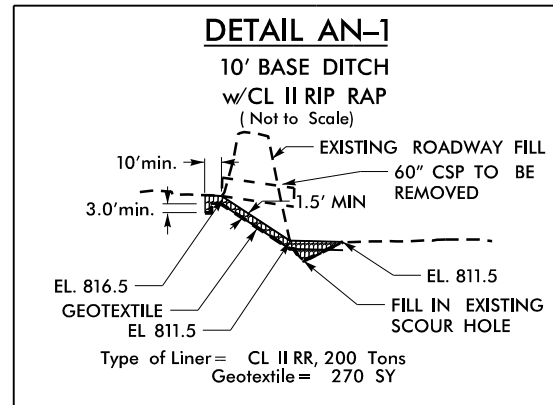


AT STA. 18+12 -Y2FLYAB- RT

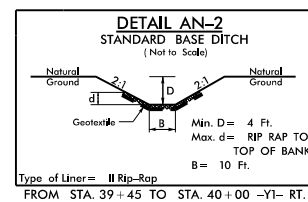
PERMIT DRAWING
SHEET 3 OF 32



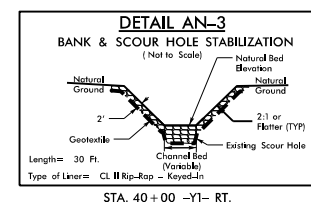
FROM STA. 26+25 TO STA. 30+00 -Y1DET- LT



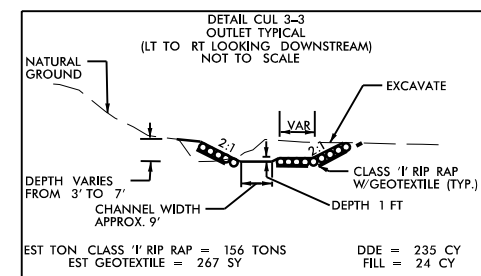
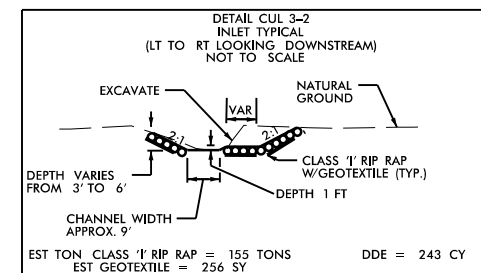
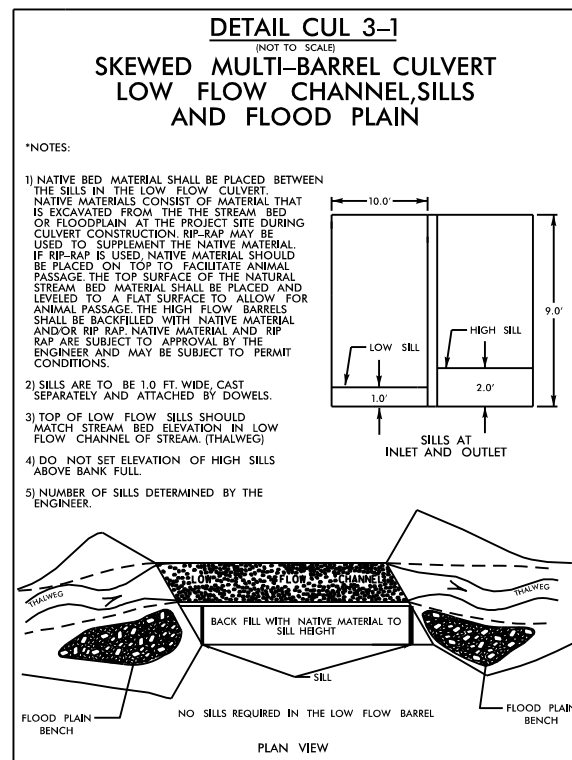
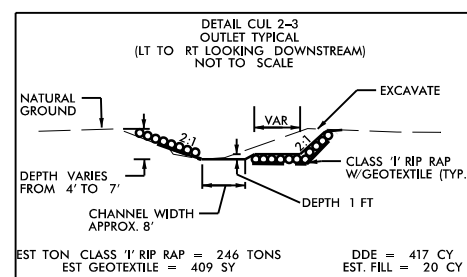
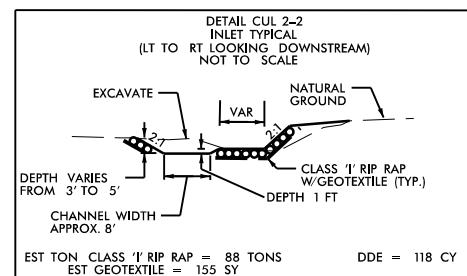
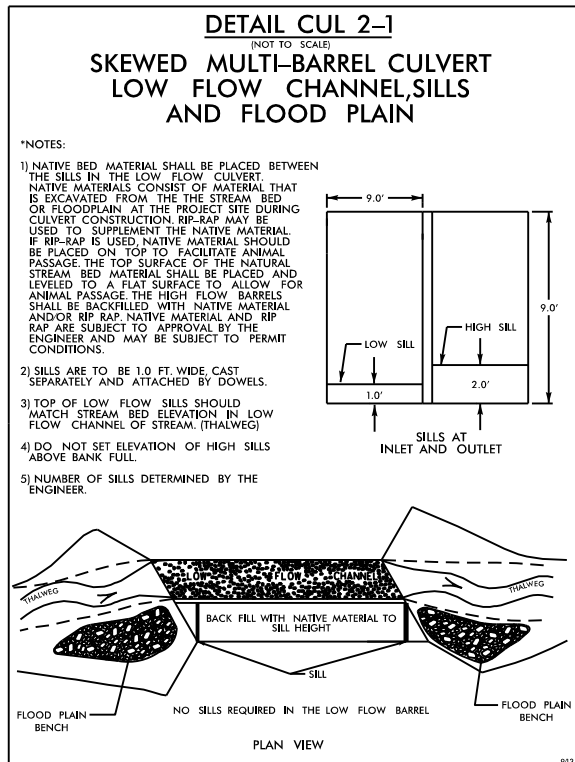
FROM STA. 39+45 TO STA. 40+00 -Y1- RT.



FROM STA. 39+45 TO STA. 40+00 -Y1- RT.



STA. 40+00 -Y1- RT.

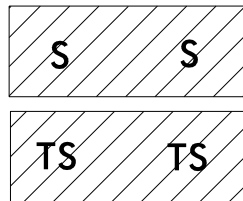
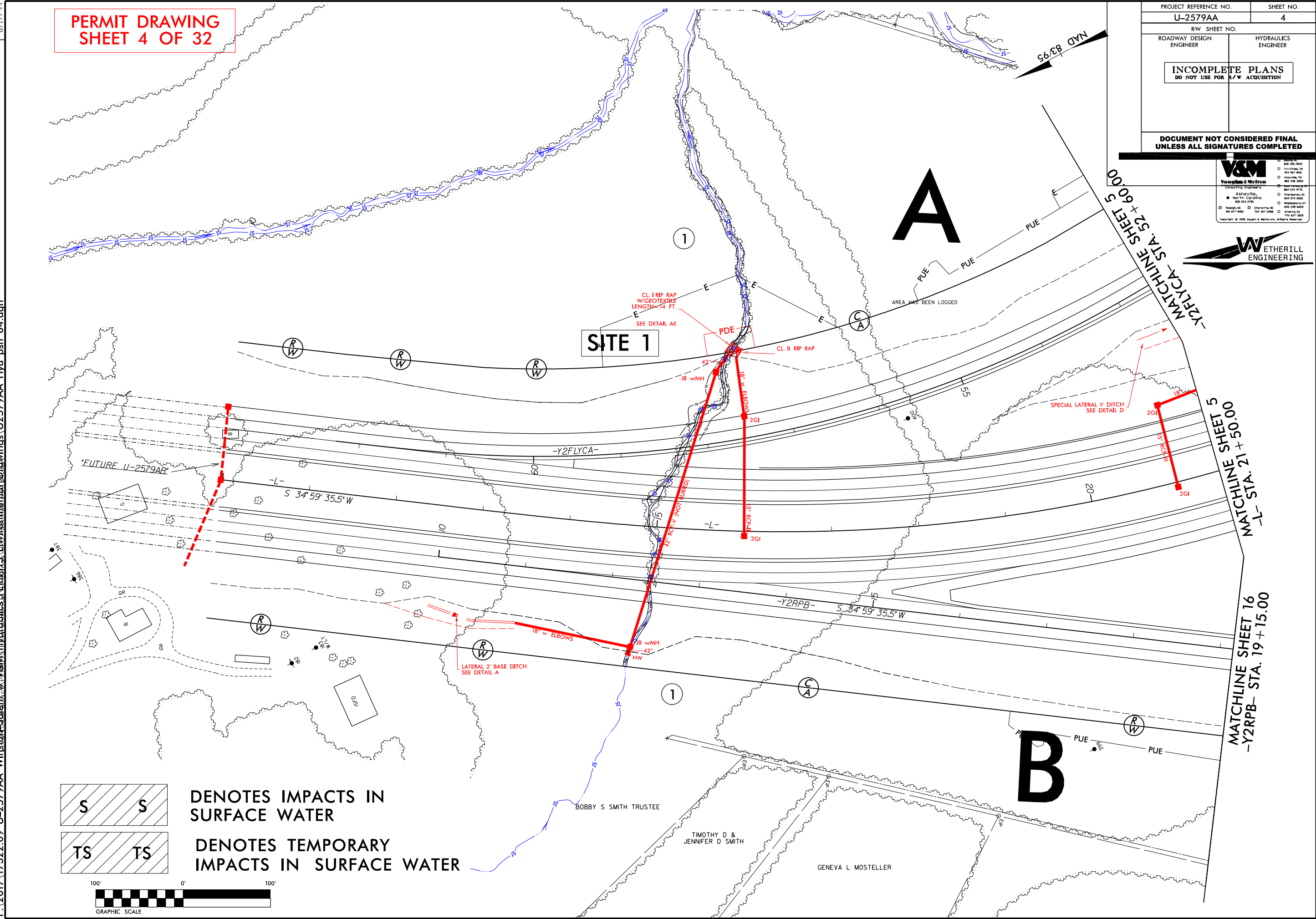


PERMIT DRAWING
SHEET 4 OF 32

PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		4	
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			

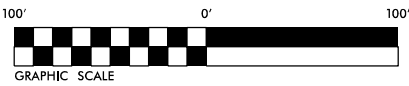
V&M
Vaughan & Nelson
Consulting Engineers
Asheville, NC
Nashville, TN
Charlotte, NC
Raleigh, NC
919-917-9465

W
ETHERILL
ENGINEERING
Chapel Hill, NC
Charlotte, NC
Raleigh, NC
Asheville, NC
919-917-9465



DENOTES IMPACTS IN
SURFACE WATER

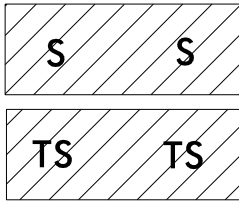
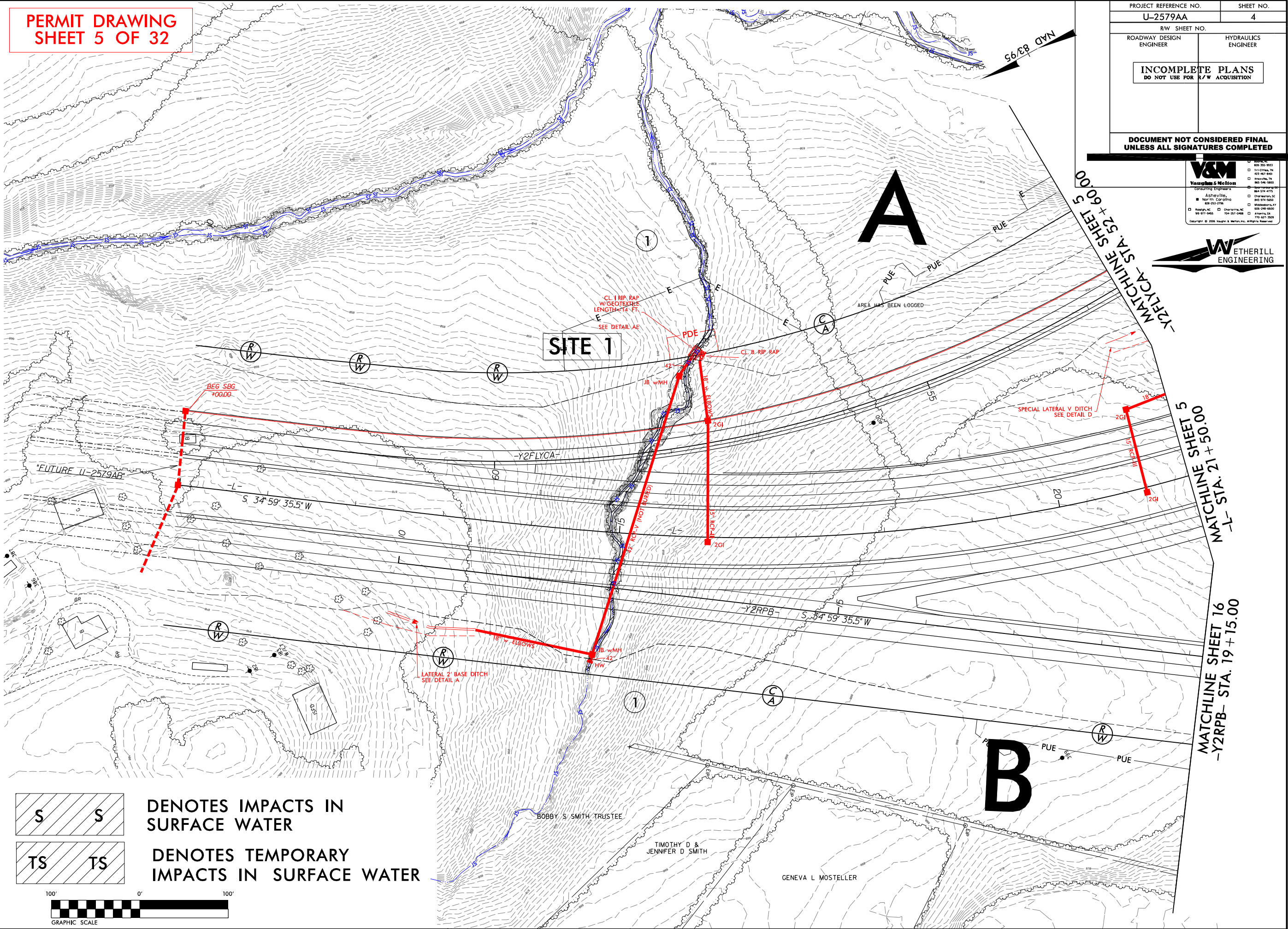
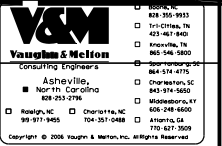
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



11/16/2018
FBrooks
P: 2017.17322.09 U-2579AA Winston-Salem, NC
V&M Hydraulics PERMITS Environmental Drawings U2579AA Hyd psh-04.dgn

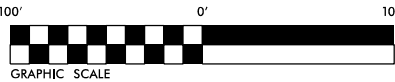
PERMIT DRAWING
SHEET 5 OF 32

PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		4	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



S DENOTES IMPACTS IN
SURFACE WATER

TS DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

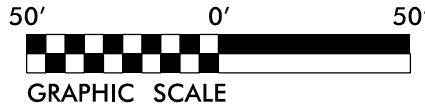


11/16/2018
FBrooks
P: 2017 17322.09 U-2579AA Winston-Salem, NC V&M Hydraulics PERMITS Environmental Drawings U2579AA Hyd psh-04 con.dgn

REVISIONS

8/17/99

PERMIT DRAWING
SHEET 6 OF 32



GRAPHIC SCALE

SITE 1

CL. I RIP RAP
W/GEOTEXTILE
LENGTH=14 FT.

SEE DETAIL AE

PDE

CL. B RIP RAP

JB w/MH

42"

18" w ELBOWS

2GI

2GI

S 34°59'35.5"W

42" RCP-V (NOT BURIED)

-Y2FLYCA-

-Y2RPB-

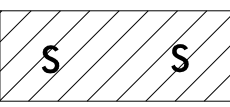
18" w ELBOWS

JB w/MH

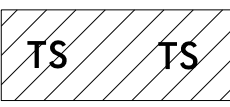
42"

HW

LATERAL 2' BASE DITCH
SEE DETAIL A



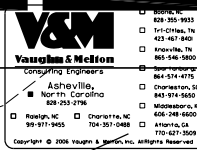
DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO.	SHEET NO.
U-2579AA	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



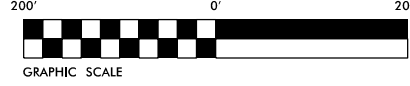
11/16/2018
FBrooks
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MATCHLINE
SHEET 16

REMOVE

MATCHLINE SHEET 18
-ST. 25 + 00.000
-ST. 25 + 00.000

ENLARGEMENTS INCLUDED
PERMIT DRAWING SHEETS
9 & 10

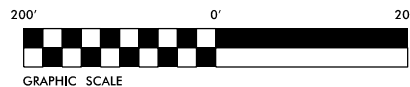


- | | |
|---|--|
|  | DENOTES IMPACTS IN SURFACE WATER |
|  | DENOTES TEMPORARY IMPACTS IN SURFACE WATER |
|  | DENOTES IMPACTS IN SURFACE WATER (POND) |
|  | DENOTES HAND CLEARING |
|  | DENOTES FILL IN WETLAND |

MATCHLINE
SHEET 16


 MATCHLINE SHEET 18
 -STAIRS- 25 + 00.000

ENLARGEMENTS INCLUDED
PERMIT DRAWING SHEETS
9 & 10



- | | |
|---|---|
|  | DENOTES IMPACTS IN
SURFACE WATER |
|  | DENOTES TEMPORARY
IMPACTS IN SURFACE WATER |
|  | DENOTES IMPACTS IN
SURFACE WATER
(POND) |
|  | DENOTES HAND
CLEARING |
|  | DENOTES FILL IN
WETLAND |

PERMIT DRAWING
SHEET 9 OF 32

PROJECT REFERENCE NO.	SHEET NO.
U-2579AA	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

BANK STABILIZATION
RIP RAP AT
EMBANKMENT
SEE DETAIL AA

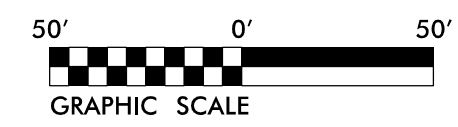
INLET TYPICAL
SEE DETAIL CUL 3-2
BANK STABILIZATION

SEE DETAIL CUL 3-1
MULTI-BARREL
CULVERT DETAIL

FALSE SUMP
OUTLET TYPICAL
SEE DETAIL CUL 3-3

SPECIAL CUT DITCH
SEE DETAIL J

SPECIAL LATERAL V DITCH
SEE DETAIL D



- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 3

SITE 4

REVISIONS

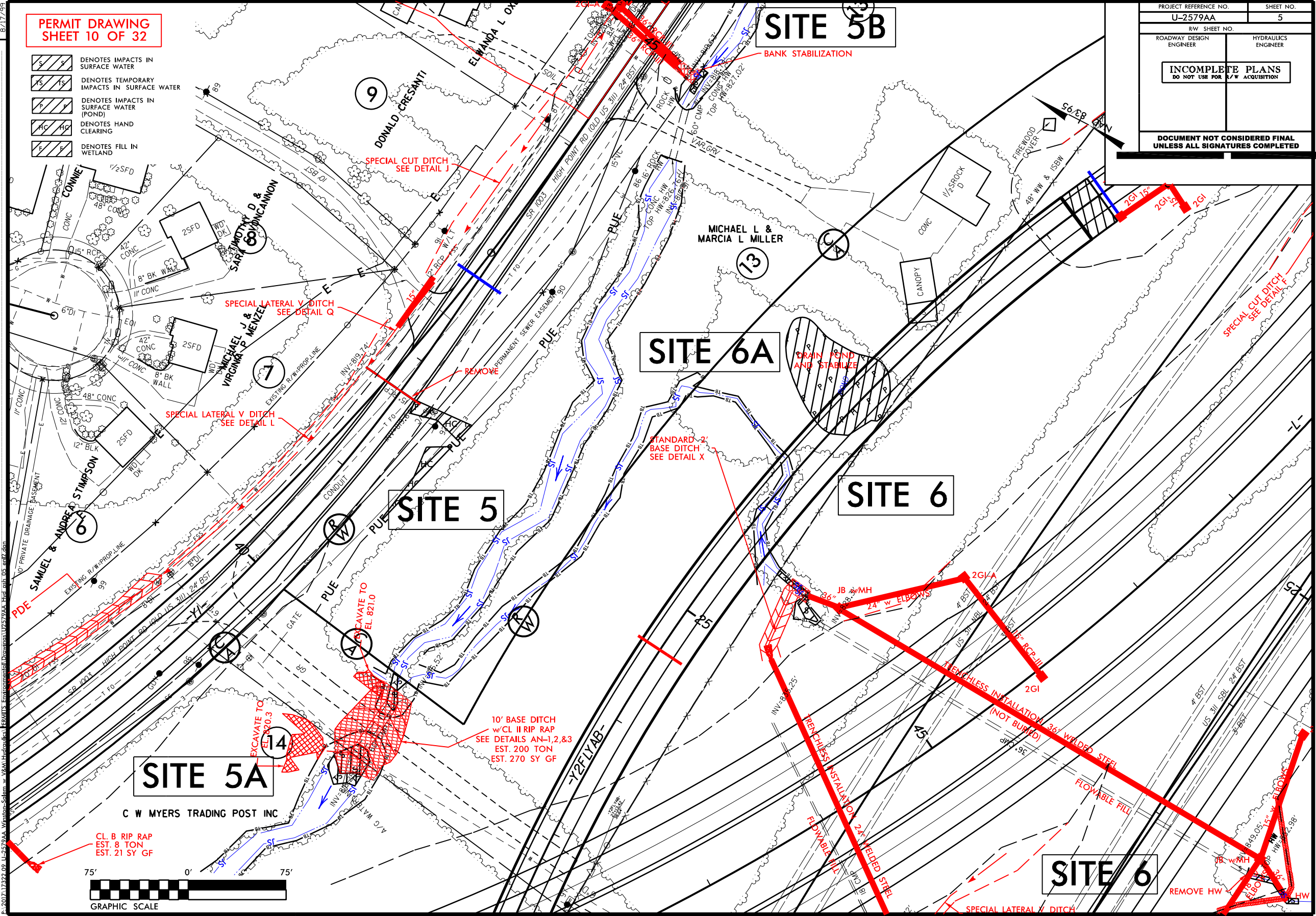
11/16/2018
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11/6/2018
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8/17/99
PERMITS: Environmental Drawings\U-2579AA.dwg
REV. 05 and 07.dwg

PERMIT DRAWING
SHEET 10 OF 32

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES IMPACTS IN SURFACE WATER (POND)
- DENOTES HAND CLEARING
- DENOTES FILL IN WETLAND

REVISIONS



PROJECT REFERENCE NO.	SHEET NO.
U-2579AA	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



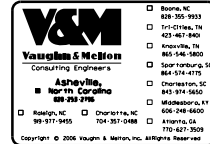
DENOTES IMPACTS IN
SURFACE WATER



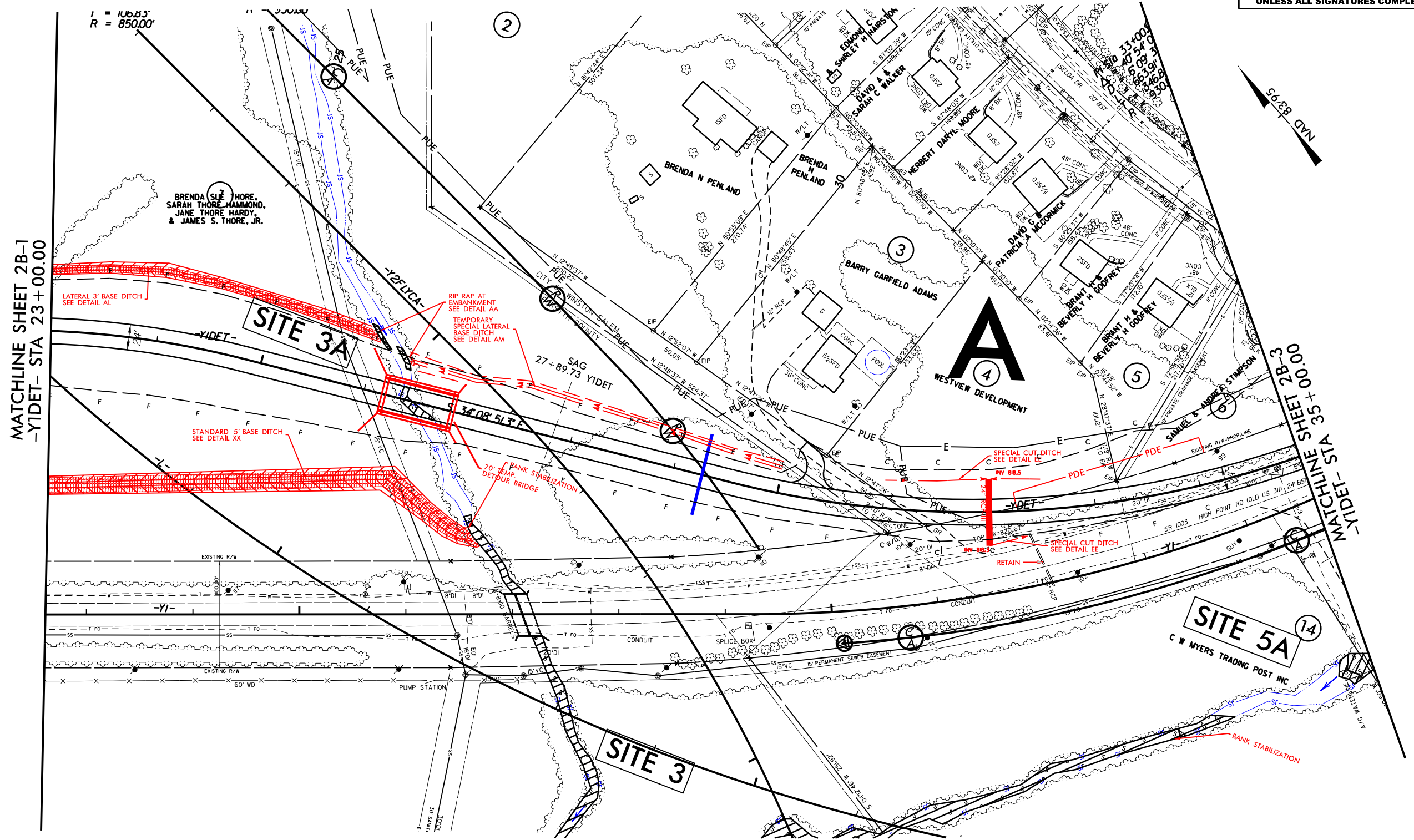
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 10A OF 32

DETAIL FOR HIGH POINT RD ON-SITE DETOUR (-YIDET-)



PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		2B-2	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



NOTES:
SEE SHEETS 41 & 42 FOR -YIDET- PROFILE
SEE SHEETS 5, 15 & 16 FOR -YI- PLANS AND CURVE DATA



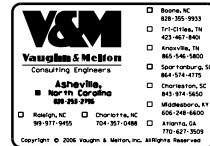
DENOTES IMPACTS IN
SURFACE WATER



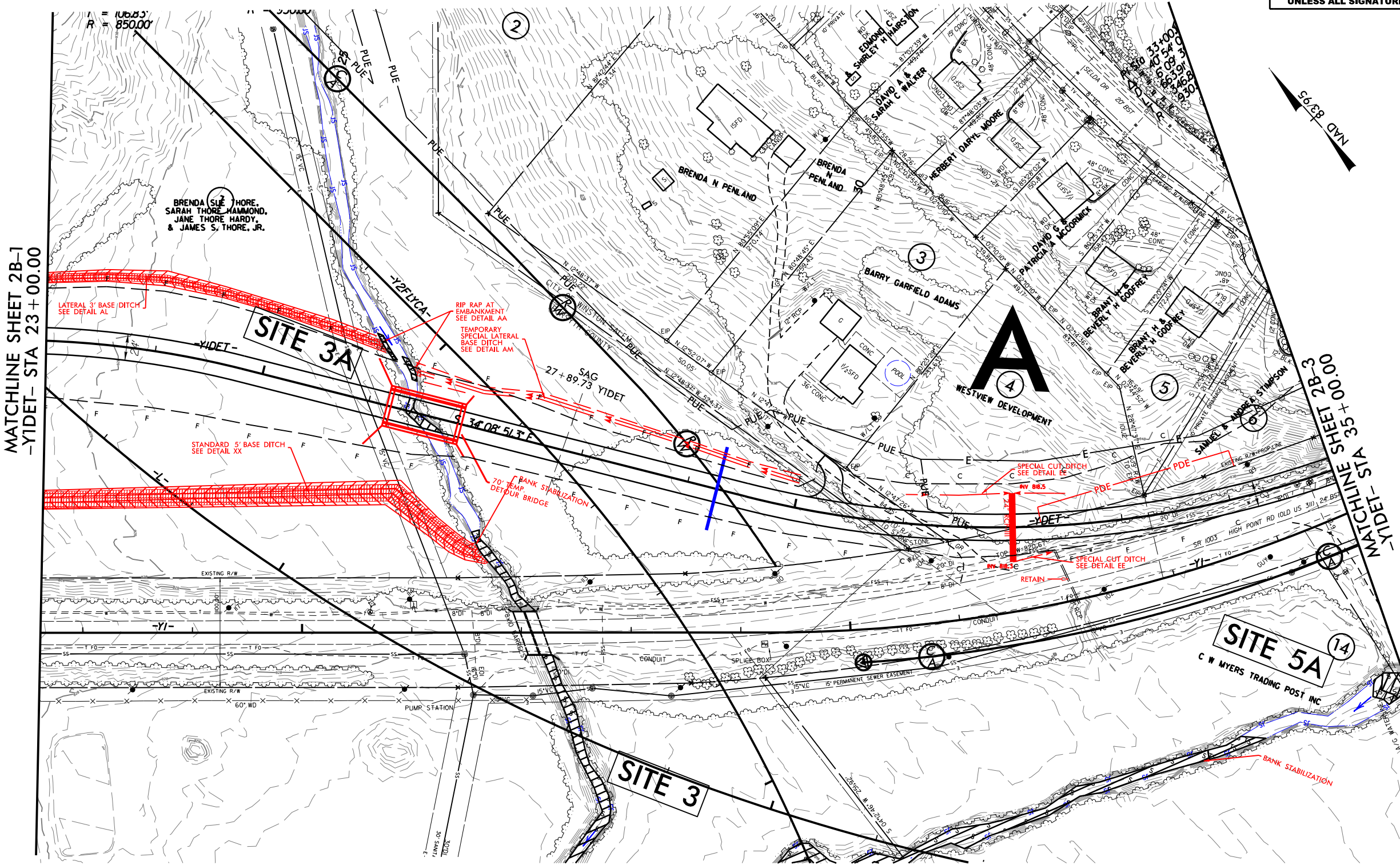
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 10B OF 32

DETAIL FOR HIGH POINT RD ON-SITE DETOUR (-YIDET-)



PROJECT REFERENCE NO.	SHEET NO.
U-2579AA	2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

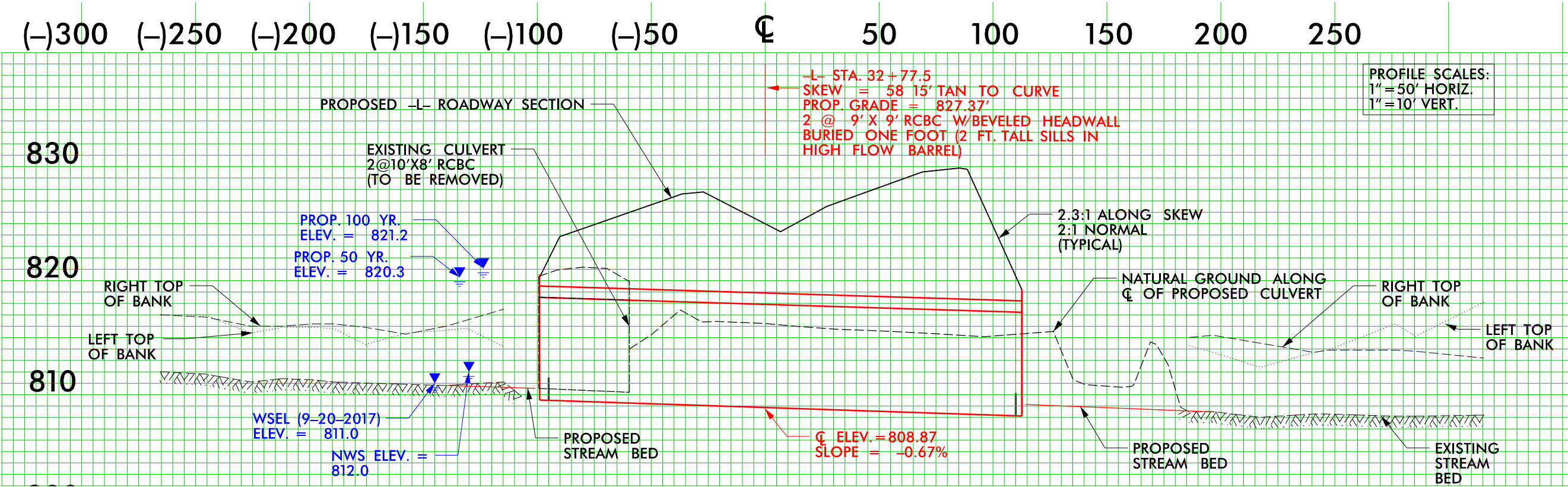


NOTES:
SEE SHEETS 41 & 42 FOR -YIDET- PROFILE
SEE SHEETS 5, 15 & 16 FOR -YI- PLANS AND CURVE DATA

PROJECT REFERENCE NO.	SHEET NO.
U-2579AA	
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	

SITE 3

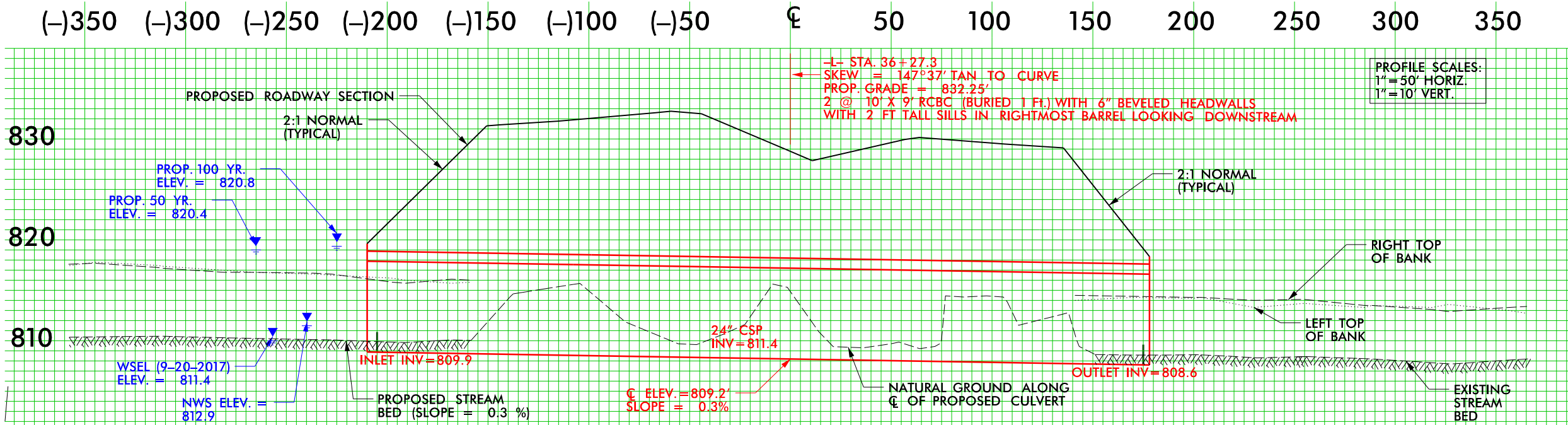
PERMIT DRAWING
SHEET 11 OF 32



PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA			
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			

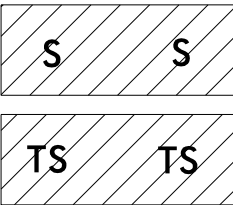
SITE 4

PERMIT DRAWING
SHEET 12 OF 32



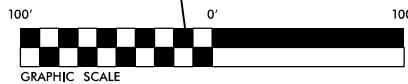
PERMIT DRAWING
SHEET 13 OF 32

PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		6	
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			



S
DENOTES IMPACTS IN
SURFACE WATER

TS
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



MATCHLINE SHEET 5
-L- STA. 47 + 50.00

MATCHLINE SHEET 5
-Y2FLYAB- STA. 21 + 80.00

MATCHLINE SHEET 5
-Y2RPC- STA. 24 + 60.00

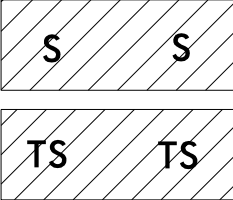
MATCHLINE SHEET 7 -L- STA. 60 + 50.00

SEE SHEETS 19 THROUGH 20 FOR -L- PROFILE
SEE SHEET 23 FOR -Y2FLYAB- PROFILE
SEE SHEET 35 FOR -Y2RPC- PROFILE

PERMIT DRAWING
SHEET 14 OF 32



PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		6	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



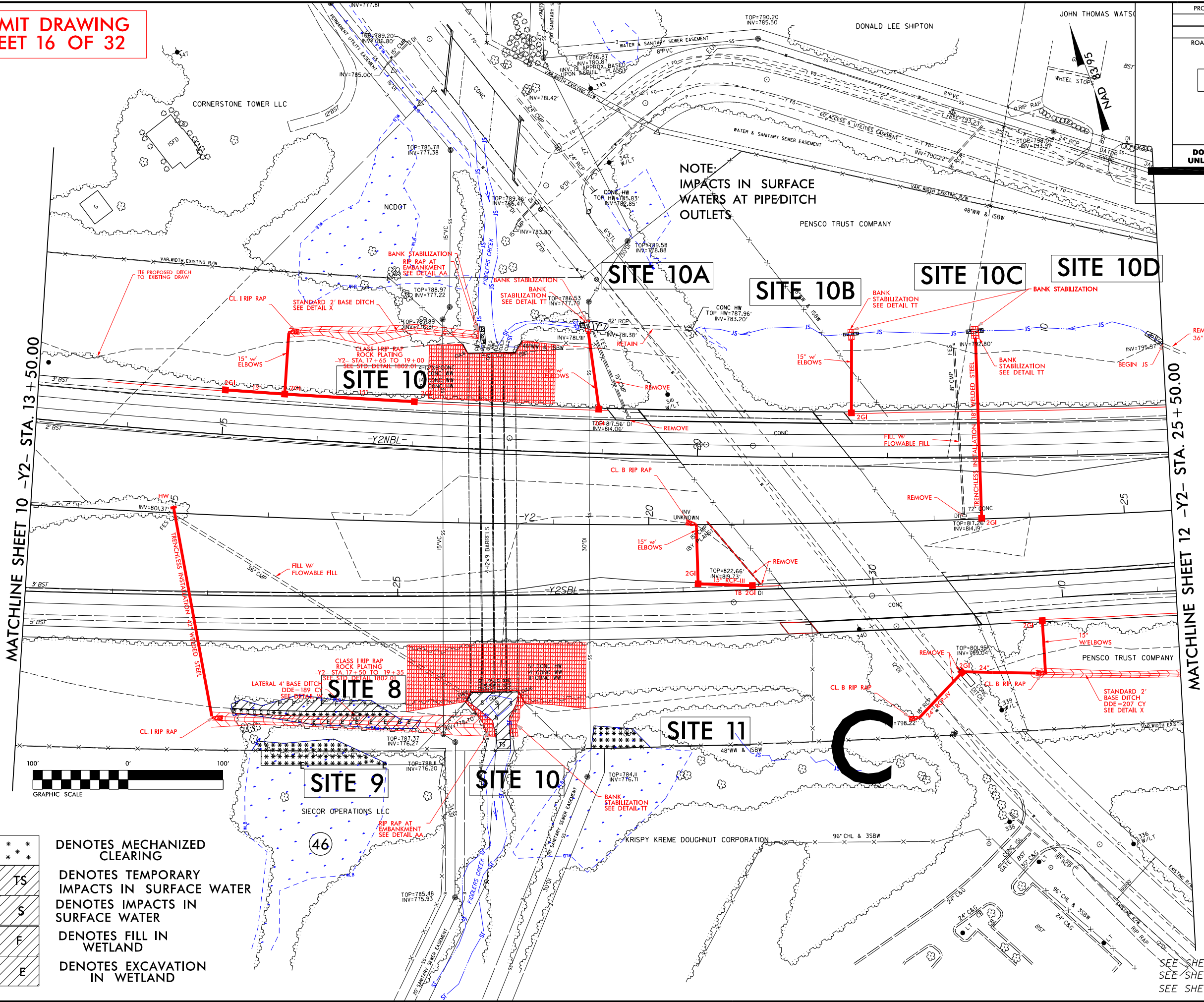
DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

SEE SHEETS 19 THROUGH 20 FOR -L- PROFILE
SEE SHEET 23 FOR -Y2FLYAB- PROFILE
SEE SHEET 35 FOR -Y2RPC- PROFILE

PERMIT DRAWING
SHEET 16 OF 32

PROJECT REFERENCE NO.	SHEET NO.
U-2579AA	11
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	



TS	TS
S	S
F	F
E	E

DENOTES MECHANIZED
CLEARING

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN
SURFACE WATER

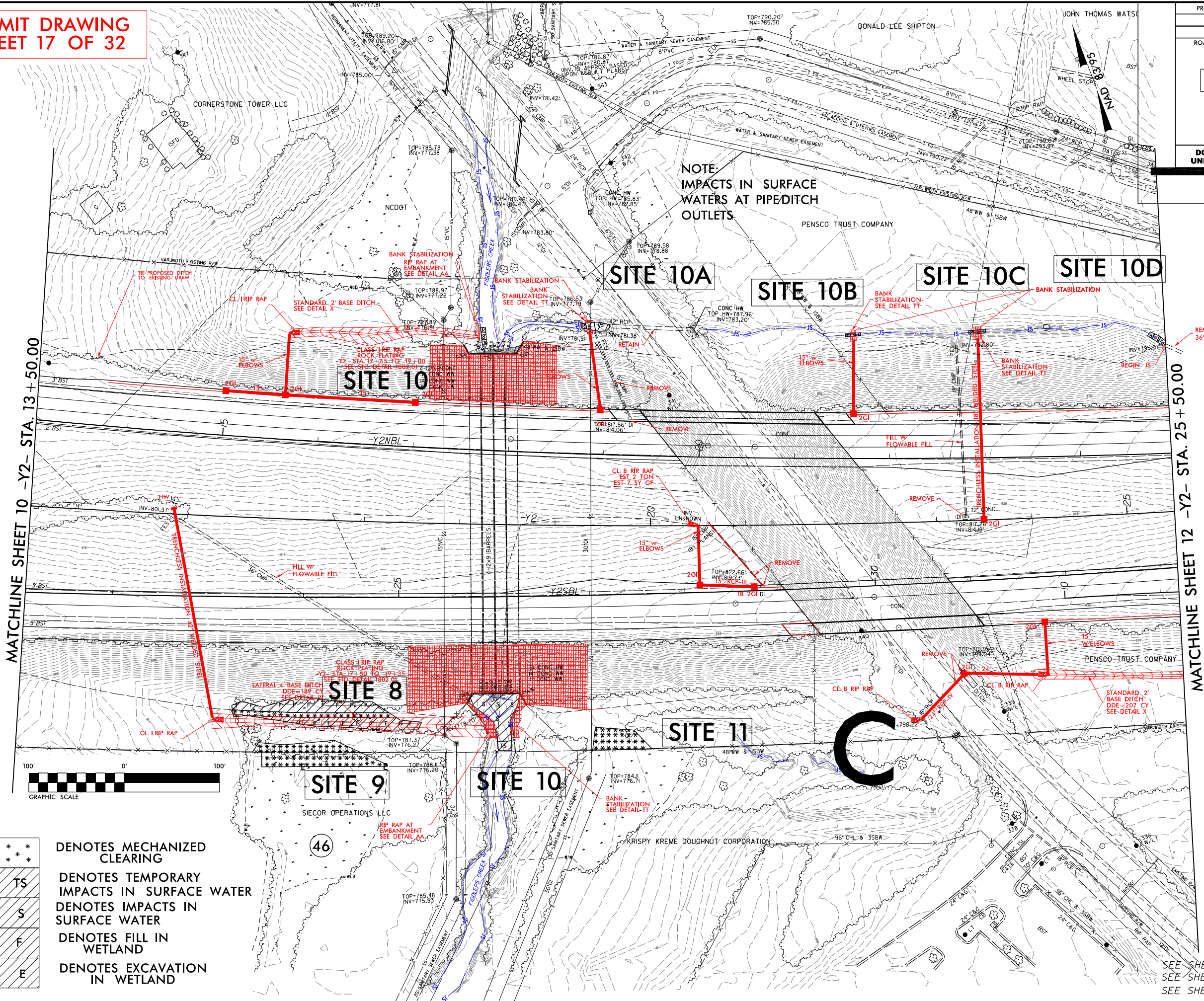
DENOTES FILL IN
WETLAND

DENOTES EXCAVATION
IN WETLAND

SEE SHEET 26 FOR -Y2NBL- PROFILE
SEE SHEET 29 FOR -Y2SBL- PROFILE
SEE SHEET 38 FOR -Y3RPC- PROFILE

PERMIT DRAWING
SHEET 17 OF 32

PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		11	
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			



*****	*****
TS TS	TS TS
S S	S S
F F	F F
E E	E E

DENOTES MECHANIZED
CLEARING

TS TS
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

S S
DENOTES IMPACTS IN
SURFACE WATER

F F
DENOTES FILL IN
WETLAND

E E
DENOTES EXCAVATION
IN WETLAND

SEE SHEET 26 FOR -Y2NBL- PROFILE
SEE SHEET 29 FOR -Y2SBL- PROFILE
SEE SHEET 38 FOR -Y3RPC- PROFILE

11/16/2018
FBrooks
P:\2017\17322.09 U-2579AA Winston-Salem_V&M_Hydraulics\PERMITS\Environmental Drawings\U2579AA Hyd psh 11-con.dgn

8/17/99

11/16/2018 FBrooks P:\2017\17322.09 U-2579AA Winston-Salem\Hydraulics\PERMITS Environmental Drawings\U2579AA Hyd psh 11-enl.dgn

REVISIONS

PERMIT DRAWING
SHEET 18 OF 32

HW
INV=801.37

TRENCHLESS INSTALLATION 42" WELDED STEEL

FILL W/
FLOWABLE FILL

EST 2 FOR
EST 7 SY GF

15" w/
ELBOWS

2GI

15" RCP-III

TB 2GI DI

LATERAL 4' BASE DITCH
DDE=189 CY
SEE DETAIL W

CLASS I RIP RAP
ROCK PLATING
-Y2- STA. 17+50 TO 19+35
SEE STD DETAIL 1802.01

SITE 8

CL. I RIP RAP

SITE 9

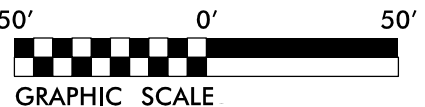
SIECOR OPERATIONS LLC

SITE 10

SITE 11

BANK
STABILIZATION
SEE DETAIL TT

KRISPY KREME DOUGHNUT CORPORATION

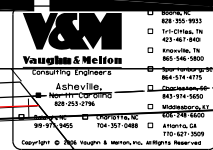


- DENOTES MECHANIZED CLEARING
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND

RIp RAP AT
EMBANKMENT
SEE DETAIL AA

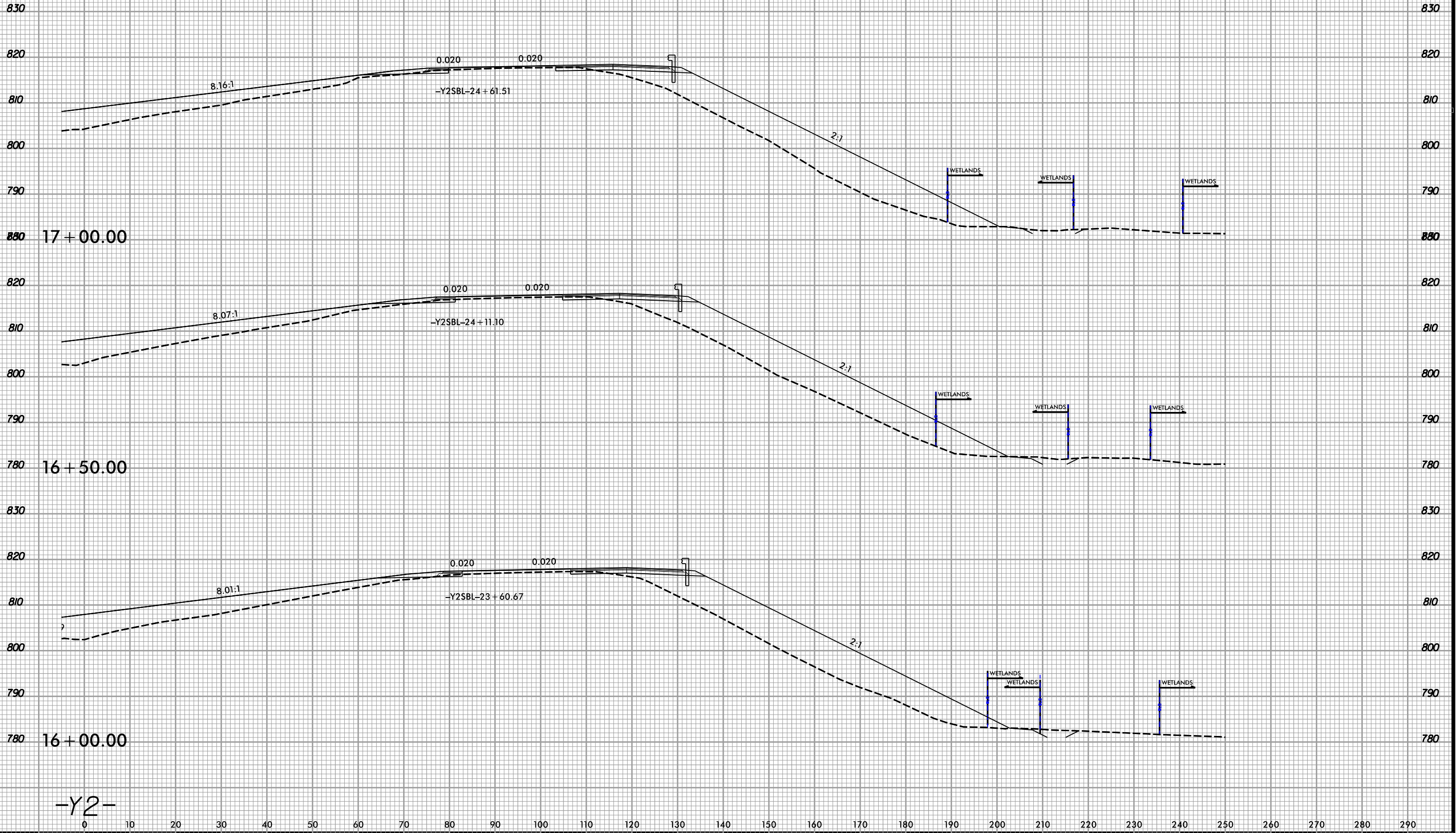
SEE SHEET 26 FOR -Y2NBL- PROFILE
SEE SHEET 29 FOR -Y2SBL- PROFILE
SEE SHEET 38 FOR -Y3RPC- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-2579AA	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

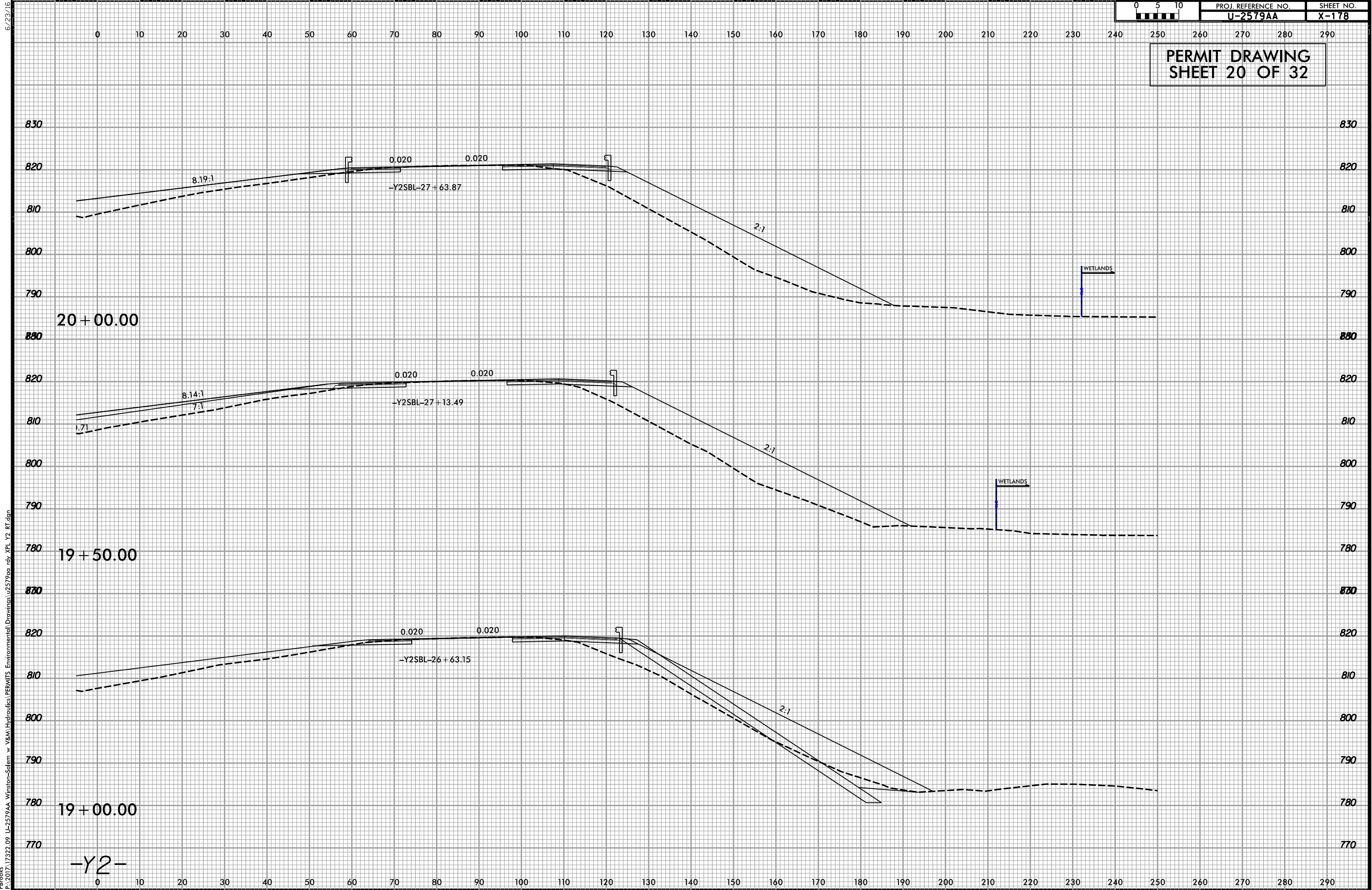


6/23/16

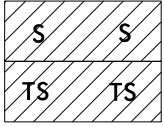
PERMIT DRAWING
SHEET 19 OF 32



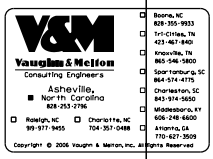
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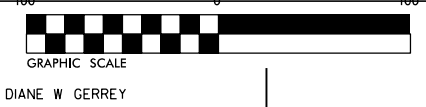
PERMIT DRAWING
SHEET 21 OF 32



DENOTES IMPACTS IN
SURFACE WATER
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



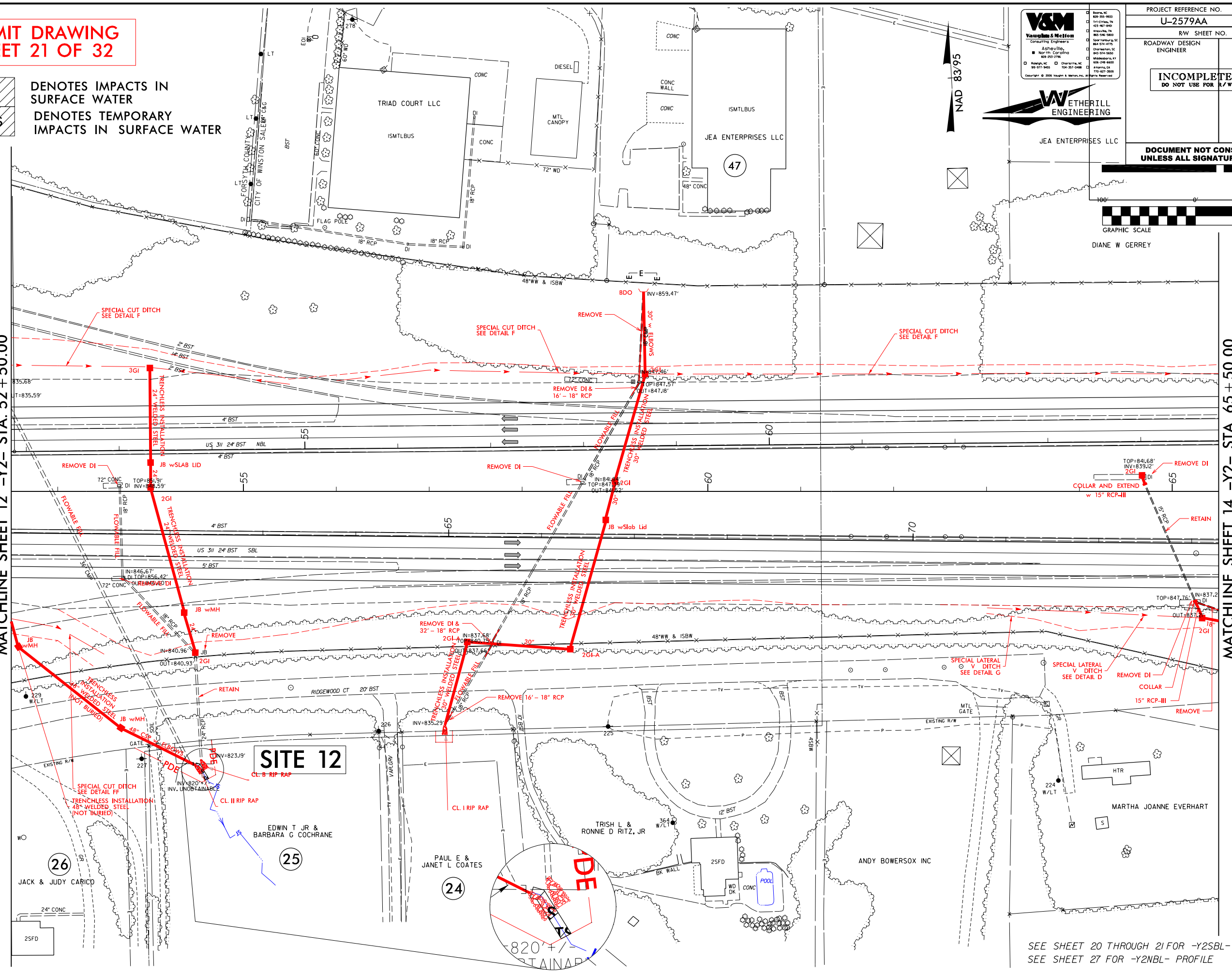
PROJECT REFERENCE NO. U-2579AA		SHEET NO. 13	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



DIANE W GERREY

MATCHLINE SHEET 12 -Y2- STA. 52 + 50.00

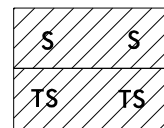
MATCHLINE SHEET 14 -Y2- STA. 65 + 50.00



SEE SHEET 20 THROUGH 21 FOR -Y2SBL- PROFILE
SEE SHEET 27 FOR -Y2NBL- PROFILE

REVISIONS
11/6/2018 FBrooks
P. 2017.17322.09 U-2579AA Winston-Salem, w&v M&H Hydraulics PERMIT Environmental Drawings U-2579AA.indd ash133idan

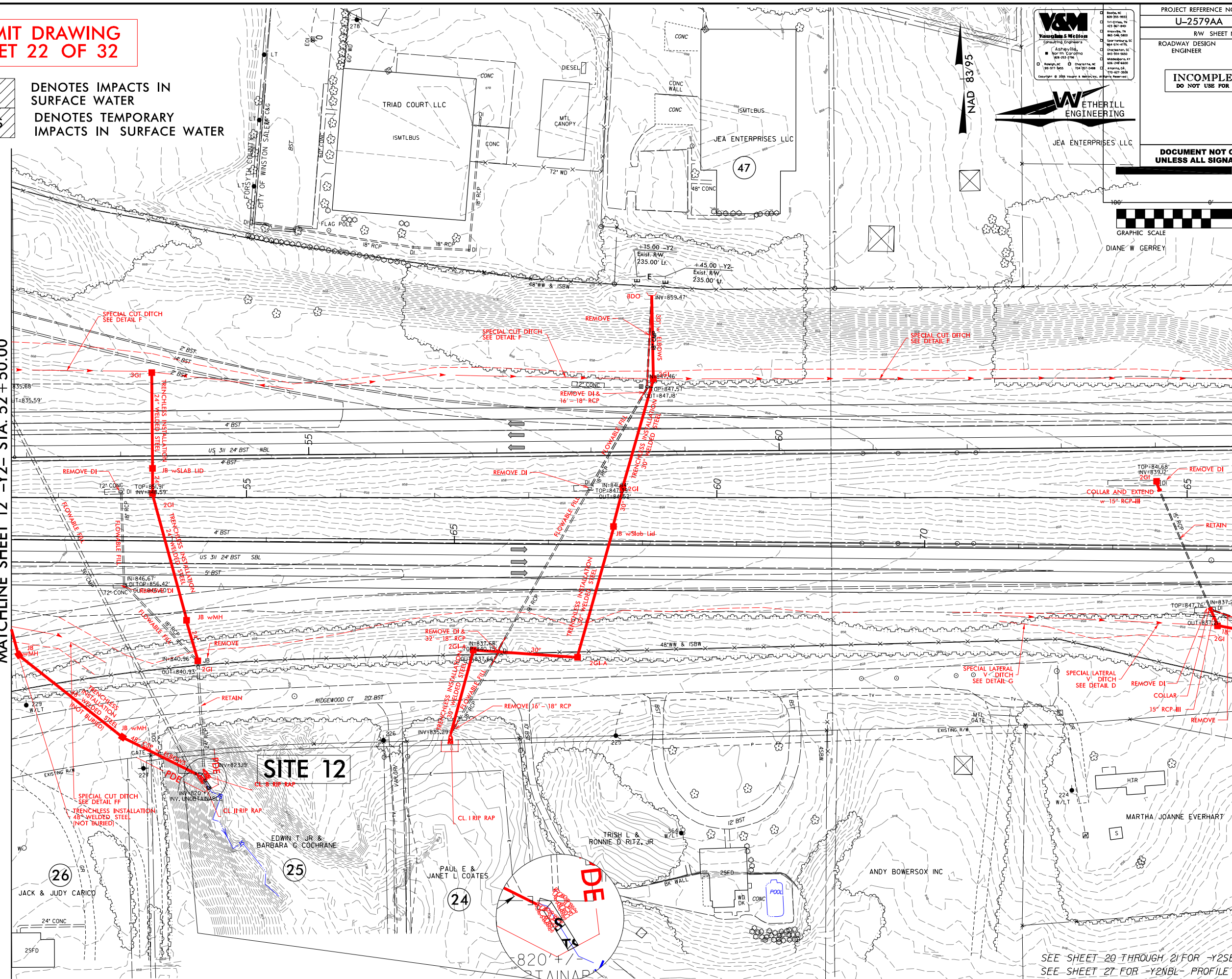
PERMIT DRAWING
SHEET 22 OF 32



DENOTES IMPACTS IN
SURFACE WATER
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

MATCHLINE SHEET 12 -Y2- STA. 52 + 50.00

MATCHLINE SHEET 14 -Y2- STA. 65 + 50.00



V&M
Vannoy & McLean
Consulting Engineers
Asheville, NC
100-111 Carolina
808-253-9786
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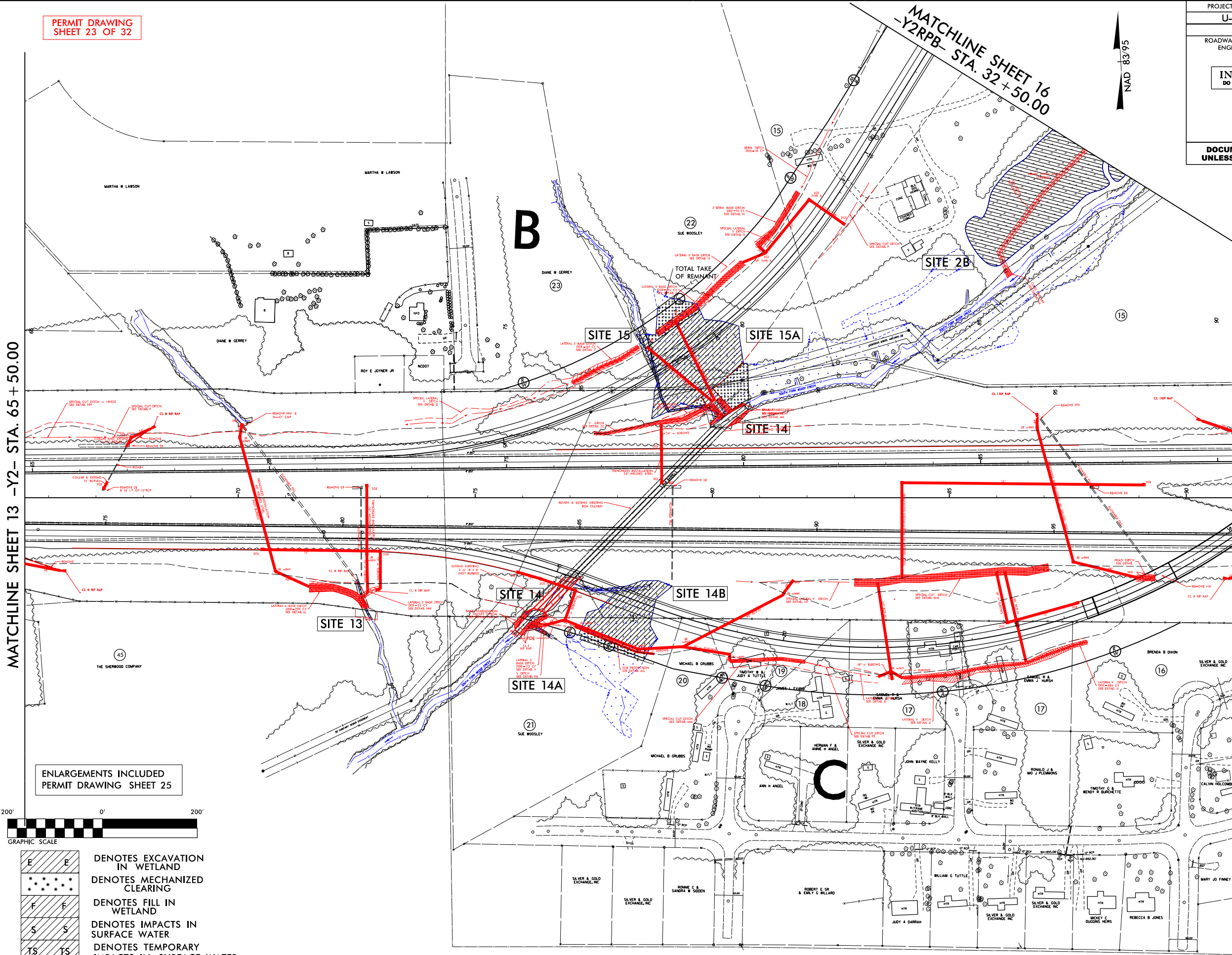
WETHERILL
ENGINEERING
JEA ENTERPRISES LLC

PROJECT REFERENCE NO. U-2579AA		SHEET NO. 13	
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			



SEE SHEET 20 THROUGH 21 FOR -Y2SBL- PROFILE
SEE SHEET 27 FOR -Y2NBL- PROFILE

REVISIONS



PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		14	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

V&M
Vannoy & Melton
Consulting Engineers
Asheville, NC
1001 N. Car. Hwy.
828-253-2796
99-977-9455

W
WETHERILL
ENGINEERING

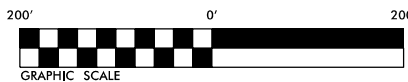
Boone, NC 828-755-9933
Spartanburg, SC 803-535-9933
Asheville, NC 828-253-2796
Charlotte, NC 704-357-0488
Atlanta, GA 770-457-1509

**MATCHLINE SHEET 5
-Y2- STA. 91 + 00.00
-Y2FLYCA- STA. 29 + 98.44**

SEE SHEET 25 FOR -Y2FLYCA- PROFILE
SEE SHEETS 27 THROUGH 28 FOR -Y2NBL- PROFILE
SEE SHEETS 31 THROUGH 32 FOR -Y2SBL- PROFILE
SEE SHEETS 33 THROUGH 34 FOR -Y2RPB- PROFILE

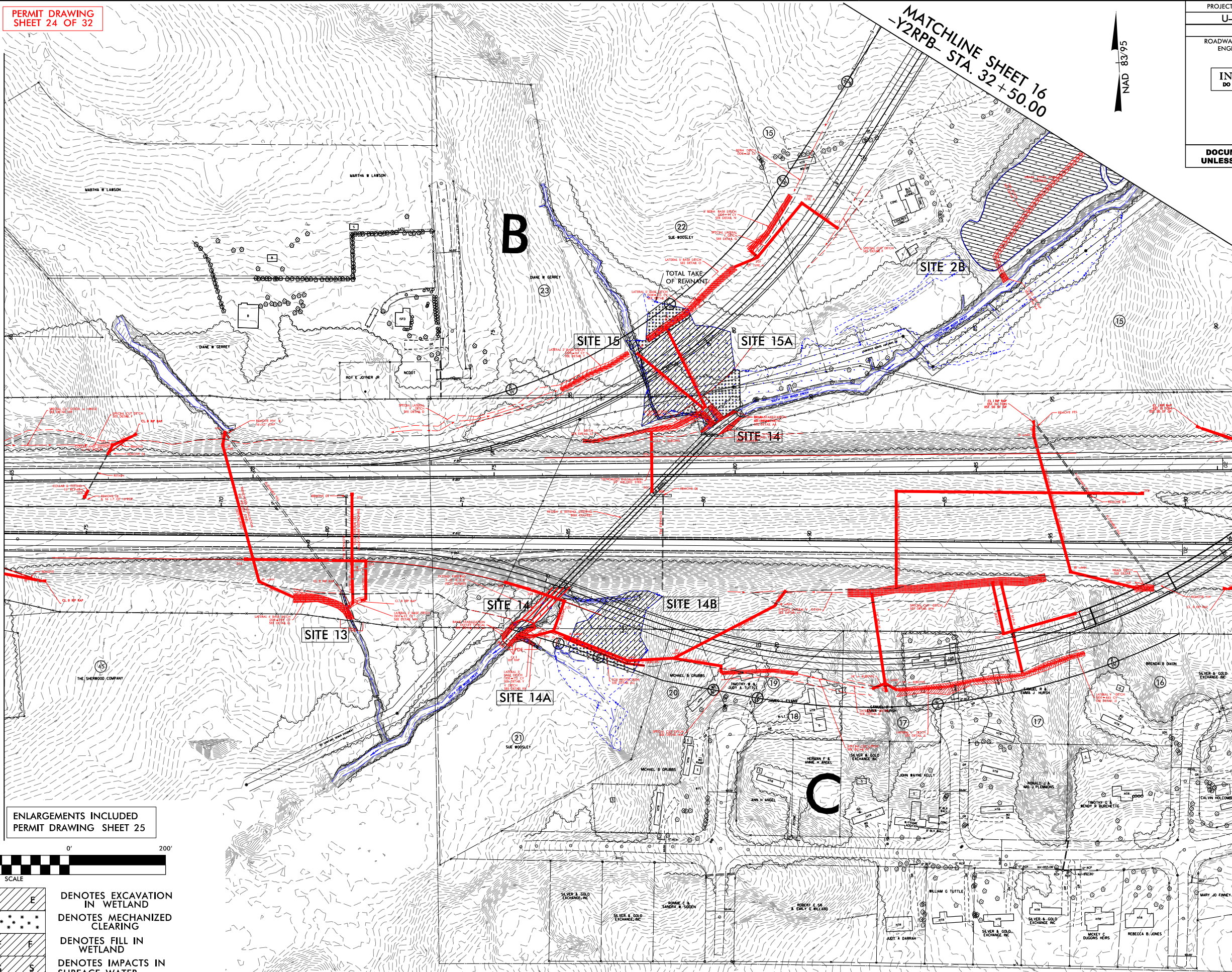
PERMIT DRAWING
SHEET 24 OF 32

MATCHLINE SHEET 13 -Y2- STA. 65 + 50.00



- | | | |
|----|----|---|
| E | E | DENOTES EXCAVATION
IN WETLAND |
| * | * | |
| F | F | DENOTES MECHANIZED
CLEARING |
| S | S | |
| TS | TS | DENOTES IMPACTS IN
SURFACE WATER |
| | | |
| | | DENOTES TEMPORARY
IMPACTS IN SURFACE WATER |
| | | |

ENLARGEMENTS INCLUDED
PERMIT DRAWING SHEET 25



NAD 83 95

PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA		14	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



MATCHLINE SHEET 5
-Y2- STA. 91 + 00.00
-Y2FLYCA- STA. 29 + 98.44

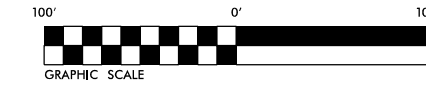
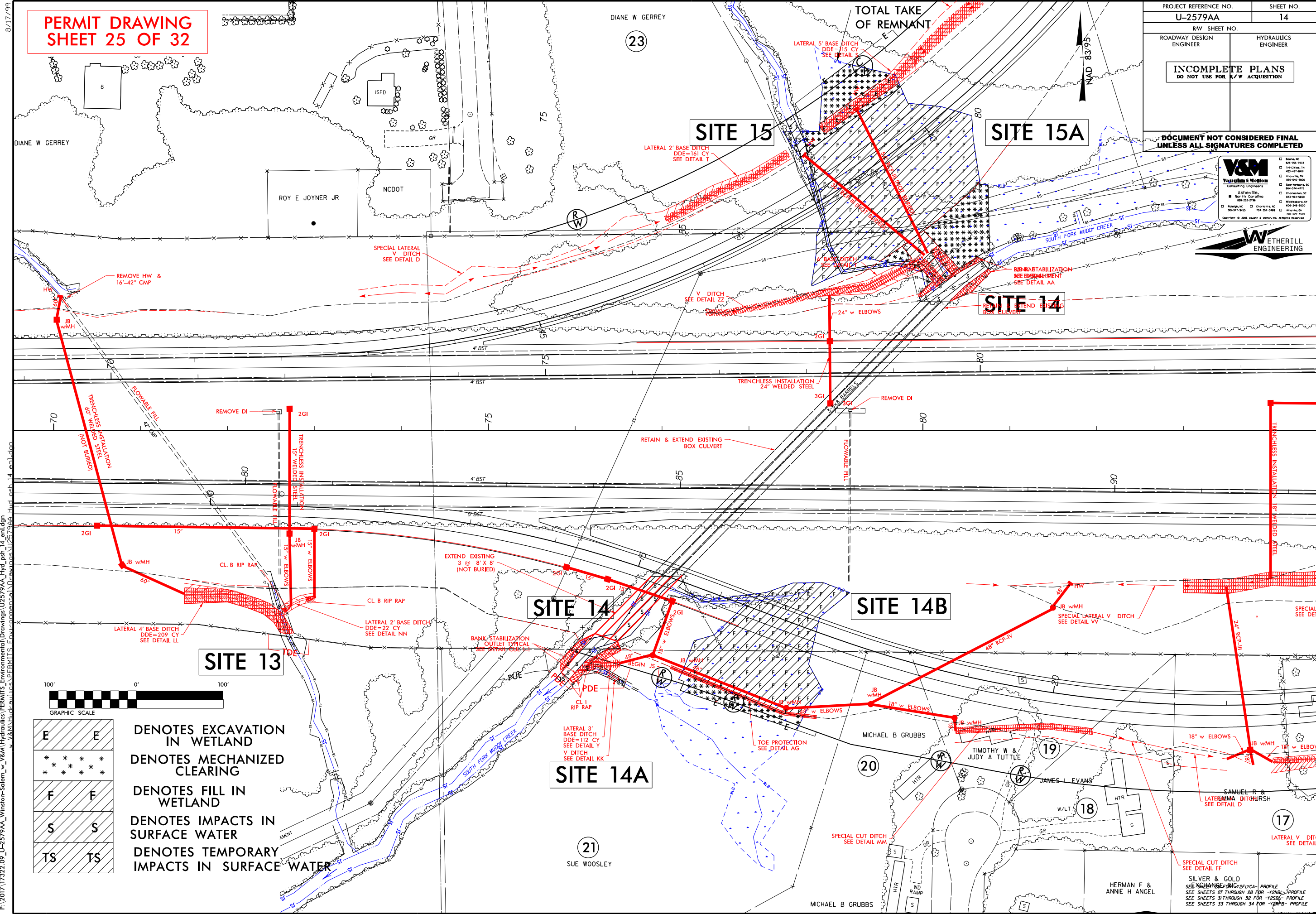
SEE SHEET 25 FOR -Y2FLYCA- PROFILE
SEE SHEETS 27 THROUGH 28 FOR -Y2NBL- PROFILE
SEE SHEETS 31 THROUGH 32 FOR -Y2SBL- PROFILE
SEE SHEETS 33 THROUGH 34 FOR -Y2RPB- PROFILE

PERMIT DRAWING
SHEET 25 OF 32

PROJECT REFERENCE NO. U-2579AA		SHEET NO. 14	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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E	E
*	*
F	F
S	S
TS	TS

DENOTES EXCAVATION
IN WETLAND

DENOTES MECHANIZED
CLEARING

DENOTES FILL IN
WETLAND

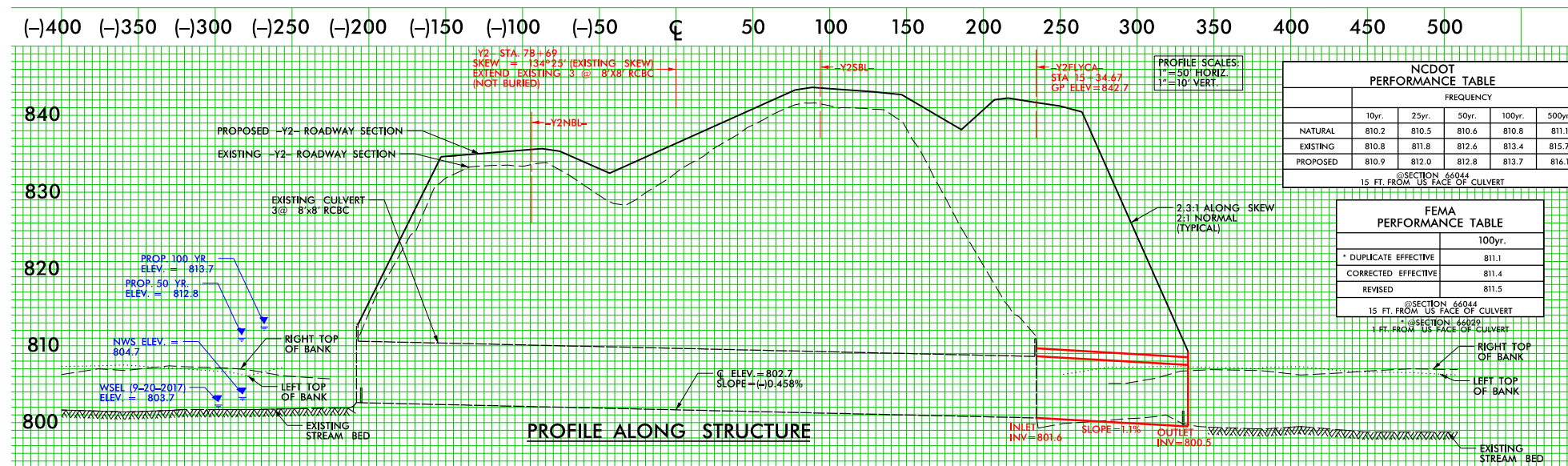
DENOTES IMPACTS IN
SURFACE WATER

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

8/17/99
11/16/2018
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SITE 14

**PERMIT DRAWING
SHEET 26 OF 32**

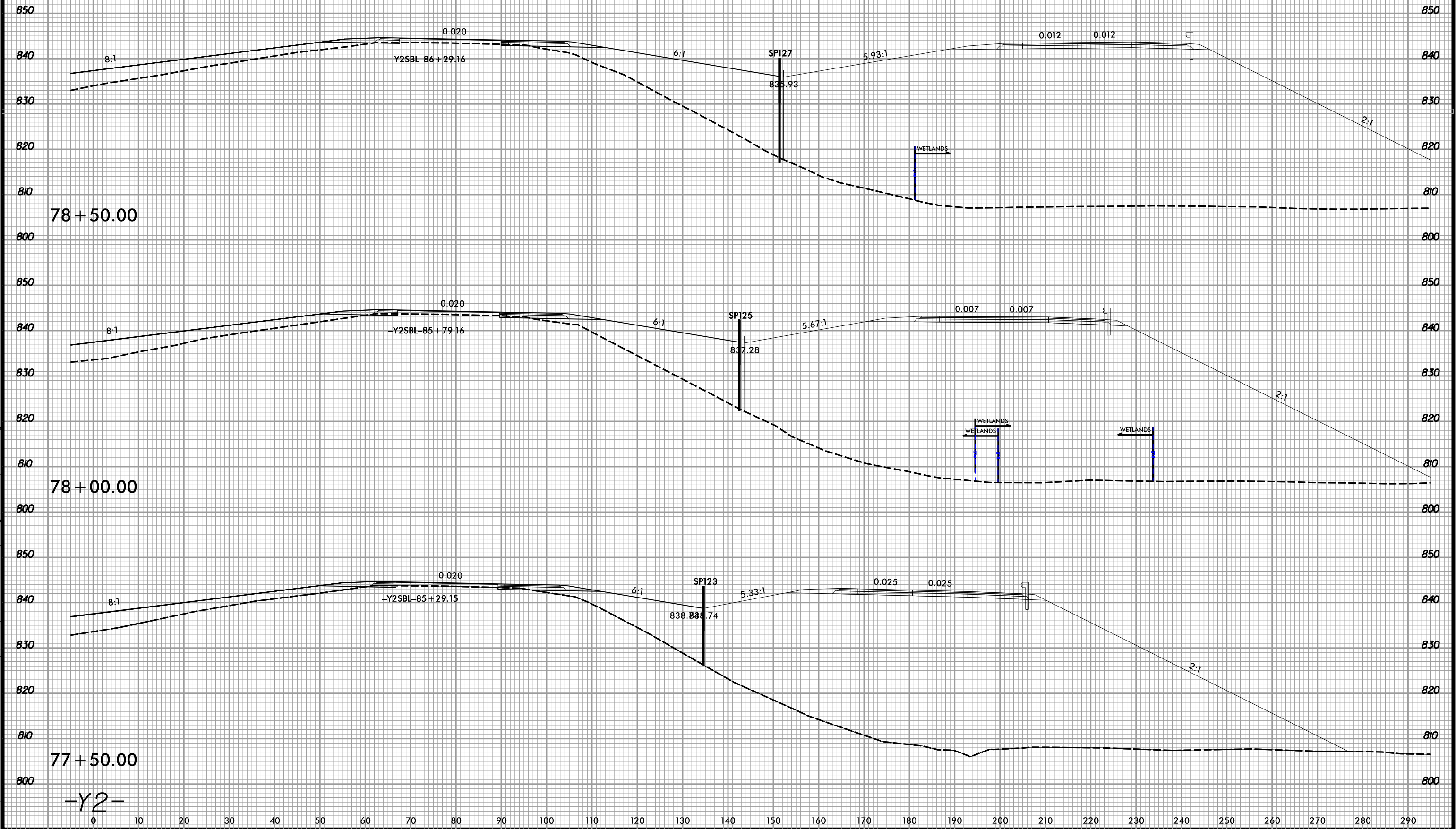


6/23/16



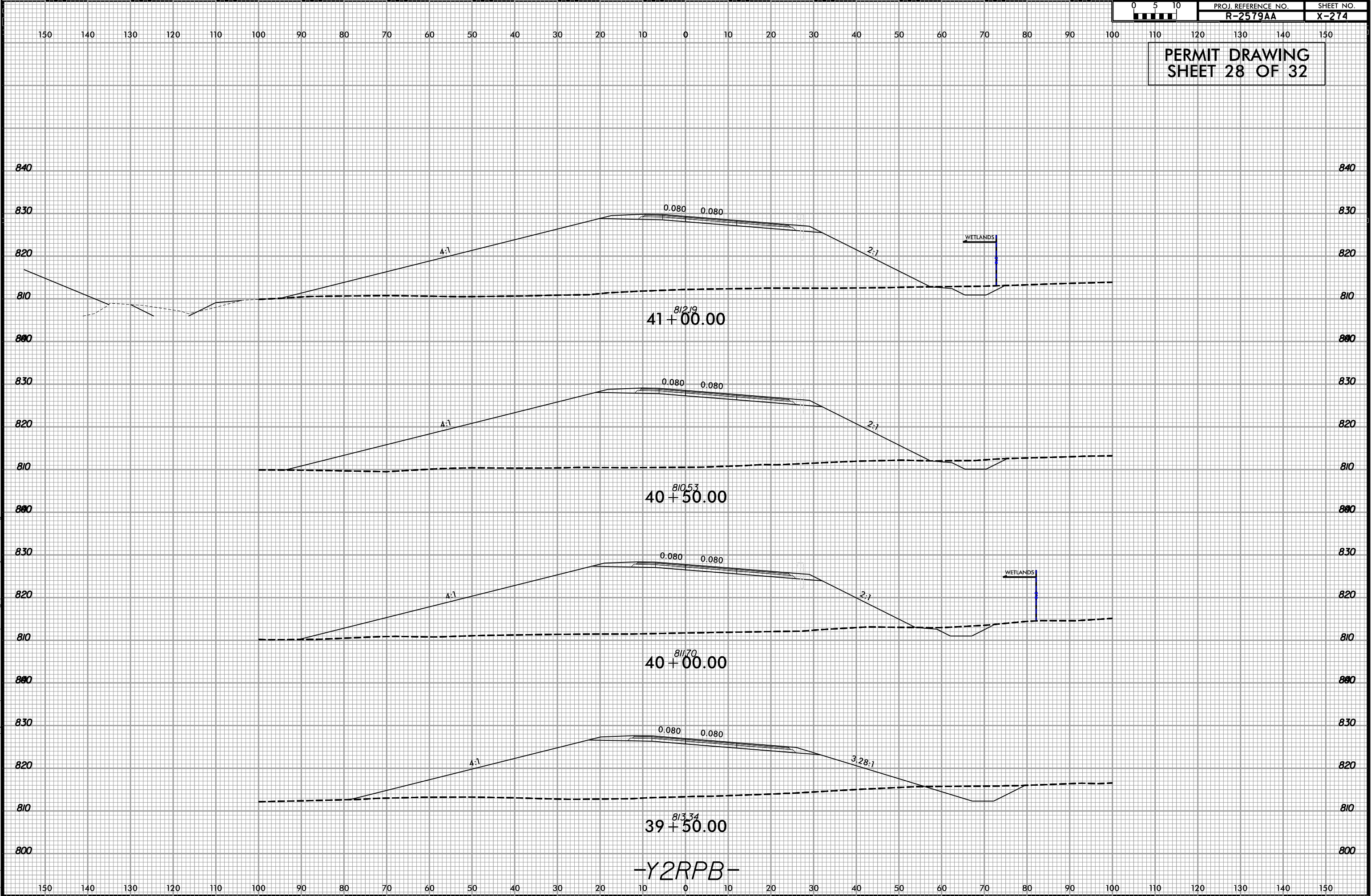
PROJ. REFERENCE NO.	SHEET NO.
U-2579AA	X-208

PERMIT DRAWING
SHEET 27 OF 32



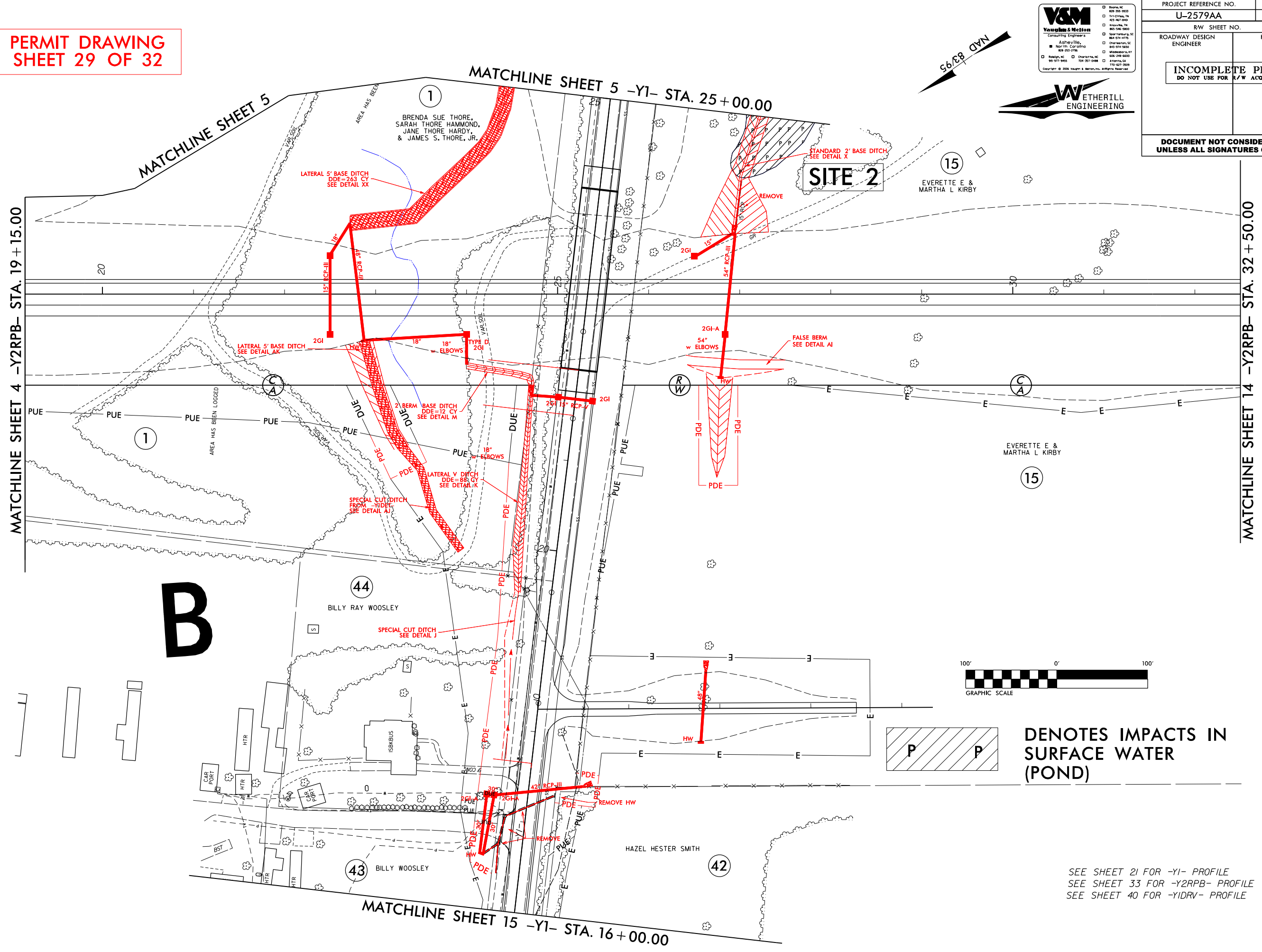
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1/16/2018
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8/17/99
11/4/2018
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11/4/2018
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PERMIT DRAWING
SHEET 29 OF 32

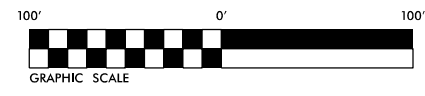


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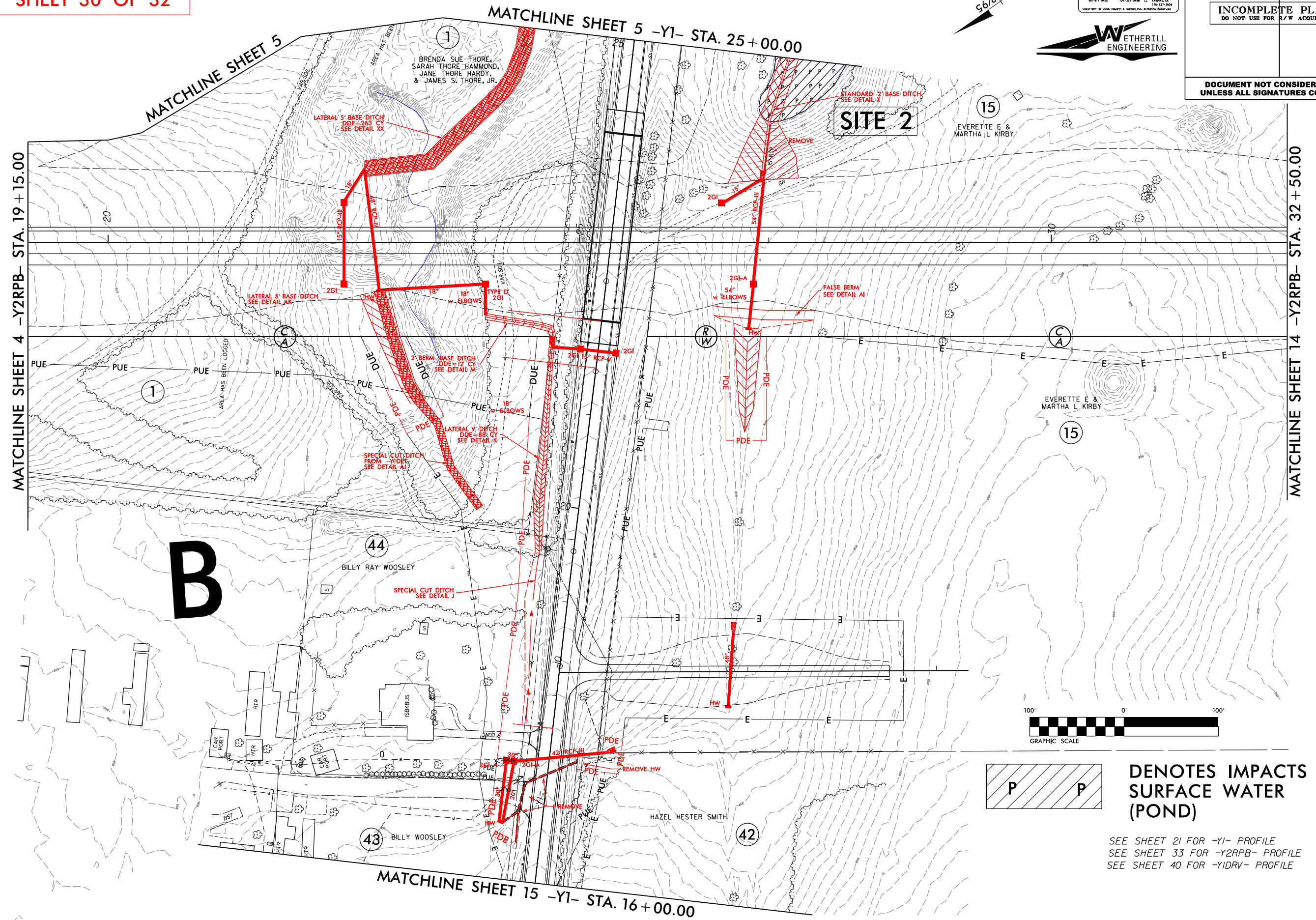
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U-2579AA		16	
RW SHEET NO.			
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DENOTES IMPACTS IN
SURFACE WATER
(POND)

SEE SHEET 21 FOR -Y1- PROFILE
SEE SHEET 33 FOR -Y2RPB- PROFILE
SEE SHEET 40 FOR -Y1DRV- PROFILE

PERMIT DRAWING
SHEET 30 OF 32

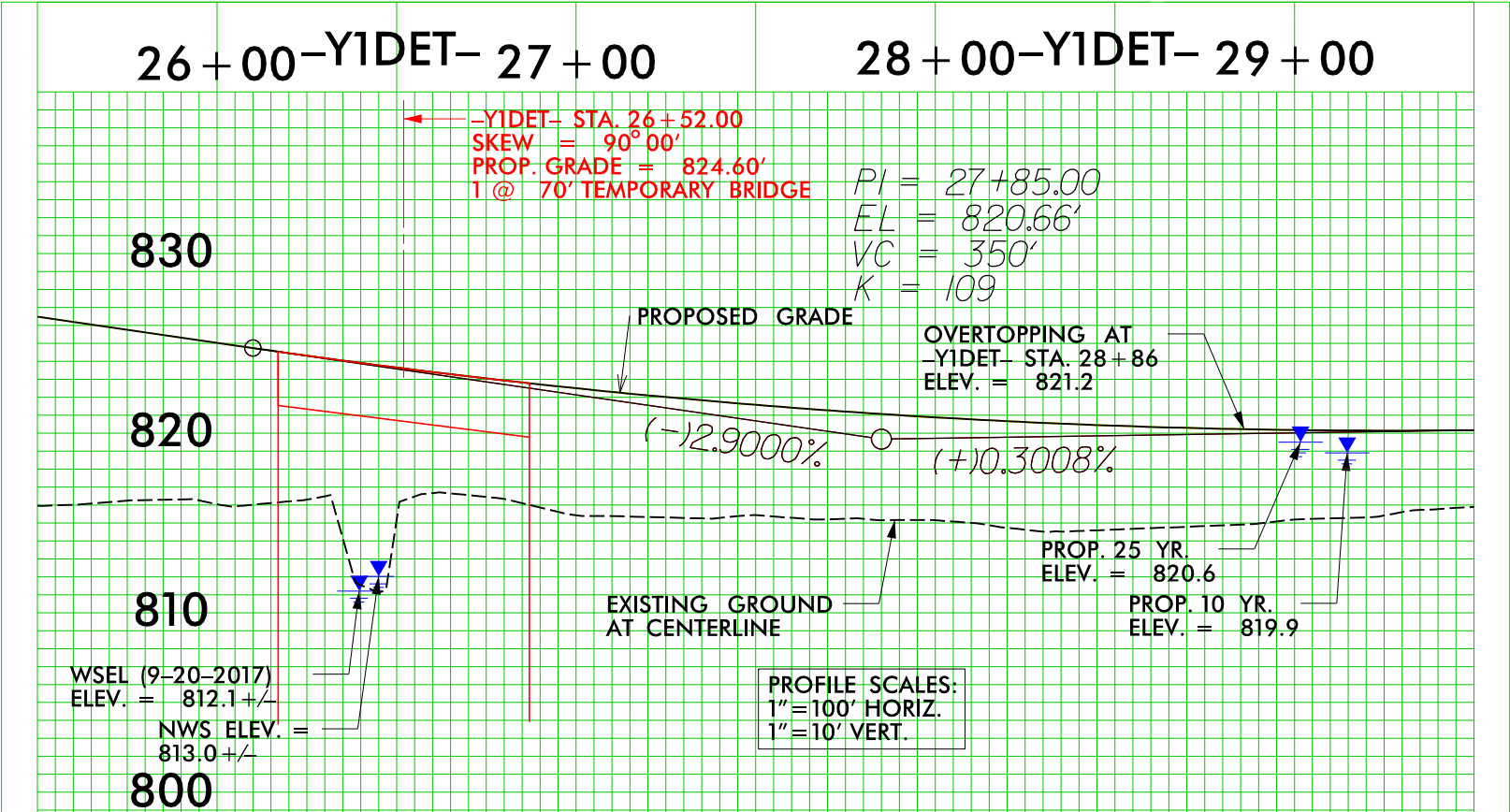


DENOTES IMPACTS IN
SURFACE WATER
(POND)

SEE SHEET 21 FOR -Y1- PROFILE
SEE SHEET 33 FOR -Y2RPB- PROFILE
SEE SHEET 40 FOR -YIDRV- PROFILE

PROJECT REFERENCE NO.		SHEET NO.	
U-2579AA			
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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PERMIT DRAWING
SHEET 31 OF 32



WETLAND PERMIT IMPACT 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)
1	-L- 15+12	42" RCP-V (Not Buried)							< 0.01	406	40	
2	-Y1- 25+60 RT	Drain and Stabilize Pond						0.50				
2A	-Y1- 28+00 RT	Drain and Stabilize Pond						0.12				
2B	-Y1- 28+60 RT	Drain and Stabilize Pond						2.31				
3	-Y1-32+78	2 @ 9'x9' RCBC						0.07	< 0.01	364	20	
3		Bank Stabilization						< 0.01		26		
3A	-Y1 Det- 26+40	Temp. Road/Detour						< 0.01	< 0.01	20	60	
4	-L- 36+28	2 @ 10'x9' RCBC						0.12	0.01	505	45	
4		Bank Stabilization						0.01		80		
5	-Y1- 41+70 RT	15" Pipe Removal	< 0.01				0.02					
5A	-Y1- 39+50 RT	60" Pipe Removal						0.01	< 0.01	42	20	
5B	-Y1- 45+00 RT	Bank Stabilization						< 0.01	< 0.01	20	10	
6	-L- 45+60	36" Welded Steel						< 0.01	< 0.01	78	20	
6A	-Y2 FLYAB- 23+00	Drain and Stabilize Pond						0.11				
7	-L- 54+04	72" Alt/Welded Steel						0.01	< 0.01	60	20	
7		Bank Stabilization						< 0.01		35		
8	-Y2- 15+70 to 17+65 RT	4' Base Ditch	0.04		0.03	0.02						
9	-Y2- 15+92 to 17+31 RT	Erosion Control Practices				0.06						
10	-Y2- 18+36	Bank Stabilization						0.04	< 0.01	60	20	
10A	-Y2- 19+50 LT	Bank Stabilization						< 0.01	< 0.01	9	22	
10B	-Y2- 22+10 LT	Bank Stabilization						< 0.01	< 0.01	8	10	
10C	-Y2- 23+50 LT	Bank Stabilization						< 0.01	< 0.01	8	10	
10D	-Y2- 25+50 LT	Bank Stabilization						< 0.01	< 0.01	10	10	
11	-Y2- 19+40 to 20+01 RT	Erosion Control Practices				0.26						
12	-Y2- 52+14	RR Pad Outlet						< 0.01	< 0.01	12	10	
13	-Y2- 72+48 RT	60" Alt/Welded Steel						< 0.01	< 0.01	63	25	
14	-Y2- 78+70	3 @ 8'x8' RCBC Extension						0.06	< 0.01	150	20	
14		Bank Stabilization						0.03		97		
14A	-Y2FLYCA- 14+75 to 15+30	3' Base Ditch						< 0.01	< 0.01	50	10	
14B	-Y2FLYCA- 15+68 to 17+46	Y2 FLYCA	0.38			0.05						
15	-Y2RPB- 41+50	36" RCP-III						0.03	0.01	265	50	
15A	-Y2RPB- 39+50 to 42+00	Y2RPB	0.64		0.07	0.21						
TOTALS*:			1.06		0.11	0.60	0.02	3.49	0.07	2368	422	0

*Rounded totals are sum of actual impacts

NOTES:

15A - There will be total take of the remnant, shown in the quantities.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
11/30/2018
Forsythe Co.
U-2579AA