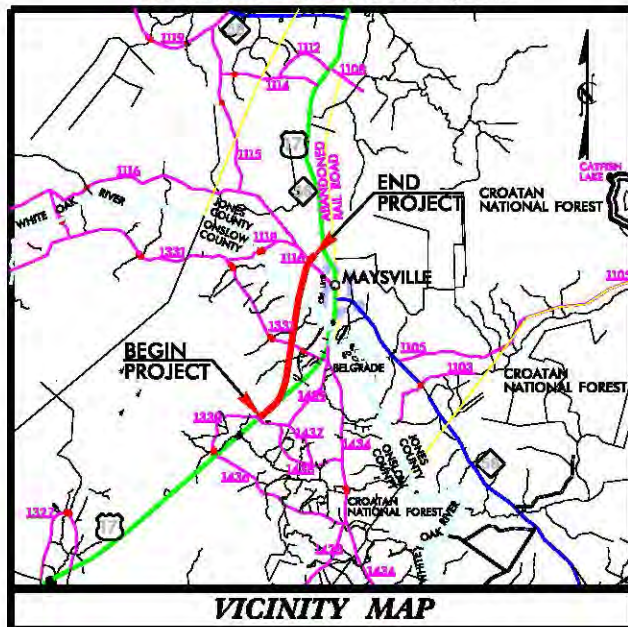


TIP PROJECT: R-2514B

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



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERMIT DRAWING
SHEET 1 OF 62

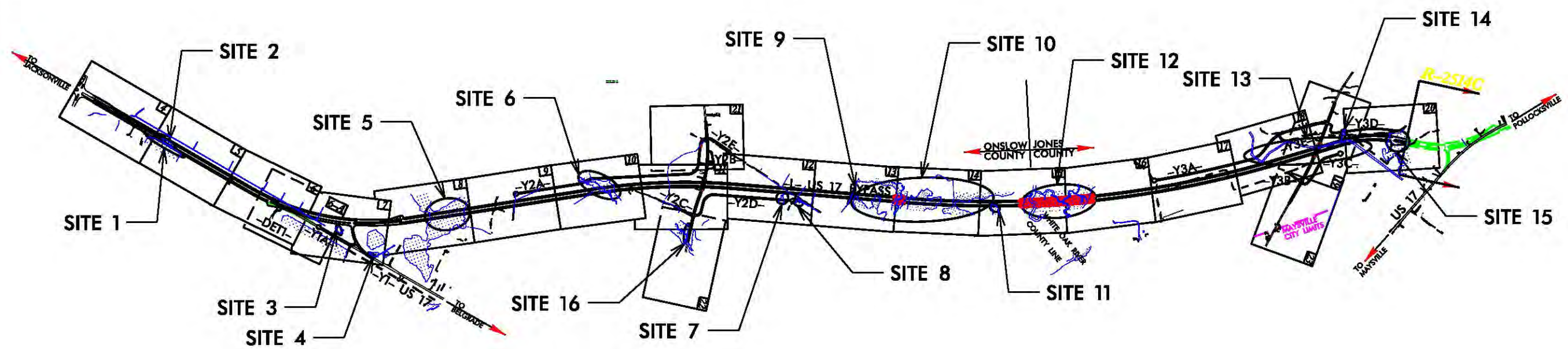
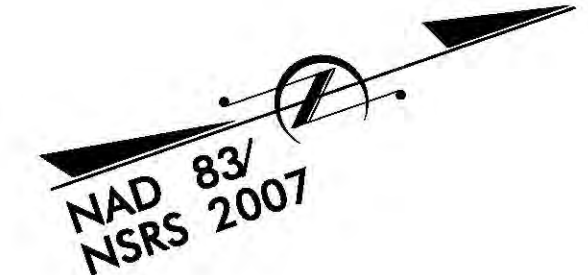
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34442.1.3		PE	
34442.2.S3		RIGHT OF WAY	

ONSLOW & JONES COUNTIES

**LOCATION: US 17 FROM SOUTH OF BELGRADE AT
SR 1330/SR 1439 TO NORTH OF MAYSVILLE**

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

WETLAND AND SURFACE WATER IMPACTS PERMIT



*DESIGN EXCEPTION REQUIRED FOR SAG VERTICAL CURVE K FACTORS AND STOPPING SIGHT DISTANCE (-Y2- & -Y3-)
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A FULL CONTROLLED-ACCESS PROJECT WITH ACCESS AS SHOWN ON PLANS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

<p>GRAPHIC SCALES</p>	<p>DESIGN DATA</p> <p>ADT 2015 = 6800 vpd ADT 2035 = 15900 vpd DHV = 7 % D = 65 % T = 7 % * V = 70 MPH * TTST = 4% DUAL = 3% FUNC CLASS = FREEWAY STATEWIDE TIER</p>	<p>PROJECT LENGTH</p> <p>LENGTH ROADWAY OF TIP PROJECT R-2514B = 3.906 MILES LENGTH STRUCTURE OF TIP PROJECT R-2514B = 0.250 MILES TOTAL LENGTH OF TIP PROJECT R-2514B = 4.156 MILES</p>	<p>Prepared in the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610</p> <p>2012 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: DECEMBER 17, 2013</p> <p>LETTING DATE: JUNE 16, 2015</p>	<p>HYDRAULICS ENGINEER</p> <p>SIGNATURE: _____ P.E.</p> <p>ROADWAY DESIGN ENGINEER</p> <p>SIGNATURE: _____ P.E.</p>	
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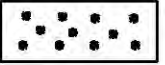
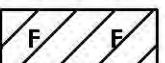
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\$\$\$DCN\$\$\$\$
\$\$\$USERNAME\$\$\$\$

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

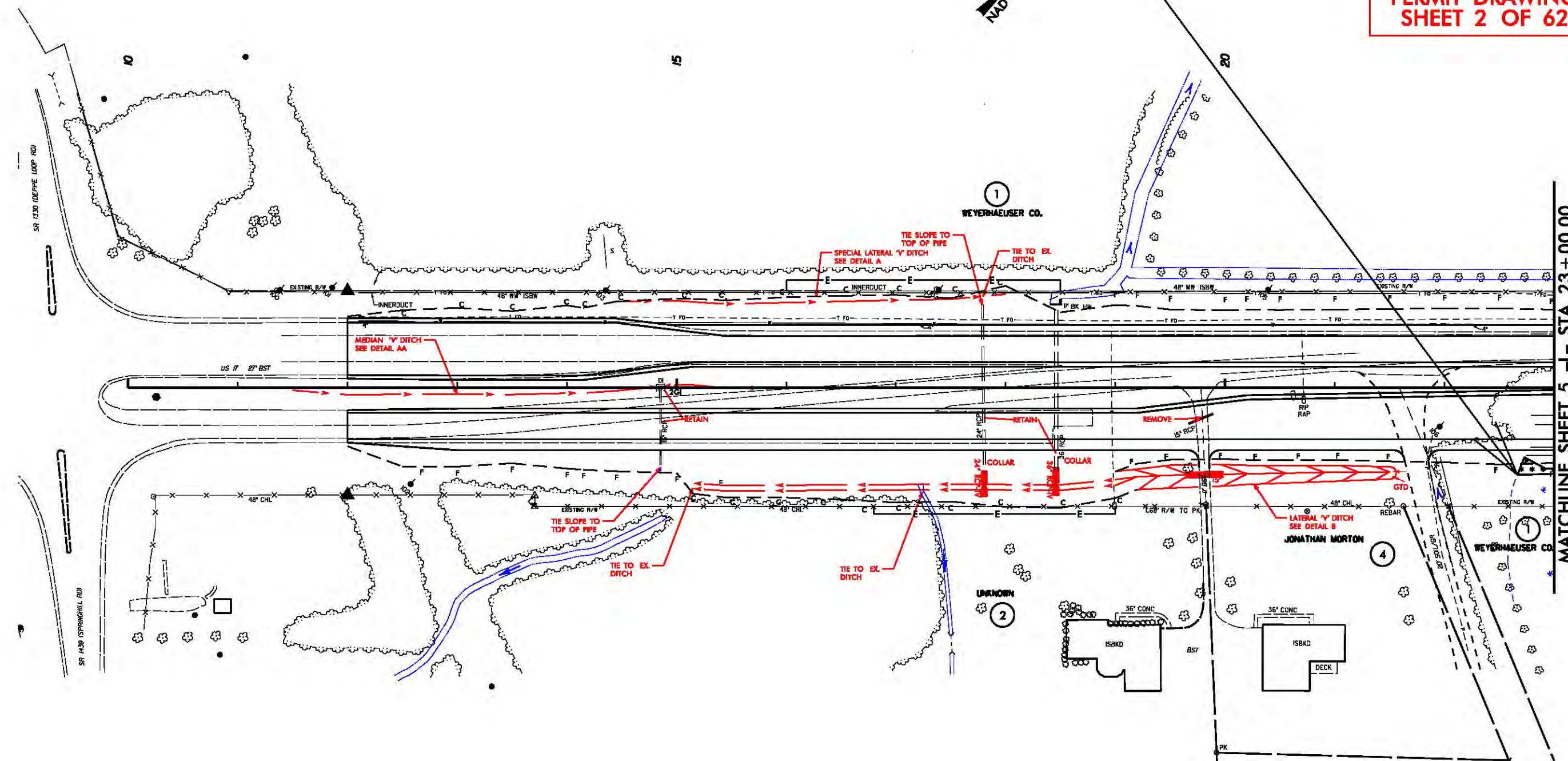
SITE 1



-  DENOTES MECHANIZED CLEARING
-  DENOTES FILL IN WETLAND

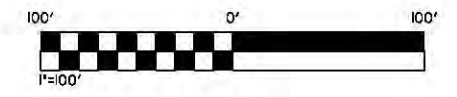
PERMIT DRAWING
SHEET 2 OF 62

REVISIONS



MATCHLINE SHEET 5 -L- STA. 23 + 00.00

*****SYTIME*****
*****UN*****



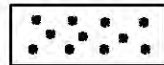
3
RONNE L. ADAMS

2
UNKNOWN

4
JONATHAN MORTON

1
WEYERHAEUSER CO.

8/17/99



DENOTES MECHANIZED CLEARING



DENOTES FILL IN WETLAND

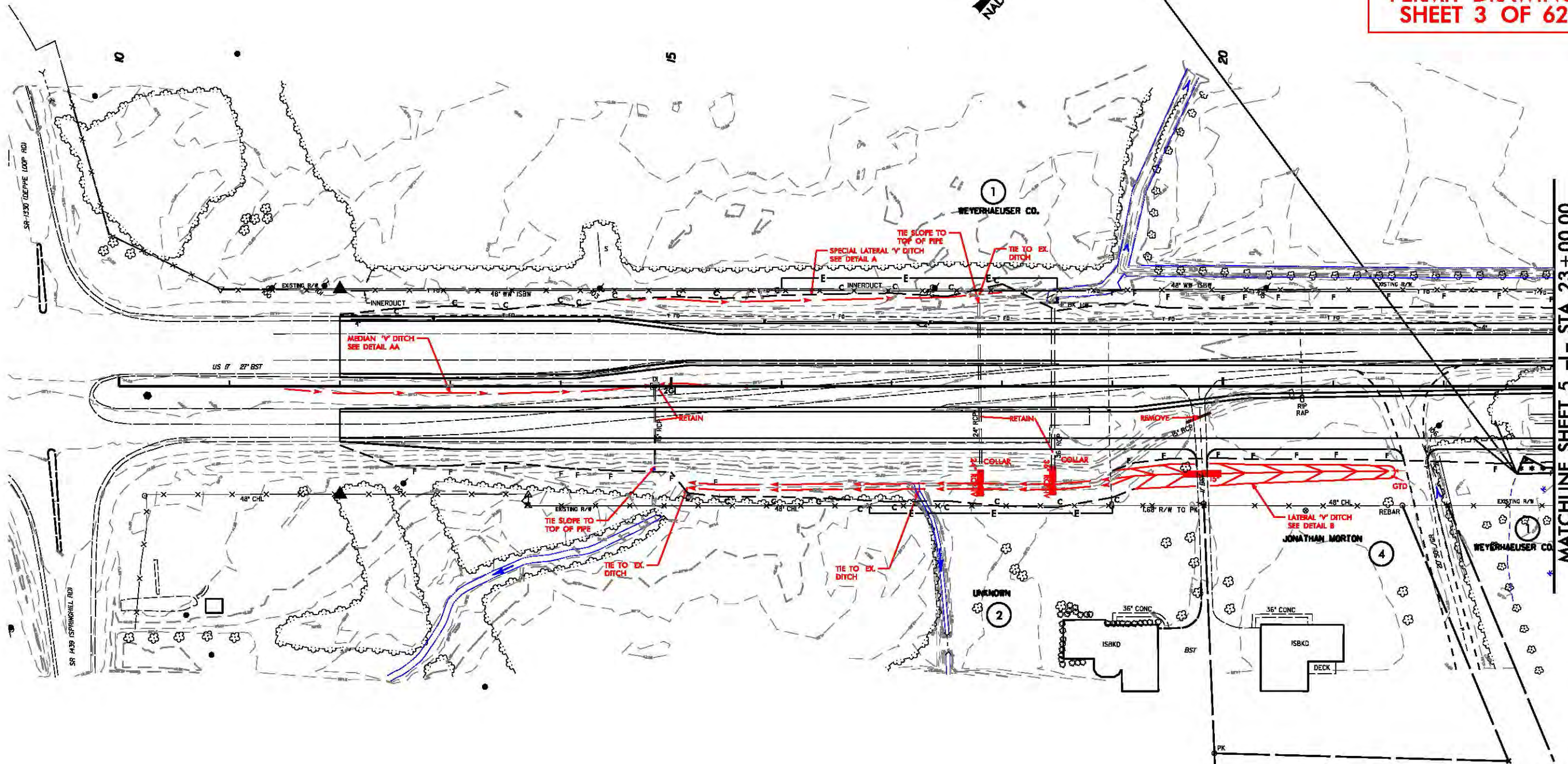
SITE 1



PROJECT REFERENCE NO.	SHEET NO.
R-2514B	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

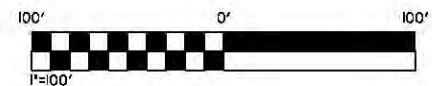
**PERMIT DRAWING
SHEET 3 OF 62**

REVISIONS



MATCHLINE SHEET 5 -L- STA. 23+00.00

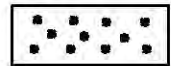
SYTIME
UN



8/17/99



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

SITE 2



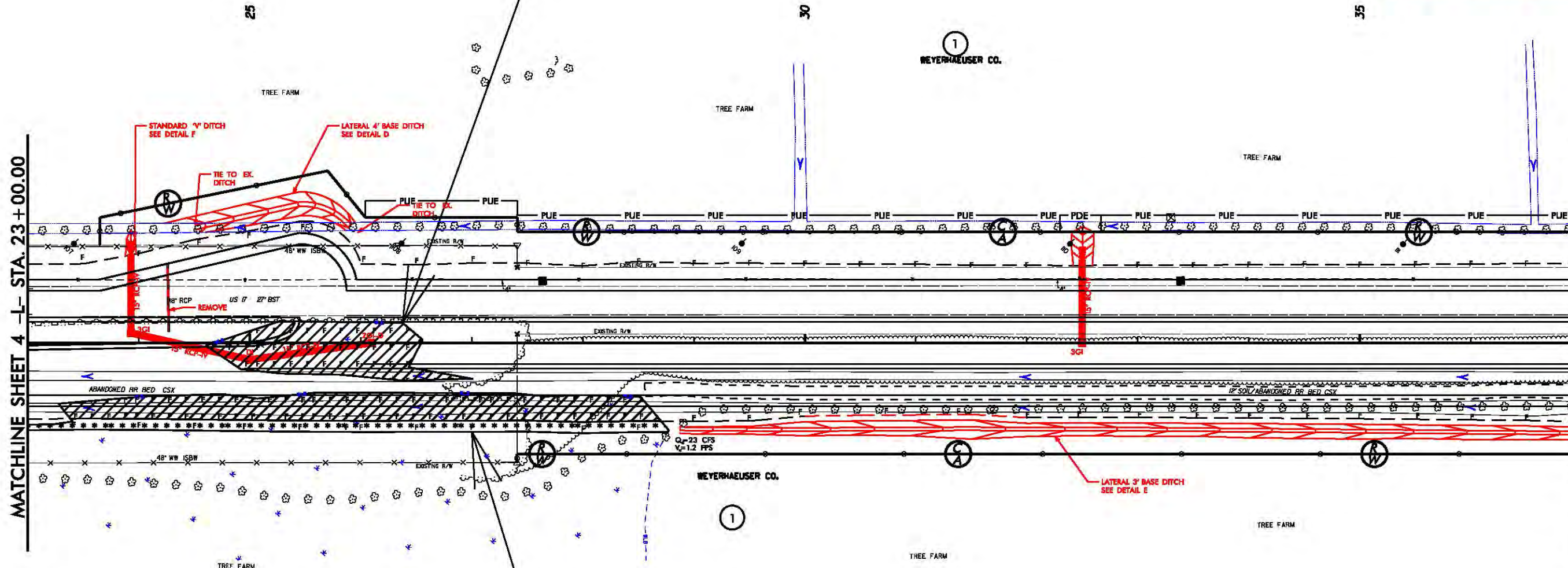
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R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING SHEET 4 OF 62

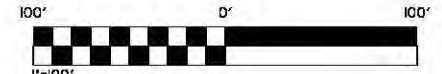
REVISIONS

MATCHLINE SHEET 4 -L- STA. 23+00.00

MATCHLINE SHEET 6 -L- STA. 37+00.00



SITE 1



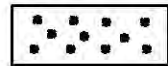
SEE SHEET 24 FOR -L- PROFILE
 SEE SHEET 2-A FOR MEDIAN TURN DETAIL
 CONCRETE ISLAND

*****SYTIME*****
 *****UN*****

8/17/99



DENOTES FILL IN WETLAND



DENOTES MECHANIZED CLEARING

SITE 2



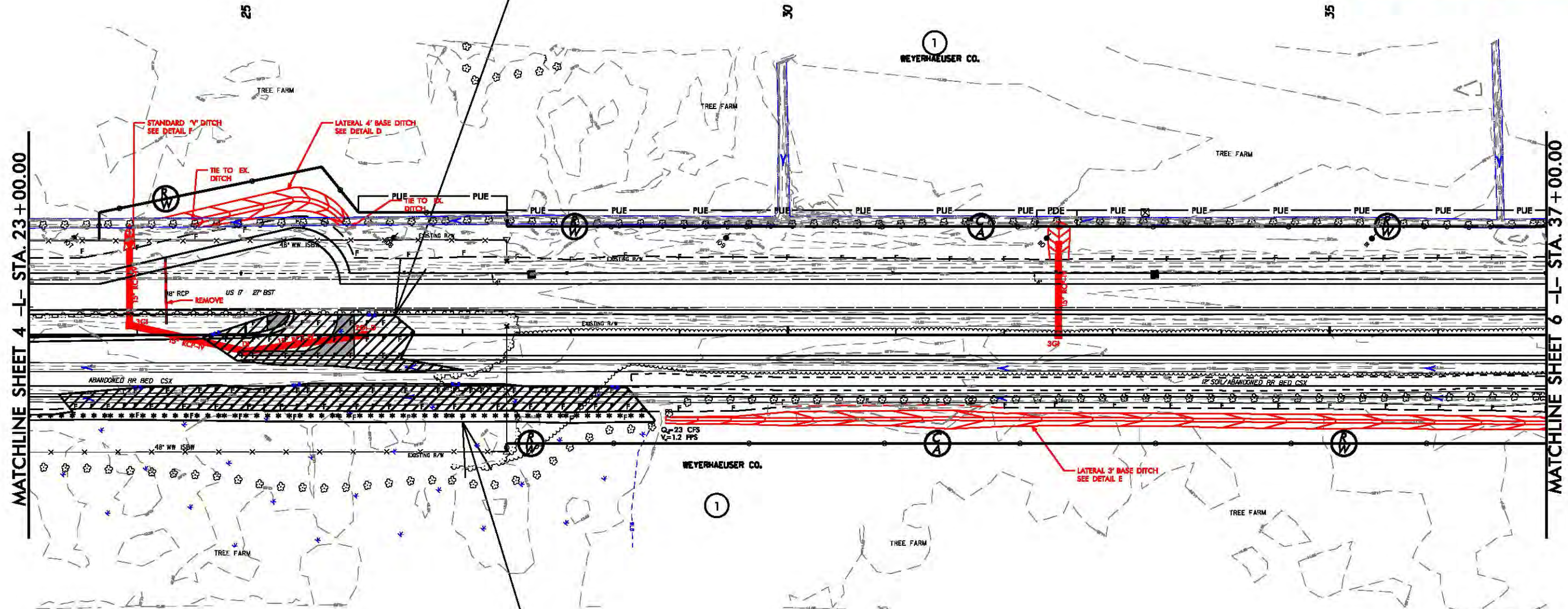
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R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING SHEET 5 OF 62

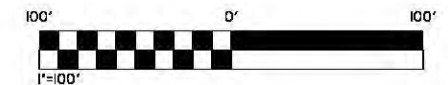
REVISIONS

MATCHLINE SHEET 4 -L- STA. 23+00.00

MATCHLINE SHEET 6 -L- STA. 37+00.00



SITE 1



SEE SHEET 24 FOR -L- PROFILE
 SEE SHEET 2-A FOR MEDIAN TURN DETAIL
 CONCRETE ISLAND

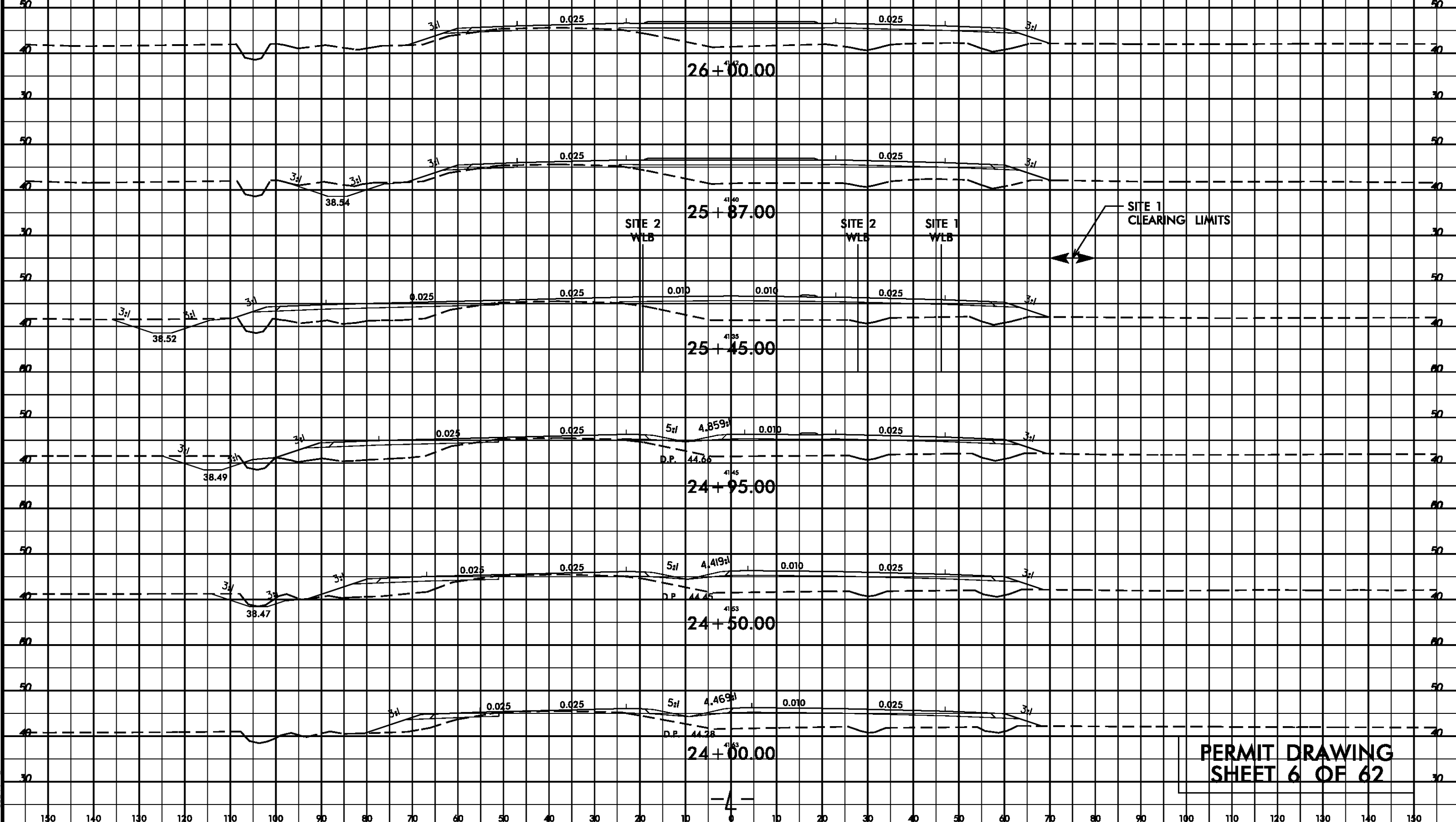
*****SYTIME*****
 *****UN*****

8/23/99



PROJ. REFERENCE NO. R-2514B SHEET NO. X-7

SITES 1 & 2 WETLAND IMPACTS

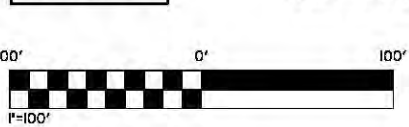


PERMIT DRAWING
SHEET 6 OF 62

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

8/17/99

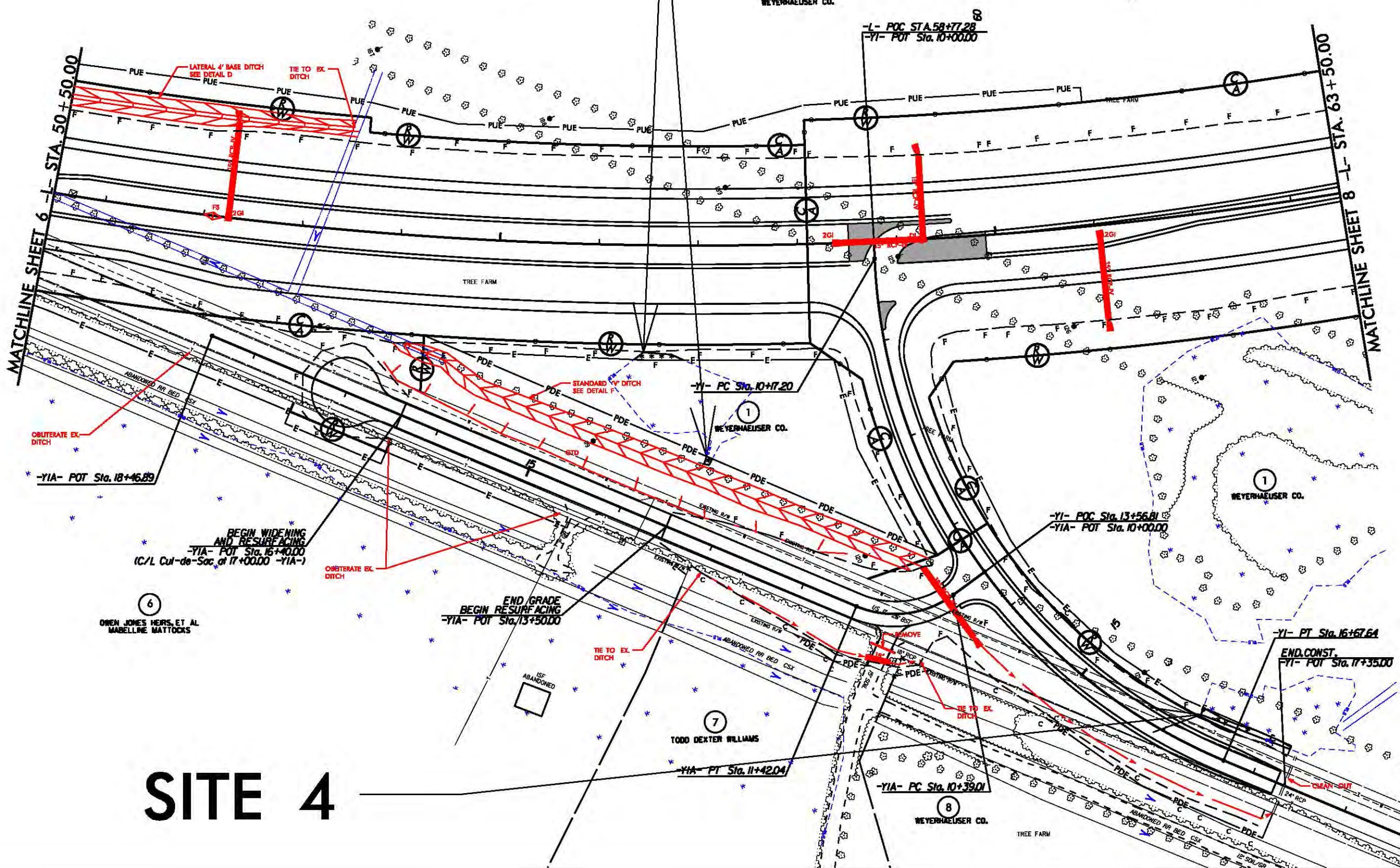
50
100' 0' 100'
1"=100'



SITE 3

PERMIT DRAWING
SHEET 7 OF 62

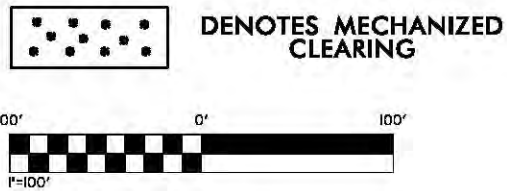
PROJECT REFERENCE NO. R-2514B	SHEET NO. 7
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



SITE 4

REVISIONS

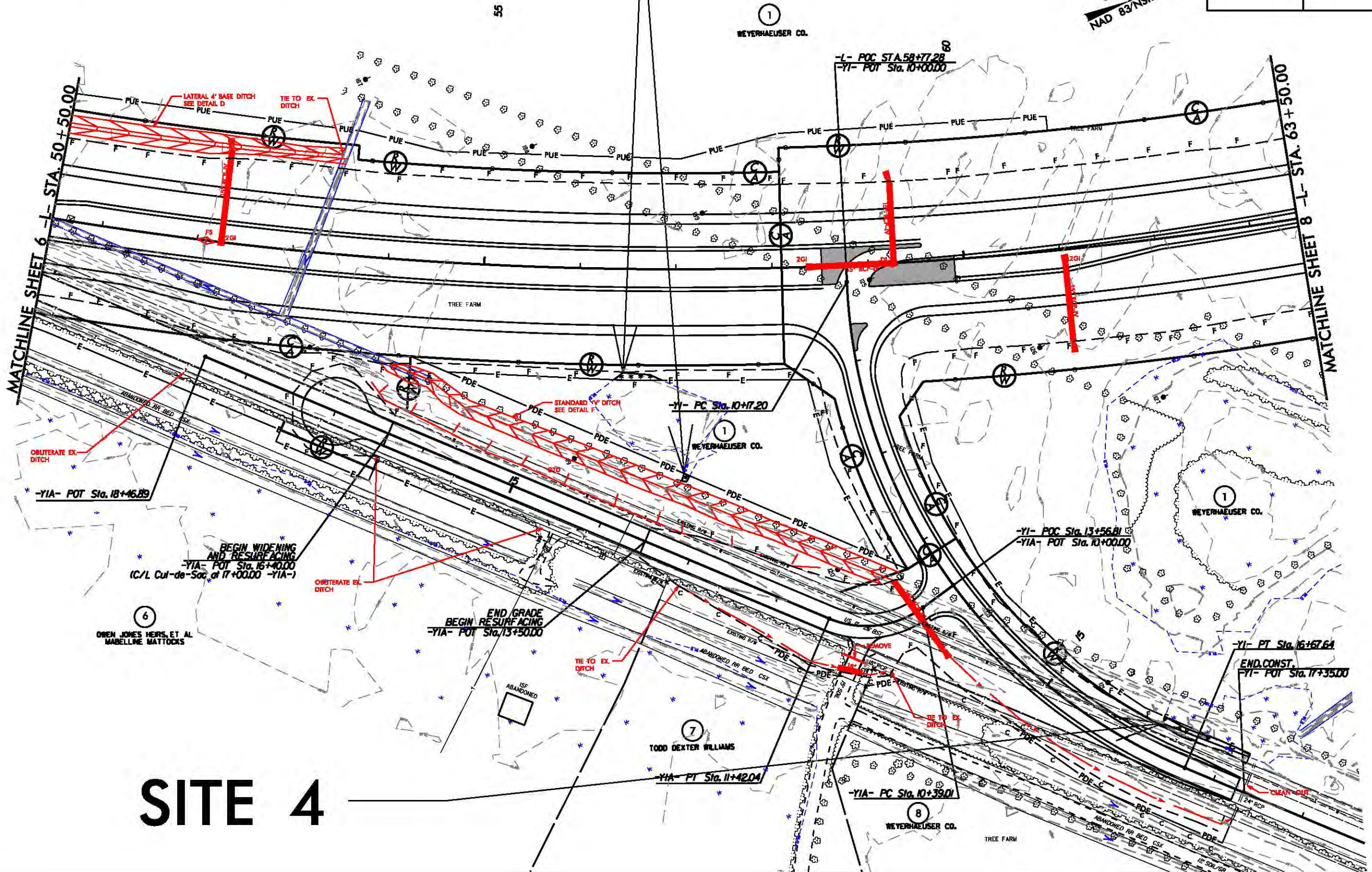
8/17/99



SITE 3

**PERMIT DRAWING
SHEET 8 OF 62**

PROJECT REFERENCE NO. R-2514B	SHEET NO. 7
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



SITE 4

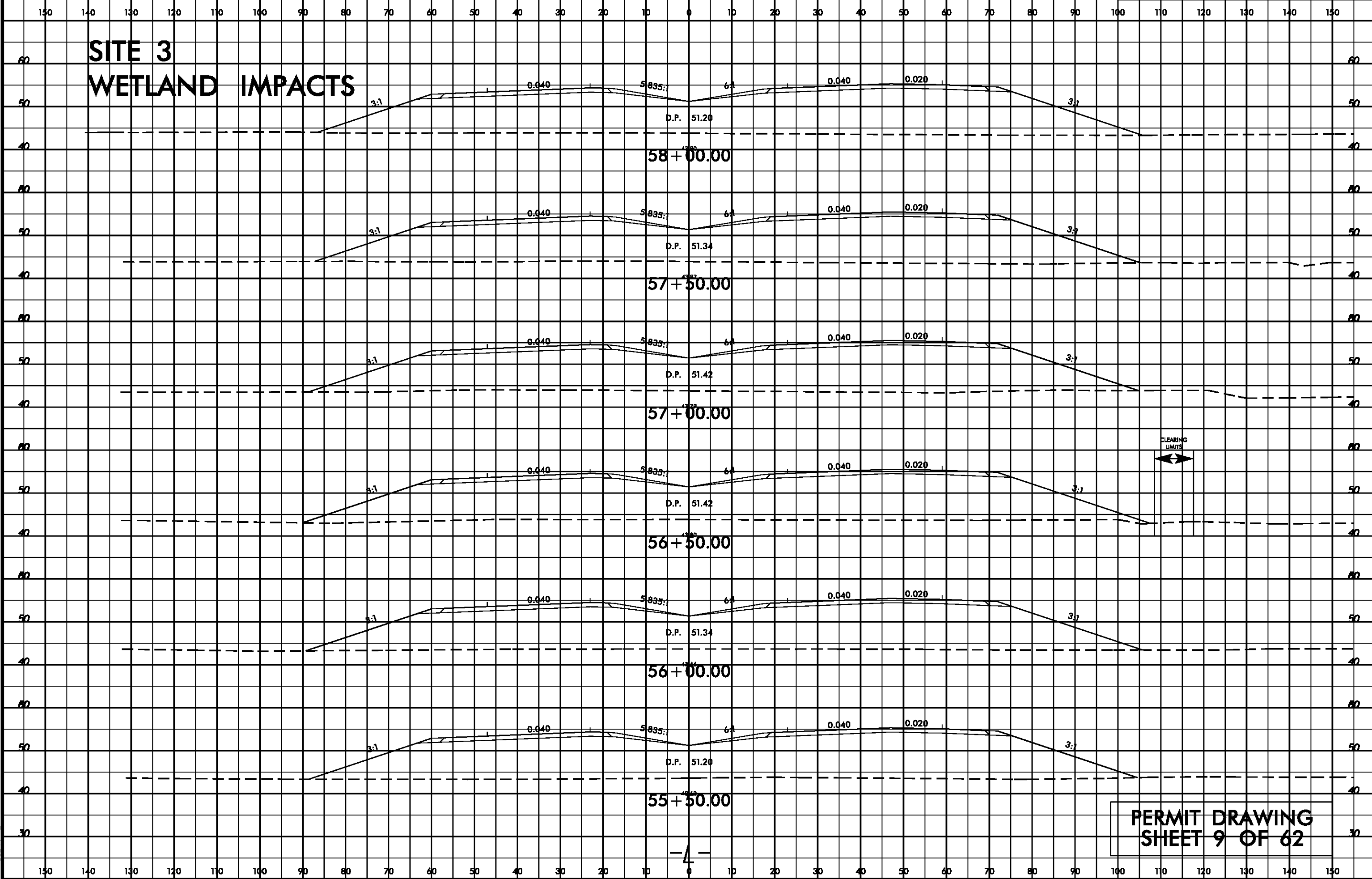
REVISIONS

*****SYTIME*****
*****DUN*****

8/23/99



SITE 3 WETLAND IMPACTS



CLEARING LIMITS

PERMIT DRAWING
SHEET 9 OF 62

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

8/23/99

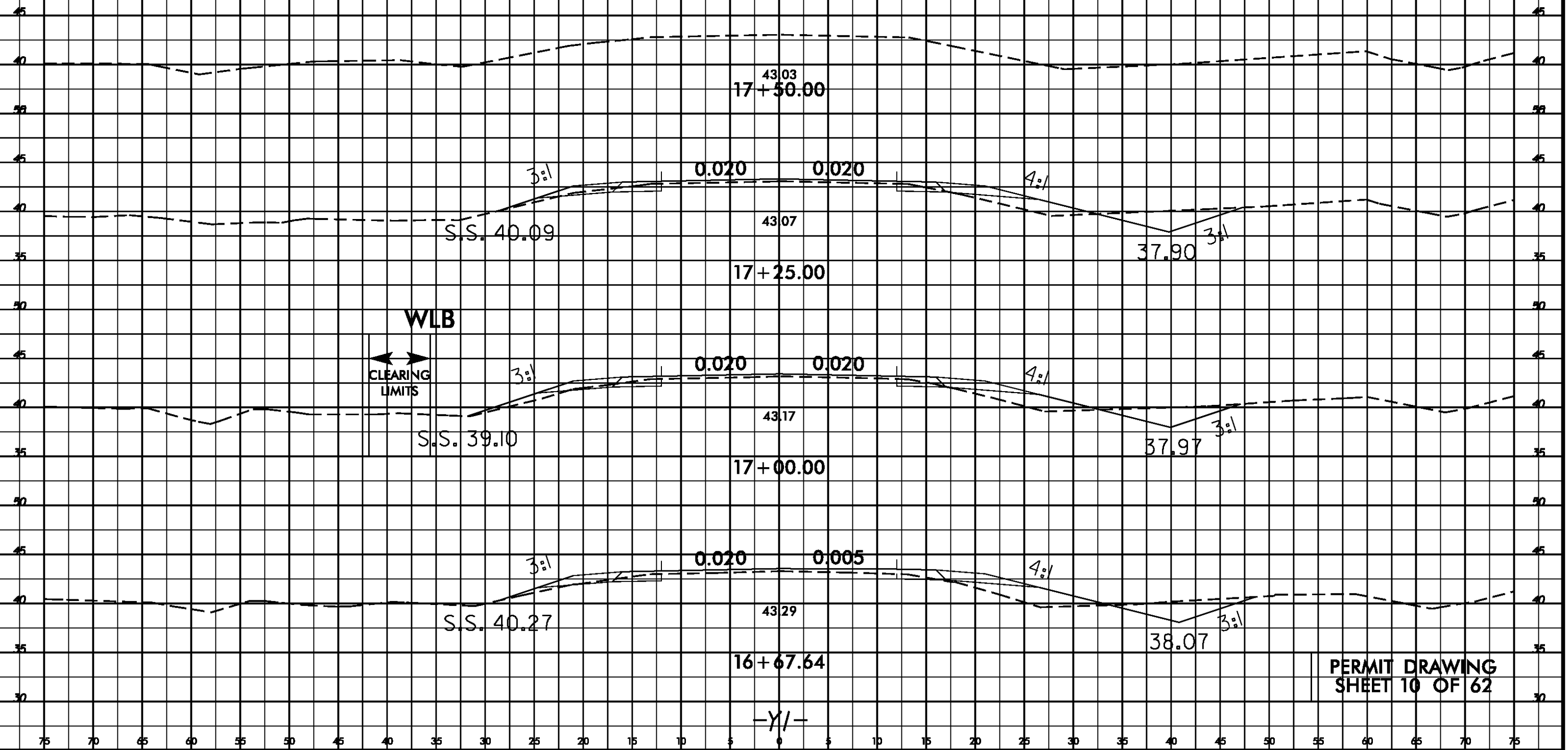


PROJ. REFERENCE NO.
R-2514B

SHEET NO.
X-90

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

SITE 4 WETLAND IMPACTS



PERMIT DRAWING
SHEET 10 OF 62

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

8/17/99

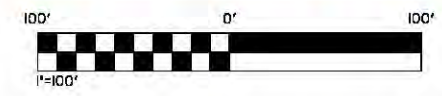
PROJECT REFERENCE NO. R-2514B	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SITE 5

NAD 83/NSRS 2007

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

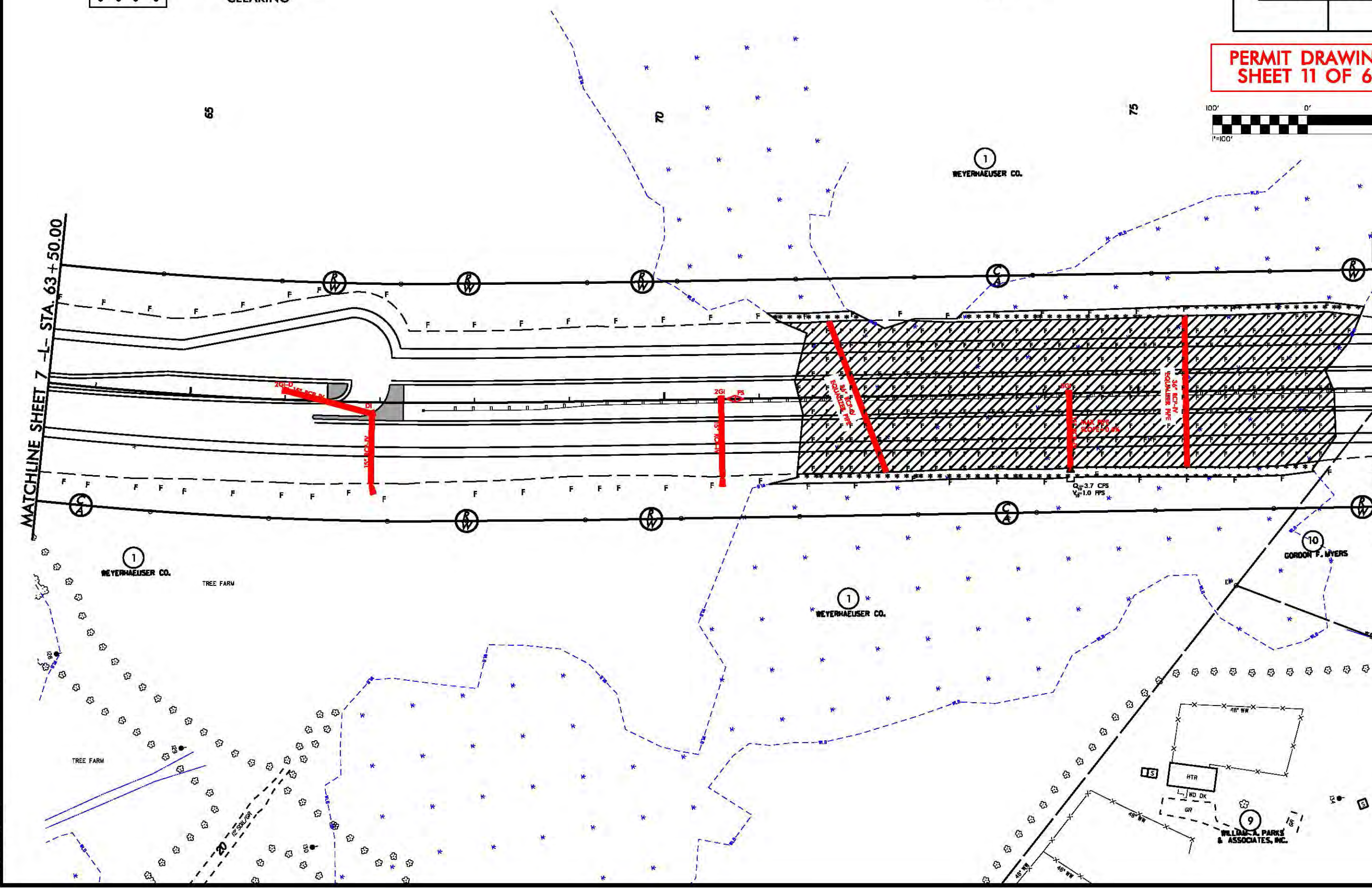
PERMIT DRAWING
SHEET 11 OF 62



REVISIONS

MATCHLINE SHEET 7 -L- STA. 63+50.00

MATCHLINE SHEET 9 -L- STA. 77+50.00



*****SYTIME*****
*****SYTIME*****
*****SYTIME*****

WILLIAM A. PARKS & ASSOCIATES, INC.

8/17/99

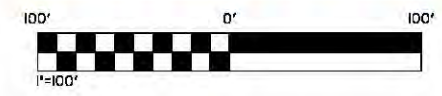
PROJECT REFERENCE NO. R-2514B	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SITE 5

NAD 83/NSRS 2007

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

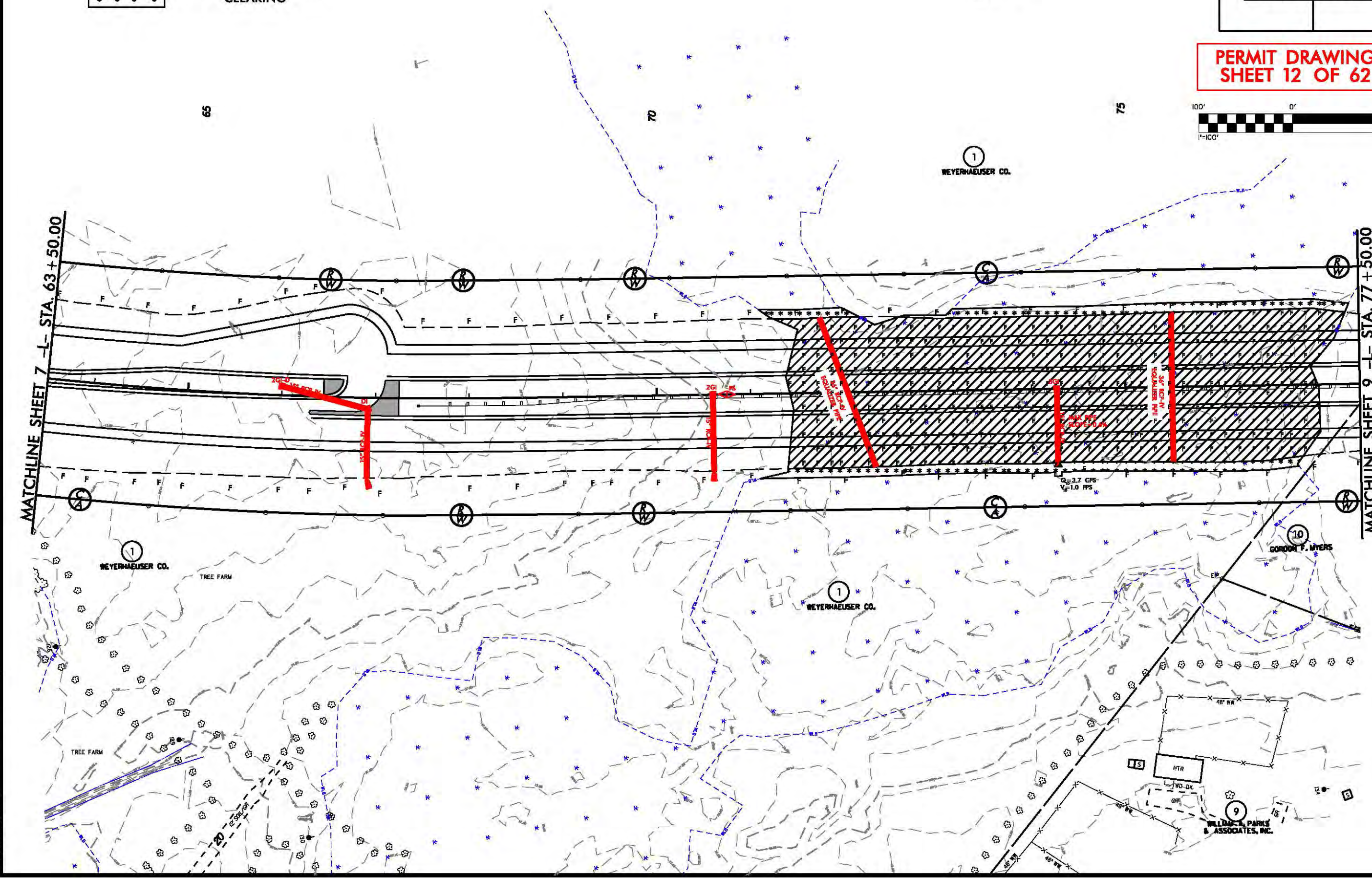
PERMIT DRAWING
SHEET 12 OF 62



REVISIONS

MATCHLINE SHEET 7 -L- STA. 63+50.00

MATCHLINE SHEET 9 -L- STA. 77+50.00



*****SYTIME*****
*****UN*****

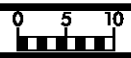
WEYERHAEUSER CO. TREE FARM

WEYERHAEUSER CO.

GORDON F. MYERS

WILLIAM A. PARKS & ASSOCIATES, INC.

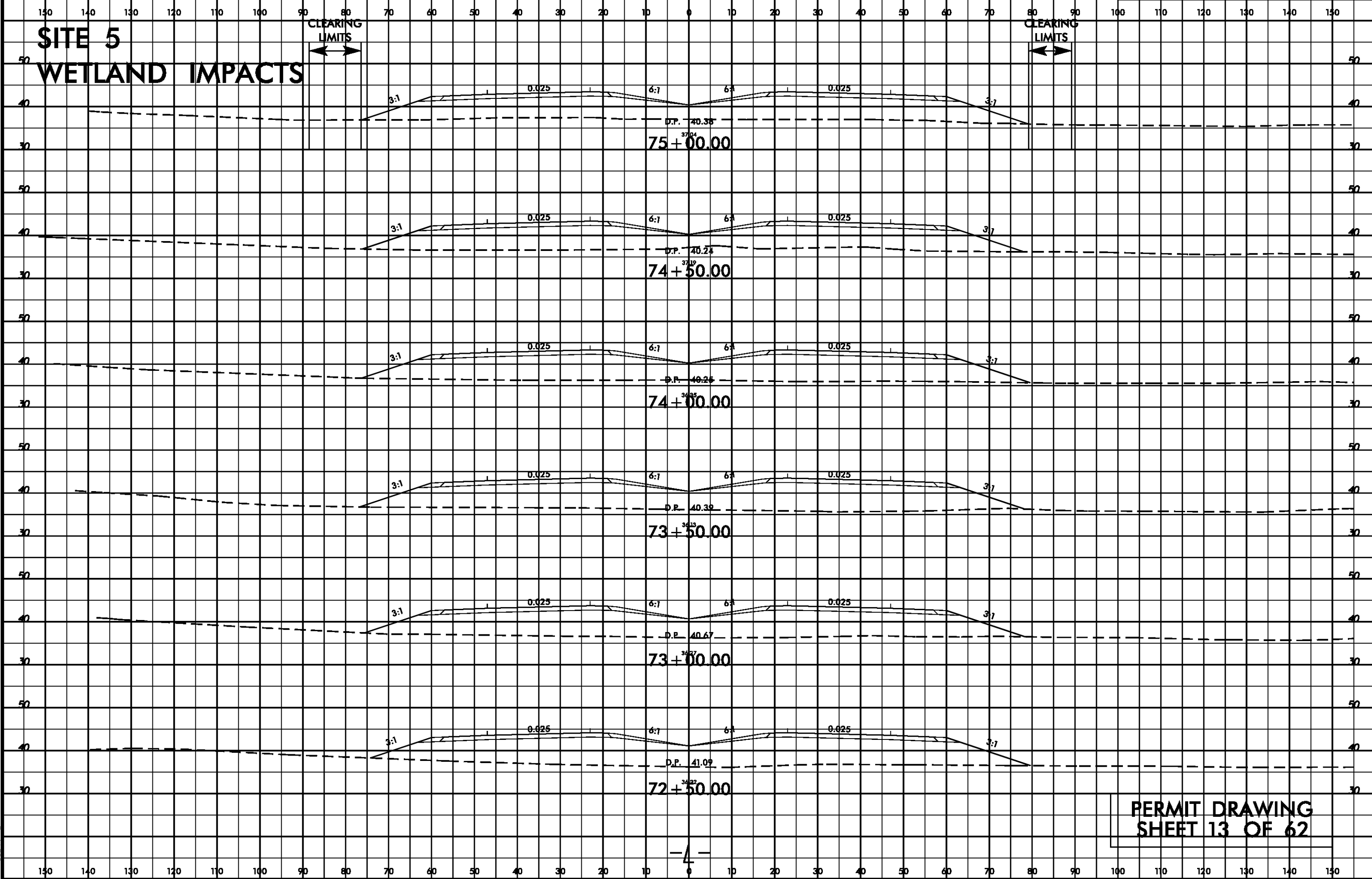
8/23/99



SITE 5 WETLAND IMPACTS

CLEARING LIMITS
← →

CLEARING LIMITS
← →



PERMIT DRAWING
SHEET 13 OF 62

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

8/17/99

R/W Revision 5/11/14 ICL Realigned -Y2A- and Adjusted Proposed R/W, Permanent Drainage and Temporary Construction Easements on Parcels 11, 12 and 13.

REVISIONS



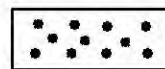
DENOTES FILL IN WETLAND



DENOTES IMPACTS IN SURFACE WATER

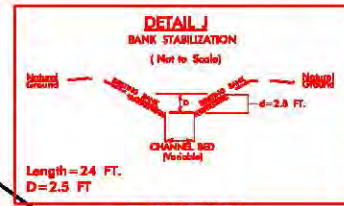


DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING

SITE 6



NAD 83/NSRS 2007

PROJECT REFERENCE NO. R-2514B	SHEET NO. 10
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

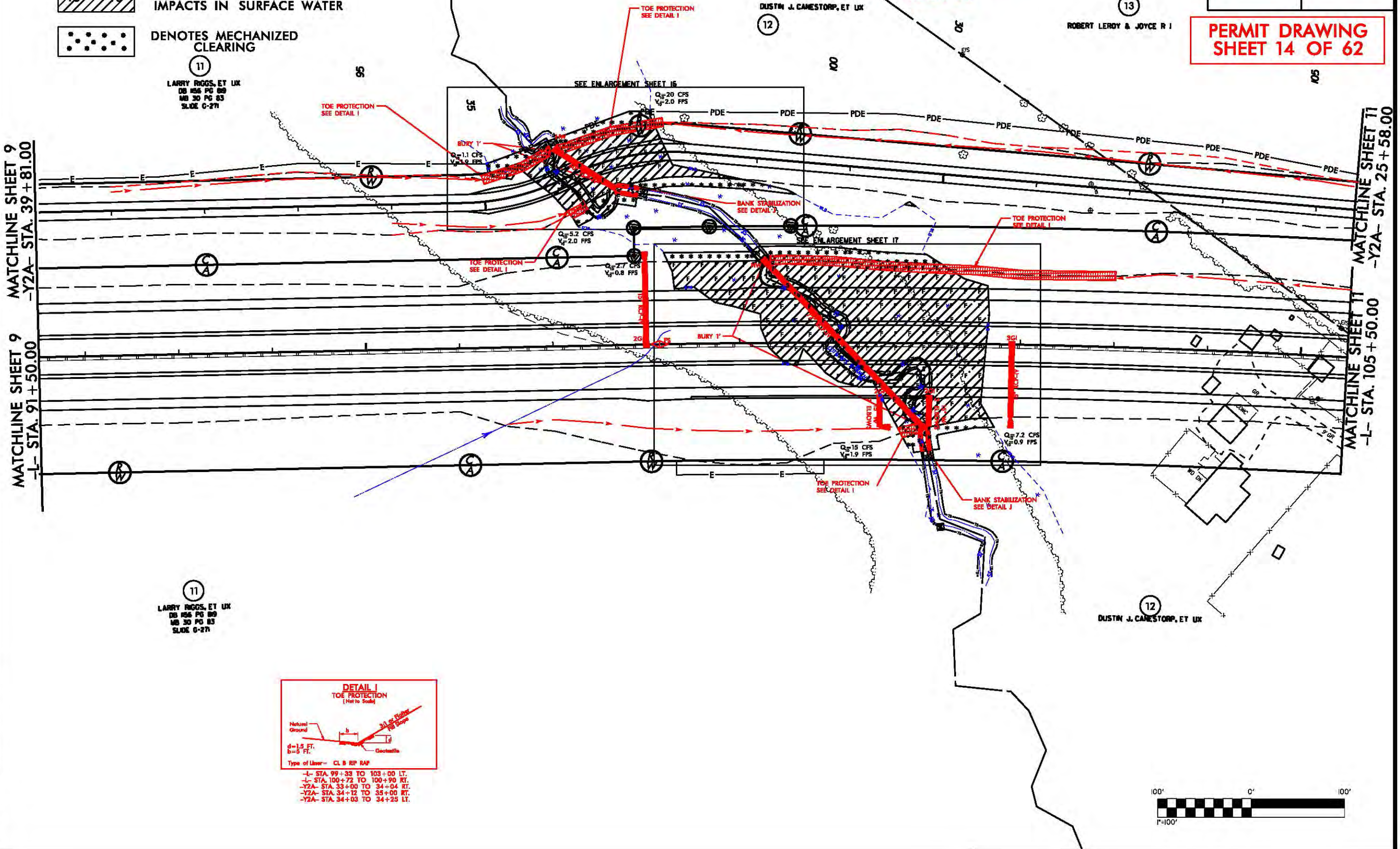
PERMIT DRAWING SHEET 14 OF 62

MATCHLINE SHEET 9
-L- STA. 91+50.00

MATCHLINE SHEET 9
-Y2A- STA. 39+81.00

MATCHLINE SHEET 11
-L- STA. 105+50.00

MATCHLINE SHEET 11
-Y2A- STA. 25+58.00



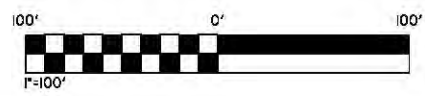
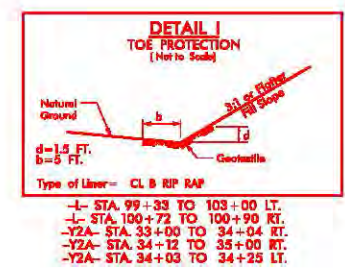
11
LARRY ROGGS, ET UX
DB 156 PG 89
MS 30 PG 83
SLIDE 0-27

11
LARRY ROGGS, ET UX
DB 156 PG 89
MS 30 PG 83
SLIDE 0-27

12
DUSTIN J. CAMESTORP, ET UX

13
ROBERT LEROY & JOYCE R I

12
DUSTIN J. CAMESTORP, ET UX



8/17/99

REVISIONS
R/W Revision 5/11/14 ICL Realigned -Y2A- and Adjusted Proposed R/W, Permanent Drainage and Temporary Construction Easements on Parcels 11, 12 and 13.

SYTIME
UN



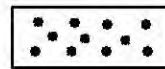
DENOTES FILL IN WETLAND



DENOTES IMPACTS IN SURFACE WATER

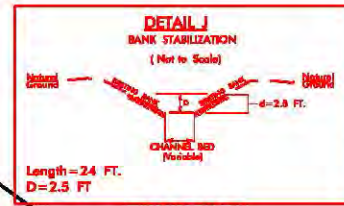


DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING

SITE 6



NAD 83/NSRS 2007

PROJECT REFERENCE NO. R-2514B	SHEET NO. 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

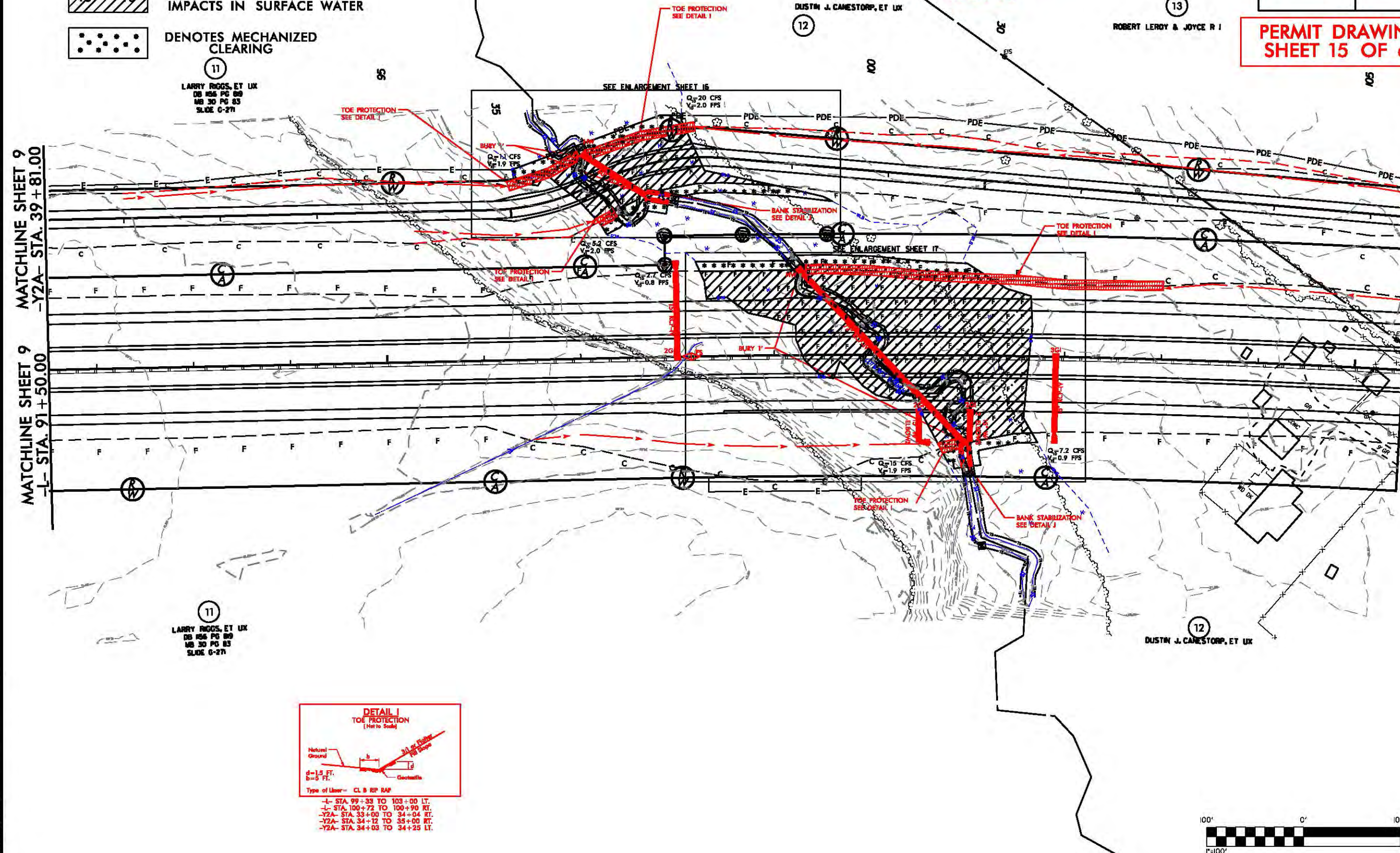
PERMIT DRAWING SHEET 15 OF 62

MATCHLINE SHEET 9
-L- STA. 91+50.00

MATCHLINE SHEET 9
-Y2A- STA. 39+81.00

MATCHLINE SHEET 11
-L- STA. 105+50.00

MATCHLINE SHEET 11
-Y2A- STA. 25+58.00



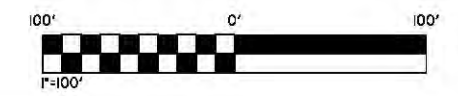
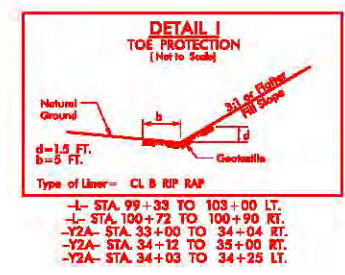
11
LARRY ROGGS, ET UX
DB 156 PG 89
MS 30 PG 83
SLIDE 0-27

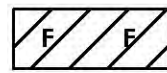
12
DUSTIN J. CAMESTORP, ET UX

13
ROBERT LEROY & JOYCE R I

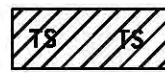
11
LARRY ROGGS, ET UX
DB 156 PG 89
MS 30 PG 83
SLIDE 0-27

12
DUSTIN J. CAMESTORP, ET UX





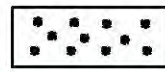
DENOTES FILL IN WETLAND



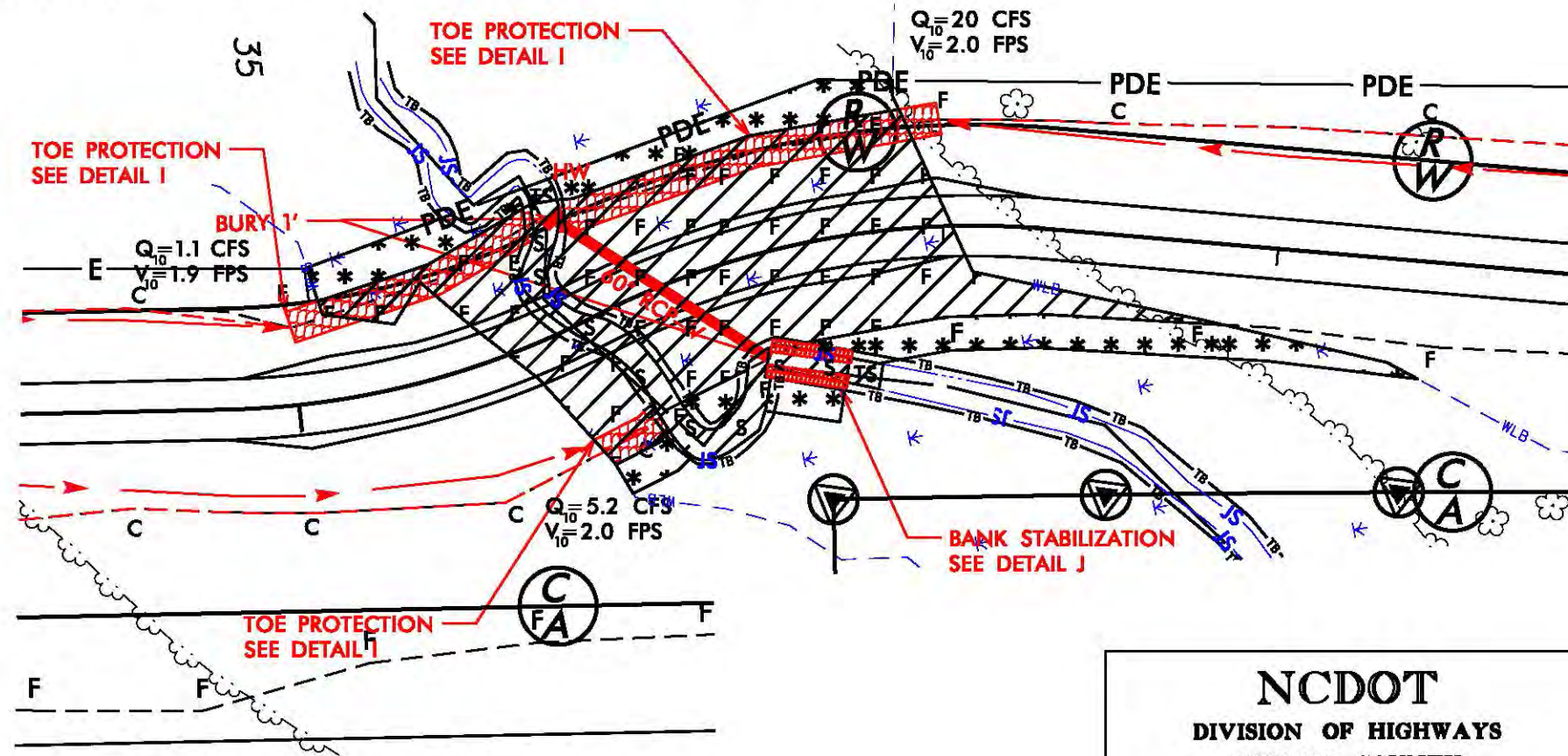
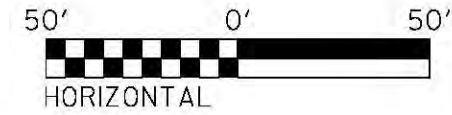
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

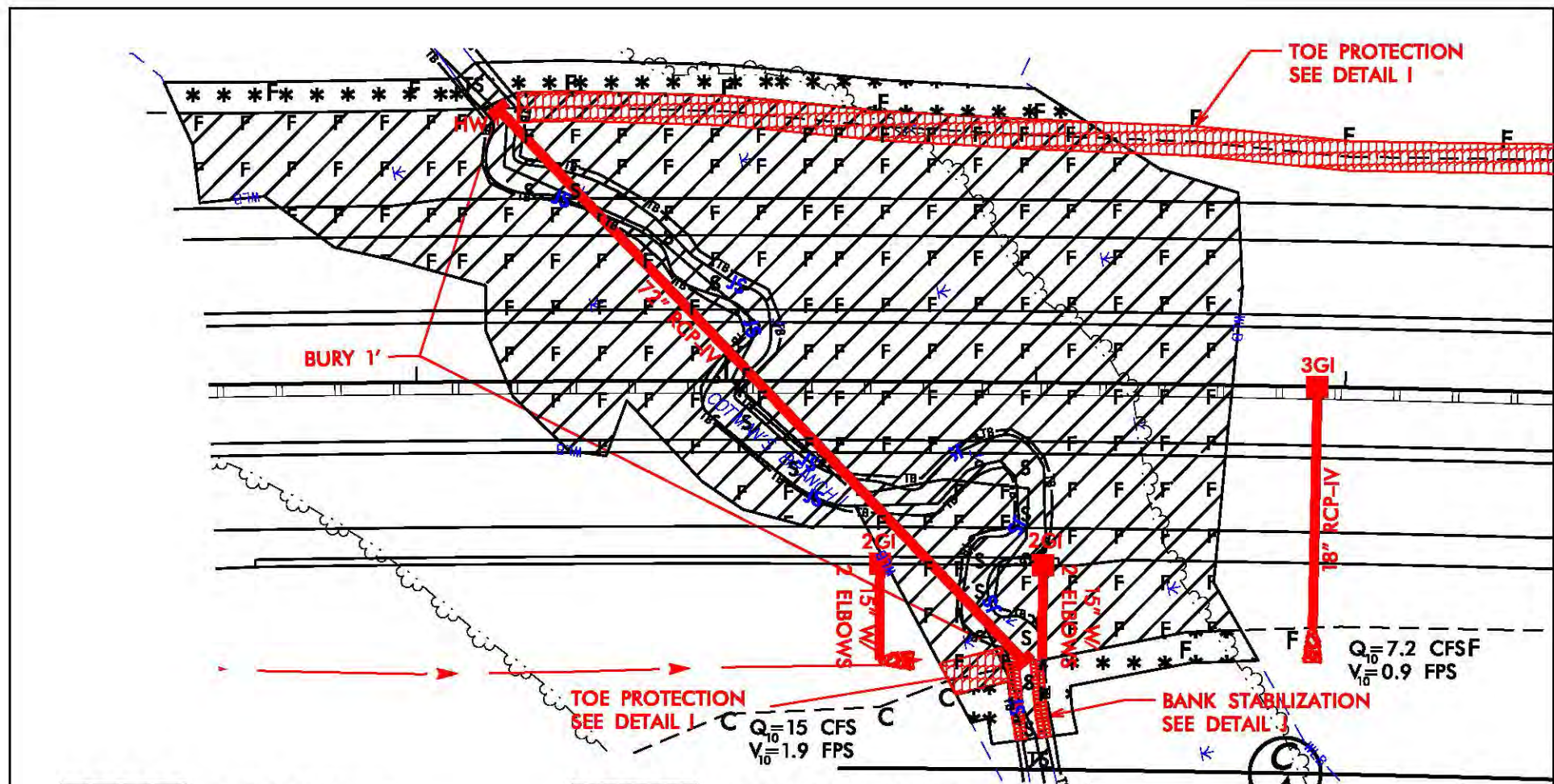




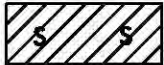
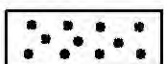
DENOTES MECHANIZED CLEARING

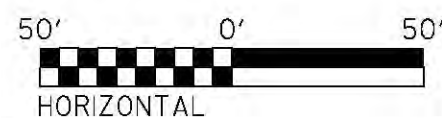


PLAN VIEW SITE 6

NCDOT
DIVISION OF HIGHWAYS
ONSLow COUNTY
PROJECT: 34442.13 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330/SR 1439 TO
NORTH OF MAYSVILLE
SHEET 16 OF 62



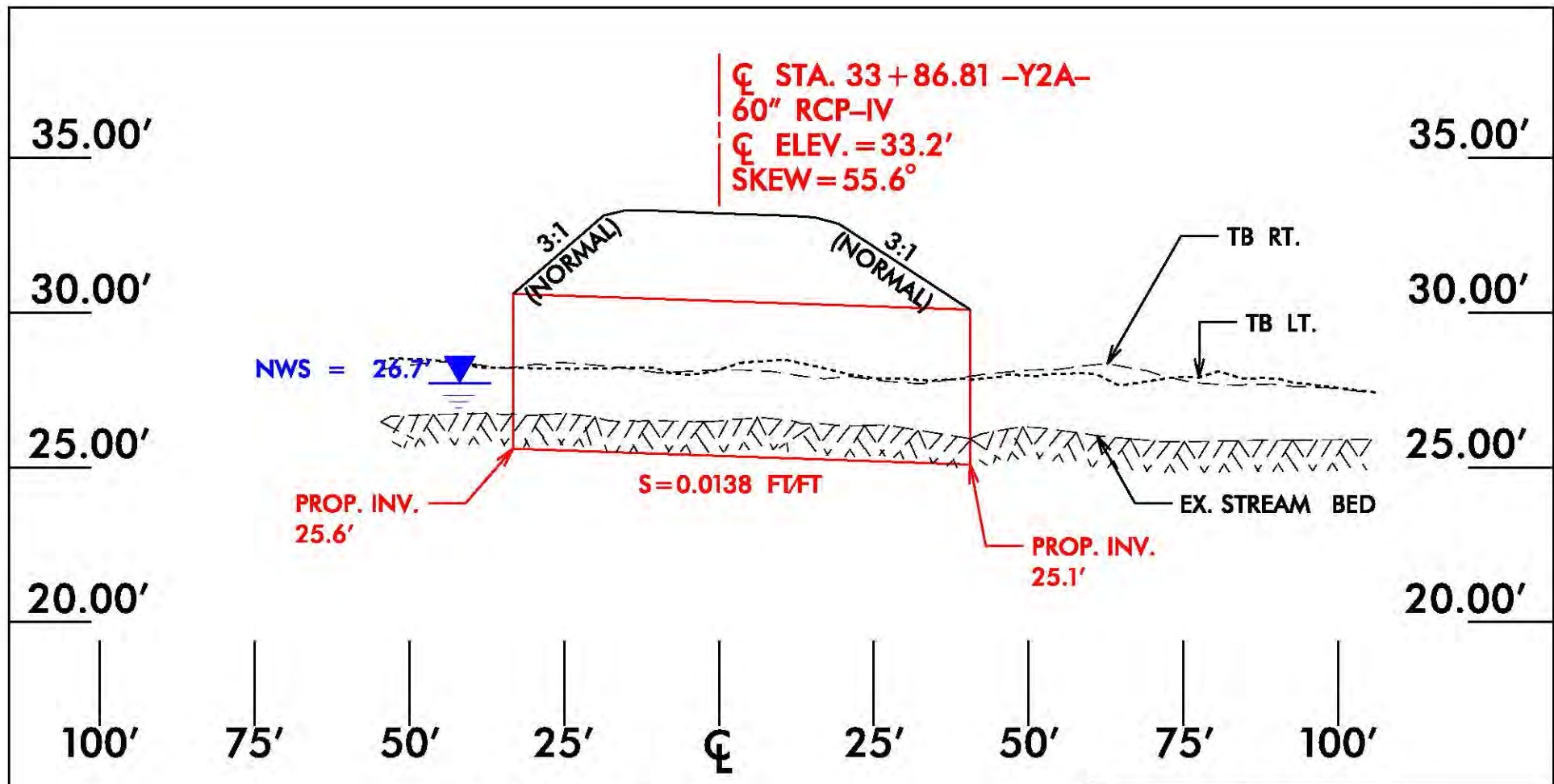
-  DENOTES FILL IN WETLAND
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-  DENOTES IMPACTS IN SURFACE WATER
 DENOTES MECHANIZED CLEARING



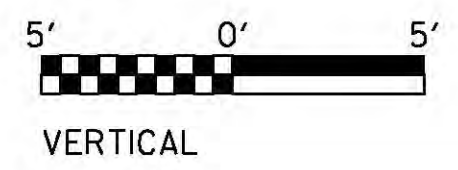
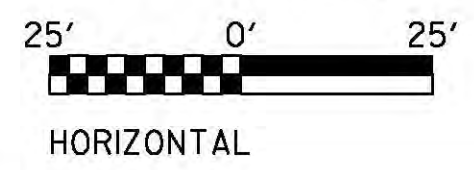
PLAN VIEW SITE 6

NCDOT
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 34442.13 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330/SR 1439 TO
 NORTH OF MAYSVILLE

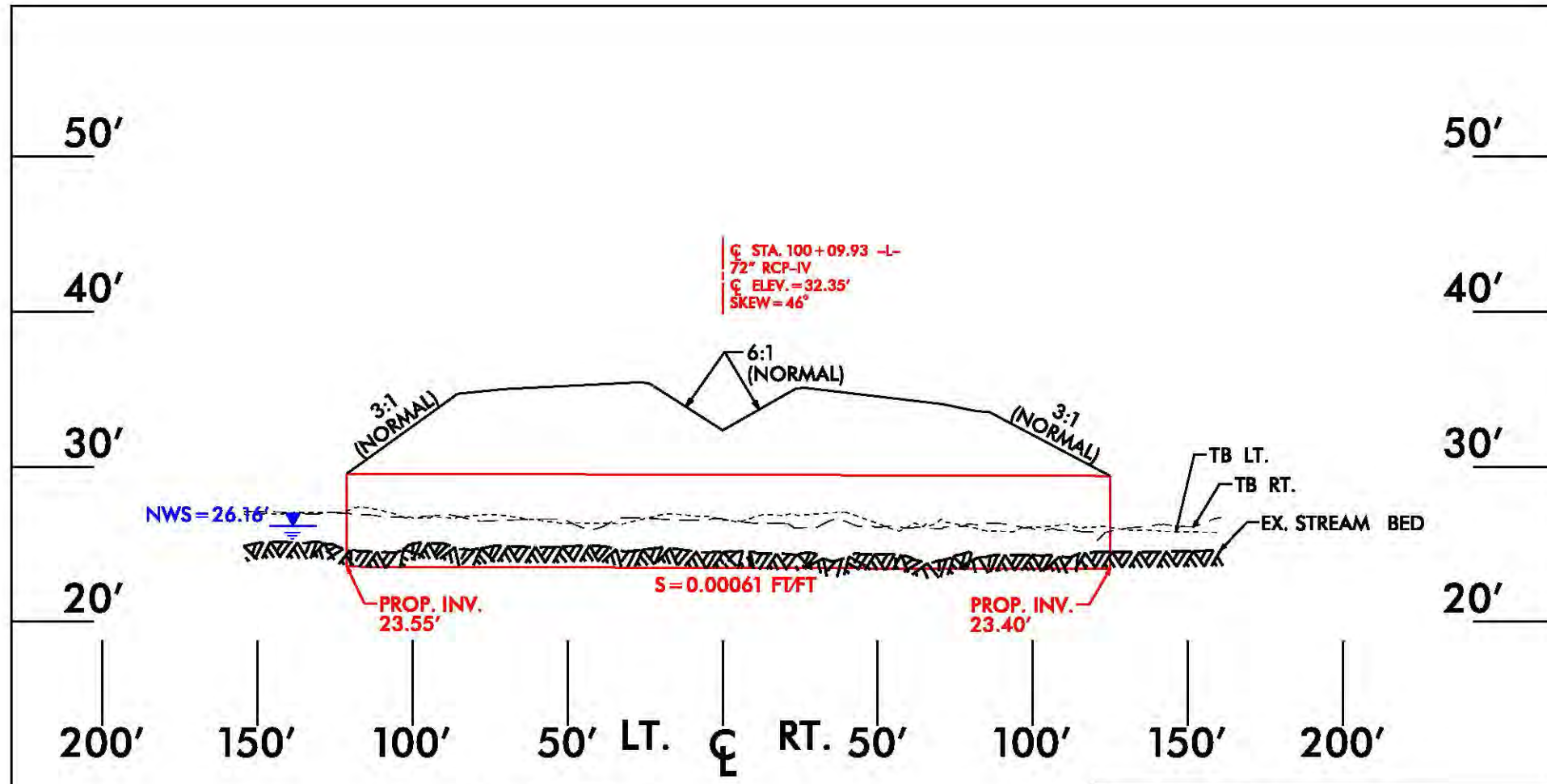
SHEET 17 OF 62



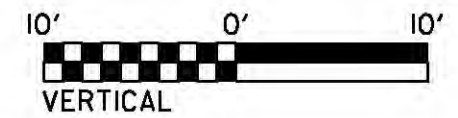
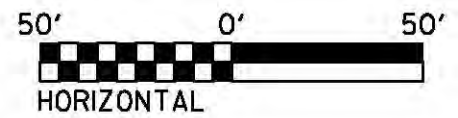
PROFILE
-Y2A- 60" PIPE



NCDOT
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 34442.13 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330 / SR 1439 TO
 NORTH OF MAYSVILLE
 SHEET 18 OF 62



PROFILE
 -L- 72" PIPE



NCDOT
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 34442.13 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330 / SR 1439 TO
 NORTH OF MAYSVILLE
 SHEET 19 OF 62

5/28/99

PERMIT DRAWING SHEET 20 OF 62

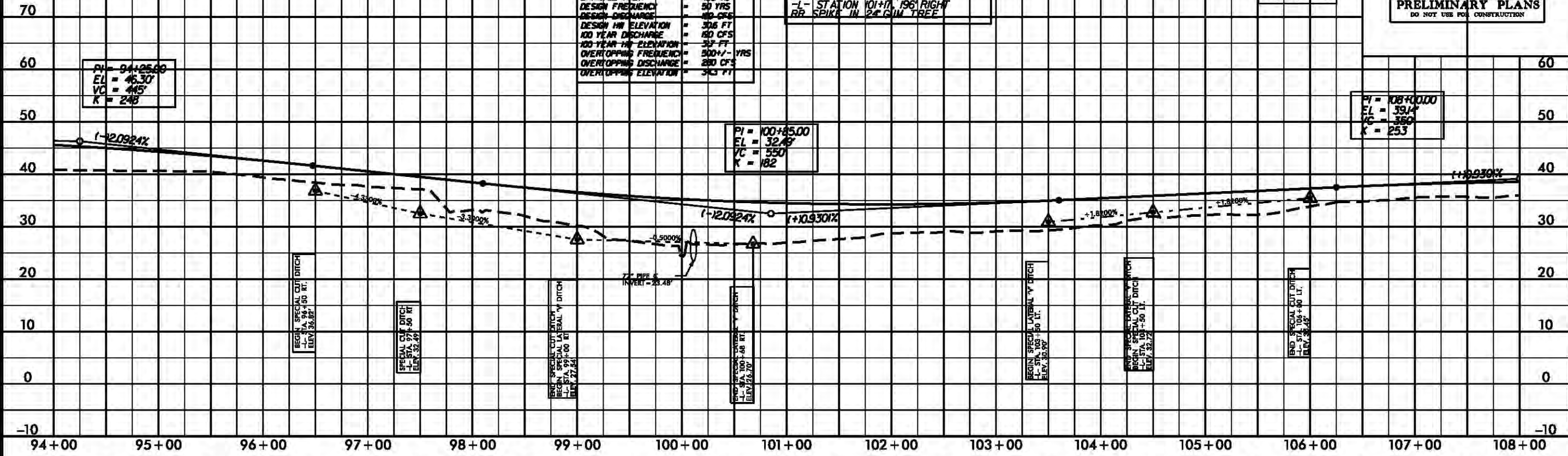


PROJECT REFERENCE NO. R-2514B	SHEET NO. 27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PIPE HYDRAULIC DATA
-L- STA. 100+00

DRAINAGE AREA	= 425 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 80 CFS
DESIGN HW ELEVATION	= 306 FT
100 YEAR DISCHARGE	= 160 CFS
100 YEAR HW ELEVATION	= 317 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 280 CFS
OVERTOPPING ELEVATION	= 313 FT

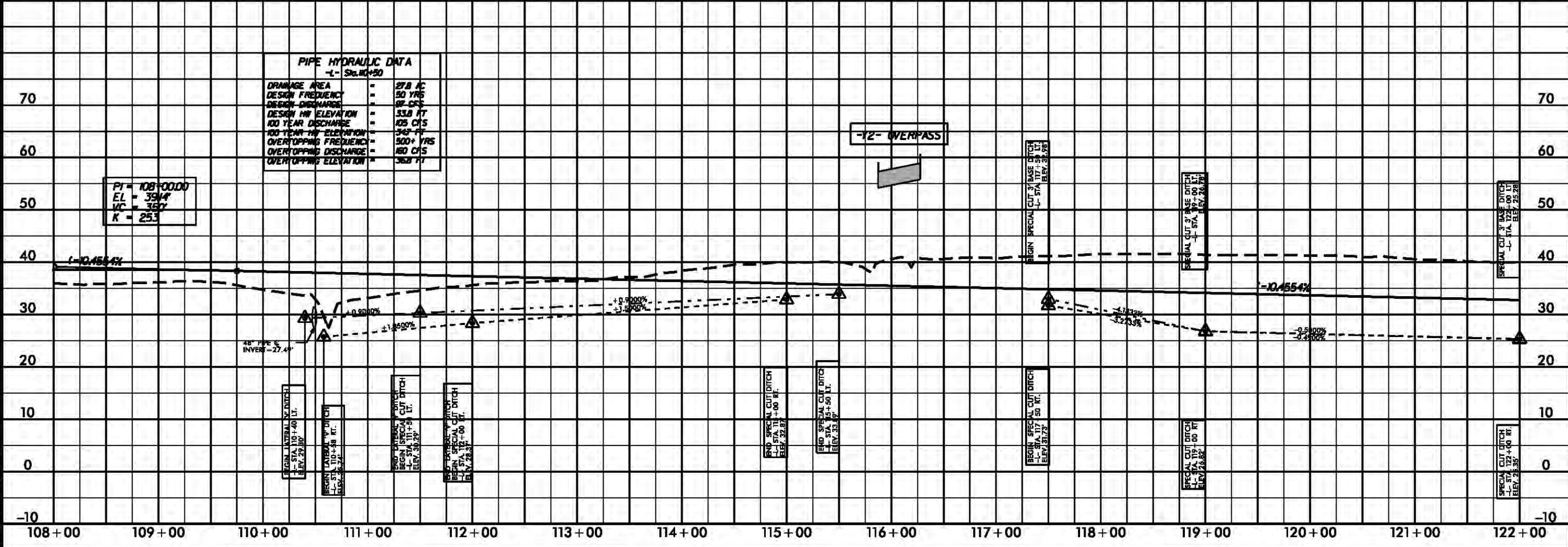
BM 50 ELEVATION = 30.6'
N 46.479
BLZ STATION 50+80, 198' RIGHT
-L- STATION 101+11, 196' RIGHT
RR SPIKE IN 24" GUM TREE



PIPE HYDRAULIC DATA
-L- STA. 108+50

DRAINAGE AREA	= 278 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 87 CFS
DESIGN HW ELEVATION	= 33.8 FT
100 YEAR DISCHARGE	= 105 CFS
100 YEAR HW ELEVATION	= 347 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 180 CFS
OVERTOPPING ELEVATION	= 352 FT

-12- OVERPASS

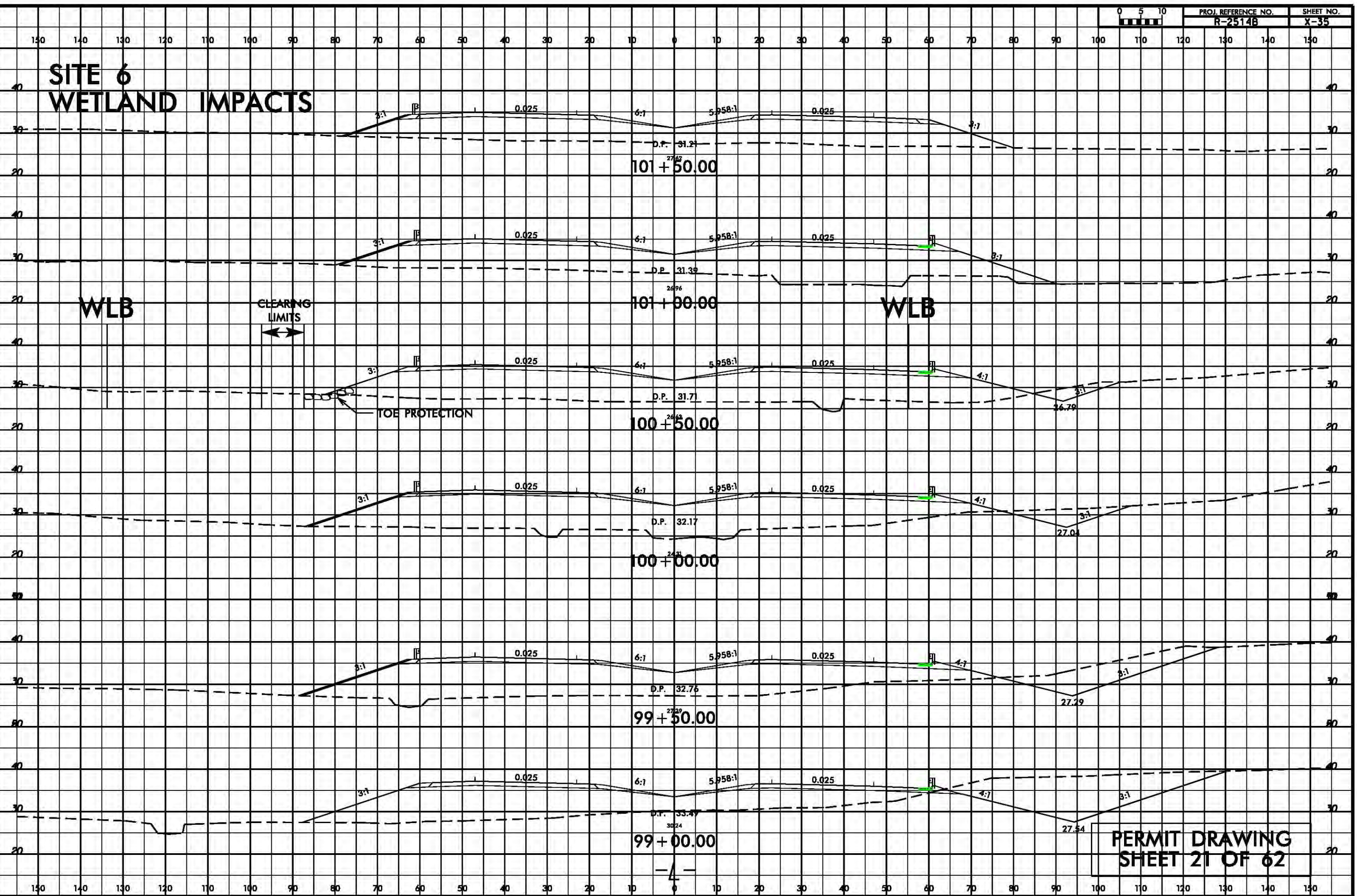


*****SYTIME*****
*****DRAWING*****

6/23/99



SITE 6 WETLAND IMPACTS



PERMIT DRAWING
SHEET 21 OF 62

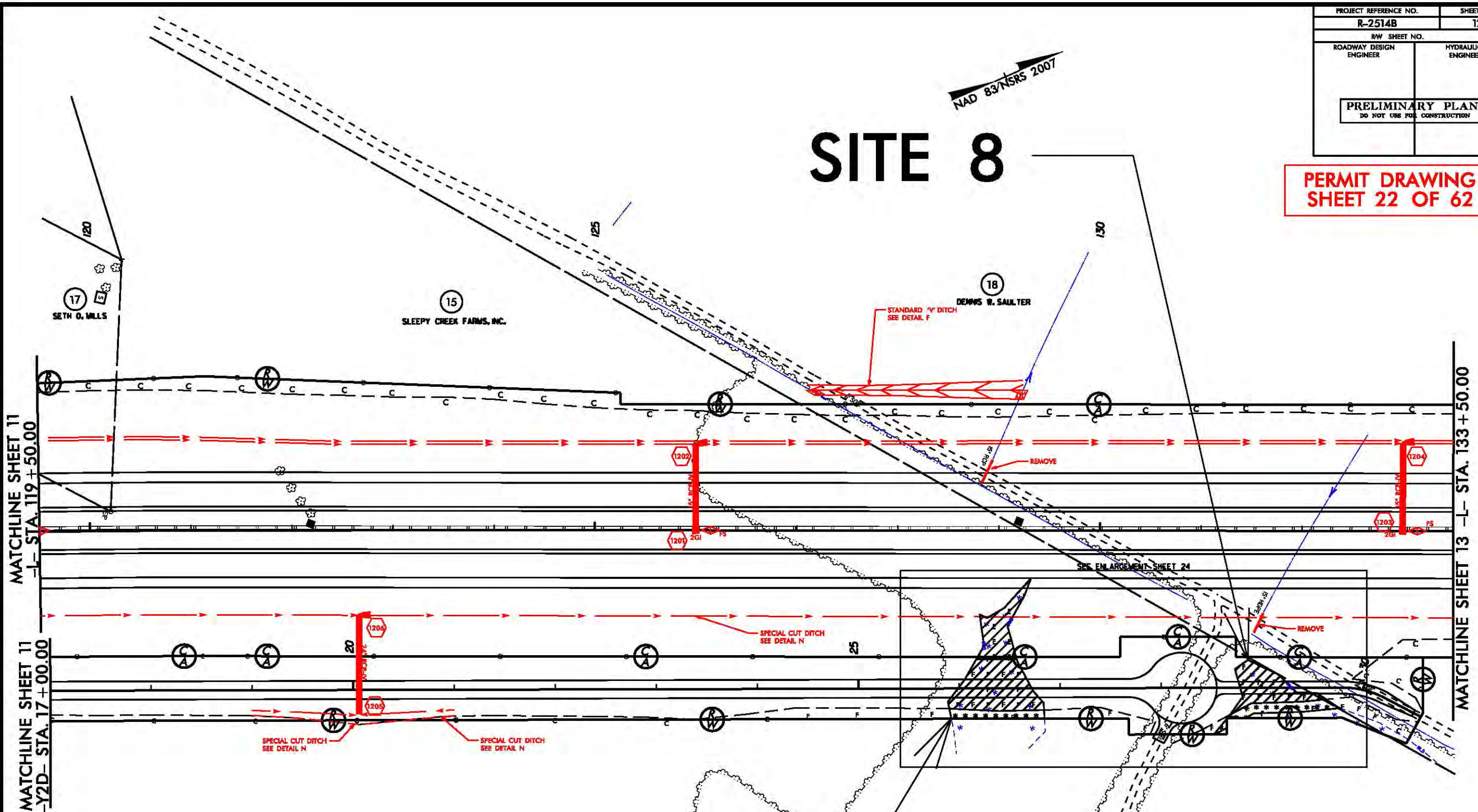
*****SYTIME*****
*****DGN*****
*****USERNAM*****

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 22 OF 62

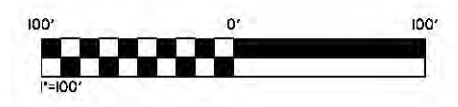
NAD 83/NSRS 2007

SITE 8



- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

SITE 7



REVISIONS

8/17/99

*****SYTIME*****
*****UN*****

8/17/99

PROJECT REFERENCE NO. R-2514B	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007

SITE 8

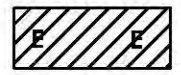
**PERMIT DRAWING
SHEET 23 OF 62**

REVISIONS

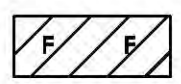
MATCHLINE SHEET 11
-L- STA. 119 + 50.00

MATCHLINE SHEET 11
-Y2D- STA. 17 + 00.00

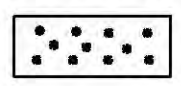
MATCHLINE SHEET 13 -L- STA. 133 + 50.00



DENOTES EXCAVATION IN WETLAND



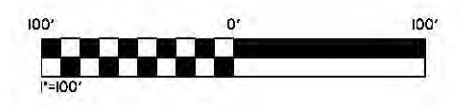
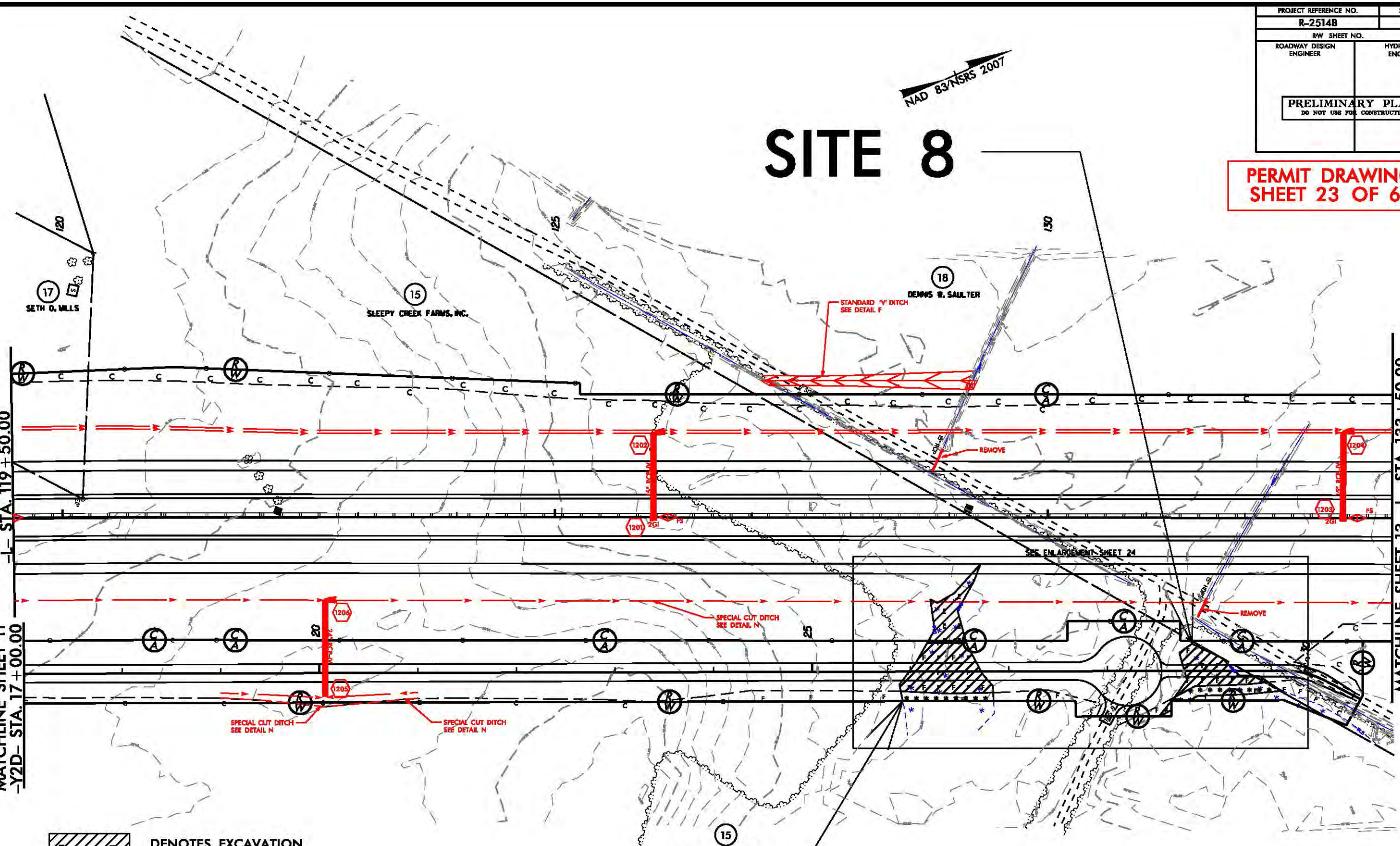
DENOTES FILL IN WETLAND

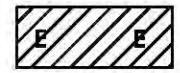
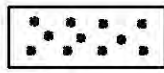



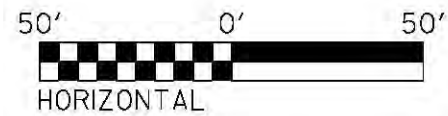
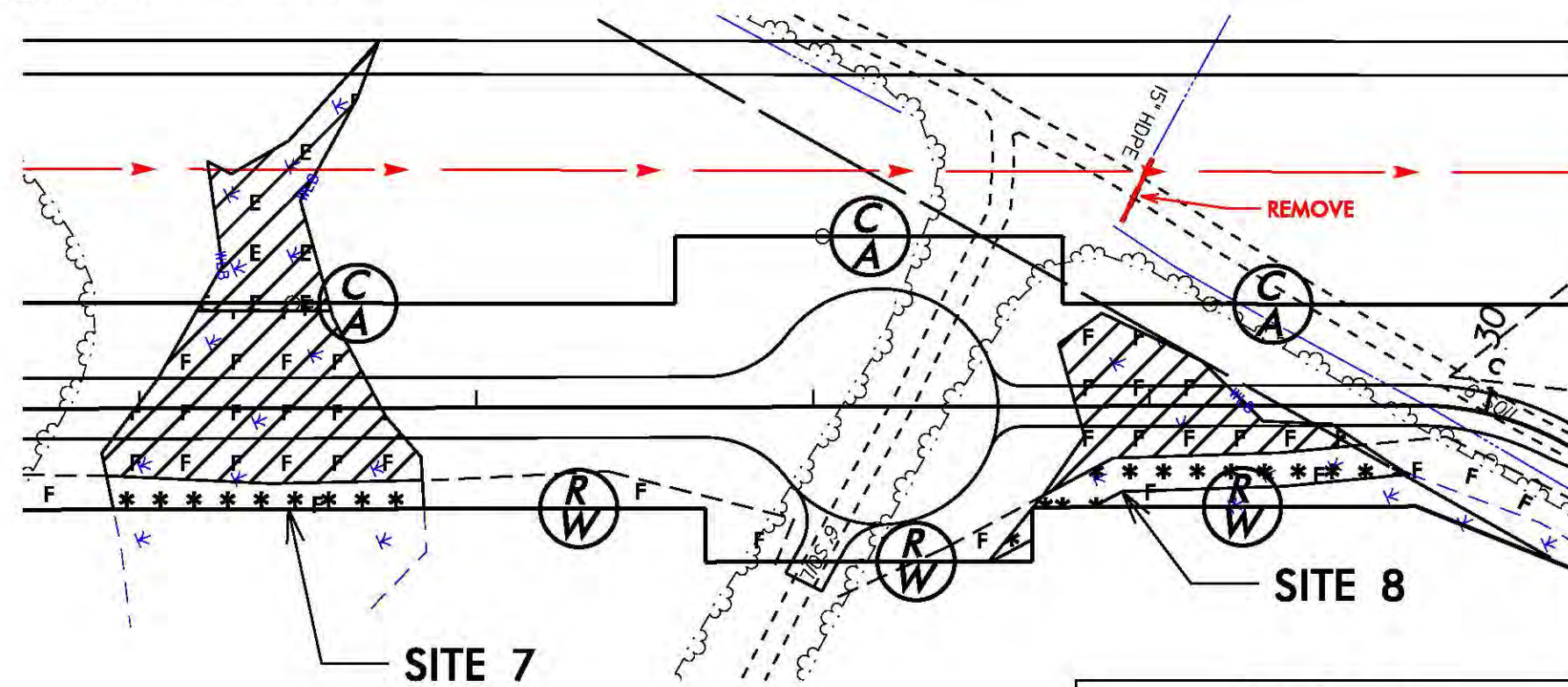
DENOTES MECHANIZED CLEARING

SITE 7

SYTIME
UNIVERSITY



 DENOTES EXCAVATION IN WETLAND  DENOTES MECHANIZED CLEARING
 DENOTES FILL IN WETLAND



PLAN VIEW
SITE 7 & 8

NCDOT
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 34442.13 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330/SR 1439 TO
 NORTH OF MAYSVILLE
 SHEET 24 OF 62

8/23/99

0 10 20

PROJ. REFERENCE NO.
R-2514B

SHEET NO.
X-45

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

SITE 7 & SITE 8 WETLAND IMPACTS

WLB

SITE 8
CLEARING
LIMITS

0.020 0.020
Y2D
STA 28+39.10
OFFSET 155.31'

3:1 4:1 0.025 6:1 26.67 4:1 0.025 4:1
D.P. 25.37
131+50.00

20.53

20.70

0.020 0.020
Y2D
STA 28+39.10
OFFSET 155.49'

3:1 4:1 0.025 6:1 30.13 6:1 0.025 4:1
D.P. 25.59
131+00.00

20.78

20.94

0.020 0.020
Y2D
STA 27+39.10
OFFSET 155.66'

3:1 4:1 0.025 6:1 30.11 6:1 0.025 4:1
D.P. 25.82
130+50.00

21.03

21.19

0.020 0.020
Y2D
STA 27+39.10
OFFSET 155.83'

3:1 4:1 0.025 6:1 30.42 6:1 0.025 4:1
D.P. 26.05
130+00.00

21.28

21.43

0.020 0.020
Y2D
STA 26+39.10
OFFSET 156.01'

3:1 4:1 0.025 6:1 30.64 6:1 0.025 4:1
D.P. 26.28
129+50.00

21.33

21.66

WLB

SITE 7
CLEARING
LIMITS

0.020 0.020
Y2D
STA 26+39.10
OFFSET 156.18'

3:1 3:1 3:1 4:1 0.025 6:1 31.33 6:1 0.025 4:1
D.P. 26.50
129+00.00

26.83

21.78

21.92

PERMIT DRAWING
SHEET 25 OF 62

-4-

300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

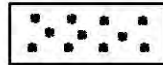
*****SYTIME*****
*****DRAWING*****
*****USERNAME*****

PROJECT REFERENCE NO. R-2514B	SHEET NO. 13
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 26 OF 62



DENOTES FILL IN WETLAND

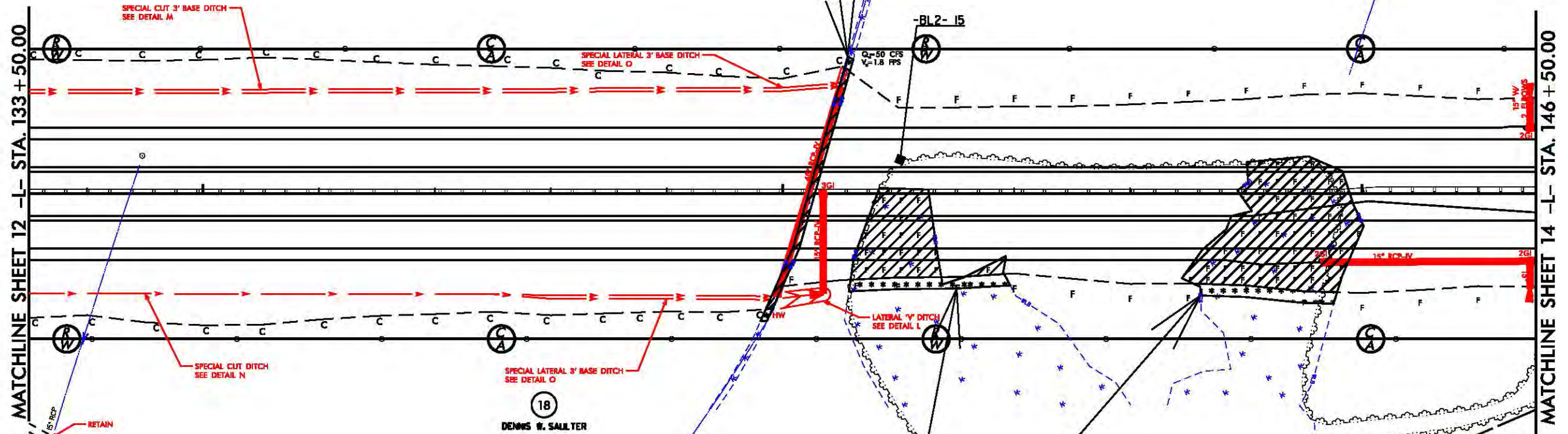


DENOTES MECHANIZED CLEARING

SITE 9

19
MARTHA D. BYNUM
NAD 83/NSRS 2007

18
DENNIS W. SALTER



SITE 10

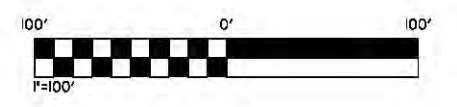
15
SLEEPY CREEK FARMS, INC.

15
SLEEPY CREEK FARMS, INC.

REVISIONS

8/17/99

*****SYTIME*****
*****UN*****

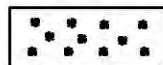


8/17/99

PROJECT REFERENCE NO. R-2514B	SHEET NO. 13
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



DENOTES FILL IN WETLAND

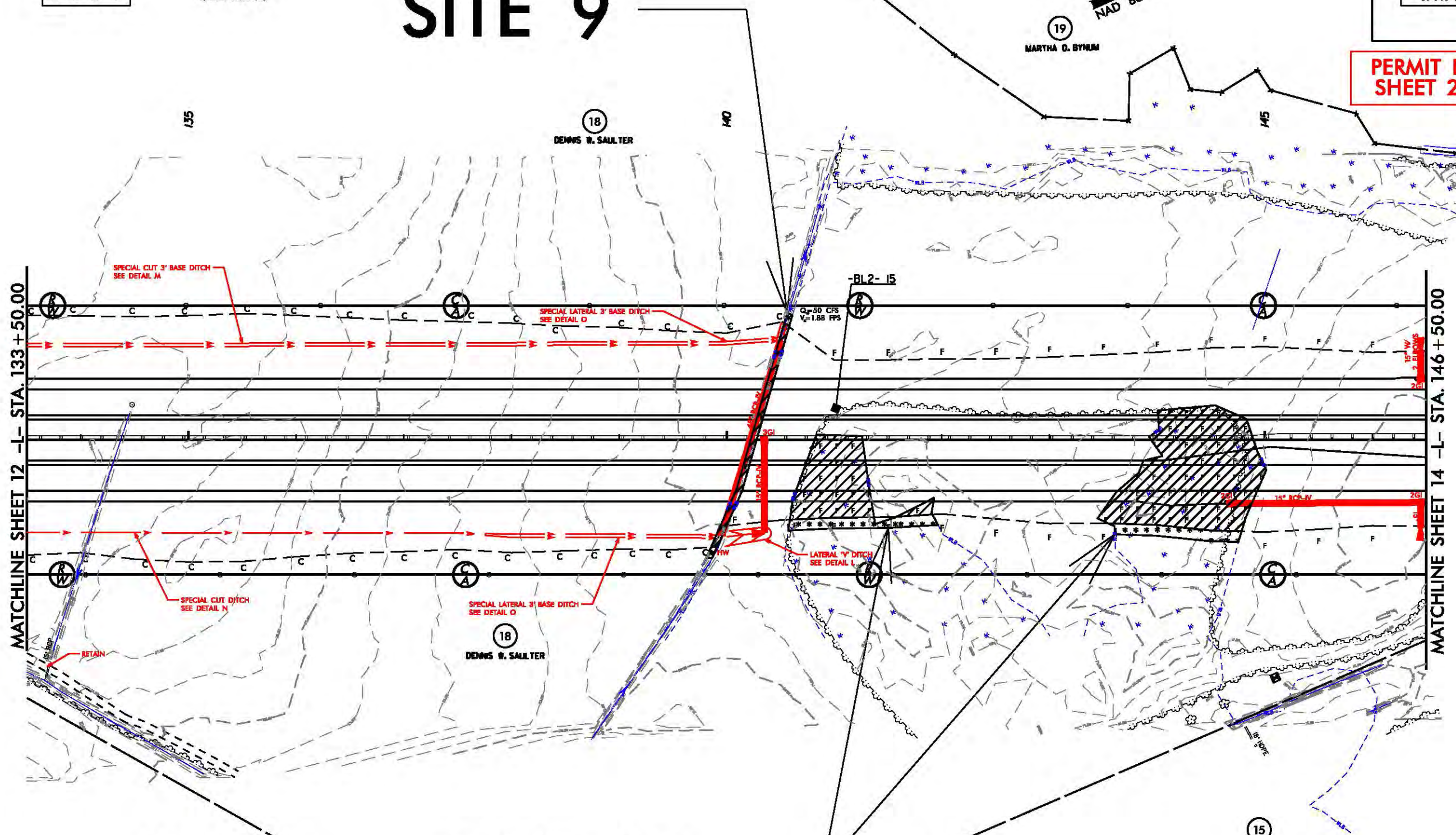


DENOTES MECHANIZED CLEARING

SITE 9

NAD 83/NSRS 2007

**PERMIT DRAWING
SHEET 27 OF 62**



REVISIONS

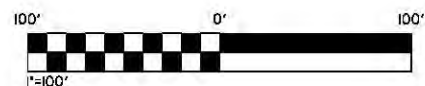
MATCHLINE SHEET 12 -L- STA. 133 + 50.00

MATCHLINE SHEET 14 -L- STA. 146 + 50.00

SITE 10

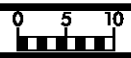
15
SLEEPY CREEK FARMS, INC.

15
SLEEPY CREEK FARMS, INC.



SYTIME
UN

8/23/99



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 9 & SITE 10 WETLAND IMPACTS

D.P. 22.10
1998
142 + 00.00

D.P. 21.86
1996
141 + 50.00
WLB

D.P. 21.71
1994
141 + 00.00

D.P. 21.64
1994
140 + 50.00

D.P. 21.66
1985
140 + 00.00

D.P. 21.76
2012
139 + 50.00

SITE 10
CLEARING
LIMITS
↔

WLB

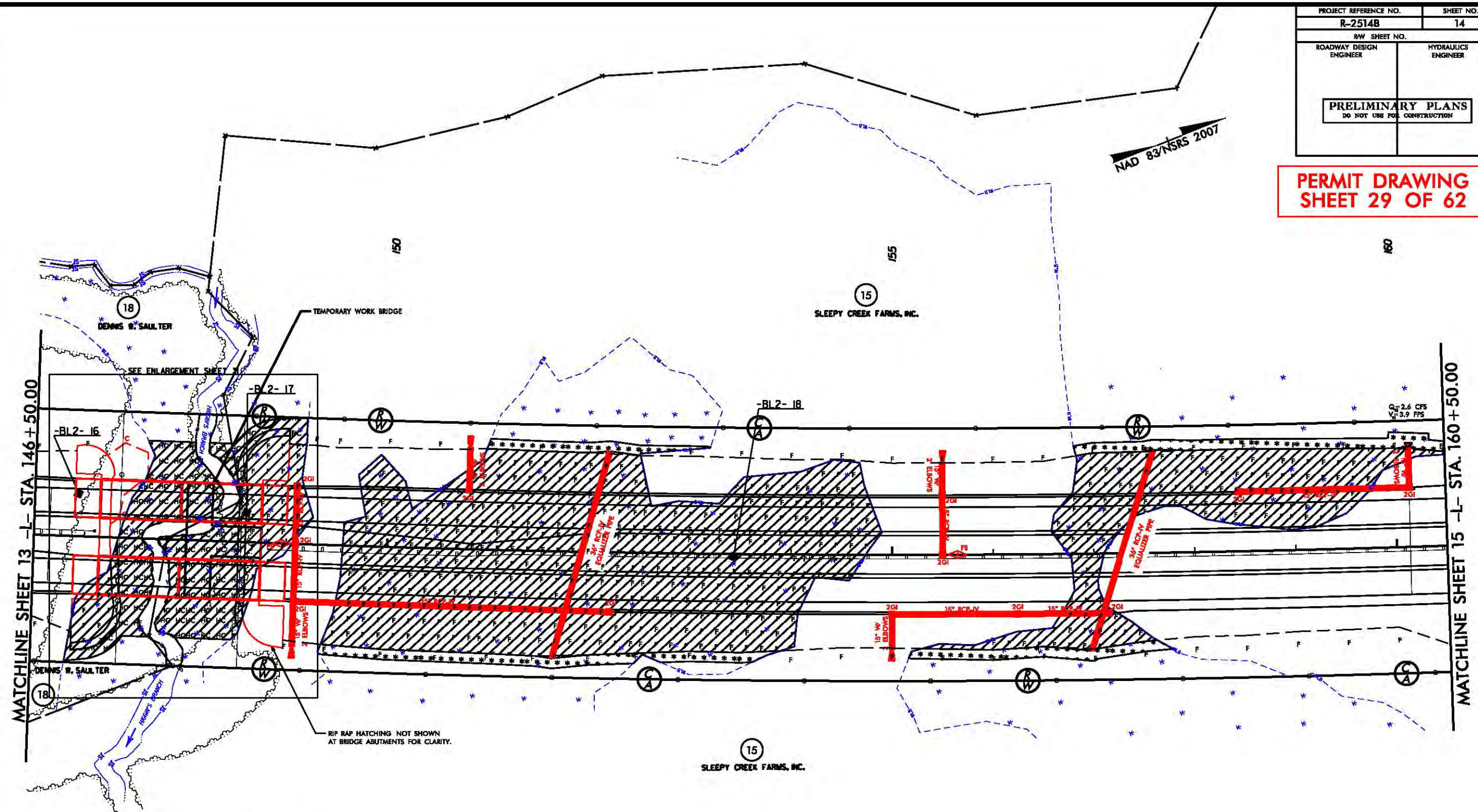
WLB

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 29 OF 62

NAD 83/NSRS 2007

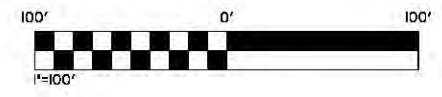


MATCHLINE SHEET 13 -L- STA. 146 + 50.00

MATCHLINE SHEET 15 -L- STA. 160 + 50.00

- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY FILL IN WETLAND

SITE 10



REVISIONS

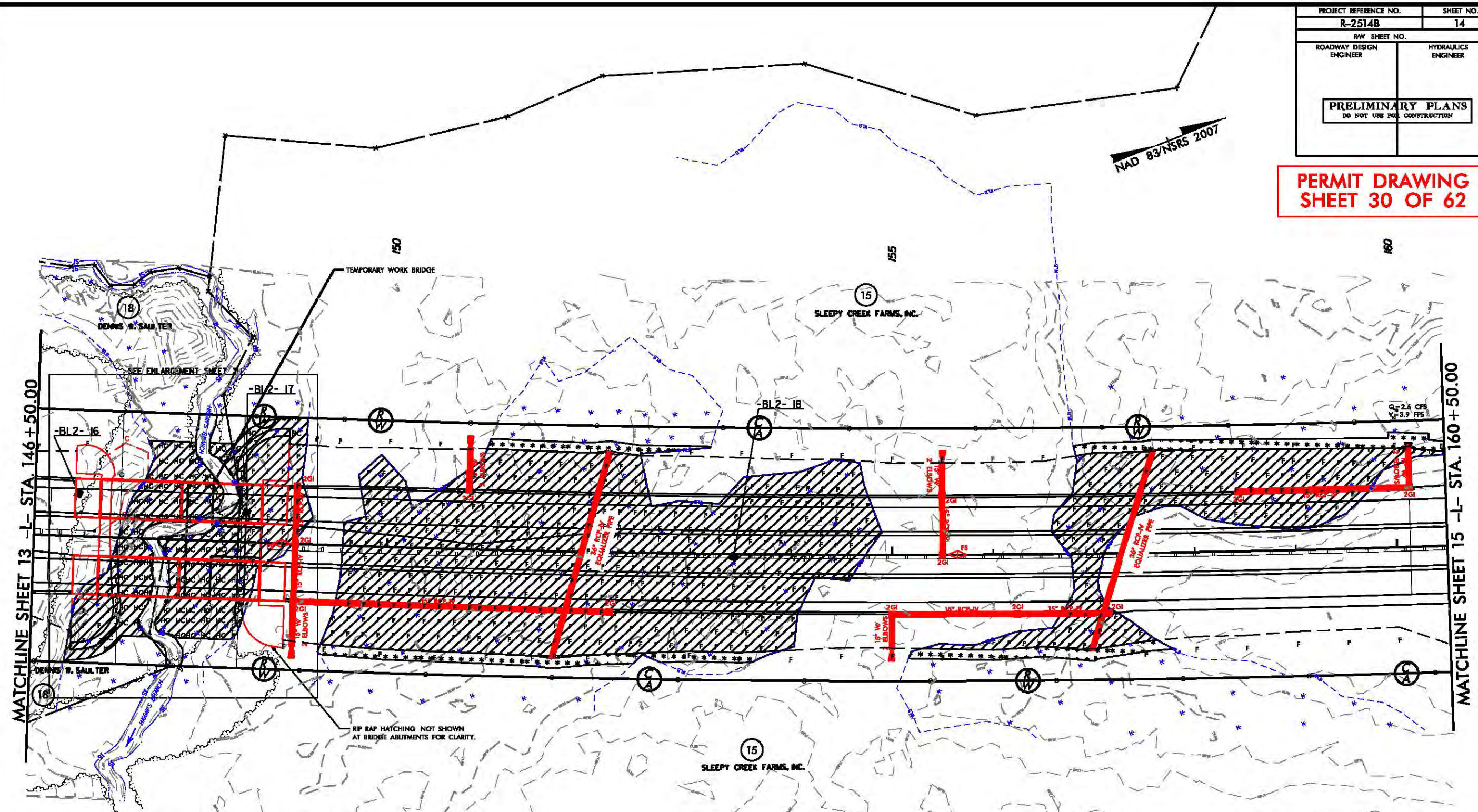
8/17/99

*****SYTIME*****
*****UN*****

PROJECT REFERENCE NO. R-2514B	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

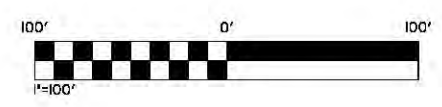
PERMIT DRAWING
SHEET 30 OF 62

NAD 83/NSRS 2007



- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY FILL IN WETLAND

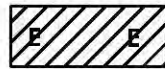


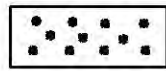
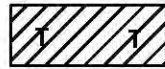
SITE 10

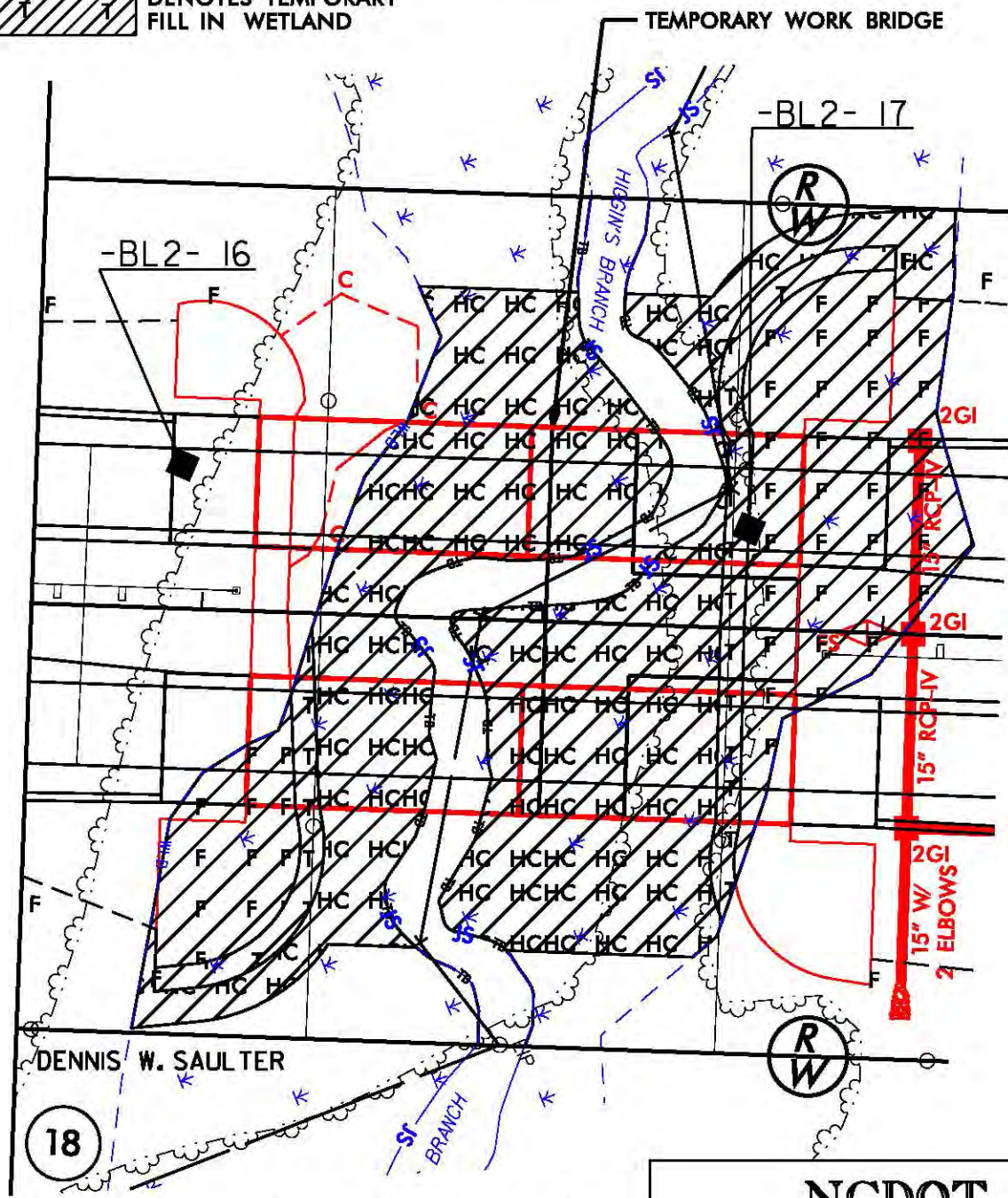


REVISIONS

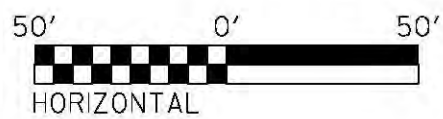
8/17/99

*****SYTIME*****
*****UN*****

- | | | | |
|---|--------------------------------------|--|--------------------------------|
|  | DENOTES EXCAVATION
IN WETLAND |  | DENOTES HAND
CLEARING |
|  | DENOTES FILL IN
WETLAND |  | DENOTES MECHANIZED
CLEARING |
|  | DENOTES TEMPORARY
FILL IN WETLAND | | |



PLAN VIEW
SITE 10



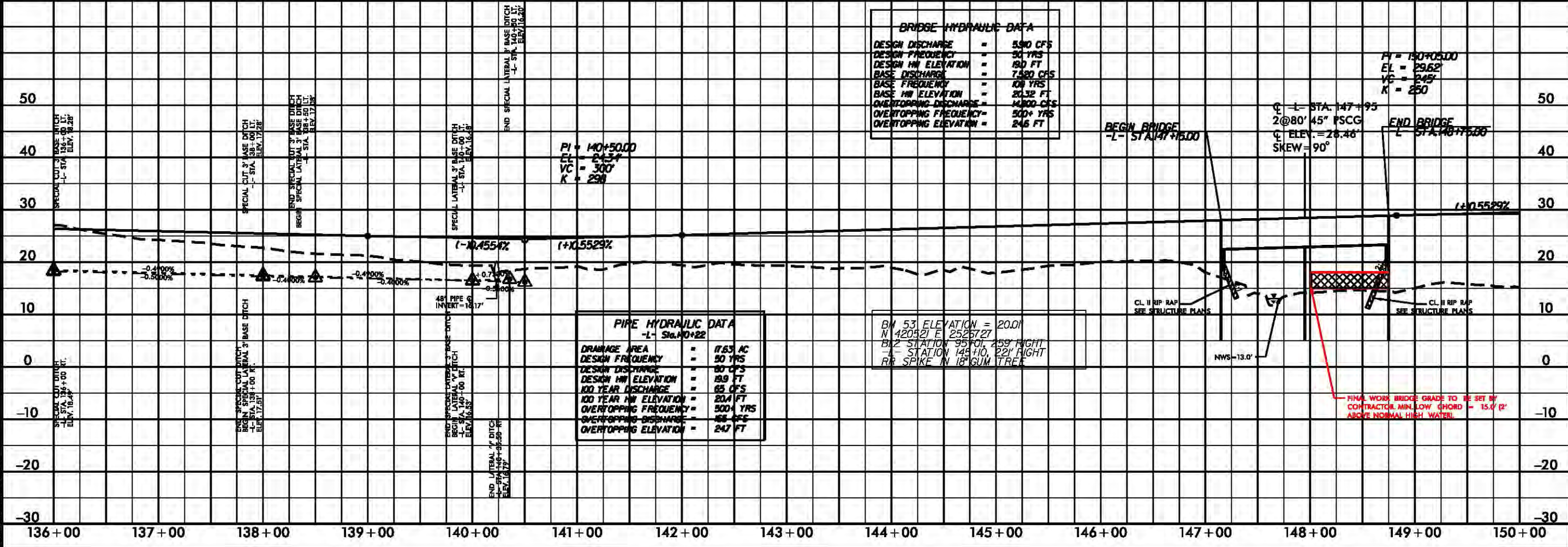
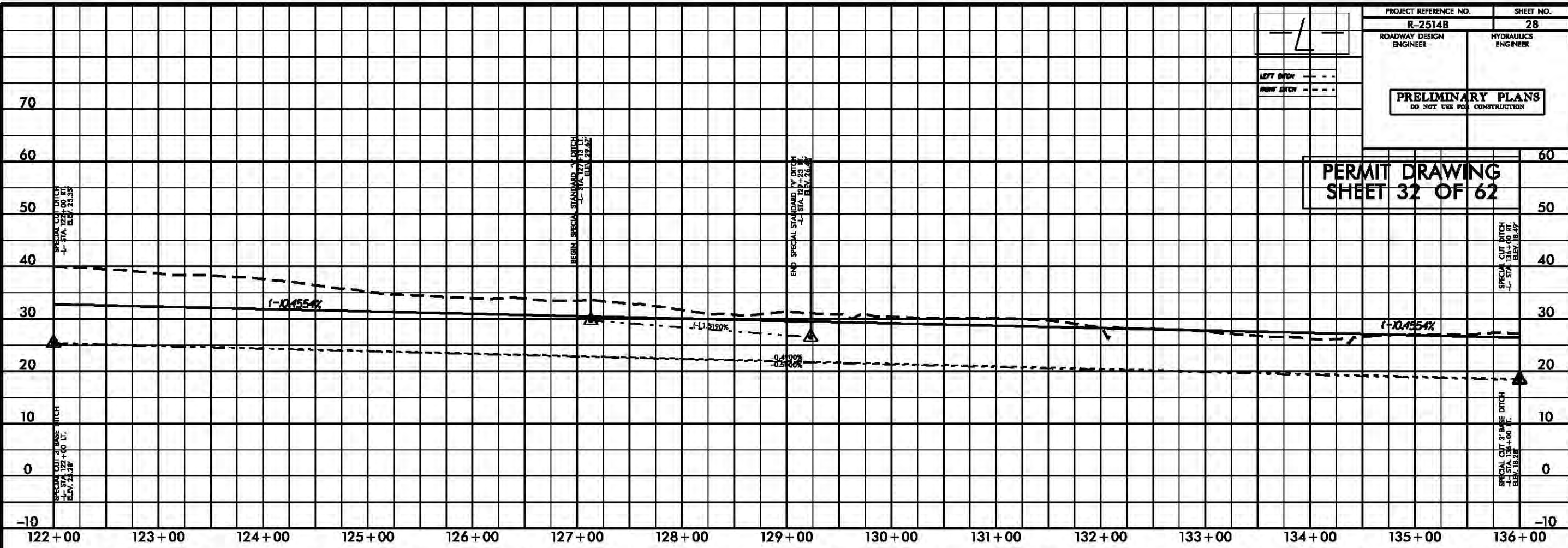
NCDOT
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 34442.1.3 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330/SR 1439 TO
 NORTH OF MAYSVILLE

SHEET 31 OF 62

5/28/99

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 32 OF 62



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	590 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	19.0 FT
BASE DISCHARGE	=	750 CFS
BASE FREQUENCY	=	10 YRS
BASE HW ELEVATION	=	20.32 FT
OVERTOPPING DISCHARGE	=	1400 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

PIPE HYDRAULIC DATA
-L- Sta. 140+22

DRAINAGE AREA	=	1763 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	80 CFS
DESIGN HW ELEVATION	=	19.9 FT
100 YEAR DISCHARGE	=	93 CFS
100 YEAR HW ELEVATION	=	20.4 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	158 CFS
OVERTOPPING ELEVATION	=	24.7 FT

BM 53 ELEVATION = 20.01
N 420921 E 2526727
BLZ STATION 95+01, 259' HEIGHT
-L- STATION 145+10, 22' HEIGHT
RR SPIKE IN 18" GUM TREE

PI = 140+50.00
EL = 29.62'
VC = 245'
K = 250

CL -L- STA. 147+95
2@80' 45" PSCG
CL ELEV. = 26.46'
SKEW = 90°

FINAL WORK BRIDGE GRADE TO BE SET BY CONTRACTOR MIN. LOW CHORD = 15.0' (2' ABOVE NORMAL HIGH WATER)

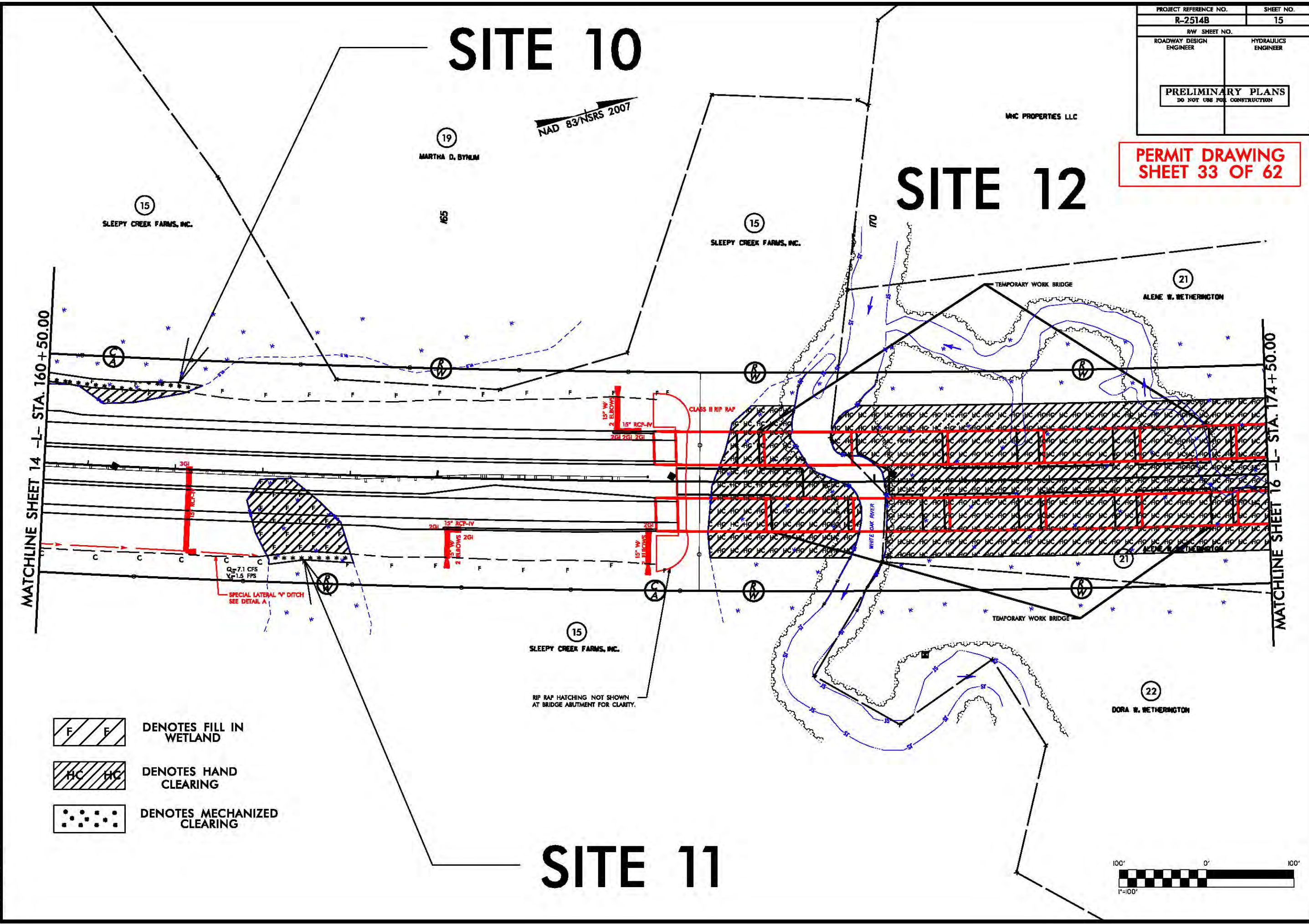
*****SYTIME*****
*****SUNLISE*****

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SITE 10

SITE 12

PERMIT DRAWING
SHEET 33 OF 62

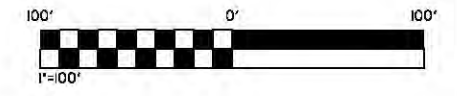


MATCHLINE SHEET 14 -L- STA. 160+50.00

MATCHLINE SHEET 16 -L- STA. 174+50.00

- F F DENOTES FILL IN WETLAND
- HC HC DENOTES HAND CLEARING
- DENOTES MECHANIZED CLEARING

SITE 11



REVISIONS

8/17/99

*****SYTIME*****
*****UN*****

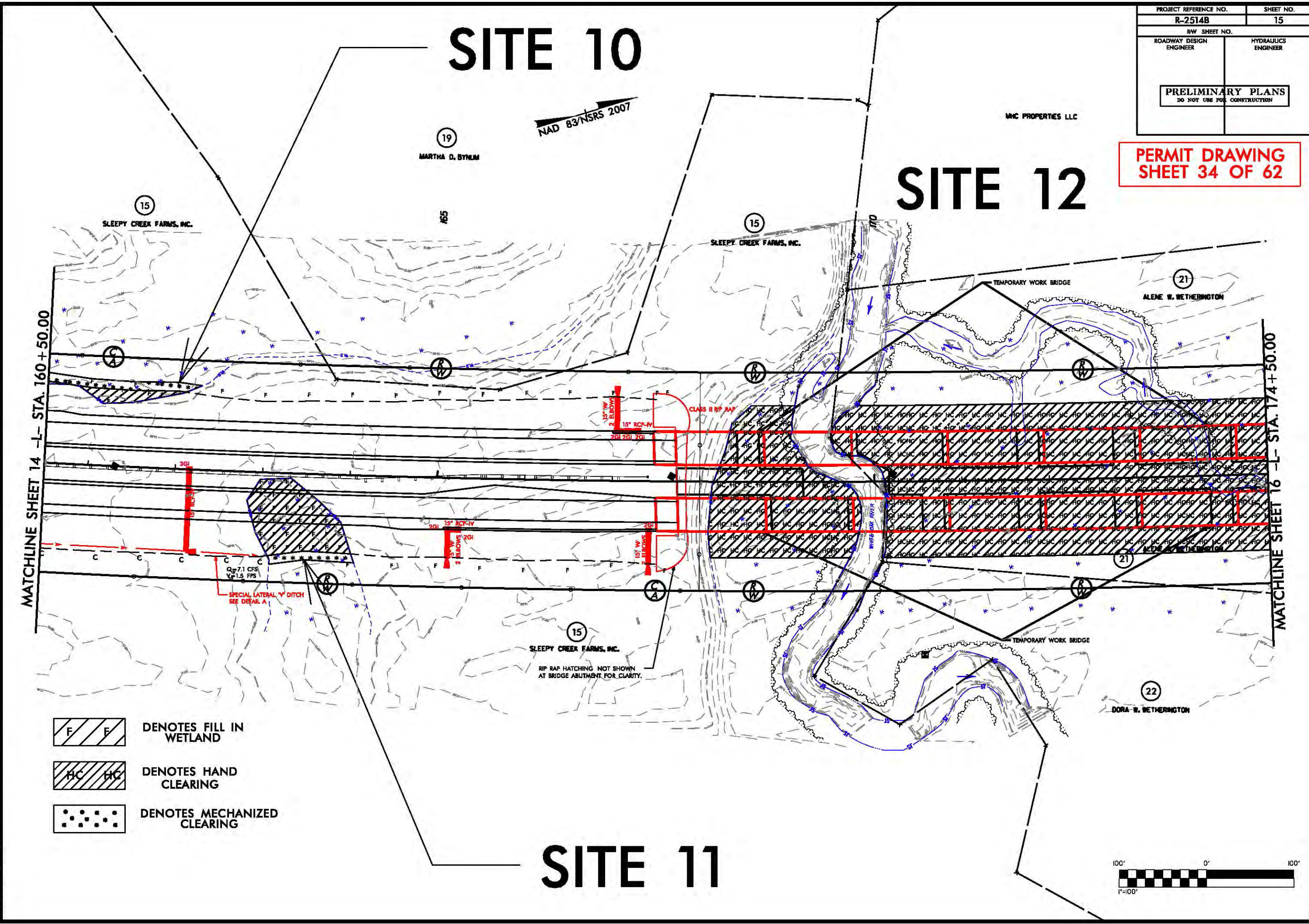
PROJECT REFERENCE NO.	SHEET NO.
R-2514B	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



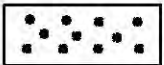
SITE 10

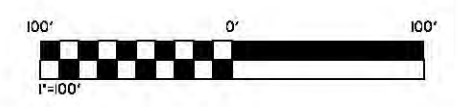
SITE 12

SITE 11

PERMIT DRAWING
SHEET 34 OF 62



-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING
-  DENOTES MECHANIZED CLEARING

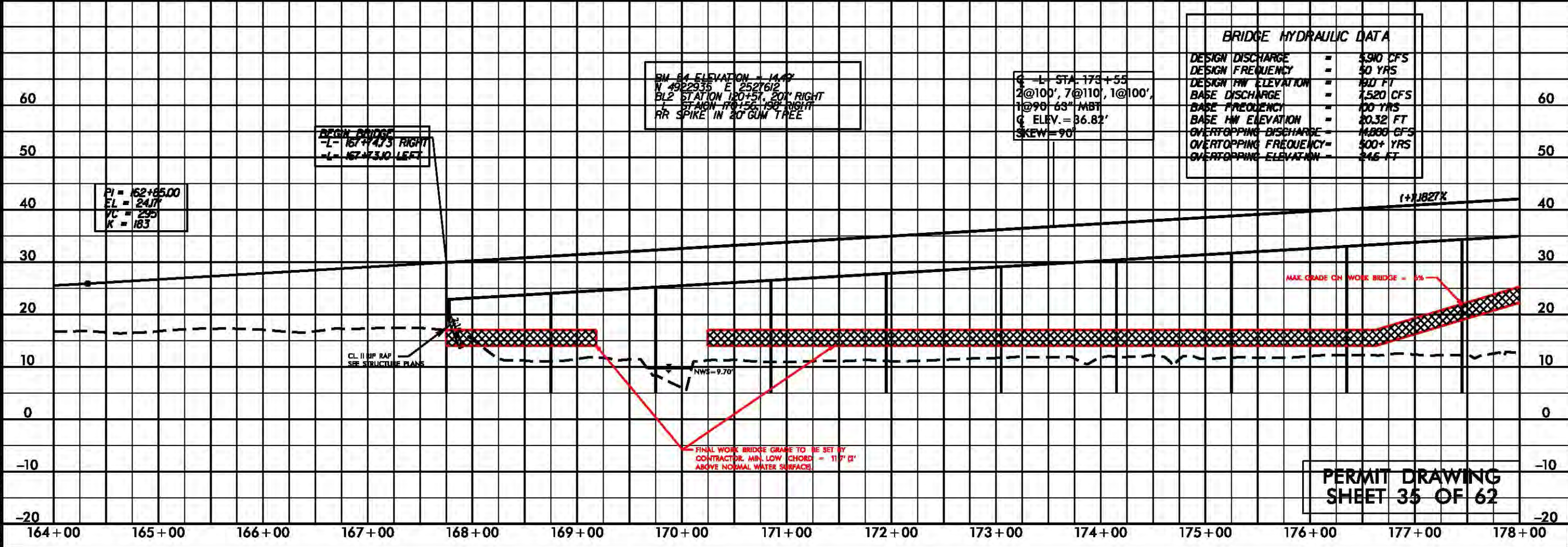
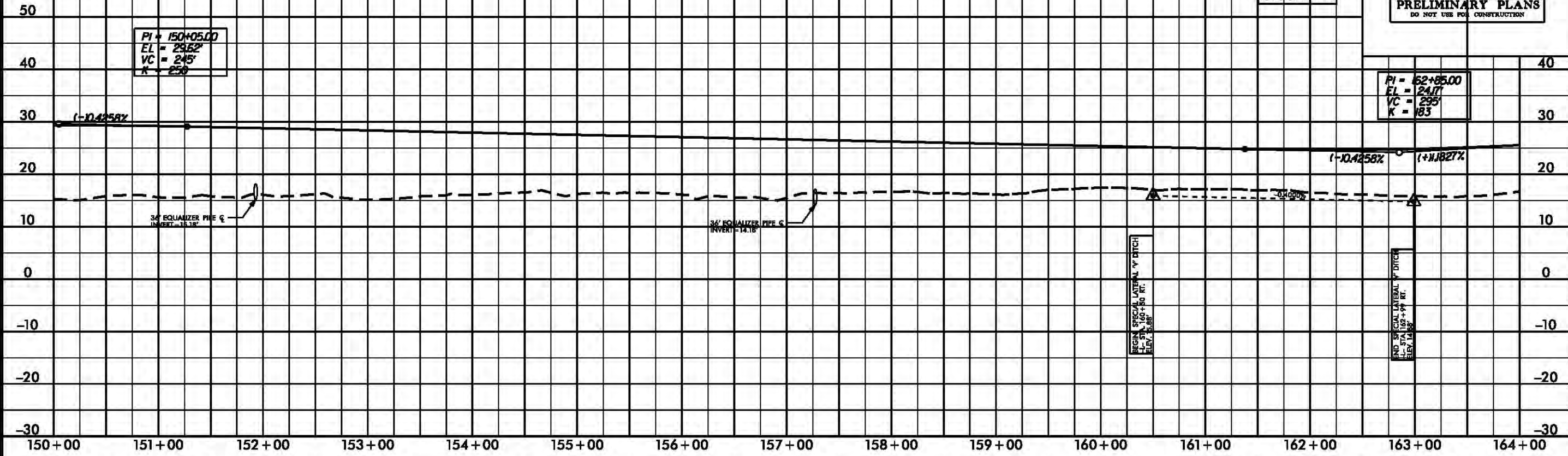
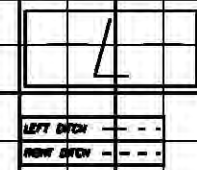


REVISIONS

8/17/99

SYTIME
UN

5/28/99



BRIDGE HYDRAULIC DATA	
DESIGN DISCHARGE	= 590 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 19.0 FT
BASE DISCHARGE	= 7,520 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 20.32 FT
OVERTOPPING DISCHARGE	= 1,800 CFS
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING ELEVATION	= 24.6 FT

BM 54 ELEVATION = 14.47'
 N 49°29'35" E 252.7612'
 BL2 STATION 120+51.20' RIGHT
 L STATION 170+56.190' RIGHT
 RR SPIKE IN 20' GUM TREE

G - L STA. 173+55
 2@100', 7@110', 1@100'
 1@90' 63" MBT
 G ELEV. = 36.82'
 SKEW = 90°

BEGIN BRIDGE
 L = 167+4.73 RIGHT
 L = 167+73.10 LEFT

PI = 162+85.00
 EL = 24.77'
 VC = 295'
 K = 183

SYSTEMS
 5/28/99

8/23/99

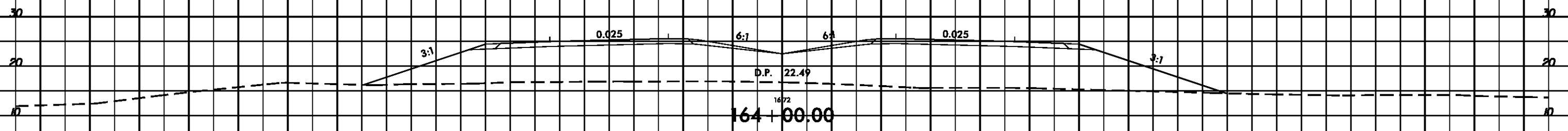
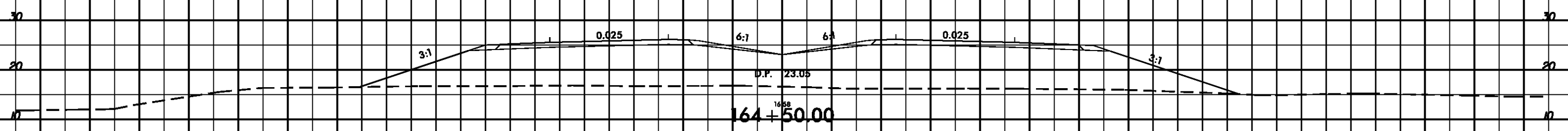
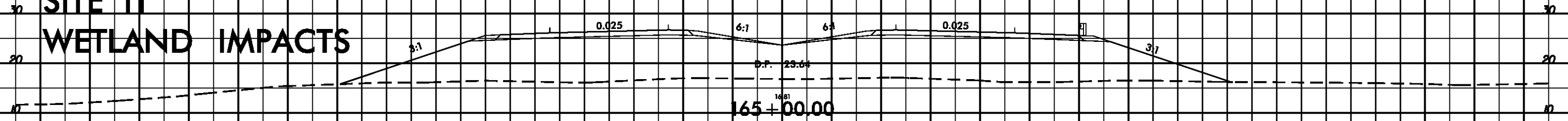


PROJ. REFERENCE NO.
R-2514B

SHEET NO.
X-58

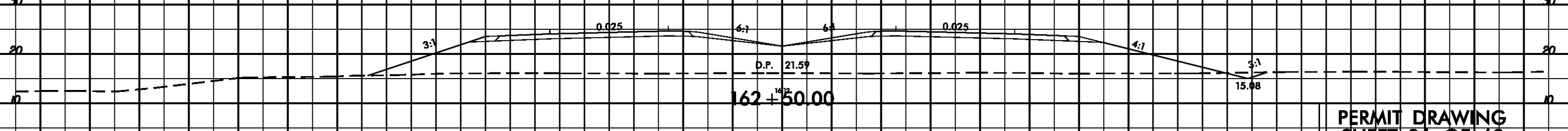
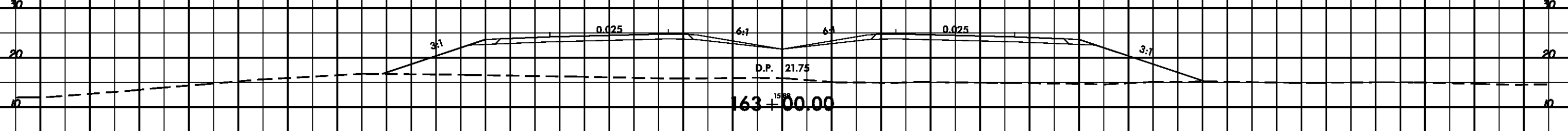
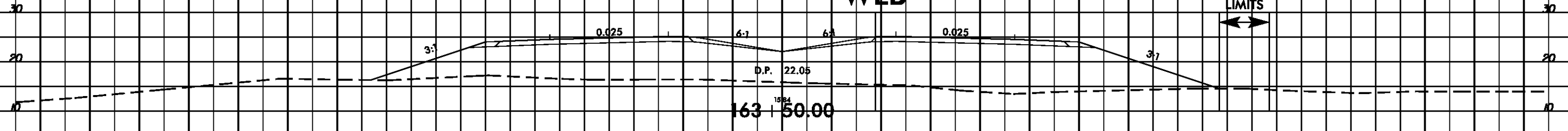
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 11 WETLAND IMPACTS



WLB

CLEARING LIMITS






-4-

PERMIT DRAWING
SHEET 36 OF 62

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

8/17/99

-  DENOTES FILL IN WETLAND
-  DENOTES HAND CLEARING
-  DENOTES TEMPORARY FILL IN WETLAND

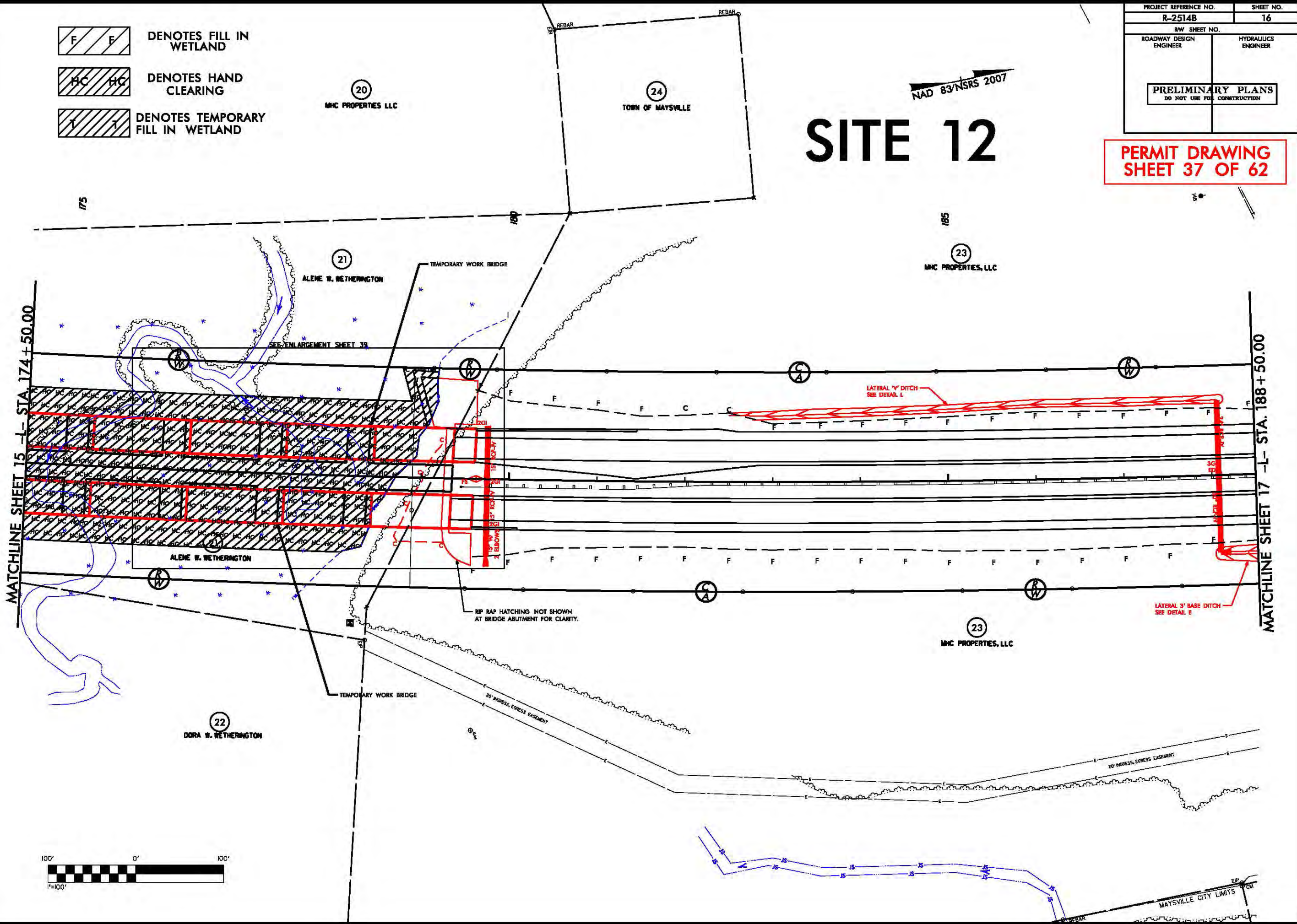
PROJECT REFERENCE NO. R-2514B	SHEET NO. 16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SITE 12

NAD 83/NSRS 2007

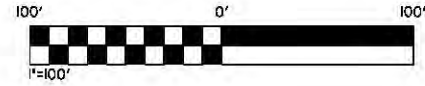
PERMIT DRAWING SHEET 37 OF 62

REVISIONS



MATCHLINE SHEET 15 -L- STA. 174+50.00

MATCHLINE SHEET 17 -L- STA. 188+50.00



*****SYTIME*****
*****UN*****

MAYSVILLE CITY LIMITS

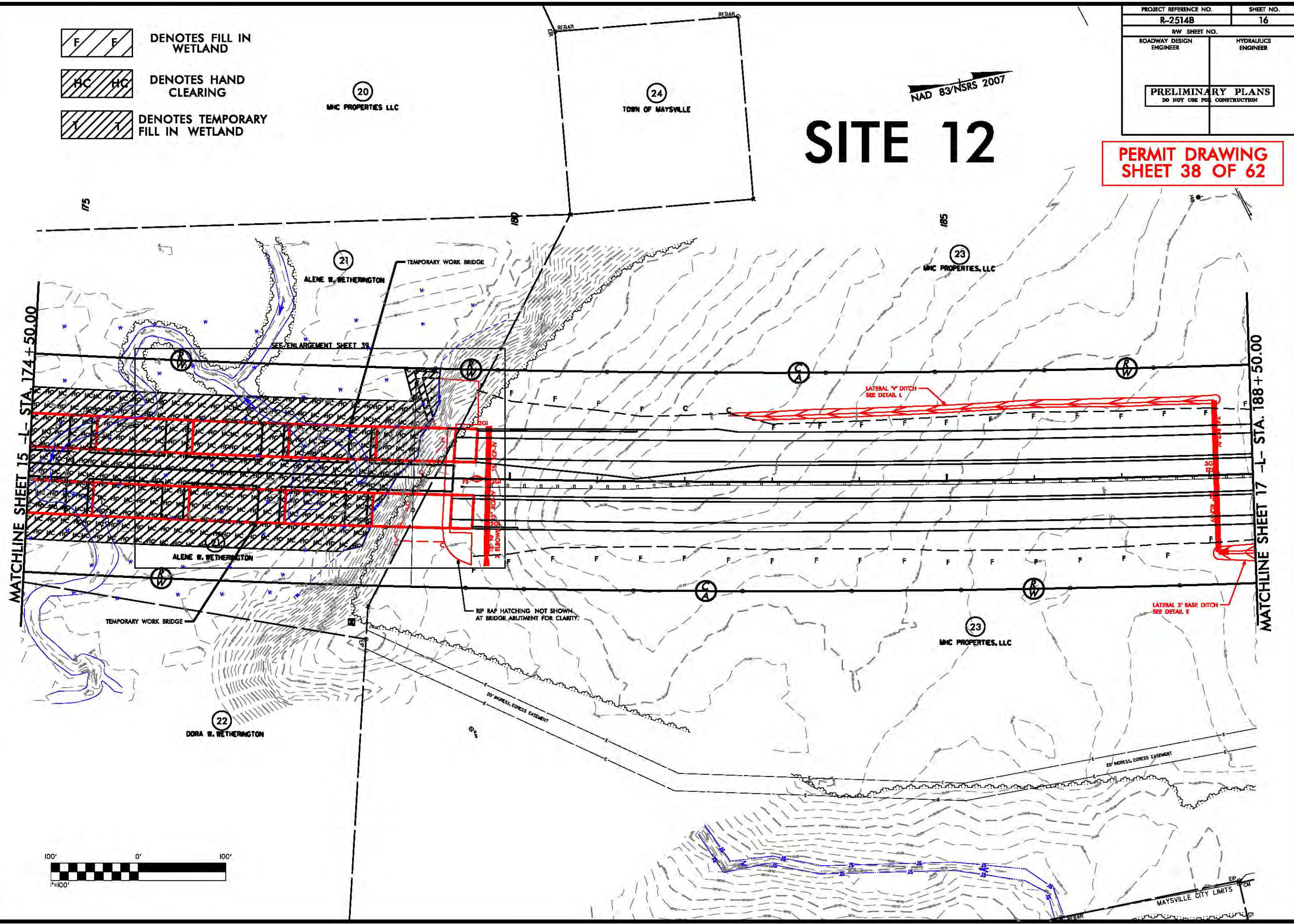
PROJECT REFERENCE NO. R-2514B	SHEET NO. 16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES TEMPORARY FILL IN WETLAND

NAD 83/NSRS 2007

SITE 12

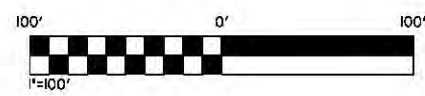
PERMIT DRAWING SHEET 38 OF 62



REVISIONS

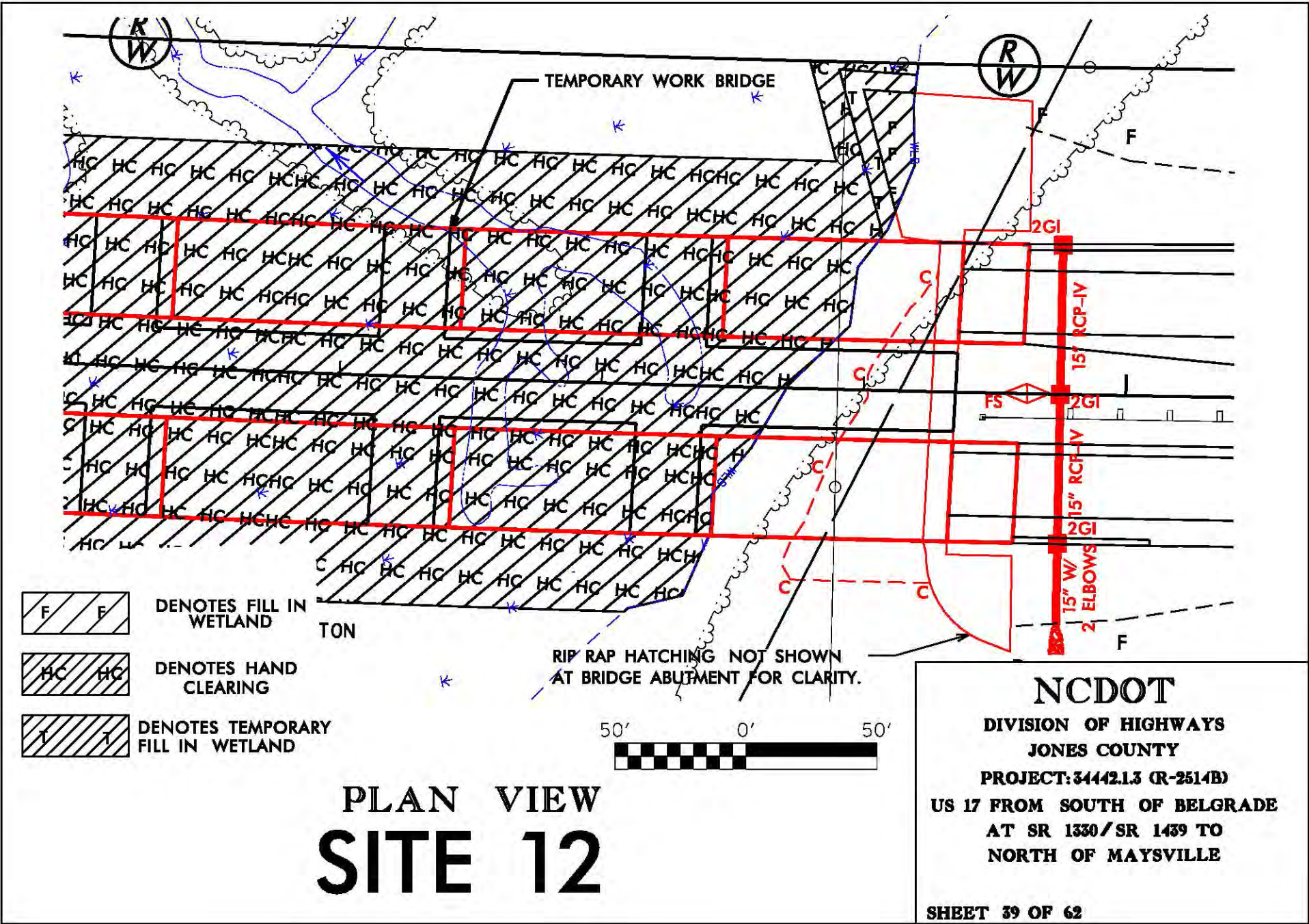
MATCHLINE SHEET 15 -L- STA 174+50.00

MATCHLINE SHEET 17 -L- STA 188+50.00



SYNTHESIS ENGINEERING & CONSULTING, INC.

MAYSVILLE CITY LIMITS



5/28/99

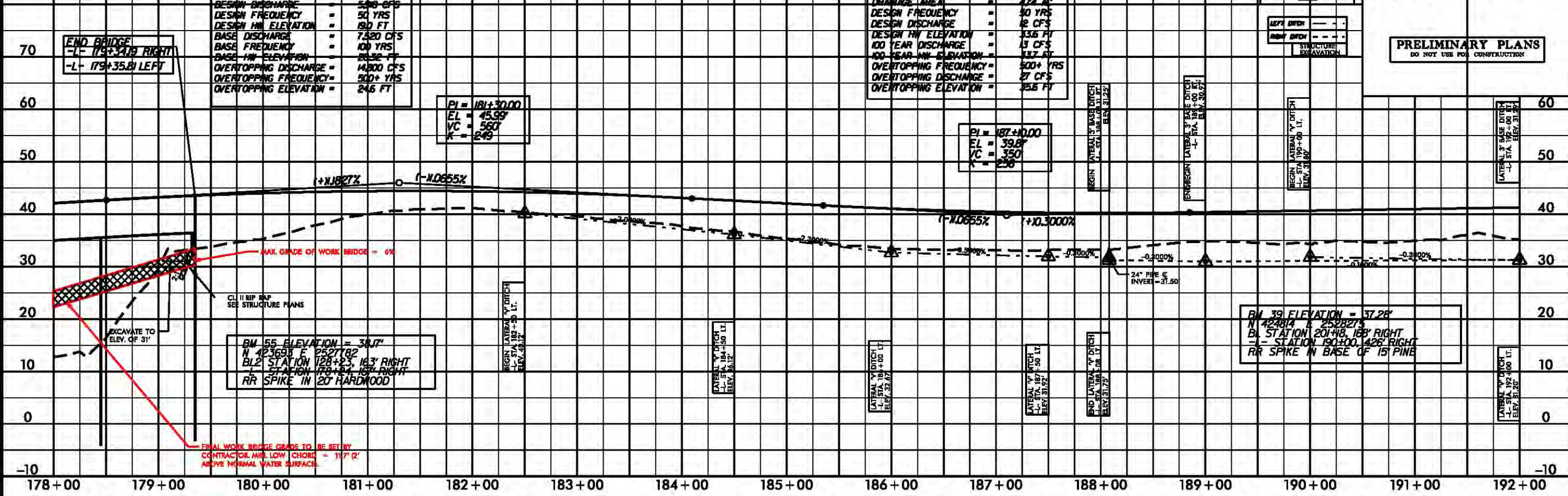
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 5,200 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 190 FT
BASE DISCHARGE	= 7,520 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 203.26 FT
OVERTOPPING DISCHARGE	= 14,000 CFS
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING ELEVATION	= 246 FT

PIPE HYDRAULIC DATA
-1- Sta. 188+00

DRAINAGE AREA	= 174 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 12 CFS
DESIGN HW ELEVATION	= 33.6 FT
100 YEAR DISCHARGE	= 13 CFS
100 YEAR HW ELEVATION	= 33.7 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 27 CFS
OVERTOPPING ELEVATION	= 35.6 FT

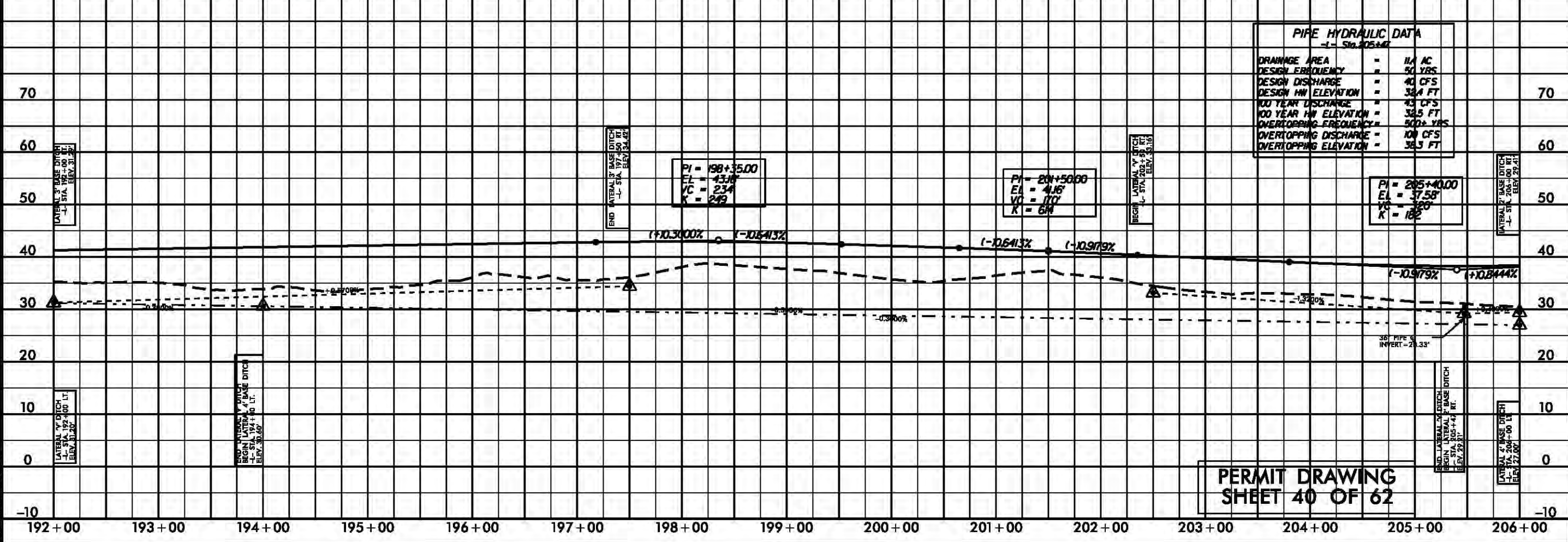


BM 55 ELEVATION = 30.17'
 N 423698 E 2527782
 BL2 STATION 128+23.163' RIGHT
 STATION 178+34.157' RIGHT
 RR SPIKE IN 20' HARDWOOD

BM 39 ELEVATION = 37.28'
 N 424814 E 2528275
 BL STATION 201+48.168' RIGHT
 STATION 190+00.426' RIGHT
 RR SPIKE IN BASE OF 15' PINE

PIPE HYDRAULIC DATA
-1- Sta. 205+00

DRAINAGE AREA	= 111 AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 40 CFS
DESIGN HW ELEVATION	= 38.4 FT
100 YEAR DISCHARGE	= 43 CFS
100 YEAR HW ELEVATION	= 38.5 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 100 CFS
OVERTOPPING ELEVATION	= 38.3 FT



PERMIT DRAWING SHEET 40 OF 62

SYTIME

8/23/99

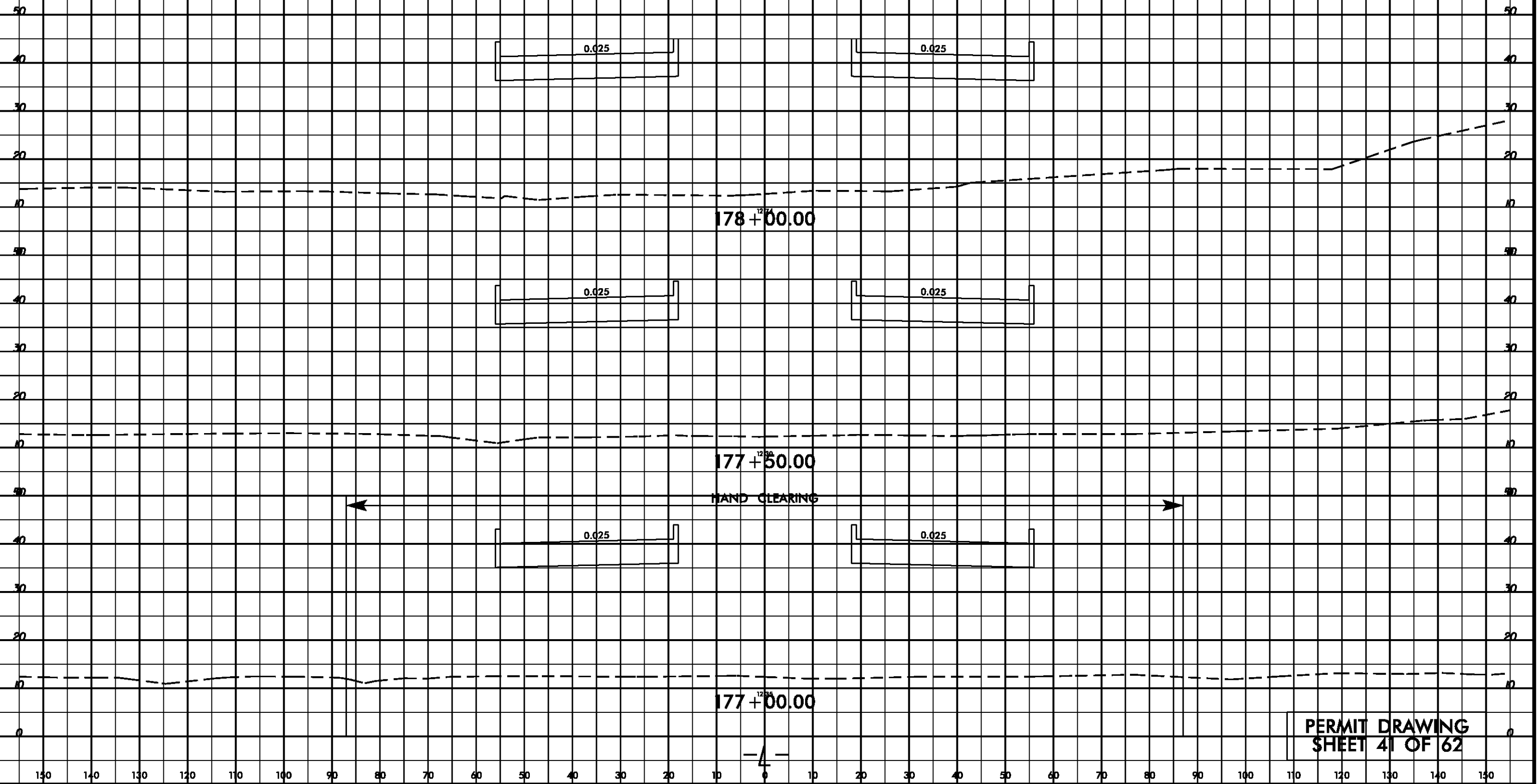


PROJ. REFERENCE NO.
R-2514B

SHEET NO.
X-65

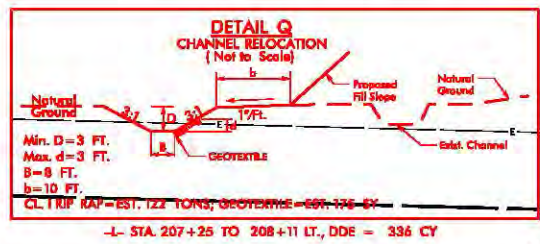
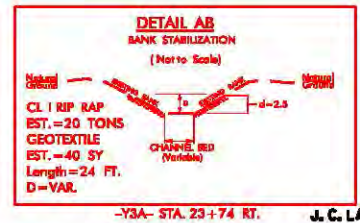
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SITE 12 WETLAND IMPACTS



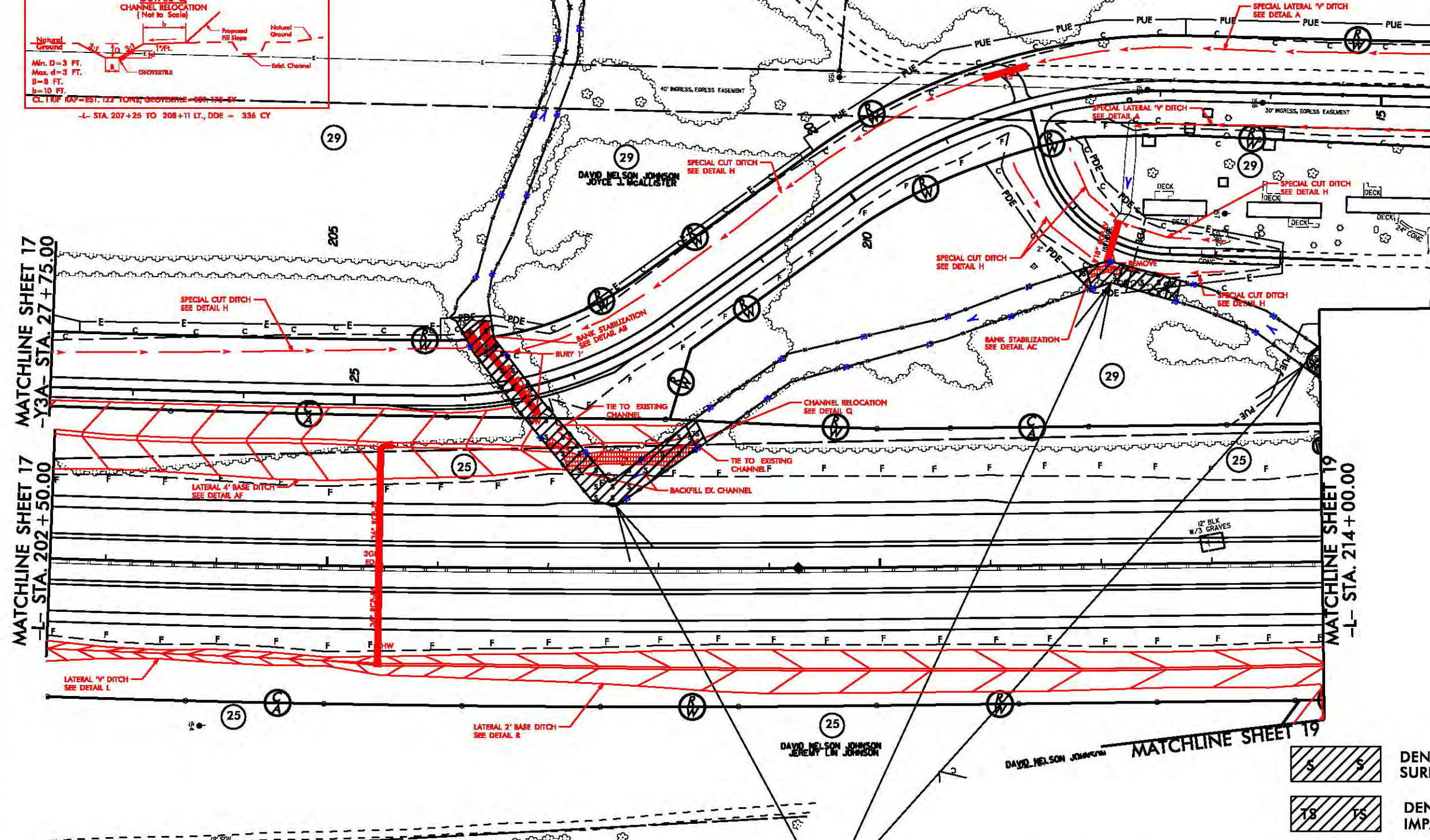
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO. R-2514B	SHEET NO. 18
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



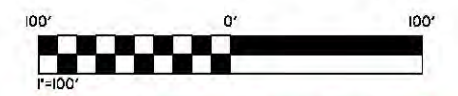
8/17/99

NAD 83/NSRS 2007



REVISIONS

DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER



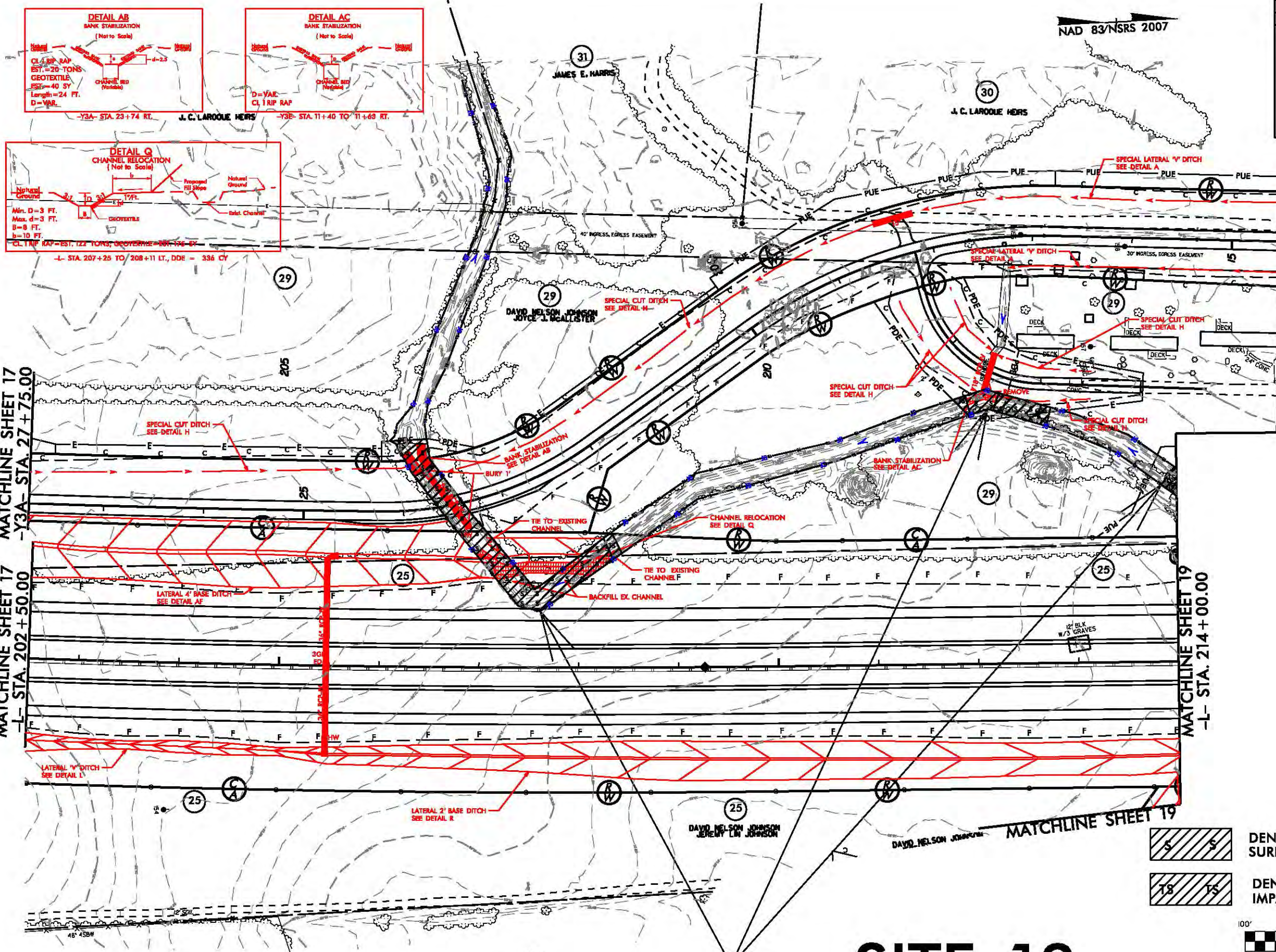
PERMIT DRAWING
SHEET 42 OF 62

SITE 13

*****SYTIME*****
*****UN*****

PROJECT REFERENCE NO. R-2514B	SHEET NO. 18
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007





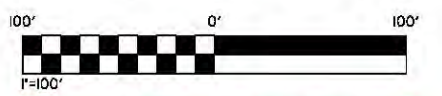
MATCHLINE SHEET 17
-L- STA. 202+50.00

MATCHLINE SHEET 19
-Y3A- STA. 14+50.00

MATCHLINE SHEET 19
-L- STA. 214+00.00

REVISIONS

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



**PERMIT DRAWING
SHEET 43 OF 62**

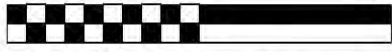
SITE 13

27
DAVID NELSON JOHNSON

8/17/99

*****SYTIME*****
*****UN*****

25' 0' 25'



HORIZONTAL

5' 0' 5'



VERTICAL

45'

45'

40'

40'

35'

35'

30'

30'

25'

25'

20'

20'

50'

25'

LT.

CL

RT.

25'

50'

75'

100'

CL STA. 23+51.43 -Y3A-
84" RCP-IV
CL ELEV. = 36.82'
SKEW = 62.5°

3:1
(NORMAL)

4:1
(NORMAL)

TB LT.

TB RT.

NWS = 28.13'



EX. STREAM BED

PROP. INV.
25.17'

PROP. INV.
25.00'

PROFILE -Y3A- 84" PIPE

NCDOT

DIVISION OF HIGHWAYS
JONES COUNTY

PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330/SR 1439 TO
NORTH OF MAYSVILLE

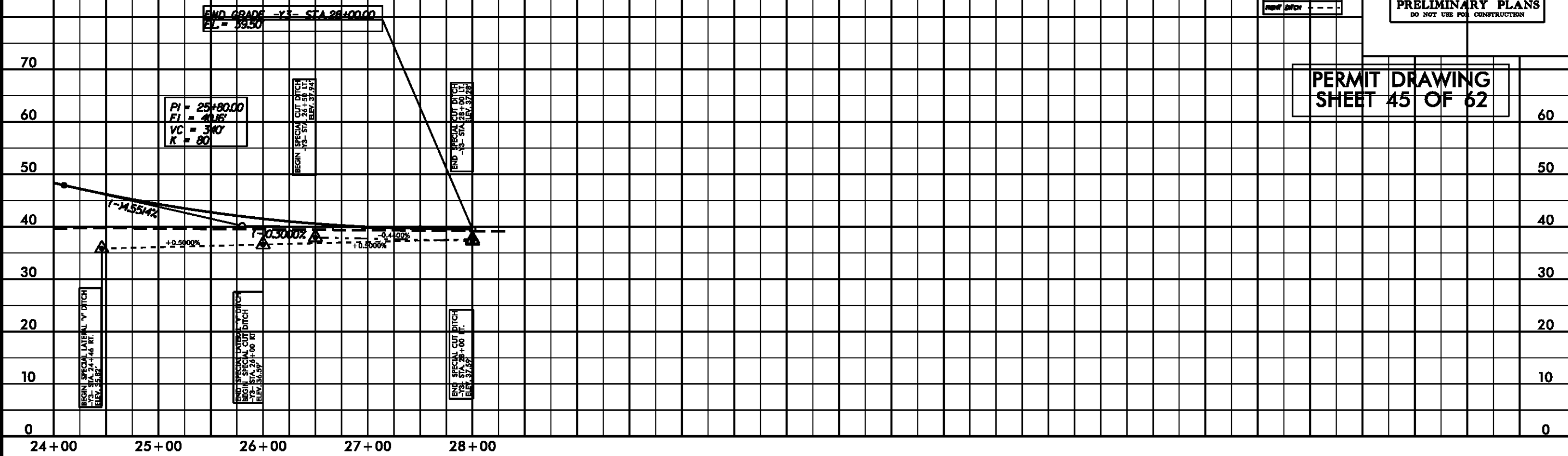
SHEET 44 OF 62

5/28/99

-Y3-

LEFT DITCH ---
RIGHT DITCH ---

PERMIT DRAWING SHEET 45 OF 62



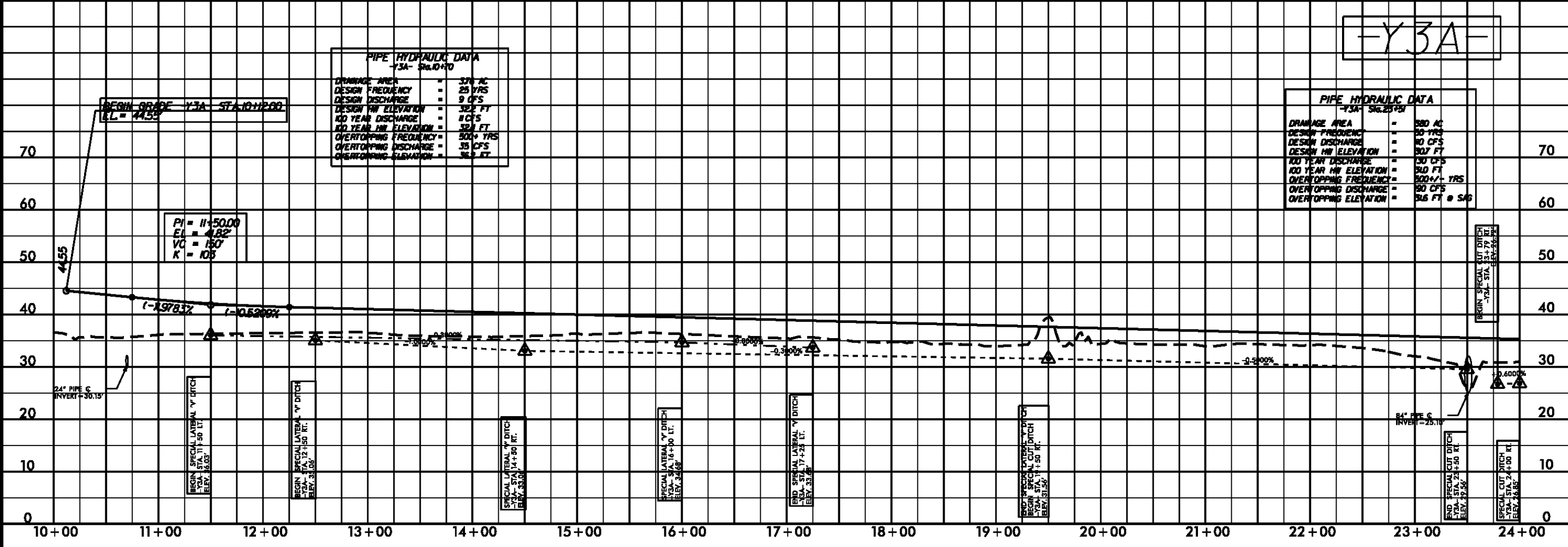
-Y3A-

PIPE HYDRAULIC DATA
-Y3A- Sta. 10+10

DRAINAGE AREA	=	371 AC
DESIGN FREQUENCY	=	25 YRS
DESIGN DISCHARGE	=	9 CFS
DESIGN HW ELEVATION	=	32.1 FT
100 YEAR DISCHARGE	=	11 CFS
100 YEAR HW ELEVATION	=	32.1 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	15 CFS
OVERTOPPING ELEVATION	=	32.1 FT

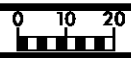
PIPE HYDRAULIC DATA
-Y3A- Sta. 23+75

DRAINAGE AREA	=	380 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	10 CFS
DESIGN HW ELEVATION	=	30.7 FT
100 YEAR DISCHARGE	=	130 CFS
100 YEAR HW ELEVATION	=	31.0 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	130 CFS
OVERTOPPING ELEVATION	=	31.6 FT @ SAG



*****SYTIME*****
*****DGN*****
*****RMP*****

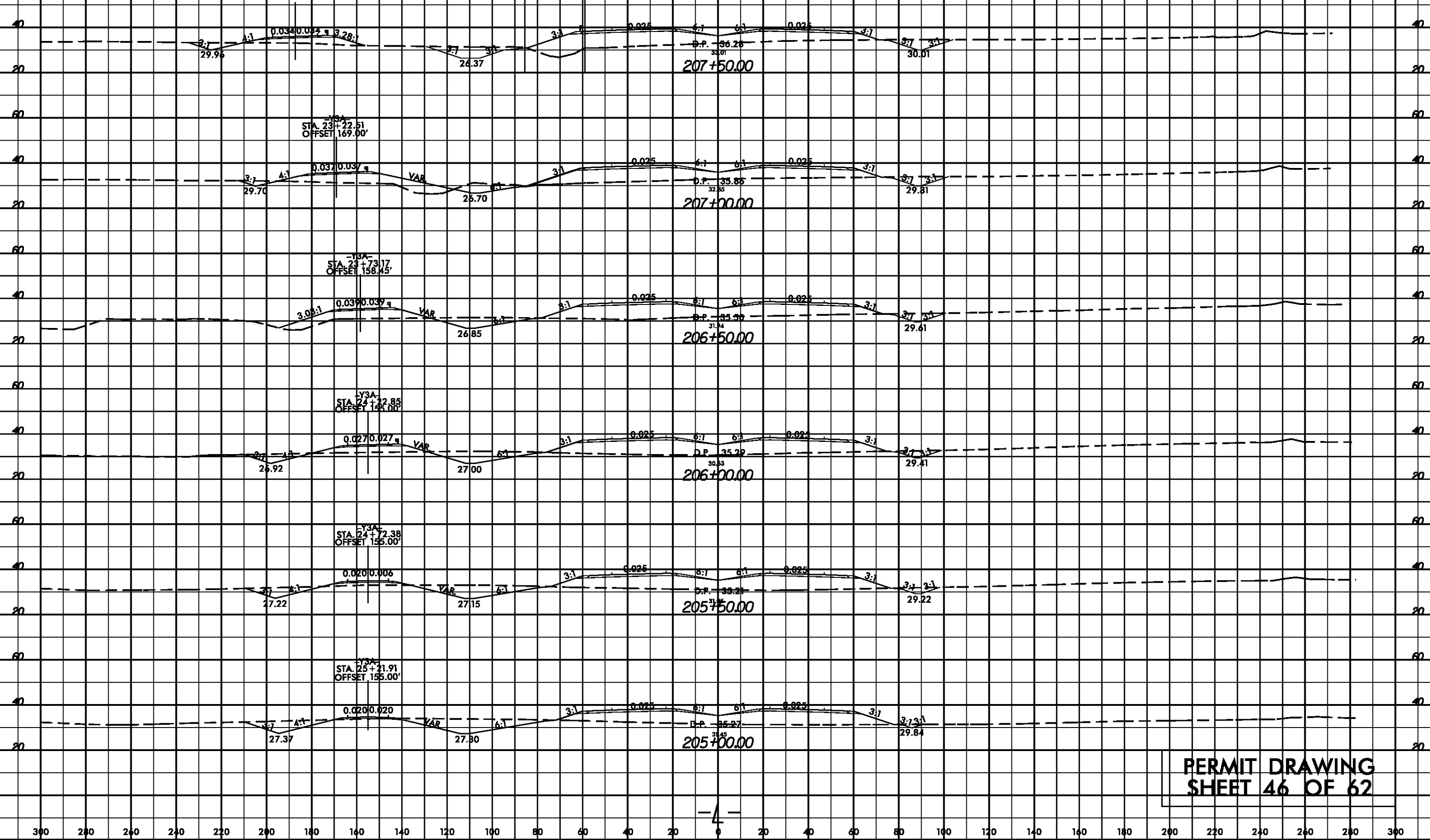
8/23/99



300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300

SITE 13 SURFACE WATER IMPACTS

JS JS



PERMIT DRAWING
SHEET 46 OF 62

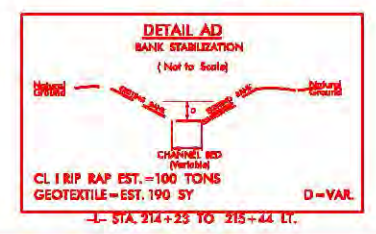
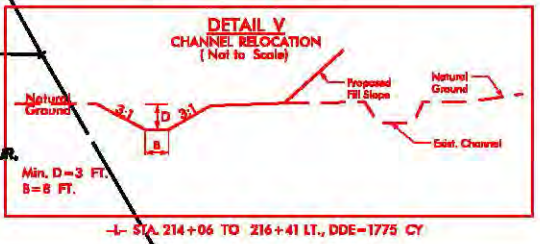
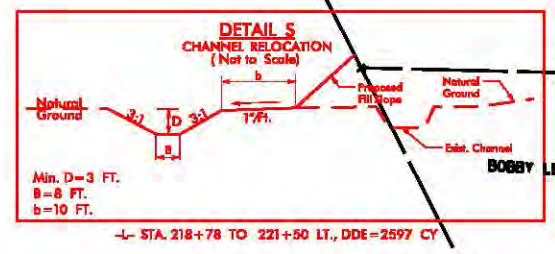
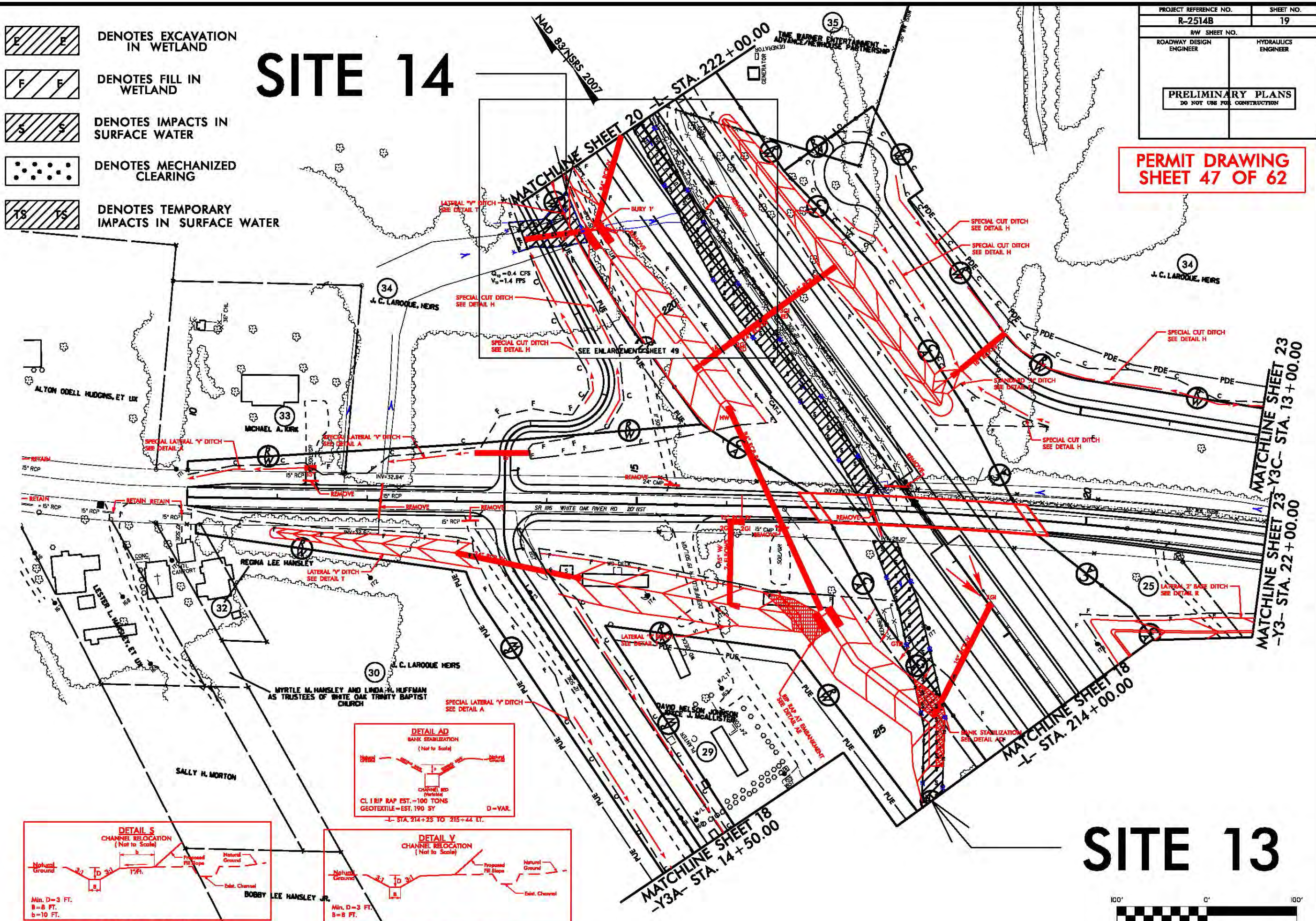
*****SYTIME*****
*****DGN*****
*****USER*****

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PERMIT DRAWING
SHEET 47 OF 62

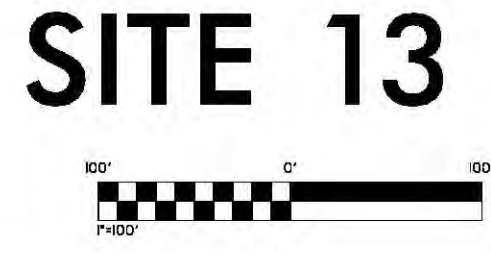
- DENOTES EXCAVATION IN WETLAND
- DENOTES FILL IN WETLAND
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 14






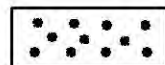

REVISIONS
R/W Revision 4/9/14 JCL Revised Property Owner Name and Dead Book Information for Parcel 33

SYTIME
UNIVERSITY

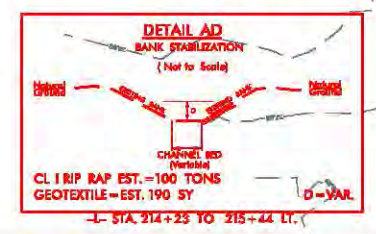
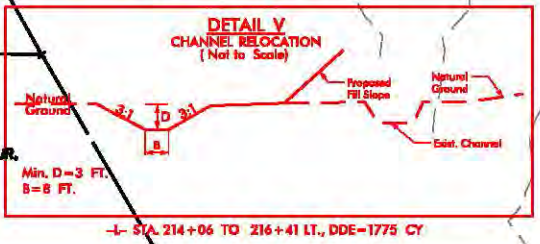
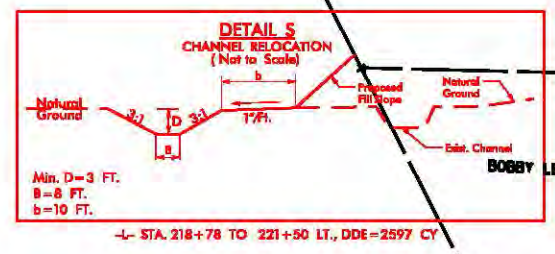
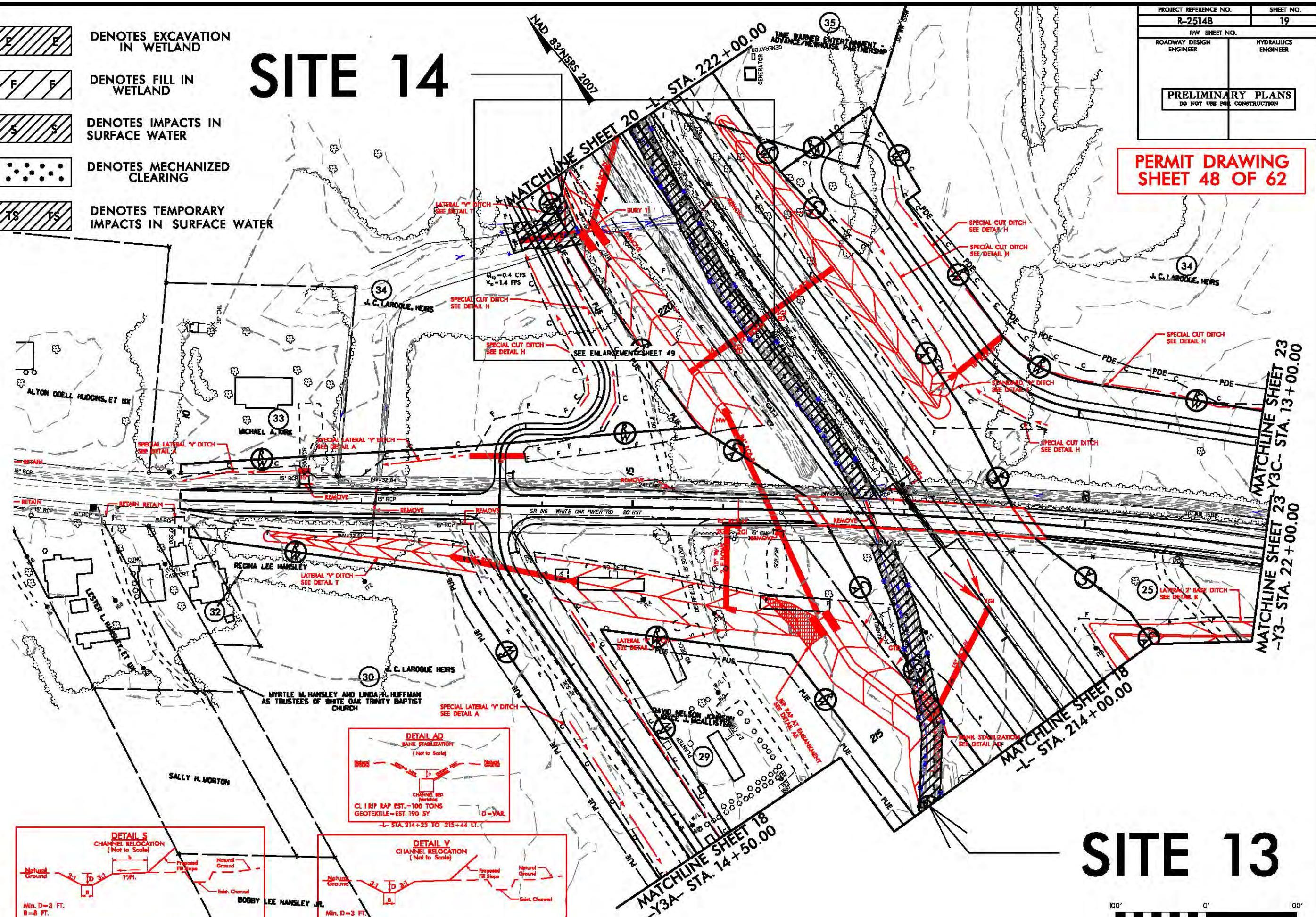


PROJECT REFERENCE NO.	SHEET NO.
R-2514B	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

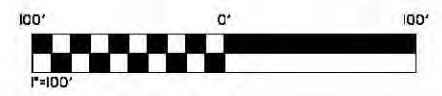
PERMIT DRAWING
SHEET 48 OF 62

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

SITE 14






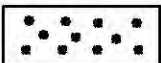
SITE 13

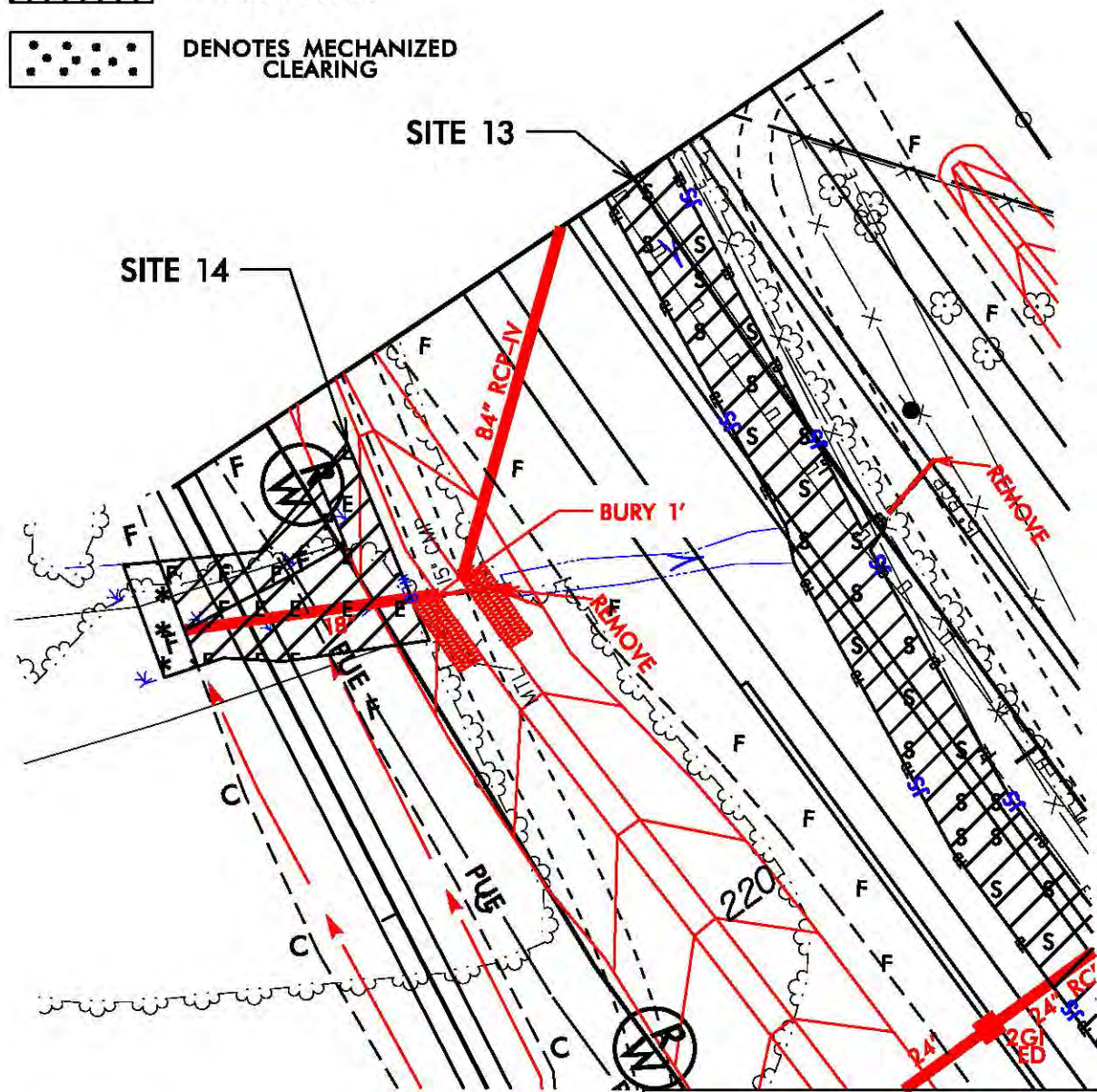
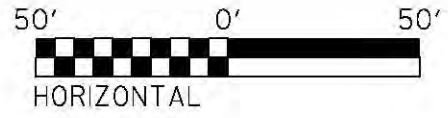


REVISIONS
R/W Revision 4/9/14 JCL Revised Property Owner Name and Dead Book Information for Parcel 33

8/17/99

*****SYTIME*****
*****UN*****

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



PLAN VIEW
**SITE 13 &
14**

NCDOT
DIVISION OF HIGHWAYS
JONES COUNTY
PROJECT: 34442.1.3 (R-2514B)
US 17 FROM SOUTH OF BELGRADE
AT SR 1330/SR 1439 TO
NORTH OF MAYSVILLE

SHEET 49 OF 62

50' 0' 50'

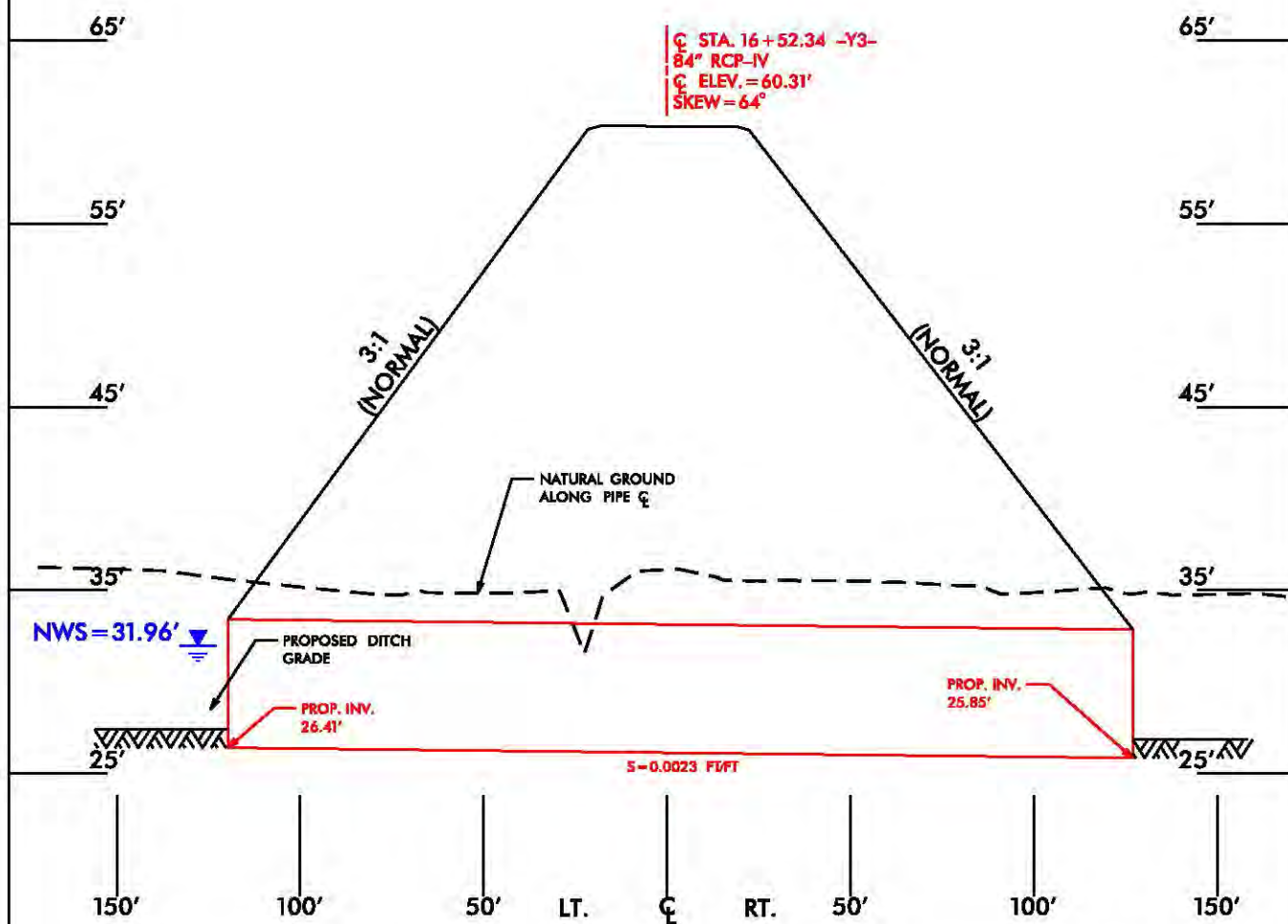


HORIZONTAL

10' 0' 10'



VERTICAL



PROFILE
-Y3- 84" PIPE

NCDOT
 DIVISION OF HIGHWAYS
 JONES COUNTY
 PROJECT: 34442.1.3 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330/SR 1439 TO
 NORTH OF MAYSVILLE

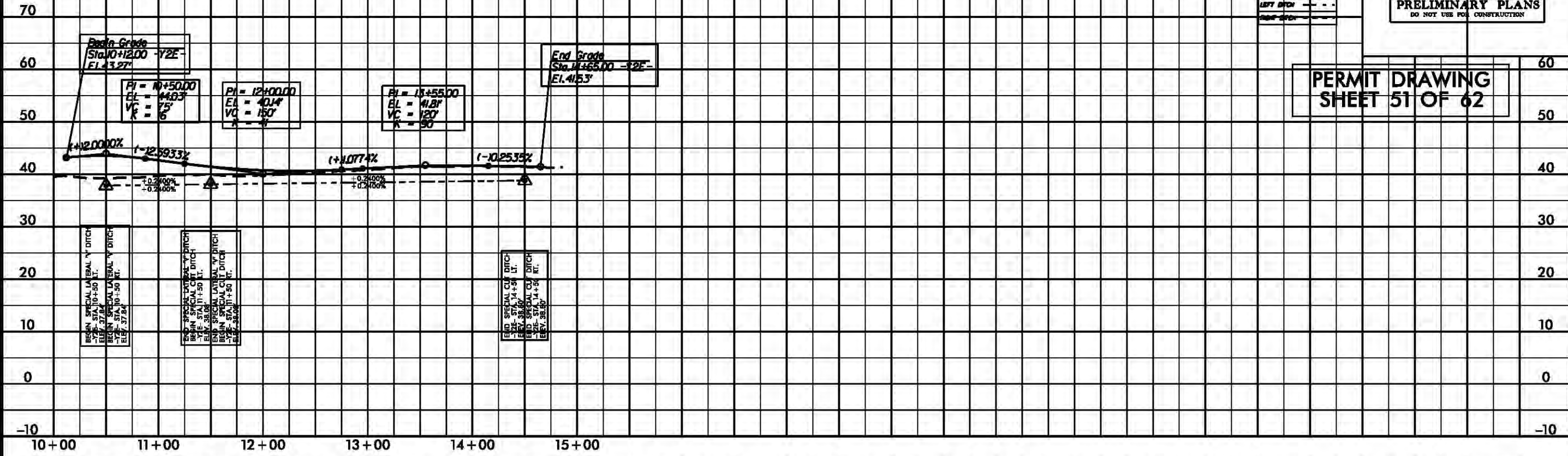
SHEET 50 OF 62

5/28/99

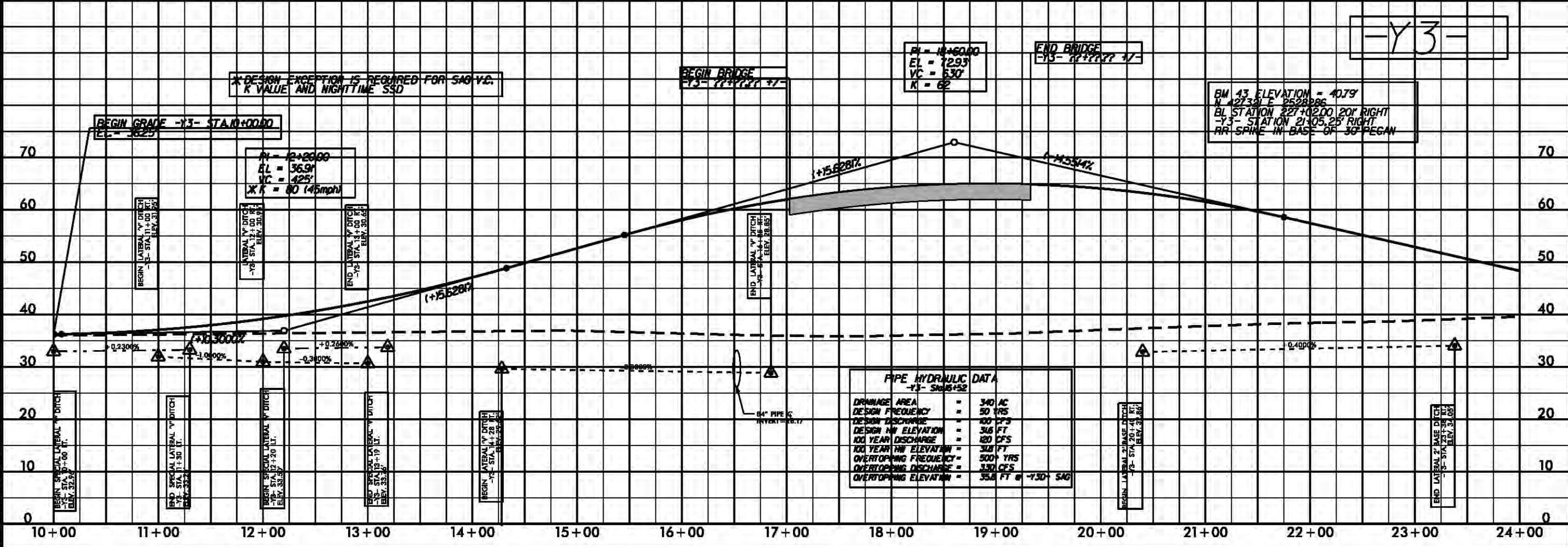
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PERMIT DRAWING
SHEET 51 OF 62

-Y2E-



-Y3-



*****SYTIME*****
*****DGN*****
*****RMP*****

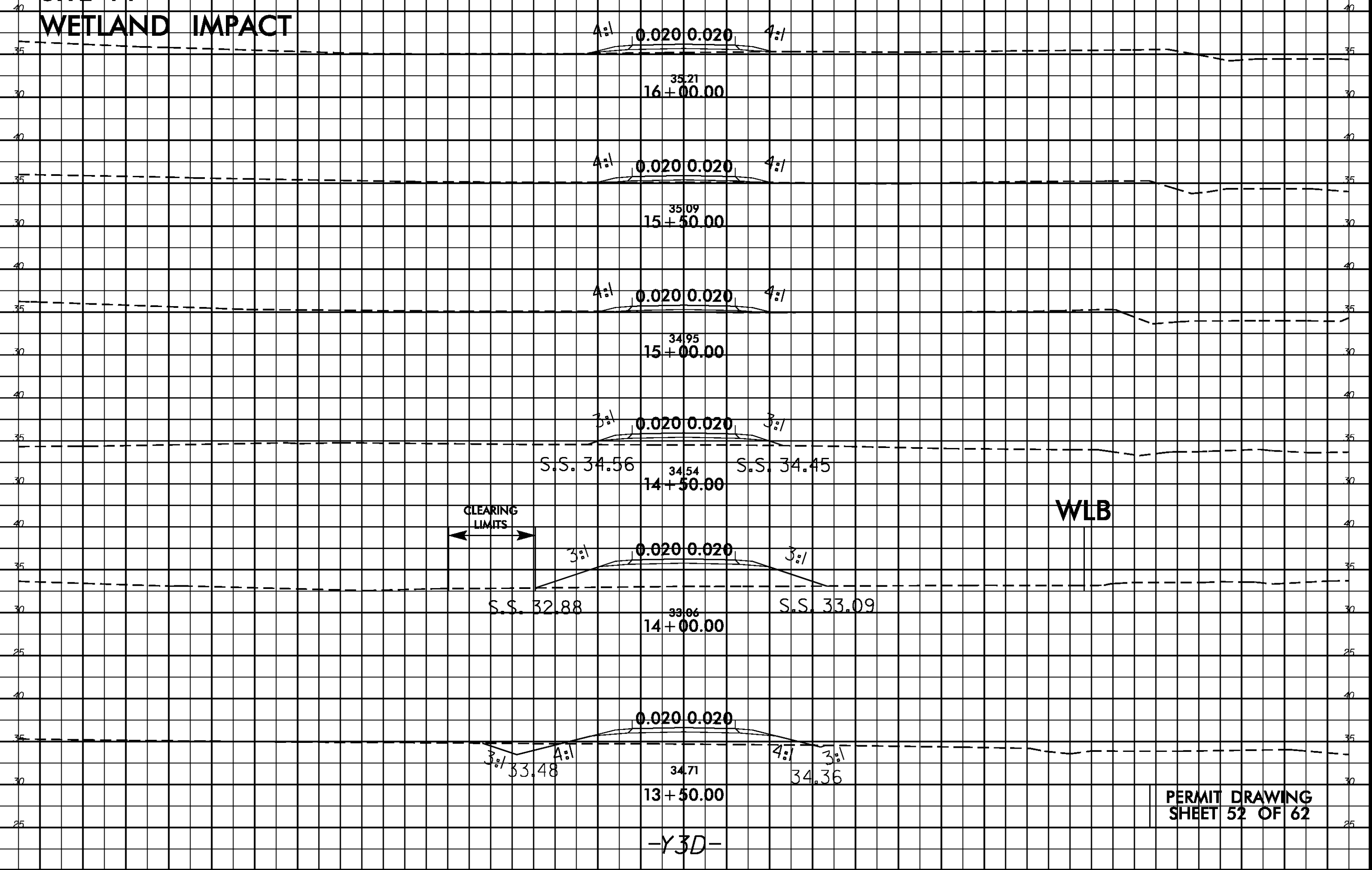
8/23/99

SITE 14 WETLAND IMPACT



PROJ. REFERENCE NO.
R-2514B

SHEET NO.
X-155



PERMIT DRAWING
SHEET 52 OF 62

-Y3D-

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO. R-2514B	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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

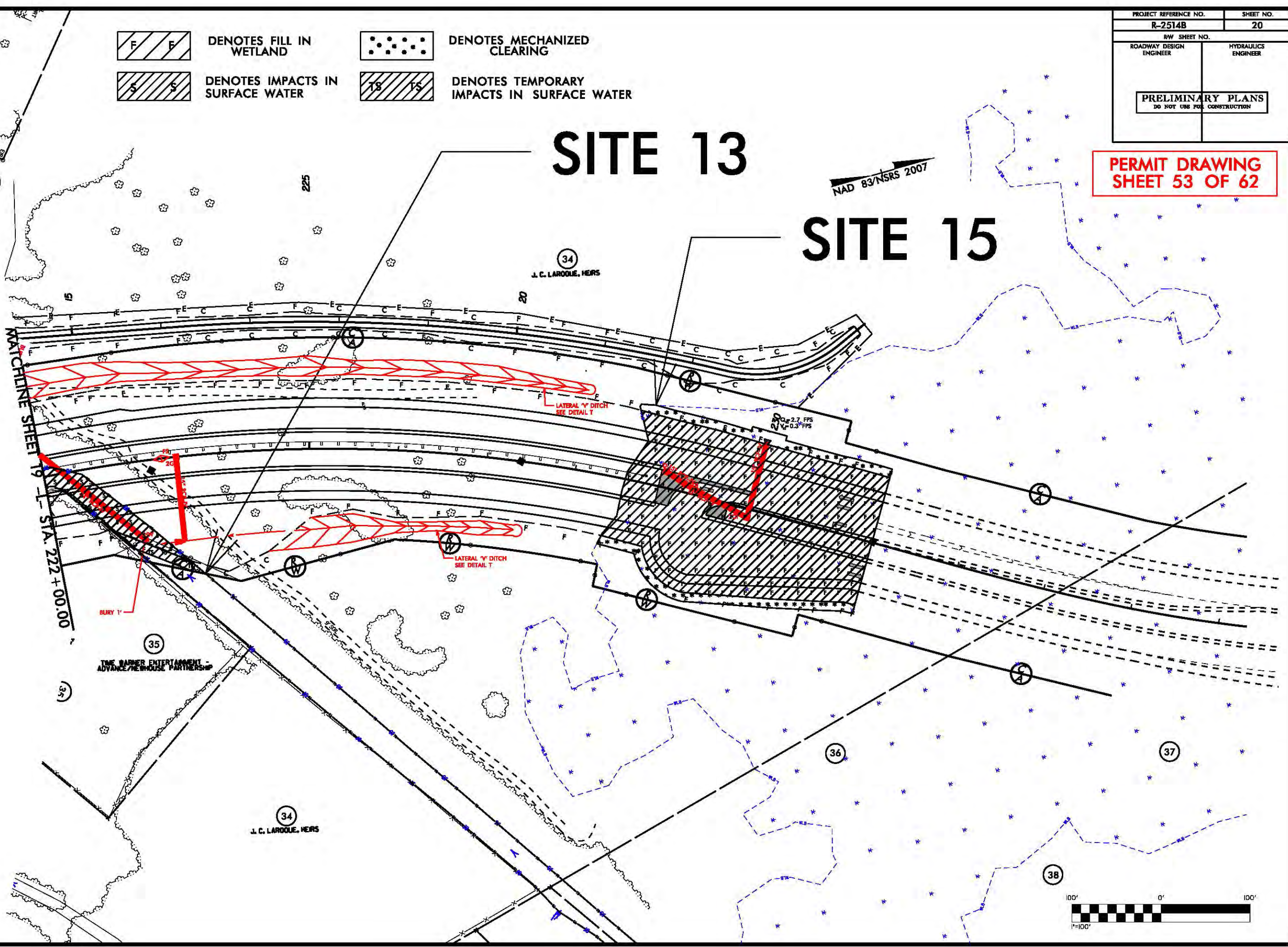
SITE 13

SITE 15

NAD 83/NSRS 2007

**PERMIT DRAWING
SHEET 53 OF 62**

REVISIONS



8/17/99

*****SYTIME*****
*****UN*****
*****UN*****

PROJECT REFERENCE NO. R-2514B	SHEET NO. 20
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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

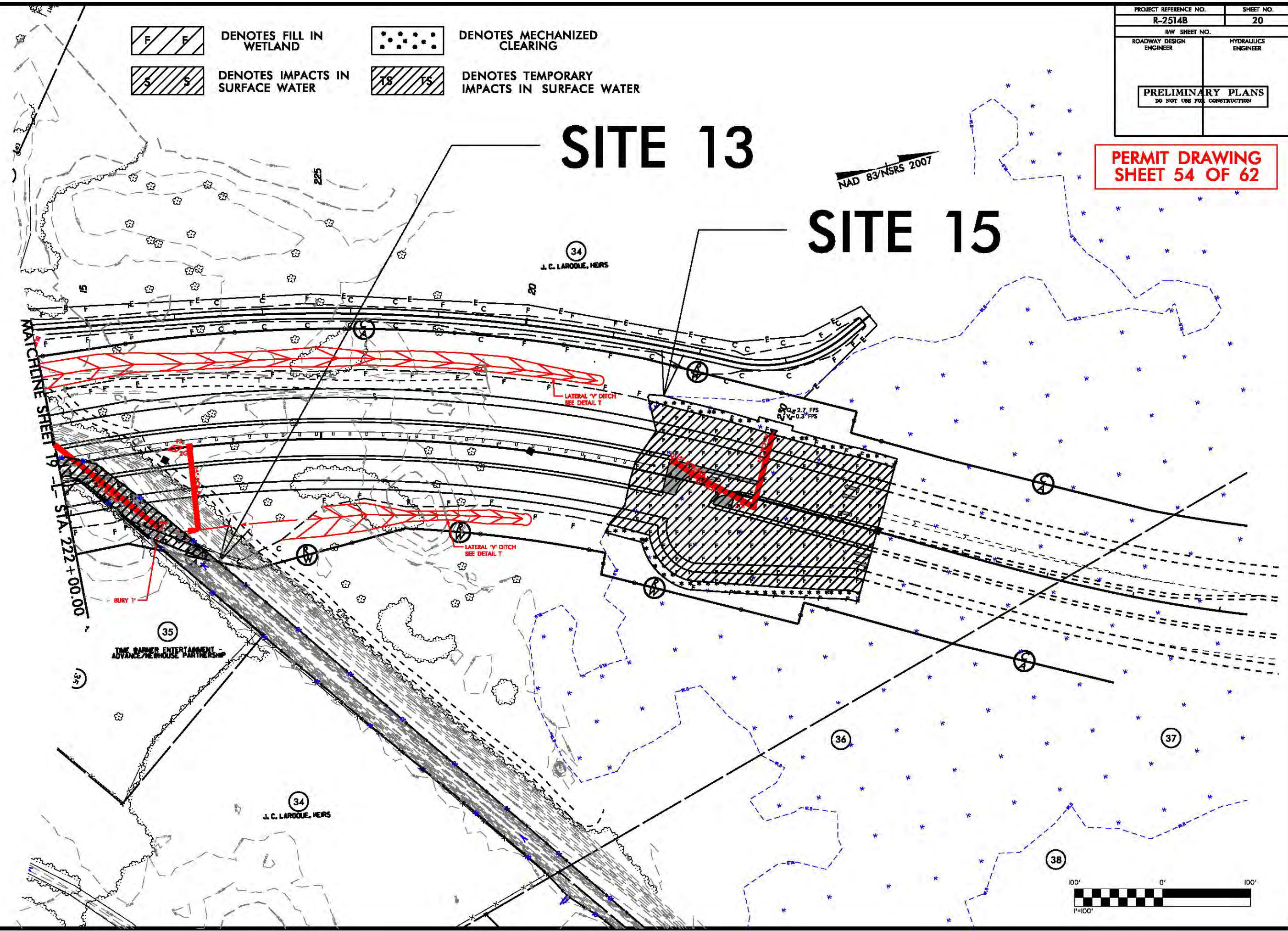
SITE 13

SITE 15

NAD 83/NSRS 2007

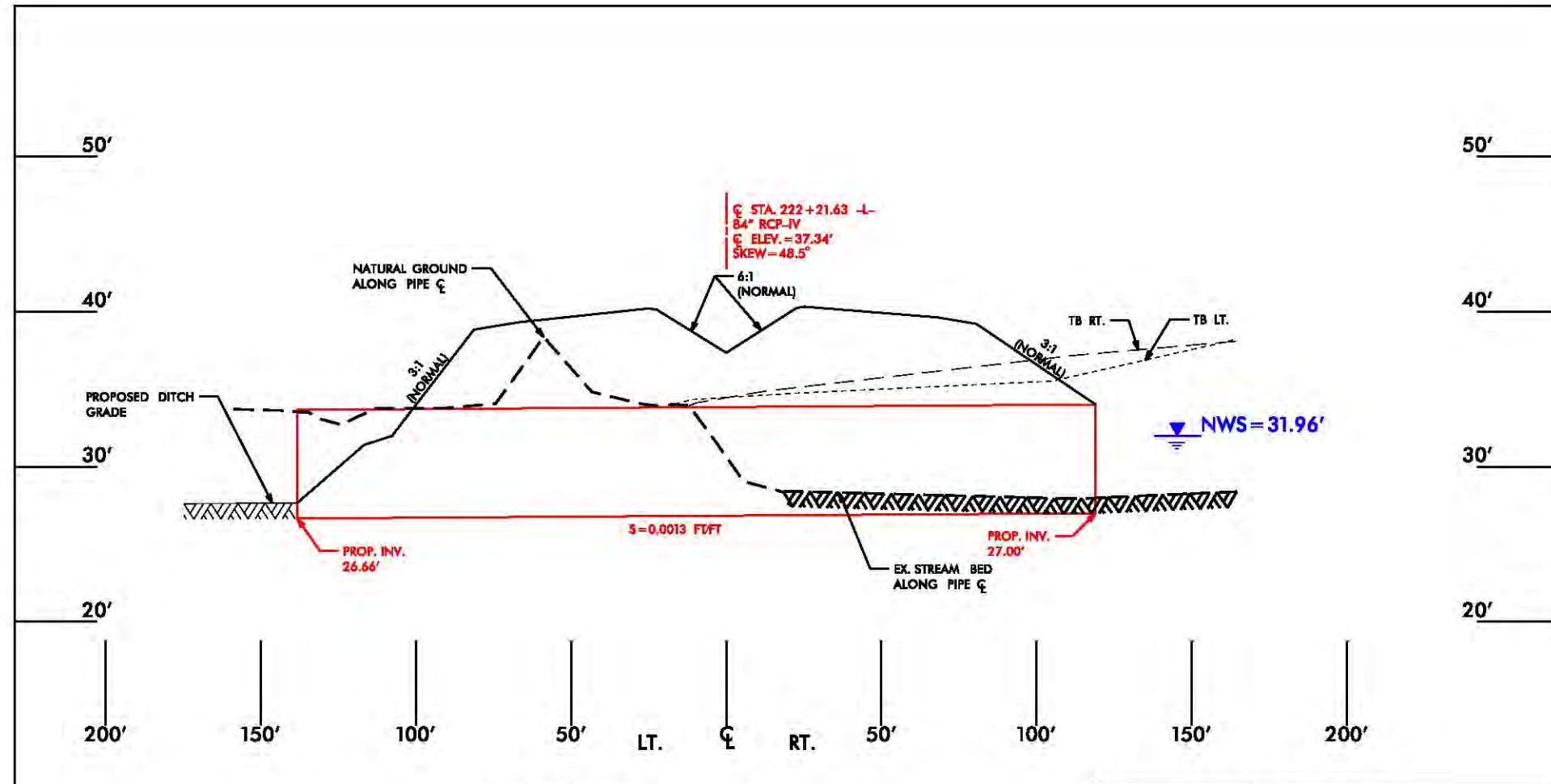
PERMIT DRAWING
SHEET 54 OF 62

REVISIONS

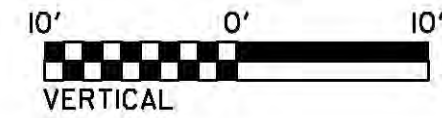
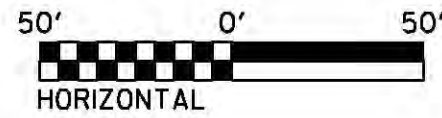


8/17/99

*****SYTIME*****
*****UN*****



PROFILE
 -L- 84" PIPE

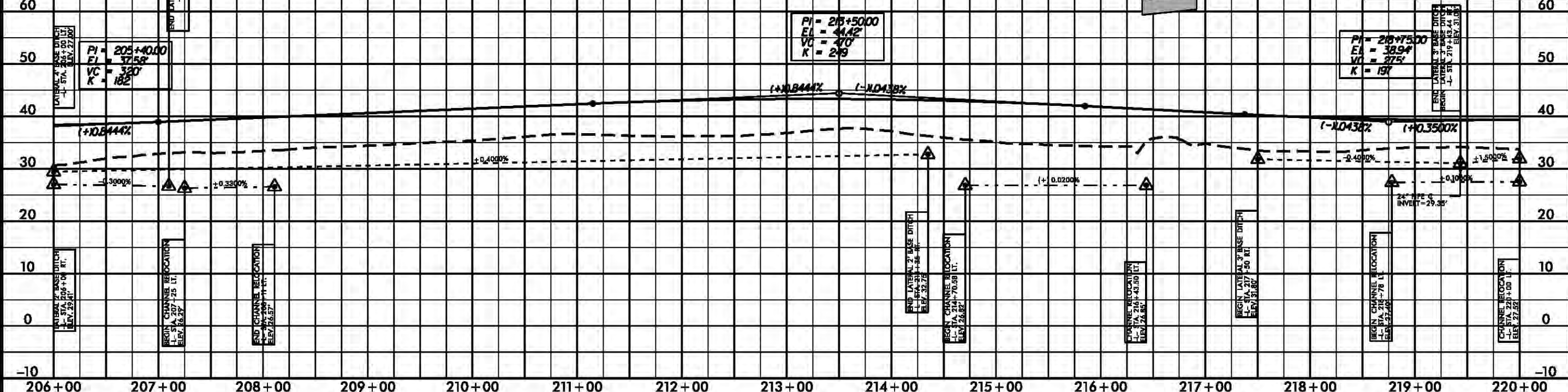
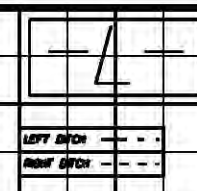


NCDOT
 DIVISION OF HIGHWAYS
 JONES COUNTY
 PROJECT: 34442.13 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330 / SR 1439 TO
 NORTH OF MAYSVILLE
 SHEET 55 OF 62

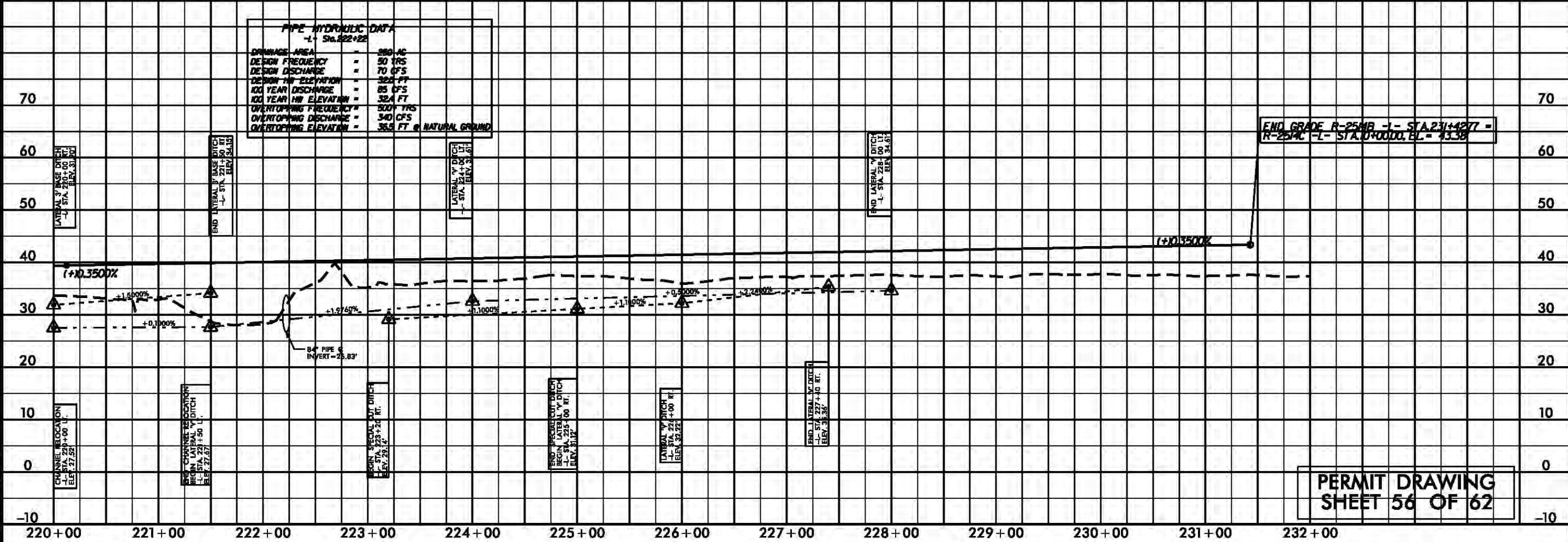
5/28/99

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PIPE HYDRAULIC DATA	
-L- Sta. 209+43	
DRAINAGE AREA	34 AC
DESIGN FREQUENCY	50 YRS
DESIGN DISCHARGE	42 CFS
DESIGN HW ELEVATION	329 FT
100 YEAR DISCHARGE	17 CFS
100 YEAR HW ELEVATION	335 FT
OVERTOPPING FREQUENCY	1000 YRS
OVERTOPPING DISCHARGE	45 CFS
OVERTOPPING ELEVATION	393 FT



PIPE HYDRAULIC DATA	
-L- Sta. 222+22	
DRAINAGE AREA	880 AC
DESIGN FREQUENCY	50 YRS
DESIGN DISCHARGE	70 CFS
DESIGN HW ELEVATION	322 FT
100 YEAR DISCHARGE	85 CFS
100 YEAR HW ELEVATION	324 FT
OVERTOPPING FREQUENCY	500 YRS
OVERTOPPING DISCHARGE	340 CFS
OVERTOPPING ELEVATION	35.9 FT @ NATURAL GROUND



PERMIT DRAWING
SHEET 56 OF 62

*****SYTIME*****
*****DGN*****
*****RANGE*****

8/23/99

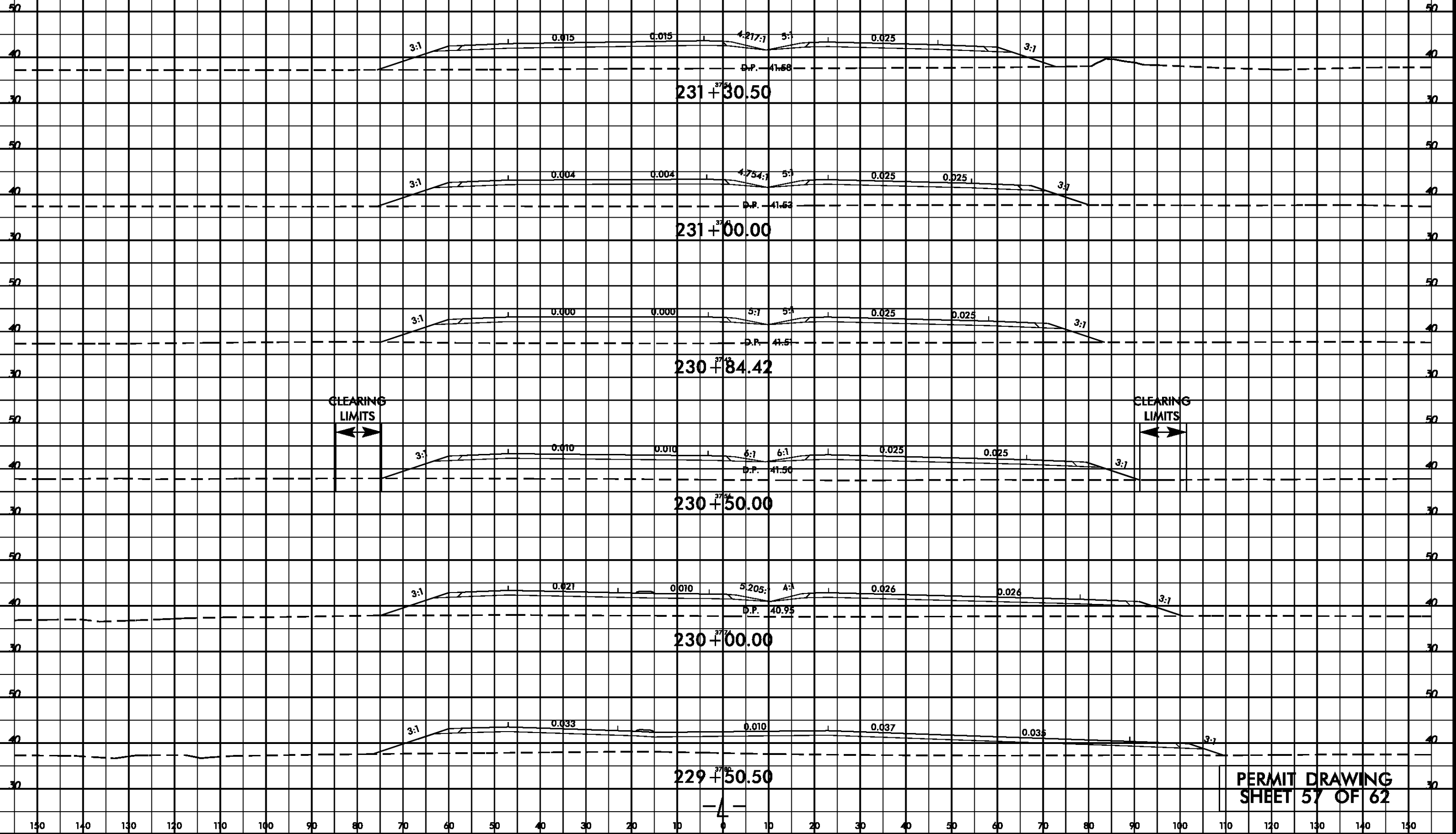


PROJ. REFERENCE NO.
R-2514B

SHEET NO.
X-85

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 15 WETLAND IMPACTS

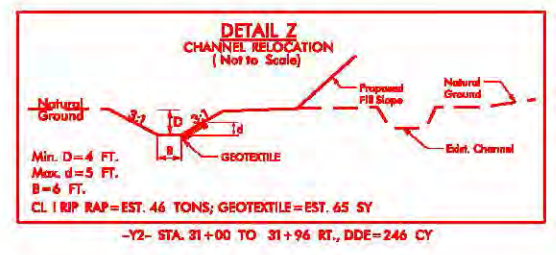


PERMIT DRAWING
SHEET 57 OF 62

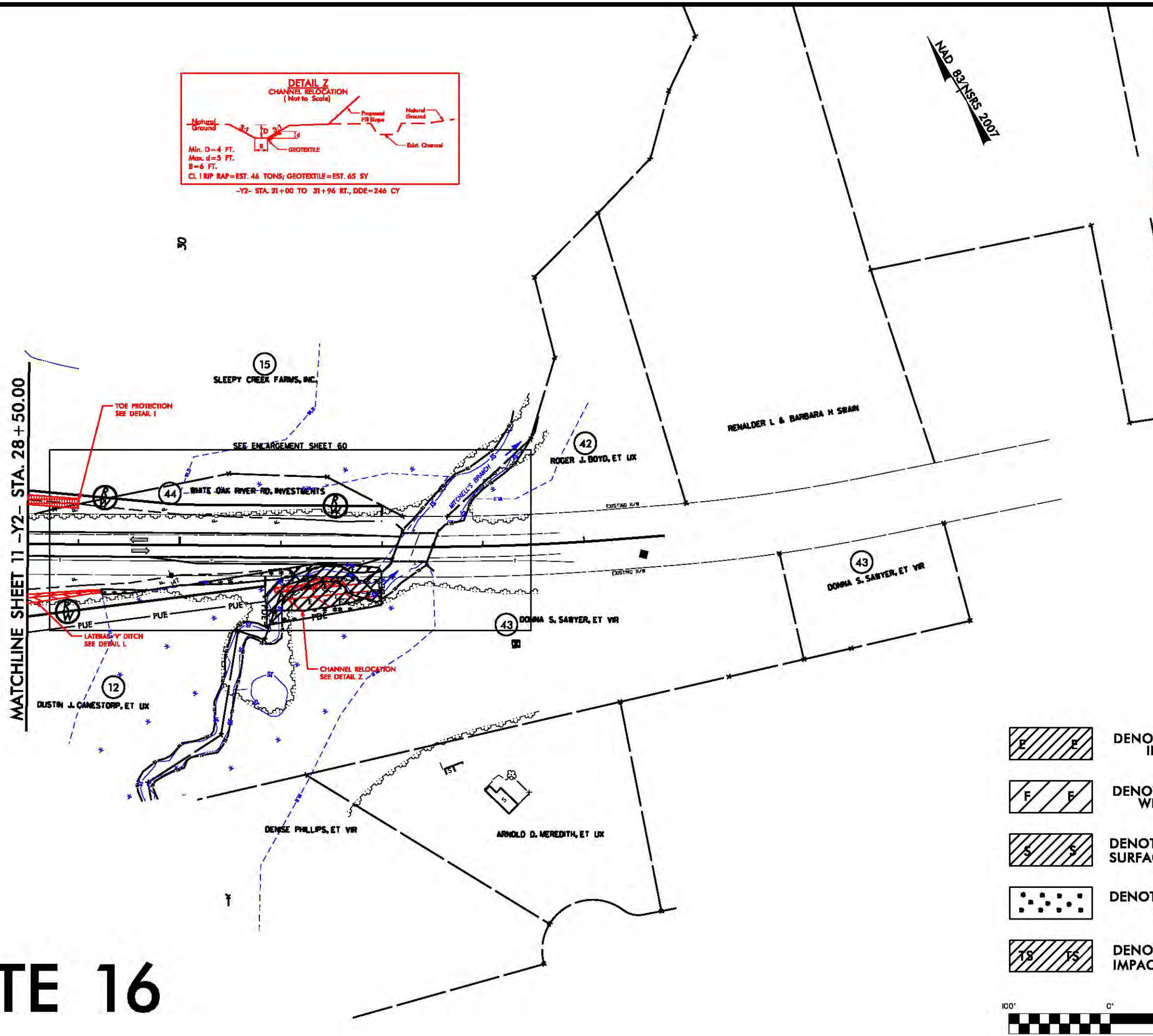
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\$\$\$\$\$USERNAME\$\$\$\$\$




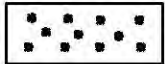

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

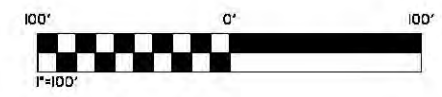
PERMIT DRAWING SHEET 58 OF 62



MATCHLINE SHEET 11 -Y2- STA. 28+50.00



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



SITE 16

REVISIONS

8/17/99

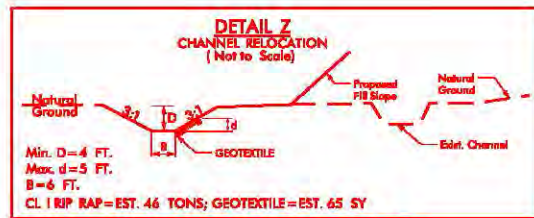
*****SYTIME*****
*****UN*****

8/17/99

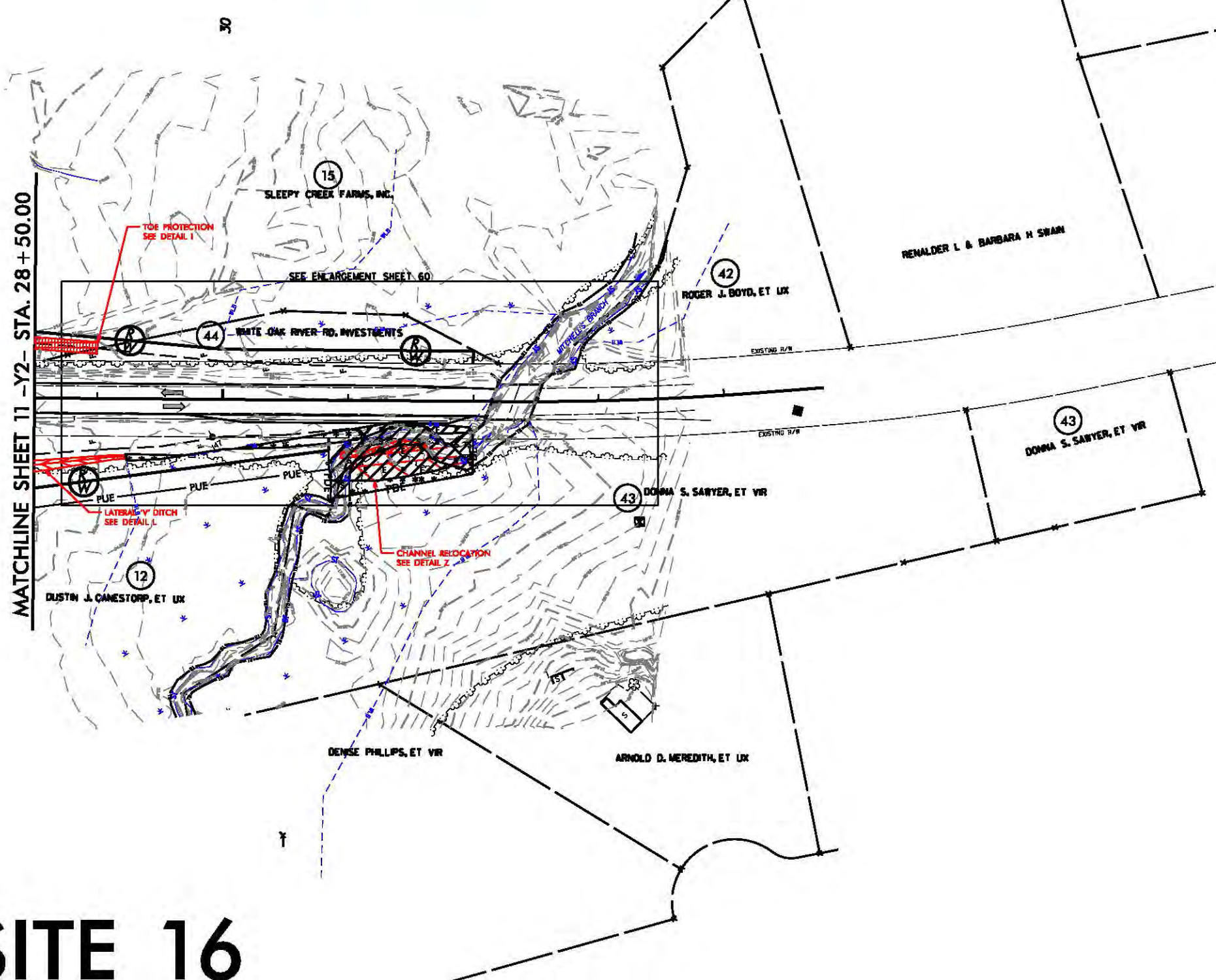
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2514B	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	




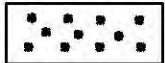

PERMIT DRAWING SHEET 59 OF 62

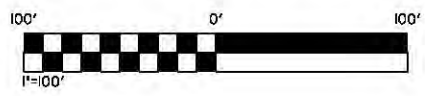


NAD 82/NSRS 2007




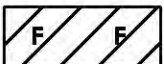
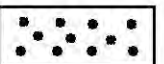


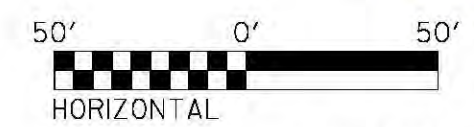
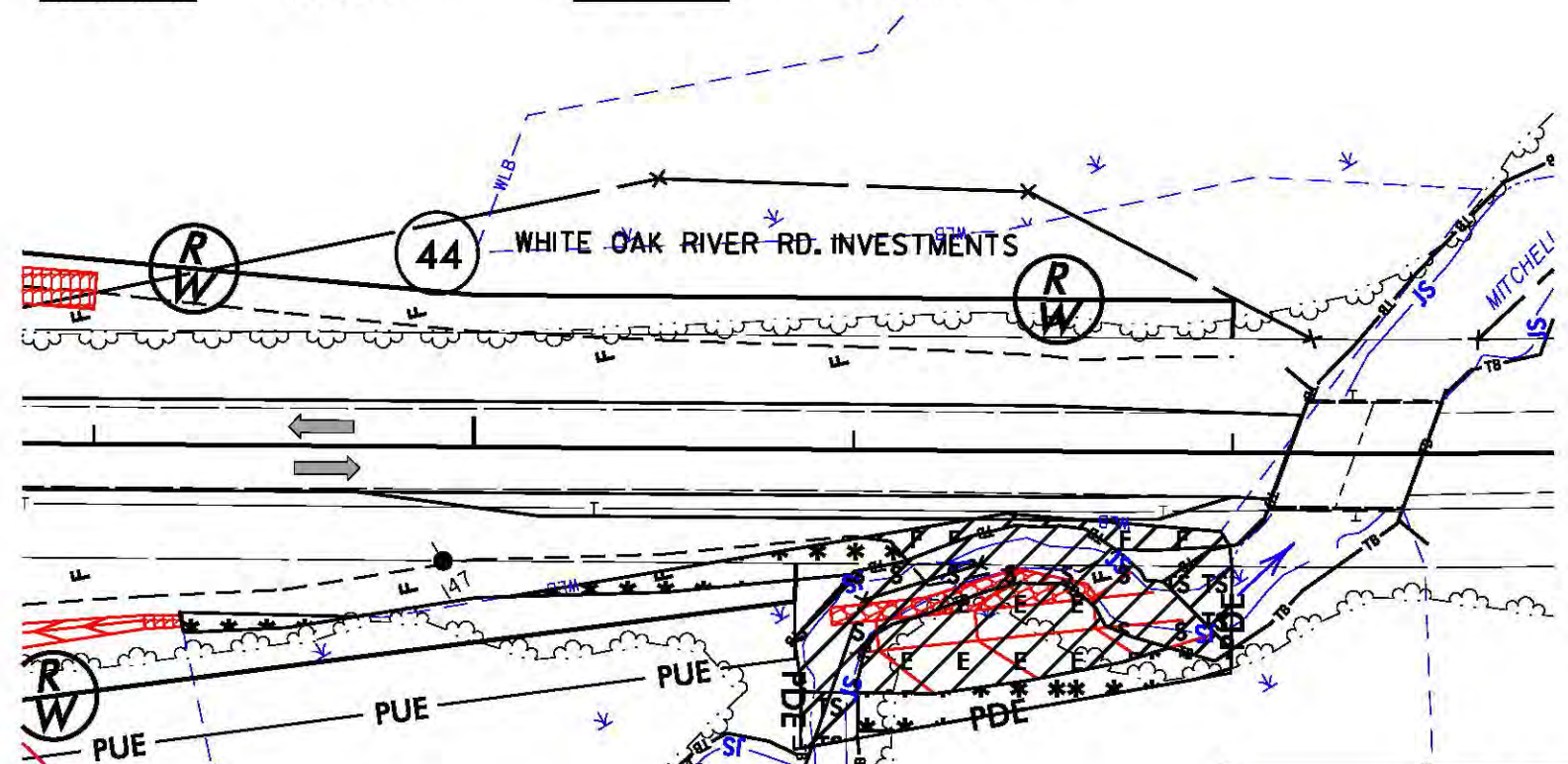
SITE 16

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



*****SYTIME*****
*****UN*****

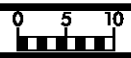
- | | | | | | |
|---|----------------------------------|---|-------------------------------------|---|---|
|  | DENOTES EXCAVATION
IN WETLAND |  | DENOTES IMPACTS IN
SURFACE WATER |  | DENOTES TEMPORARY
IMPACTS IN SURFACE WATER |
|  | DENOTES FILL IN
WETLAND |  | DENOTES MECHANIZED
CLEARING | | |



PLAN VIEW
SITE 16

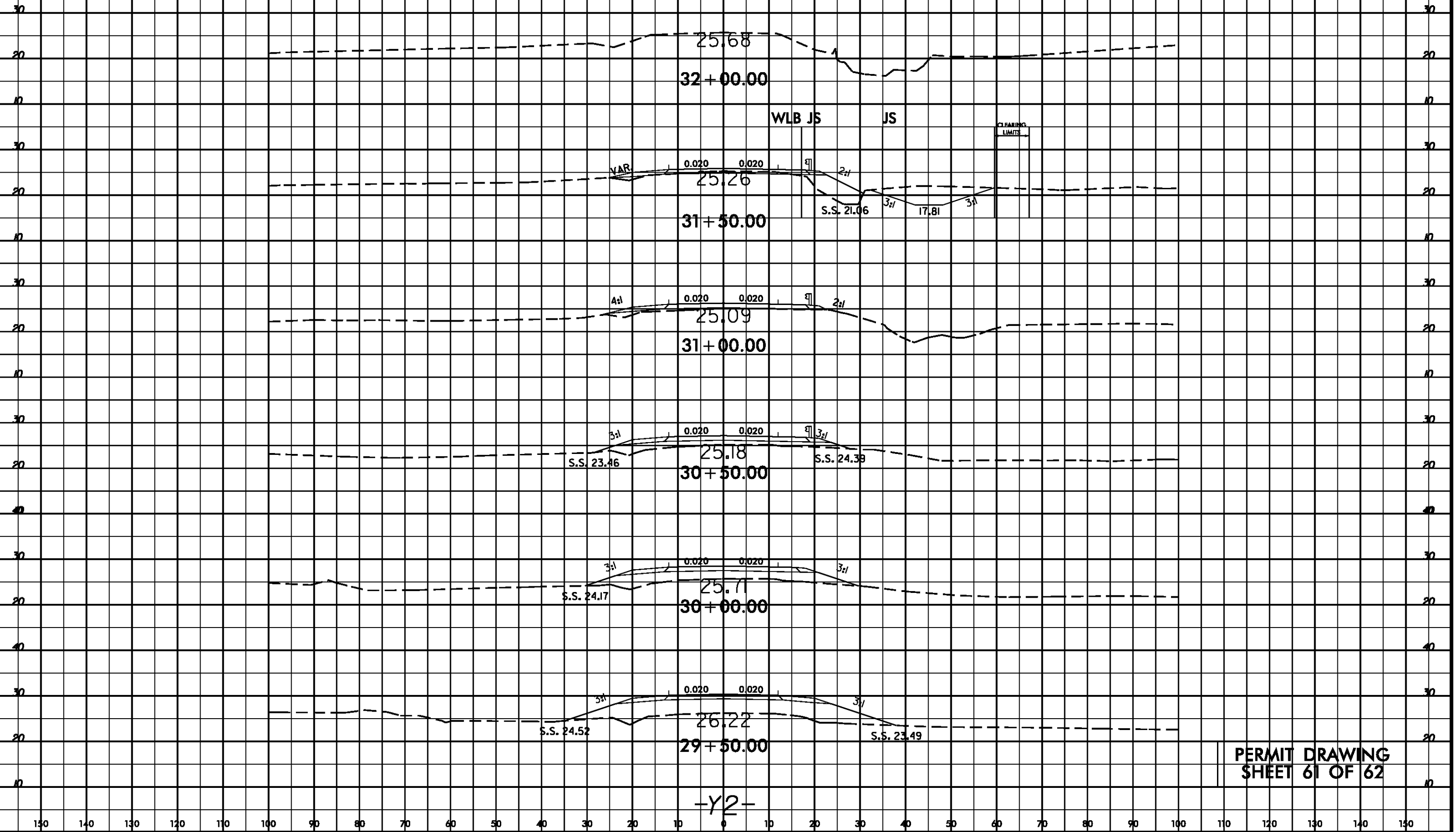
NCDOT
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 PROJECT: 34442.13 (R-2514B)
 US 17 FROM SOUTH OF BELGRADE
 AT SR 1330/SR 1439 TO
 NORTH OF MAYSVILLE
 SHEET 60 OF 62

8/23/99



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SITE 16 WETLAND IMPACTS



PERMIT DRAWING
SHEET 61 OF 62

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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	22+67 TO 28+77 -L- RT.		0.27			0.13						
2	24+60 TO 27+00 -L-		0.19									
3	56+35 TO 57+13 -L- RT.					< 0.01						
4	16+26 TO 17+40 -Y1- LT.					0.01						
5	71+09 TO 77+39 -L-		2.06			0.25						
6	27+46 TO 32+33 -Y2A-	60" PIPE	0.22			0.09		0.02	< 0.01	130	6	
6	98+20 TO 101+64 -L-	72" PIPE	0.80			0.09		0.07	< 0.01	356	14	
6	33+61 LT. -Y2A-	BANK STABILIZATION						< 0.01	< 0.01	25	10	
6	100+97 RT. -L-	BANK STABILIZATION						< 0.01	< 0.01	25	10	
7	128+50 TO 129+44 -L- RT.		0.08		0.04	0.02						
8	131+13 TO 132+38 -L- RT.		0.05			0.02						
9	139+81 TO 140+61 -L-	48" PIPE	0.03			< 0.01						
10	140+57 TO 162+27 -L-	160' BRIDGE	3.32	0.06		0.38	0.43					
11	162+83 TO 164+07 -L- RT.		0.17			0.02						
12	168+10 TO 179+18 -L-	1160' BRIDGE	0.01	0.01			4.02					
13	206+10 TO 223+71 -L-	84" PIPE						0.60	0.04	1151	60	
13	23+74 RT. -Y3A-	BANK STABILIZATION						0.01	< 0.01	27	7	
13	11+50 RT. -Y3E-	BANK STABILIZATION						0.01	< 0.01	29	7	
13	214+74 LT. -L-	BANK STABILIZATION						0.05		87		
14	13+65 TO 14+27 -Y3D-	18" PIPE	0.02		0.04	< 0.01						
15	228+39 TO 231+42 -L-		1.08			0.14						
16	29+23 TO 32+00 -Y2- RT.		< 0.01		0.03	0.03		0.04	0.01	120	25	
TOTALS*:			8.29	0.07	0.11	1.21	4.45	0.81	0.06	1949	139	0

*Rounded totals are sum of actual impacts

NOTES:
 Site 10: Permanent Impacts due to bents in wetlands: <0.01 Acres--These impacts are not included in the total impacts above.
 Site 10: Temporary Impacts due to Temporary Work Bridge bents in wetlands: <0.01 Acres--These impacts are not included in the total impacts above.
 Site 12: Permanent Impacts due to bents in wetlands: 0.01 Acres--These impacts are not included in the total impacts above.
 Site 12: Temporary Impacts due to Temporary Work Bridge bents in wetlands: 0.03 Acres--These impacts are not included in the total impacts above.
 Site 13: 386 LF of Permanent Stream Impacts due to Relocation.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 ONSLOW AND JONES COUNTY
 WBS - 34442.1.3 (R-2514B)

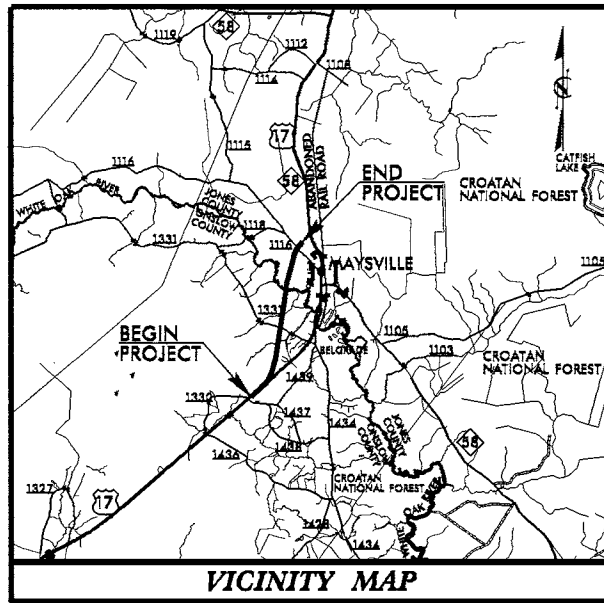
 SHEET 62 OF 62

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TIP PROJECT: R-2514B

CONTRACT:

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Utility Permit Drawing
Sheet 1 of 9

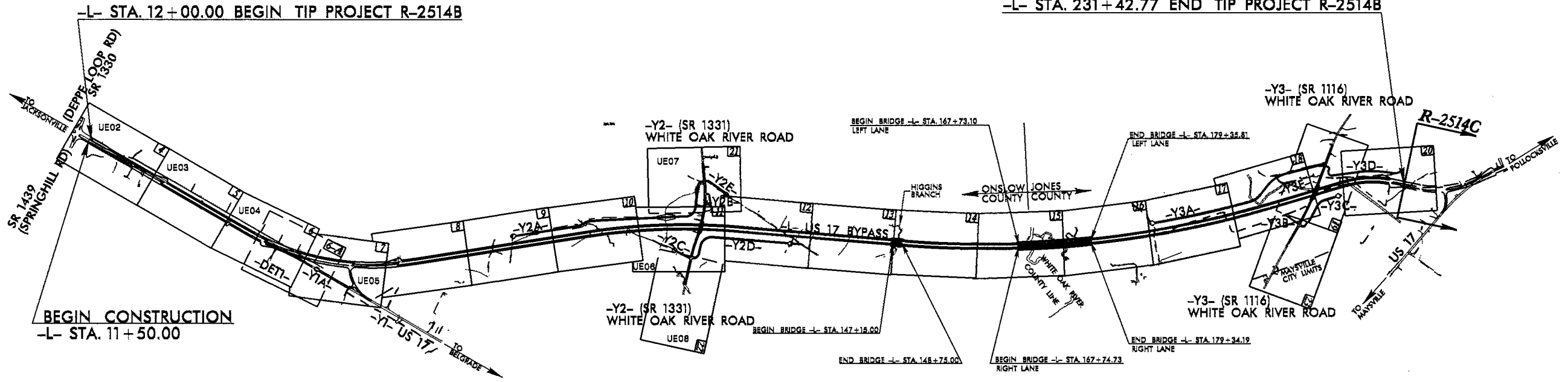
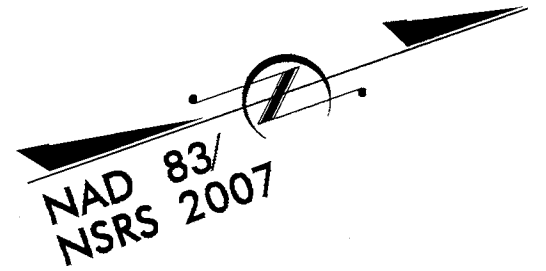
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514B	UE-01	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34442.1.3		PE	
34442.2.53		RIGHT OF WAY	

NEU PERMIT DRAWING PLANS

ONSLOW & JONES COUNTIES

LOCATION: US 17 FROM SOUTH OF BELGRADE AT
SR 1330/SR 1439 TO NORTH OF MAYSVILLE

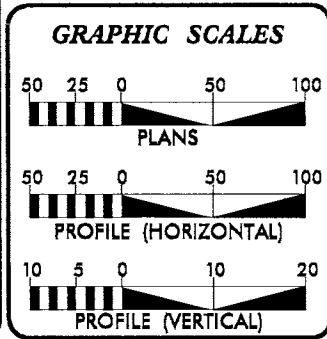
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES



REVISED 10-13-2014

*DESIGN EXCEPTION REQUIRED FOR SAG VERTICAL CURVE K FACTORS AND STOPPING SIGHT DISTANCE (-Y2- & -Y3-)
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A FULL CONTROLLED-ACCESS PROJECT WITH ACCESS AS SHOWN ON PLANS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2015 = 6800 vpd
ADT 2035 = 15900 vpd
DHV = 7 %
D = 65 %
T = 7 % *
V = 70 MPH
* TTST = 4% DUAL = 3%
FUNC CLASS = FREEWAY STATEWIDE TIER

PROJECT LENGTH

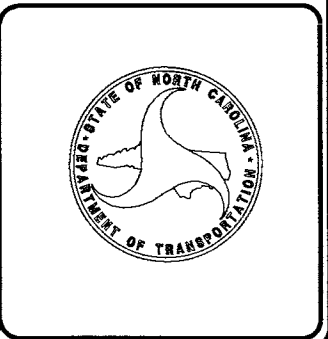
LENGTH ROADWAY OF TIP PROJECT R-2514B = 3.906 MILES
LENGTH STRUCTURE OF TIP PROJECT R-2514B = 0.250 MILES
TOTAL LENGTH OF TIP PROJECT R-2514B = 4.156 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh, NC, 27610

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: DECEMBER 17, 2013	JAMES A. SPEER, PE PROJECT ENGINEER
LETTING DATE: JUNE 16, 2015	JOHN LANSFORD, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

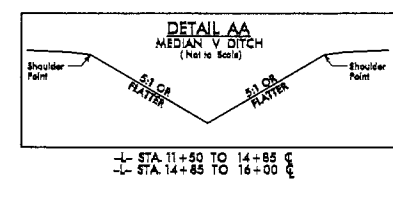
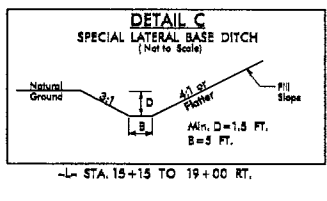
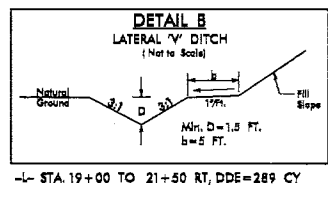
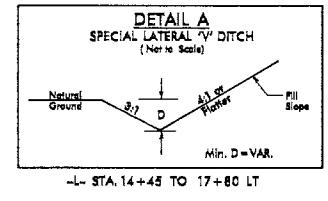
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ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.



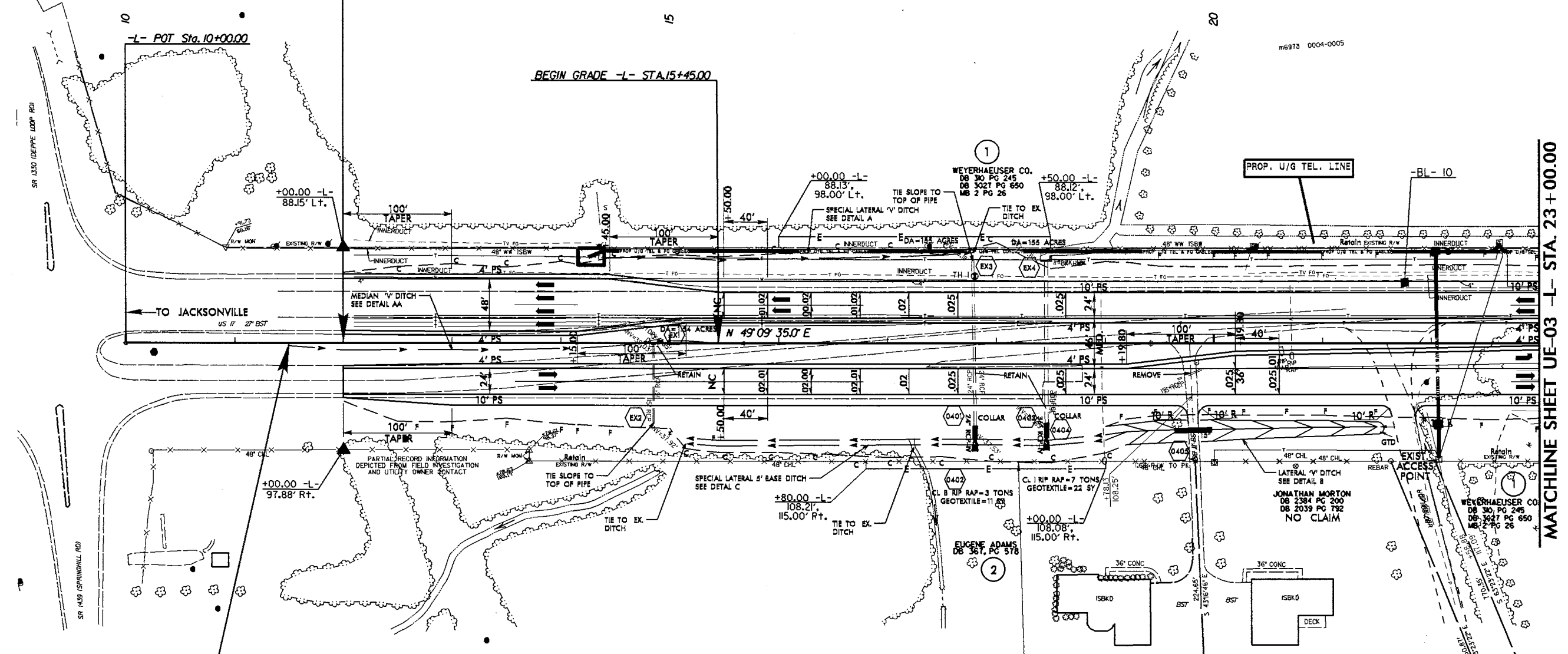
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>			

Utility Permit Drawing
Sheet 2 of 9

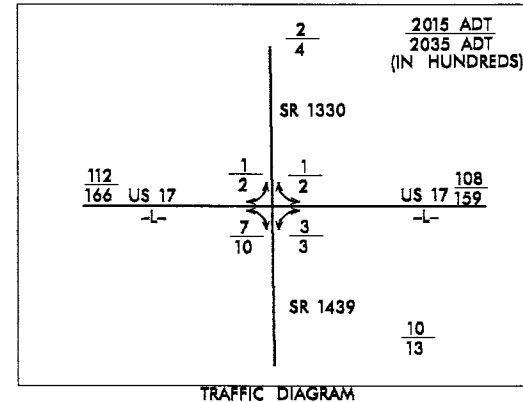
REVISED 07-15-2014



BEGIN STATE PROJECT R-2514B
-L- POT STA. 12+00.00



BEGIN CONSTRUCTION
-L- POT STA. 11+50.00



RONNE L. ADAMS
DB 421 PG 507
DB 756 PG 734
DB 1221 PG 306
DB 286 PG 646
NO CLAIM

GTD DENOTES 'GRADE TO DRAIN'
SEE SHEET 24 FOR -L- PROFILE

8/17/99
13-OCT-2014 12:22
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MATCHLINE SHEET UE-03 -L- STA. 23+00.00

8/17/99

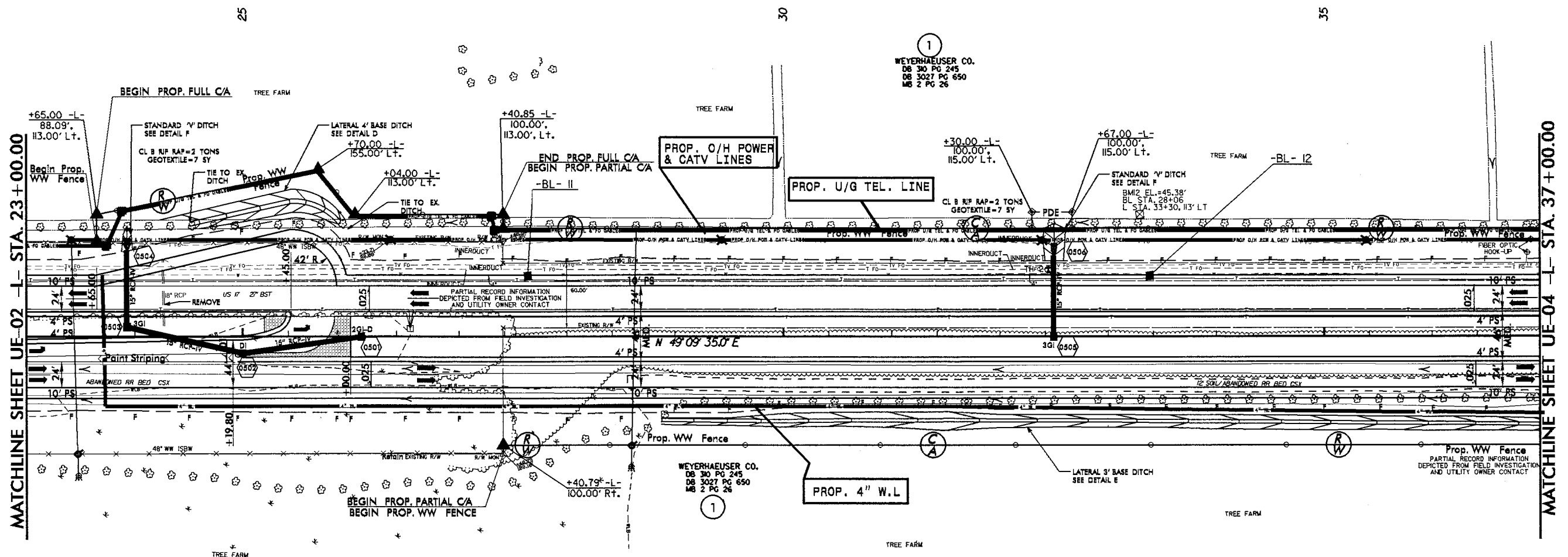
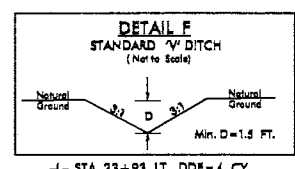
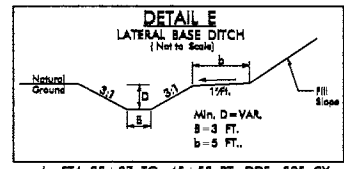
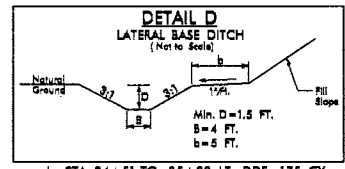
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

Utility Permit Drawing
Sheet 3 of 9

NAD 83/NRS 2007

REVISED 07-15-2014



MATCHLINE SHEET UE-02 -L- STA. 23+00.00

MATCHLINE SHEET UE-04 -L- STA. 37+00.00

SEE SHEET 24 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

8/17/99

13-OCT-2014 4:10
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\$\$\$\$\$REVISION\$\$\$\$\$

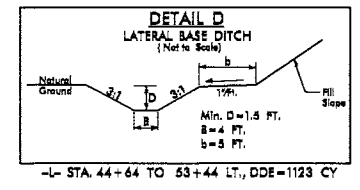
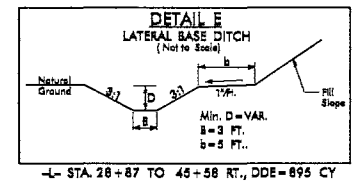
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>			

Utility Permit Drawing Sheet 4 of 9



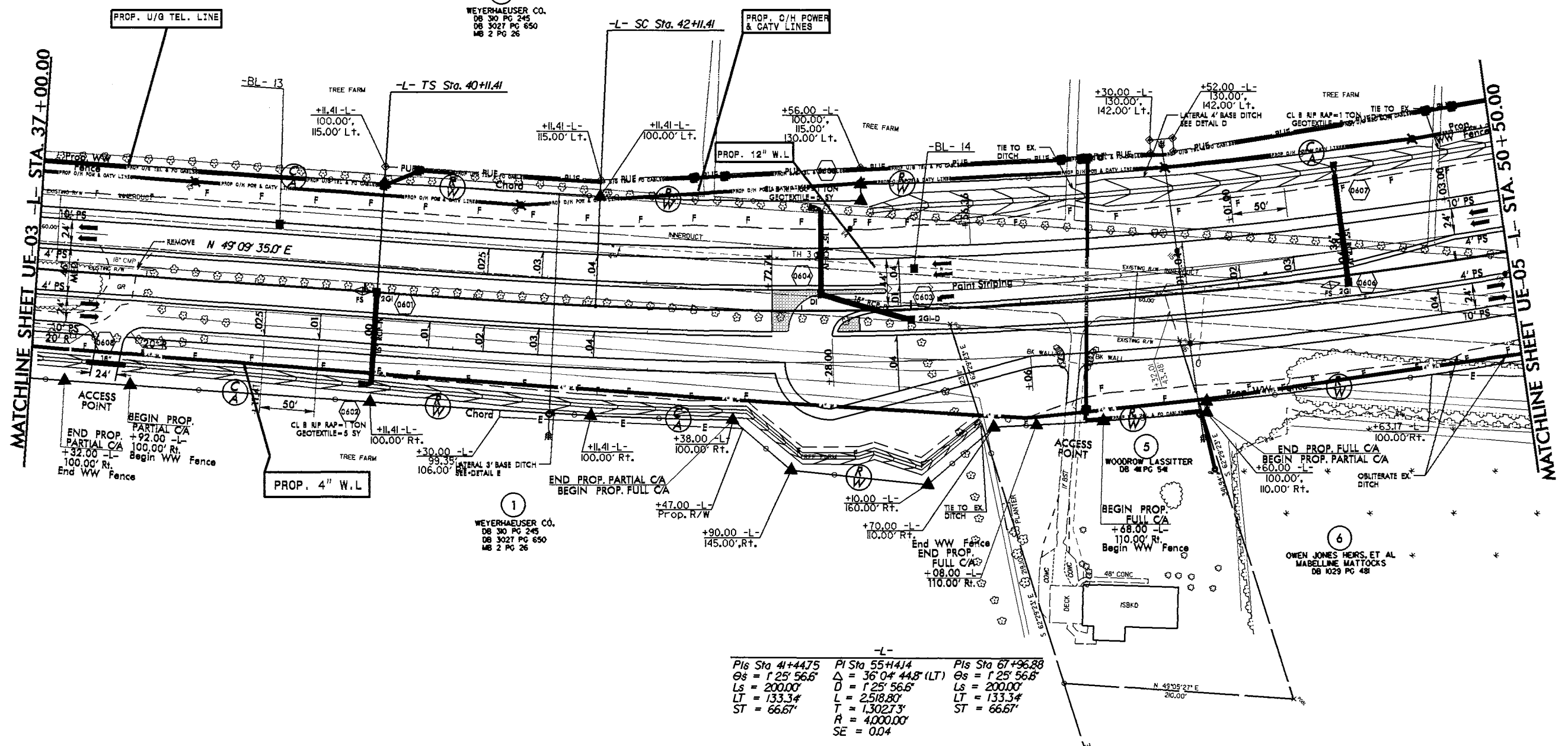
REVISED 07-15-2014

80



DETAIL G
FALSE SUMP
(Not to Scale)

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'



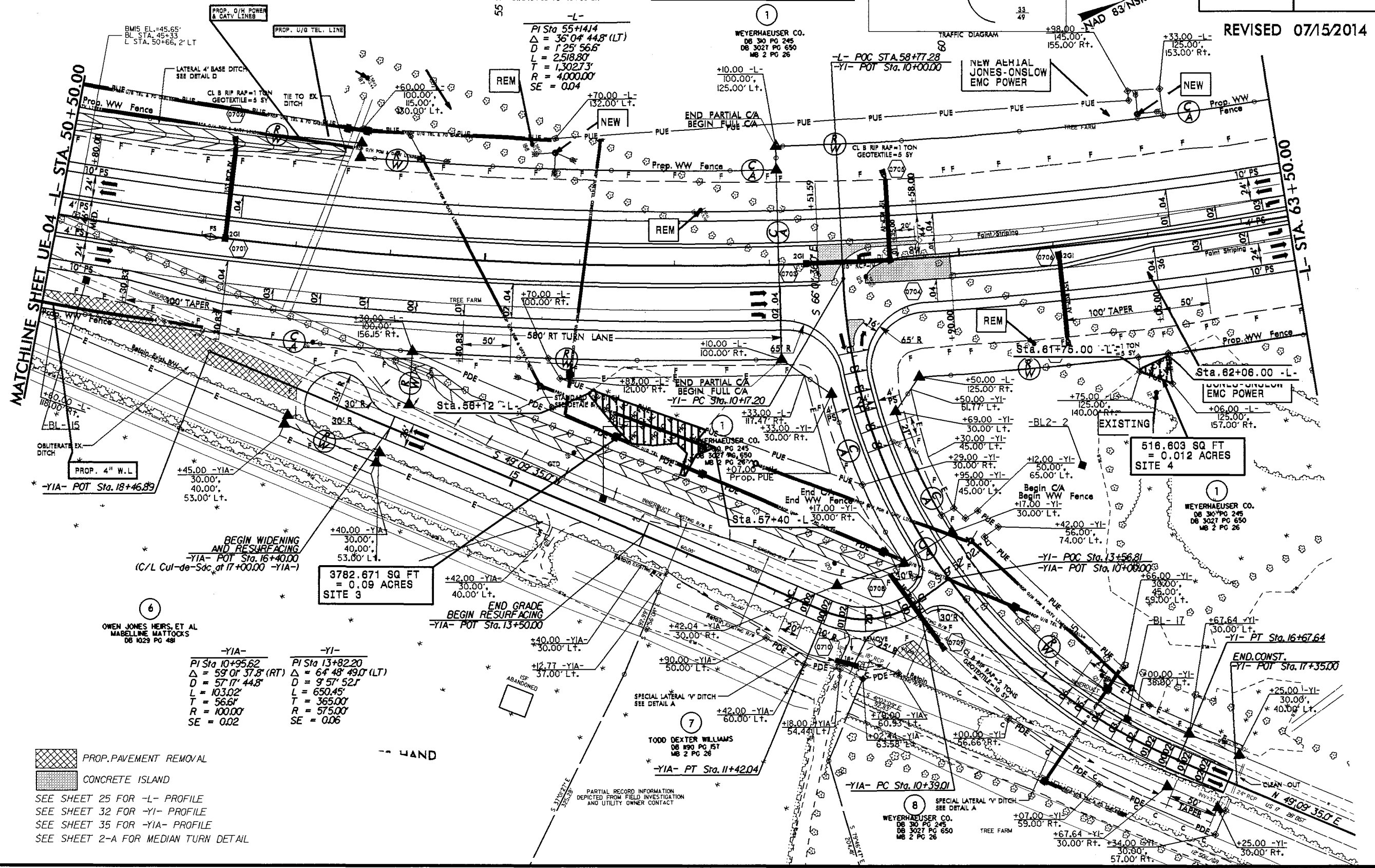
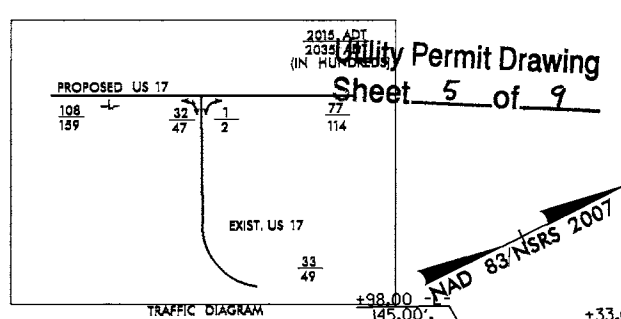
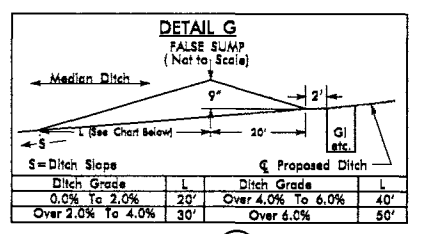
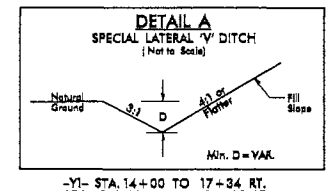
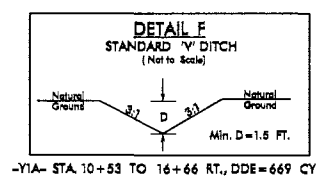
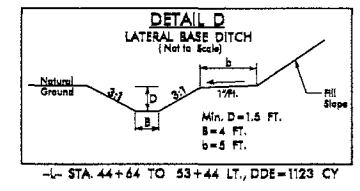
MATCHLINE SHEET UE-03 -L- STA. 37+00.00

MATCHLINE SHEET UE-05 -L- STA. 50+50.00

Sta	PI	Sta	PI	Sta	PI
41+44.75	55+41.4	67+96.88			
$\theta_s = 125^\circ 56.6'$	$\Delta = 36^\circ 04' 44.8" (LT)$	$\theta_s = 125^\circ 56.6'$			
$L_s = 200.00'$	$D = 125^\circ 56.6'$	$L_s = 200.00'$			
$LT = 133.34'$	$L = 2518.80'$	$LT = 133.34'$			
$ST = 66.67'$	$T = 1302.73'$	$ST = 66.67'$			
	$R = 4000.00'$				
	$SE = 0.04$				

SEE SHEETS 24-25 FOR -L- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL
CONCRETE ISLAND

REVISED 07/15/2014



BMIS EL.=45.65'
BL STA. 45+33
L STA. 50+66, 2' LT

PROP. O/H POWER & CATV LINES
PROP. U/B TEL. LINE

-L-
PI Sta 55+14.4
 $\Delta = 36^{\circ} 04' 44.8''$ (LT)
 $D = 125' 56.6''$
 $L = 2518.80'$
 $T = 1302.73'$
 $R = 4000.00'$
 $SE = 0.04$

WEYERHAEUSER CO.
DB 30 PG 245
DB 3027 PG 650
MB 2 PG 26

NEW AERIAL JONES-ONSLOW EMC POWER

NEW
Prop. WW Fence

MATCHLINE SHEET UE-04
L- STA. 50+50.00

L- STA. 63+50.00

BEGIN WIDENING AND RESURFACING
-YIA- POT Sta. 16+40.00
(C/L Cul-de-Sac at 17+00.00 -YIA-)

3782.671 SQ FT
= 0.09 ACRES
SITE 3

516.603 SQ FT
= 0.012 ACRES
SITE 4

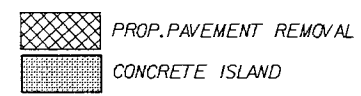
OWEN JONES HEERS, ET AL
MABELLINE MATTOCKS
DB 1029 PG 481

-YIA-	-YI-
PI Sta 10+95.62	PI Sta 13+82.20
$\Delta = 59^{\circ} 01' 37.8''$ (RT)	$\Delta = 64^{\circ} 48' 49.0''$ (LT)
$D = 57' 17' 44.8''$	$D = 9' 57' 52.1''$
$L = 103.02'$	$L = 650.45'$
$T = 56.61'$	$T = 365.00'$
$R = 100.00'$	$R = 575.00'$
$SE = 0.02$	$SE = 0.06$

END GRADE BEGIN RESURFACING
-YIA- POT Sta. 13+50.00

TODD DEXTER WILLIAMS
DB 190 PG 157
MB 2 PG 26

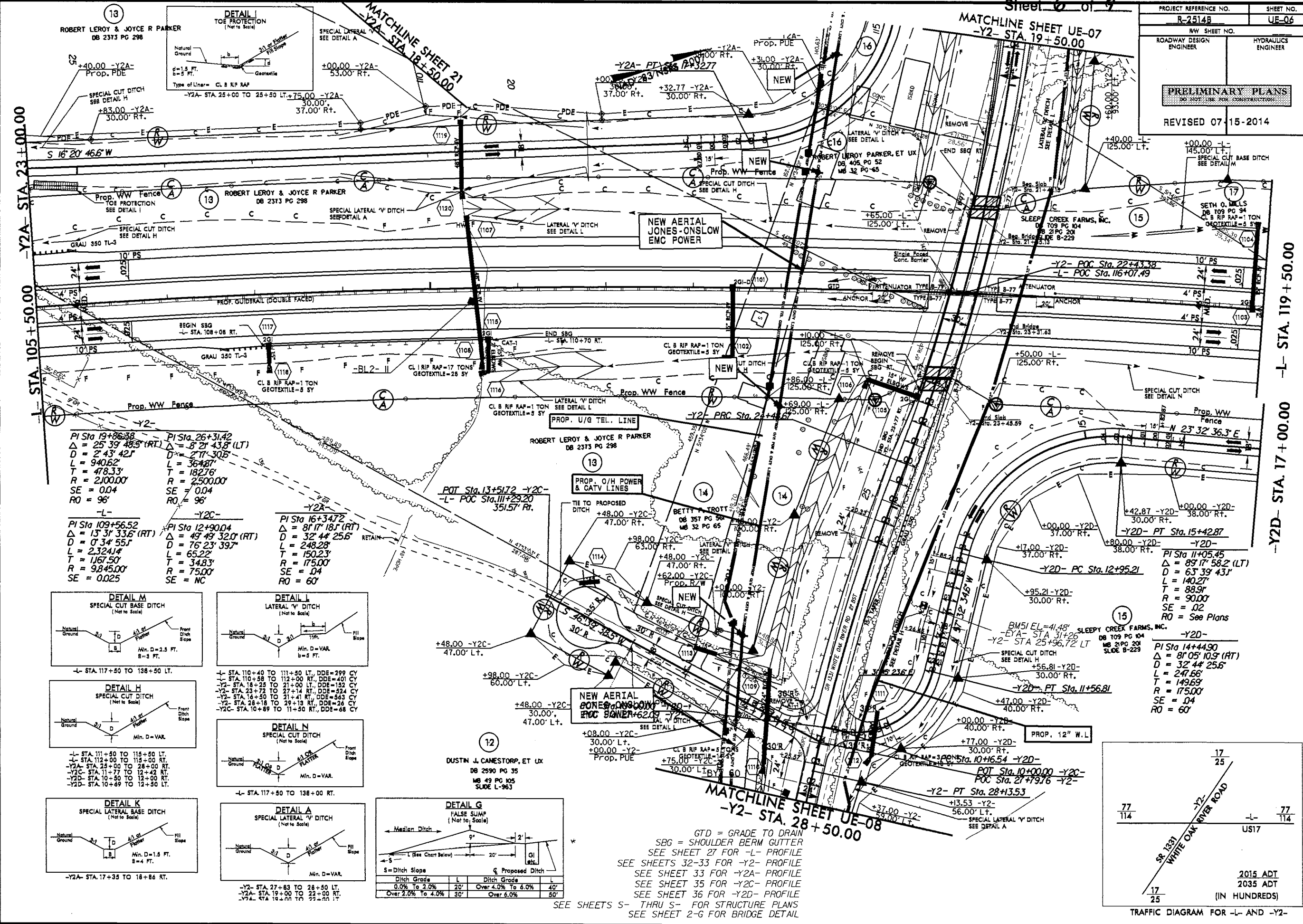
WEYERHAEUSER CO.
DB 30 PG 245
DB 3027 PG 650
MB 2 PG 26



SEE SHEET 25 FOR -L- PROFILE
SEE SHEET 32 FOR -YI- PROFILE
SEE SHEET 35 FOR -YIA- PROFILE
SEE SHEET 2-A FOR MEDIAN TURN DETAIL

8/17/99
13-OCT-2014 14:14
C:\Users\jgibson\Documents\Engineering\NEU\Permit Plans and Narratives\R2514B-14-14\Z-UE05-05.dwg
REVISED 07/15/2014

PROJECT REFERENCE NO. R-2514B	SHEET NO. UE-06
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
REVISED 07-15-2014	



PI Sta 19+86.38
 $\Delta = 25^\circ 39' 48.5"$ (RT)
 $D = 2' 43' 42.1"$
 $L = 940.62$
 $T = 478.33'$
 $R = 2,100.00'$
 $SE = 0.04$
 $RO = 96'$

PI Sta 26+31.42
 $\Delta = 8^\circ 21' 43.8"$ (LT)
 $D = 2' 17' 30.5"$
 $L = 364.87$
 $T = 182.76$
 $R = 2,500.00'$
 $SE = 0.04$
 $RO = 96'$

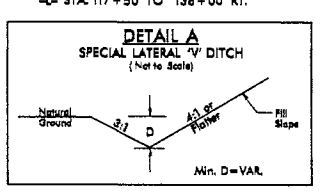
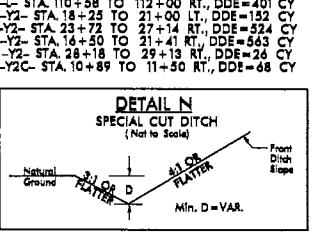
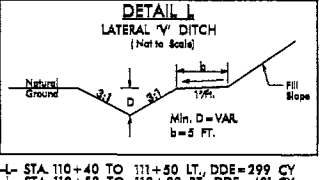
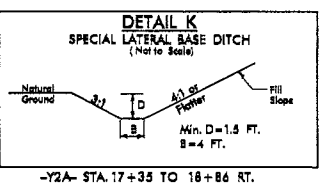
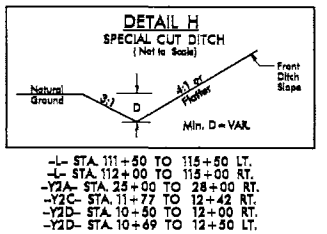
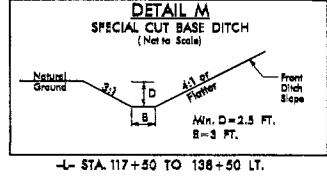
PI Sta 109+56.52
 $\Delta = 13^\circ 31' 33.5"$ (RT)
 $D = 0' 34' 55.1"$
 $L = 2,324.4'$
 $T = 1,167.50'$
 $R = 9,845.00'$
 $SE = 0.025$

PI Sta 12+90.04
 $\Delta = 49^\circ 49' 32.0"$ (RT)
 $D = 76' 23' 39.7"$
 $L = 65.22'$
 $T = 34.83'$
 $R = 75.00'$
 $SE = NC$

PI Sta 16+34.72
 $\Delta = 8^\circ 17' 18.1"$ (RT)
 $D = 32' 44' 25.6"$
 $L = 248.28'$
 $T = 150.23'$
 $R = 175.00'$
 $SE = 04$
 $RO = 60'$

PI Sta 11+05.45
 $\Delta = 89^\circ 17' 58.2"$ (LT)
 $D = 63' 39' 43.1"$
 $L = 140.27'$
 $T = 88.9'$
 $R = 90.00'$
 $SE = .02$
 $RO = \text{See Plans}$

PI Sta 14+44.90
 $\Delta = 8^\circ 05' 10.3"$ (RT)
 $D = 32' 44' 25.6"$
 $L = 247.66'$
 $T = 149.69'$
 $R = 175.00'$
 $SE = .04$
 $RO = 60'$

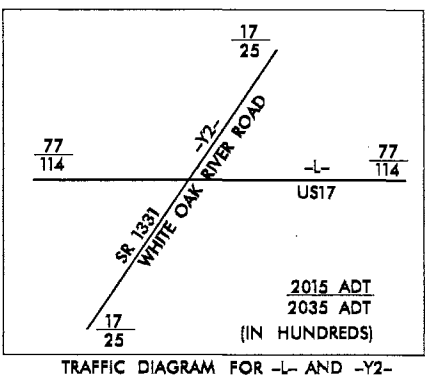


DETAIL G
FALSE SUMP
(Not to Scale)

S = Ditch Slope
 L = Proposed Ditch

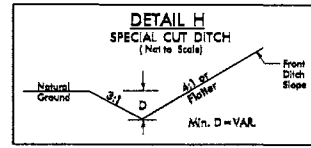
Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

GT D = GRADE TO DRAIN
 SBG = SHOULDER BERM GUTTER
 SEE SHEET 27 FOR -L- PROFILE
 SEE SHEETS 32-33 FOR -Y2- PROFILE
 SEE SHEET 33 FOR -Y2A- PROFILE
 SEE SHEET 35 FOR -Y2C- PROFILE
 SEE SHEET 36 FOR -Y2D- PROFILE
 SEE SHEETS S- THRU S- FOR STRUCTURE PLANS
 SEE SHEET 2-G FOR BRIDGE DETAIL

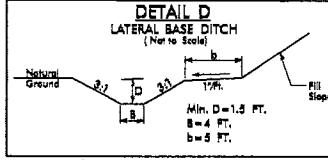


REVISIONS
 10-01-2014 (415) Engineering/NEU/Permit Plans and Nherakawa.R2514B.ut.rd.jll.UE06.ash.dgn

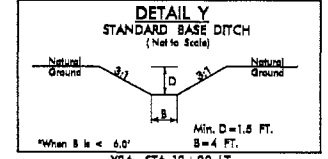
8/17/99
REVISIONS
11-OCT-2014 4:17
Engineering\NEU\Permit Plans and
Narrative\R2514B.ctb\d21.UE07.psd.dgn



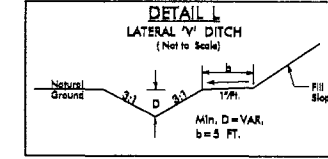
-Y2- STA. 12+86.33 TO 14+50 LT.
-Y2A- STA. 11+56.52 TO 13+00 RT.
-Y2A- STA. 12+00 TO 12+50 LT.
-Y2E- STA. 11+50 TO 14+50 RT.
-Y2E- STA. 11+50 TO 14+50 LT.



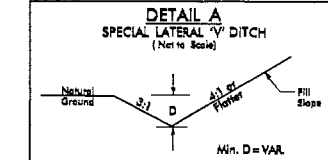
-Y2- STA. 14+00 TO 14+58 RT., DDE=97 CY
-Y2- STA. 15+27 TO 16+50 RT.



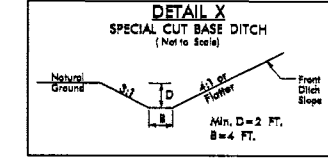
*When B is < 6.0'
-Y2A- STA. 12+20 LT.



-Y2- STA. 15+28.43 TO 15+50 LT., DDE=11 CY
-Y2- STA. 15+50 TO 16+38 LT., DDE=43 CY
-Y2- STA. 16+50 TO 21+41 RT., DDE=563 CY
-Y2- STA. 18+25 TO 21+00 LT., DDE=162 CY
-Y2B- STA. 10+50 TO 12+50 LT., DDE=103 CY



-Y2E- STA. 10+50 TO 11+50 RT.
-Y2E- STA. 10+50 TO 11+50 LT.



-Y2- STA. 12+50 TO 14+00 RT.

-Y2B-
PI Sta 10+62.40
Δ = 80° 05' 18.0" (RT)
D = 190.59 09.4'
L = 41.93'
T = 25.2'
R = 30.00'
SE = NC

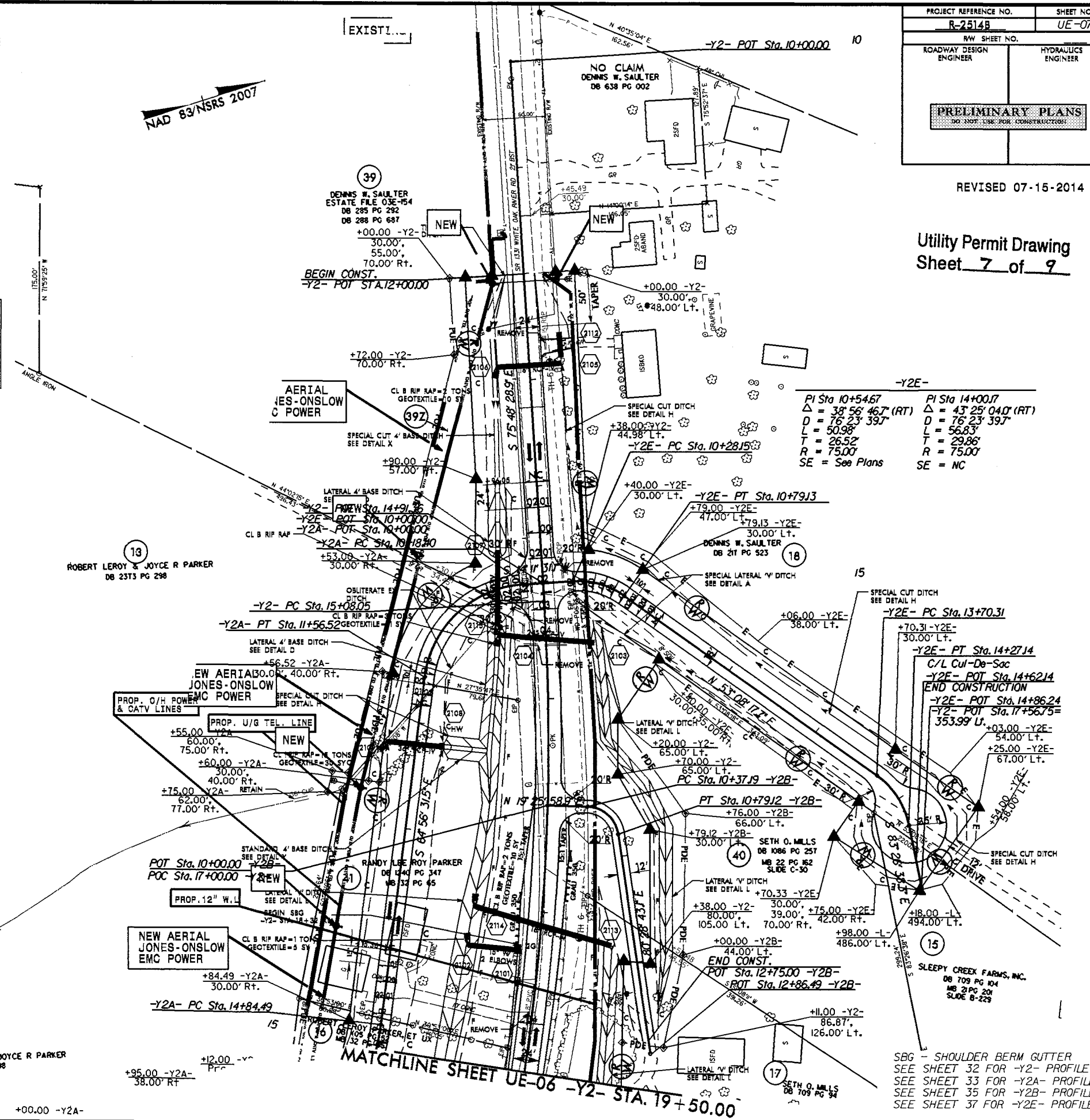
-Y2-
PI Sta 19+86.38
Δ = 25° 39' 48.5" (RT)
D = 2' 43' 42.1"
L = 940.62'
T = 478.33'
R = 2100.00'
SE = 0.04
RO = 96'

-Y2A-
PI Sta 11+01.04
Δ = 79° 08' 02.6" (LT)
D = 57' 17" 44.8"
L = 138.11'
T = 82.63'
R = 100.00'
SE = 0.02
RO = See Plans

PI Sta 16+34.72
Δ = 81° 17' 18.1" (RT)
D = 32' 44" 25.6"
L = 248.28'
T = 150.23'
R = 175.00'
SE = .04
RO = 60'

MATCHLINE SHEET 11
-Y2A- STA. 18+50.00

NAD 83/NSRS 2007



PROJECT REFERENCE NO. R-2514B
SHEET NO. UE-07
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISED 07-15-2014

Utility Permit Drawing
Sheet 7 of 9

-Y2E-
PI Sta 10+54.67
Δ = 38° 56' 46.7" (RT)
D = 76' 23" 39.7"
L = 50.98'
T = 26.52'
R = 75.00'
SE = See Plans

PI Sta 14+00.07
Δ = 43° 25' 04.0" (RT)
D = 76' 23" 39.7"
L = 56.83'
T = 29.86'
R = 75.00'
SE = NC

SBG - SHOULDER BERM GUTTER
SEE SHEET 32 FOR -Y2- PROFILE
SEE SHEET 33 FOR -Y2A- PROFILE
SEE SHEET 35 FOR -Y2B- PROFILE
SEE SHEET 37 FOR -Y2E- PROFILE

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	-Y2-29+24 TO 31+00 (Sheet UE-08)	Aerial Power & CATV lines					0.09					
1	-Y2- 30+38 (SHEET UE-08)	Power pole	<0.01									
2	-Y2-32+00 TO 32+51 (Sheet UE-08)	Aerial Power & CATV Lines					0.02					
3	-L-56+12 TO 57+40 (Sheet UE-05)	Aerial Power & CATV Lines					0.09					
4	'L-61+75 TO 62+06 (Sheet UE-05)	Aerial Power					0.01					
TOTALS:			<0.01	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00

Note : 6.25 sq. ft. (Each) = 0.0001 ac (Each) permanent impact in the wetlands from pole installation.
 Total = 93.75 sq. ft.
 = 0.002 ac
 = < 0.01 ac

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ONSLOW COUNTY
 TIP PROJECT (R-2514B)

Revised 7/15/2014