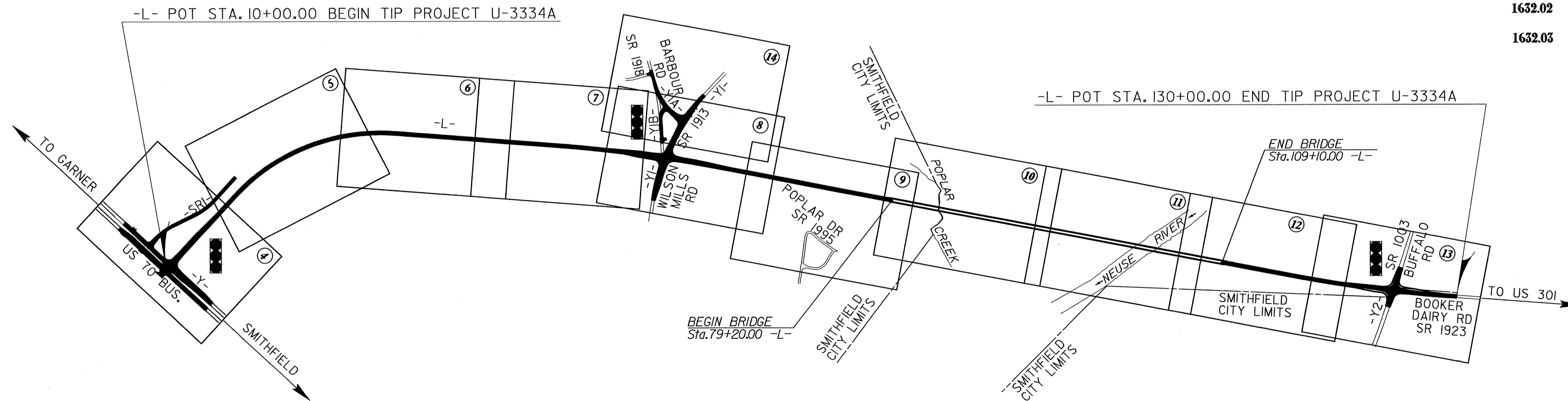


TIP PROJECT: U-3334A

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
JOHNSTON COUNTY

**LOCATION: SR 1923 EXTENSION (BOOKER DAIRY RD) FROM US 70
 BUSINESS WEST TO SR 1003 (BUFFALO RD)**

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



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3334A	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
	Wattle	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
	Type A	
1632.01	Type B	
1632.02	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

**THIS PROJECT CONTAINS
 EROSION CONTROL PLANS
 FOR CLEARING AND
 GRUBBING PHASE OF
 CONSTRUCTION.**

**THIS PROJECT HAS
 BEEN DESIGNED TO
 SENSITIVE WATERSHED
 STANDARDS.**

**ENVIRONMENTALLY
 SENSITIVE AREA(S) EXIST
 ON THIS PROJECT**
*Refer To E. C. Special Provisions
 for Special Considerations.*

GRAPHIC SCALE

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

Prepared in the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 1 South Wilmington St.
 Raleigh, NC 27611
2006 STANDARD SPECIFICATIONS

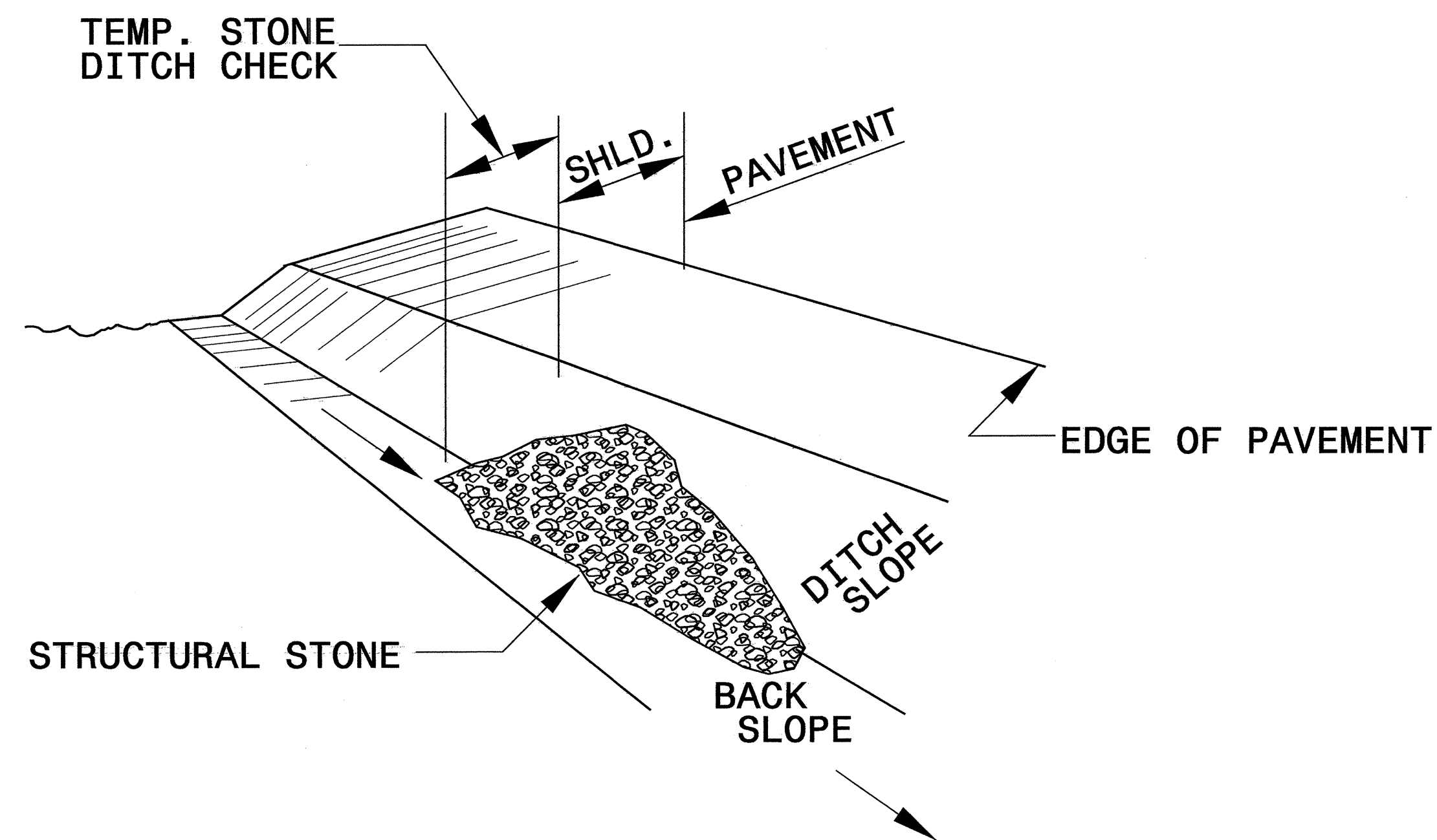
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1630.06 Special Stilling Basin
1606.01 Special Sediment Control Fence	1632.02 Rock Inlet Sediment Trap Type B
1607.01 Gravel Construction Entrance	1632.03 Rock Inlet Sediment Trap Type C
1622.01 Temporary Berms and Slope Drains	1633.01 Temporary Rock Silt Check Type A
1630.03 Temporary Silt Ditch	1634.02 Temporary Rock Sediment Dam Type B
1630.05 Temporary Diversion	1635.01 Rock Pipe Inlet Sediment Trap Type A
	1635.02 Rock Pipe Inlet Sediment Trap Type B

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

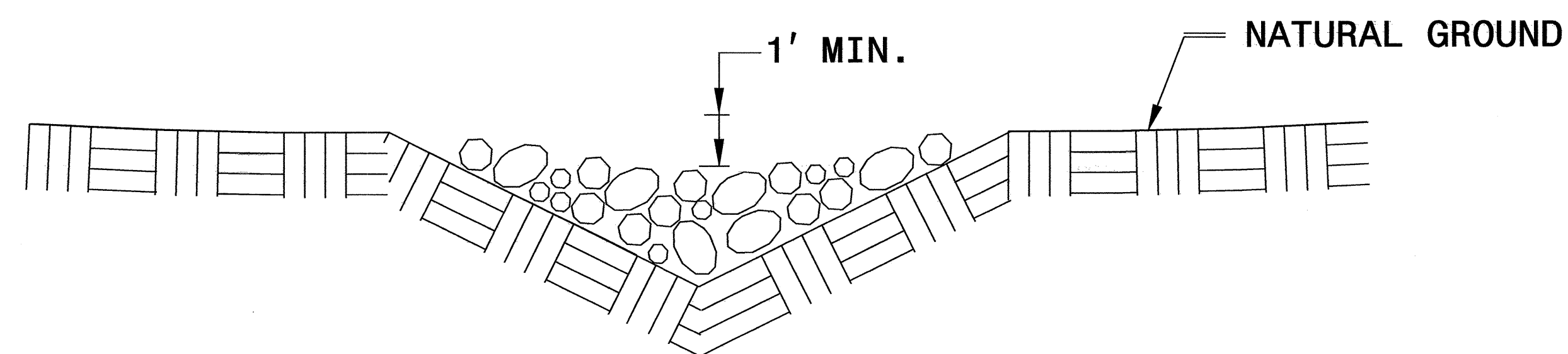


ISOMETRIC VIEW

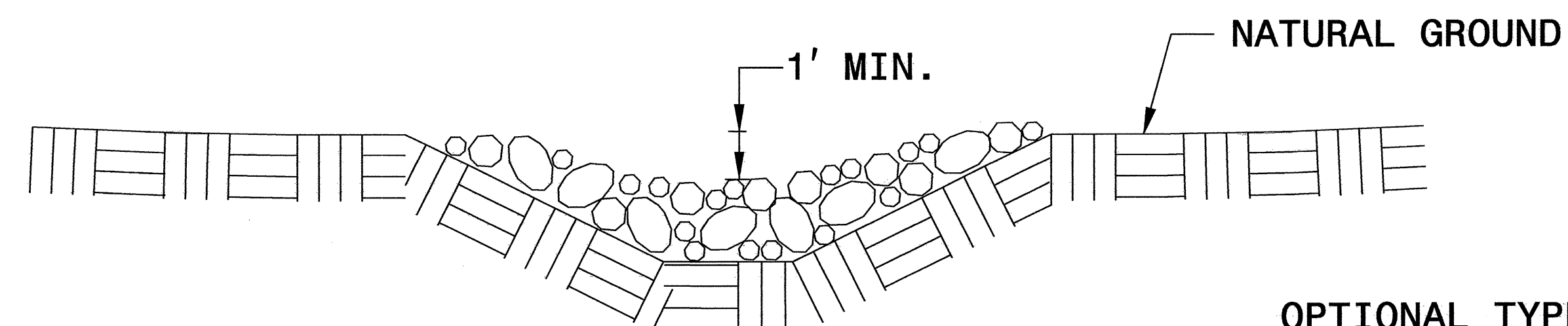
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

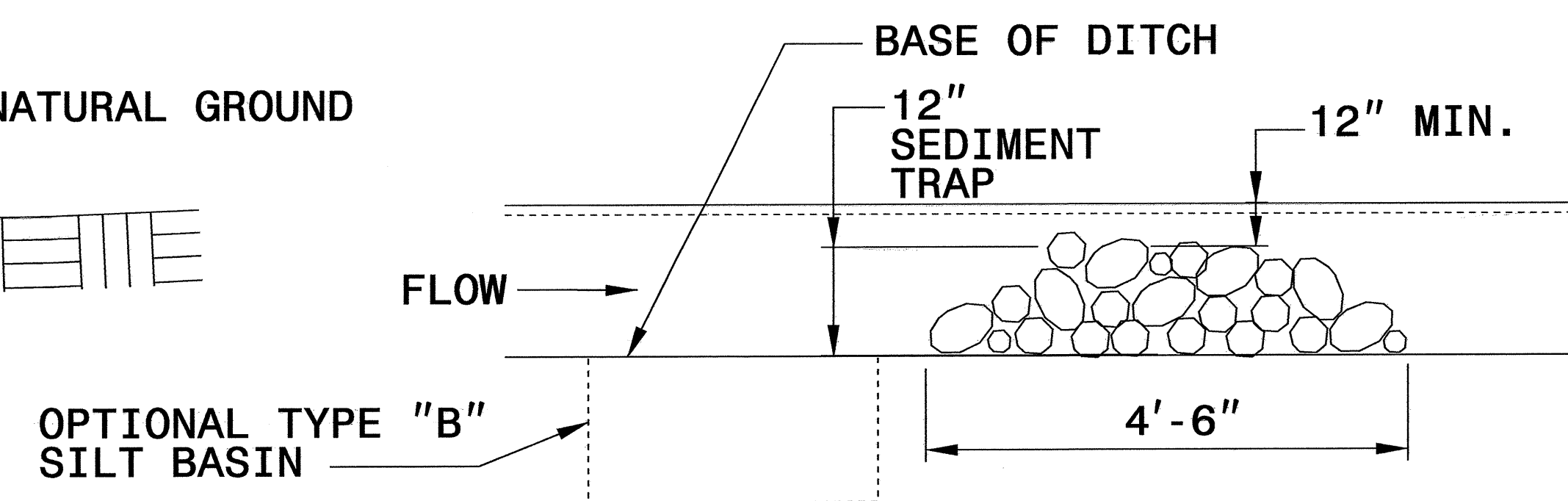
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



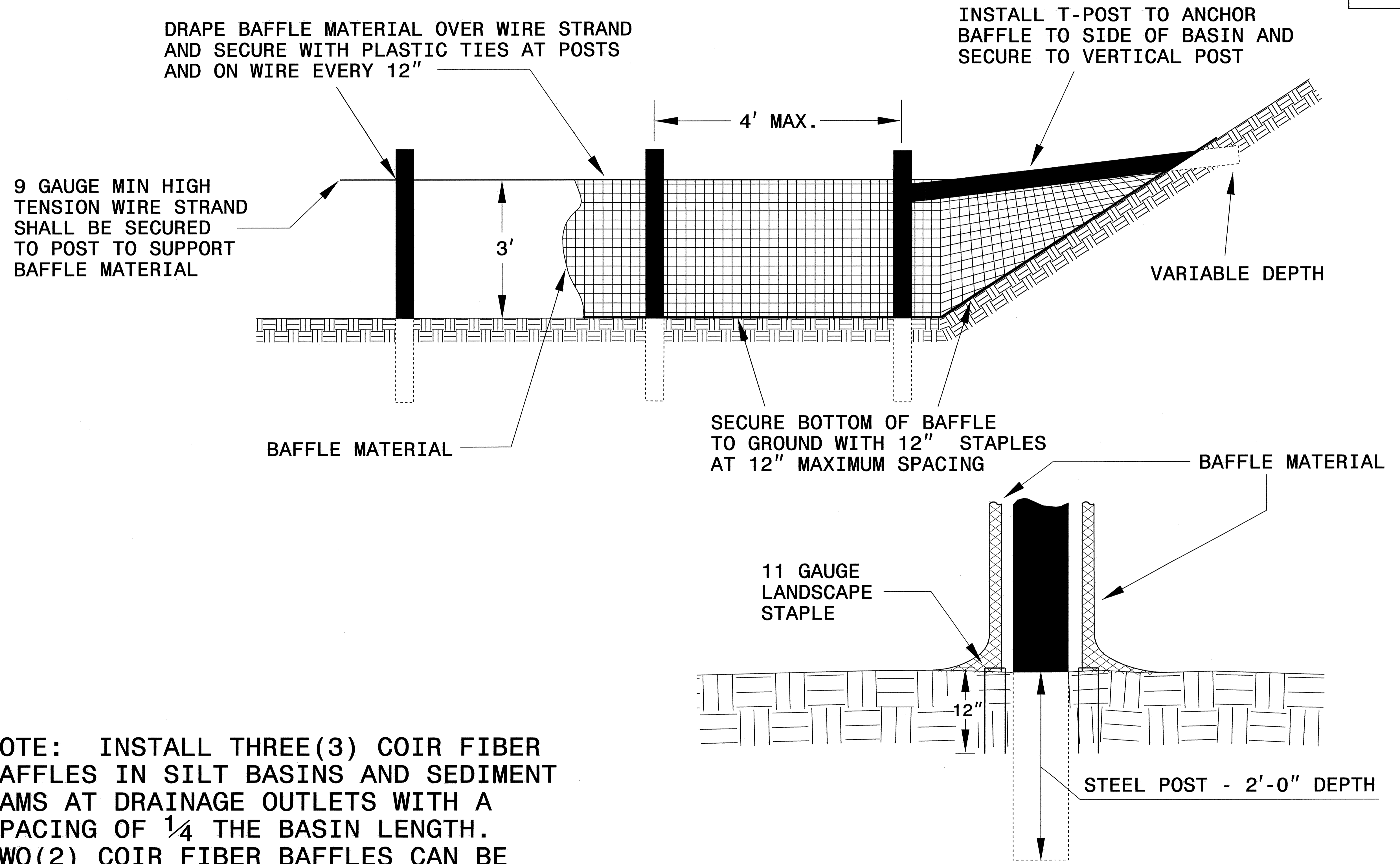
CROSS SECTION TRAPEZOIDAL DITCH



ELEVATION VIEW

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL

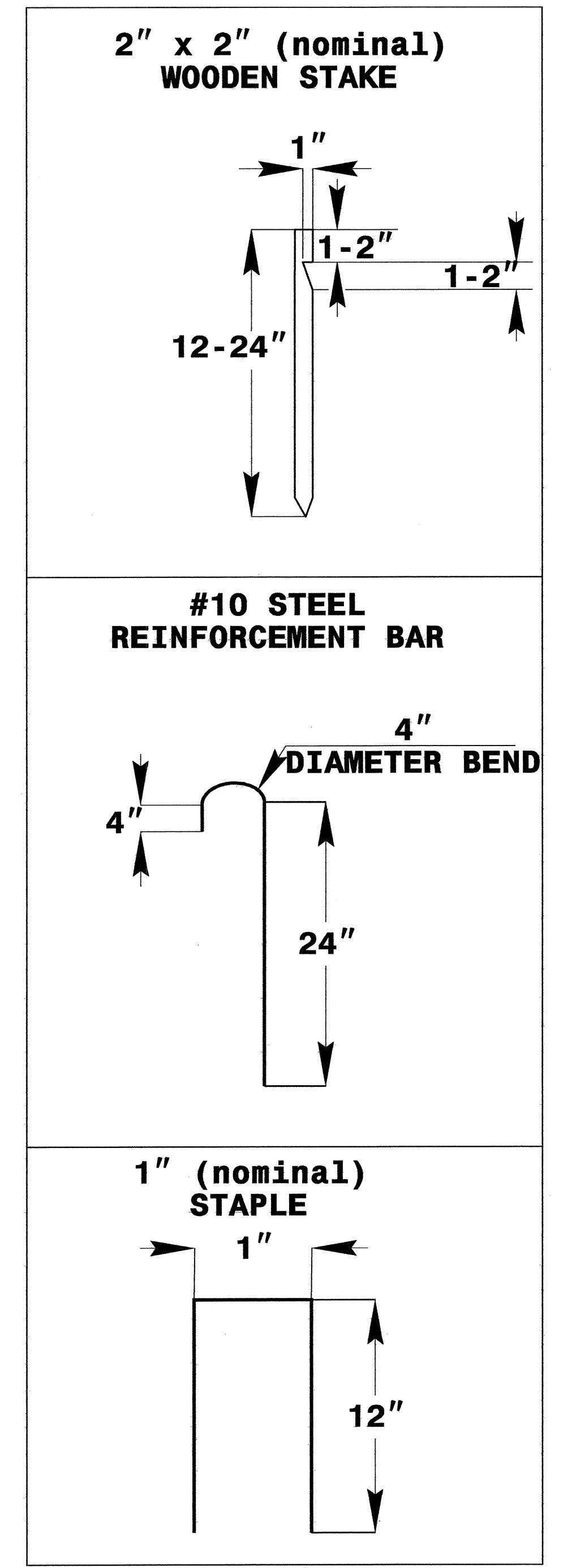
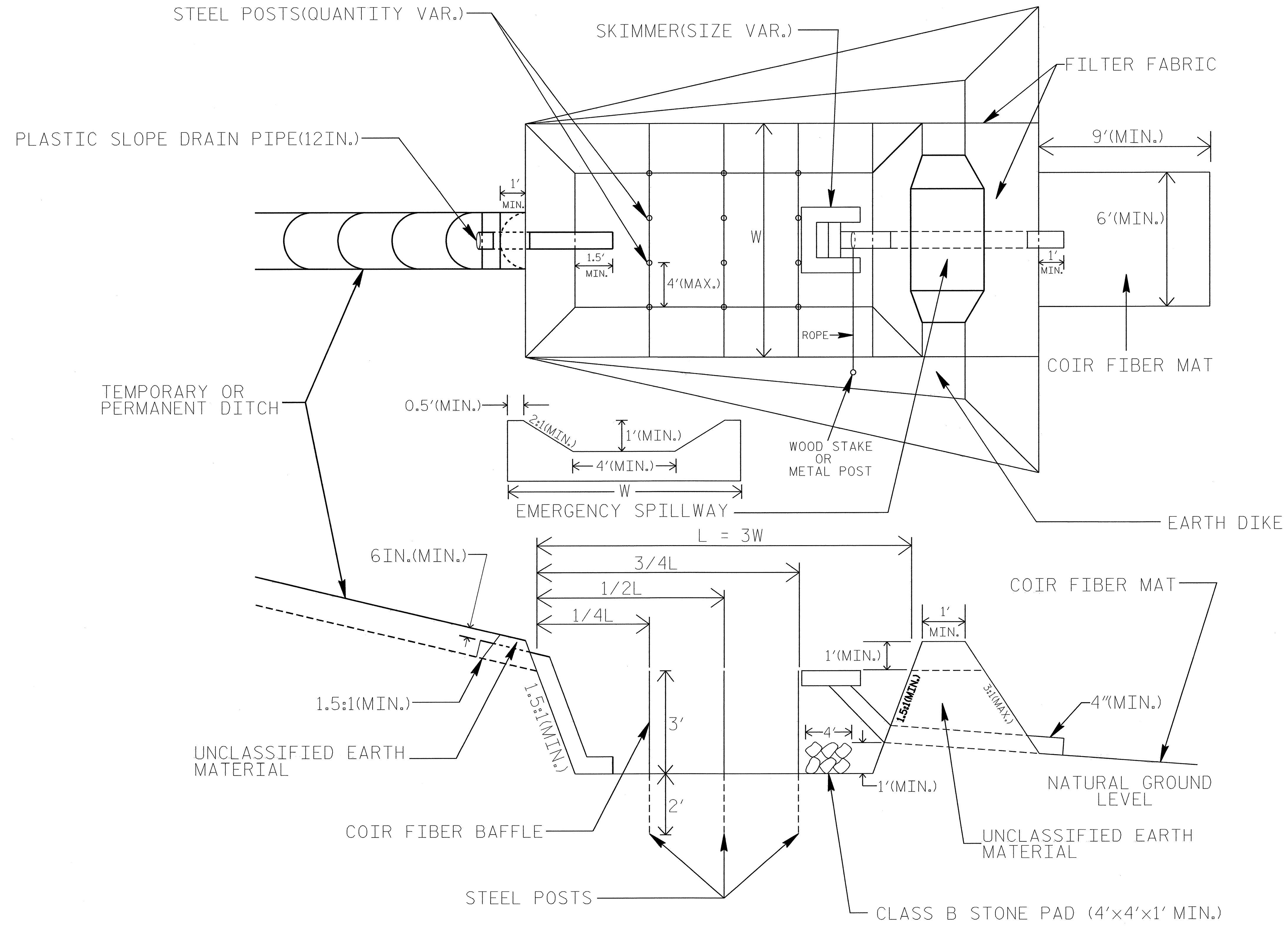


NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.

BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



COIR FIBER MAT ANCHOR OPTIONS

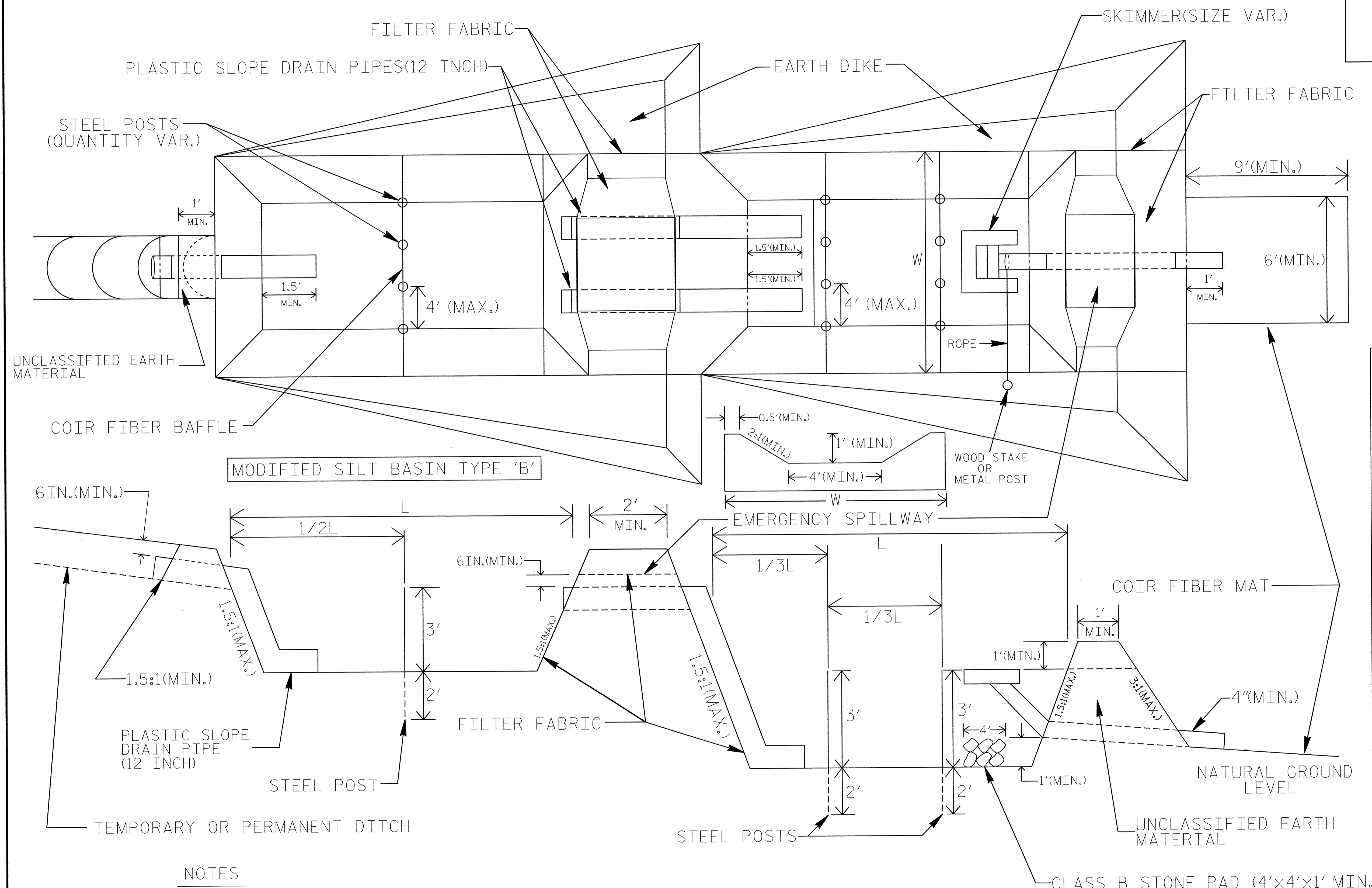
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.

NOT TO SCALE

TIERED SKIMMER BASIN DETAIL

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



2" x 2" (nominal) WOODEN STAKE

#10 STEEL REINFORCEMENT BAR

1" (nominal) STAPLE

COIR FIBER MAT ANCHOR OPTIONS

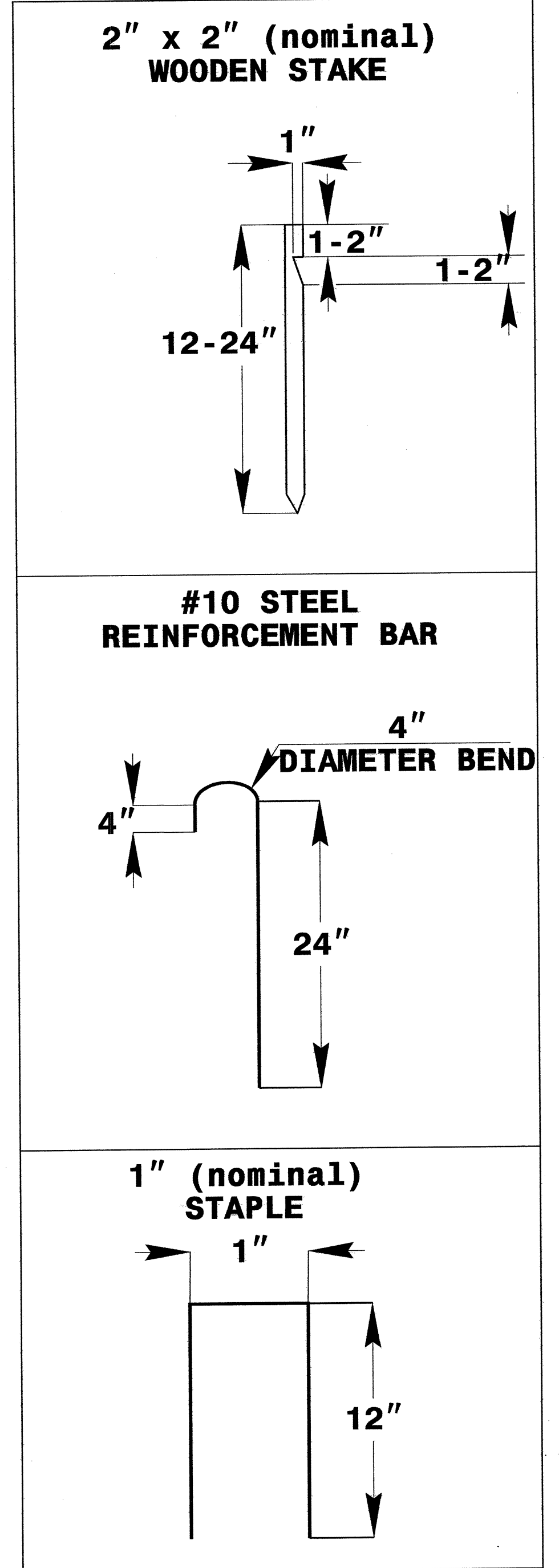
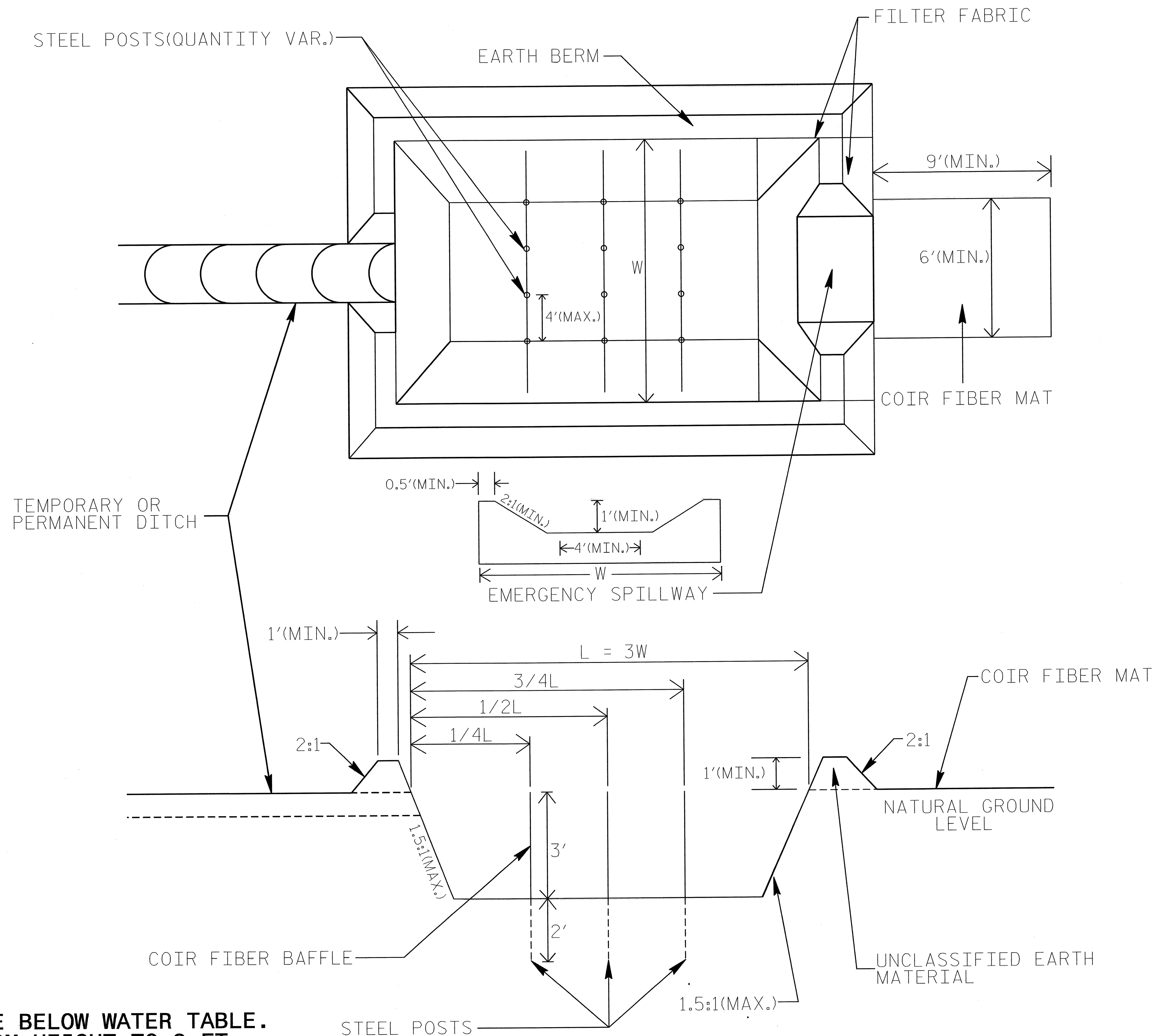
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.

NOT TO SCALE

INFILTRATION BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

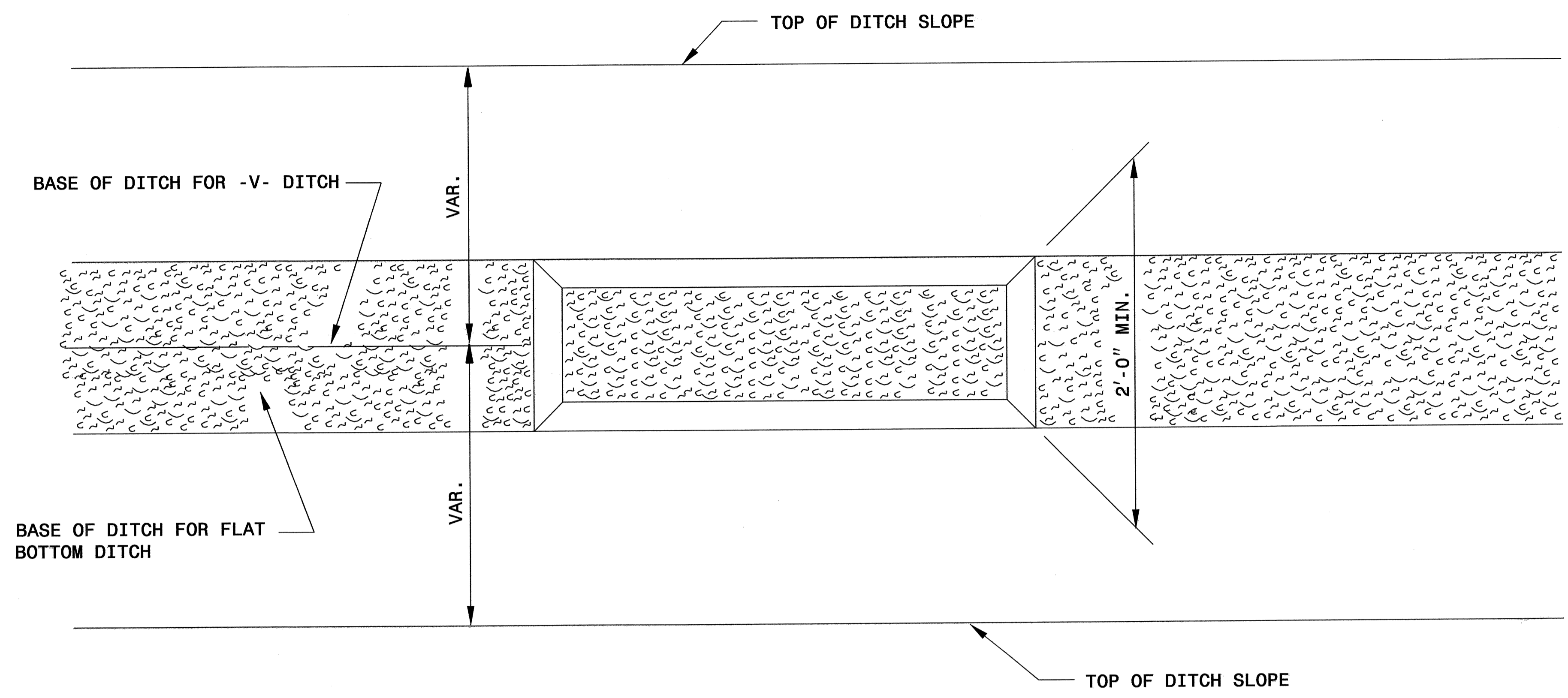


NOTES:

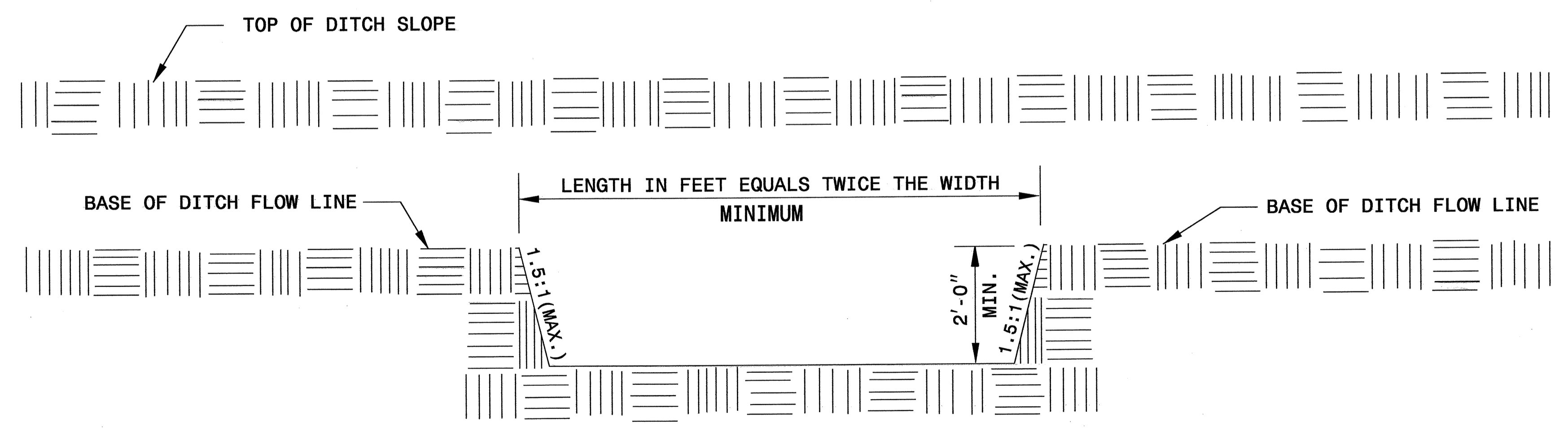
1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 3 FT.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE INTO BASIN.

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT BASIN 'B' DETAIL



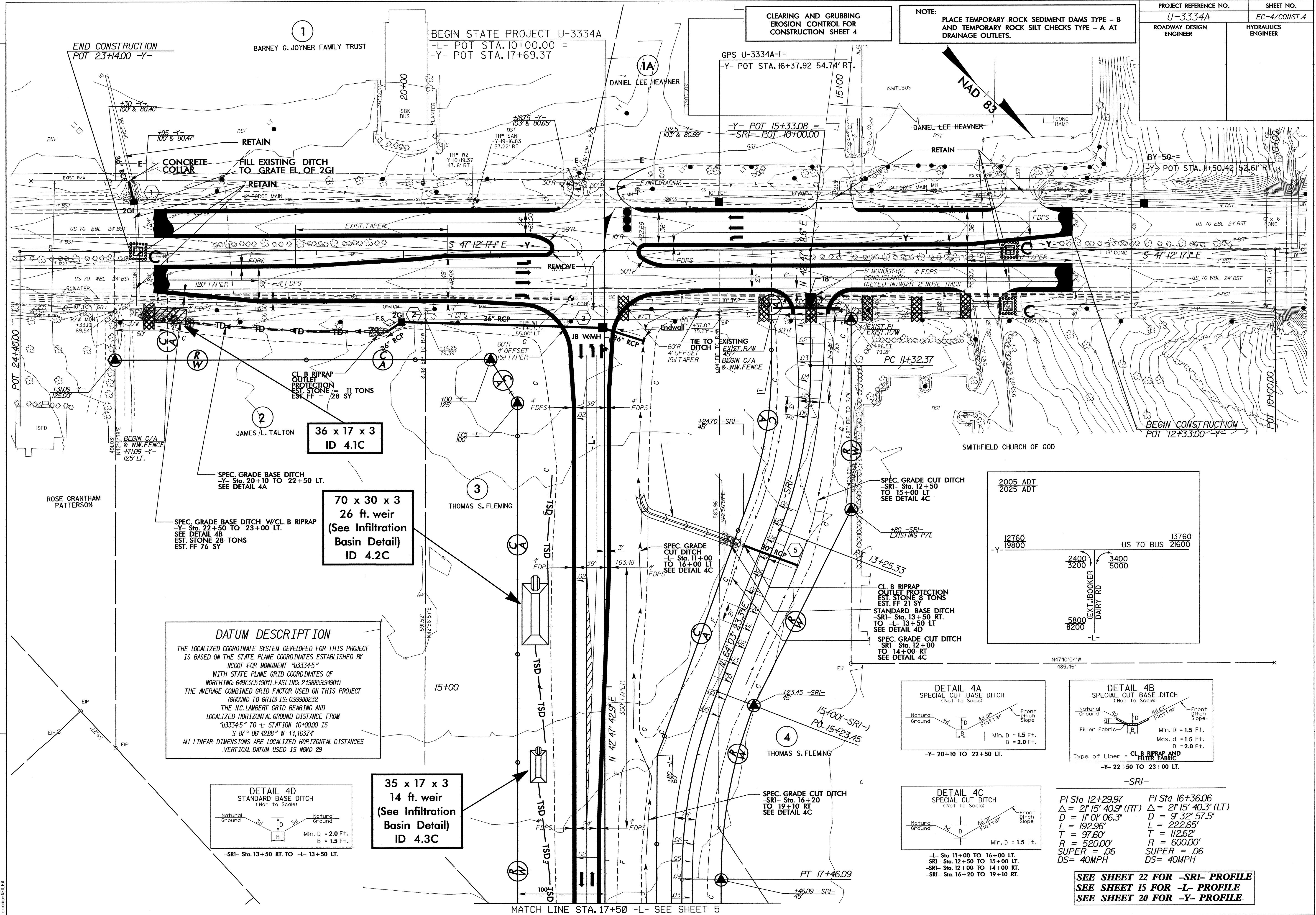
PLAN



ELEVATION

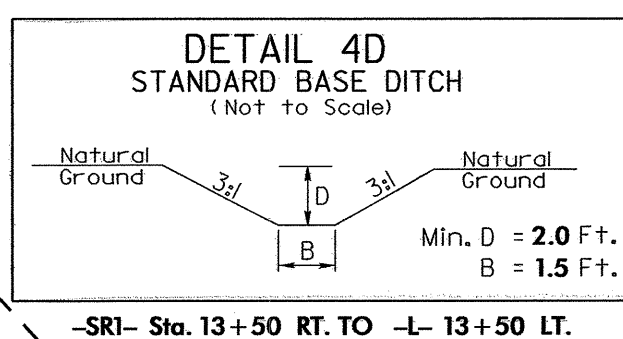
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

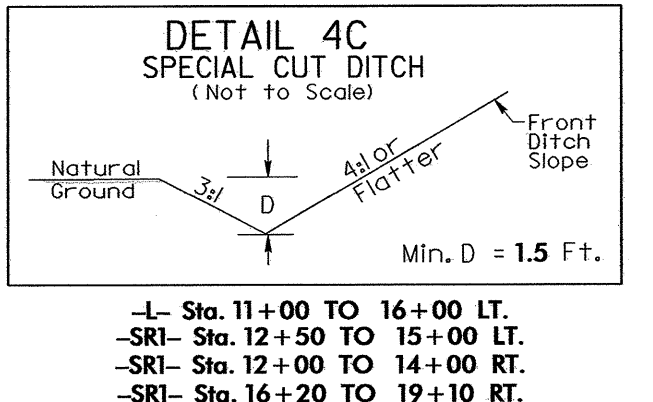
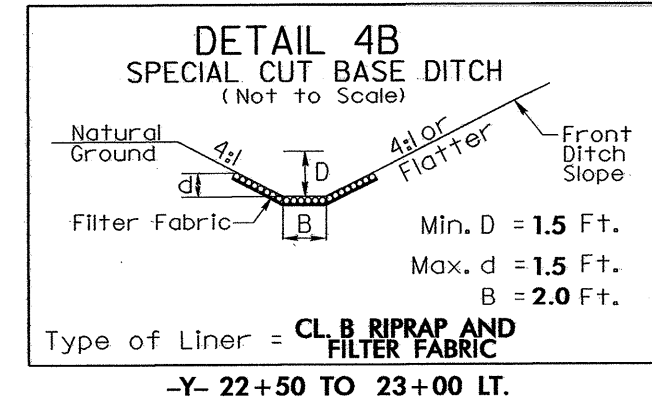
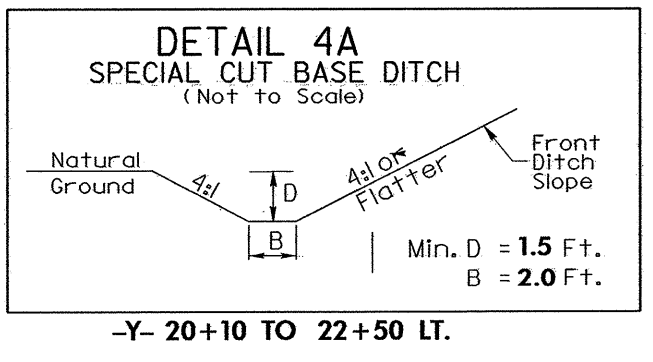
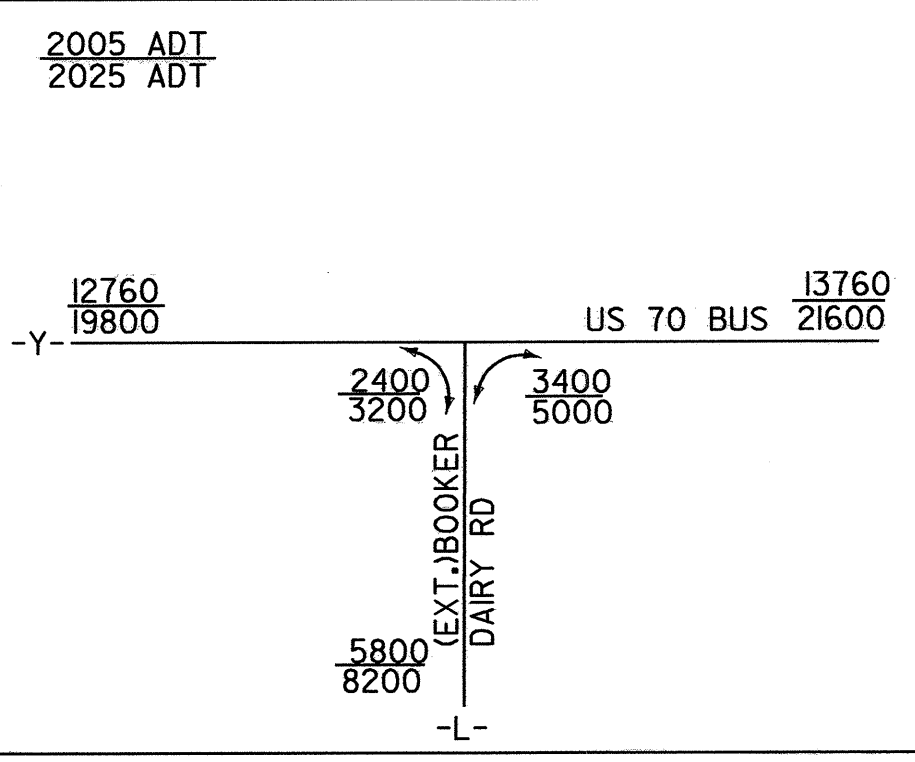


DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDDOT FOR MONUMENT "U3334-5" WITH STATE PLANE GRID COORDINATES OF NORTHING: 649737.519(Ft) EASTING: 2198859.949(Ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988232 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U3334-5" TO -L- STATION 10+00.00 IS S 87° 06' 42.88" W 11,163.74 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29



35 x 17 x 3
14 ft. weir
(See Infiltration Basin Detail)
ID 4.3C



PI Sta 12+29.97
Δ = 2' 15' 40.9" (RT)
D = 11' 01' 06.3"
L = 192.96'
T = 97.60'
R = 520.00'
SUPER = .06
DS = 40MPH

PI Sta 16+36.06
Δ = 2' 15' 40.3" (LT)
D = 9' 32' 57.5"
L = 222.65'
T = 112.62'
R = 600.00'
SUPER = .06
DS = 40MPH

SEE SHEET 22 FOR -SRI- PROFILE
SEE SHEET 15 FOR -L- PROFILE
SEE SHEET 20 FOR -Y- PROFILE

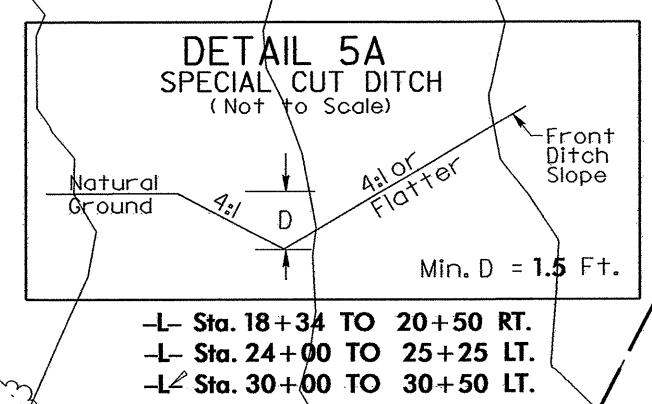
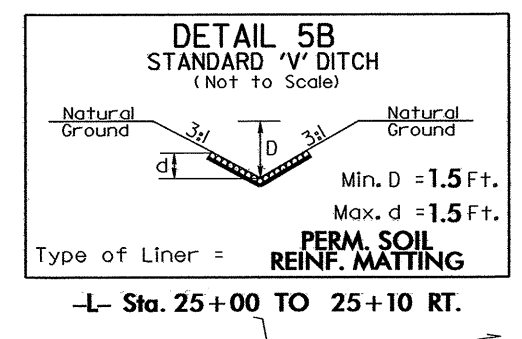
REVISIONS

ARCADIS G&M
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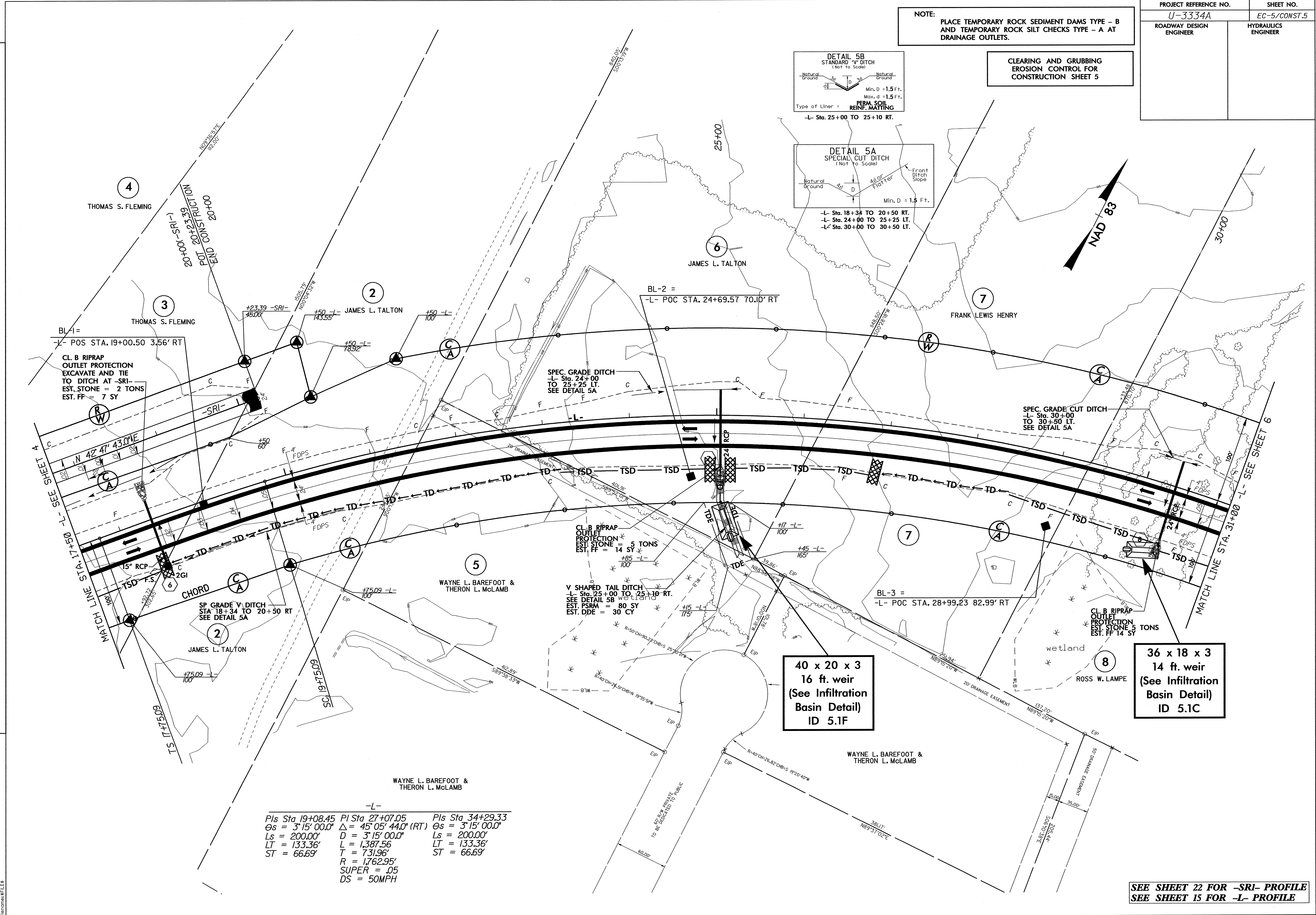
MATCH LINE STA. 17+50 -L- SEE SHEET 5

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5



REVISIONS



BL-1 =
-L- POS STA. 19+00.50 3.56' RT
CL. B RIPRAP OUTLET PROTECTION EXCAVATE AND TIE TO DITCH AT -SRI- EST. STONE = 2 TONS EST. FF = 7 SY

BL-2 =
-L- POC STA. 24+69.57 70.10' RT

BL-3 =
-L- POC STA. 28+99.23 82.99' RT

SPEC. GRADE DITCH
-L- Sta. 24+00 TO 25+25 LT. SEE DETAIL 5A

SPEC. GRADE CUT DITCH
-L- Sta. 30+00 TO 30+50 LT. SEE DETAIL 5A

CL. B RIPRAP OUTLET PROTECTION EST. STONE = 5 TONS EST. FF = 14 SY

CL. B RIPRAP OUTLET PROTECTION EST. STONE = 5 TONS EST. FF = 14 SY

SP. GRADE V DITCH STA. 18+34 TO 20+50 RT SEE DETAIL 5A

V SHAPED TAIL DITCH
-L- Sta. 25+00 TO 25+10 RT. SEE DETAIL 5B wetland EST. PSRM = 80 SY EST. DDE = 30 CY

40 x 20 x 3
16 ft. weir
(See Infiltration Basin Detail)
ID 5.1F

36 x 18 x 3
14 ft. weir
(See Infiltration Basin Detail)
ID 5.1C

-L-		
PIs Sta. 19+08.45	PI Sta. 27+07.05	PIs Sta. 34+29.33
$\Theta_s = 3^\circ 15' 00.0''$	$\Delta = 45^\circ 05' 44.0''$ (RT)	$\Theta_s = 3^\circ 15' 00.0''$
$L_s = 200.00'$	$D = 3^\circ 15' 00.0''$	$L_s = 200.00'$
$LT = 133.36'$	$L = 1,387.56'$	$LT = 133.36'$
$ST = 66.69'$	$T = 731.96'$	$ST = 66.69'$
	$R = 1762.95'$	
	$SUPER = .05$	
	$DS = 50MPH$	

SEE SHEET 22 FOR -SRI- PROFILE
SEE SHEET 15 FOR -L- PROFILE

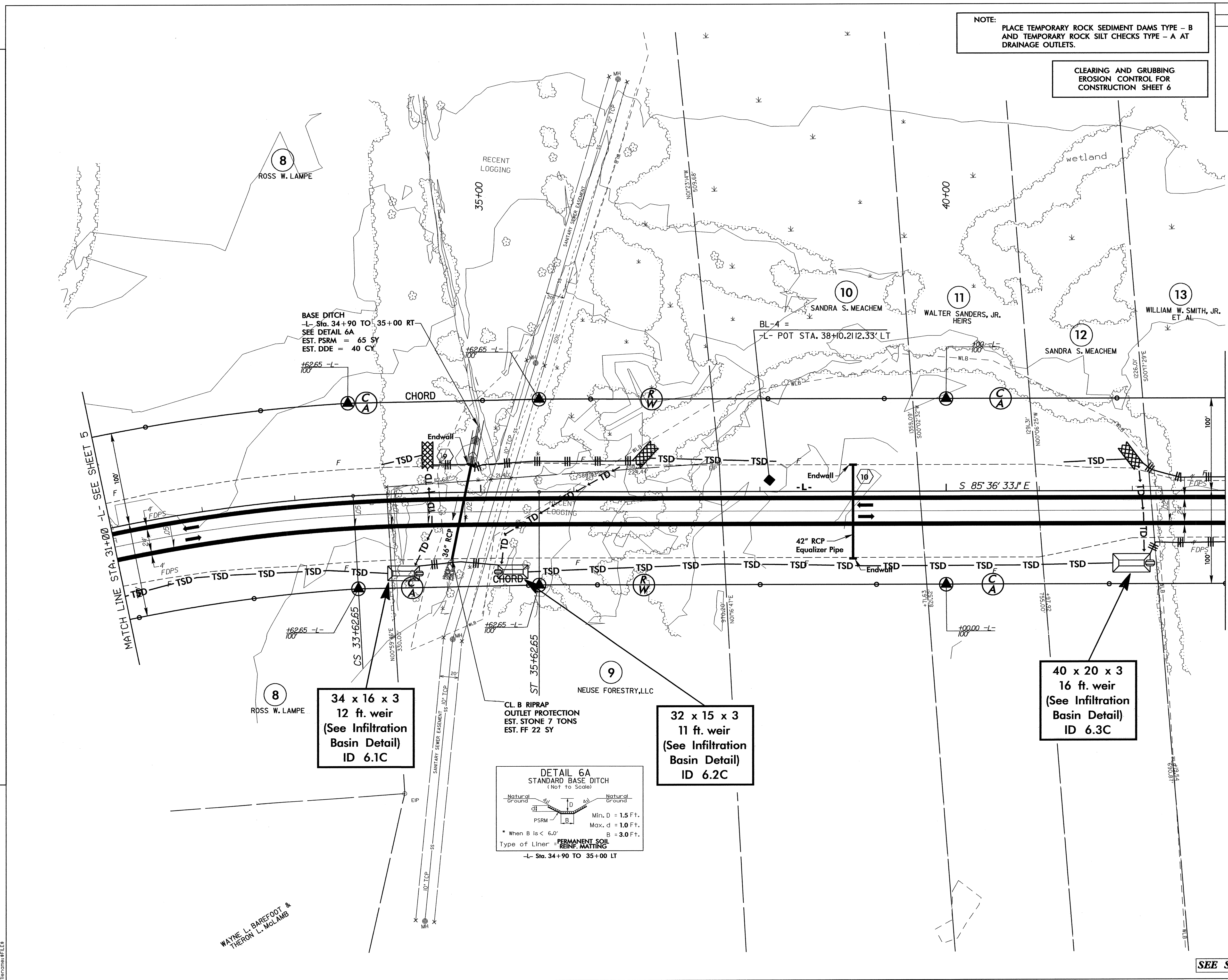
PROJECT REFERENCE NO.	SHEET NO.
U-3334A	EC-6/CONST.6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

NAD 83

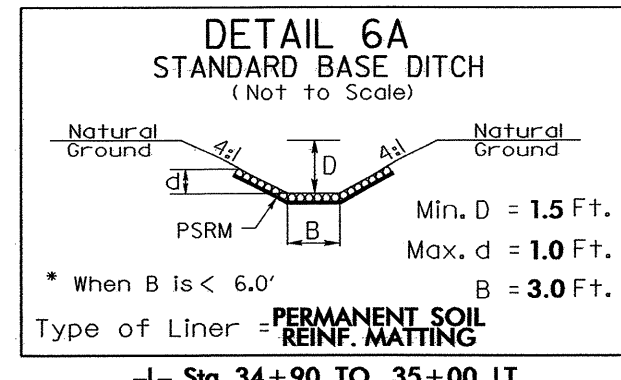
REVISIONS



34 x 16 x 3
12 ft. weir
(See Infiltration Basin Detail)
ID 6.1C

32 x 15 x 3
11 ft. weir
(See Infiltration Basin Detail)
ID 6.2C

40 x 20 x 3
16 ft. weir
(See Infiltration Basin Detail)
ID 6.3C



MATCH LINE STA. 43+00 -L- SEE SHEET 7

NOTE:
A FUTURE ACCESS POINT IS DESIGNATED AT LEFT AND RIGHT OF -L- Sta. 35+90 FOR PLACEMENT OF A ROAD AS DETERMINED BY THE CITY OF SMITHFIELD.

SEE SHEETS 15 AND 16 -L- PROFILE

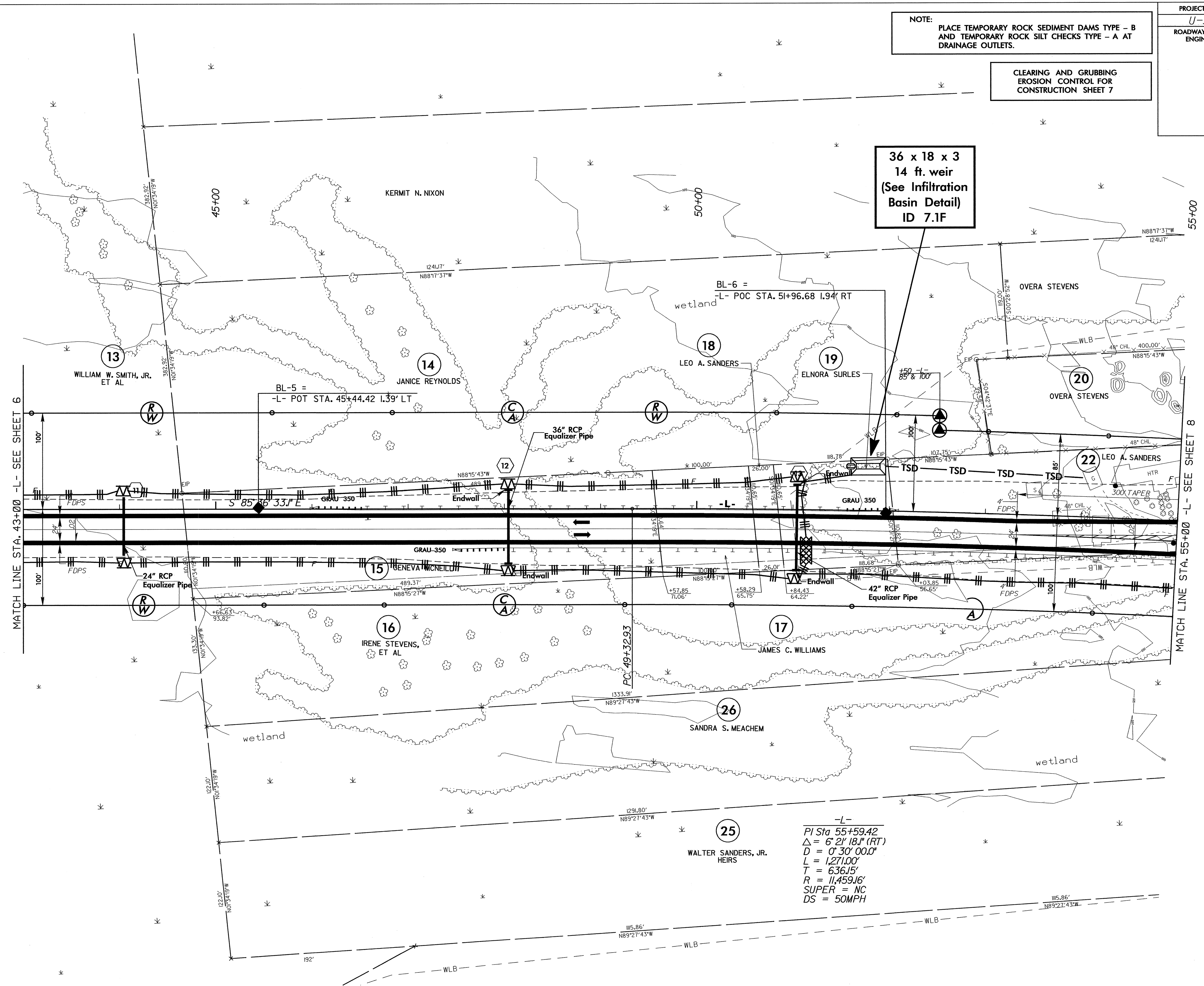
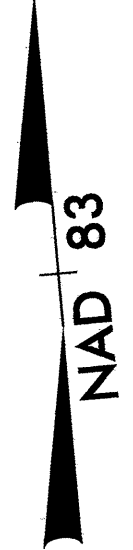
ARCADIS CAN
ROADWAY DESIGN
Files: 03-11-15
Time: 11:00 AM
Wayne L. Barefoot &
Theron L. McLamb

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-7/CONST.7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7

36 x 18 x 3
14 ft. weir
(See Infiltration Basin Detail)
ID 7.1F



REVISIONS

ASCADS, CIV
DSCAD, DATA
FILENAMES.P1E1

SEE SHEET 16 FOR -L- PROFILE

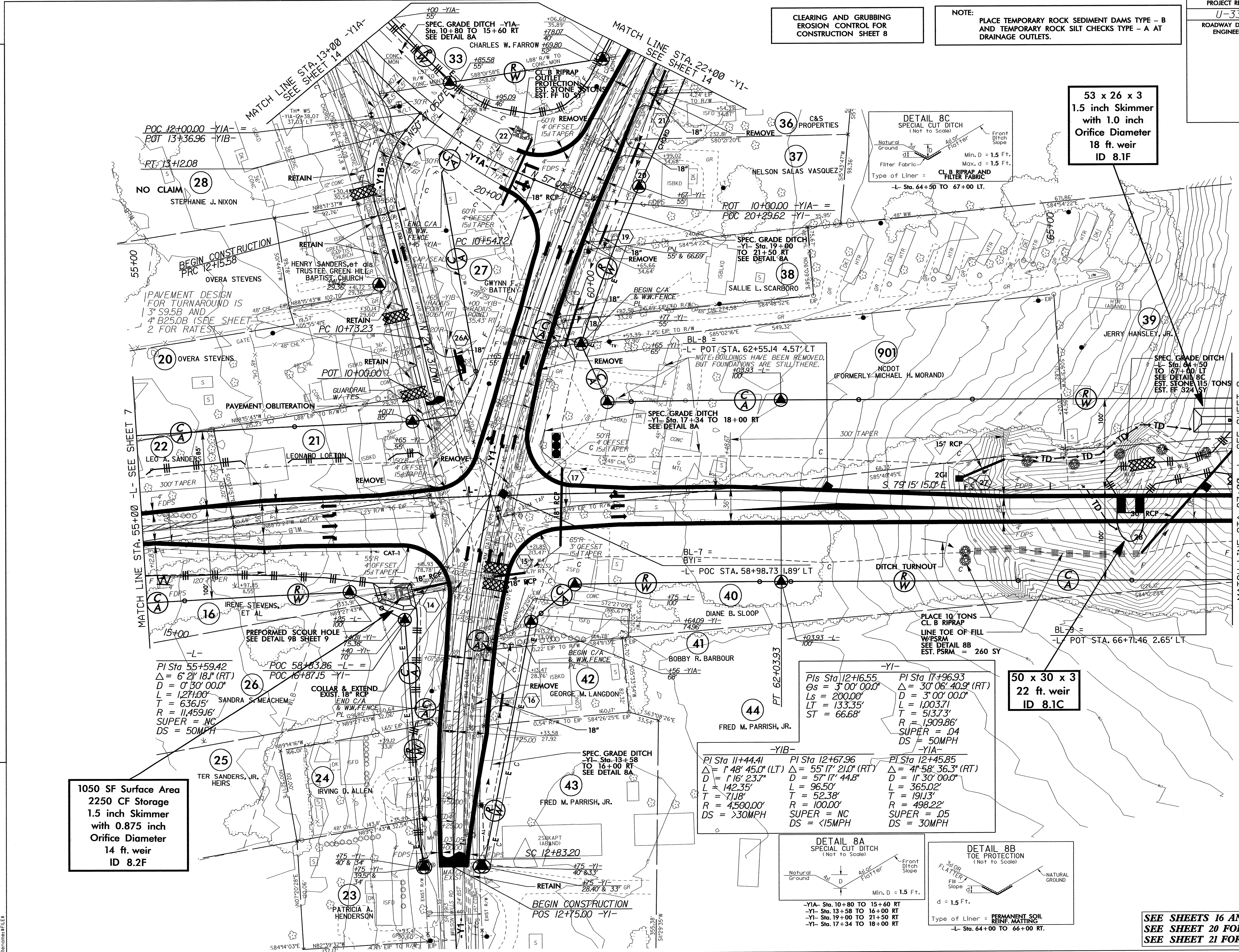
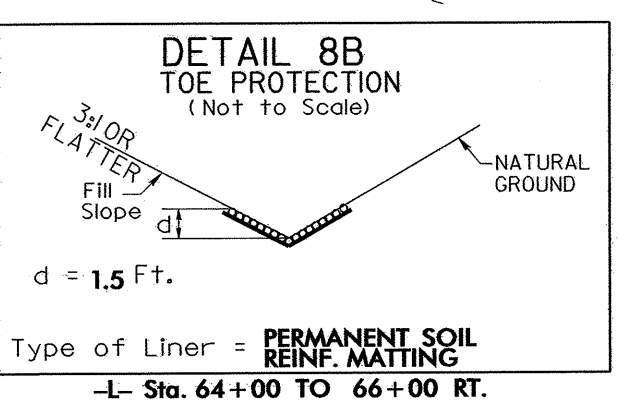
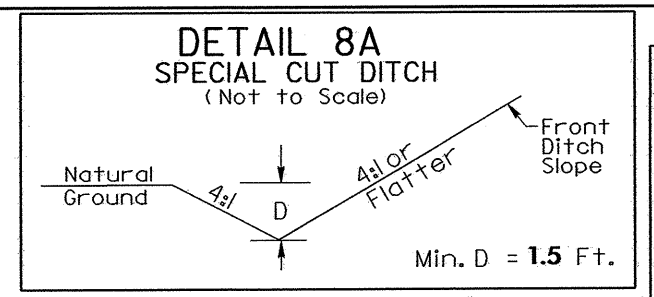
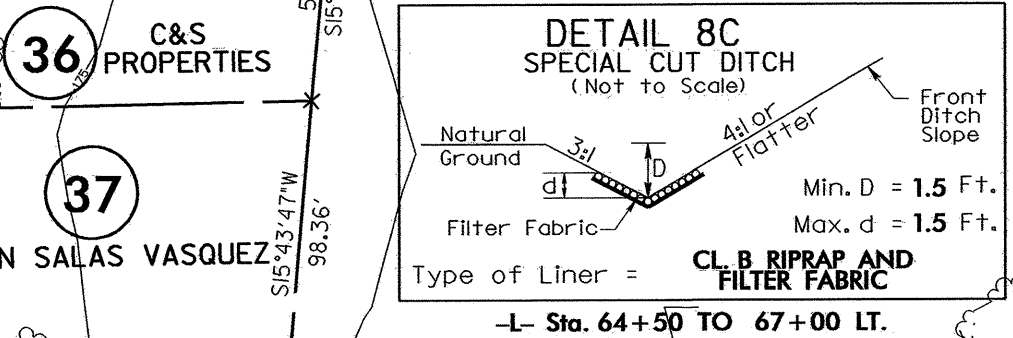
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 8

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

53 x 26 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
18 ft. weir
ID 8.1F

50 x 30 x 3
22 ft. weir
ID 8.1C

1050 SF Surface Area
2250 CF Storage
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
14 ft. weir
ID 8.2F



SEE SHEETS 16 AND 17 FOR -L- PROFILE
SEE SHEET 20 FOR -YI- PROFILE
SEE SHEET 21 FOR -YIA- PROFILE

NAD 83

REVISIONS

ARCADIS G&M
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Times: 4:15 PM

NOTE: UTILIZE SKIMMER BASIN AND/OR TIERED SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 9

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

40 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 9.1C

46 x 23 x 3
15 ft. weir
ID 9.2C

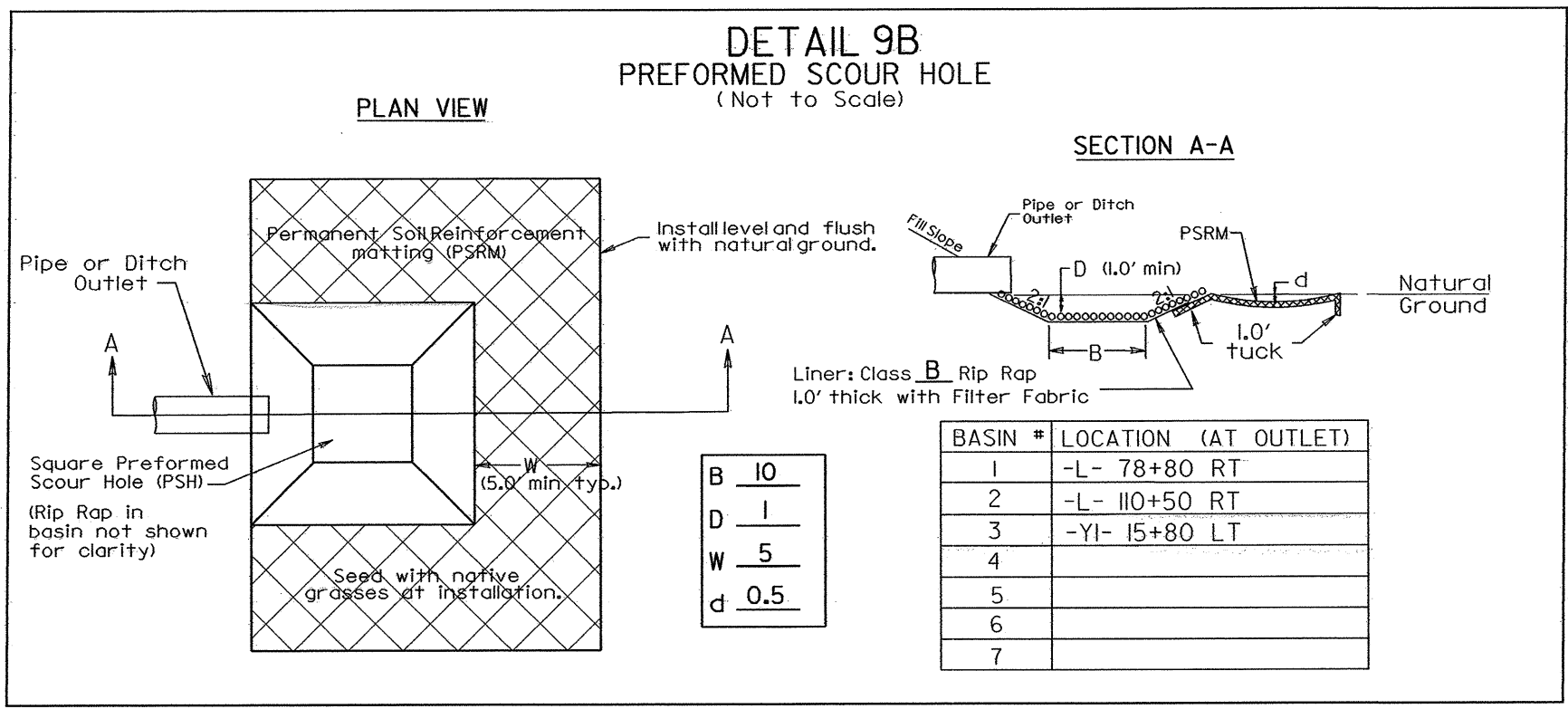
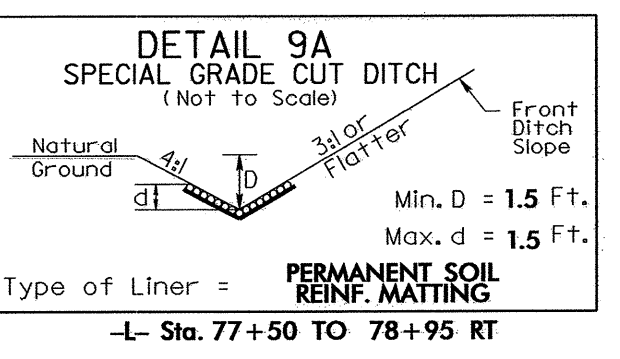
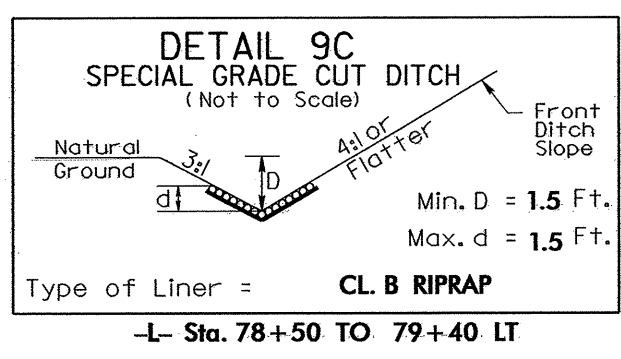
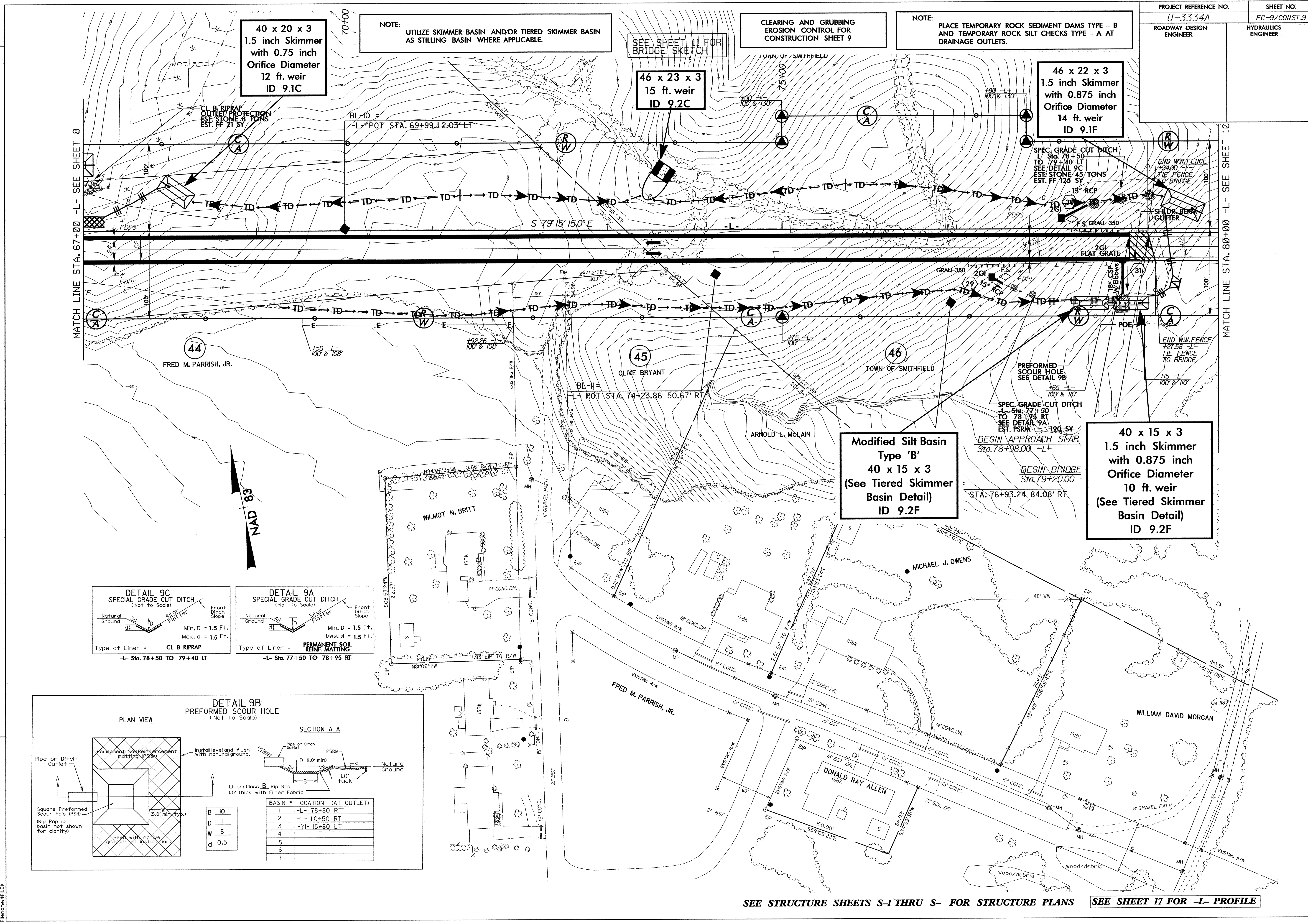
46 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
14 ft. weir
ID 9.1F

Modified Silt Basin
Type 'B'
40 x 15 x 3
(See Tiered Skimmer
Basin Detail)
ID 9.2F

40 x 15 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
10 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 9.2F

MATCH LINE STA. 67+00 -L- SEE SHEET 8

MATCH LINE STA. 80+00 -L- SEE SHEET 10



REVISIONS

NAD 83

SEE STRUCTURE SHEETS S-1 THRU S- FOR STRUCTURE PLANS SEE SHEET 17 FOR -I- PROFILE

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-10/CONST.10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

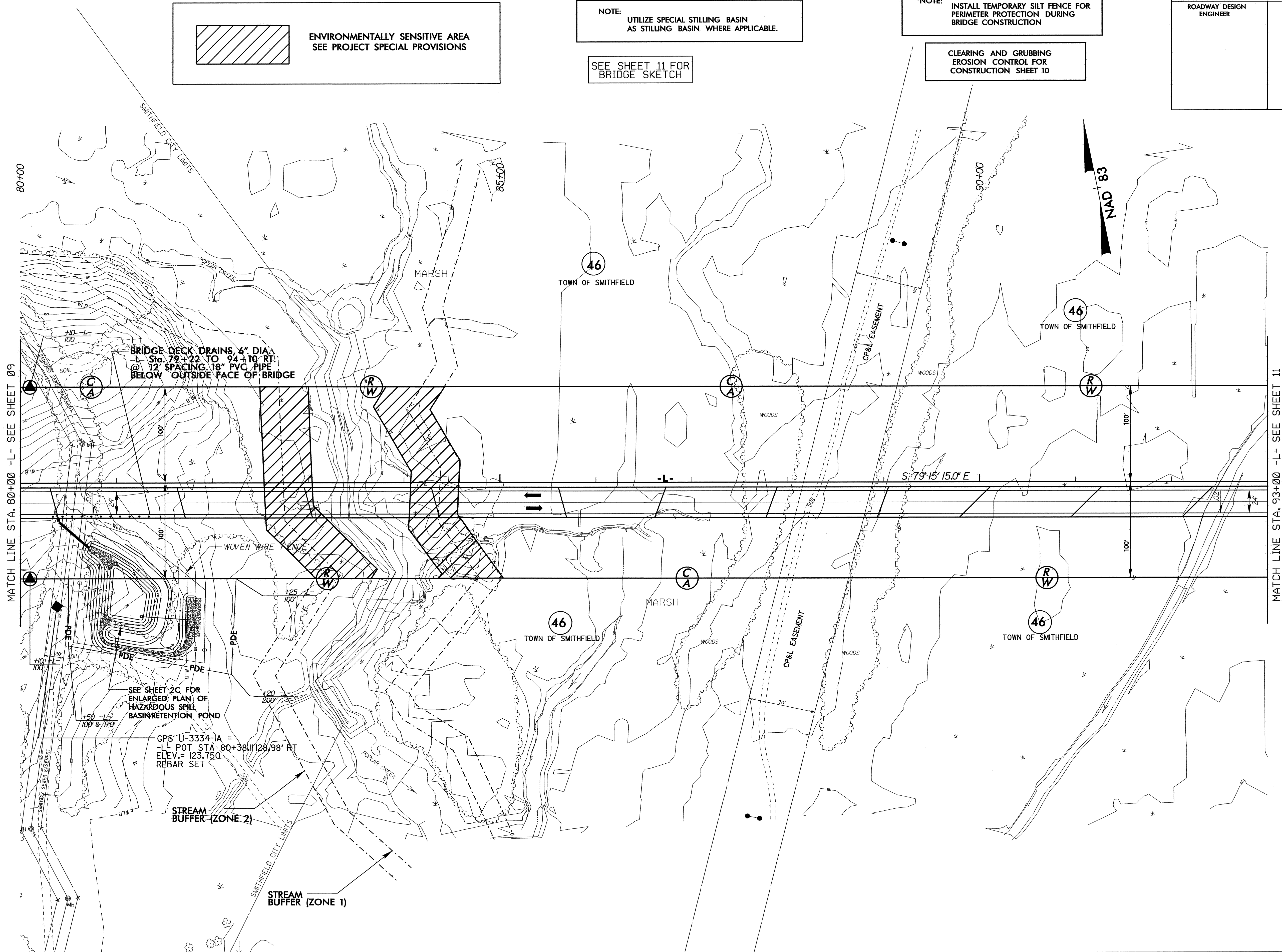
NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.

SEE SHEET 11 FOR BRIDGE SKETCH

NOTE: INSTALL TEMPORARY SILT FENCE FOR PERIMETER PROTECTION DURING BRIDGE CONSTRUCTION

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 10

REVISIONS



MATCH LINE STA. 80+00 -L- SEE SHEET 09

MATCH LINE STA. 93+00 -L- SEE SHEET 11

BRIDGE DECK DRAINS, 4" DIA.
-L- Sta. 79+22 TO 94+10 RT.
@ 12' SPACING 18" PVC PIPE
BELOW OUTSIDE FACE OF BRIDGE

SEE SHEET 2C FOR ENLARGED PLAN OF HAZARDOUS SPILL BASIN RETENTION POND

GPS U-3334-1A =
-L- POT STA. 80+38.1126.98' RT
ELEV. = 123.750
REBAR SET

SEE STRUCTURE SHEETS S-1 THRU S- FOR STRUCTURE PLANS

SEE SHEET 17 FOR -L- PROFILE
SEE SHEET 11 FOR BRIDGE SKETCH

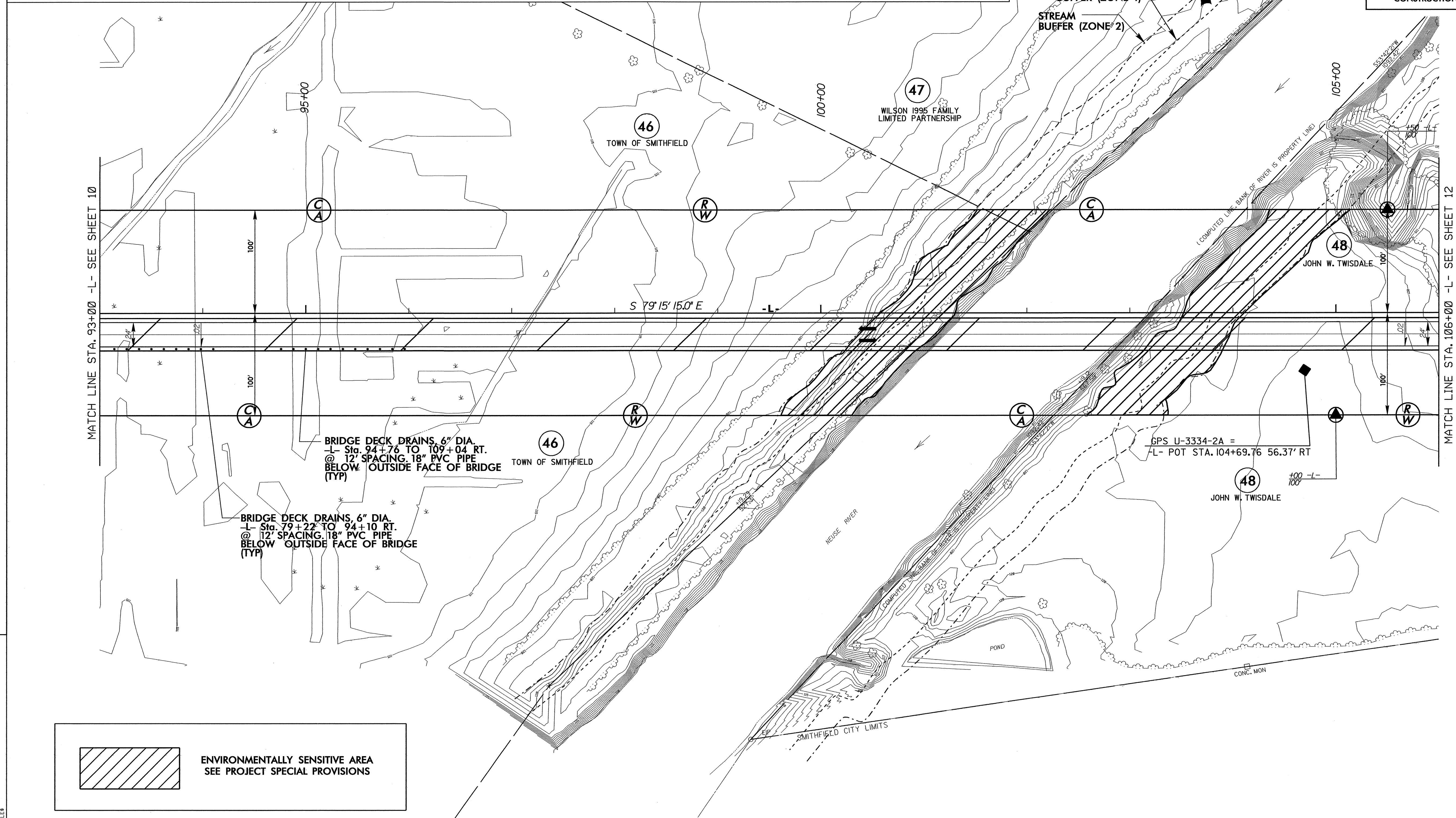
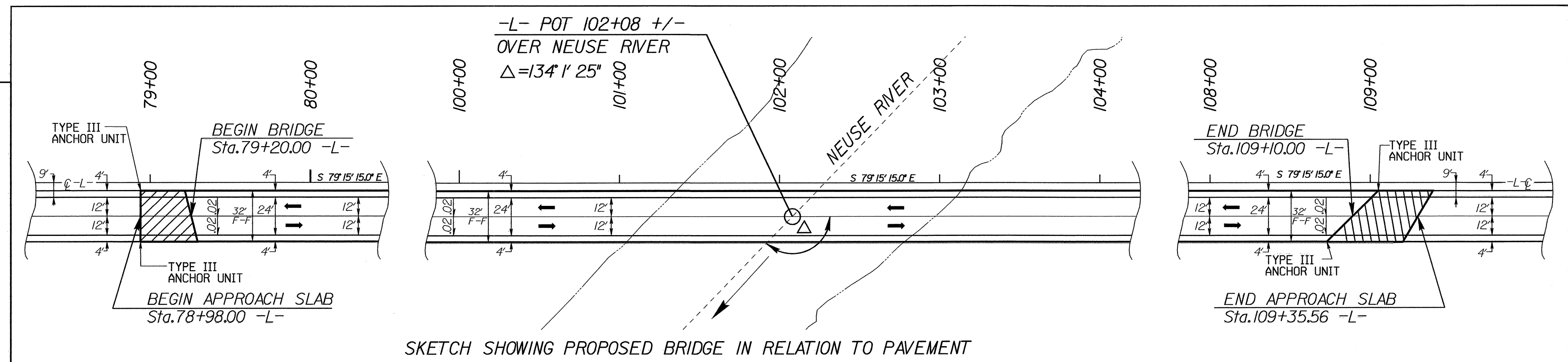
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CAD
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Time: 11:00 AM

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-II/CONST.II
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: INSTALL TEMPORARY SILT FENCE FOR PERIMETER PROTECTION DURING BRIDGE CONSTRUCTION

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 11

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.



 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

REVISIONS

ASCADAS 2014
PCSDADATW
FileNames#FILE#

SEE STRUCTURE SHEETS S-1 THRU S- FOR STRUCTURE PLANS

SEE SHEETS 17 AND 18 FOR -L- PROFILE

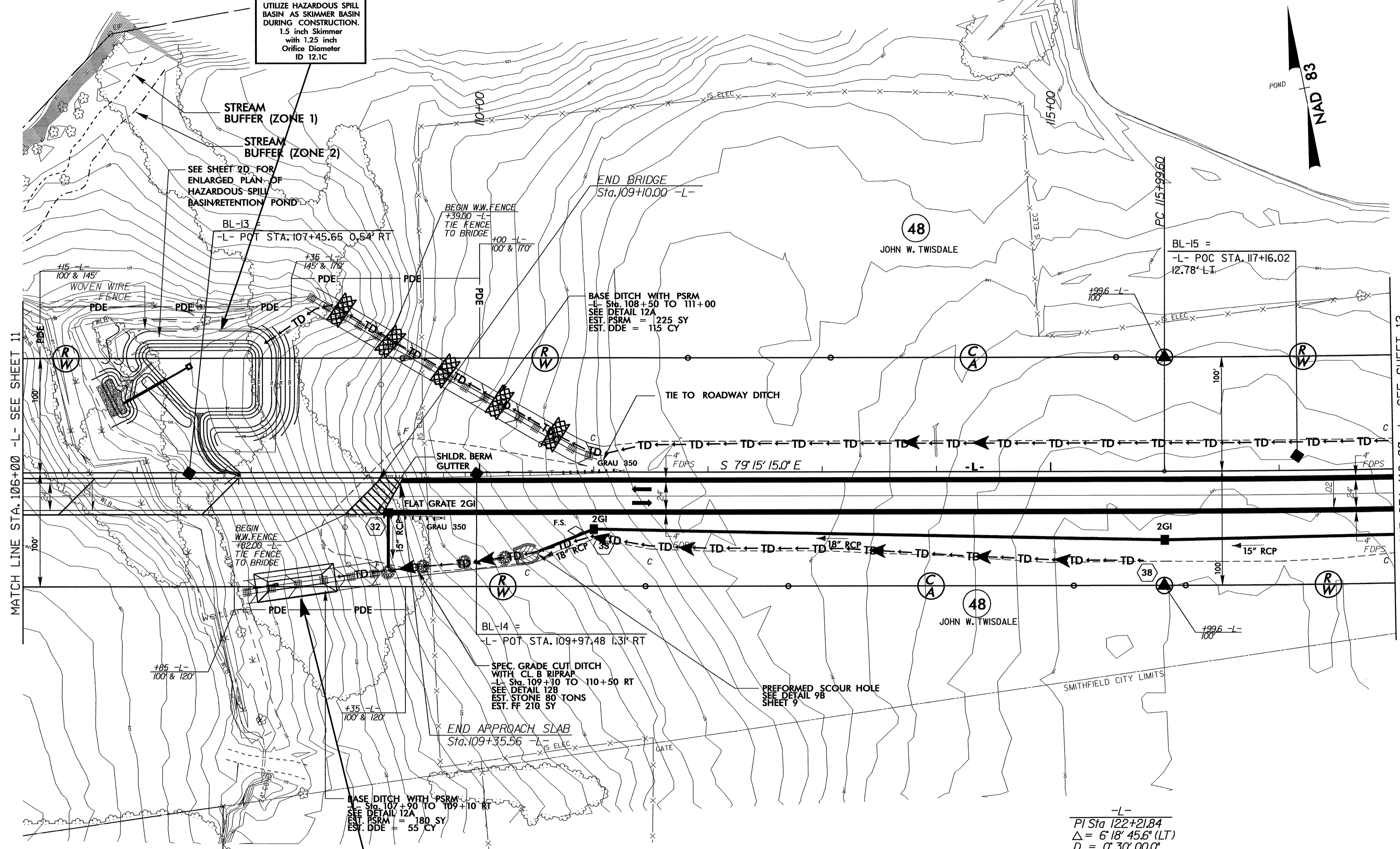
PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-12/CONST.12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SPECIAL STILLING BASIN AND/OR SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 12

UTILIZE HAZARDOUS SPILL BASIN AS SKIMMER BASIN DURING CONSTRUCTION. 1.5 inch Skimmer with 1.25 inch Orifice Diameter ID 12.1C

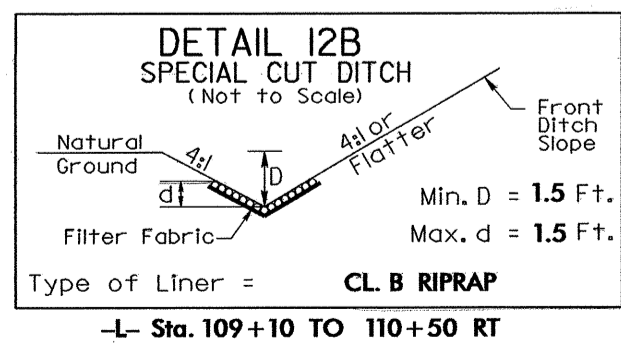
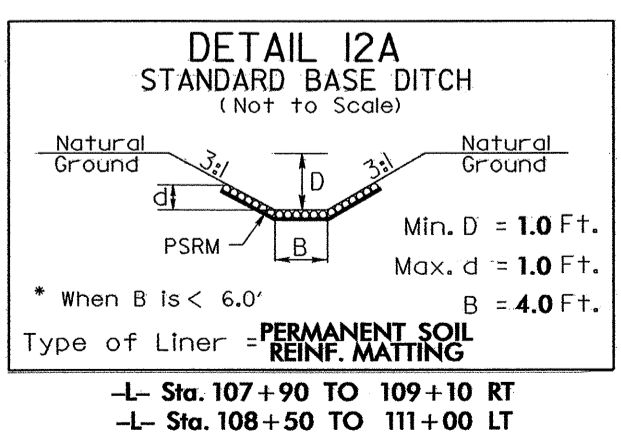


REVISIONS

MATCH LINE STA. 106+00 -L- SEE SHEET 11

MATCH LINE STA. 118+00 -L- SEE SHEET 13

70 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 12.1F



-L-
PI Sta 122+21.84
 $\Delta = 6' 18' 45.6''$ (LT)
D = 0' 30' 00.0"
L = 1,262.53'
T = 631.91'
R = 11,459.16'
SUPER = NC
DS = 50MPH

SEE STRUCTURES SHEET S-1 THRU S- FOR STRUCTURE PLANS

SEE SHEET 18 FOR -L- PROFILE
SEE SHEET 11 FOR BRIDGE SKETCH

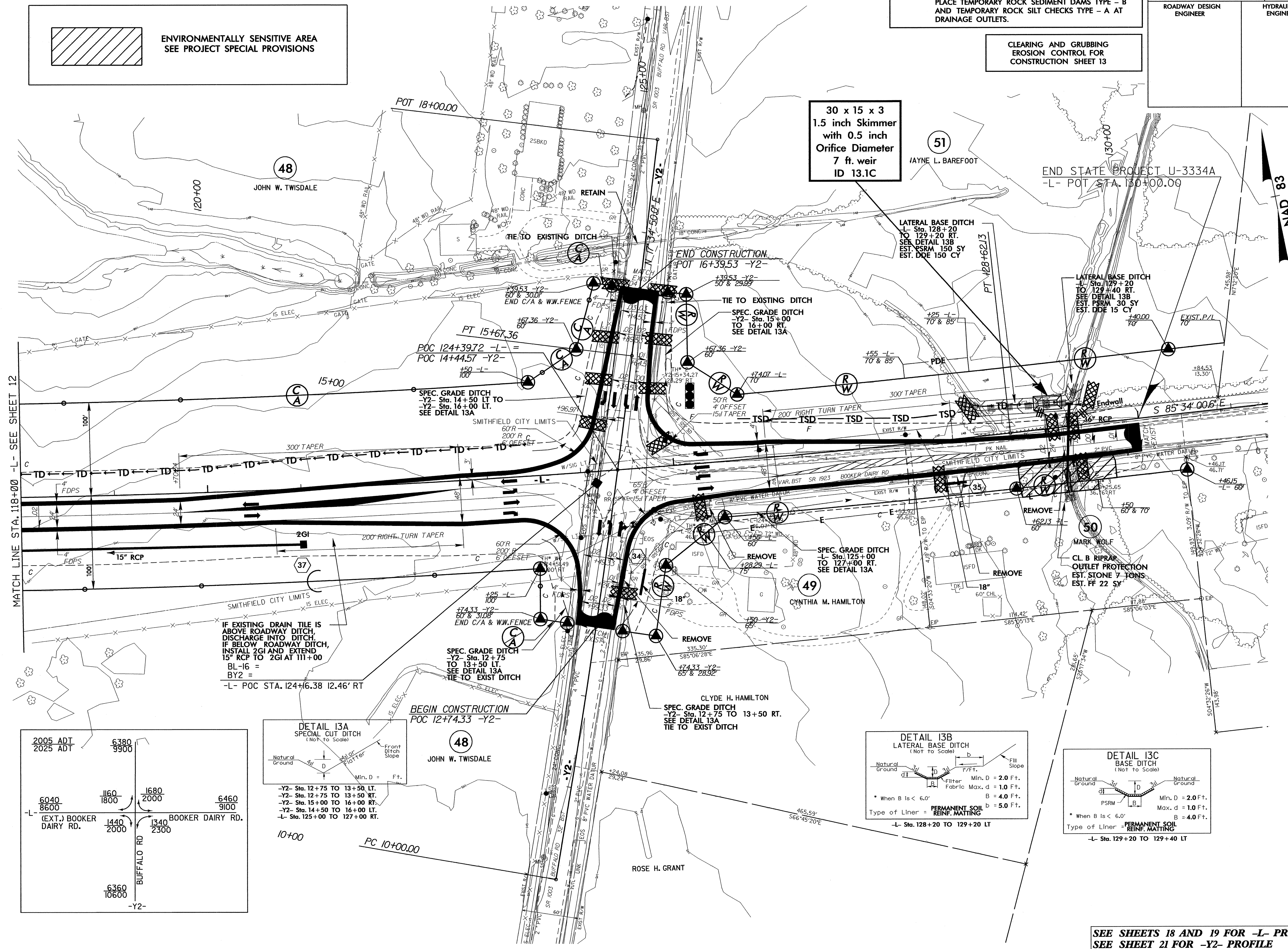
ARCADIS
G&S
FILENAMES#FILES

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

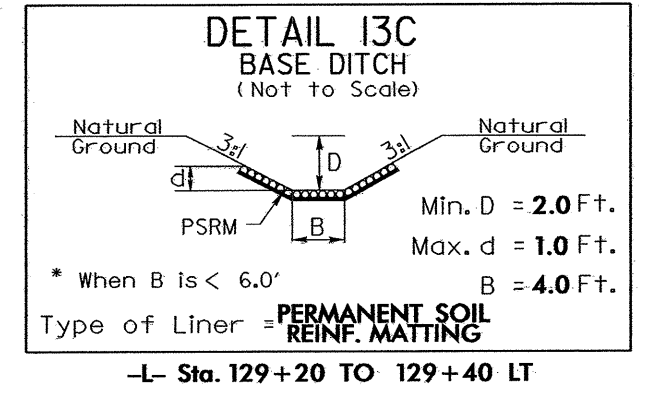
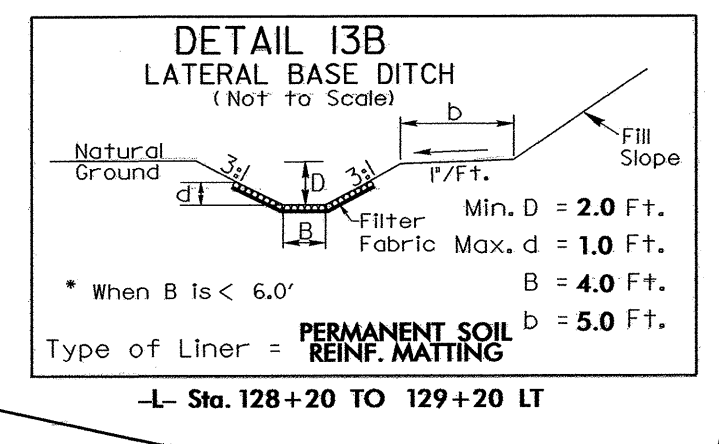
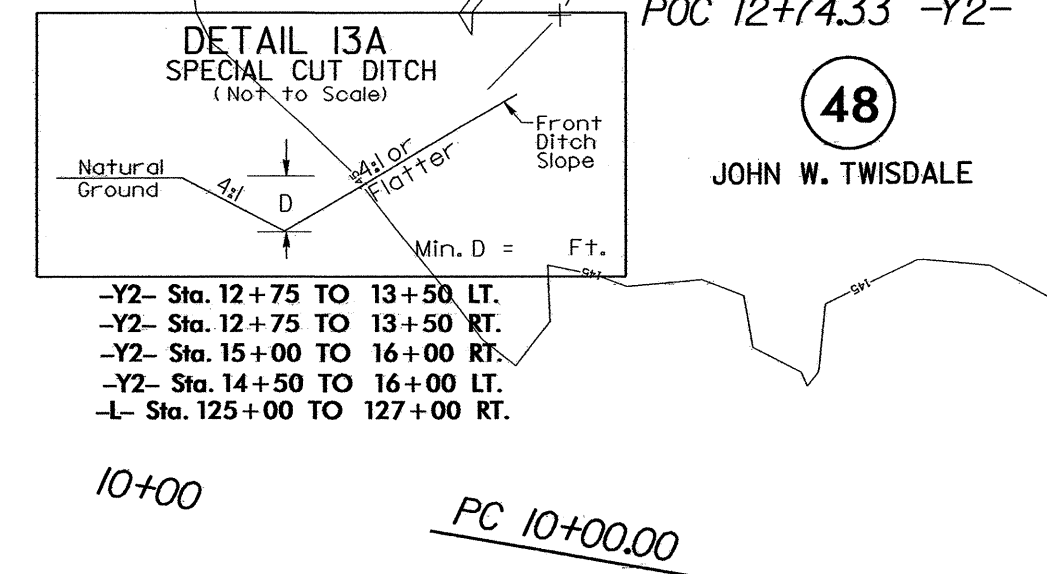
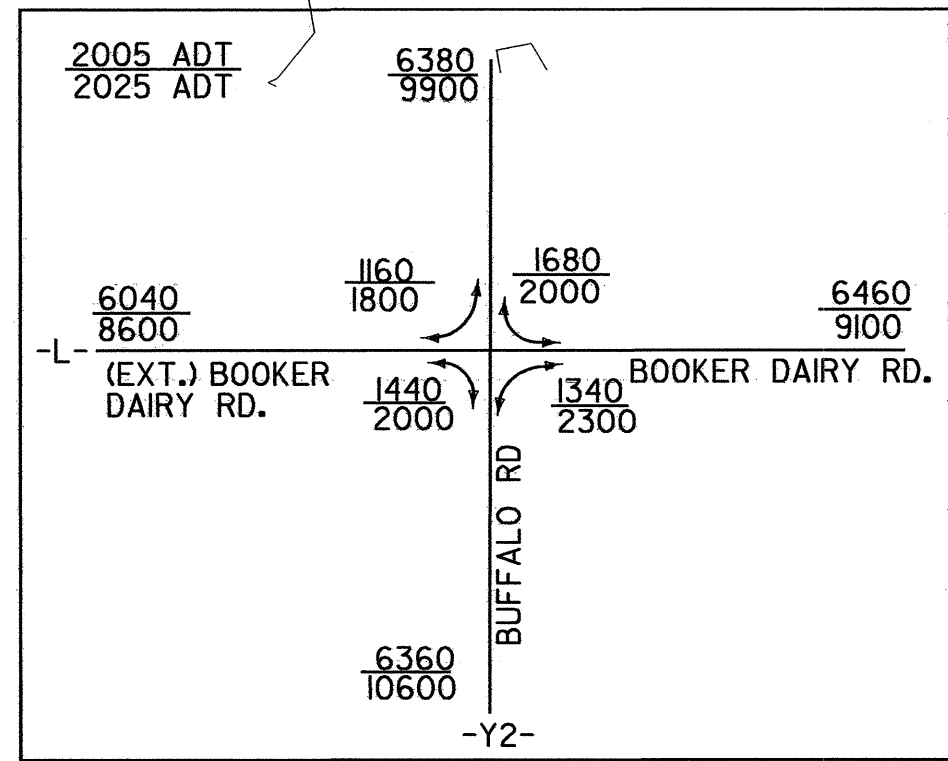
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 13

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

30 x 15 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
7 ft. weir
ID 13.1C



MATCH LINE STA. 118+00 -L- SEE SHEET 12



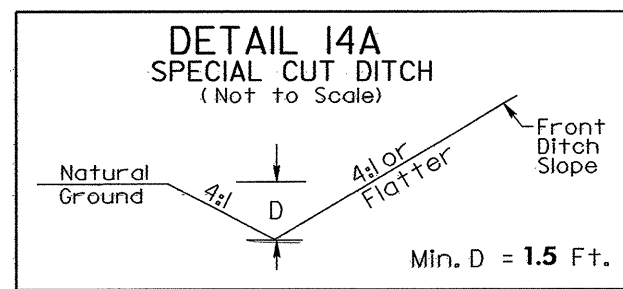
SEE SHEETS 18 AND 19 FOR -L- PROFILE
SEE SHEET 21 FOR -Y2- PROFILE

REVISIONS

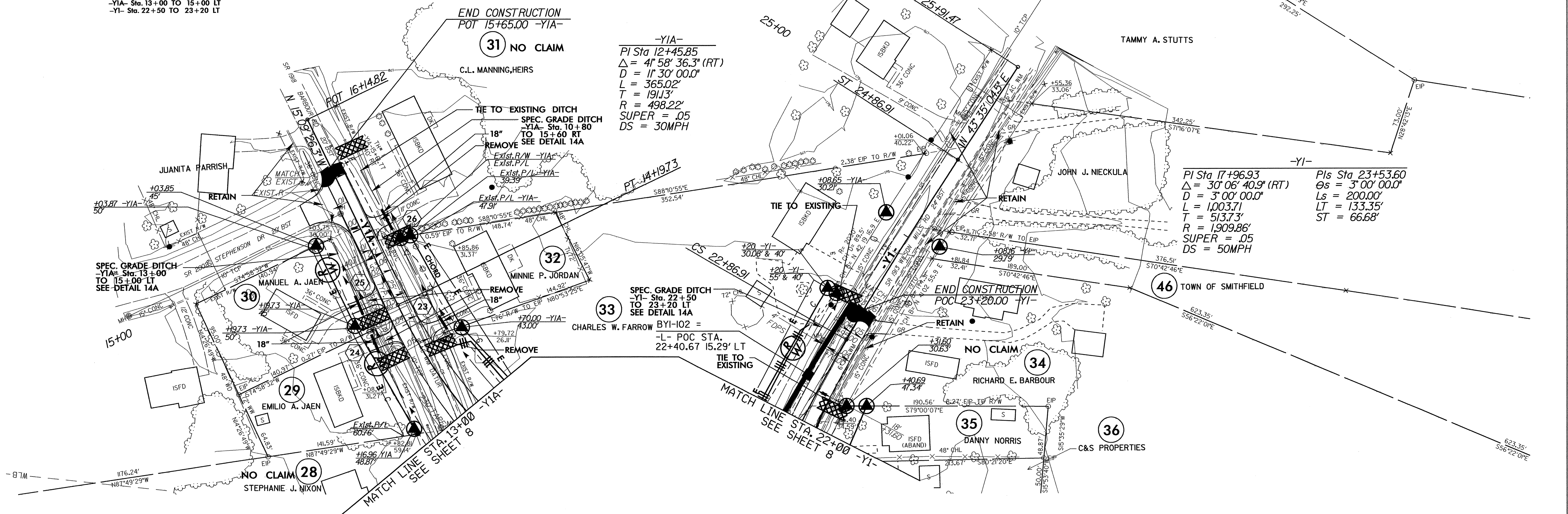
ARCADIS | AECOM
E:\Projects\13\Files

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14



-YIA- Sta. 10+80 TO 15+60 RT
-YIA- Sta. 13+00 TO 15+00 LT
-YI- Sta. 22+50 TO 23+20 LT



-YIA-
PI Sta 12+45.85
 $\Delta = 4' 58' 36.3''$ (RT)
 $D = 1' 30' 00.0''$
 $L = 365.02'$
 $T = 191.13'$
 $R = 498.22'$
SUPER = .05
DS = 30MPH

-YI-
PI Sta 17+96.93
 $\Delta = 30' 06' 40.9''$ (RT)
 $D = 3' 00' 00.0''$
 $L = 1,003.71'$
 $T = 513.73'$
 $R = 1,909.86'$
SUPER = .05
DS = 50MPH

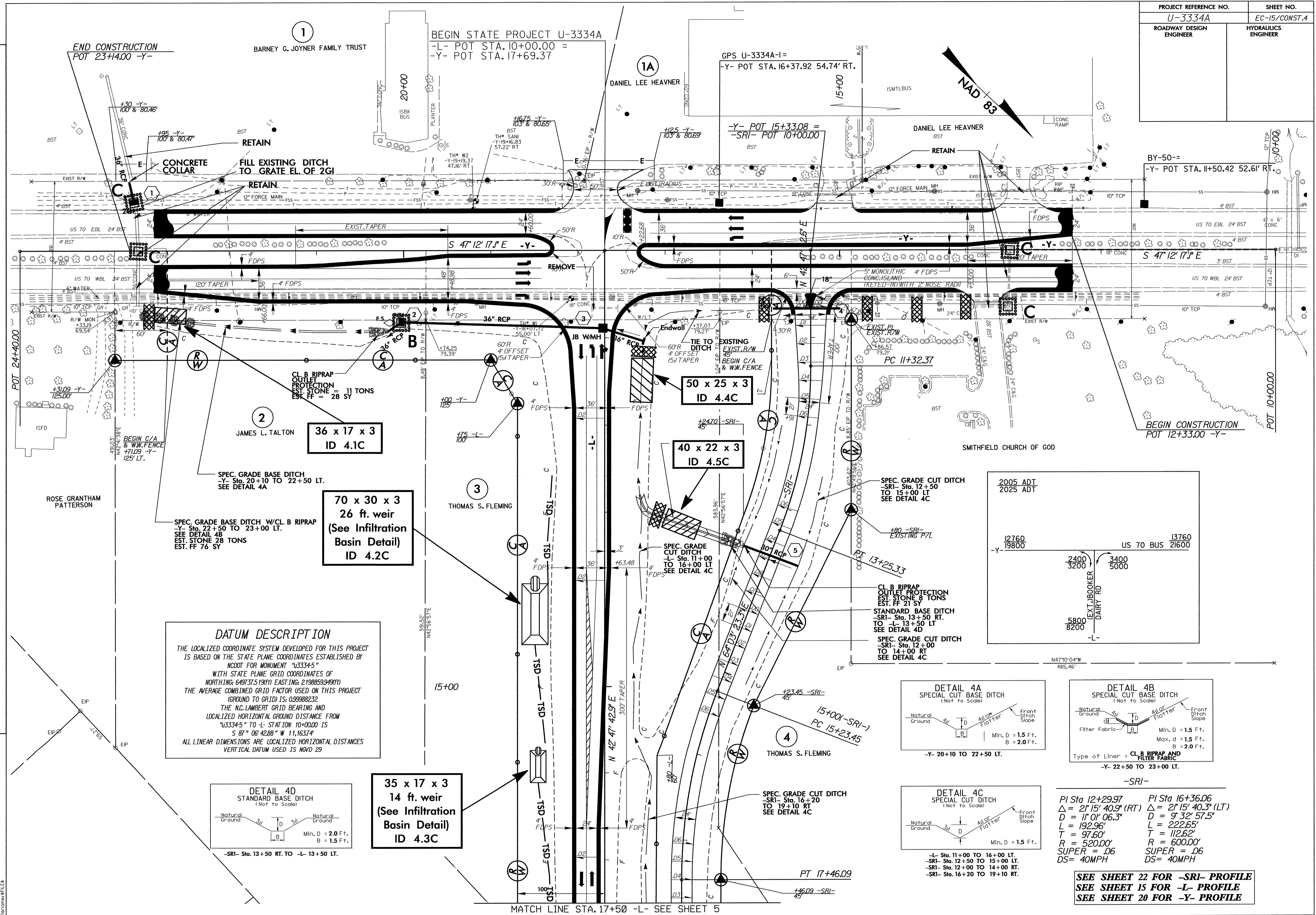
SPEC. GRADE DITCH
-YIA- Sta. 13+00
TO 15+00 LT
SEE-DETAIL 14A

SPEC. GRADE DITCH
-YI- Sta. 22+50
TO 23+20 LT
SEE-DETAIL 14A

REVISIONS

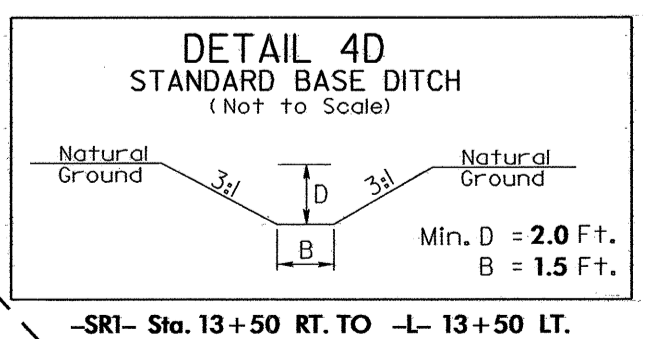
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DATE: 01/11/19

SEE SHEET 20 FOR -YI- PROFILE
SEE SHEET 21 FOR -YIA- PROFILE

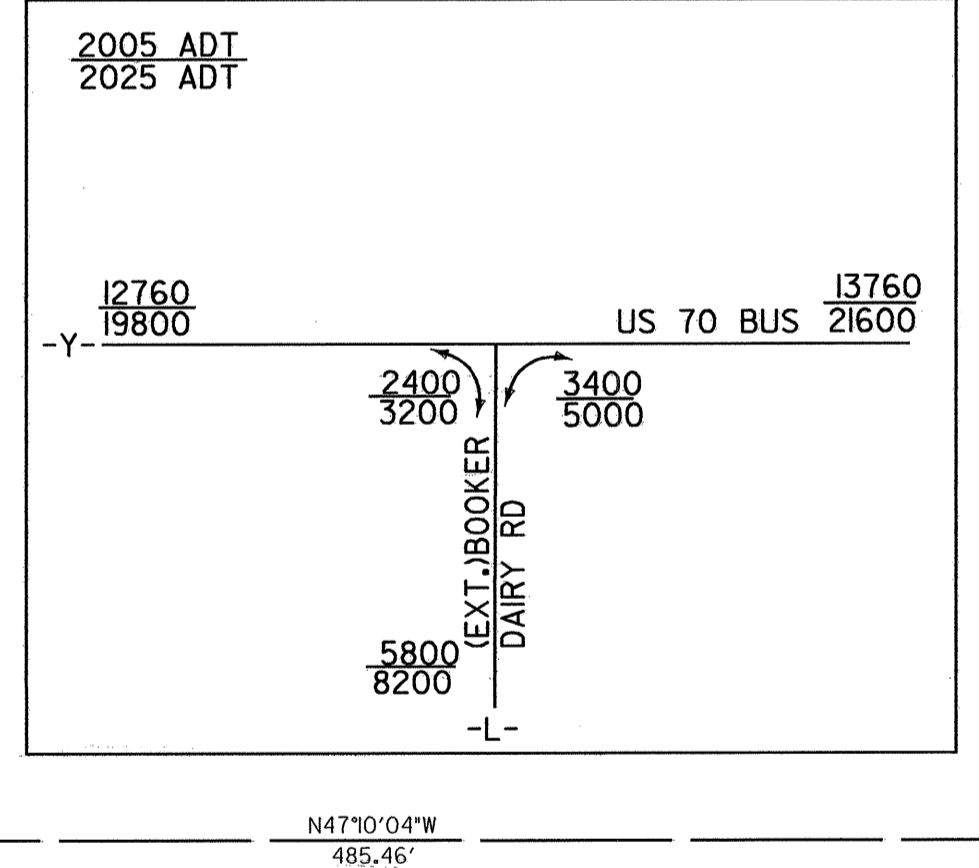
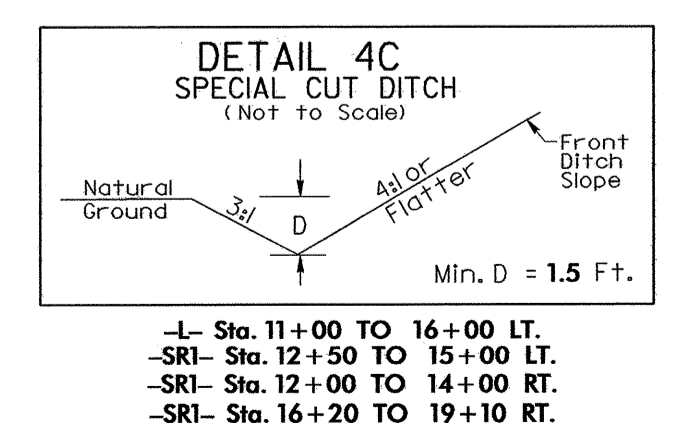
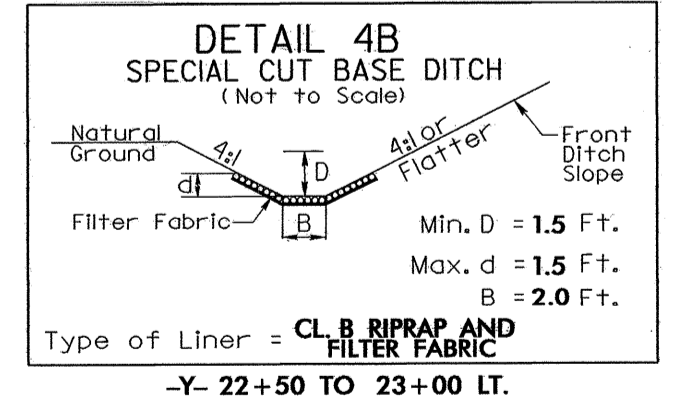
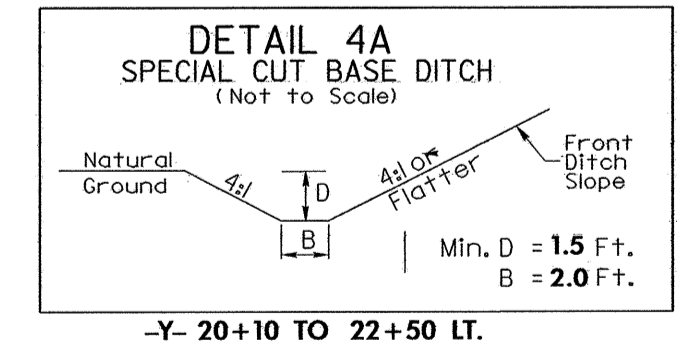


DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDDOT FOR MONUMENT "U3334-5" WITH STATE PLANE GRID COORDINATES OF NORTHING: 649737.519(FT) EASTING: 2198859.949(FT) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988232 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U3334-5" TO -L- STATION 10+00.00 IS S 87° 08' 42.88" W 11,163.74' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29



35 x 17 x 3
14 ft. weir
(See Infiltration Basin Detail)
ID 4.3C



PI Sta 12+29.97
Δ = 21' 15" 40.9" (RT)
D = 11' 01" 06.3"
L = 192.96'
T = 97.60'
R = 520.00'
SUPER = .06
DS = 40MPH

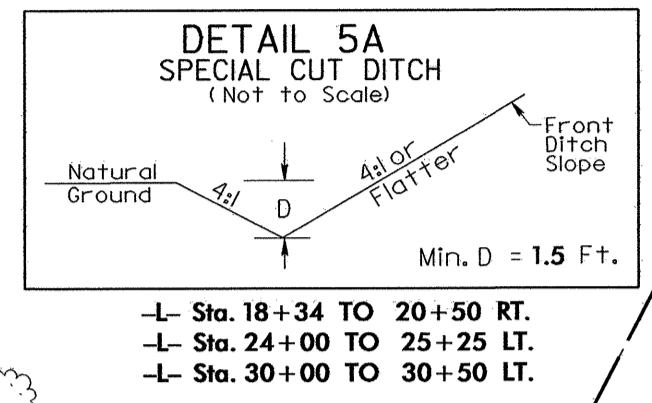
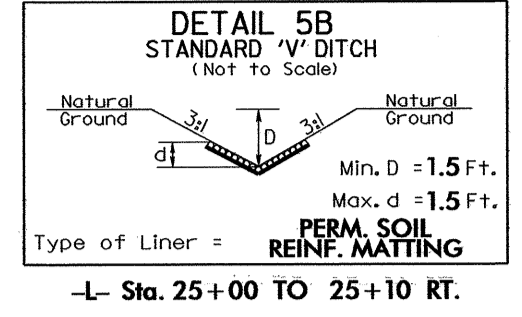
PI Sta 16+36.06
Δ = 21' 15" 40.3" (LT)
D = 9' 32" 57.5"
L = 222.65'
T = 112.62'
R = 600.00'
SUPER = .06
DS = 40MPH

SEE SHEET 22 FOR -SRI- PROFILE
SEE SHEET 15 FOR -L- PROFILE
SEE SHEET 20 FOR -Y- PROFILE

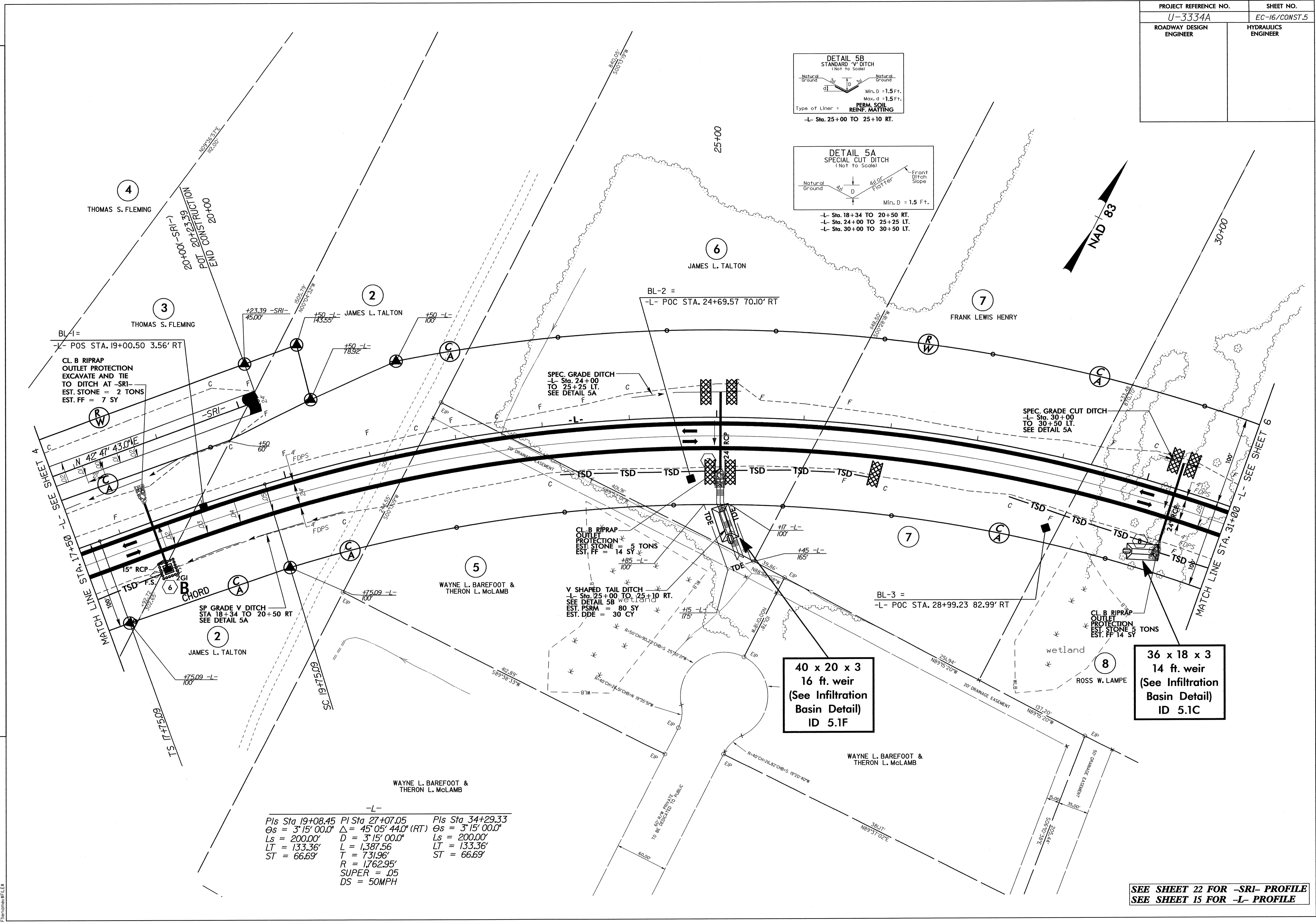
REVISIONS

ARCADIS G&M
Filomeno#FLE#
Times: #Times#

MATCH LINE STA. 17+50 -L- SEE SHEET 5



REVISIONS



BL-1 =
-L- POS STA. 19+00.50 3.56' RT
CL. B RIPRAP
OUTLET PROTECTION
EXCAVATE AND TIE
TO DITCH AT -SRI-
EST. STONE = 2 TONS
EST. FF = 7 SY

SPEC. GRADE DITCH
-L- Sta. 24+00
TO 25+25 LT.
SEE DETAIL 5A

SPEC. GRADE CUT DITCH
-L- Sta. 30+00
TO 30+50 LT.
SEE DETAIL 5A

CL. B RIPRAP
OUTLET PROTECTION
EST. STONE = 5 TONS
EST. FF = 14 SY
V SHAPED TAIL DITCH
-L- Sta. 25+00 TO 25+10 RT.
SEE DETAIL 5B
EST. PSRAM = 80 SY
EST. DDE = 30 CY

40 x 20 x 3
16 ft. weir
(See Infiltration
Basin Detail)
ID 5.1F

36 x 18 x 3
14 ft. weir
(See Infiltration
Basin Detail)
ID 5.1C

-L-	Wayne L. Barefoot & Theron L. McLamb	
Pls Sta. 19+08.45	PI Sta. 27+07.05	Pls Sta. 34+29.33
$\theta_s = 3' 15'' 00.0''$	$\Delta = 45' 05'' 44.0''$ (RT)	$\theta_s = 3' 15'' 00.0''$
$L_s = 200.00'$	$D = 3' 15'' 00.0''$	$L_s = 200.00'$
$LT = 133.36'$	$L = 1,387.56'$	$LT = 133.36'$
$ST = 66.69'$	$T = 731.96'$	$ST = 66.69'$
	$R = 1,762.95'$	
	$SUPER = .05$	
	$DS = 50MPH$	

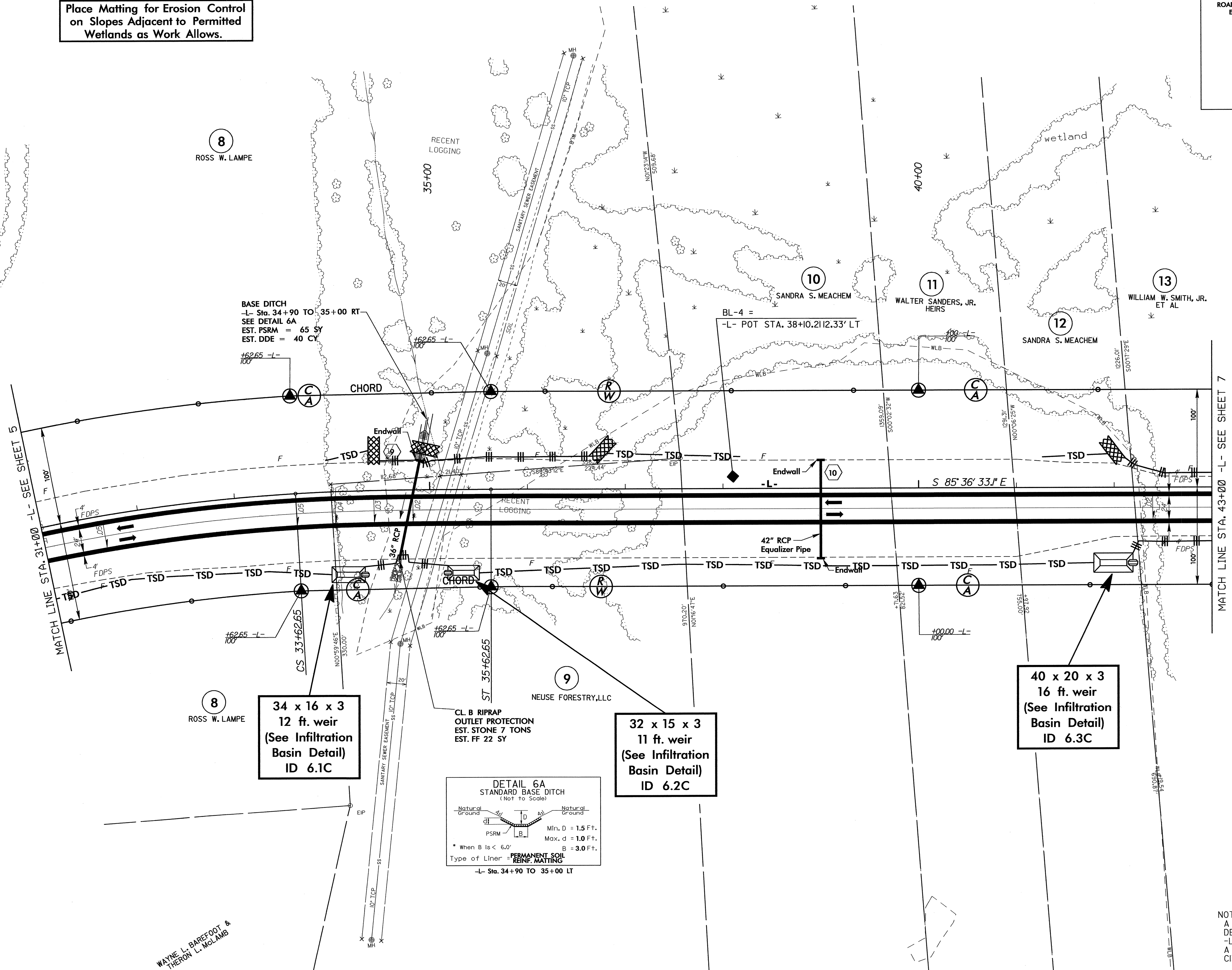
SEE SHEET 22 FOR -SRI- PROFILE
SEE SHEET 15 FOR -L- PROFILE

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-17/CONST.6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

REVISIONS

NAD 83



BASE DITCH
-L- Sta. 34+90 TO 35+00 RT
SEE DETAIL 6A
EST. PSRM = 65 SY
EST. DDE = 40 CY

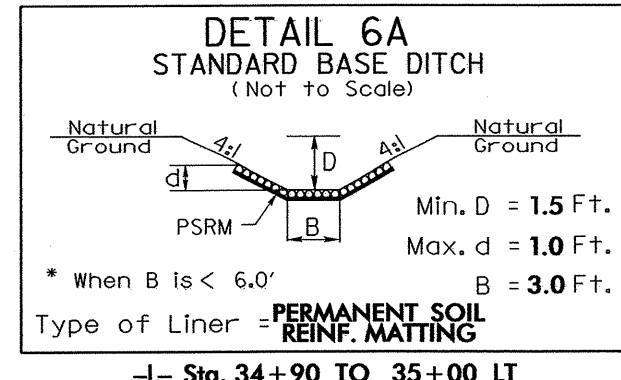
BL-4 =
-L- POT STA. 38+10.21 I2.33' LT

34 x 16 x 3
12 ft. weir
(See Infiltration
Basin Detail)
ID 6.1C

CL B RIPRAP
OUTLET PROTECTION
EST. STONE 7 TONS
EST. FF 22 SY

32 x 15 x 3
11 ft. weir
(See Infiltration
Basin Detail)
ID 6.2C

40 x 20 x 3
16 ft. weir
(See Infiltration
Basin Detail)
ID 6.3C



MATCH LINE STA. 43+00 -L- SEE SHEET 7

NOTE:
A FUTURE ACCESS POINT IS DESIGNATED AT LEFT AND RIGHT OF -L- Sta. 35+90 FOR PLACEMENT OF A ROAD AS DETERMINED BY THE CITY OF SMITHFIELD.

SEE SHEETS 15 AND 16 -L- PROFILE

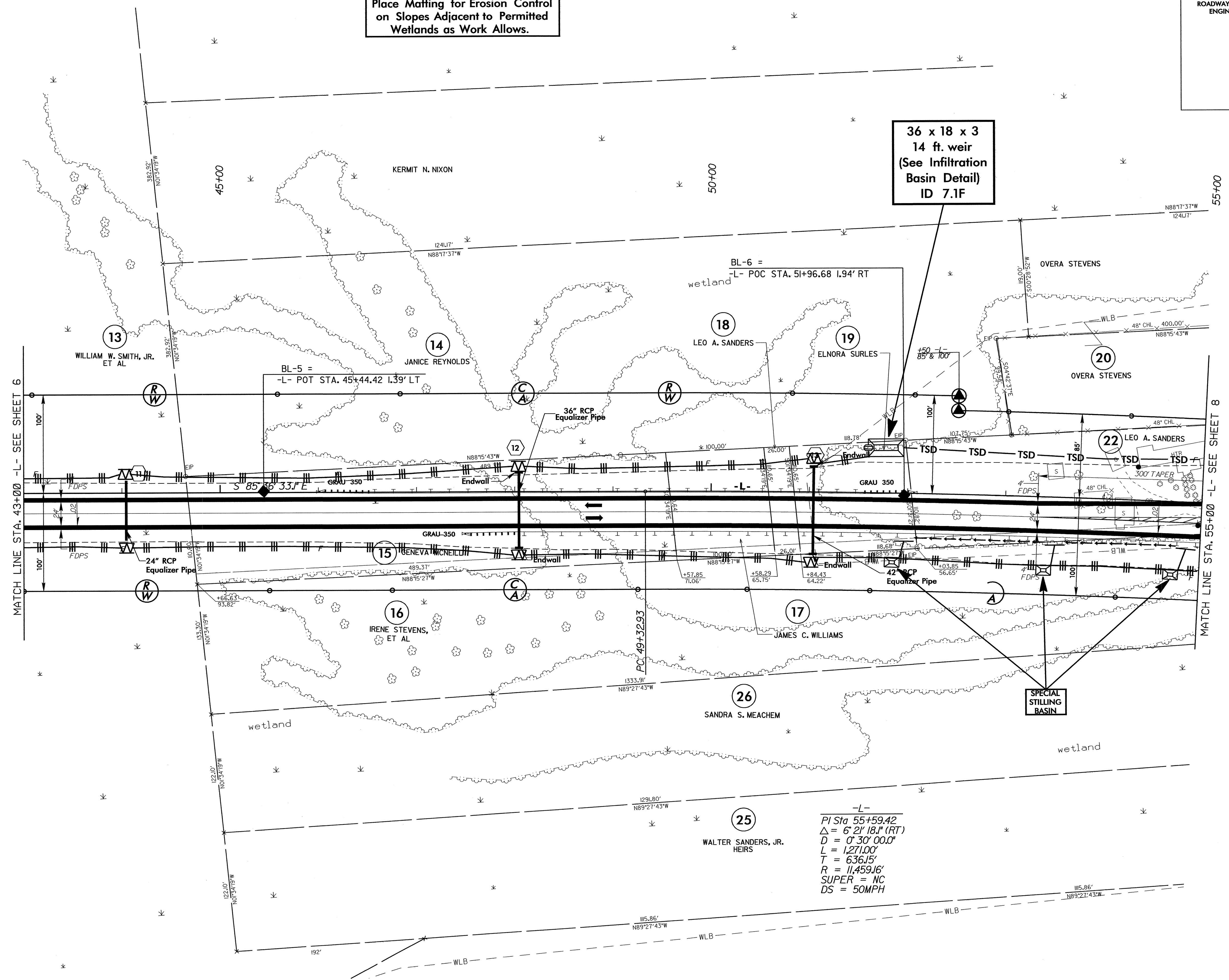
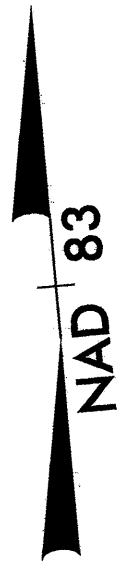
ARCADIS CORP
GEOGRAPHICS
PLANNING+FILE

WAYNE L. BAREFOOT &
THERON L. McCLAMB

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-18/CONST.7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

36 x 18 x 3
14 ft. weir
(See Infiltration Basin Detail)
ID 7.1F



REVISIONS

MATCH LINE STA. 43+00 -L- SEE SHEET 6

MATCH LINE STA. 55+00 -L- SEE SHEET 8

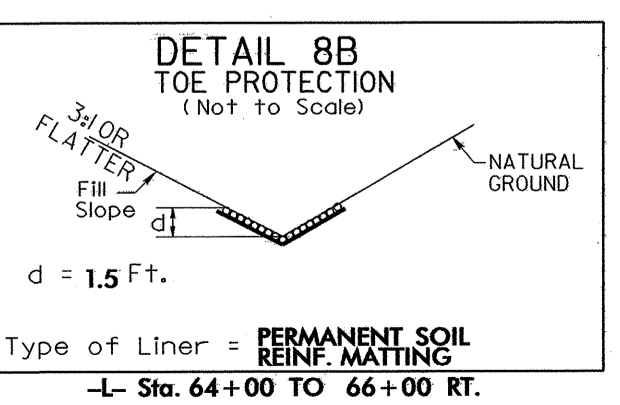
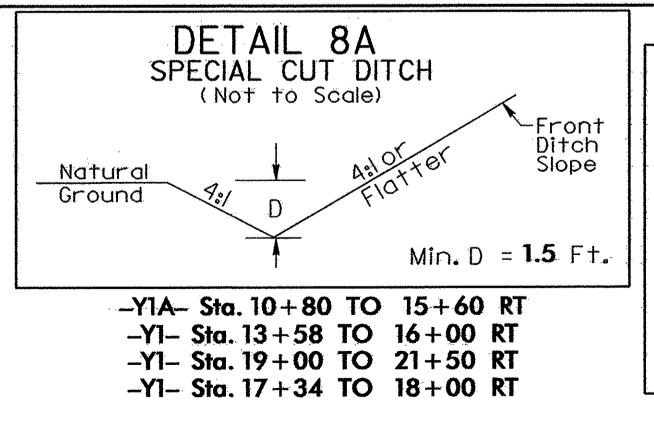
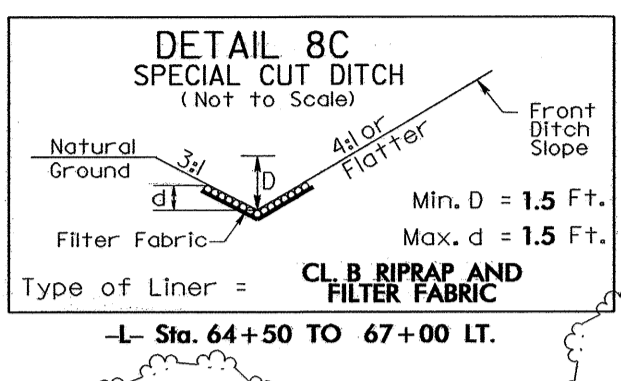
-L-
PI Sta 55+59.42
Δ = 6' 2" 18" (RT)
D = 0' 30' 00.0"
L = 1271.00'
T = 636.15'
R = 11,459.16'
SUPER = NC
DS = 50MPH

SEE SHEET 16 FOR -L- PROFILE

Place Matting for Erosion Control on Slopes Adjacent to Permitted Wetlands as Work Allows.

53 x 26 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
18 ft. weir
ID 8.1F

1050 SF Surface Area
2250 CF Storage
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
14 ft. weir
ID 8.2F



Station	Profile	PI	Δ	Os	Ls	LT	T	R	SUPER	DS
Sta. 11+44.41	-YIB-	11+44.41	1' 48' 45.0" (LT)	1' 16' 23.7"	142.35'	71.18'	4,500.00'	100.00'	NC	>30MPH
Sta. 12+67.96	-YIB-	12+67.96	55' 17' 21.0" (RT)	57' 17' 44.8"	96.50'	52.38'	100.00'	NC	NC	<15MPH
Sta. 12+45.85	-YIA-	12+45.85	4' 58' 36.3" (RT)	11' 30' 00.0"	365.02'	191.13'	498.22'	.05	.05	30MPH
Sta. 17+96.93	-YI-	17+96.93	30' 06' 40.9" (RT)	3' 00' 00.0"	1,003.71'	513.73'	1,909.86'	.04	.04	50MPH

SPECIAL STILLING BASIN
PI Sta. 55+59.42
Δ = 6' 21' 18.1" (RT)
D = 0' 30' 00.0"
L = 1,271.00'
T = 636.15'
R = 11,459.16'
SUPER = NC
DS = 50MPH

35 x 10 x 3
ID 8.3F

SEE SHEETS 16 AND 17 FOR -L- PROFILE
SEE SHEET 20 FOR -YI- PROFILE
SEE SHEET 21 FOR -YIA- PROFILE

REVISIONS

ARCADIS | TMN
Timmer | 6/11/24
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NOTE: UTILIZE SKIMMER BASIN AND/OR TIERED SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

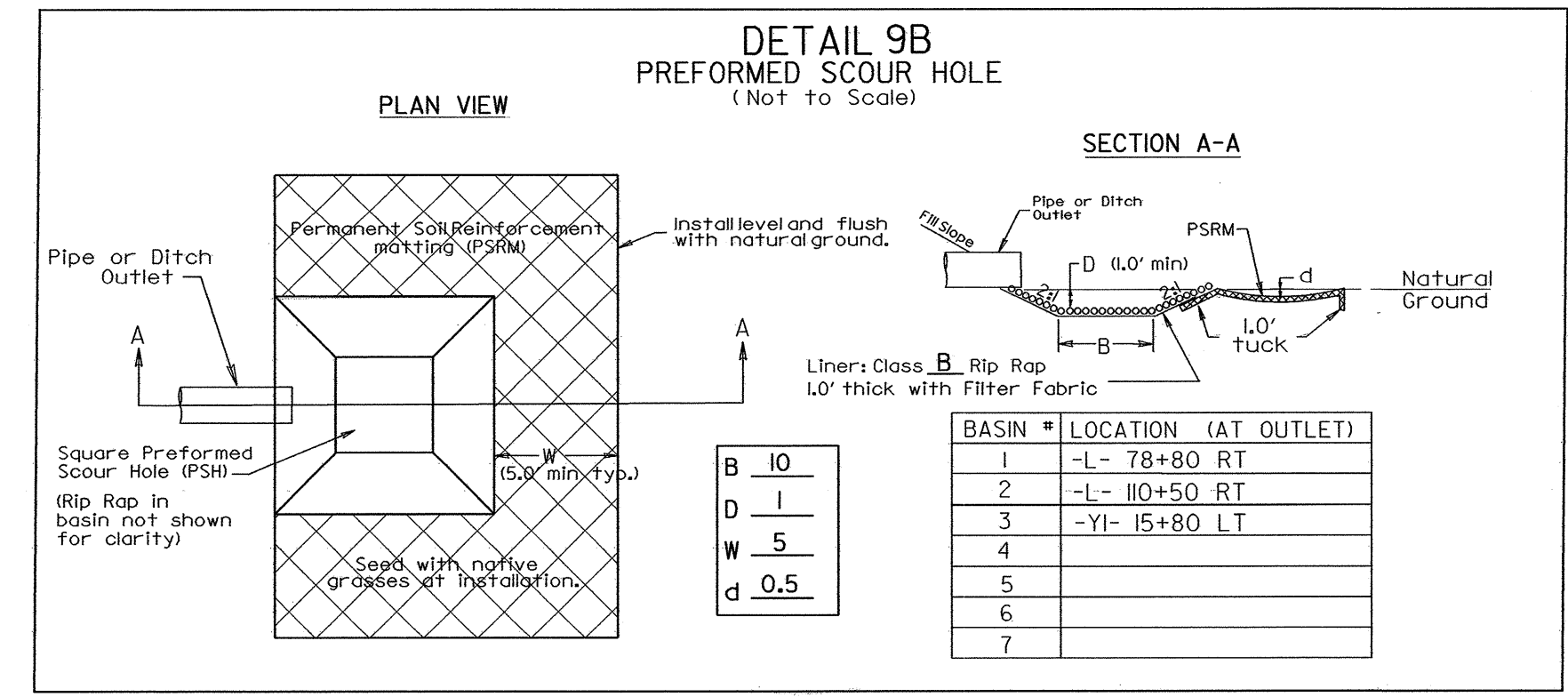
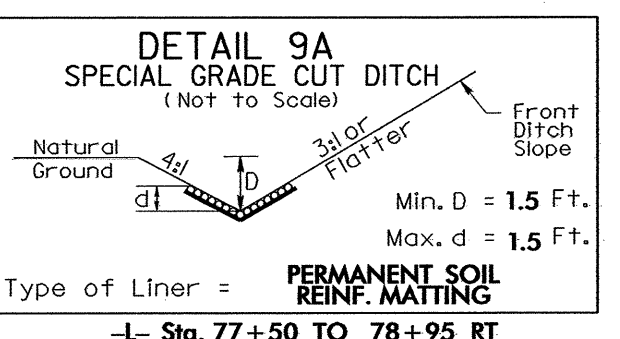
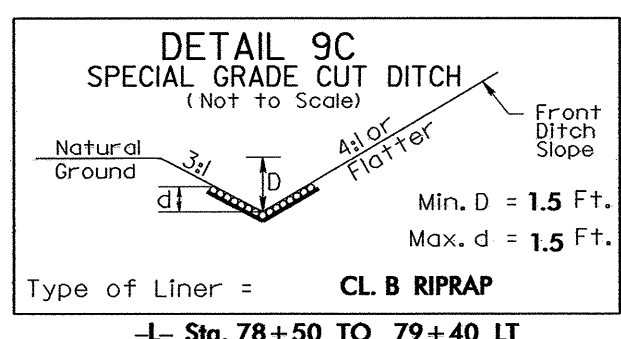
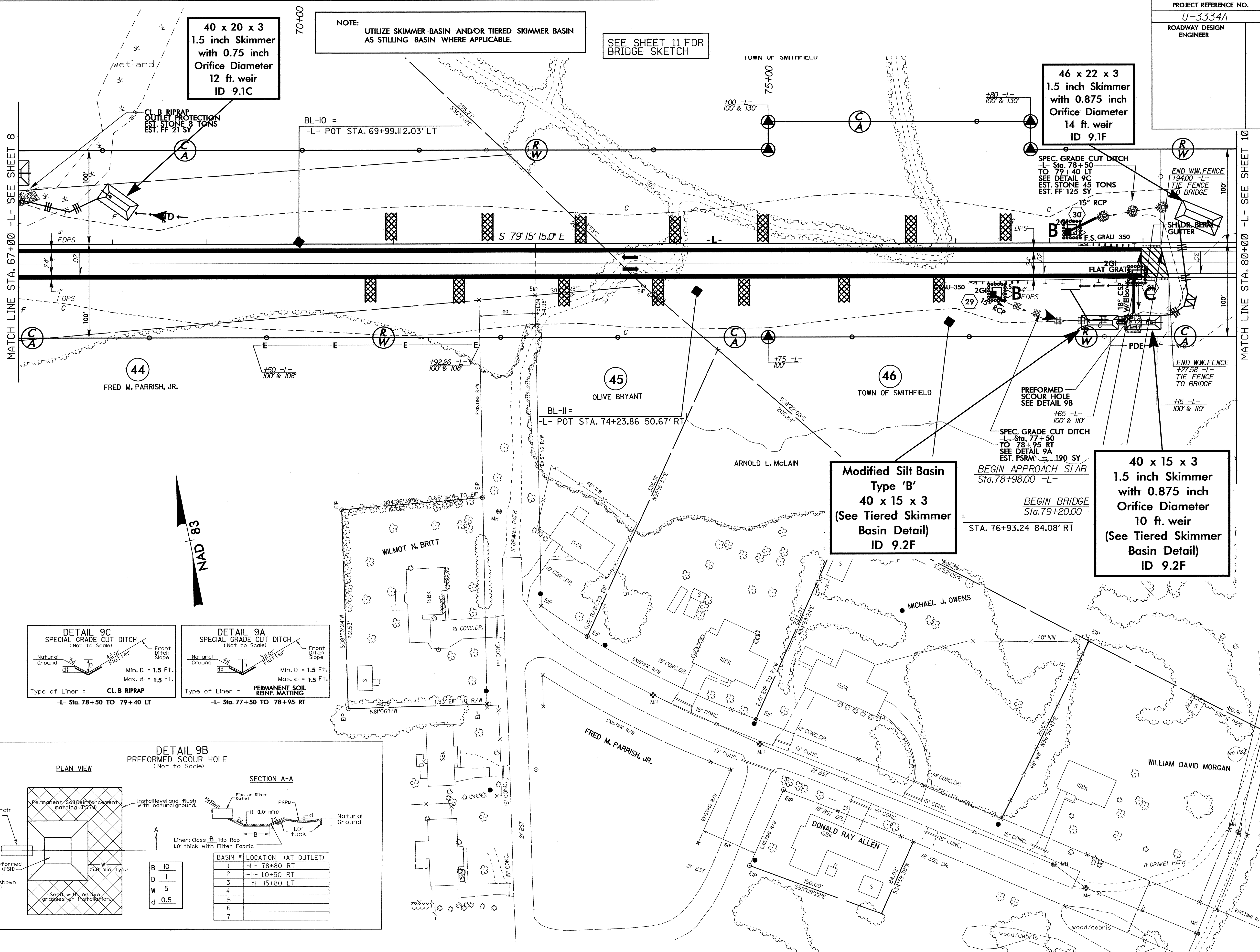
SEE SHEET 11 FOR BRIDGE SKETCH

40 x 20 x 3
1.5 inch Skimmer
with 0.75 inch
Orifice Diameter
12 ft. weir
ID 9.1C

46 x 22 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
14 ft. weir
ID 9.1F

40 x 15 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
10 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 9.2F

Modified Silt Basin
Type 'B'
40 x 15 x 3
(See Tiered Skimmer
Basin Detail)
ID 9.2F



REVISIONS

ARCADIS O&M
TAMES & TAMES
Files: 03/15/18

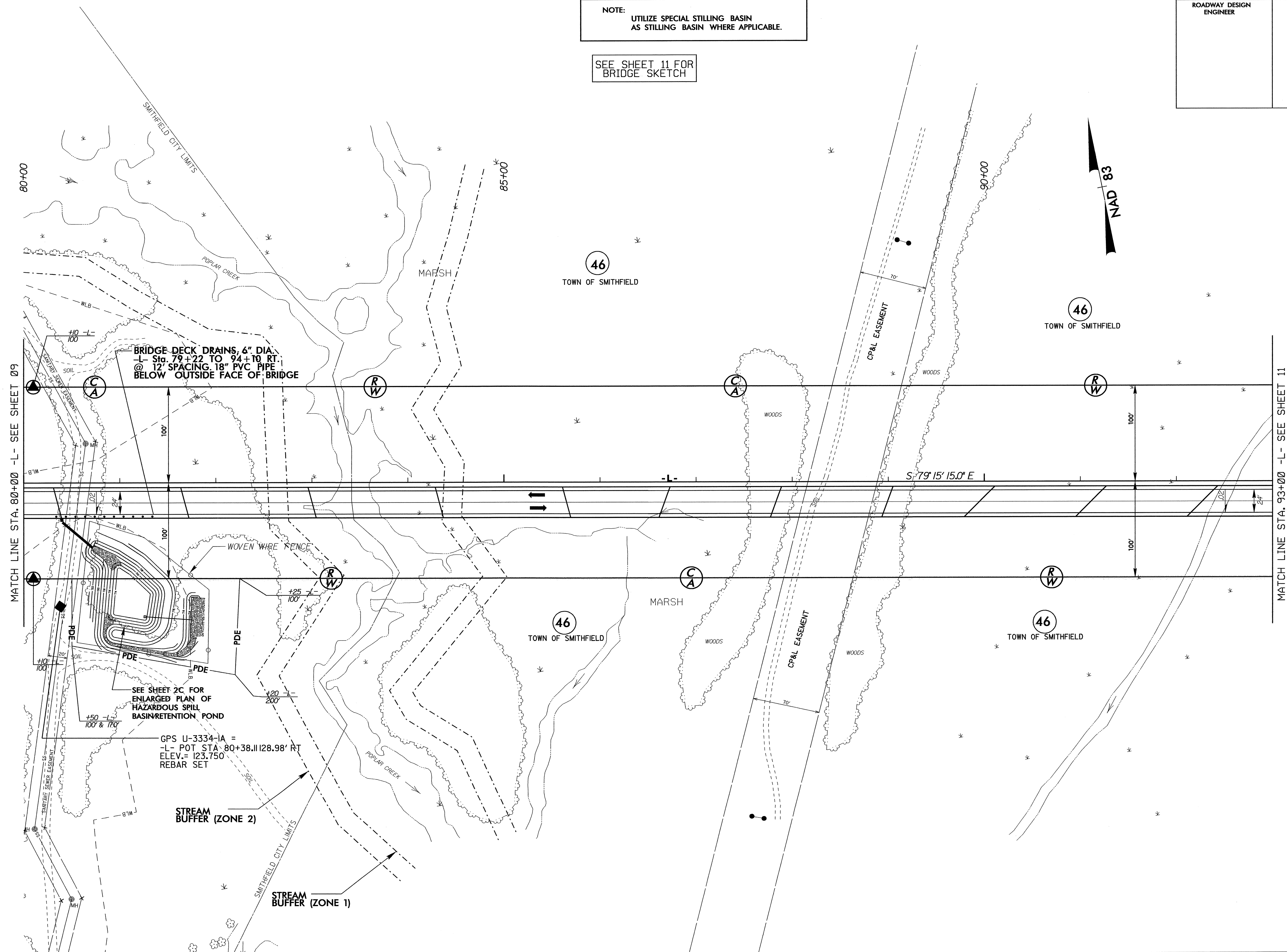
SEE STRUCTURE SHEETS S-1 THRU S- FOR STRUCTURE PLANS SEE SHEET 17 FOR -L- PROFILE

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-21/CONST.10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SPECIAL STILLING BASIN
AS STILLING BASIN WHERE APPLICABLE.

SEE SHEET 11 FOR
BRIDGE SKETCH

REVISIONS

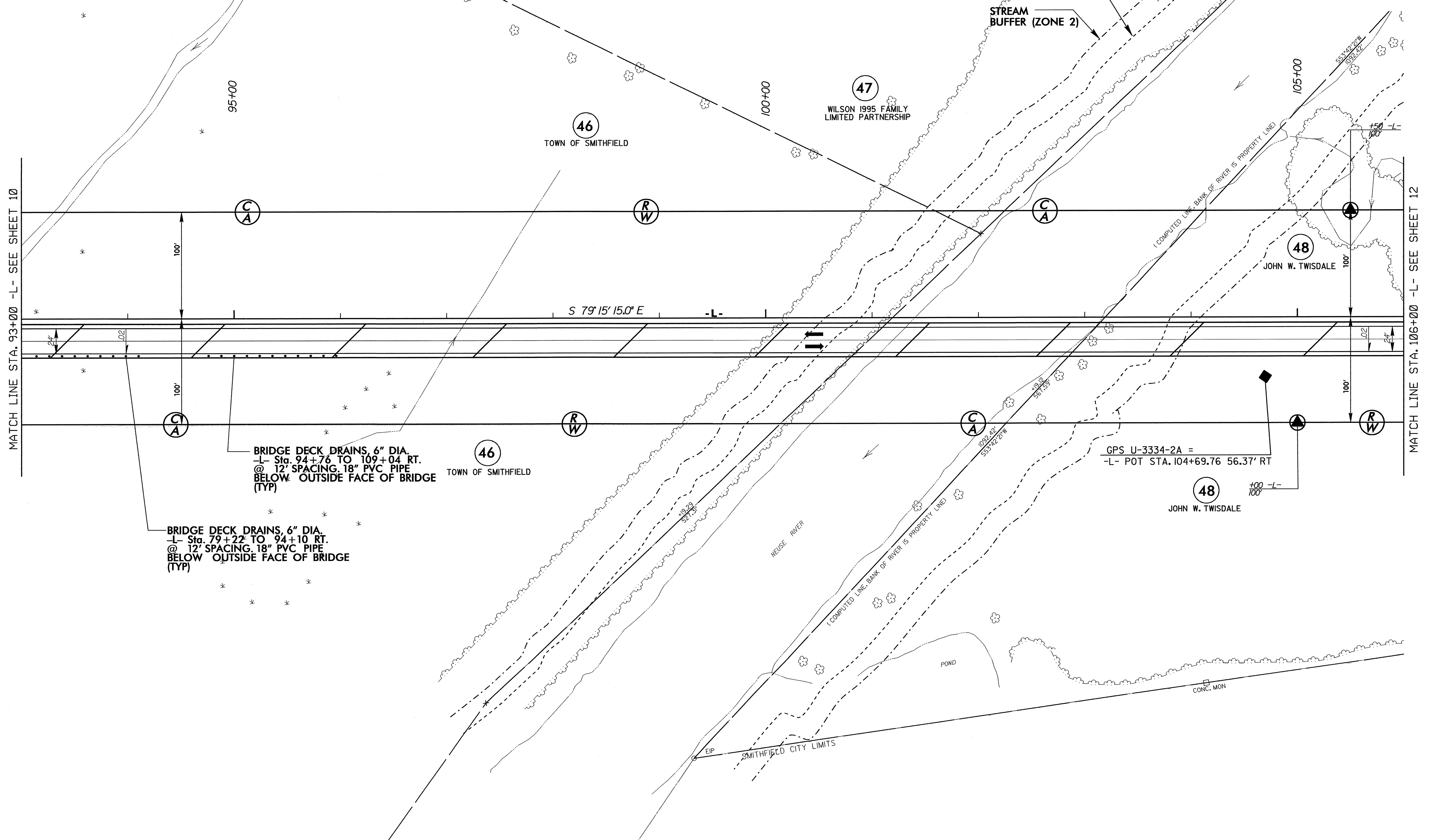
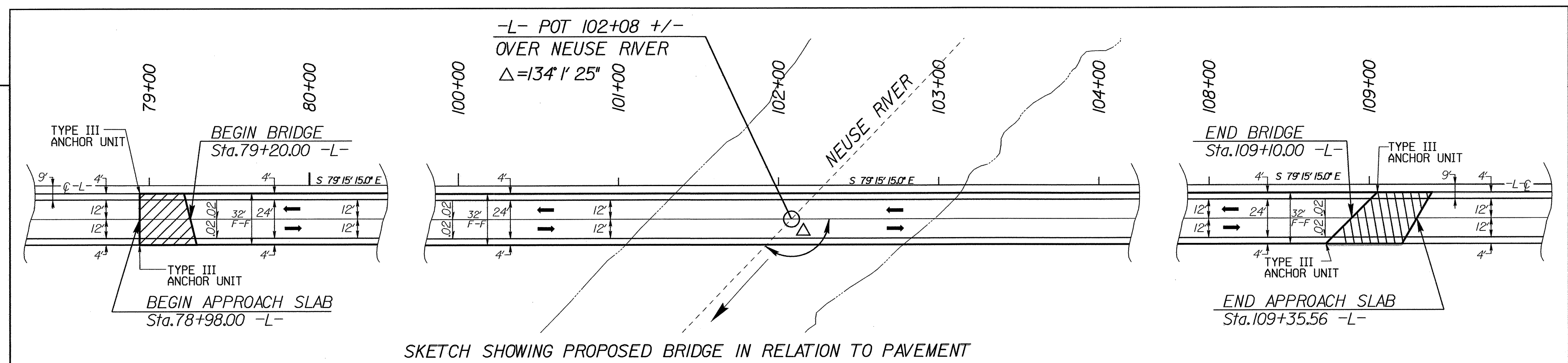


SEE STRUCTURE SHEETS S-1 THRU S- FOR STRUCTURE PLANS
SEE SHEET 17 FOR -L- PROFILE
SEE SHEET 11 FOR BRIDGE SKETCH

ARCADIS GEM
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11/11/11 11:11 AM

PROJECT REFERENCE NO. U-3334A	SHEET NO. EC-22/CONST.II
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.



BRIDGE DECK DRAINS, 6\"/>

BRIDGE DECK DRAINS, 6\"/>

SEE STRUCTURE SHEETS S-1 THRU S- FOR STRUCTURE PLANS SEE SHEETS 17 AND 18 FOR -L- PROFILE

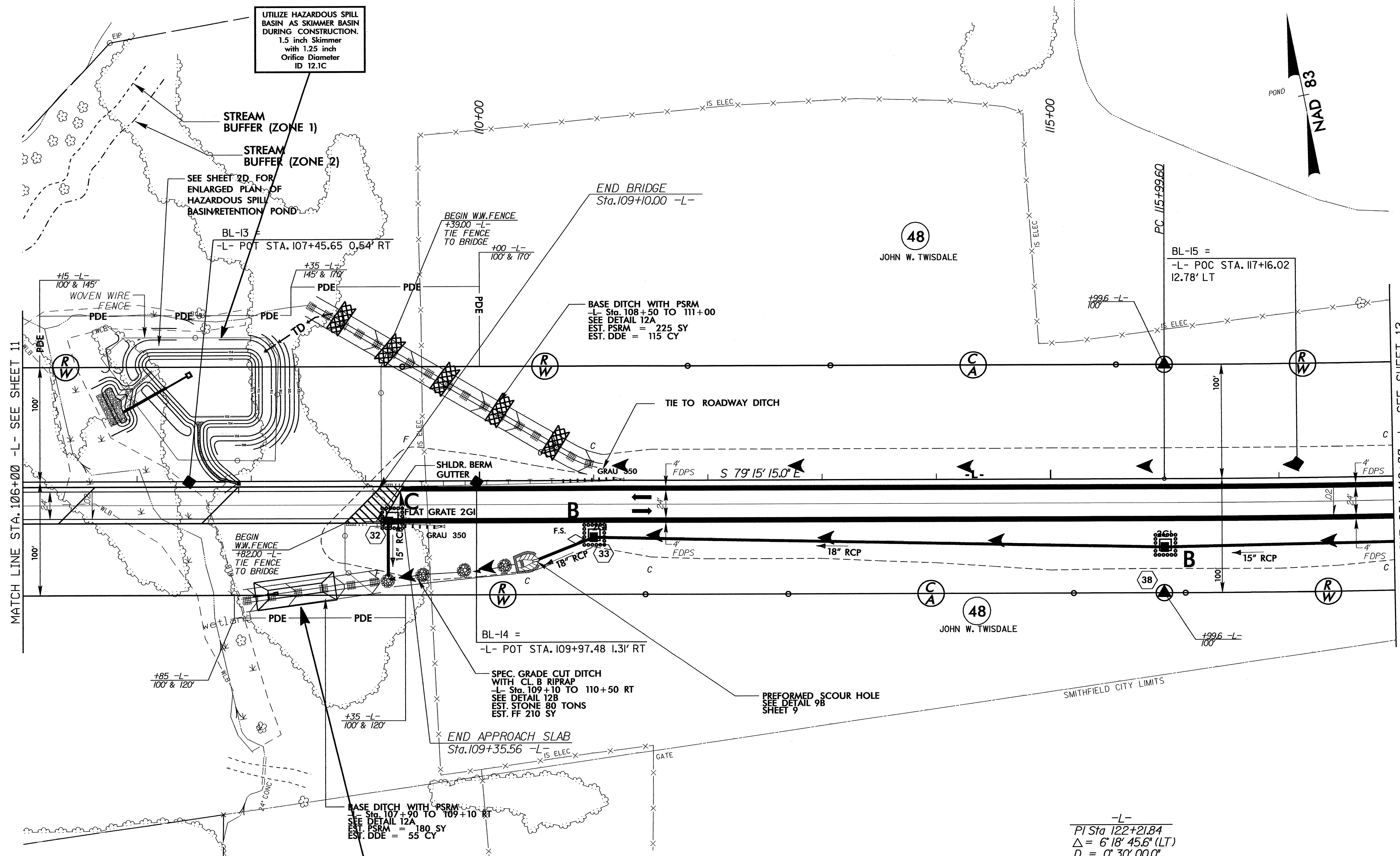
REVISIONS

ARCADIS URM
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Time: 6:11PM

PROJECT REFERENCE NO.	SHEET NO.
U-3334A	EC-23/CONST.12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE SPECIAL STILLING BASIN AND/OR SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

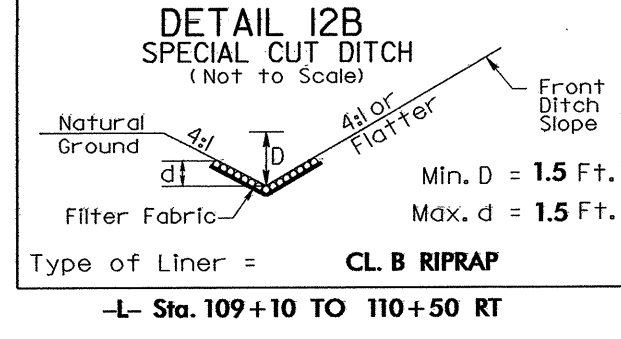
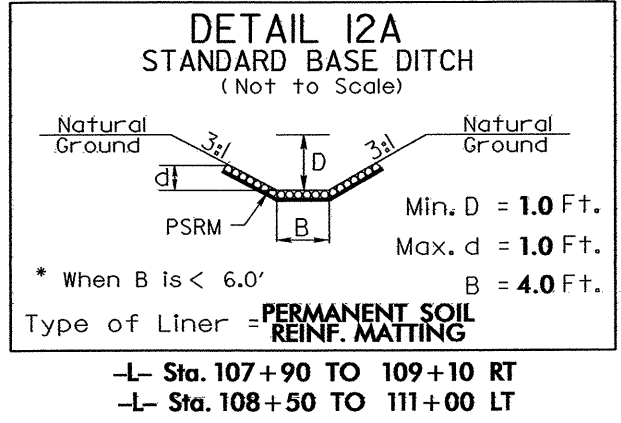
UTILIZE HAZARDOUS SPILL BASIN AS SKIMMER BASIN DURING CONSTRUCTION.
1.5 inch Skimmer with 1.25 inch Orifice Diameter ID 12.1C



MATCH LINE STA. 106+00 -L- SEE SHEET 11

MATCH LINE STA. 118+00 -L- SEE SHEET 13

70 x 25 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
17 ft. weir
ID 12.1F



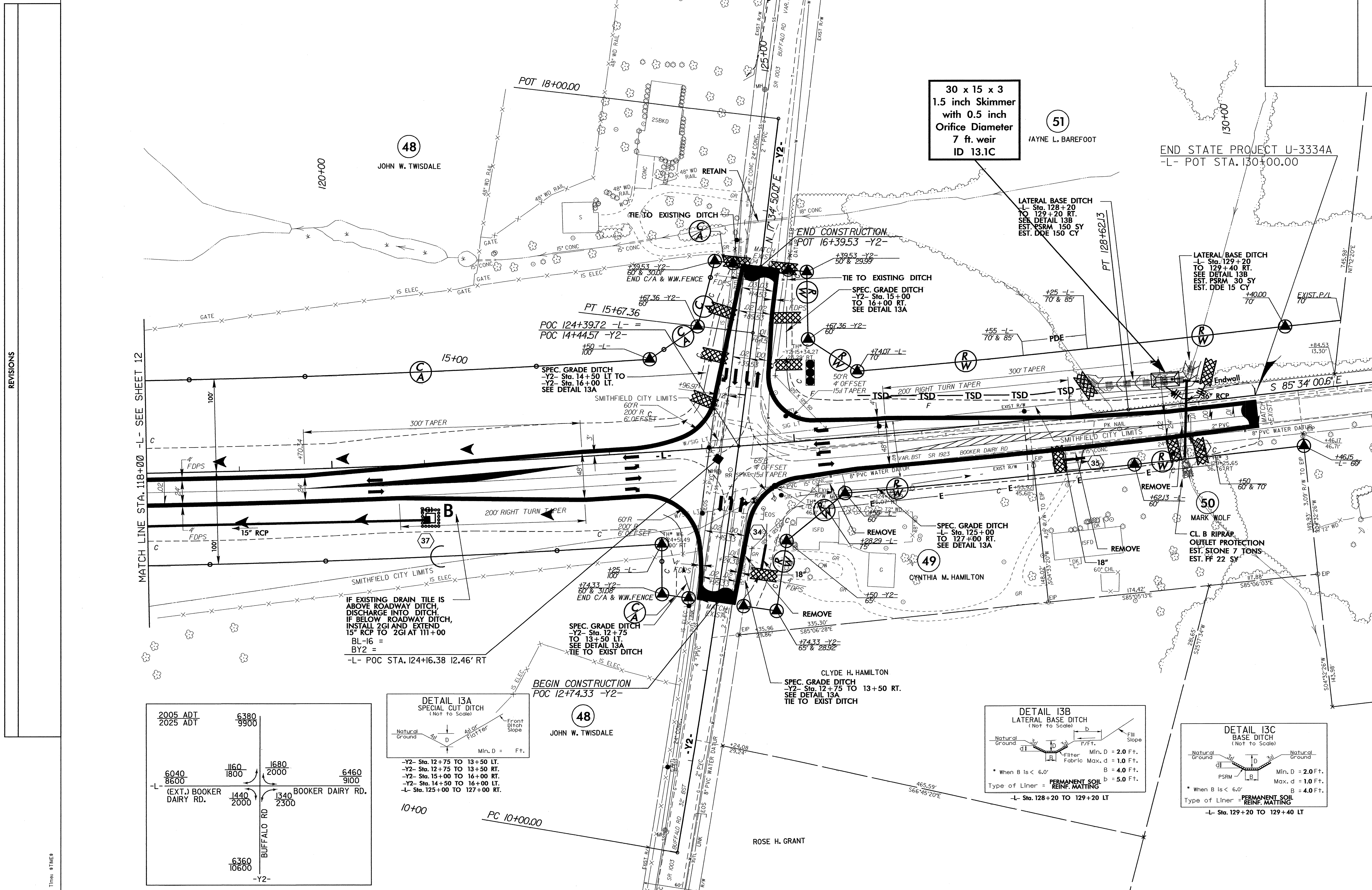
-L-
PI Sta 122+21.84
 $\Delta = 6' 18' 45.6''$ (LT)
D = 0' 30' 00.0''
L = 1,262.53'
T = 631.9'
R = 11,459.16'
SUPER = NC
DS = 50MPH

REVISIONS

ARCADIS CORP
Times #TIME#
Files names #FILE#

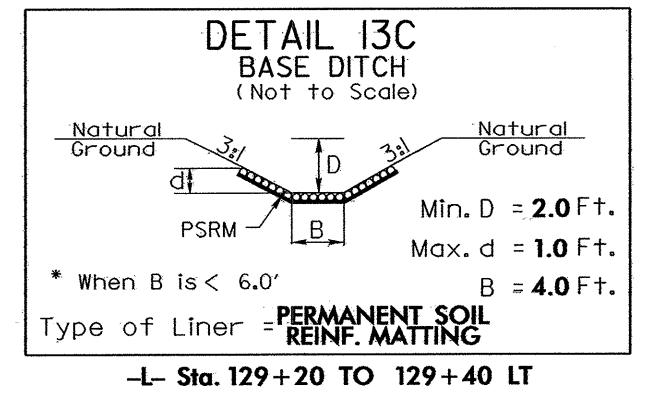
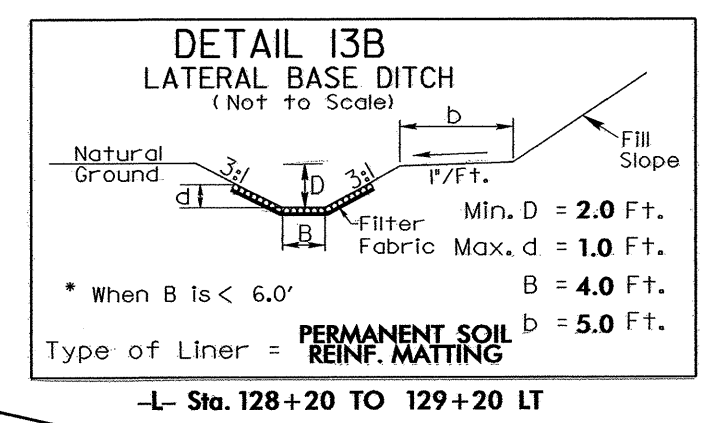
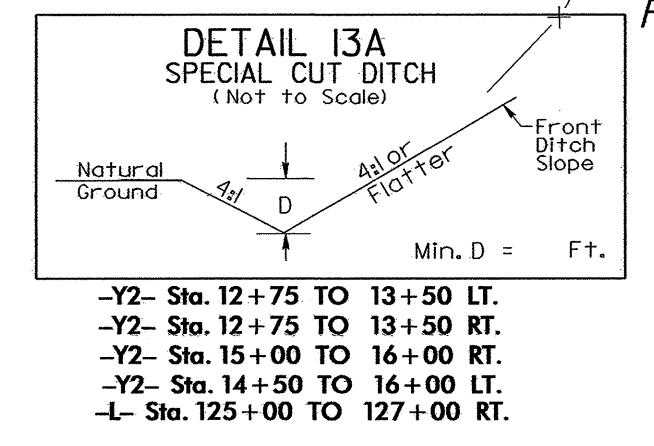
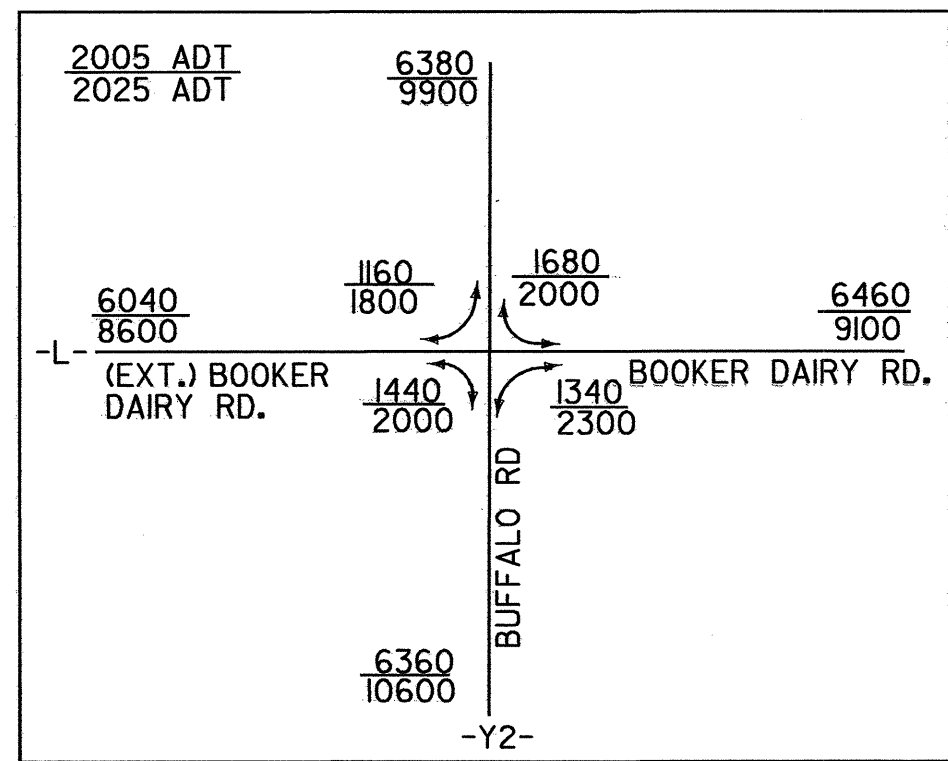
SEE STRUCTURES SHEET S-1 THRU S- FOR STRUCTURE PLANS

SEE SHEET 18 FOR -L- PROFILE
SEE SHEET 11 FOR BRIDGE SKETCH



REVISIONS

MATCH LINE STA. 118+00 -L- SEE SHEET 12

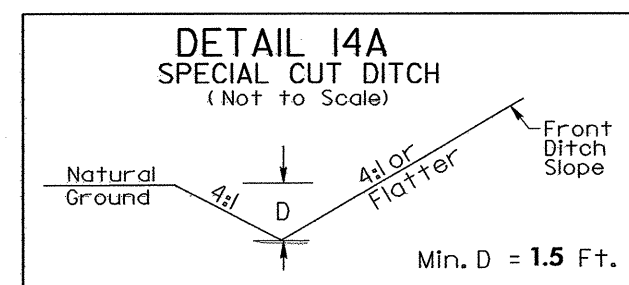


SEE SHEETS 18 AND 19 FOR -L- PROFILE
SEE SHEET 21 FOR -Y2- PROFILE

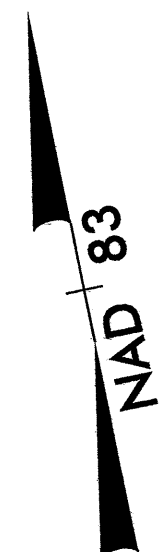
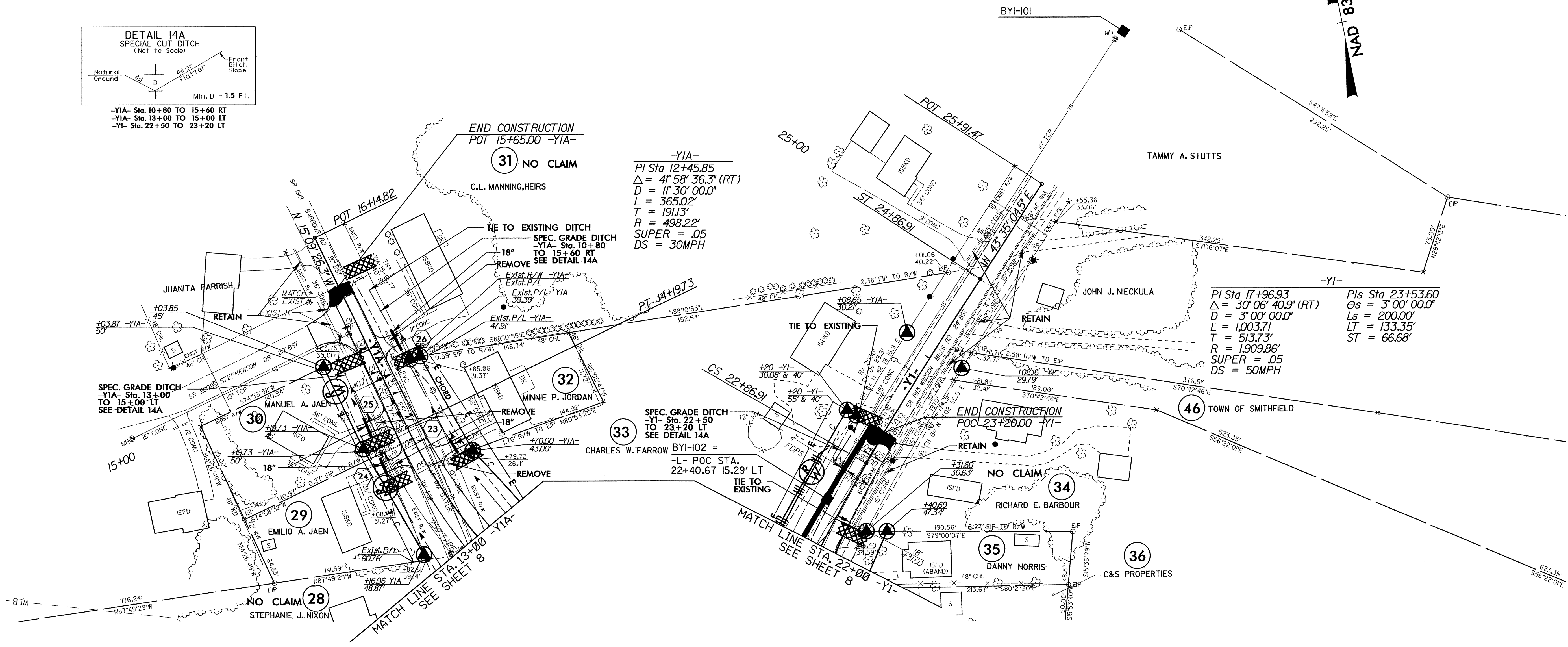
ARCADIS CAN
ROADWAY DESIGN
FILENAMES:FILES

NAD 83

PROJECT REFERENCE NO.	SHEET NO.
U-3334A	EC-25/CONST.14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-YIA- Sta. 10+80 TO 15+60 RT
 -YIA- Sta. 13+00 TO 15+00 LT
 -YI- Sta. 22+50 TO 23+20 LT



REVISIONS

SEE SHEET 20 FOR -YI- PROFILE
 SEE SHEET 21 FOR -YIA- PROFILE

ARCADIS | ENVIRONMENTAL & INFRASTRUCTURE
 11/20/2014
 11/20/2014
 11/20/2014