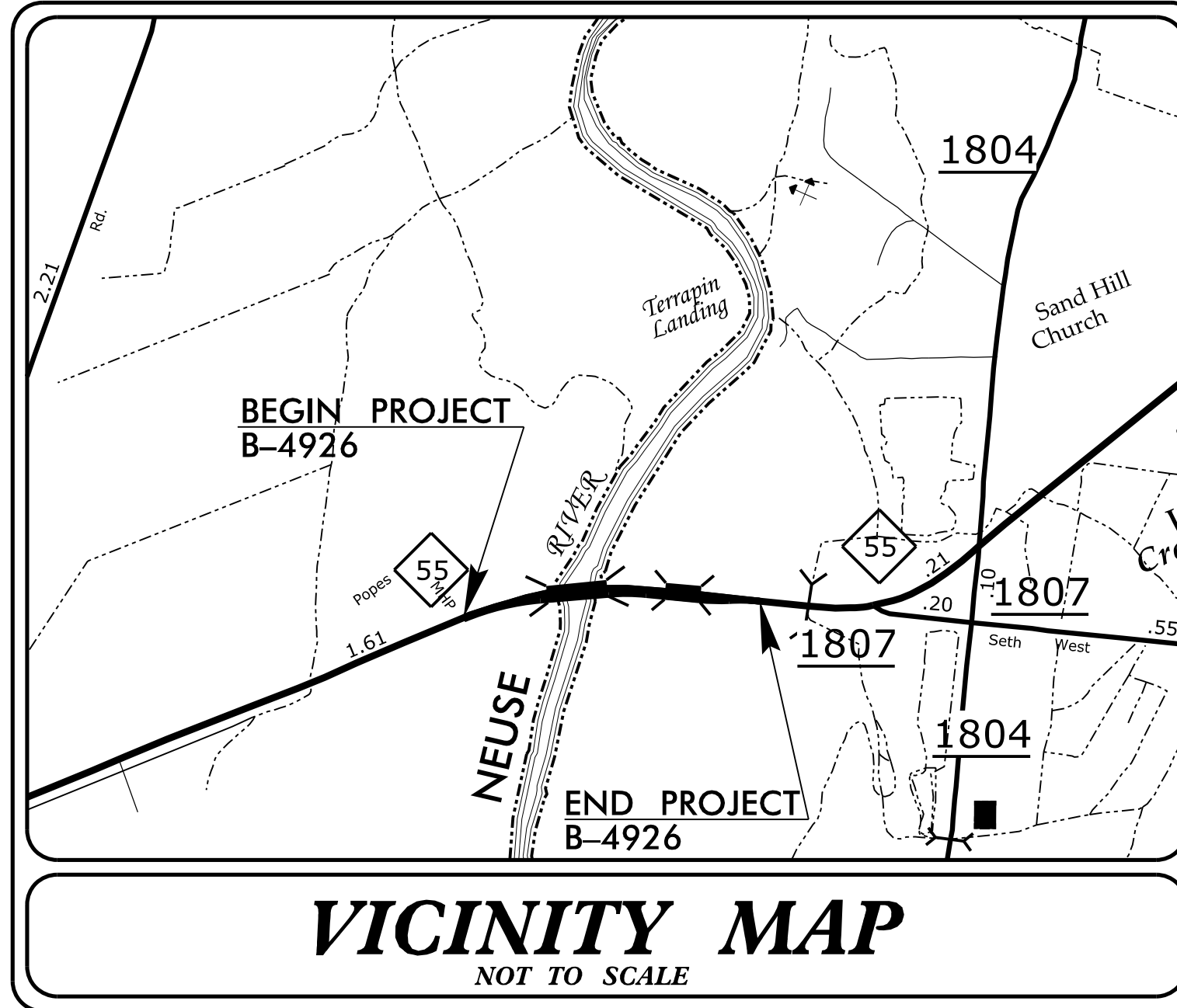


TIP PROJECT: B-4926

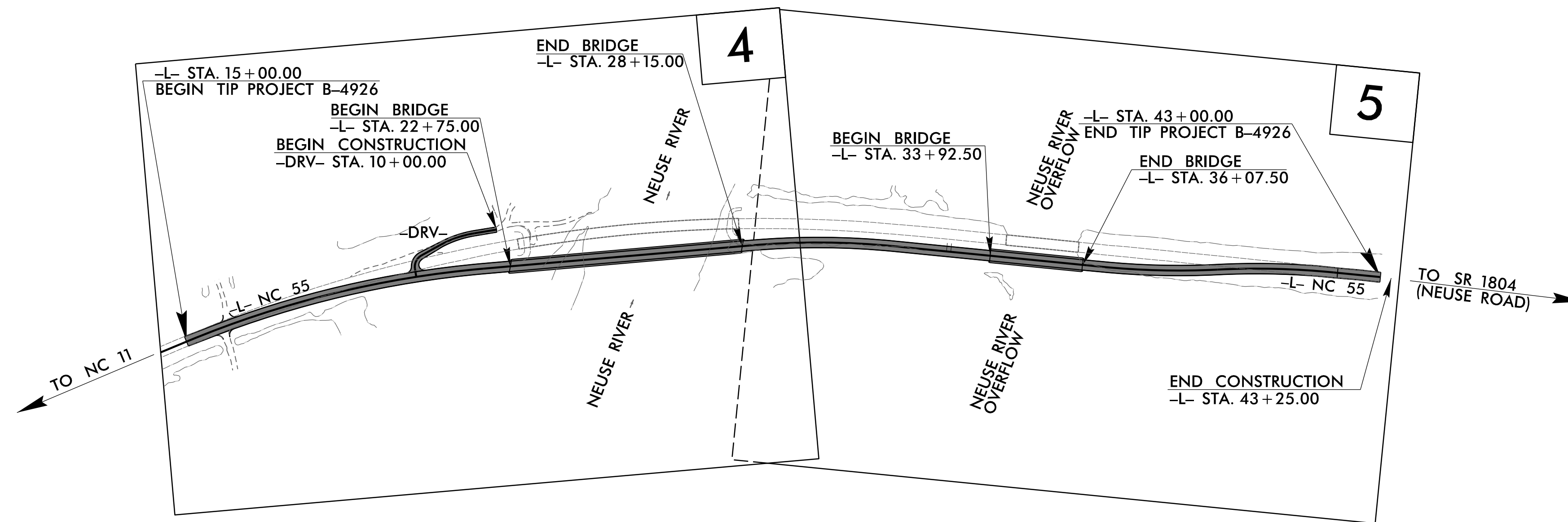
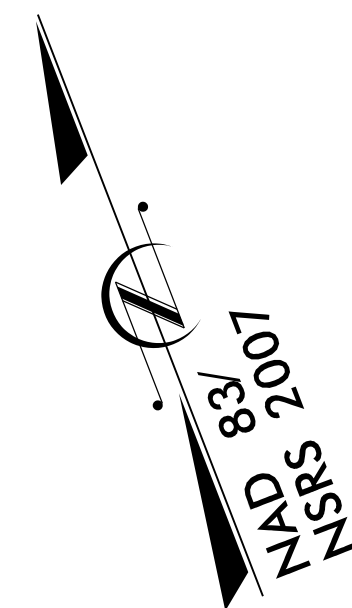


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL
LENOIR COUNTY

LOCATION: BRIDGE NO. 20 AND BRIDGE NO. 34 ON NC 55
OVER THE NEUSE RIVER

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

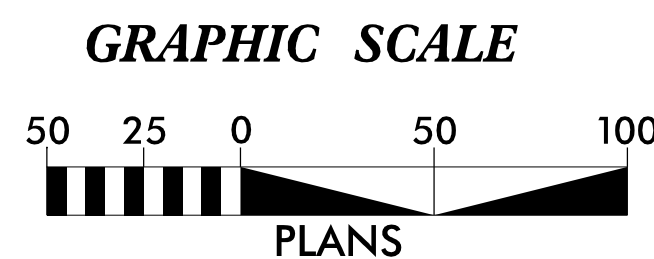
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4926	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40163.1.2	N/A	PE	
40163.2.1	N/A	R/W & UTILITIES	



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.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

TRANSYSTEMS

1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453

Prepared in the Office of:
TranSystems
1 GLENWOOD AVE SUITE 600
RALEIGH, NC 27603

Designed by:
Andrew M. Howell 3105
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

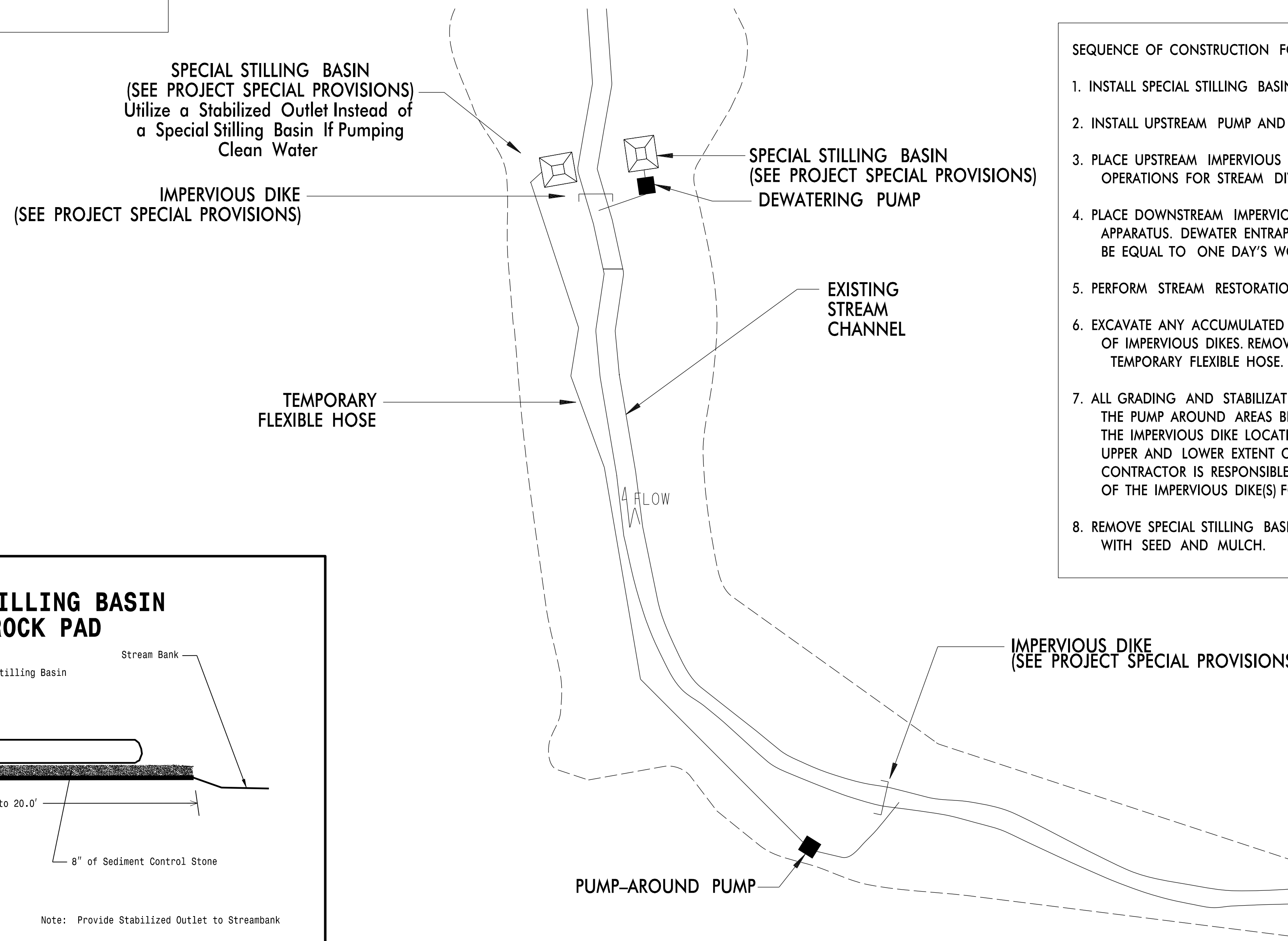
EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A		1636.03	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

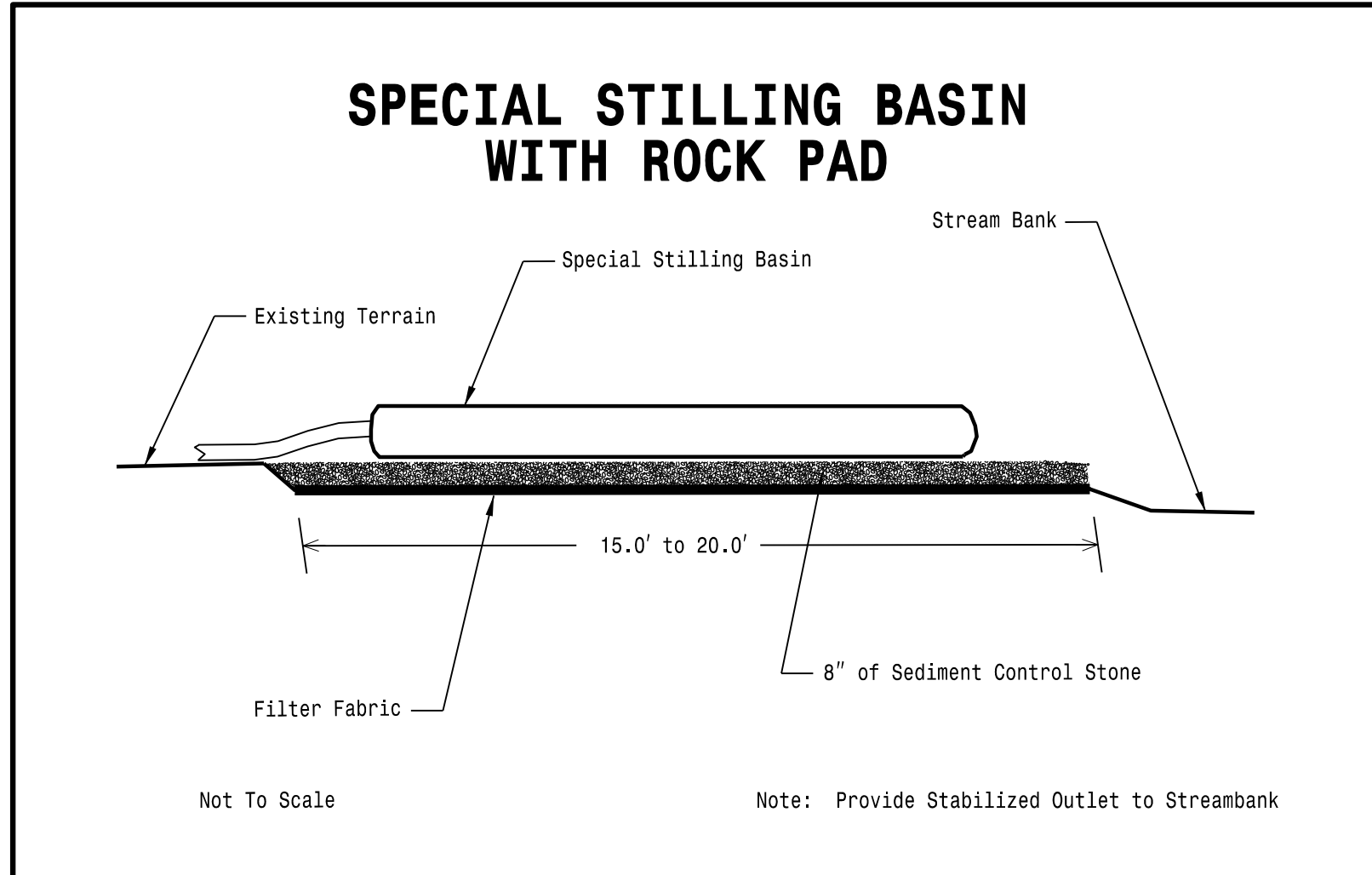
TEMPORARY STREAM DIVERSION PUMP-AROUND OPERATION

NOTES:

- 1) All excavation shall be performed in only dry or isolated sections of channel.
- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) All graded areas shall be stabilized within 24 hours.
- 4) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
- 5) Pumps and hoses shall be of sufficient size to dewater the work area.

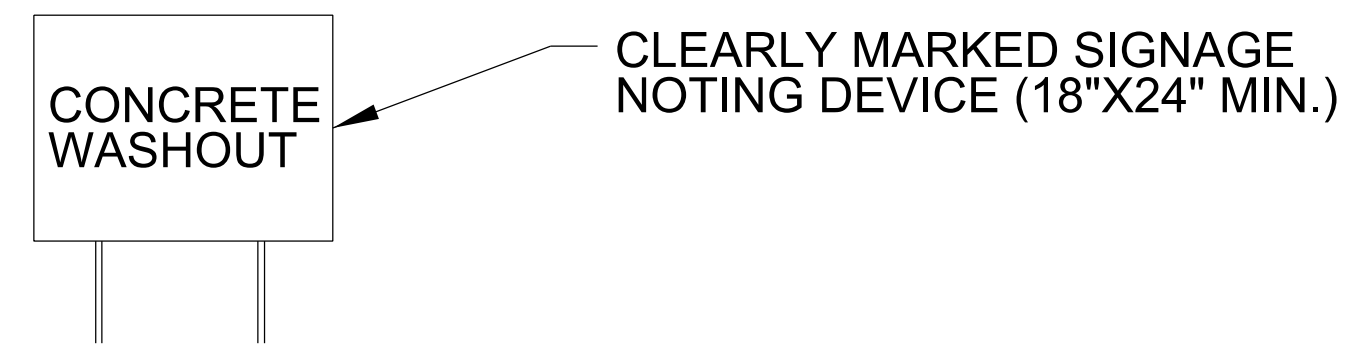
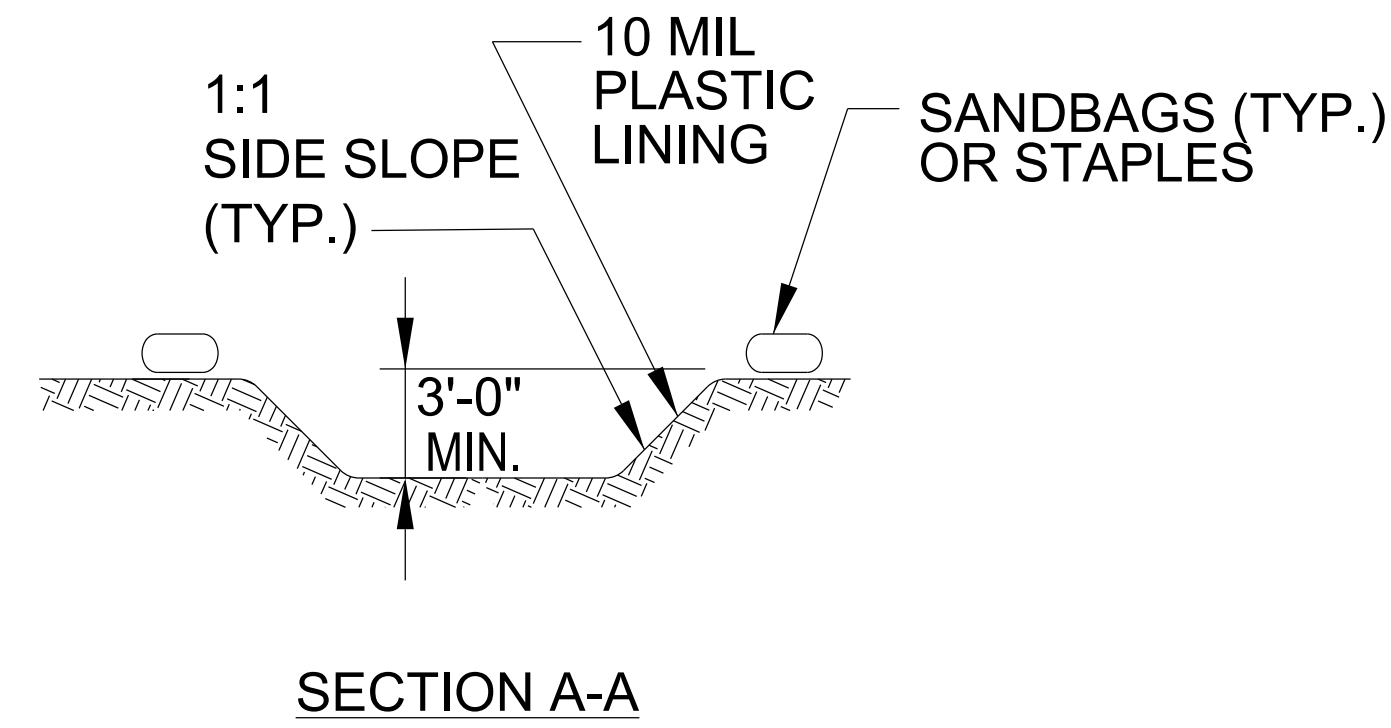
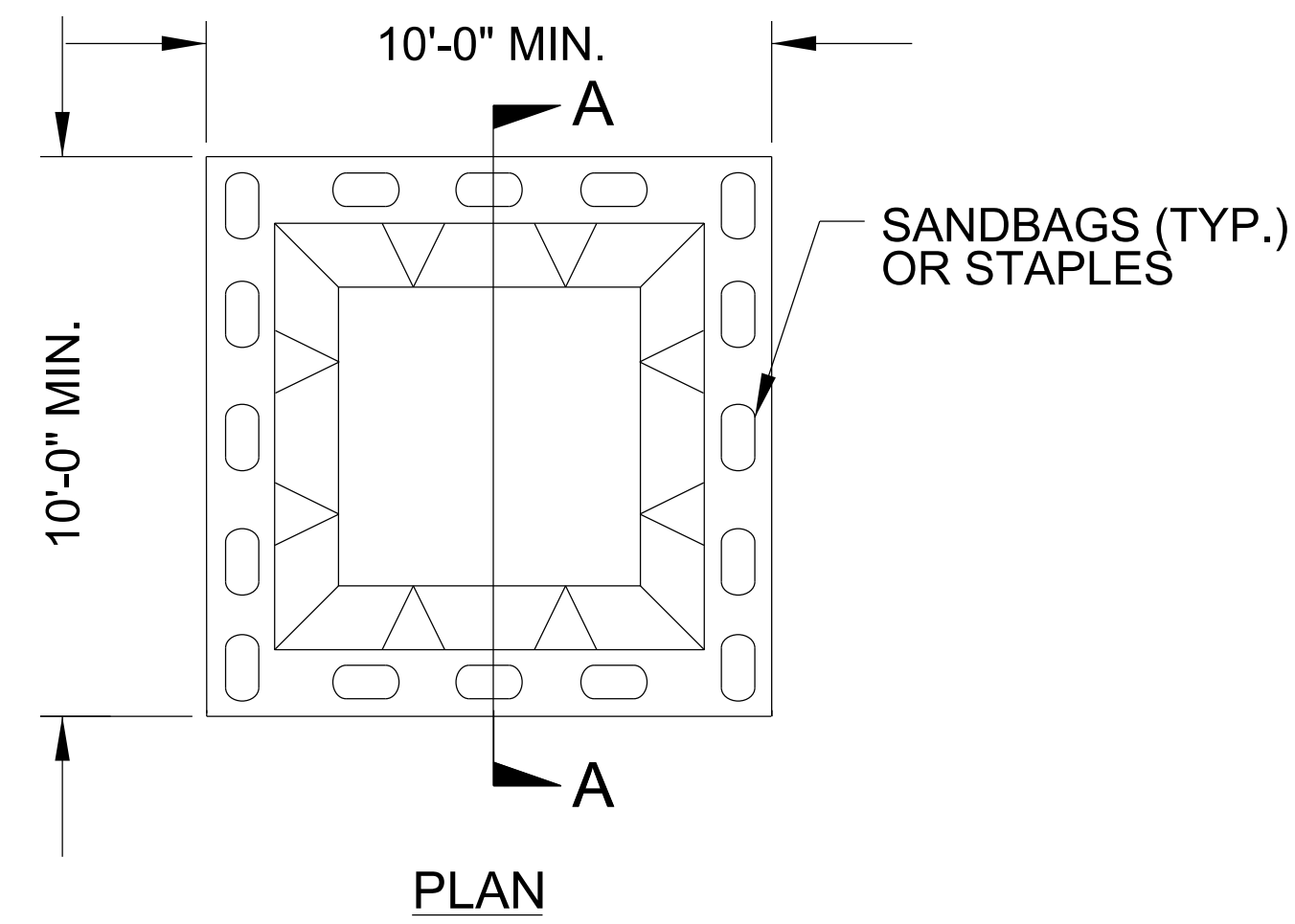


- SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA
1. INSTALL SPECIAL STILLING BASIN(S).
 2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
 3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
 4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
 5. PERFORM STREAM RESTORATION WORK IN ACCORDANCE WITH THE PLANS.
 6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
 7. ALL GRADING AND STABILIZATION MUST BE COMPLETED IN ONE DAY WITHIN THE PUMP AROUND AREAS BETWEEN THE IMPERVIOUS DIKES. THE IMPERVIOUS DIKE LOCATIONS AS SHOWN ON THIS SHEET ONLY SHOW THE UPPER AND LOWER EXTENT OF WORK FOR EACH STREAM SEGMENT. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE LOCATION OF THE IMPERVIOUS DIKE(S) FOR EACH DAY'S WORK.
 8. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.



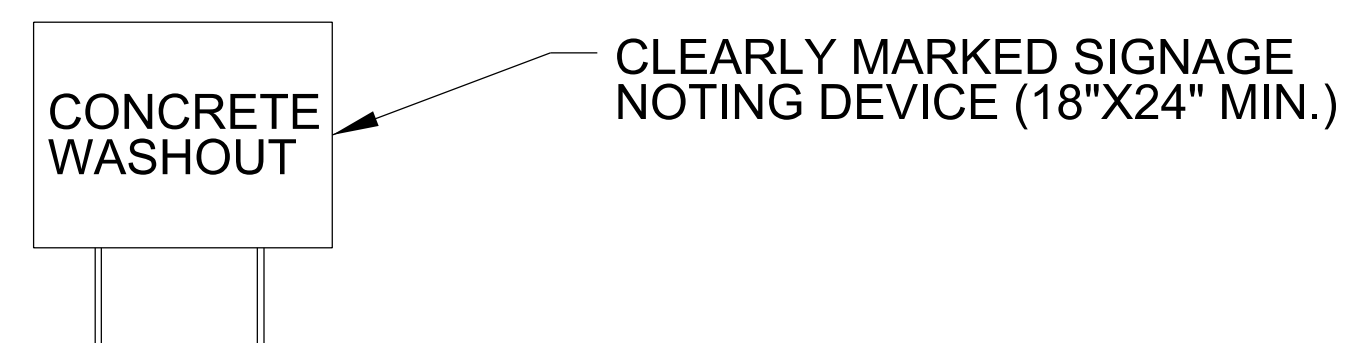
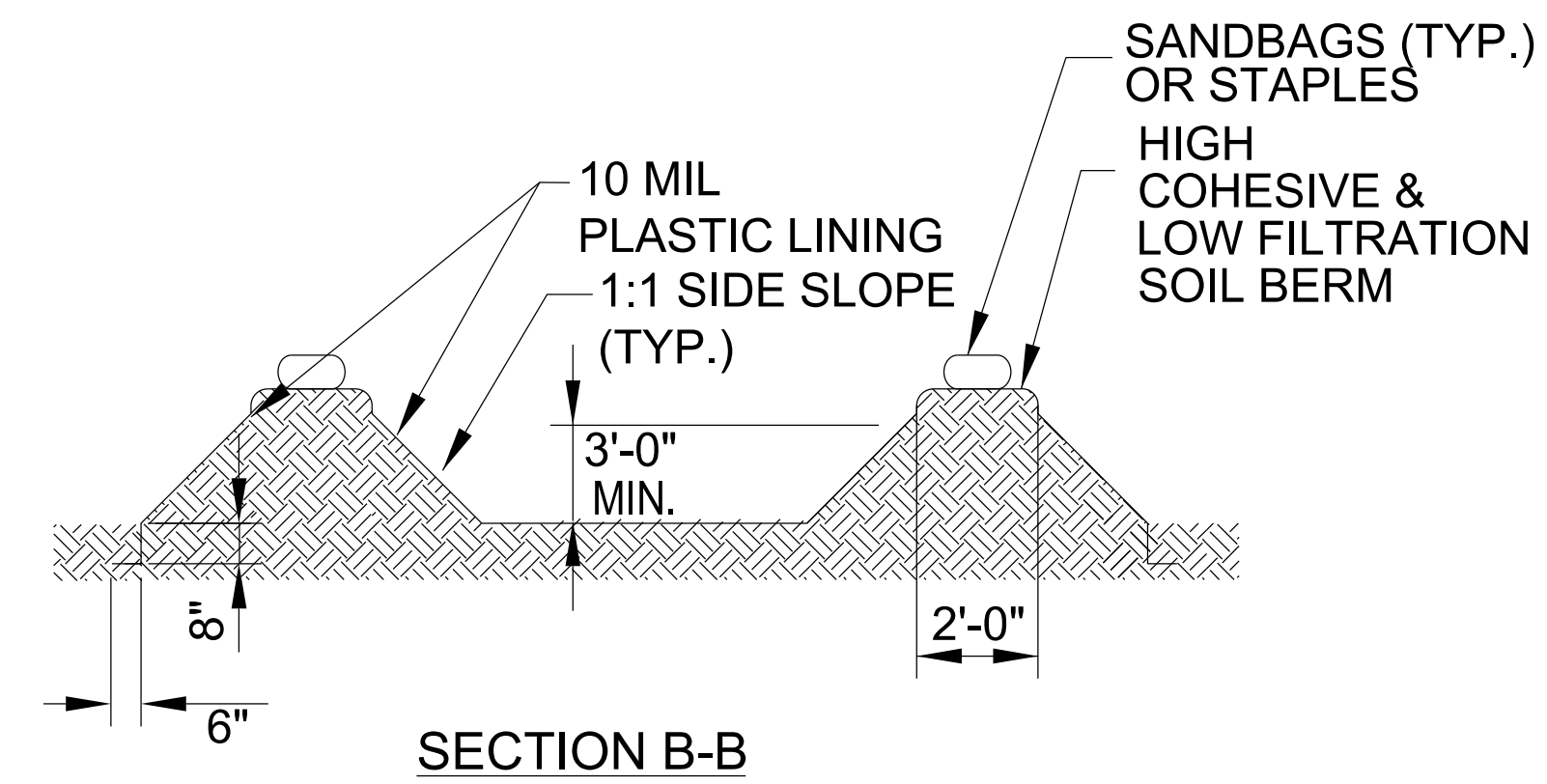
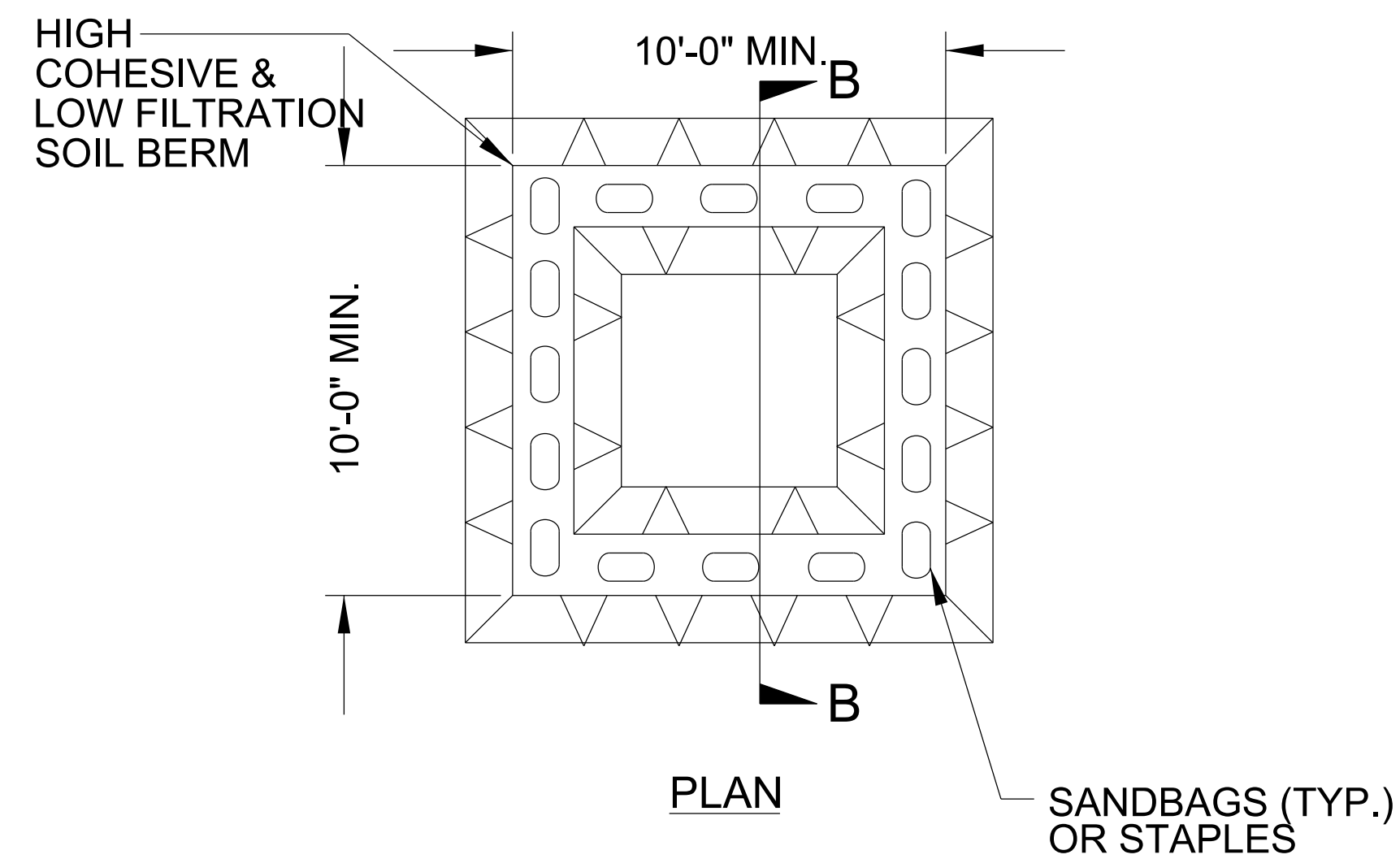
6/2/99

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
 NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GRADE WASHOUT STRUCTURE
 NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

6/2/99

BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO. B-4926	SHEET NO. EC-2D
TRANSYSTEMS	
1 Glenwood Avenue Raleigh, NC 27603 Tel: 919.789.9977 Fax: 919.789.9591 License: F-0453	

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING $V = 8.0203 * Q * T$, WHERE V IS VOLUME (FT³), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1640-14.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3' OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12" STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

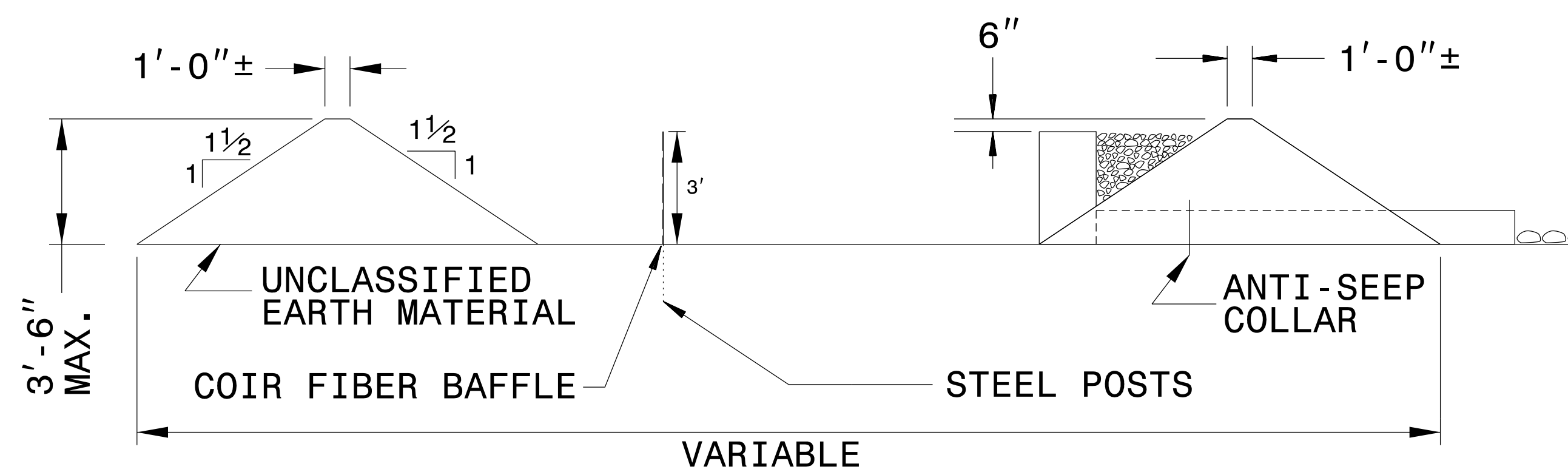
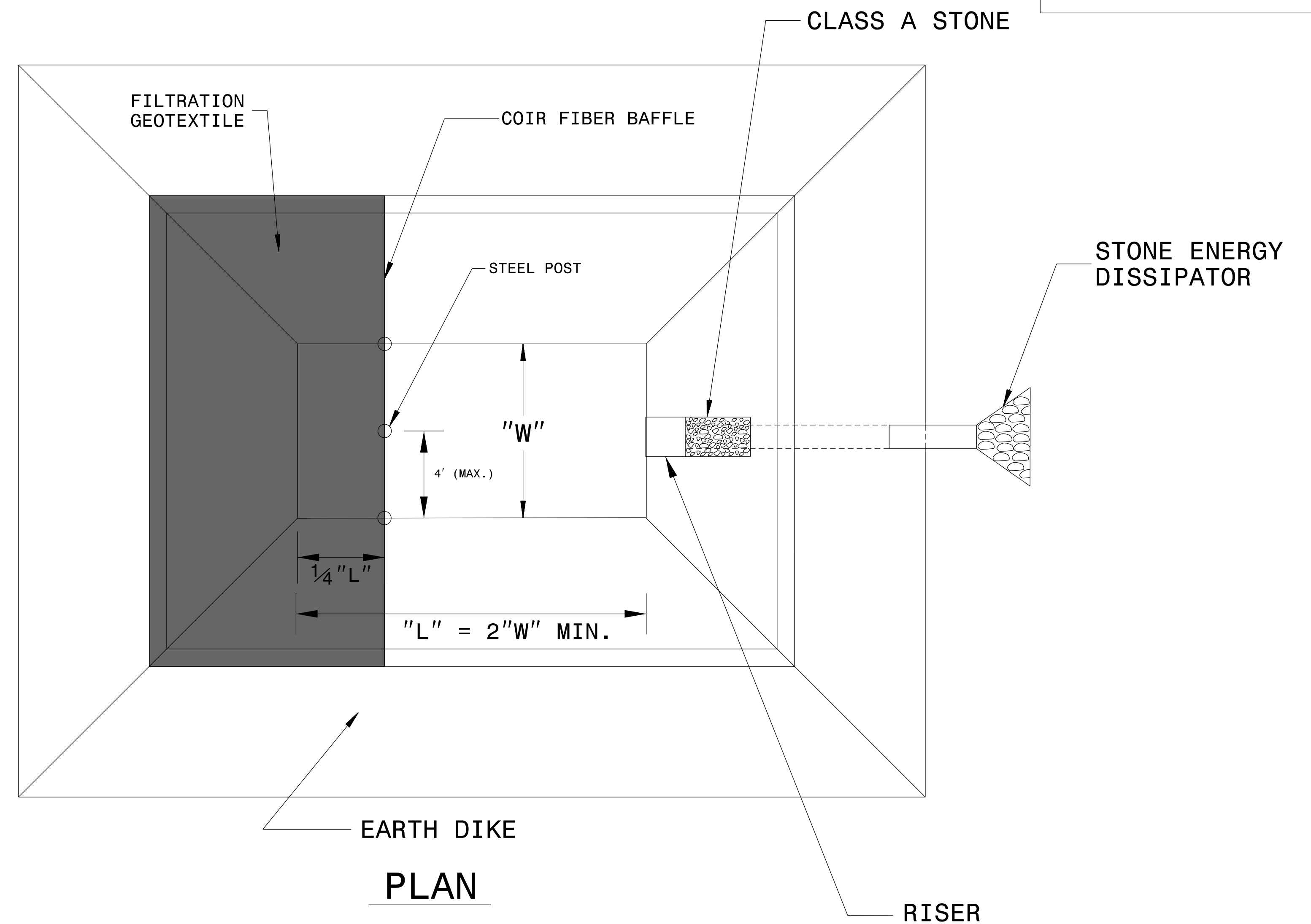
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

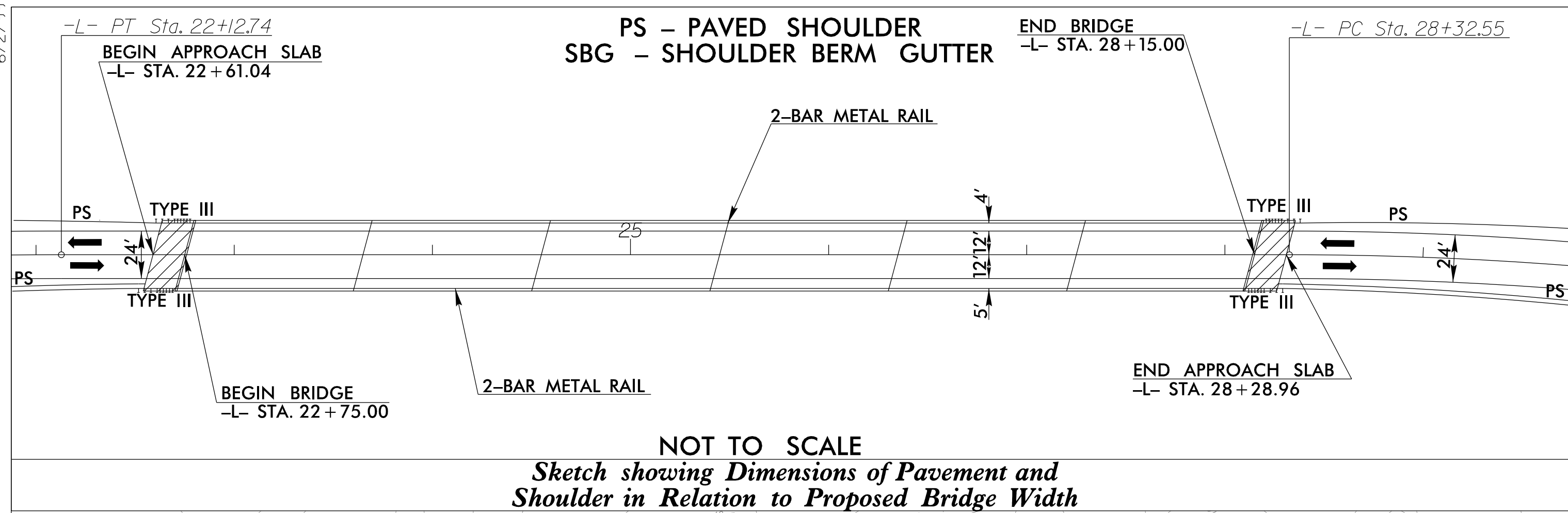
PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



TYPICAL SECTION VIEW

NOT TO SCALE

CONSTRUCTION



<p>PI Sta 18+59.98 Δ = 17° 33' 45.4" (RT) D = 2' 28' 10.7" L = 711.4' T = 358.38' R = 2,320.00' SE = .06 RO = 162'</p>	<p>PI Sta 30+02.07 Δ = 10° 38' 32.4" (RT) D = 3' 08' 53.2" L = 338.05' T = 169.51' R = 1,820.00' SE = .07 RO = 189'</p>
<p>PI Sta 10+95.74 Δ = 19° 45' 49.7" (LT) D = 22' 55' 05.9" L = 86.24' T = 43.55' R = 250.00'</p>	<p>PI Sta 12+07.18 Δ = 69° 46' 54.4" (LT) D = 190' 59' 09.4" L = 36.54' T = 20.92' R = 30.00'</p>

NOT TO SCALE
Sketch showing Dimensions of Pavement and Shoulder in Relation to Proposed Bridge Width

NOTE: PAVE -DRV- FROM STA. 12+15.00 TO STA. 12+29.88 ALL RIP RAP TO BE GRANITE MATERIAL.

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.

BEGIN CONSTRUCTION -L- STA. 14+55.00

-L- PCC Sta. 15+01.60

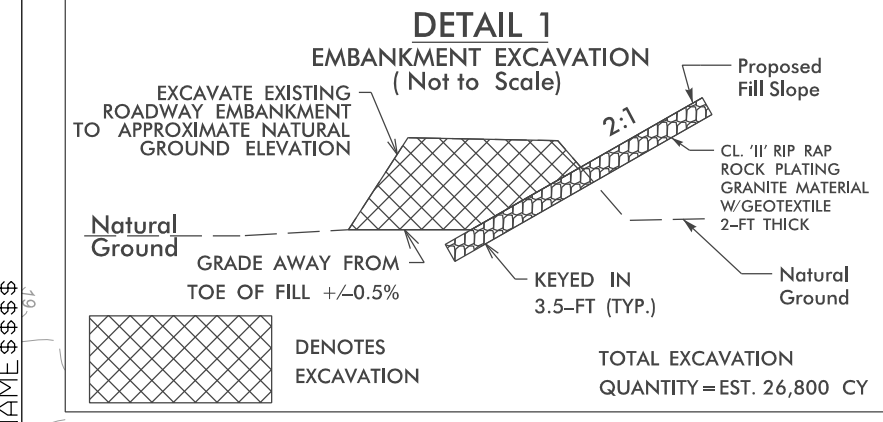
BEGIN PUMP AROUND OPERATION FOR CONSTRUCTION OF JURISDICTIONAL CHANNEL CHANGE

BEGIN TIP PROJECT B-4926 -L- STA. 15+00.00

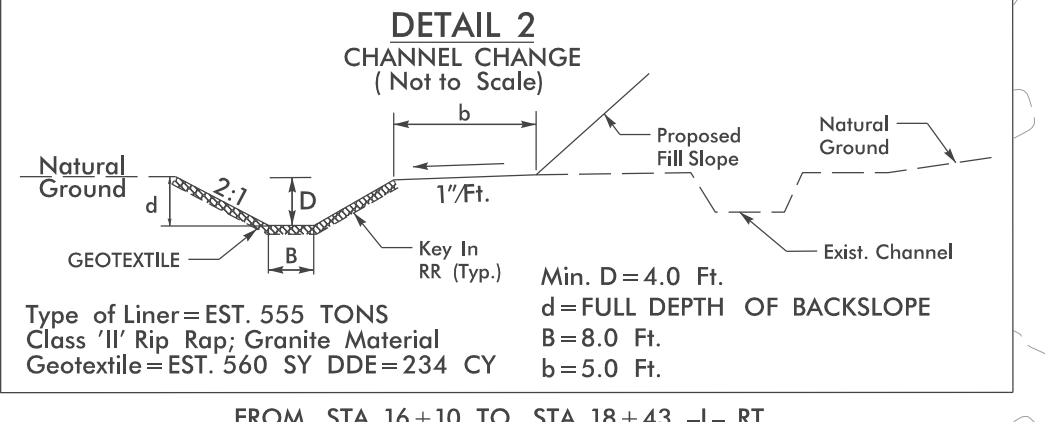
END PUMP AROUND OPERATION FOR CONSTRUCTION OF JURISDICTIONAL CHANNEL CHANGE

-DRV- POT Sta. 10+00.00
Begin Construction
CONCRETE REMNANTS REMOVAL SEE DETAIL 5

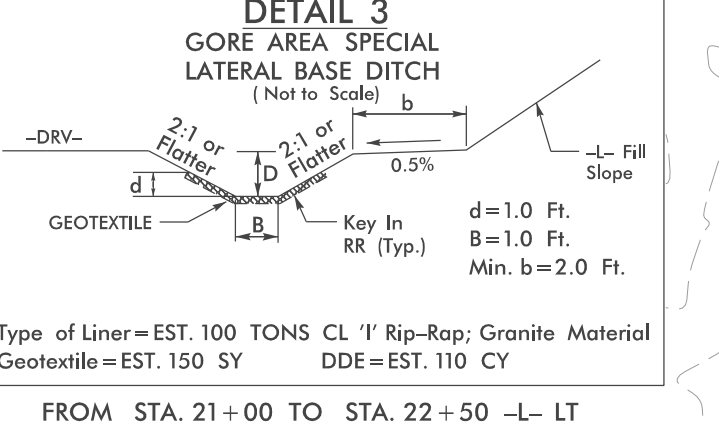
UTILIZE SPECIAL STILLING BASINS AS APPLICABLE AT DRILLED PIER LOCATIONS



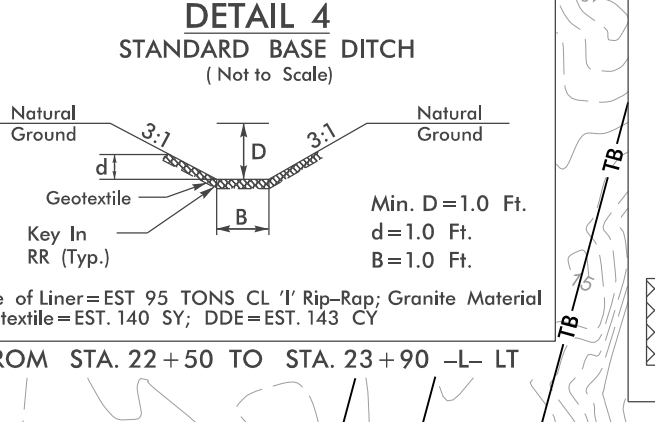
FROM STA. 17+00 TO STA. 23+25 -L- LT
FROM STA. 27+81 TO STA. 34+27 -L- LT
FROM STA. 35+92 TO STA. 40+00 -L- LT
FROM STA. 10+00 TO STA. 12+18 -DRV- LT
FROM STA. 10+00 TO STA. 12+18 -DRV- RT



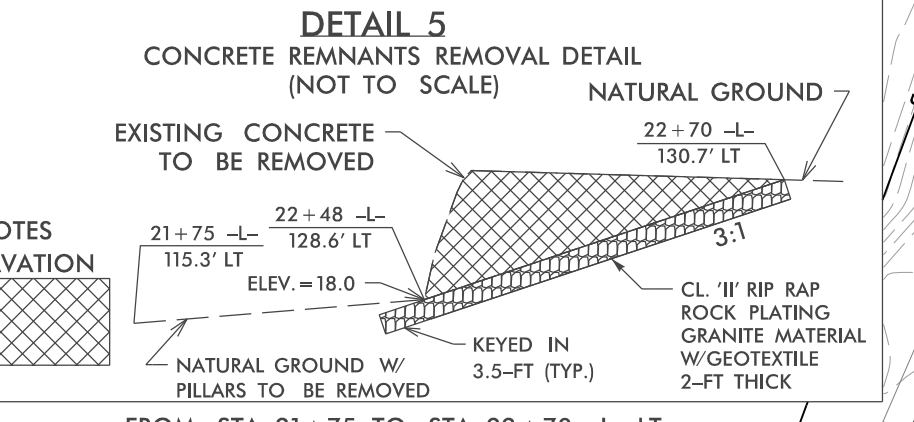
FROM STA. 16+10 TO STA. 18+43 -L- RT



FROM STA. 21+00 TO STA. 22+50 -L- LT



FROM STA. 22+50 TO STA. 23+90 -L- LT



FROM STA. 21+75 TO STA. 22+70 -L- LT

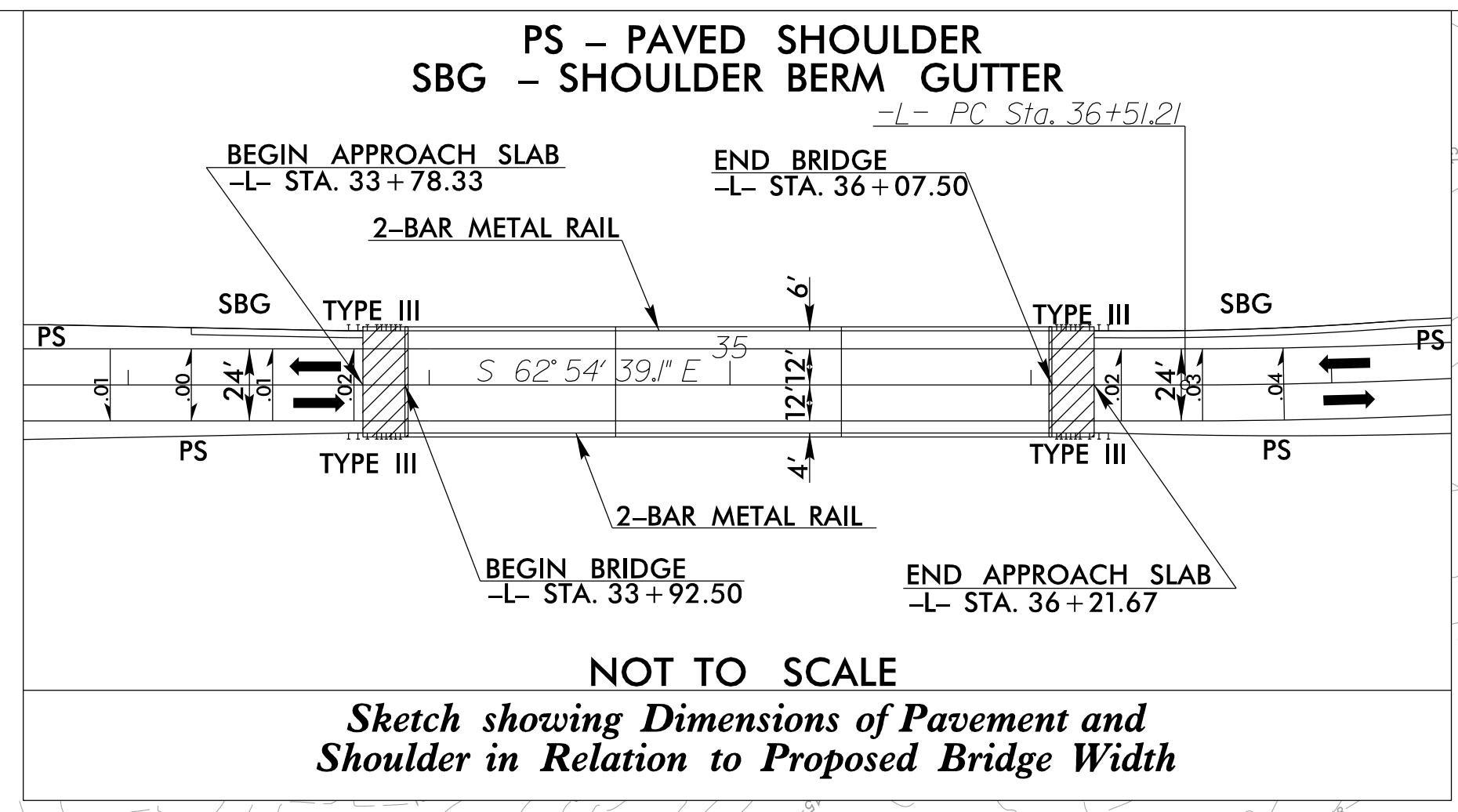
PROVIDE CLASS 'II' RIP RAP ROCK PLATING (GRANITE) ON ALL SLOPES STEEPER THAN 3:1 OR AS INDICATED ON THE PLANS. 2-FT THICK TO SHOULDER POINT. REFER TO STANDARD ROCK PLATING DETAIL (STD 275.01)

SEE SHEET 6 FOR -L- PROFILE
SEE SHEET 7 FOR -DRV- PROFILE

MATCHLINE -L- STA. 29+00.00
SEE SHEET 5

CONSERVATION EASEMENT
NORTH CAROLINA WILDLIFE HABITAT FOUNDATION
MARK T. SCHOLER
DB 1408 PG. 452
DB 1489 PG. 253
DB 1572 PG. 534
PB 9 PG. 356

6/2/2019



-L-		
PI Sta 30+02.07	PI Sta 37+86.49	PI Sta 40+56.55
$\Delta = 10' 38' 32.4''$ (RT)	$\Delta = 8' 30' 06.8''$ (LT)	$\Delta = 8' 30' 06.8''$ (RT)
$D = 3' 08' 53.2''$	$D = 3' 08' 53.2''$	$D = 3' 08' 53.2''$
$L = 338.05'$	$L = 270.06'$	$L = 270.06'$
$T = 169.51'$	$T = 135.28'$	$T = 135.28'$
$R = 1,820.00'$	$R = 1,820.00'$	$R = 1,820.00'$
$SE = .07$	*SE = SEE PLANS	*SE = SEE PLANS
$RO = 189'$		

*DESIGN EXCEPTION REQUIRED FOR SUPERELEVATION.

NOTE: ALL RIP RAP TO BE GRANITE MATERIAL

BRIDGE #34: 6" DIAMETER CIRCULAR DECK DRAINS REQUIRED SPACED 12" O.C. FROM -L- STA. 34+09 TO STA. 36+01 LT

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5

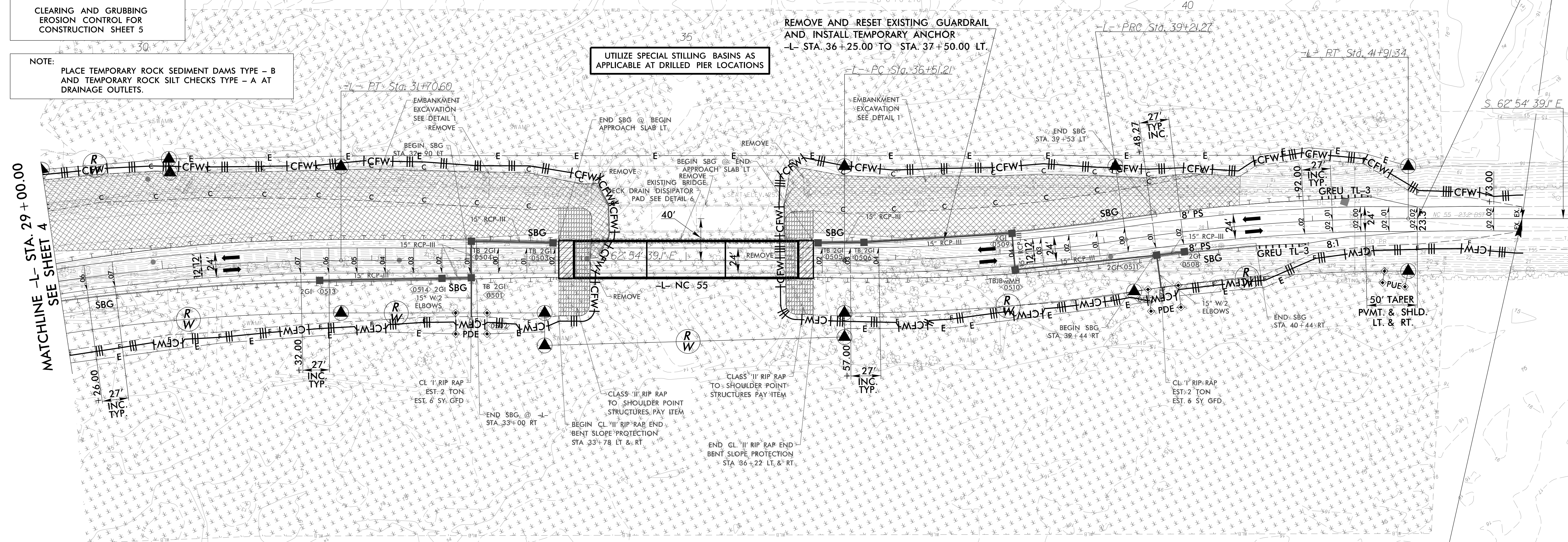
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

UTILIZE SPECIAL STILLING BASINS AS APPLICABLE AT DRILLED PIER LOCATIONS

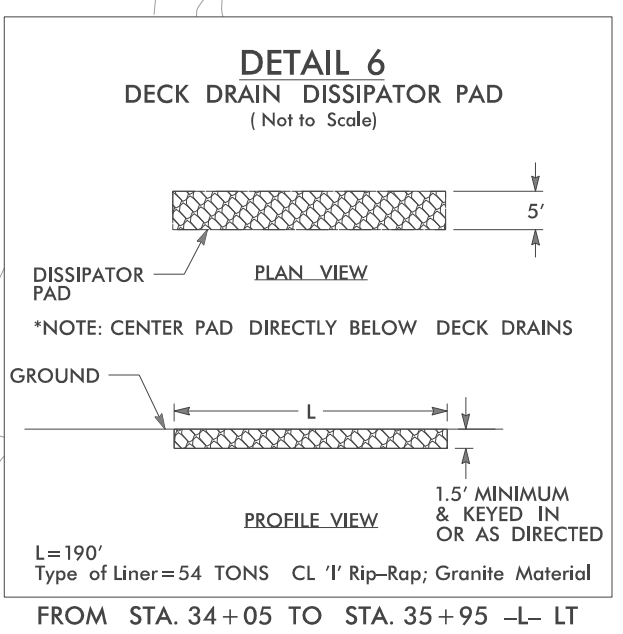
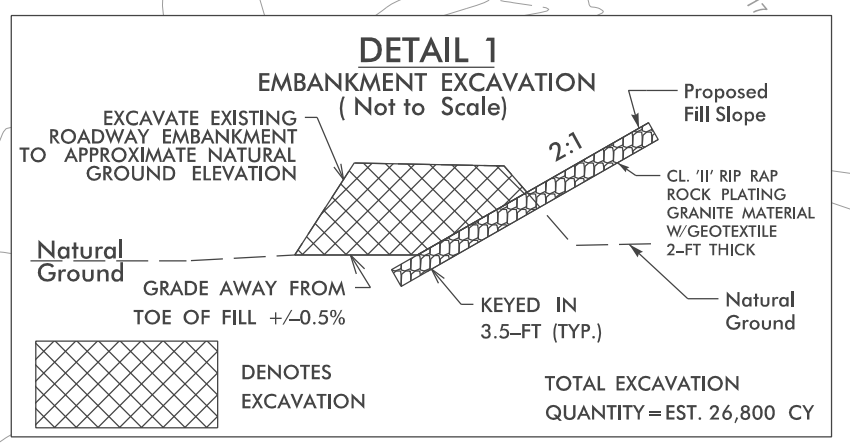
REMOVE AND RESET EXISTING GUARDRAIL AND INSTALL TEMPORARY ANCHOR -L- STA. 36+25.00 TO STA. 37+50.00 LT.

END PAVING/MILLING -L- STA. 43+00.00

END GRADE -L- STA. 42+00.00



END TIP PROJECT B-4926 -L- STA. 43+00.00



PROVIDE CLASS 'II' RIP RAP ROCK PLATING (GRANITE) ON ALL SLOPES STEEPER THAN 3:1 OR AS INDICATED ON THE PLANS. 2-FT THICK TO SHOULDER POINT. REFER TO STANDARD ROCK PLATING DETAIL (STD 275.01)

NOTE: GUARDRAIL TRANSITIONS WITH A 50:1 TAPER TO MATCH BRIDGE OFFSETS. SEE TMP PLANS FOR SHORING LOCATIONS.

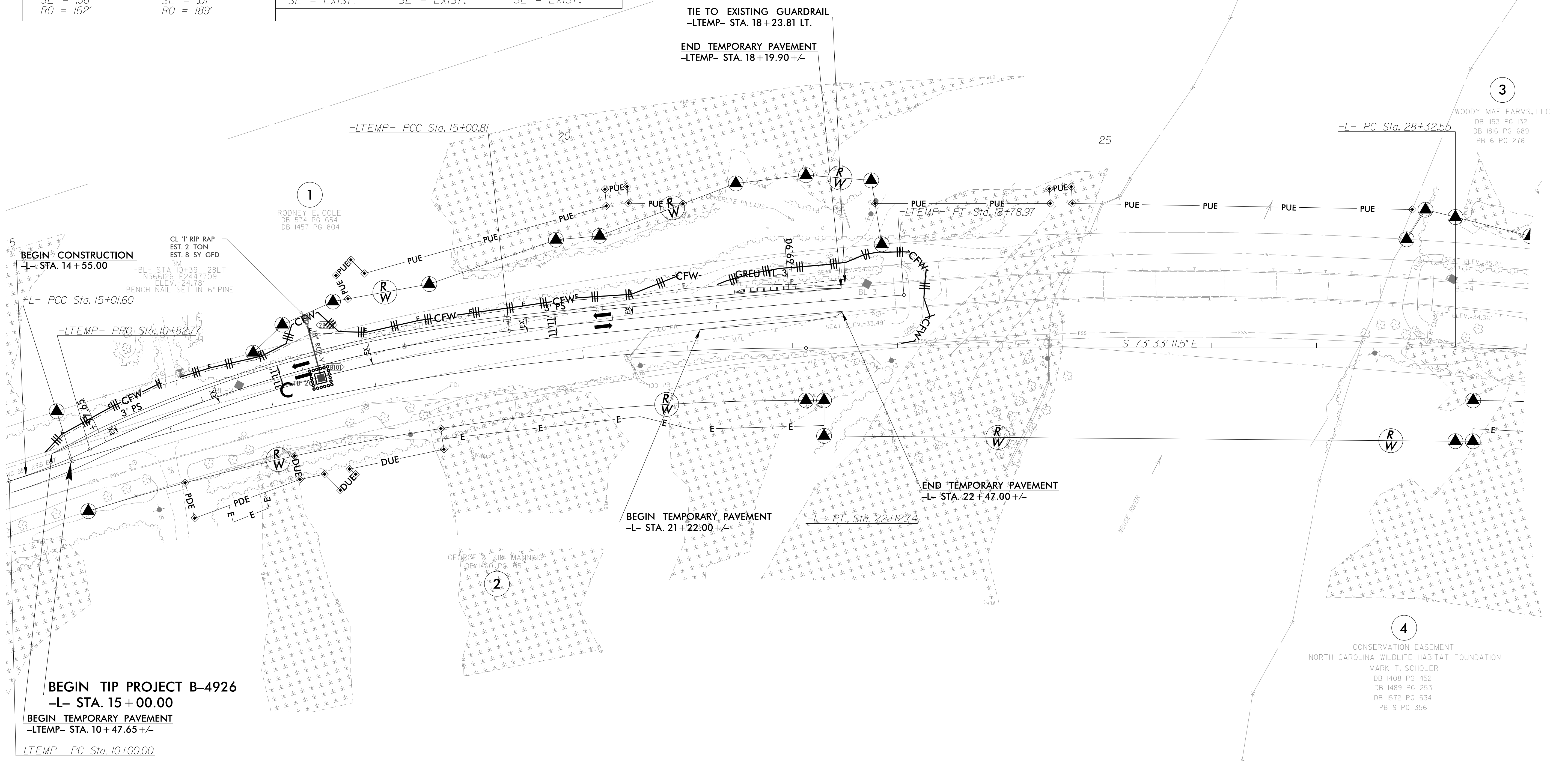
SEE SHEET 6 FOR -L- PROFILE

TEMPORARY PAVEMENT WIDENING DETAIL (-LTEMP-)

PROJECT REFERENCE NO. B-4926 SHEET NO. EC-6/ CONST.2B-1

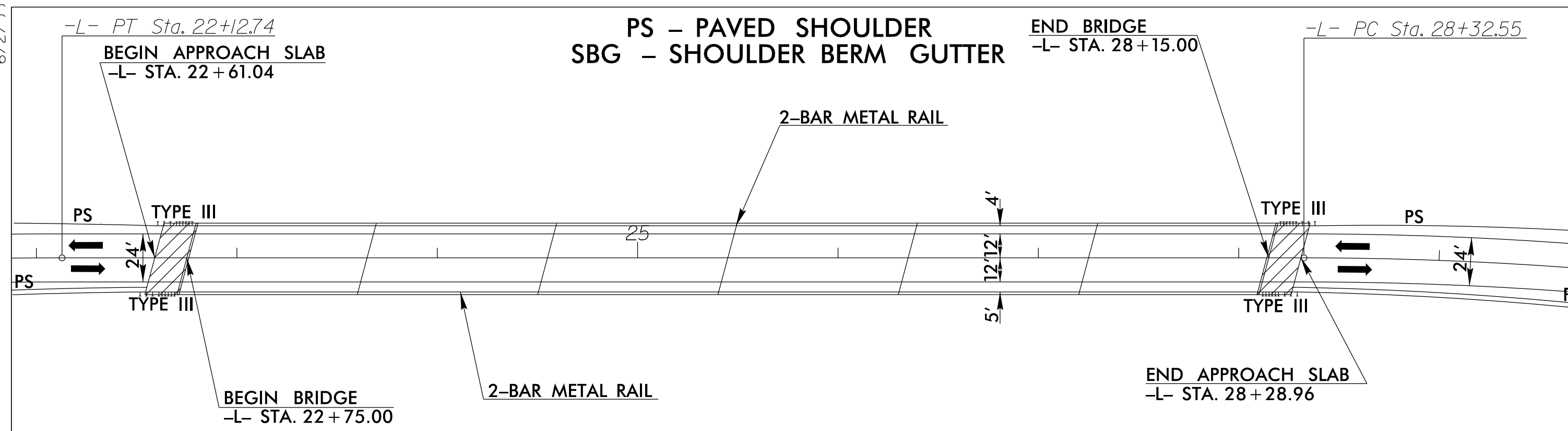
TRANSYSTEMS
1 Glenwood Avenue
Raleigh, NC 27603
Tel: 919.789.9977
Fax: 919.789.9591
License: F-0453

-L-		-LTEMP-		
PI Sta 18+59.98	PI Sta 30+02.07	PI Sta 10+41.45	PI Sta 12+93.81	PI Sta 16+89.91
$\Delta = 17^{\circ} 33' 45.4''$ (RT)	$\Delta = 10^{\circ} 38' 32.4''$ (RT)	$\Delta = 7^{\circ} 54' 15.5''$ (LT)	$\Delta = 19^{\circ} 23' 23.1''$ (RT)	$\Delta = 1^{\circ} 48' 20.2''$ (RT)
D = 2' 28" 10.7"	D = 3' 08" 53.2"	D = 9' 32" 57.5"	D = 4' 38" 18.0"	D = 0' 28" 38.9"
L = 711.14'	L = 338.05'	L = 82.77'	L = 418.03'	L = 378.17'
T = 358.38'	T = 169.51'	T = 41.45'	T = 211.03'	T = 189.10'
R = 2,320.00'	R = 1,820.00'	R = 600.00'	R = 1,235.27'	R = 12,000.00'
SE = .06	SE = .07	SE = EXIST.	SE = EXIST.	SE = EXIST.
RO = 162'	RO = 189'			



NOTE: SEE TMP-4 FOR ADDITIONAL DETAILS INCLUDING SHORING AND PORTABLE CONCRETE BARRIER.
SEE X-2 THRU X-5 FOR TEMPORARY PAVEMENT CROSS SECTIONS.

6/2/99
TRANSYSTEMS, INC. 1 GLENWOOD AVENUE, RALEIGH, NC 27603
TEL: 919.789.9977 FAX: 919.789.9591
WWW.TRANSYSTEMS.COM

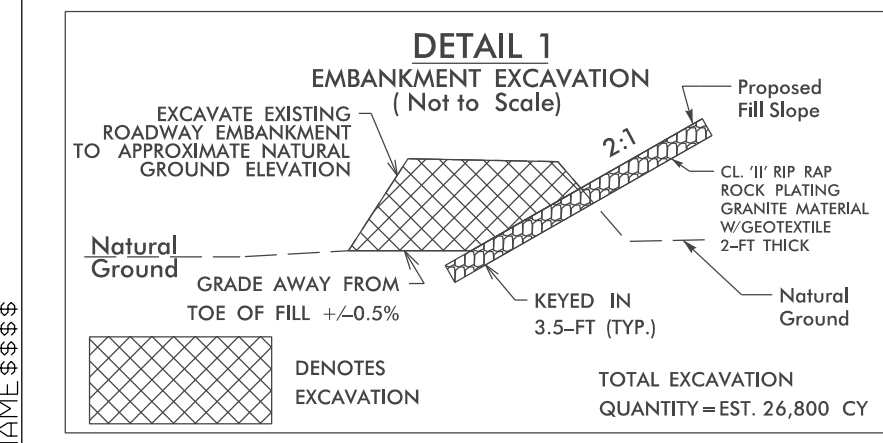
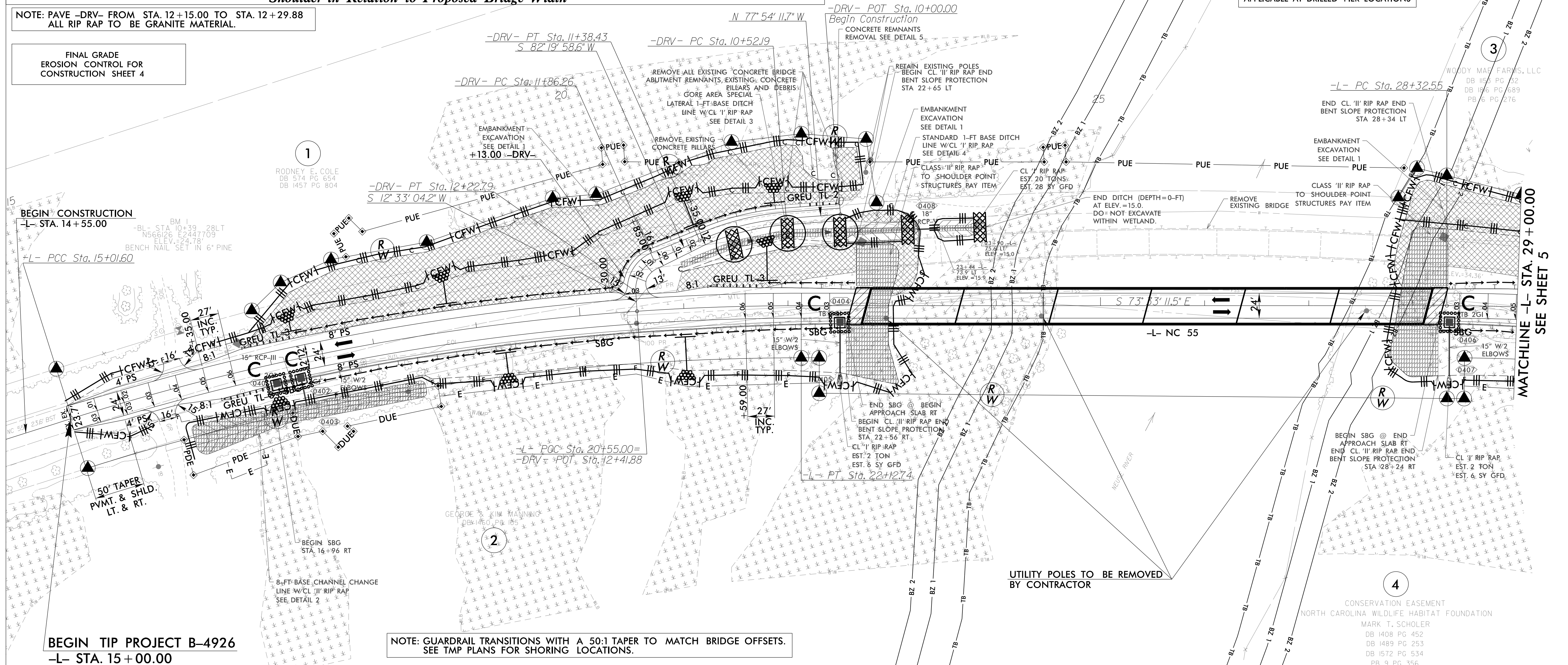


-L- PI Sta 18+59.98 $\Delta = 17^\circ 33' 45.4''$ (RT) $D = 2' 28' 10.7''$ $L = 711.4'$ $T = 358.38'$ $R = 2,320.00'$ $SE = .06$ $RO = 162'$	-L- PI Sta 30+02.07 $\Delta = 10^\circ 38' 32.4''$ (RT) $D = 3' 08' 53.2''$ $L = 338.05'$ $T = 169.51'$ $R = 1,820.00'$ $SE = .07$ $RO = 189'$
-DRV- PI Sta 10+95.74 $\Delta = 19^\circ 45' 49.7''$ (LT) $D = 22' 55' 05.9''$ $L = 86.24'$ $T = 43.55'$ $R = 250.00'$ $SE = SEE PLANS$	-DRV- PI Sta 12+07.18 $\Delta = 69^\circ 46' 54.4''$ (LT) $D = 190' 59' 09.4''$ $L = 36.54'$ $T = 20.92'$ $R = 30.00'$ $SE = SEE PLANS$

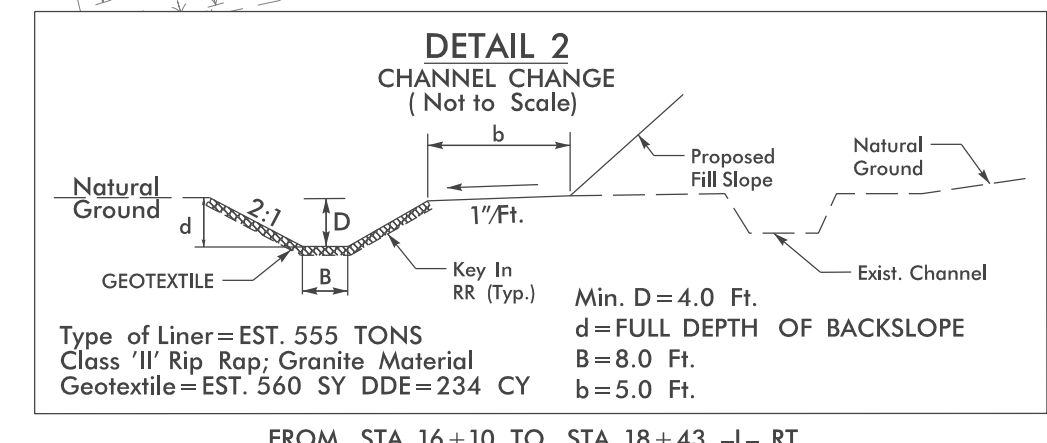
NOT TO SCALE
 Sketch showing Dimensions of Pavement and Shoulder in Relation to Proposed Bridge Width

NOTE: PAVE -DRV- FROM STA. 12+15.00 TO STA. 12+29.88
 ALL RIP RAP TO BE GRANITE MATERIAL.

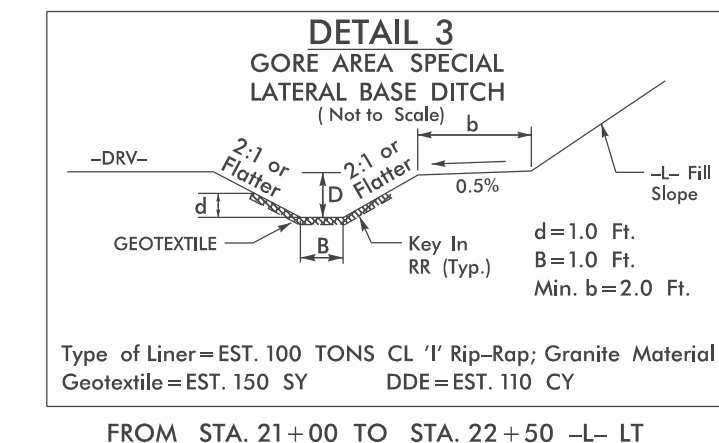
FINAL GRADE
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 4



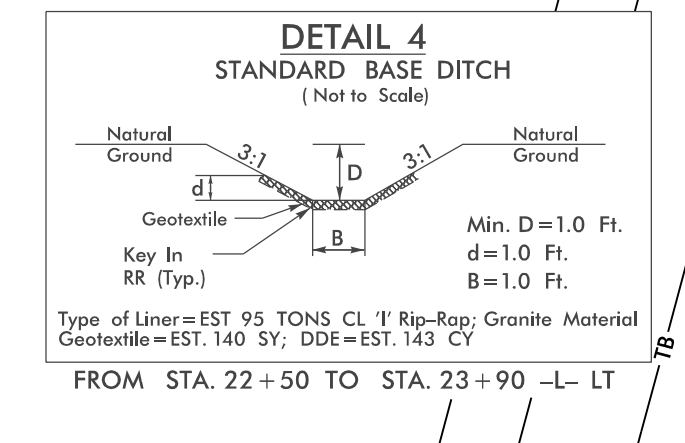
FROM STA. 17+00 TO STA. 23+25 -L- LT
 FROM STA. 27+81 TO STA. 34+27 -L- LT
 FROM STA. 35+92 TO STA. 40+00 -L- LT
 FROM STA. 10+00 TO STA. 12+18 -DRV- LT
 FROM STA. 10+00 TO STA. 12+18 -DRV- RT



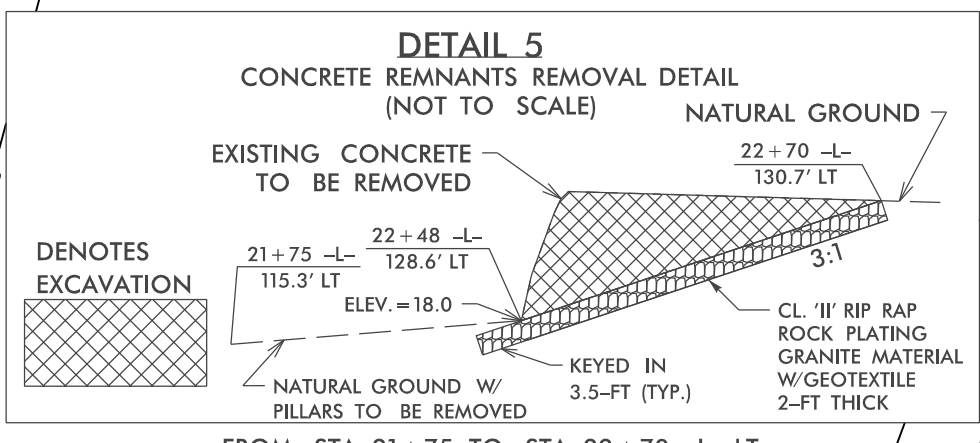
FROM STA. 16+10 TO STA. 18+43 -L- RT



FROM STA. 21+00 TO STA. 22+50 -L- LT



FROM STA. 22+50 TO STA. 23+90 -L- LT



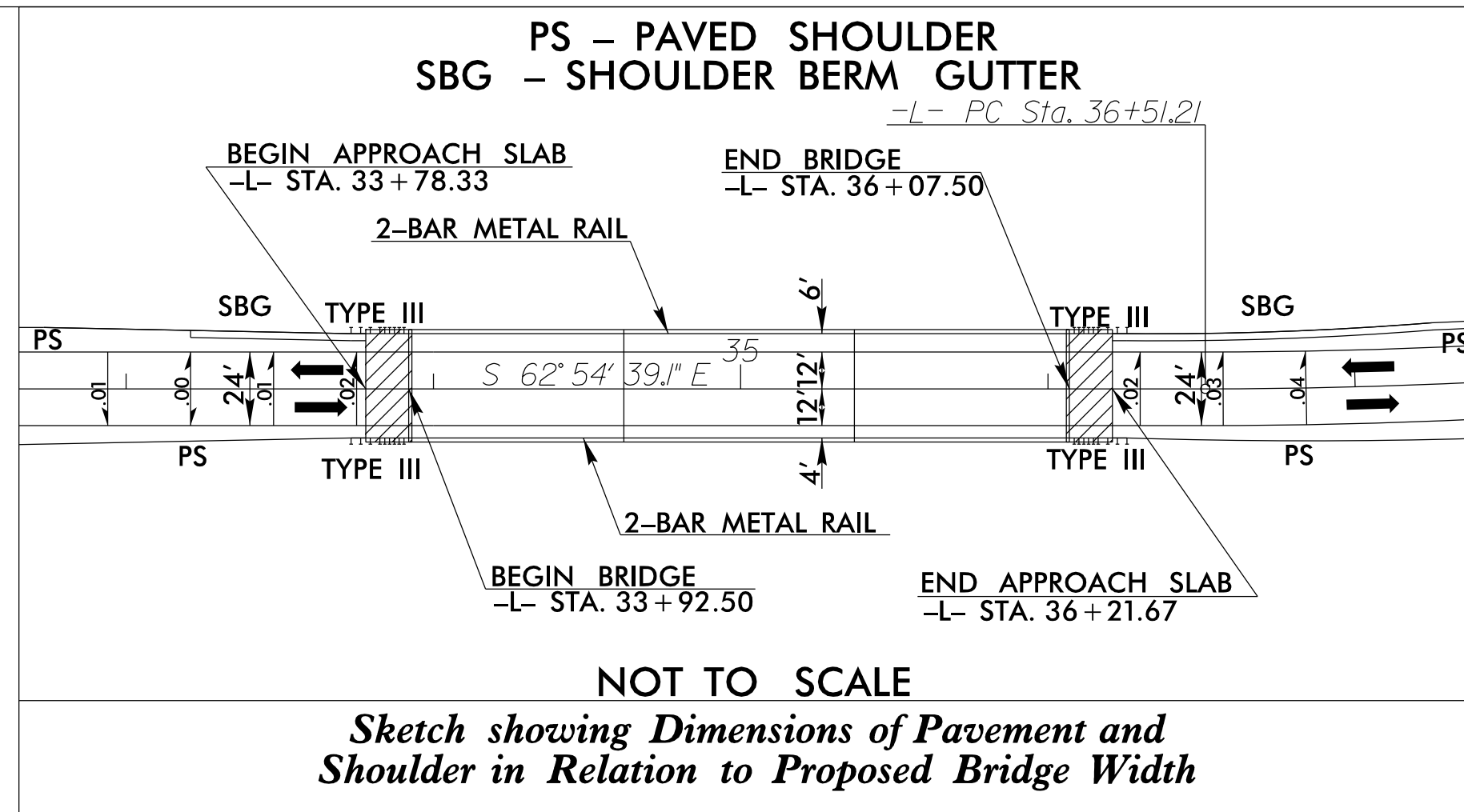
FROM STA. 21+75 TO STA. 22+70 -L- LT

PROVIDE CLASS 'II' RIP RAP ROCK PLATING (GRANITE) ON ALL SLOPES STEEPER THAN 3:1 OR AS INDICATED ON THE PLANS. 2-FIT THICK TO SHOULDER POINT. REFER TO STANDARD ROCK PLATING DETAIL (STD 275.01)

SEE SHEET 6 FOR -L- PROFILE
 SEE SHEET 7 FOR -DRV- PROFILE

4
 CONSERVATION EASEMENT
 NORTH CAROLINA WILDLIFE HABITAT FOUNDATION
 MARK T. SCHOLER
 DB 1408 PG 452
 DB 1489 PG 253
 DB 1572 PG 534
 PB 9 PG 356

6/2/99



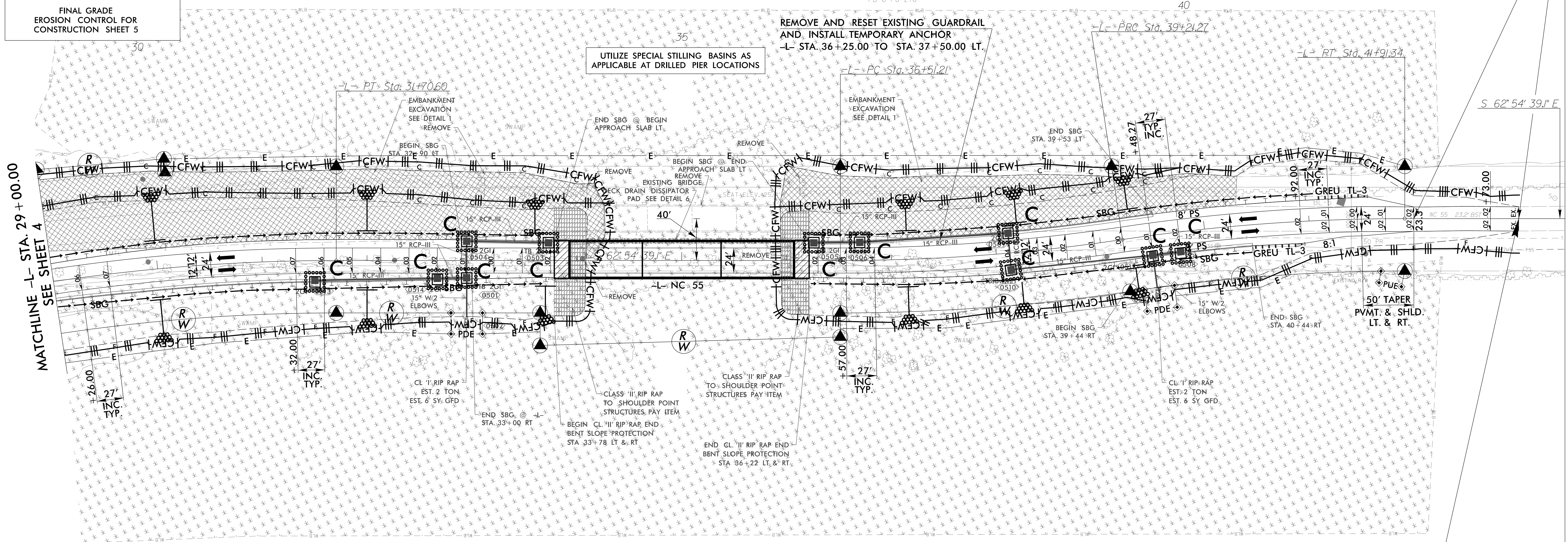
-L-		
PI Sta 30+02.07	PI Sta 37+86.49	PI Sta 40+56.55
$\Delta = 10' 38" 32.4" (RT)$	$\Delta = 8' 30" 06.8" (LT)$	$\Delta = 8' 30" 06.8" (RT)$
$D = 3' 08" 53.2"$	$D = 3' 08" 53.2"$	$D = 3' 08" 53.2"$
$L = 338.05'$	$L = 270.06'$	$L = 270.06'$
$T = 169.51'$	$T = 135.28'$	$T = 135.28'$
$R = 1,820.00'$	$R = 1,820.00'$	$R = 1,820.00'$
$SE = .07$	*SE = SEE PLANS	*SE = SEE PLANS
$RO = 189'$		

*DESIGN EXCEPTION REQUIRED FOR SUPERELEVATION.

NOTE: ALL RIP RAP TO BE GRANITE MATERIAL

BRIDGE #34: 6" DIAMETER CIRCULAR DECK DRAINS REQUIRED SPACED 12" O.C. FROM -L- STA. 34+09 TO STA. 36+01 LT

FINAL GRADE EROSION CONTROL FOR CONSTRUCTION SHEET 5



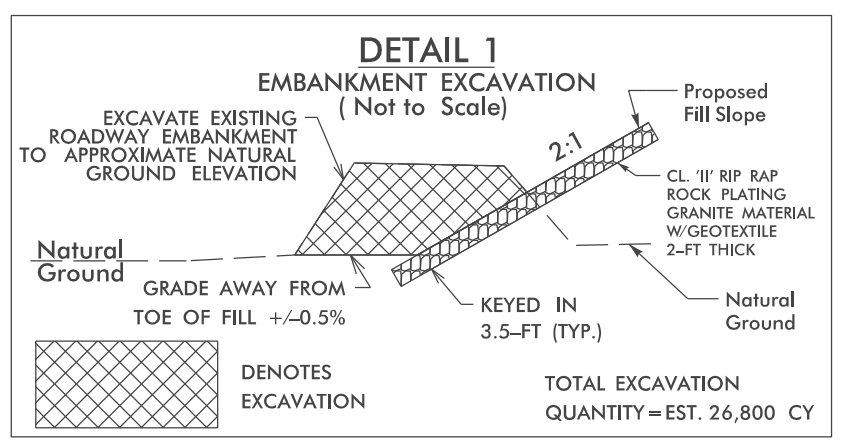
MATCHLINE -L- STA. 29+00.00 SEE SHEET 4

END PAVING/MILLING -L- STA. 43+00.00

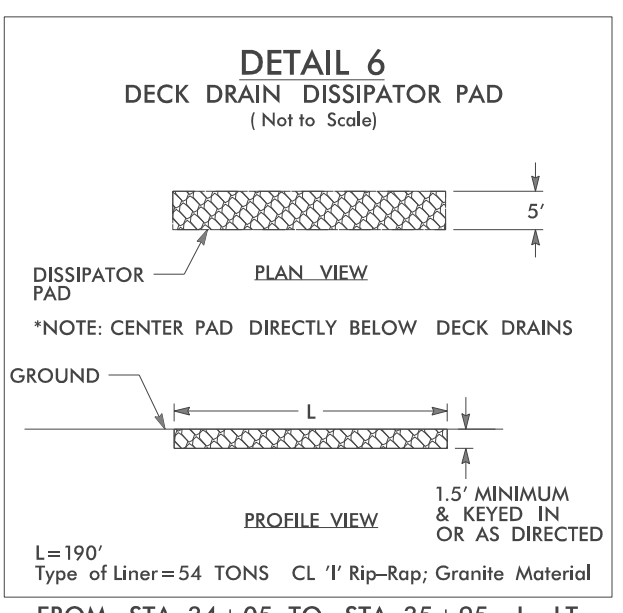
END GRADE -L- STA. 42+00.00

4

END TIP PROJECT B-4926 -L- STA. 43+00.00



FROM STA. 17+00 TO STA. 23+25 -L- LT
FROM STA. 27+81 TO STA. 34+27 -L- LT
FROM STA. 35+92 TO STA. 40+00 -L- LT
FROM STA. 10+00 TO STA. 12+18 -DRV- LT
FROM STA. 10+00 TO STA. 12+18 -DRV- RT



NOTE: GUARDRAIL TRANSITIONS WITH A 50:1 TAPER TO MATCH BRIDGE OFFSETS. SEE TMP PLANS FOR SHORING LOCATIONS.

PROVIDE CLASS 'II' RIP RAP ROCK PLATING (GRANITE) ON ALL SLOPES STEEPER THAN 3:1 OR AS INDICATED ON THE PLANS. 2-FT THICK TO SHOULDER POINT. REFER TO STANDARD ROCK PLATING DETAIL (STD 275.01)

SEE SHEET 6 FOR -L- PROFILE