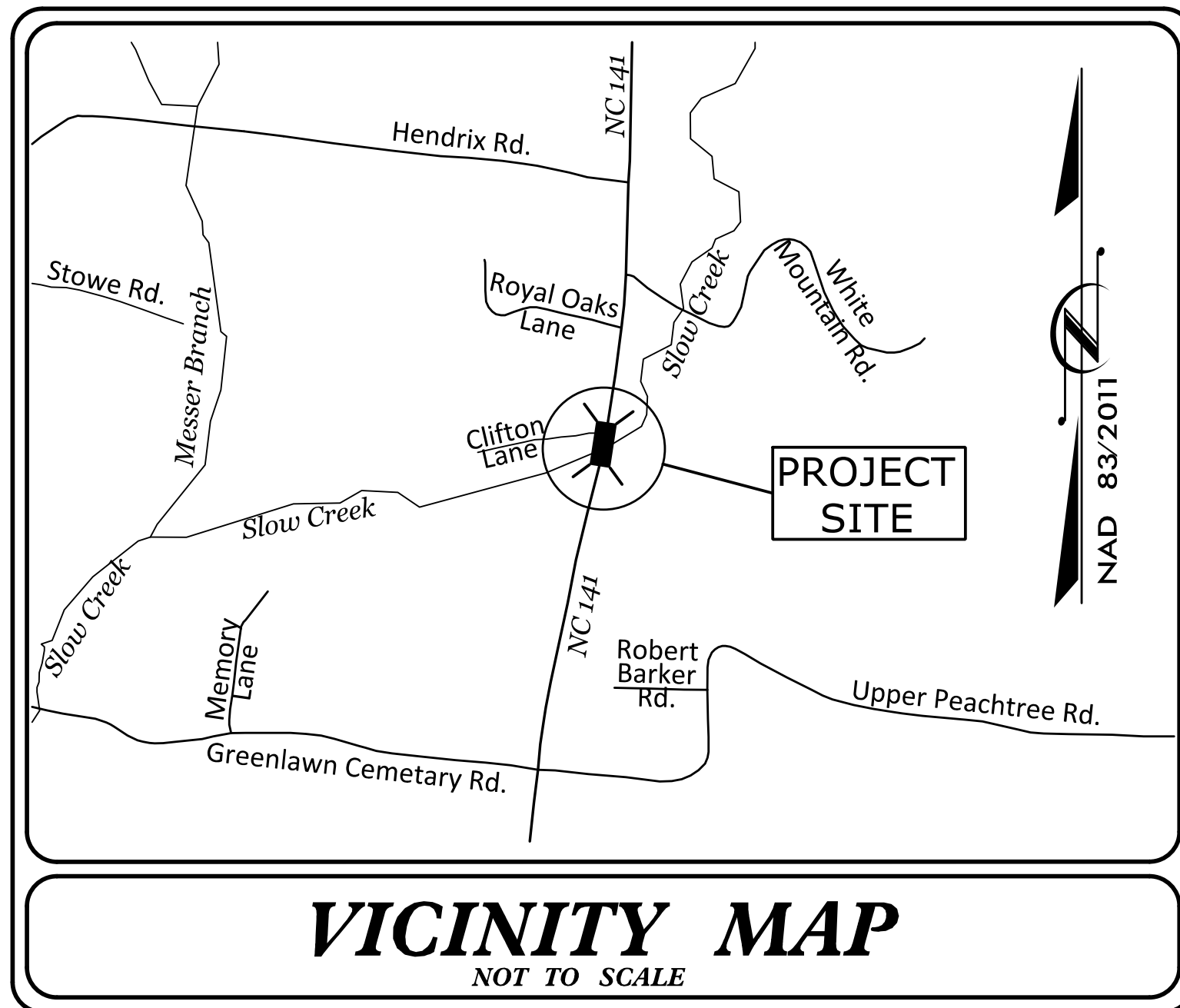


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0011	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
WBS 67011.1.1		PE	

TIP PROJECT: BR-0011



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

LOCATION: BRIDGE 190002 ON NC141 OVER SLOW CREEK

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

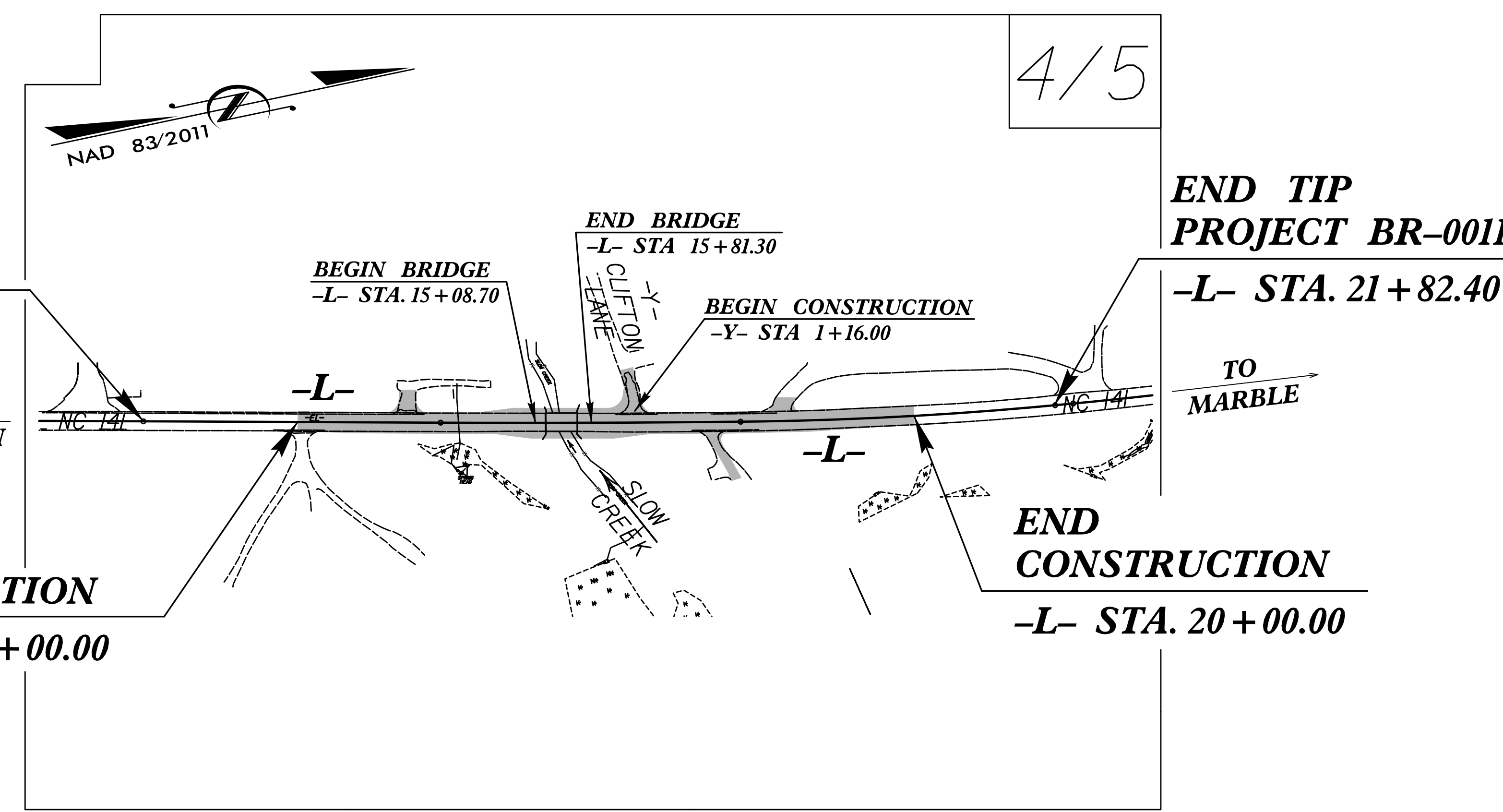
EROSION AND SEDIMENT CONTROL MEASURES

Sed. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	△△△
1622.01	Temporary Berms and Slope Drains	△
1650.02	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▩
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▩
1633.02	Temporary Rock Silt Check Type-B	▩
	Wattle/Coir Fiber Wattle	W
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	W
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:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭

VICINITY MAP
NOT TO SCALE

BEGIN TIP PROJECT BR-0011
-L- STA. 10+00.00

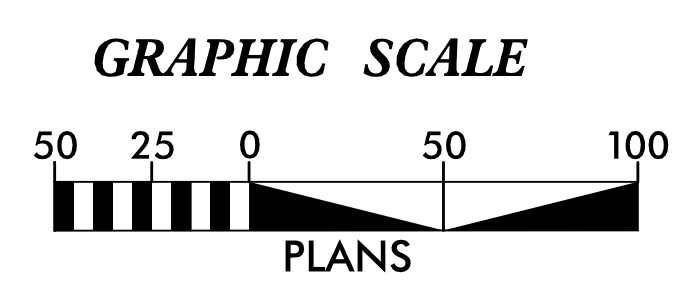
BEGIN CONSTRUCTION
-L- STA. 12+00.00



END TIP PROJECT BR-0011
-L- STA. 21+82.40

END CONSTRUCTION
-L- STA. 20+00.00

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



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.



Prepared In the Office of:
VHB ENGINEERING NC, P.C.
940 MAIN CAMPUS DRIVE, SUITE 500
RALEIGH, NC 27606

Designed by:
REID ROBOL 3409
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

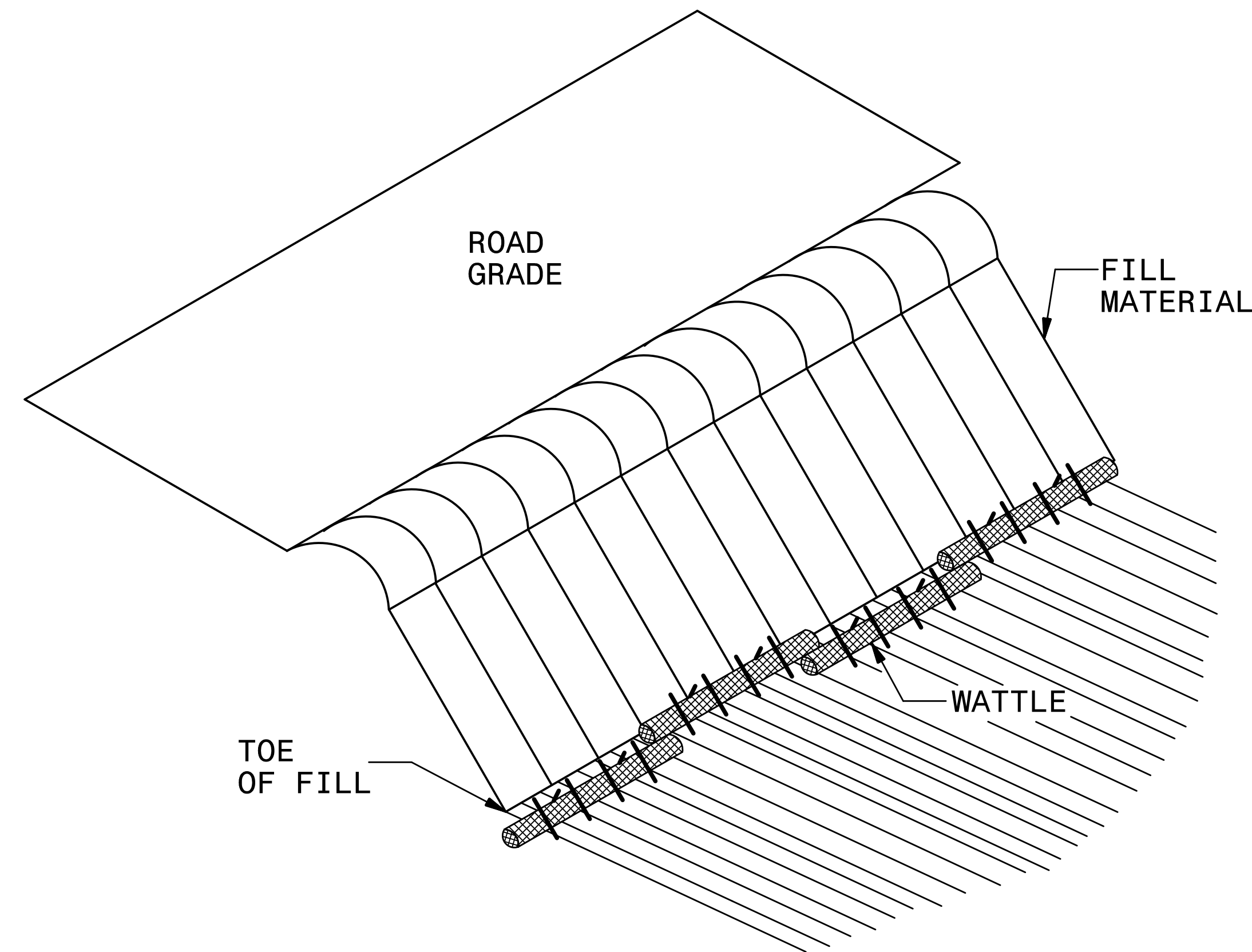
The following roadway English standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

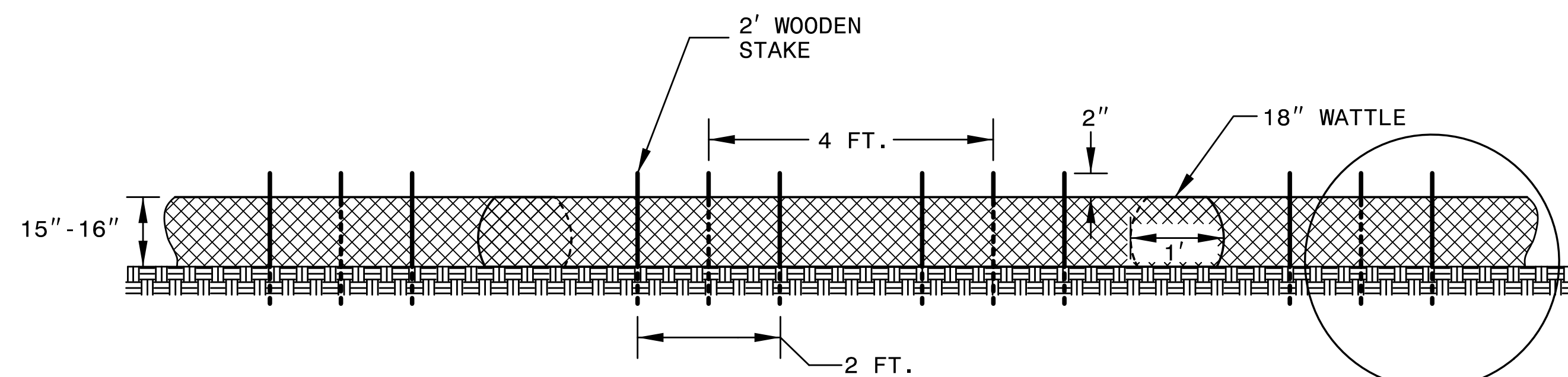
R:\Environ\BR-0011\REU_tah.dgn

PROJECT REFERENCE NO. <i>BR-0011</i>	SHEET NO. <i>EC-2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW



FRONT VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

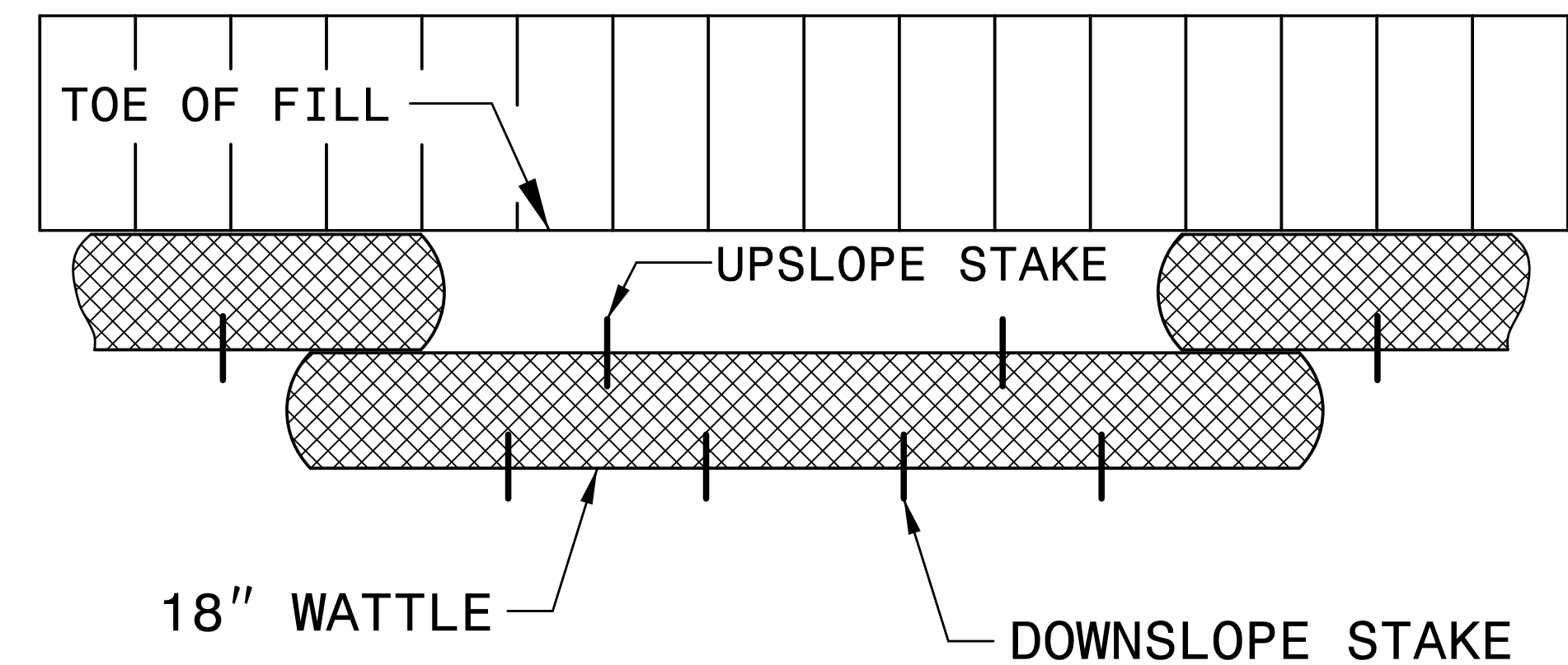
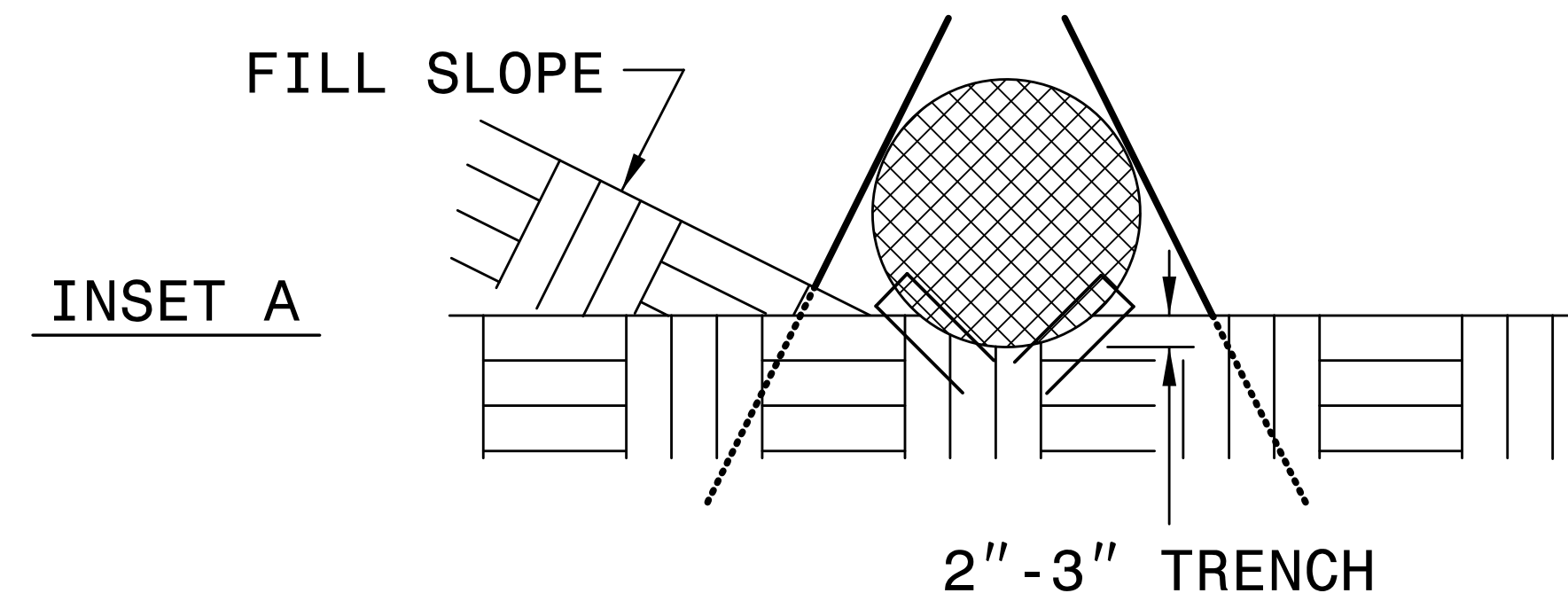
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

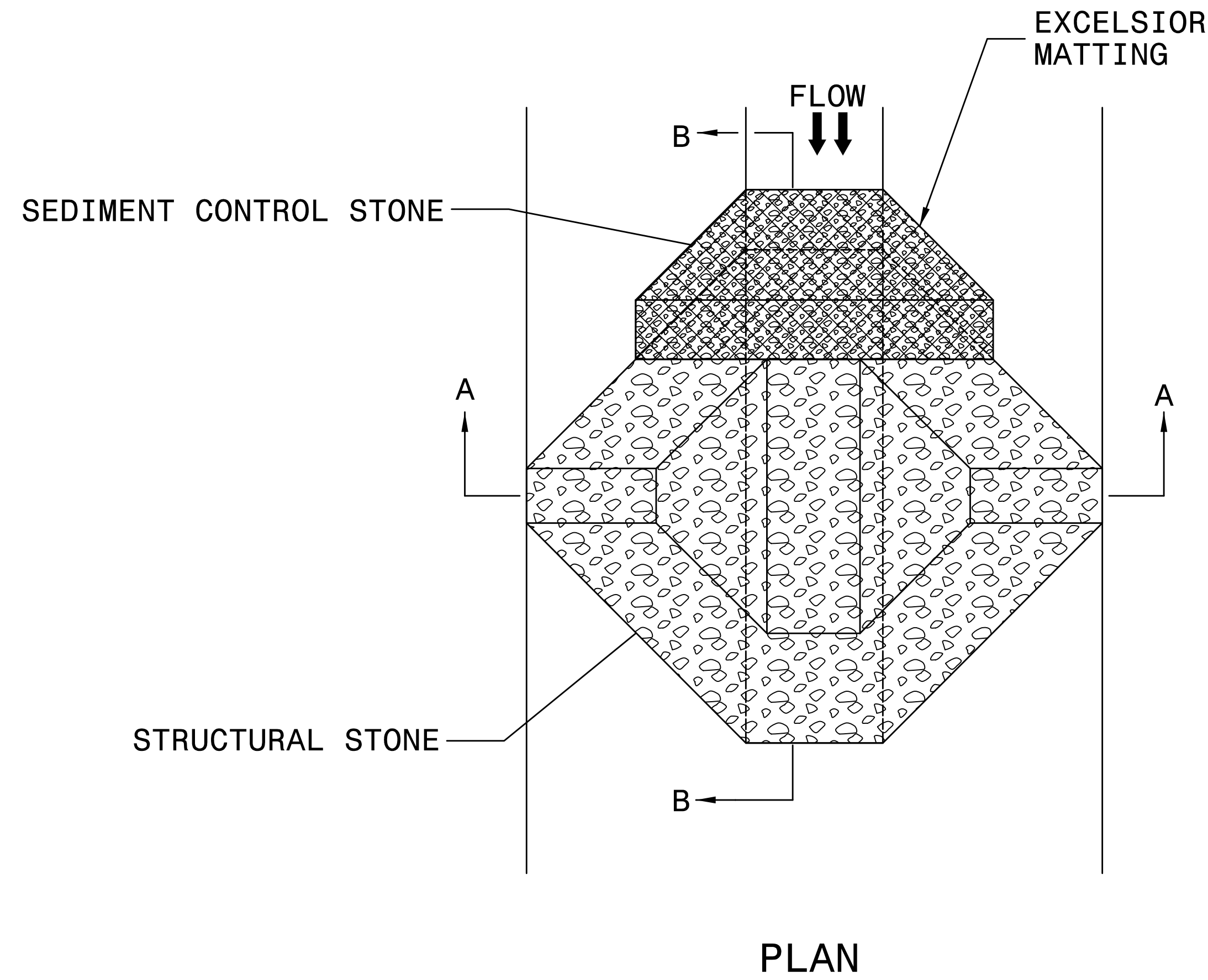
FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.



TOP VIEW

PROJECT REFERENCE NO. <i>BR-0011</i>	SHEET NO. <i>EC-2</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



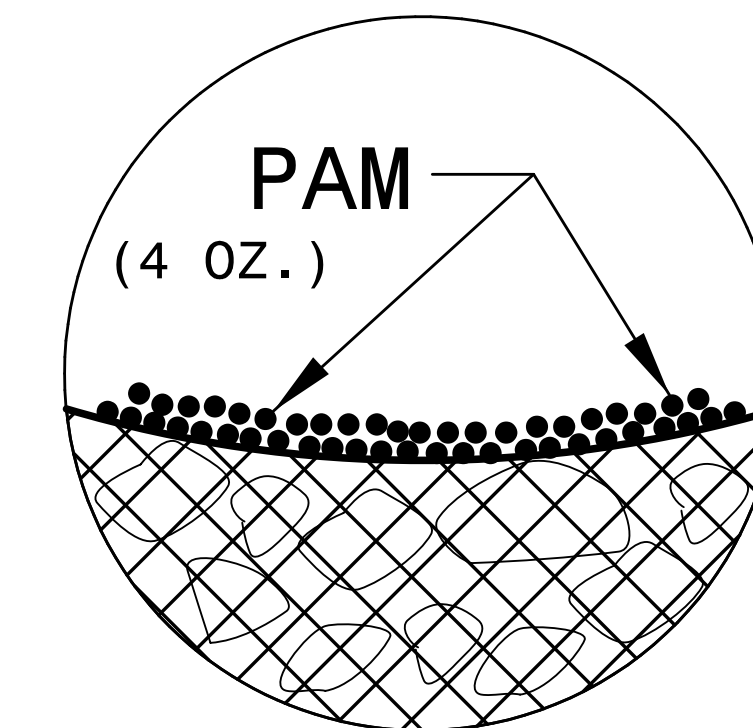
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

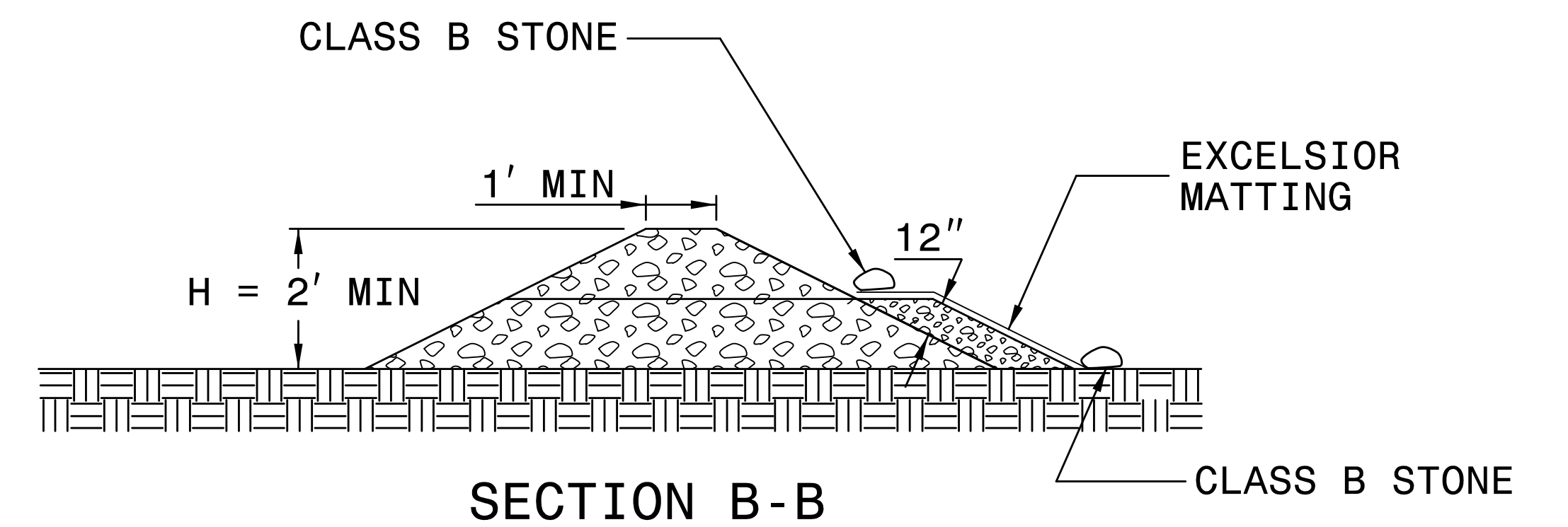
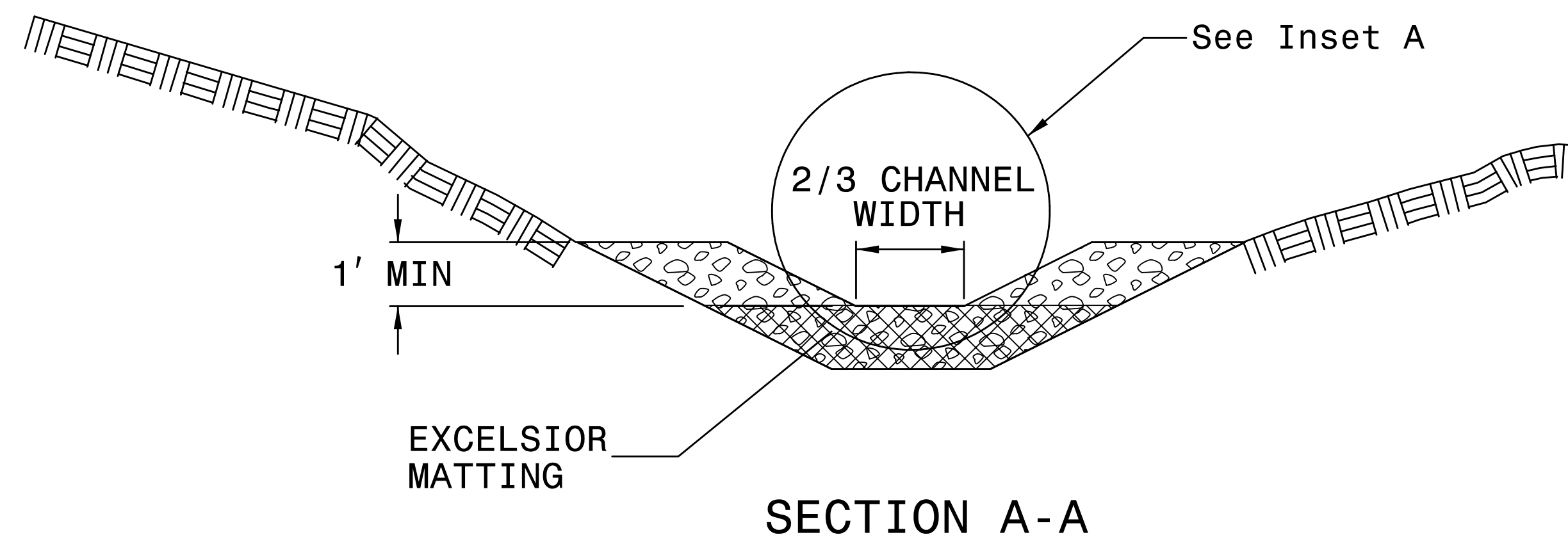
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

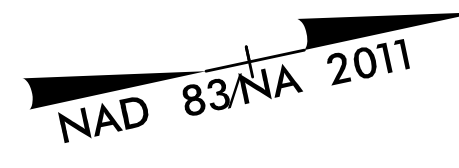
PROJECT REFERENCE NO. <i>BR-0011</i>	SHEET NO. <i>EC-03</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

1/25/2021

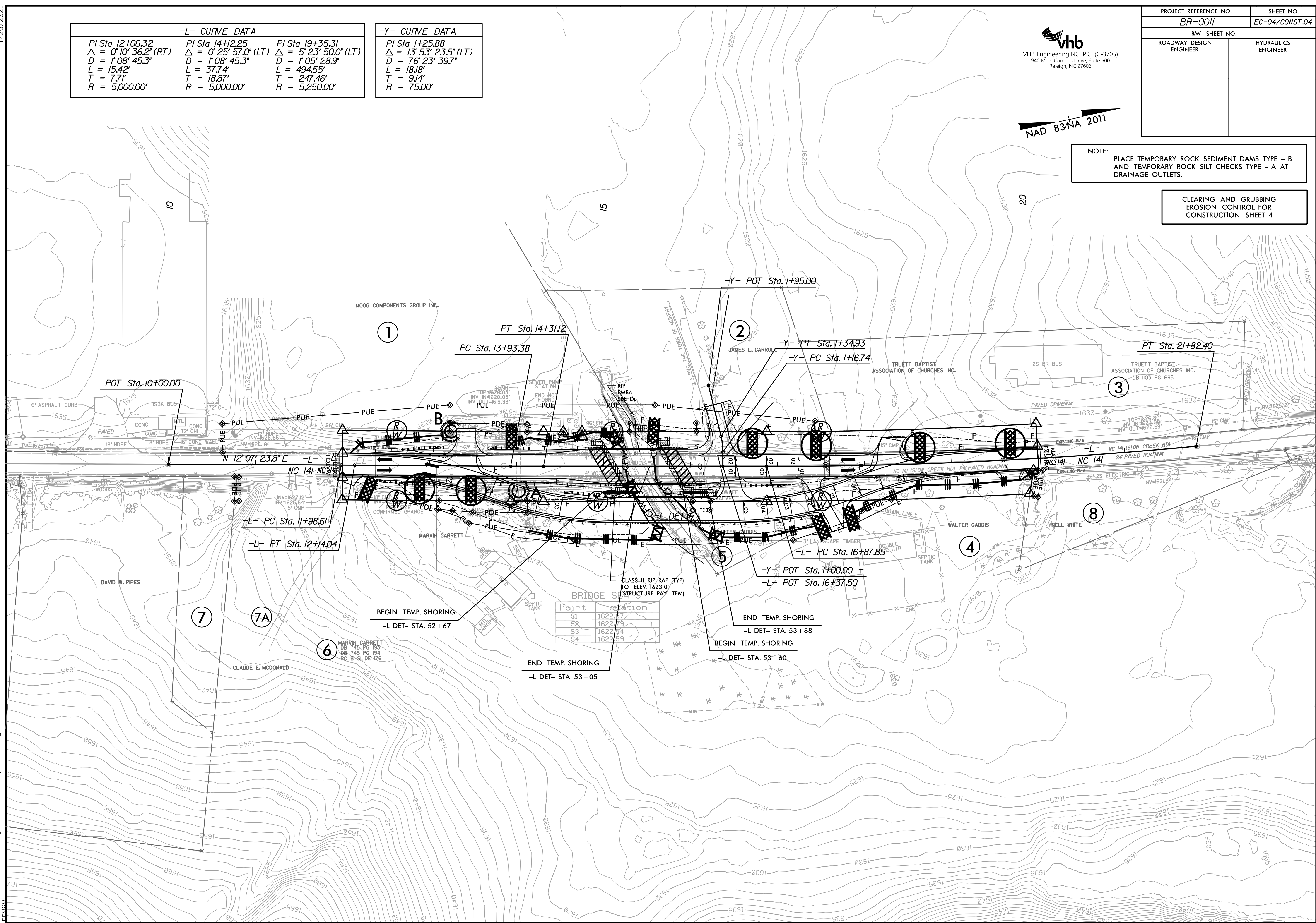
PROJECT REFERENCE NO.	SHEET NO.
BR-0011	EC-04/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-L- CURVE DATA			-Y- CURVE DATA		
PI Sta 12+06.32	PI Sta 14+12.25	PI Sta 19+35.31	PI Sta 1+25.88		
$\Delta = 0^{\circ} 10' 36.2''$ (RT)	$\Delta = 0^{\circ} 25' 57.0''$ (LT)	$\Delta = 5^{\circ} 23' 50.0''$ (LT)	$\Delta = 13^{\circ} 53' 23.5''$ (LT)		
$D = 1^{\circ} 08' 45.3''$	$D = 1^{\circ} 08' 45.3''$	$D = 1^{\circ} 05' 28.9''$	$D = 76^{\circ} 23' 39.7''$		
$L = 15.42'$	$L = 37.74'$	$L = 494.55'$	$L = 18.18'$		
$T = 7.71'$	$T = 18.87'$	$T = 247.46'$	$T = 9.14'$		
$R = 5,000.00'$	$R = 5,000.00'$	$R = 5,250.00'$	$R = 75.00'$		

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 4

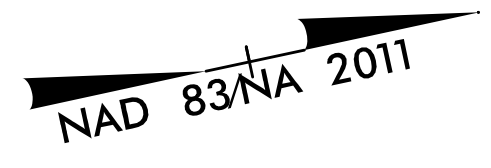


Point	Elevation
S1	1622.77
S2	1622.79
S3	1622.74
S4	1622.59

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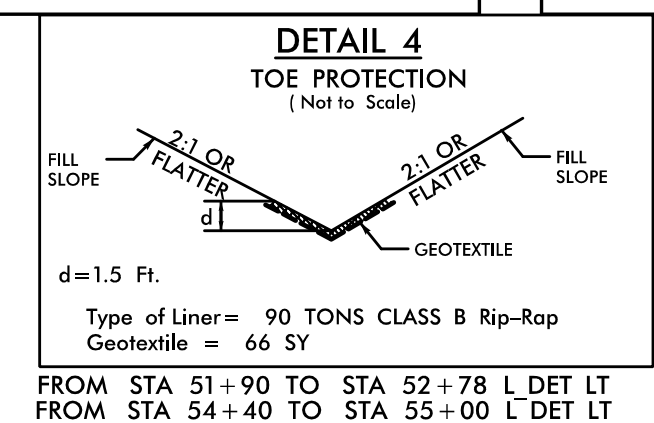
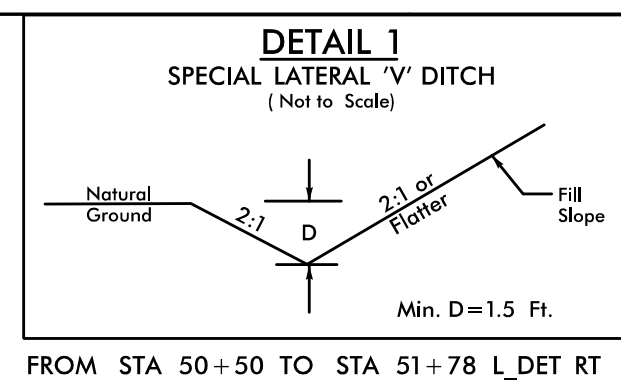
1/25/2021

PROJECT REFERENCE NO. BR-0011	SHEET NO. EC-05/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



DETOUR

-L_DET- CURVE DATA				-Y_DET- CURVE 1	
PI Sta 50+69.79	PI Sta 52+09.25	PI Sta 54+92.92	PI Sta 56+26.77	PI Sta 5+21.72	
$\Delta = 21^{\circ} 05' 07.1''$ (RT)	$\Delta = 21^{\circ} 30' 43.6''$ (LT)	$\Delta = 22^{\circ} 12' 40.8''$ (LT)	$\Delta = 18^{\circ} 48' 11.0''$ (RT)	$\Delta = 13^{\circ} 53' 23.5''$ (LT)	
D = 15' 16' 43.9"	D = 15' 16' 43.9"	D = 15' 16' 43.9"	D = 15' 16' 43.9"	D = 76' 23' 39.7"	
L = 138.00'	L = 140.80'	L = 145.37'	L = 123.07'	L = 18.18'	
T = 69.79'	T = 71.24'	T = 73.61'	T = 62.09'	T = 9.14'	
R = 375.00'	R = 375.00'	R = 375.00'	R = 375.00'	R = 75.00'	

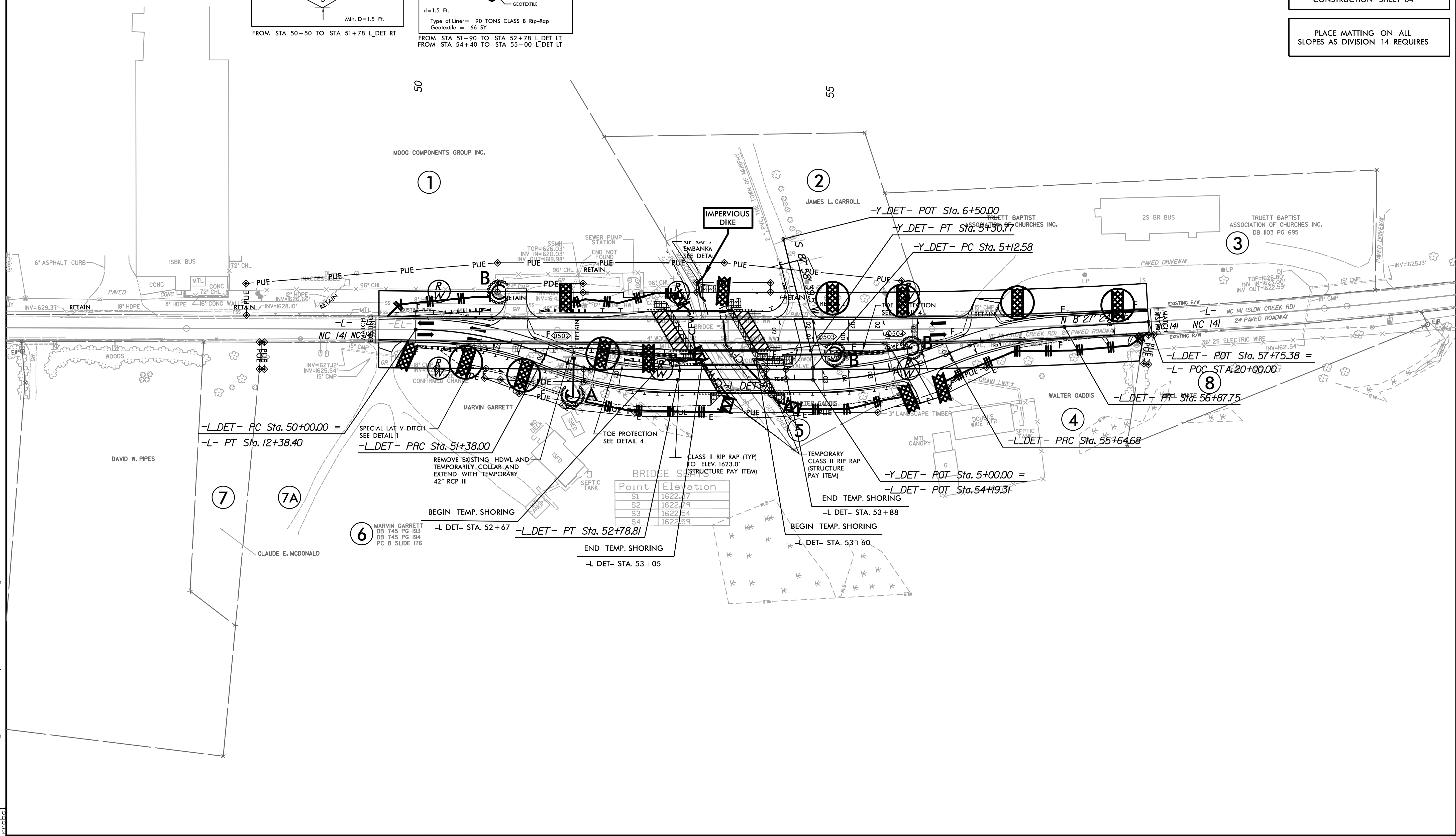


FROM STA 50+50 TO STA 51+78 L_DET RT

FROM STA 51+90 TO STA 52+78 L_DET LT
FROM STA 54+40 TO STA 55+00 L_DET LT

INTERMEDIATE DETOUR PHASE
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

PLACE MATTING ON ALL
SLOPES AS DIVISION 14 REQUIRES



Point	Elevation
S1	1622.57
S2	1622.79
S3	1622.54
S4	1622.59

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1/25/2021

PROJECT REFERENCE NO. BR-0011	SHEET NO. EC-06/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

vhb
 VHB Engineering NC, P.C. (C-3705)
 940 Main Campus Drive, Suite 500
 Raleigh, NC 27606

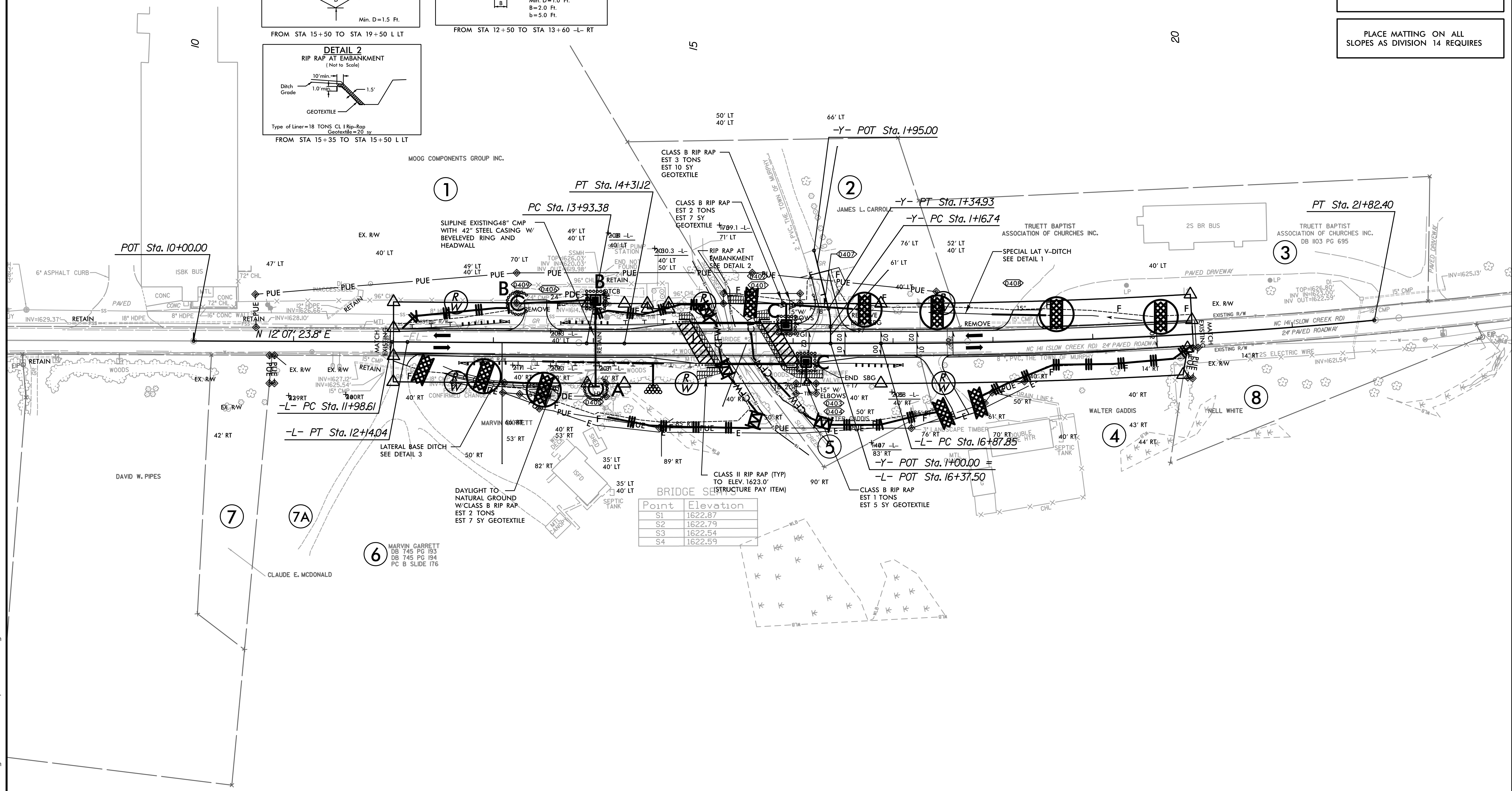
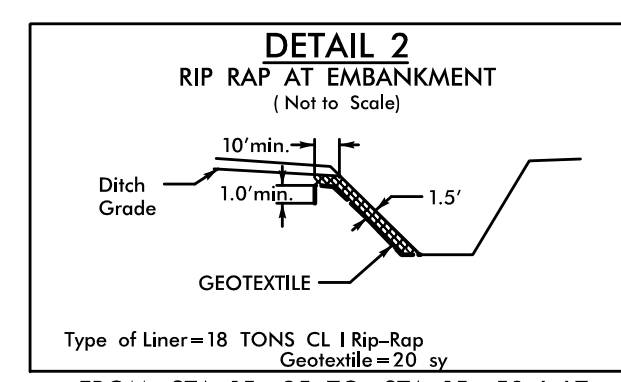
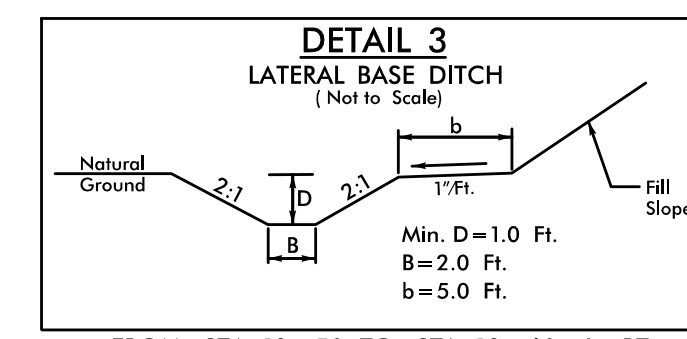
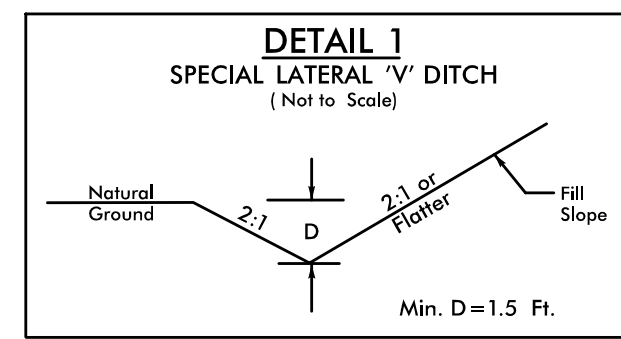
NAD 83/NA 2011

-L- CURVE DATA

PI Sta 12+06.32 Δ = 0° 10' 36.2" (RT) D = 1' 08' 45.3" L = 15.42' T = 7.7' R = 5,000.00'	PI Sta 14+12.25 Δ = 0° 25' 57.0" (LT) D = 1' 08' 45.3" L = 37.74' T = 18.87' R = 5,000.00'	PI Sta 19+35.31 Δ = 5° 23' 50.0" (LT) D = 1' 05' 28.9" L = 494.55' T = 247.46' R = 5,250.00'
---	---	---

-Y- CURVE DATA

PI Sta 1+25.88 Δ = 13° 53' 23.5" (LT) D = 76' 23' 39.7" L = 18.18' T = 9.14' R = 75.00'
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FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 04

PLACE MATTING ON ALL SLOPES AS DIVISION 14 REQUIRES

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