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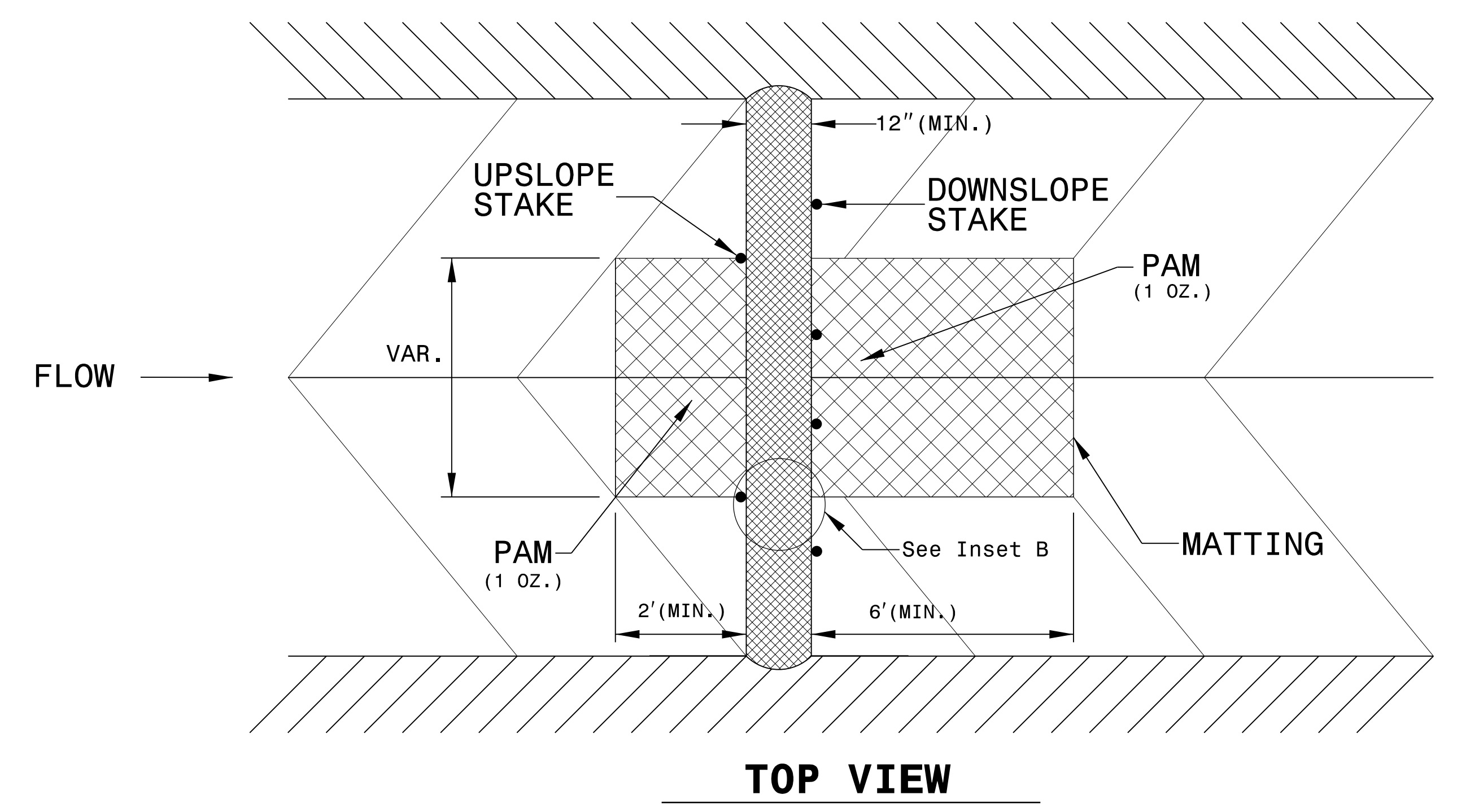
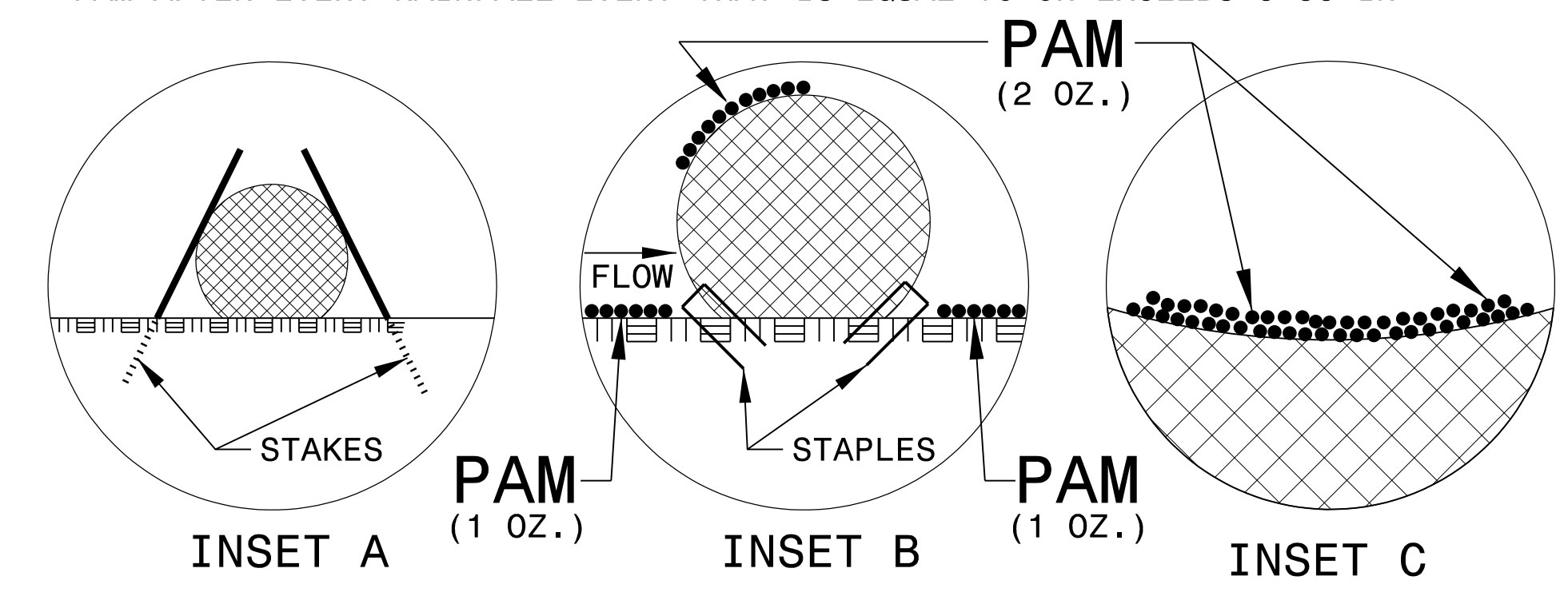
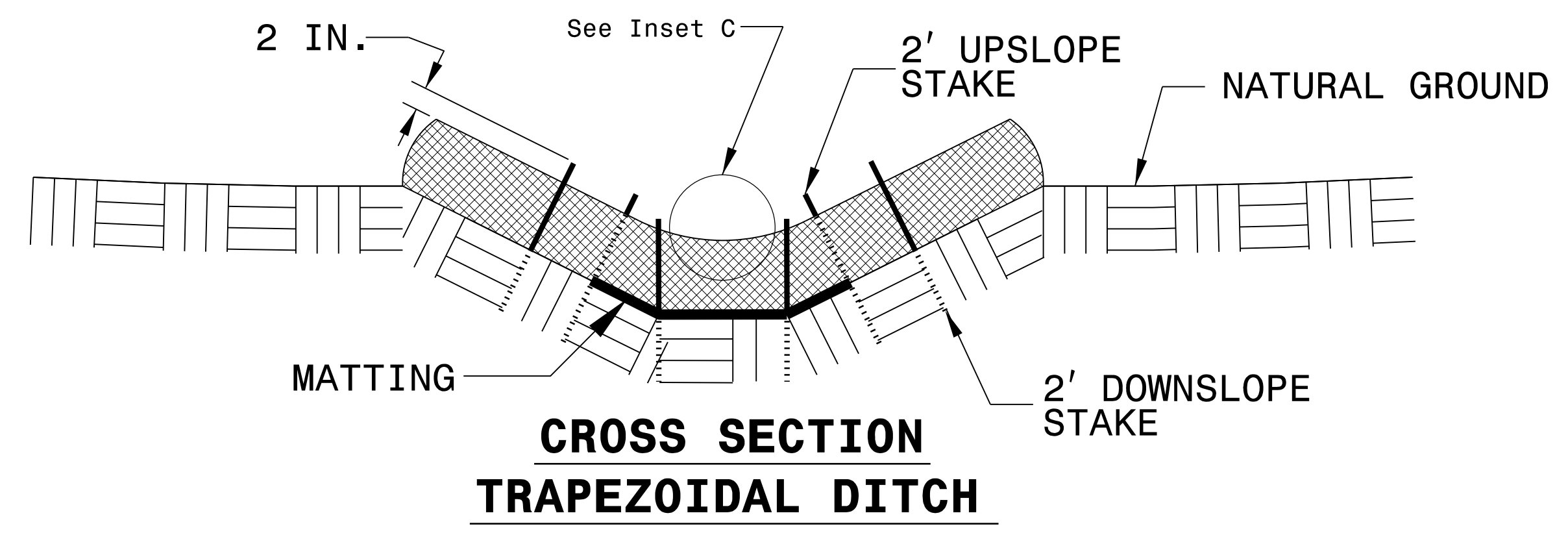
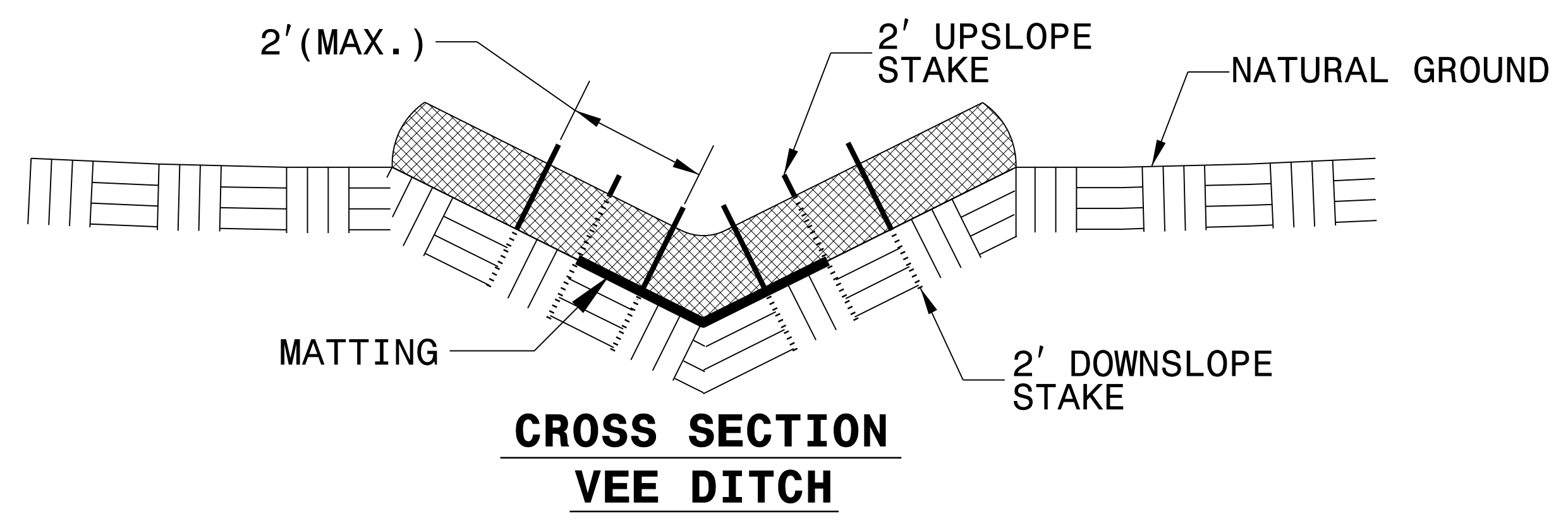
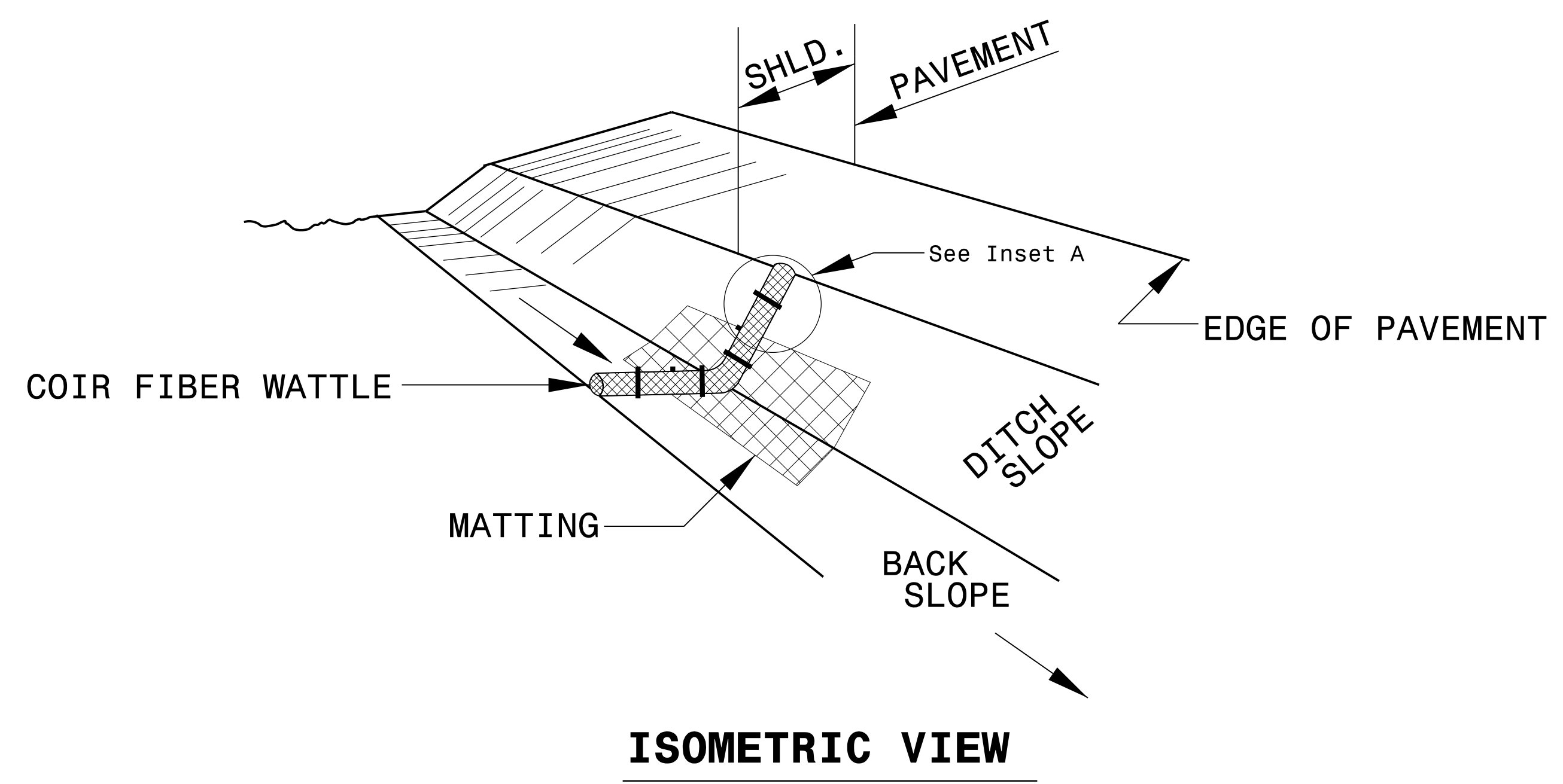
**This file or an individual page
shall not be considered a certified document.**

PROJECT REFERENCE NO. <i>BR-0070</i>	SHEET NO. <i>EC-2</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

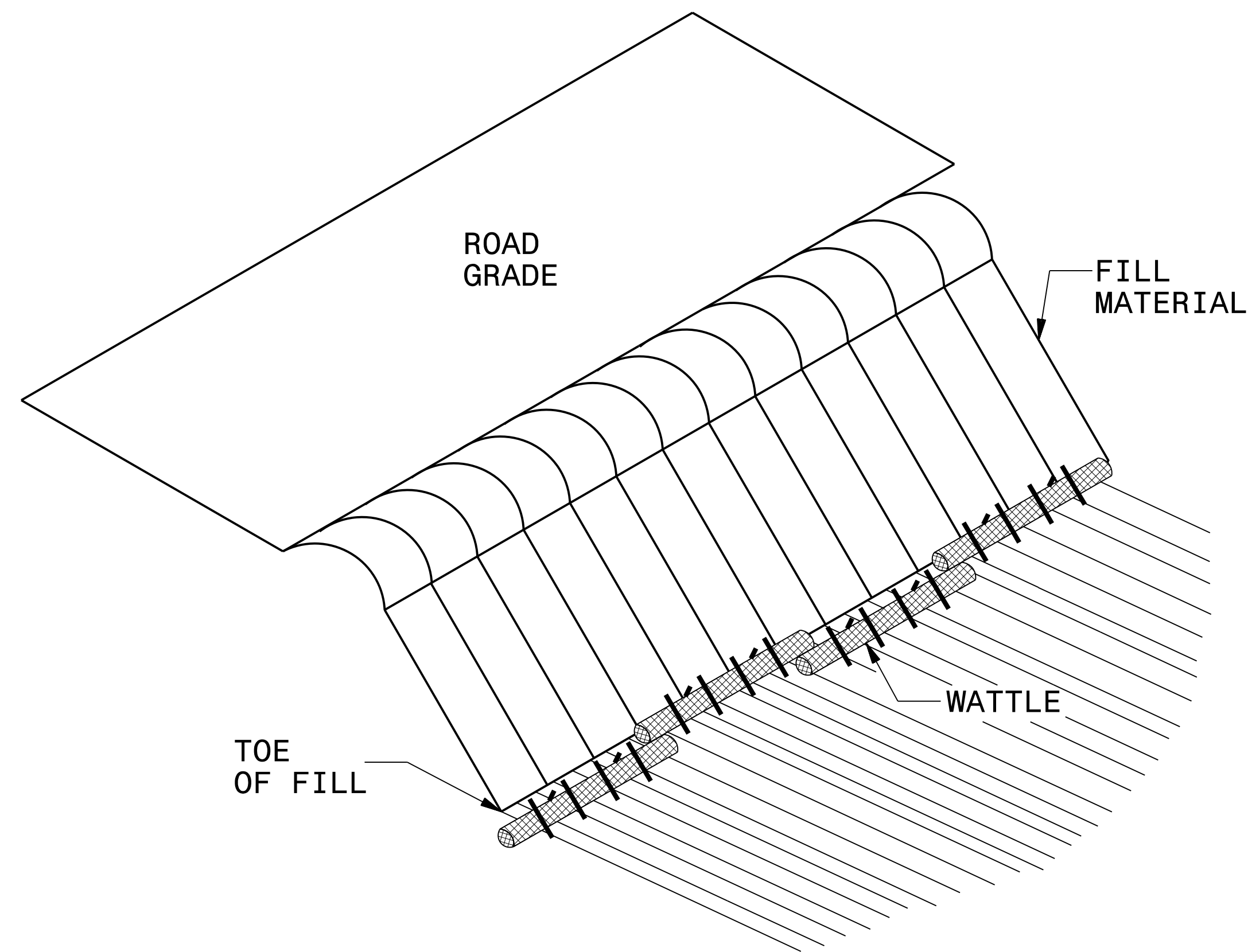
NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- 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.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- 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 WATTLE.
- INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

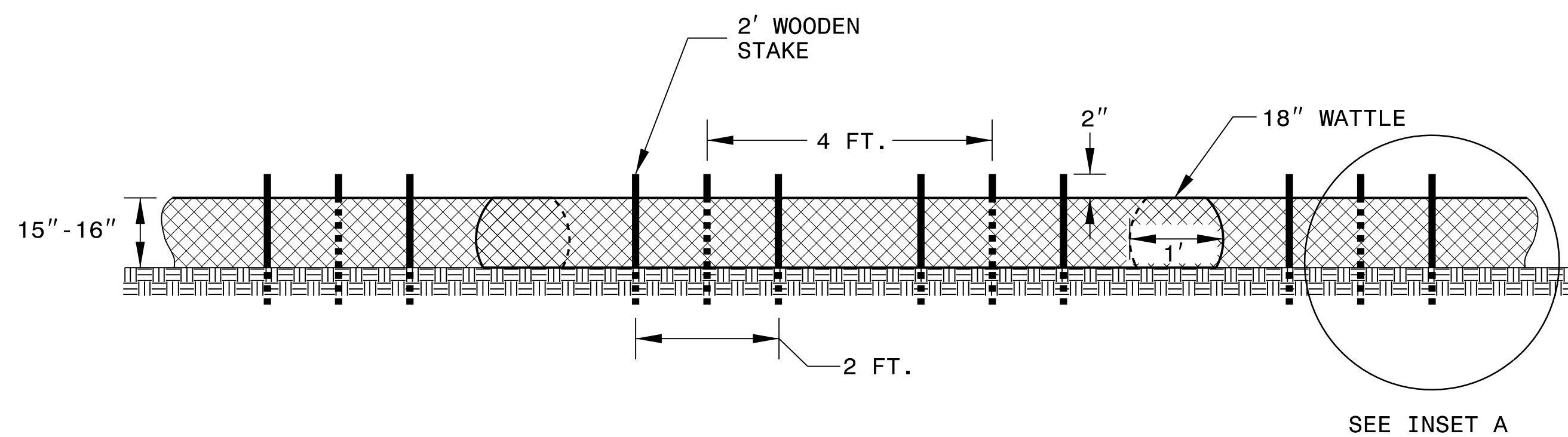


PROJECT REFERENCE NO. <i>BR-0070</i>	SHEET NO. <i>EC-2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



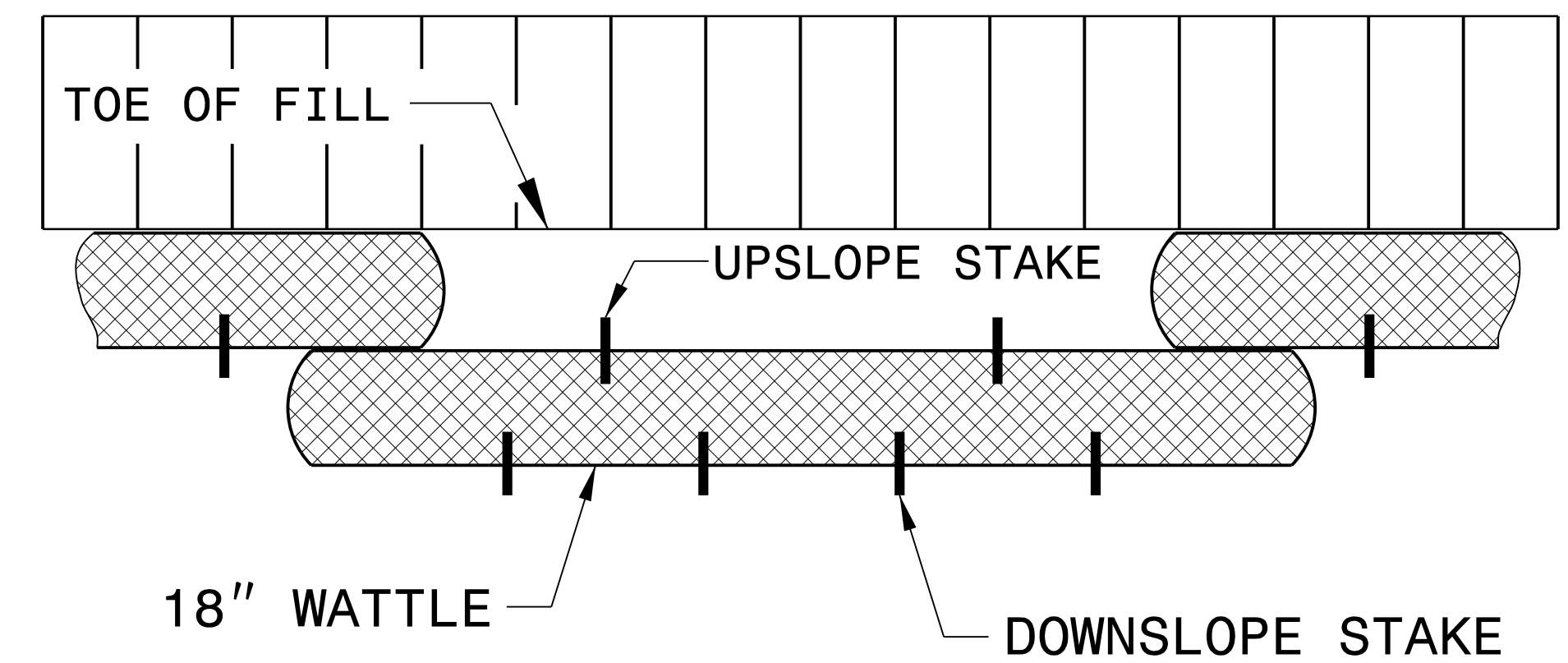
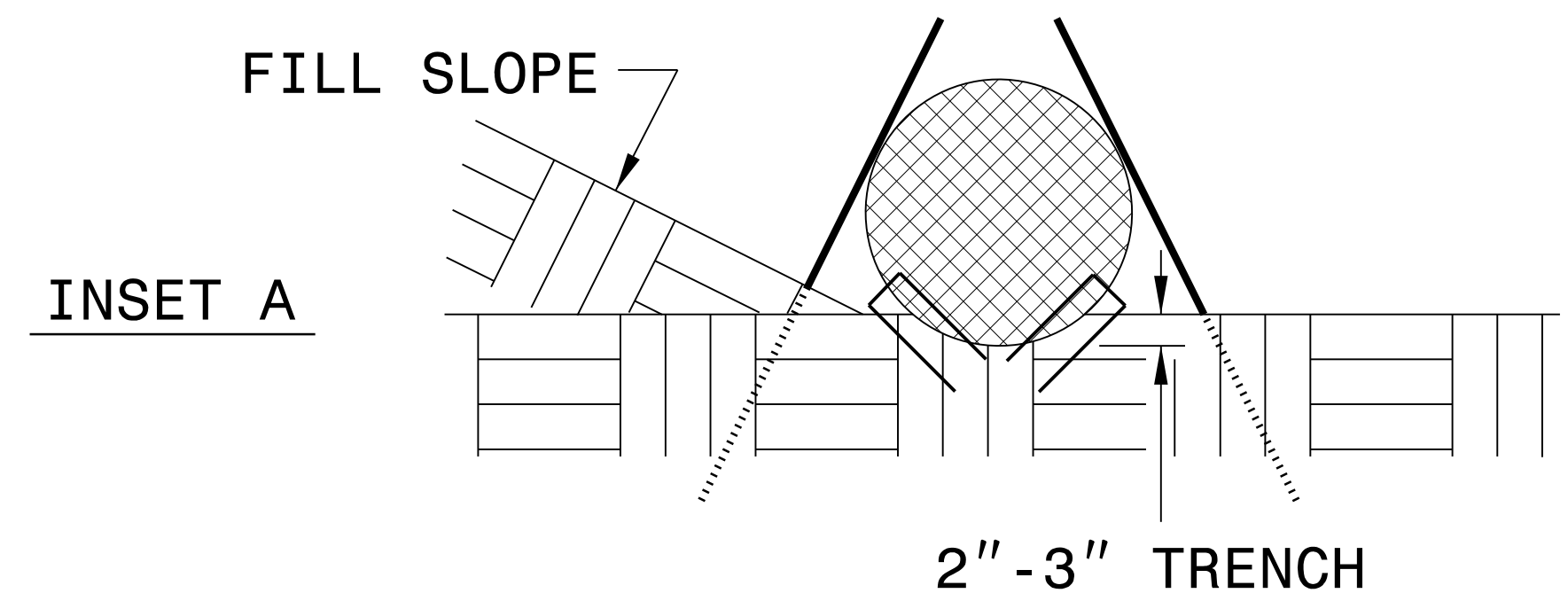
ISOMETRIC VIEW



FRONT VIEW

NOTES:

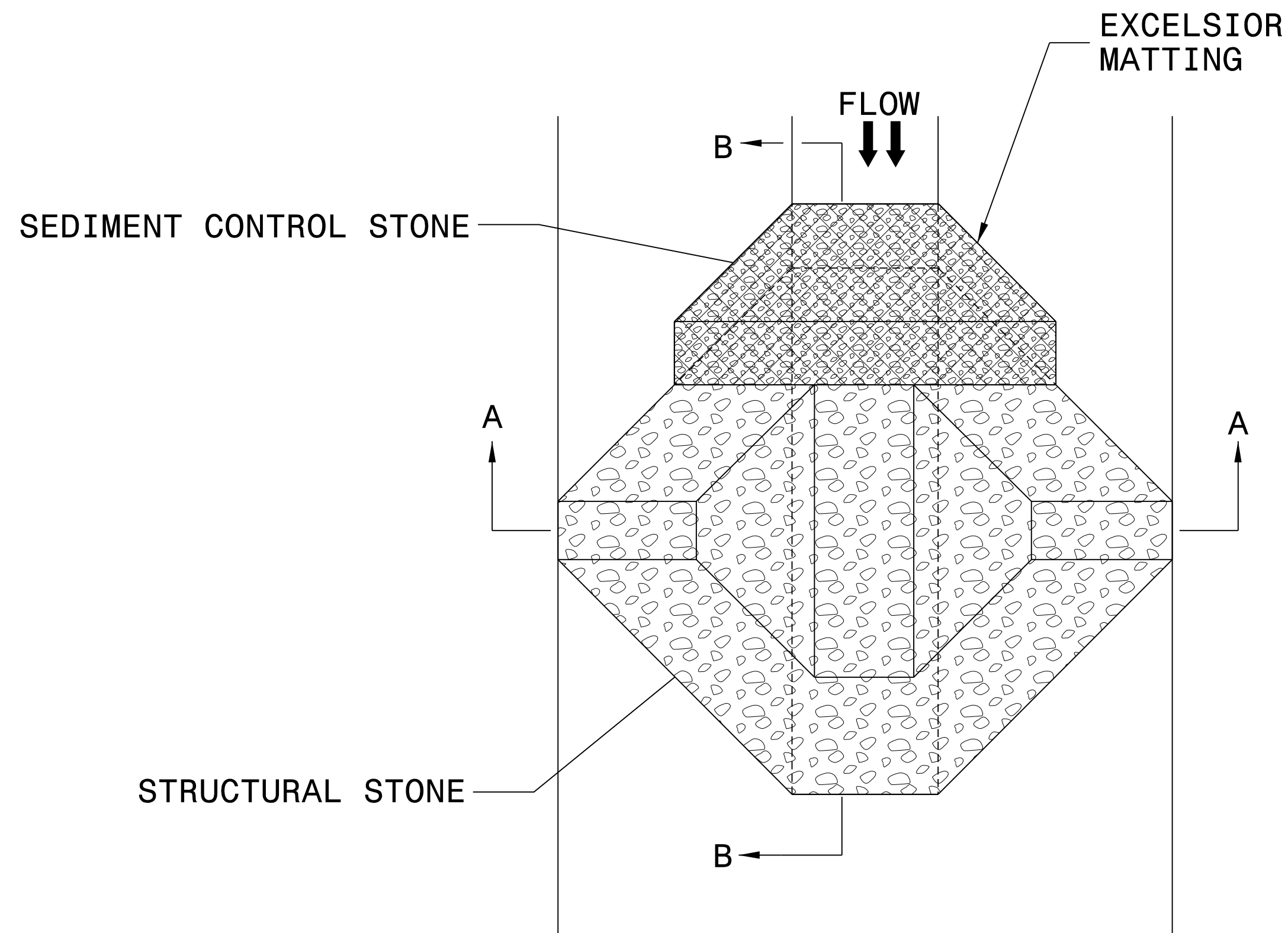
- USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLES ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 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.



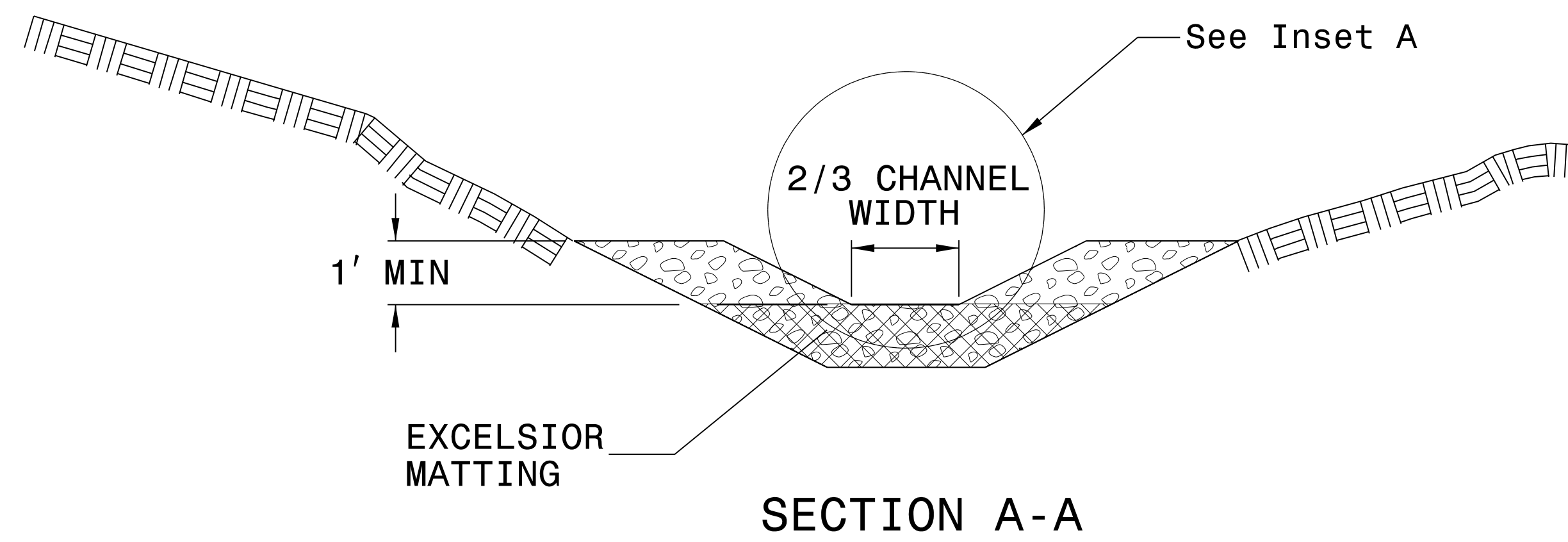
TOP VIEW

PROJECT REFERENCE NO. <i>BR-0070</i>	SHEET NO. <i>EC-2B</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN



SECTION A-A

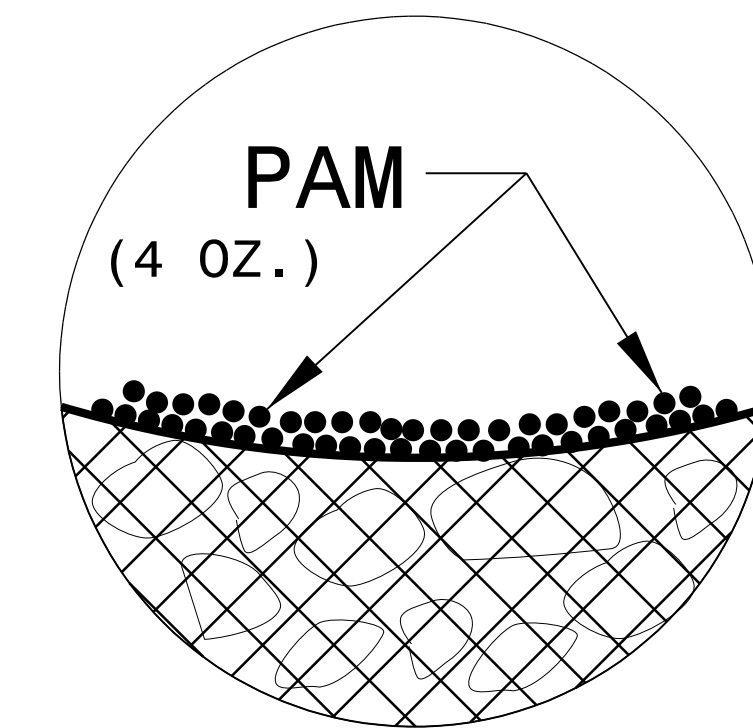
NOTES:

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

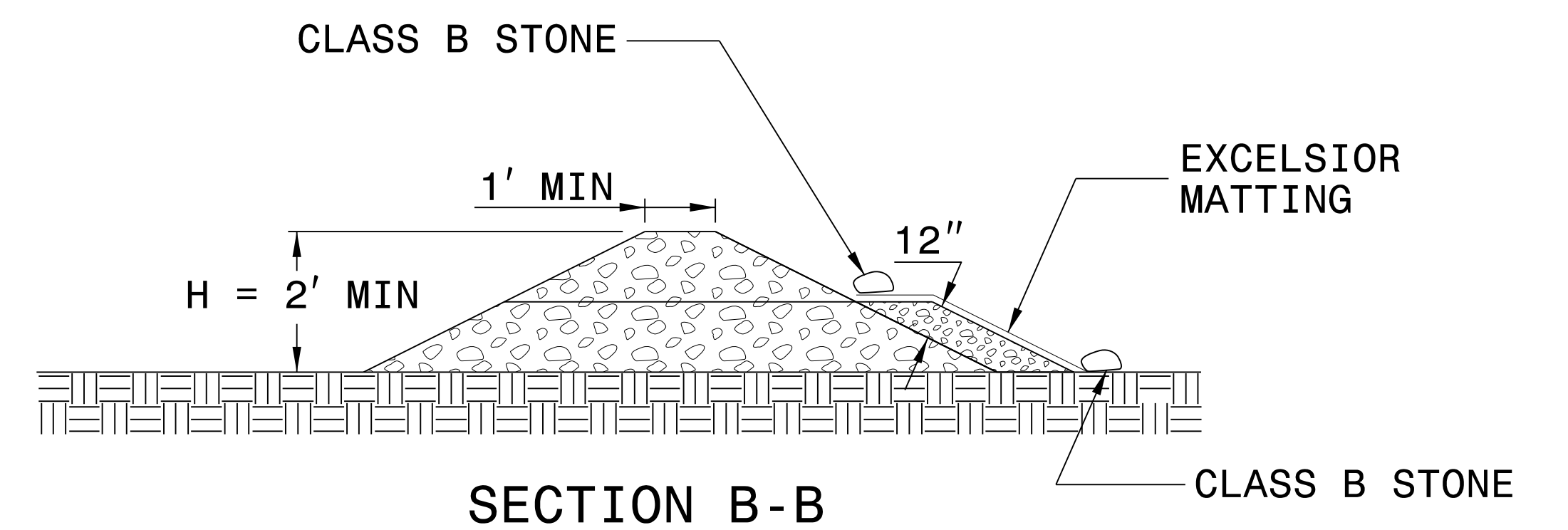
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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



SECTION B-B



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

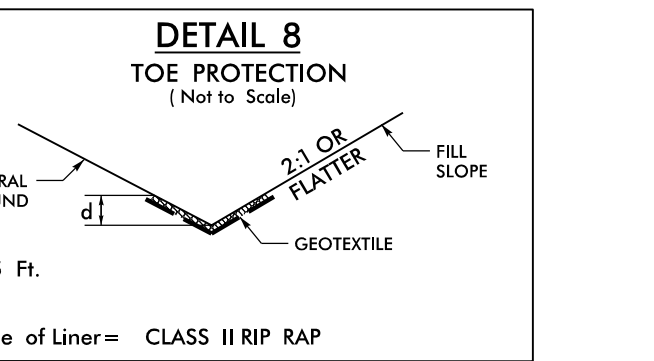
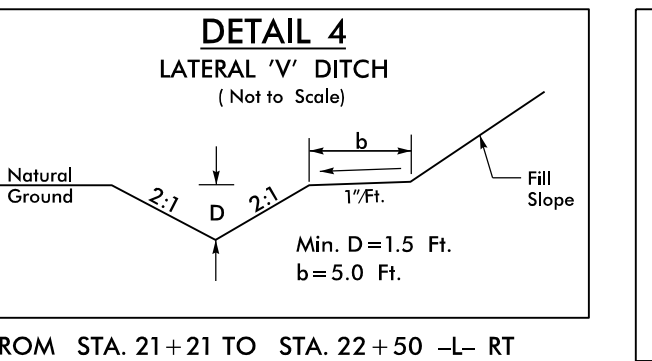
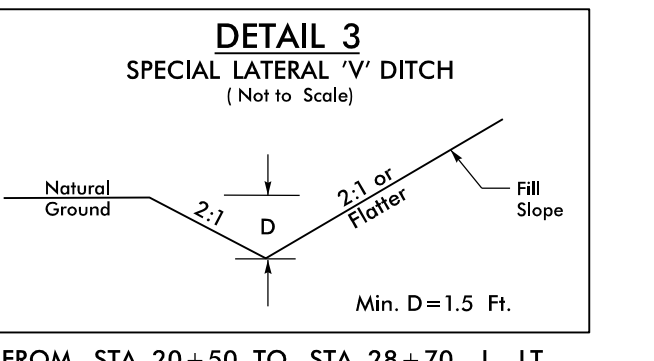
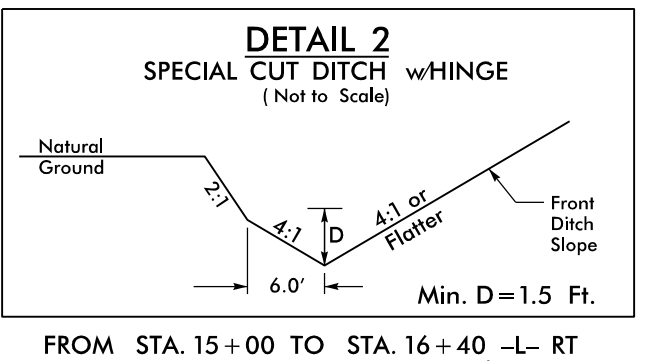
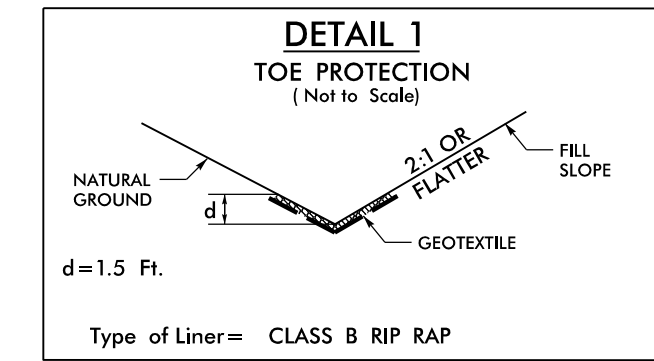
SOIL STABILIZATION TIMEFRAMES

<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.

8.17.99

PROJECT REFERENCE NO. BR-0070	SHEET NO. EC-04/CONST.04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 STEWART	 VHB VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606

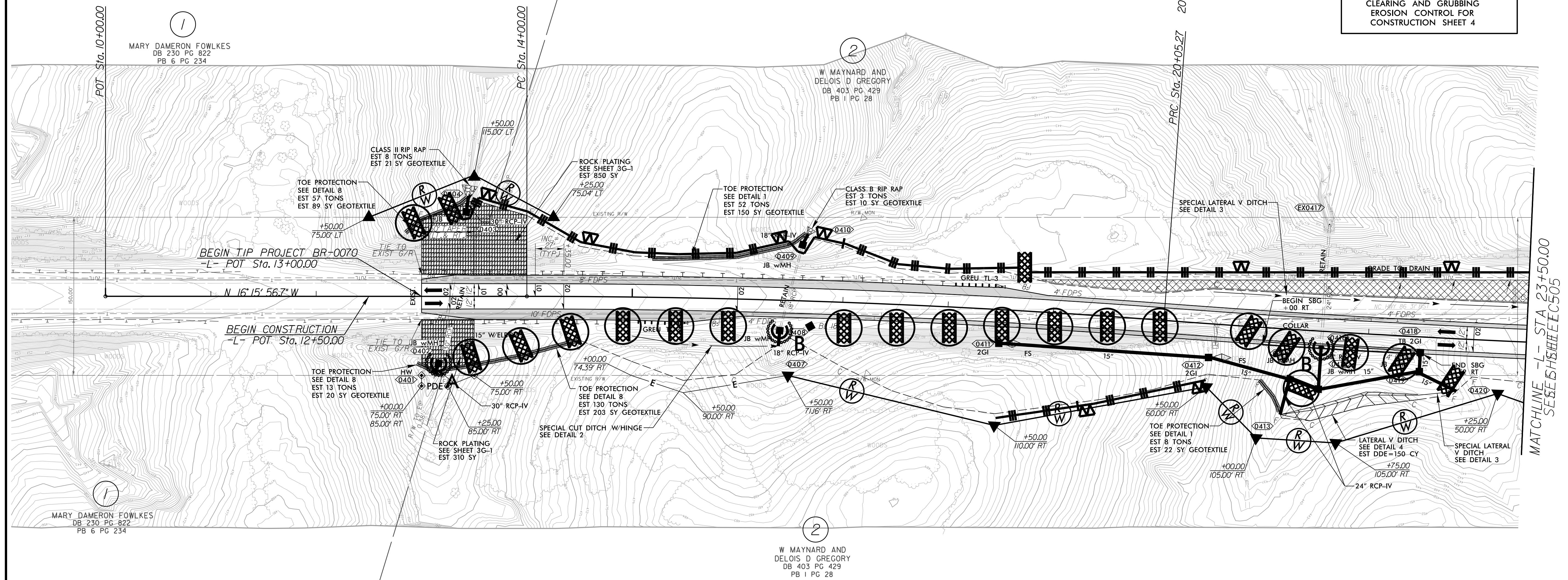
-L-
 PI Sta 17+02.78 Δ = 4' 18" 09.6" (RT)
 D = 0' 42" 39.1" L = 605.27'
 T = 302.78' R = 8,060.00'
 S_e = RC Runoff = 54'
 PI Sta 24+22.25 Δ = 4' 18" 09.6" (LT)
 D = 0' 30" 58.2" L = 833.56'
 T = 416.98' R = 11,000.00'
 S_e = NC



NAD 83 NA 2011

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

CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 4

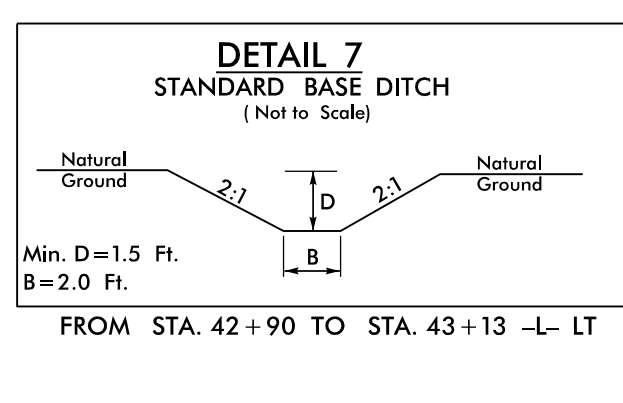
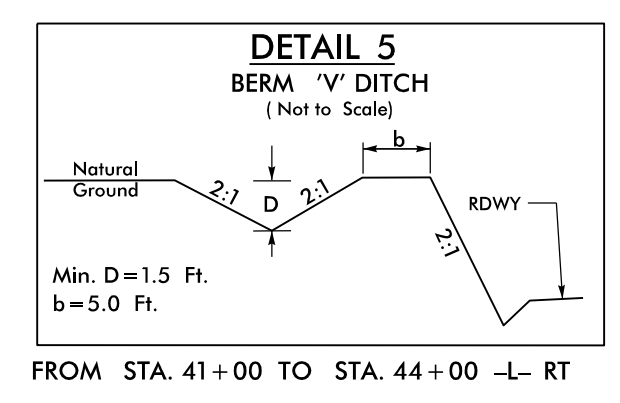
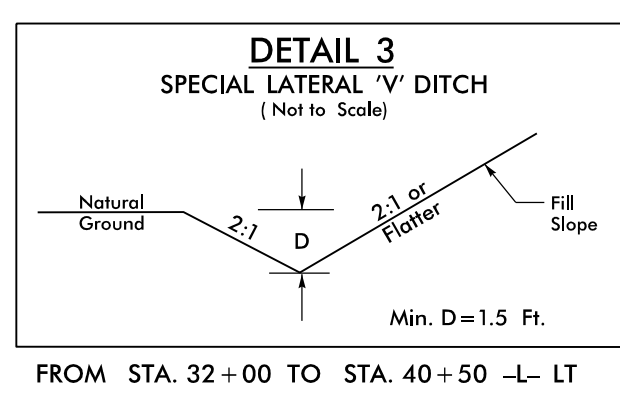
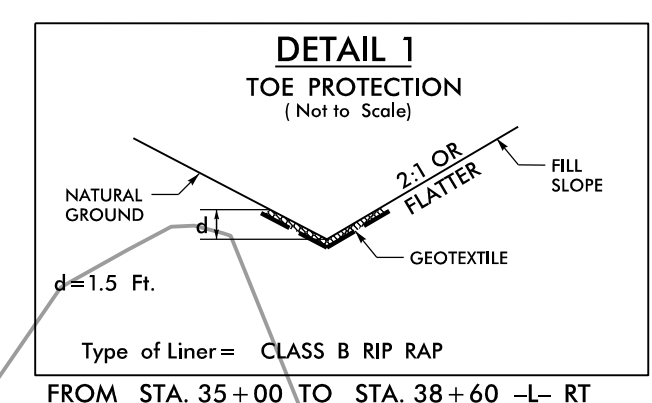


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FOR -L- PROFILE, SEE SHEET 7

8.17.99

-L-		
PI Sta 37+01.89	PI Sta 44+19.39	PI Sta 49+29.52
$\Delta = 4' 18" 06.7" (LT)$	$\Delta = 4' 16" 38.0" (RT)$	$\Delta = 0' 03" 17.2" (LT)$
$D = 0' 30' 58.2"$	$D = 0' 42' 39.1"$	$D = 0' 01' 38.6"$
$L = 833.41'$	$L = 601.69'$	$L = 200.00'$
$T = 416.90'$	$T = 300.99'$	$T = 100.00'$
$R = 11,100.00'$	$R = 8,060.00'$	$R = 209,178.46'$
$S_e = NC$	$S_e = RC$	$S_e = EXIST$
	Runoff = 54'	



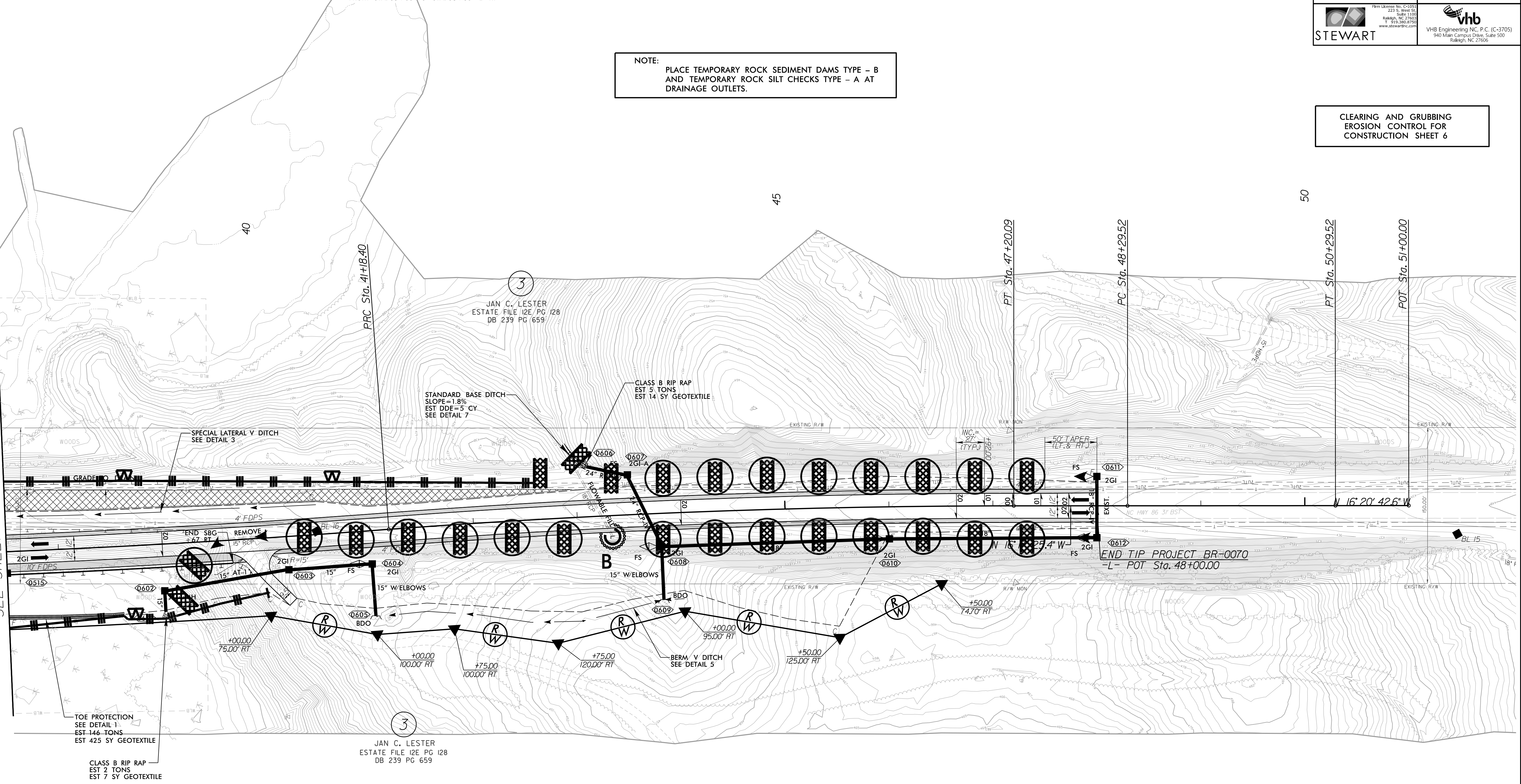
NAD 83NA 2011

PROJECT REFERENCE NO.	SHEET NO.
BR-0070	EC-06/CONST.06
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27609

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

MATCHLINE -L- STA 37+50.00 SEE SHEET EC-05



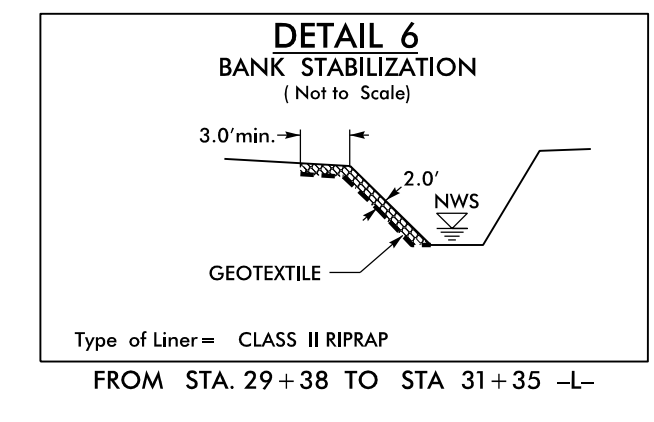
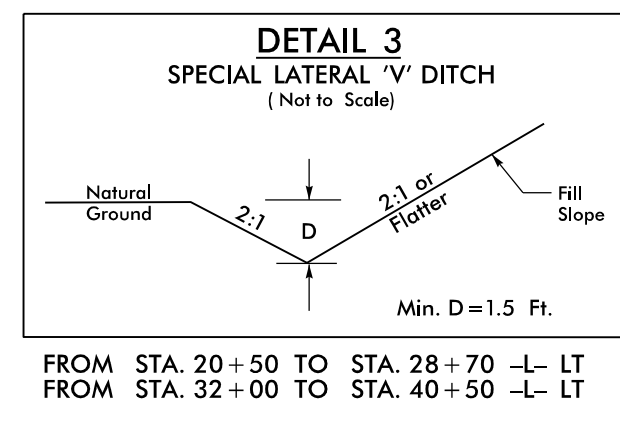
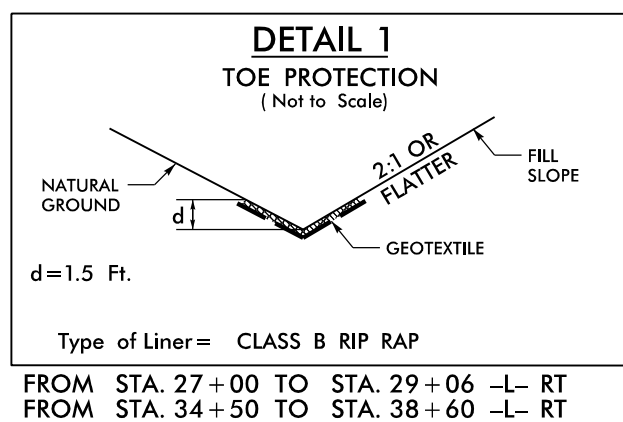
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FOR -L- PROFILE SEE SHEETS 7 & 8

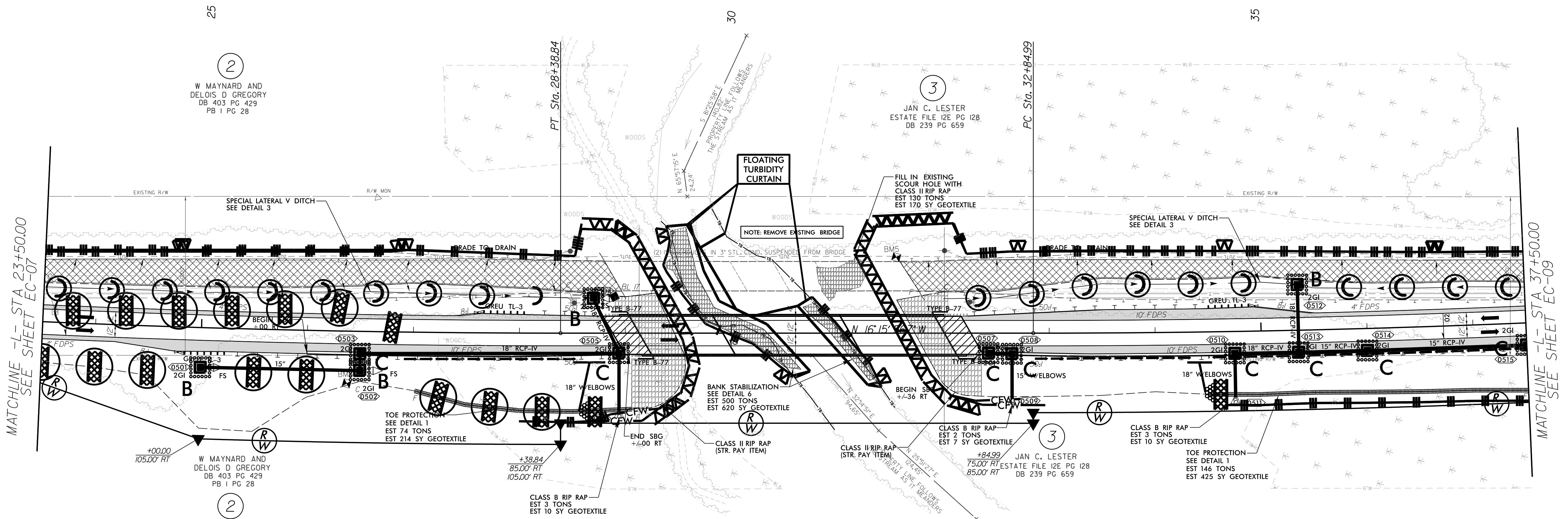
8/17/99

PROJECT REFERENCE NO. BR-0070	SHEET NO. EC-08/CONST.05
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	vhb VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606

-L-
 PI Sta 24+22.25 PI Sta 37+01.89
 $\Delta = 4' 18'' 09.6'' (LT)$ $\Delta = 4' 18'' 06.7'' (LT)$
 $D = 0' 30'' 58.2''$ $D = 0' 30'' 58.2''$
 $L = 833.56'$ $L = 833.41'$
 $T = 416.98'$ $T = 416.90'$
 $R = 11,000.00'$ $R = 11,000.00'$
 $S_e = NC$ $S_e = NC$



NAD 83/NA 2011



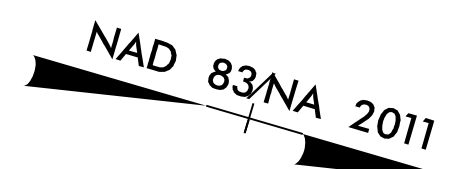
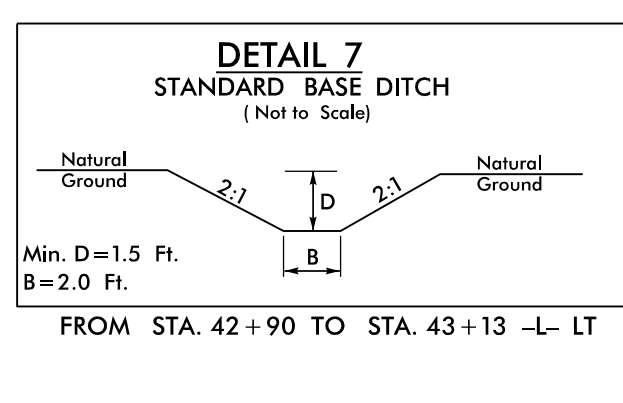
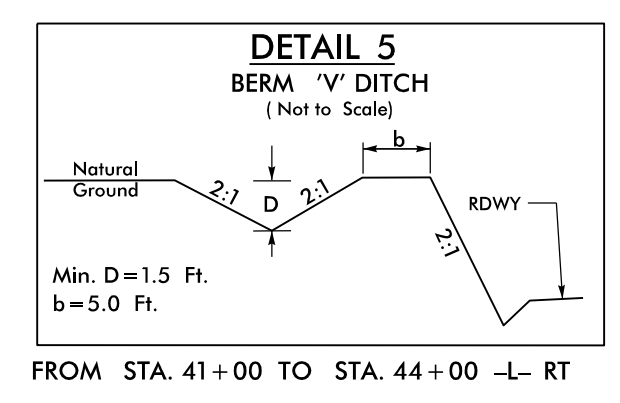
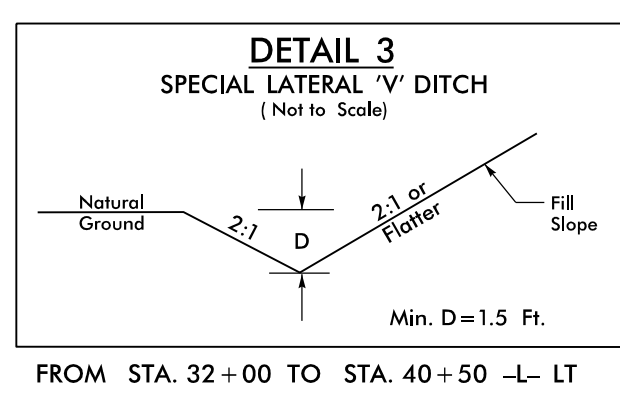
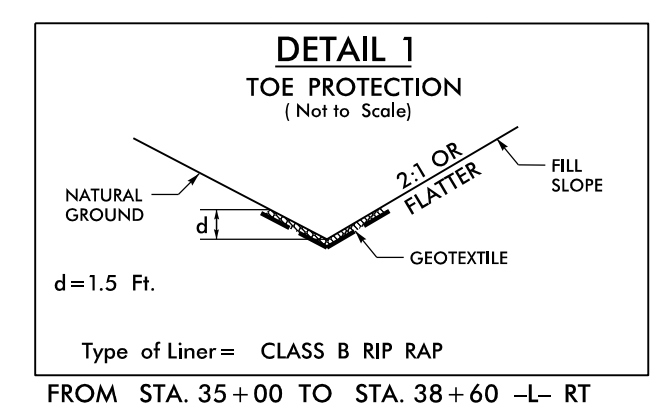
NOTE:
 UTILIZE FABRIC INSERT INLET PROTECTION DEVICES AS DIRECTED
 IN LIEU OF ROCK INLET SEDIMENT TRAP C TO AVOID
 IMPOUNDING OF RUNOFF ON ROADWAYS OPEN TO TRAFFIC.

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

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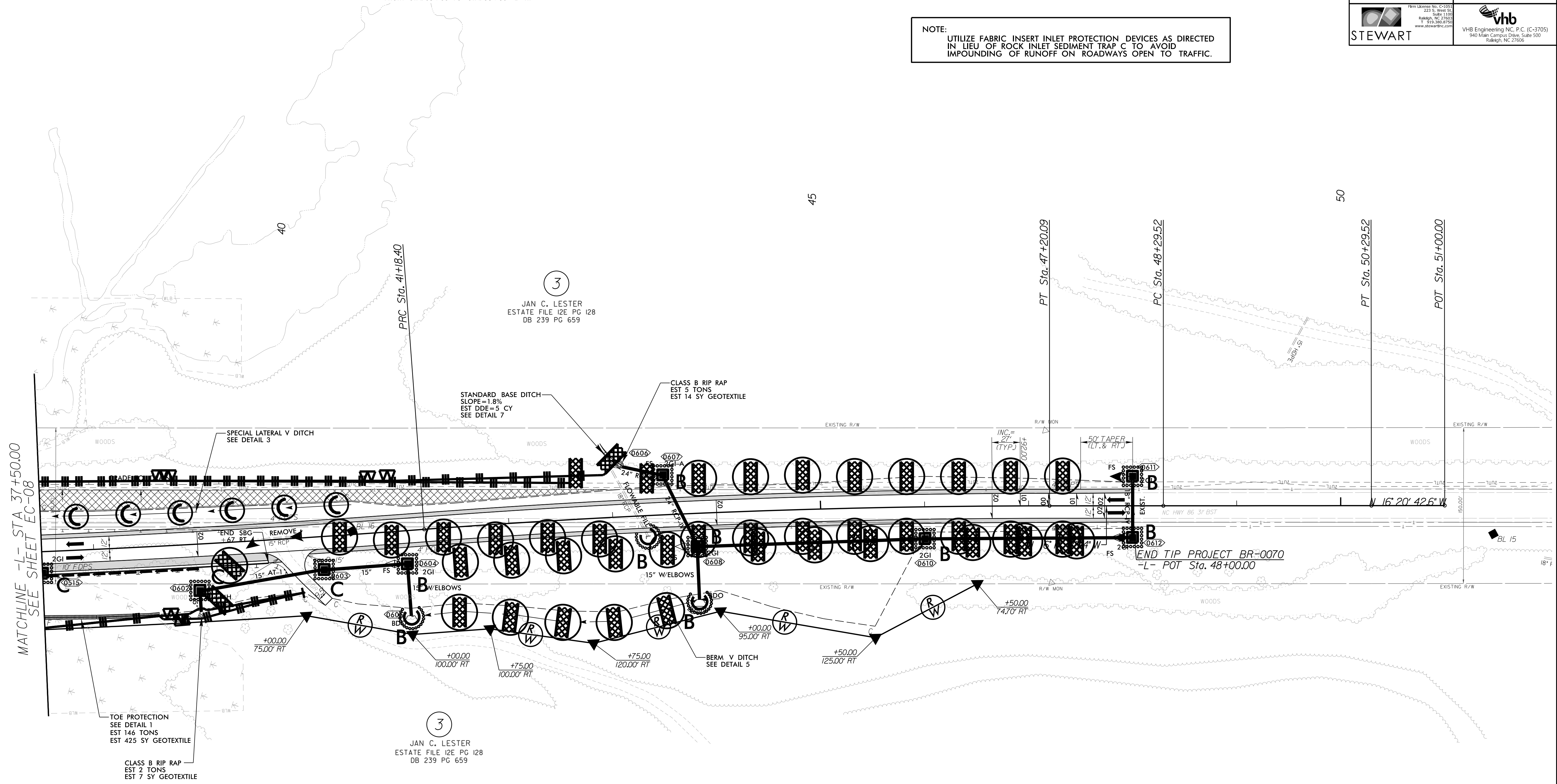
8.17.99

-L-		
PI Sta 37+01.89	PI Sta 44+19.39	PI Sta 49+29.52
$\Delta = 4' 18'' 06.7''$ (LT)	$\Delta = 4' 16'' 38.0''$ (RT)	$\Delta = 0' 03'' 17.2''$ (LT)
$D = 0' 30'' 58.2''$	$D = 0' 42'' 39.1''$	$D = 0' 01'' 38.6''$
$L = 833.41'$	$L = 601.69'$	$L = 200.00'$
$T = 416.90'$	$T = 300.99'$	$T = 100.00'$
$R = 11,100.00'$	$R = 8,060.00'$	$R = 209,178.46'$
$S_e = NC$	$S_e = RC$	$S_e = EXIST$
	Runoff = 54'	



NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICES AS DIRECTED
IN LIEU OF ROCK INLET SEDIMENT TRAP C TO AVOID
IMPOUNDING OF RUNOFF ON ROADWAYS OPEN TO TRAFFIC.

PROJECT REFERENCE NO.	SHEET NO.
BR-0070	EC-09/CONST.06
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
STEWART	VHB Engineering NC, P.C. (C-3705) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606



MATCHLINE -L- STA 37+50.00
SEE SHEET EC-08

FOR -L- PROFILE, SEE SHEETS 7 & 8

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