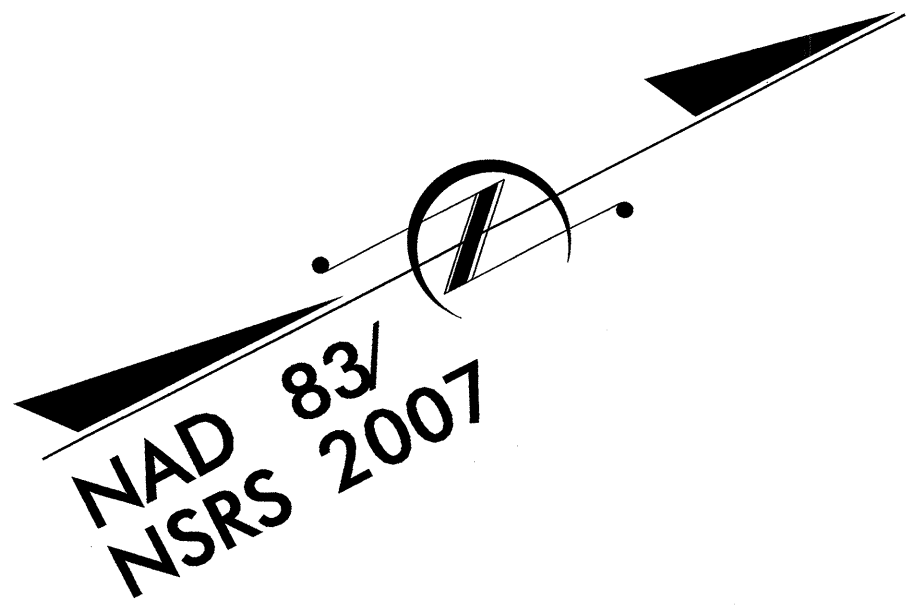


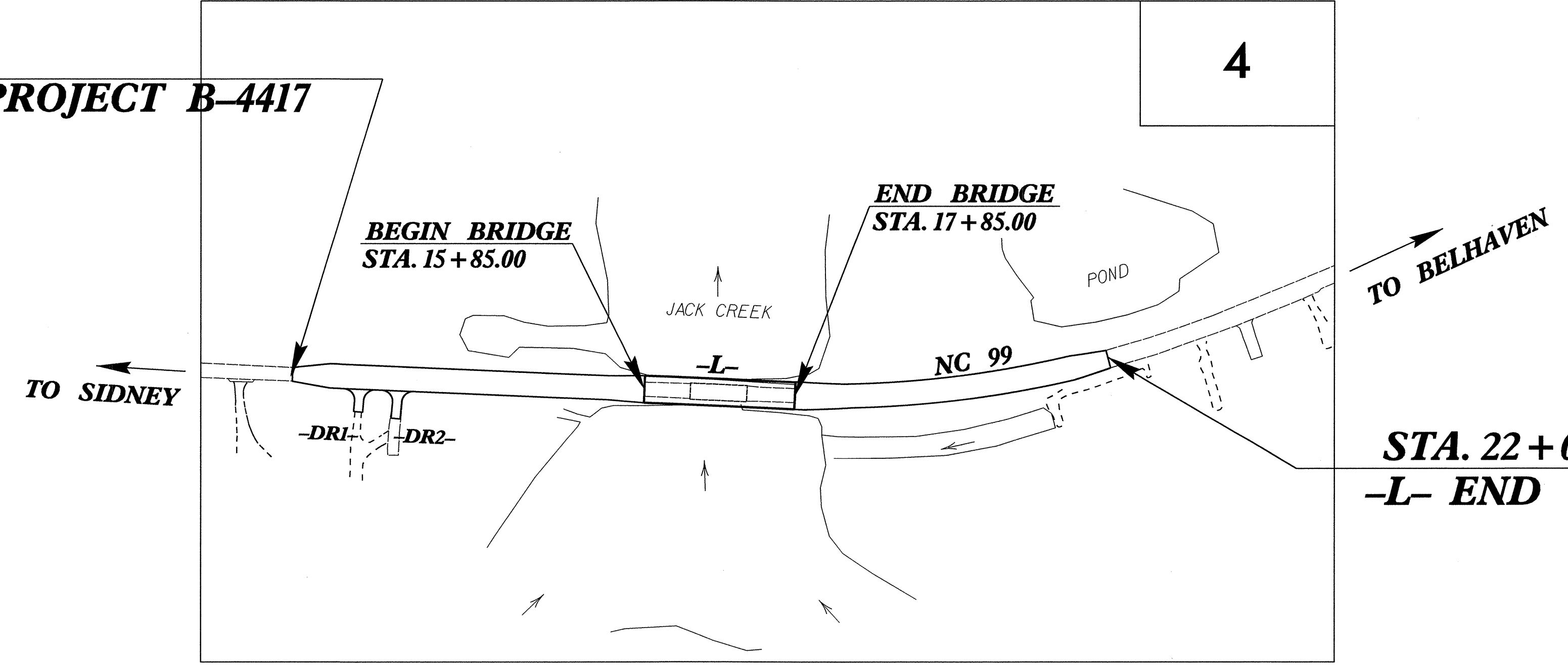
TIP PROJECT: B-4417

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

LOCATION: BRIDGE NO. 59 OVER JACK CREEK ON NC 99
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE



STA. 11 + 17.00
-L- BEGIN TIP PROJECT B-4417



STA. 22 + 05.00
-L- END TIP PROJECT B-4417

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4417	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	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.....	TSD
	Silt Basin Type B.....	SB
1635.01	Temporary Rock Silt Check Type-A.....	RS
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM).....	RS-PAM
	Temporary Rock Silt Check Type-B.....	RS-B
	Wattle / Coir Fiber Wattle.....	W
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM).....	W-PAM
1634.01	Temporary Rock Sediment Dam Type-A.....	RD
1634.02	Temporary Rock Sediment Dam Type-B.....	RD-B
1635.01	Rock Pipe Inlet Sediment Trap Type-A.....	RPI
1635.02	Rock Pipe Inlet Sediment Trap Type-B.....	RPI-B
1630.04	Stilling Basin.....	SB
1630.06	Special Stilling Basin.....	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A.....	A
1632.02	Type B.....	B
1632.03	Type C.....	C
	Skimmer Basin.....	SK
	Tiered Skimmer Basin.....	TSK
	Infiltration Basin.....	IB

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

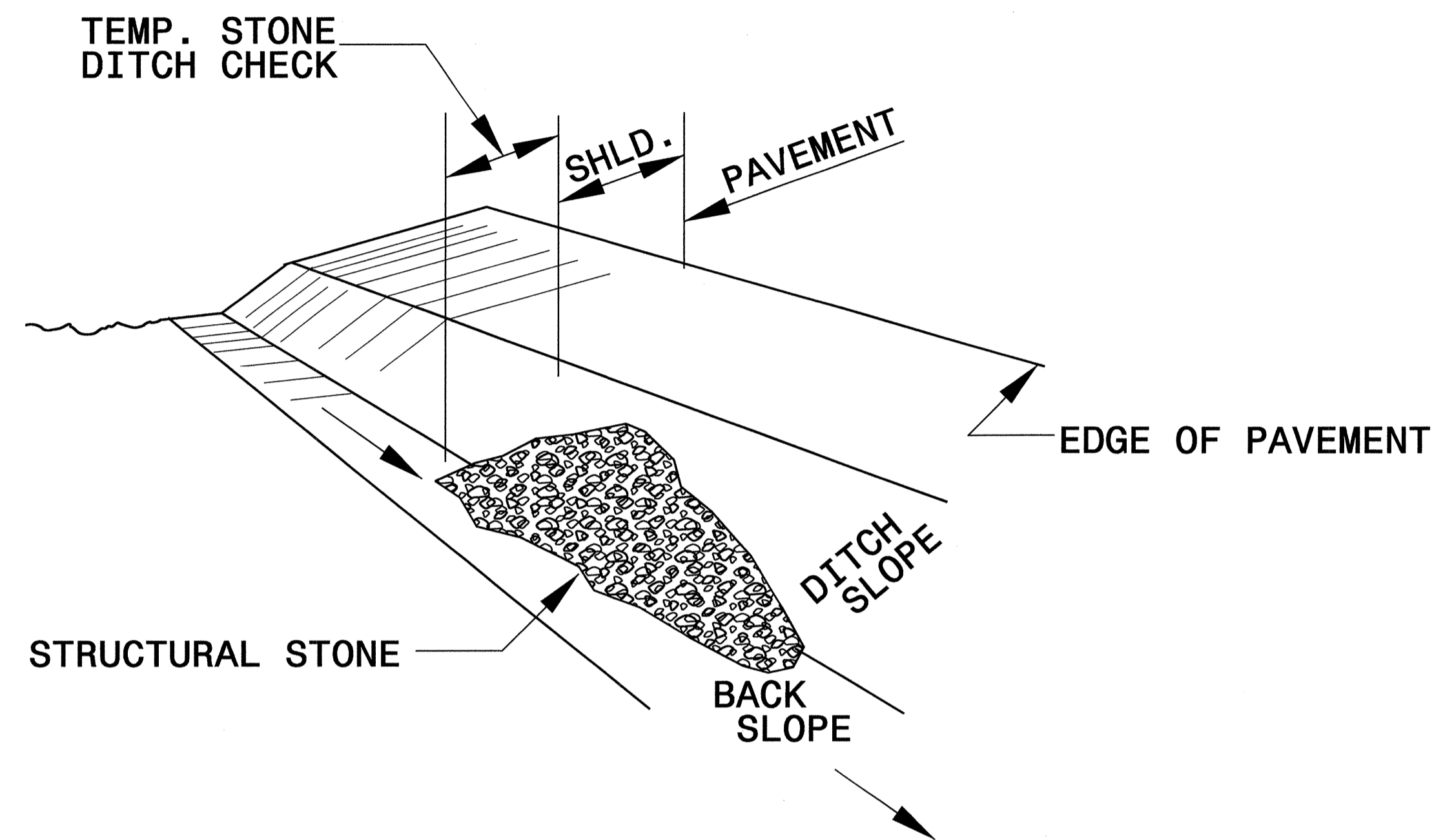
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1630.05 Temporary Diversion
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	

15-NOV-2010 09:02
 R:\ENR\117\SPM\BEN\117\4417_EC.tsh.dgn
 11/15/10 11:25:39

PROJECT REFERENCE NO. B-4417	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

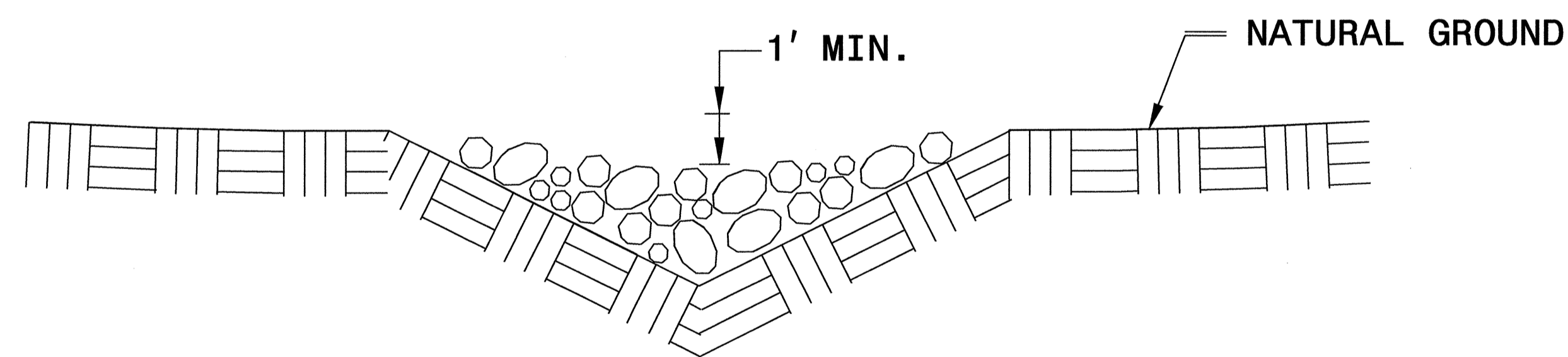


ISOMETRIC VIEW

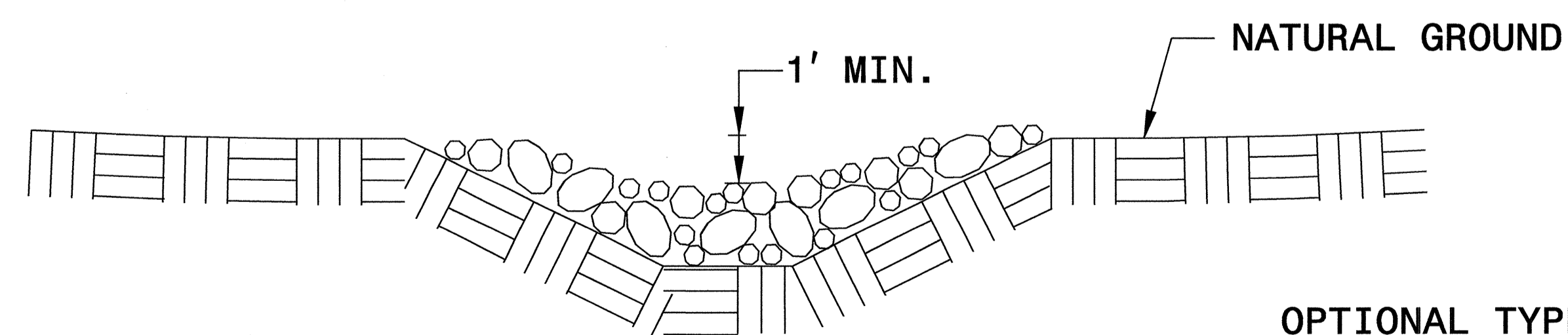
NOTES:

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

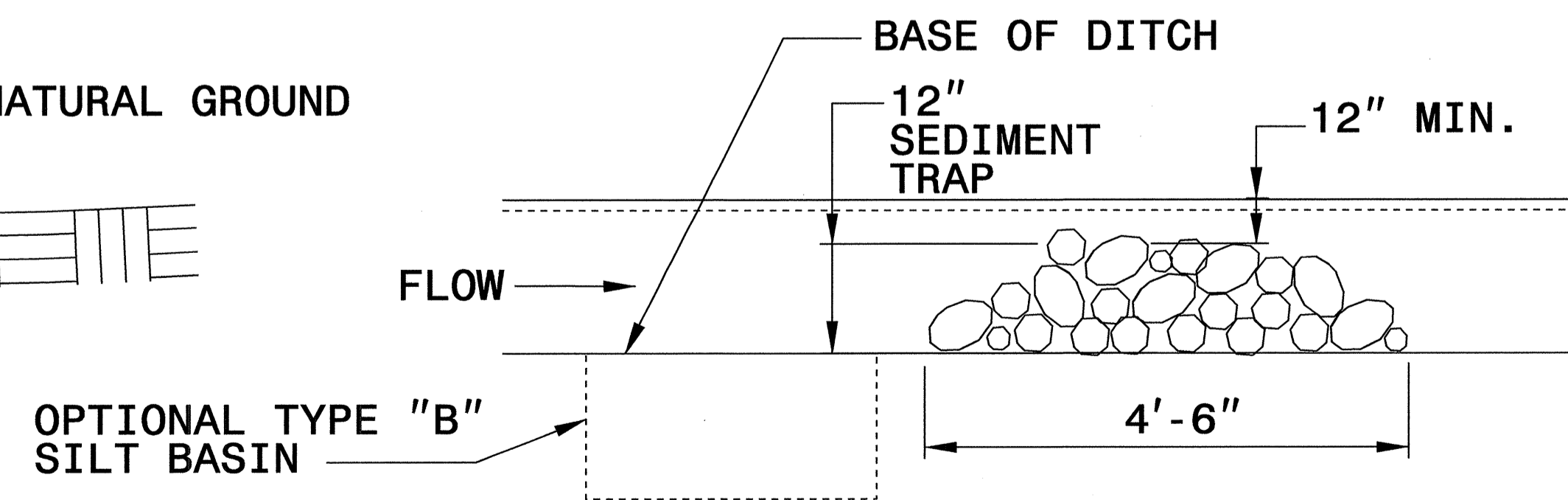
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



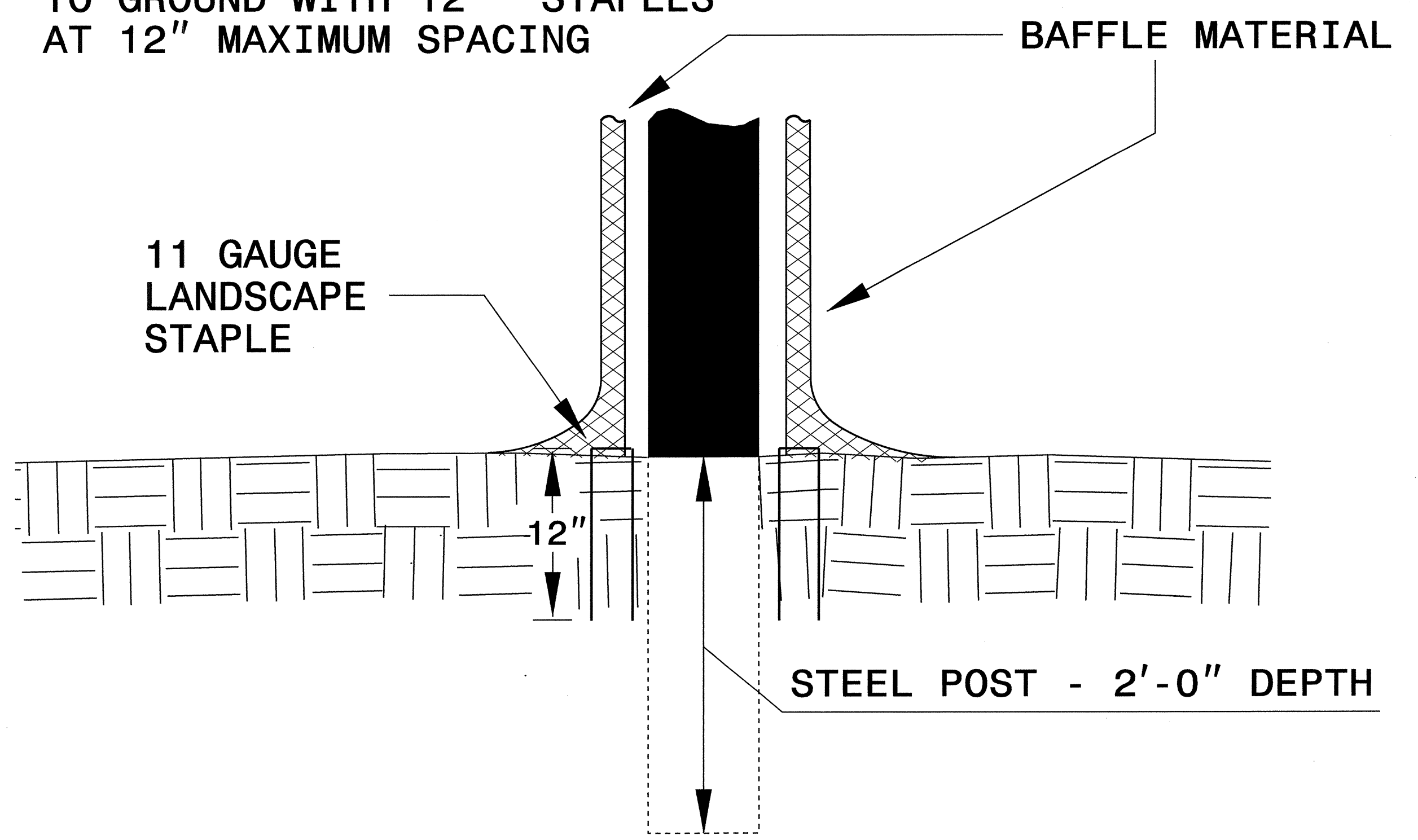
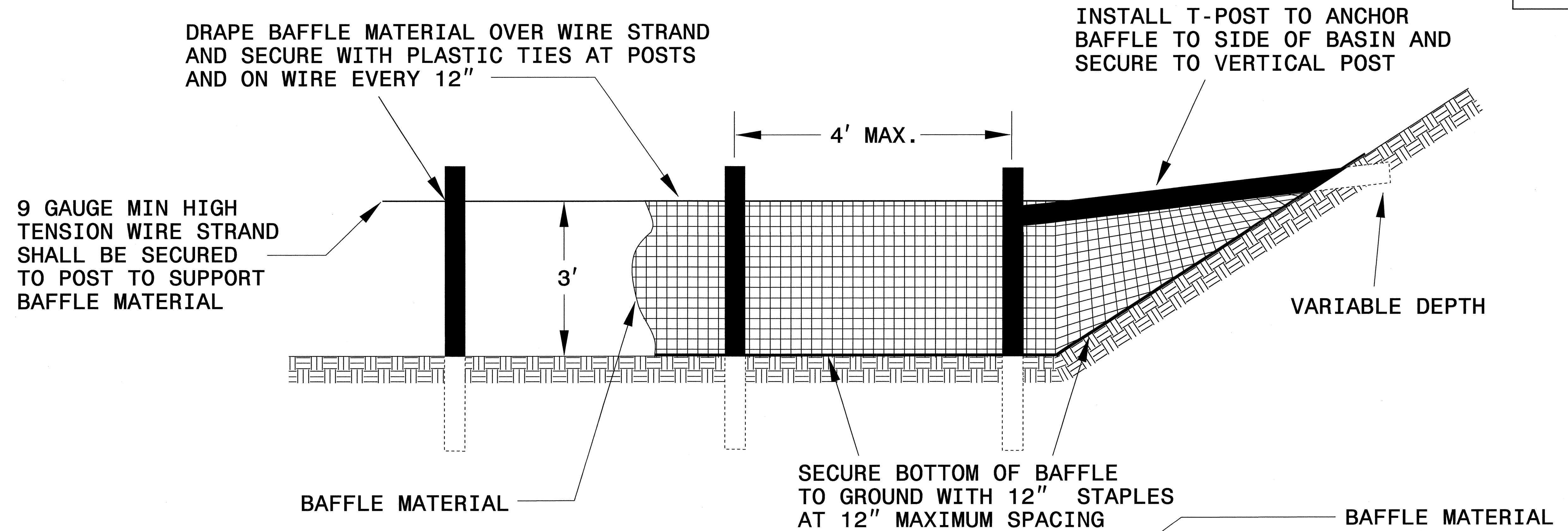
CROSS SECTION TRAPEZOIDAL DITCH



ELEVATION VIEW

PROJECT REFERENCE NO. B-4417	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



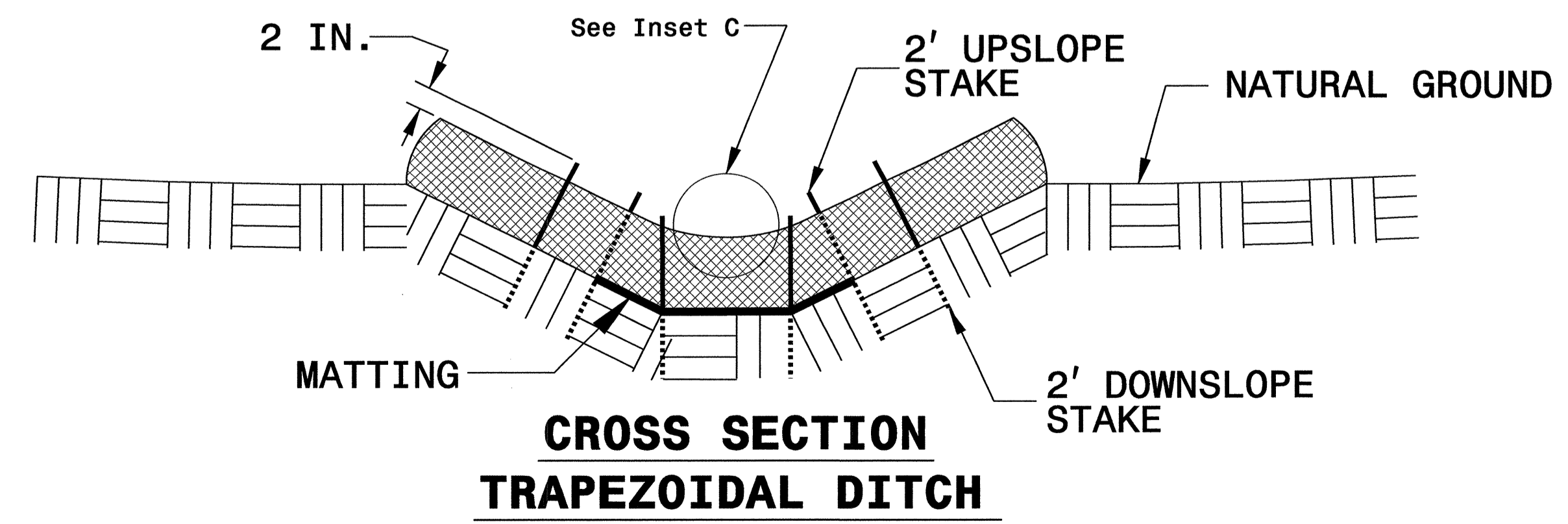
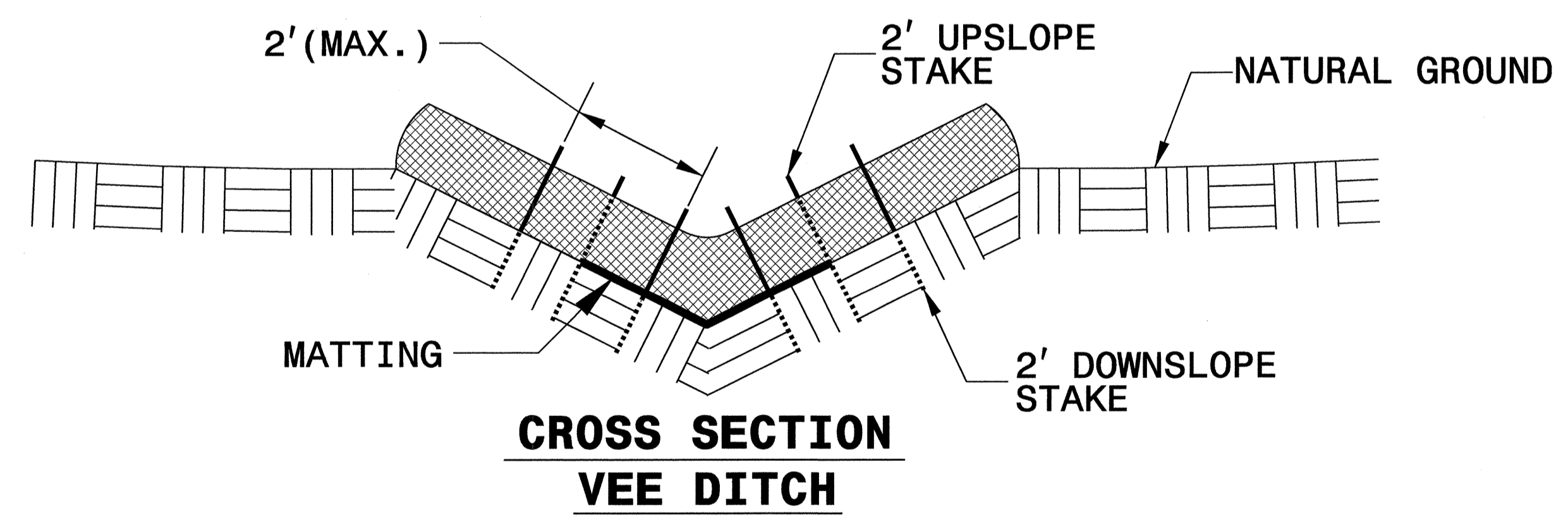
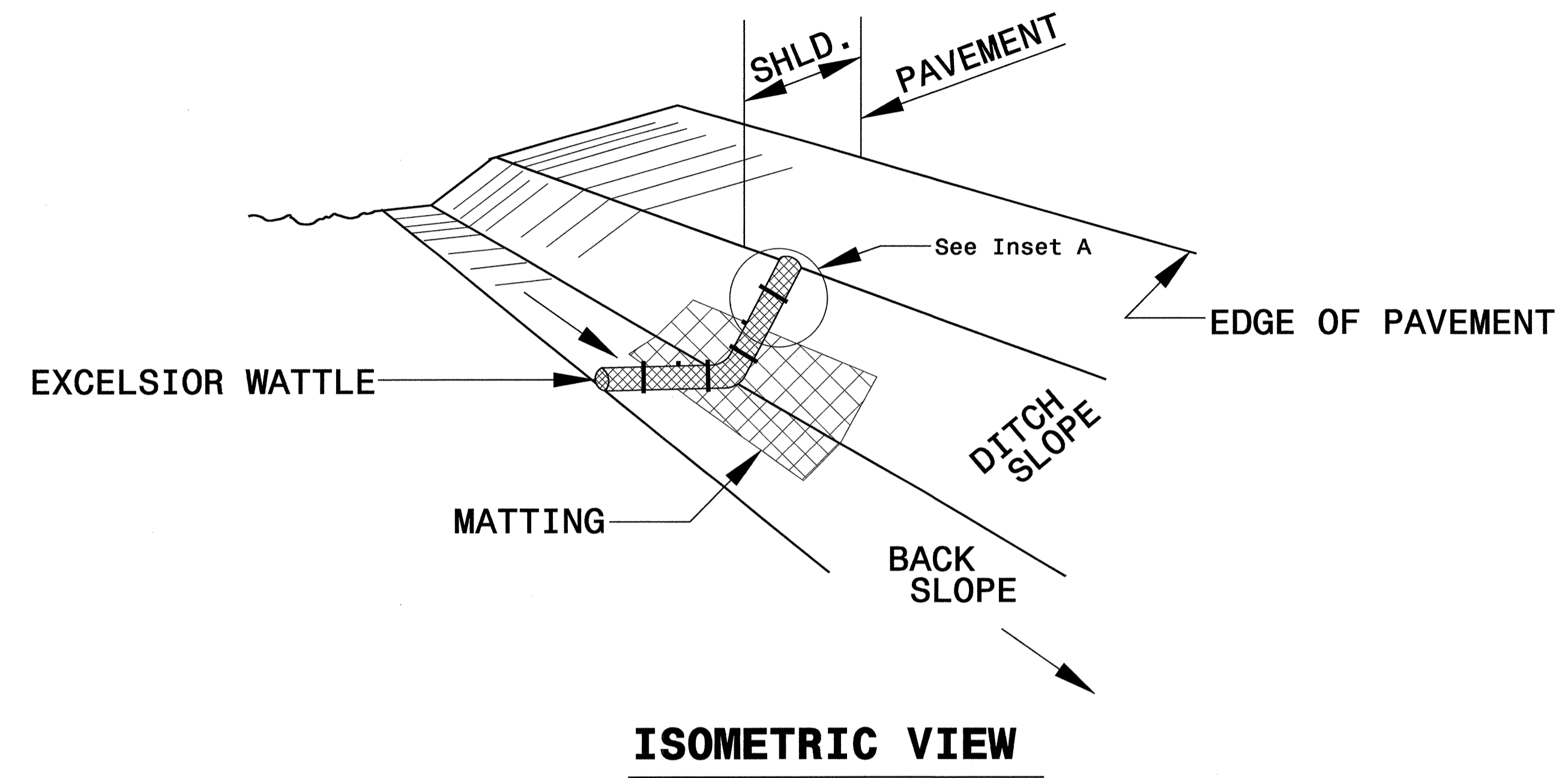
NOTES:

1. 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.
2. 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.
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

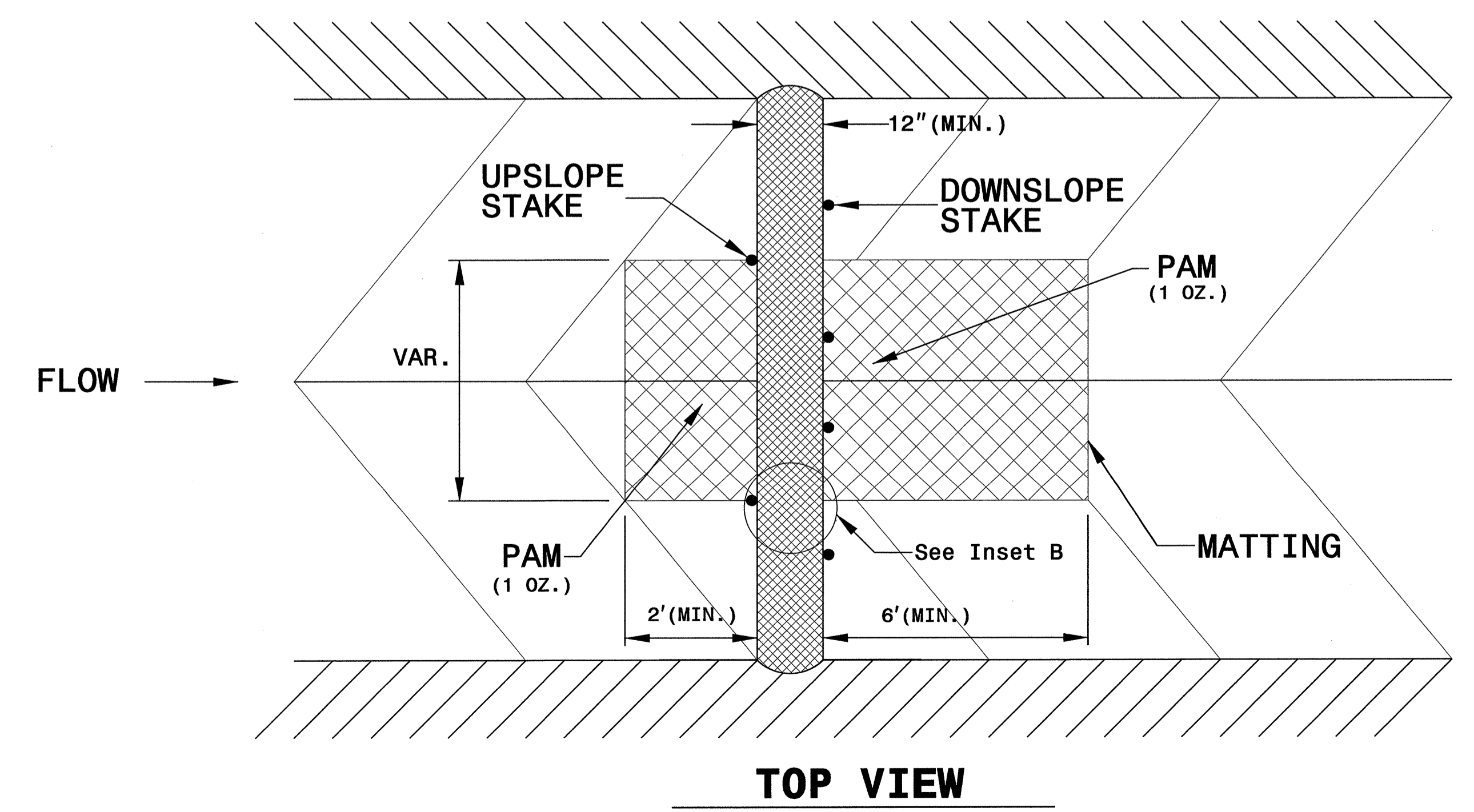
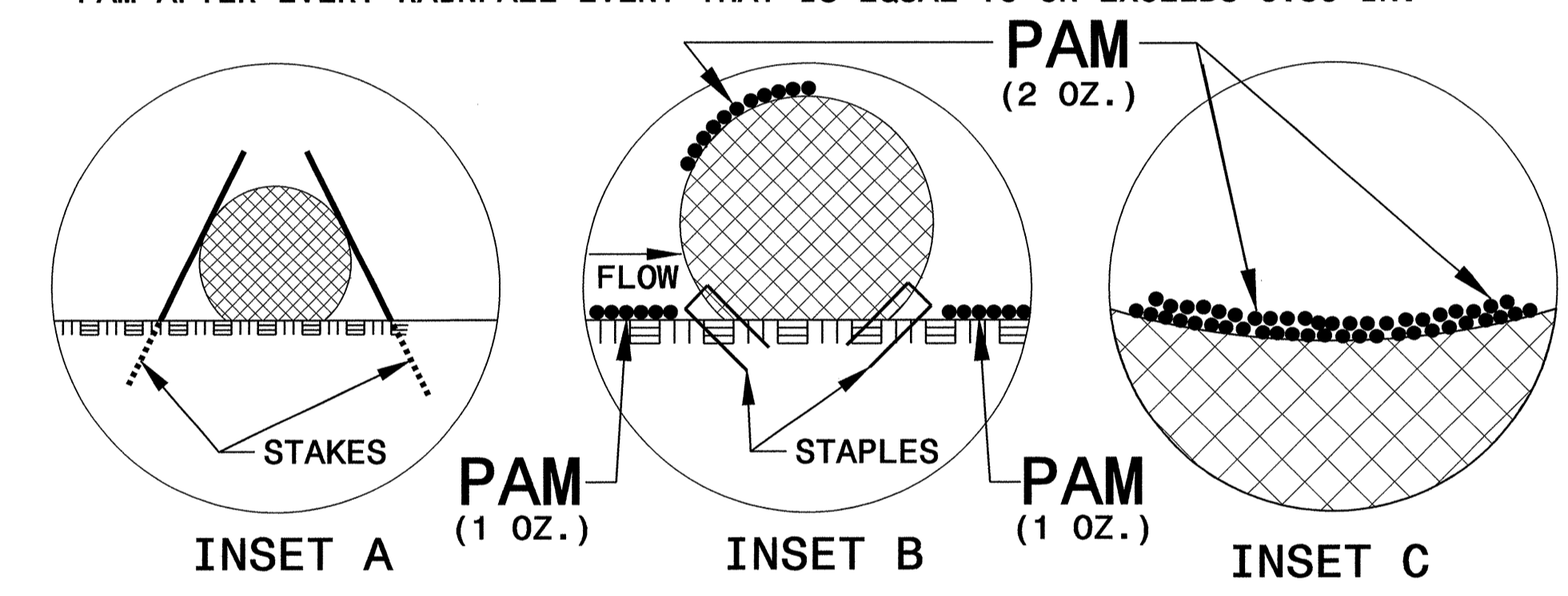
BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

PROJECT REFERENCE NO. B-4417	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

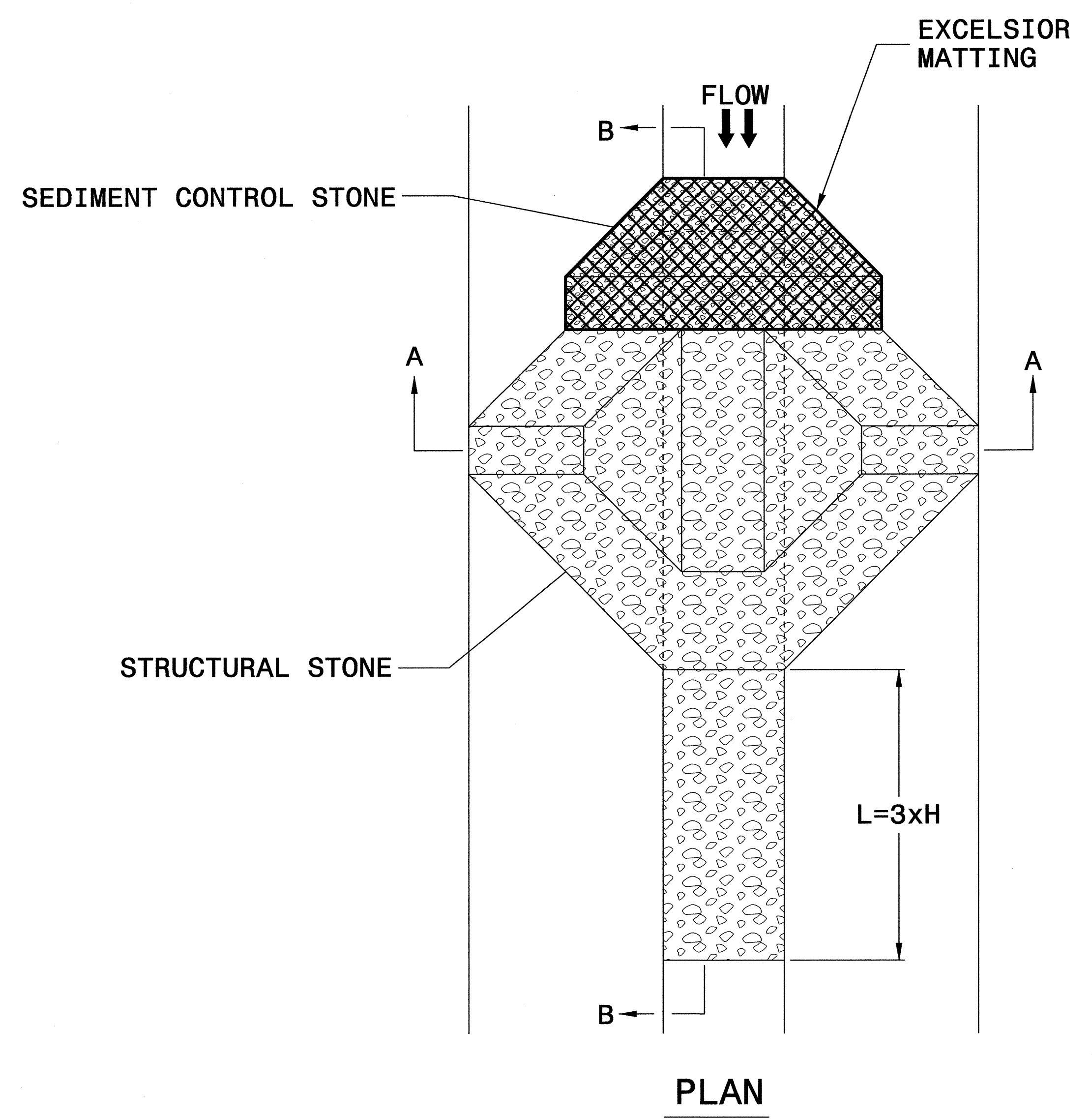


- NOTES:
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE 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 MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. B-4417	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

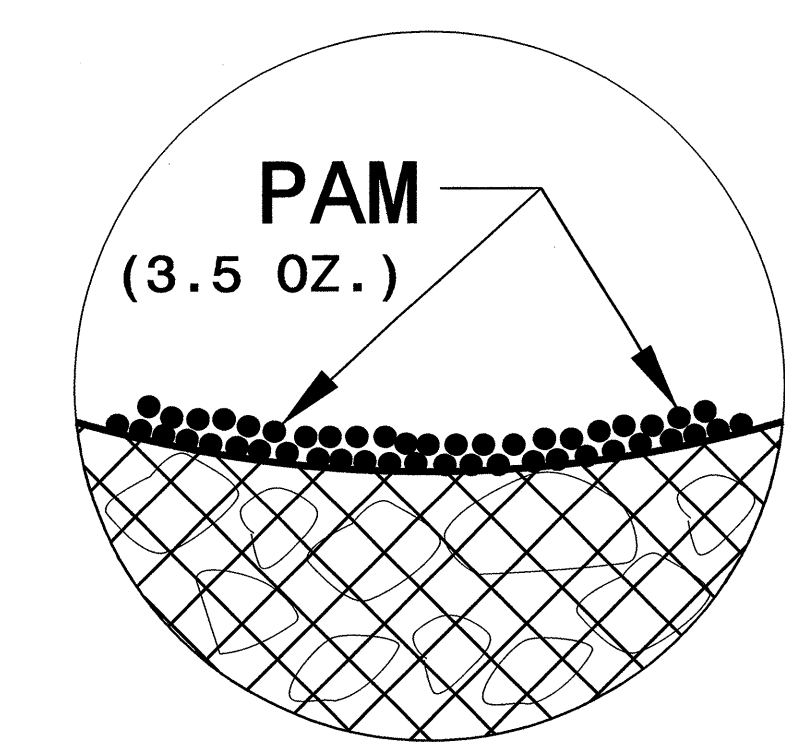


NOTES

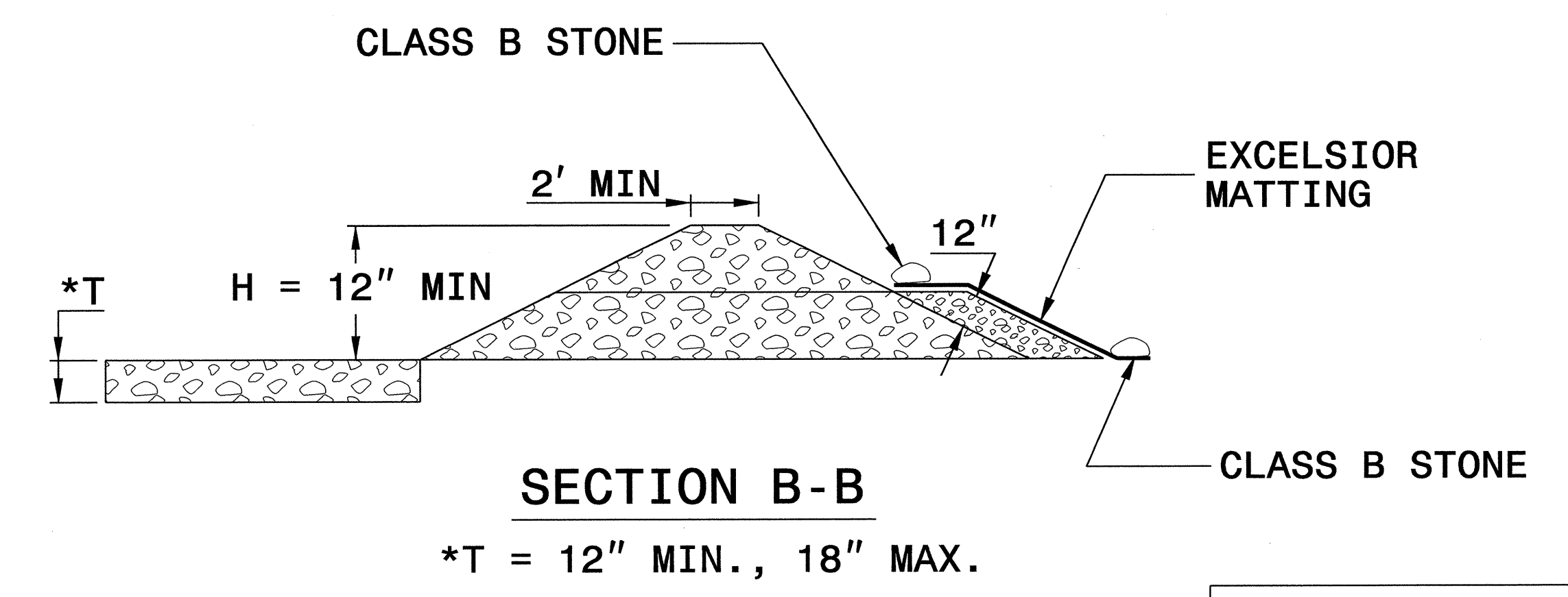
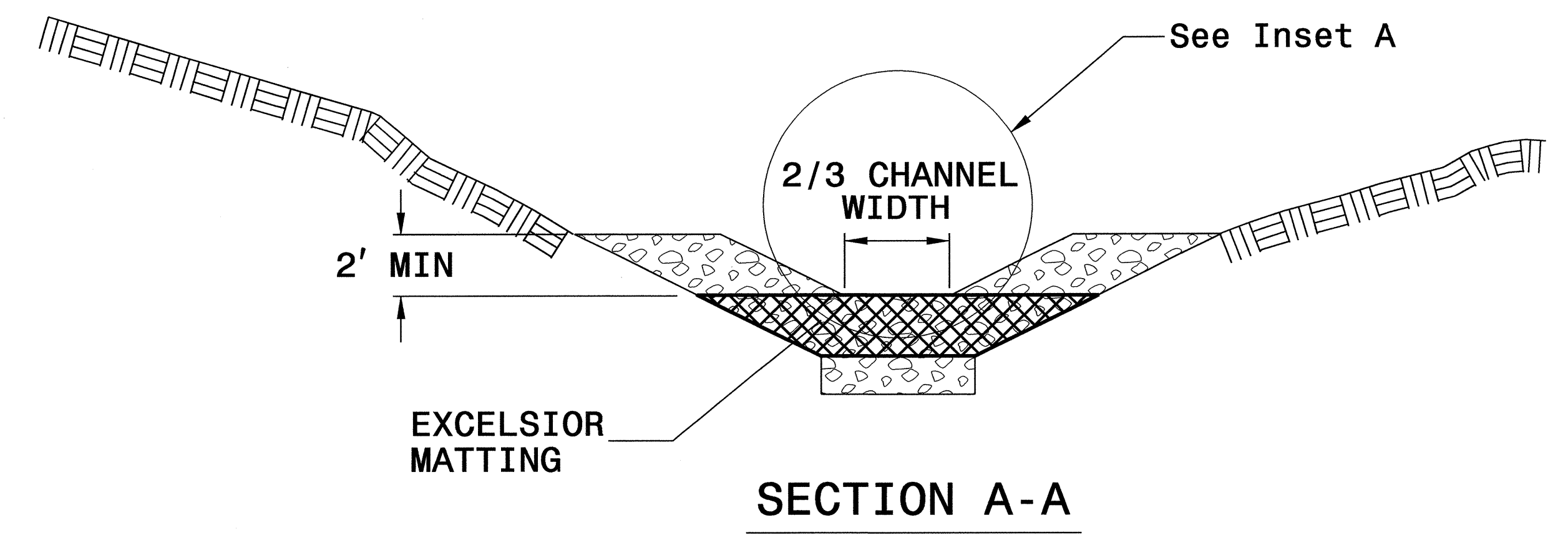
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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



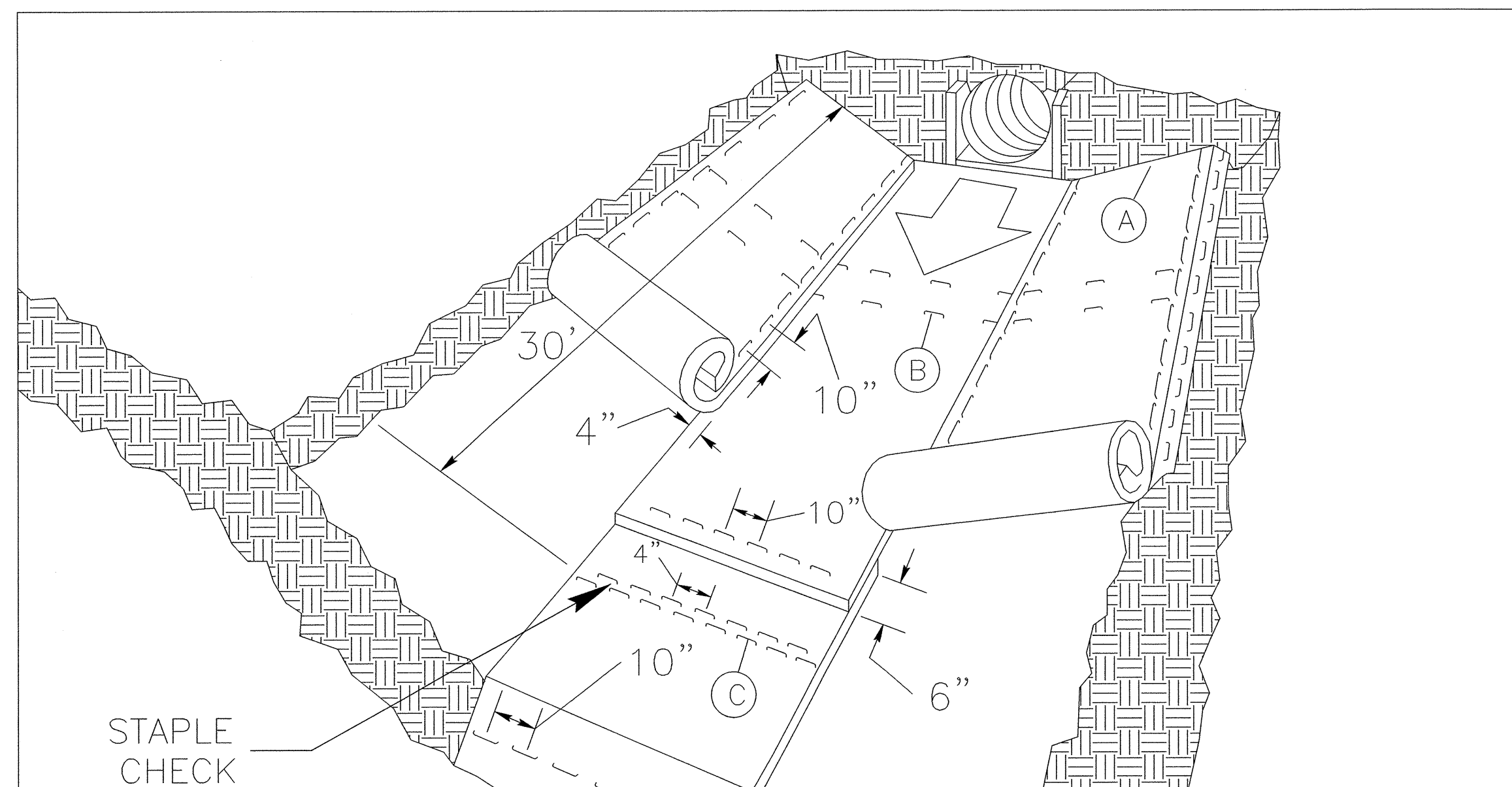
INSET A



NOT TO SCALE

PROJECT REFERENCE NO. B-4417	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

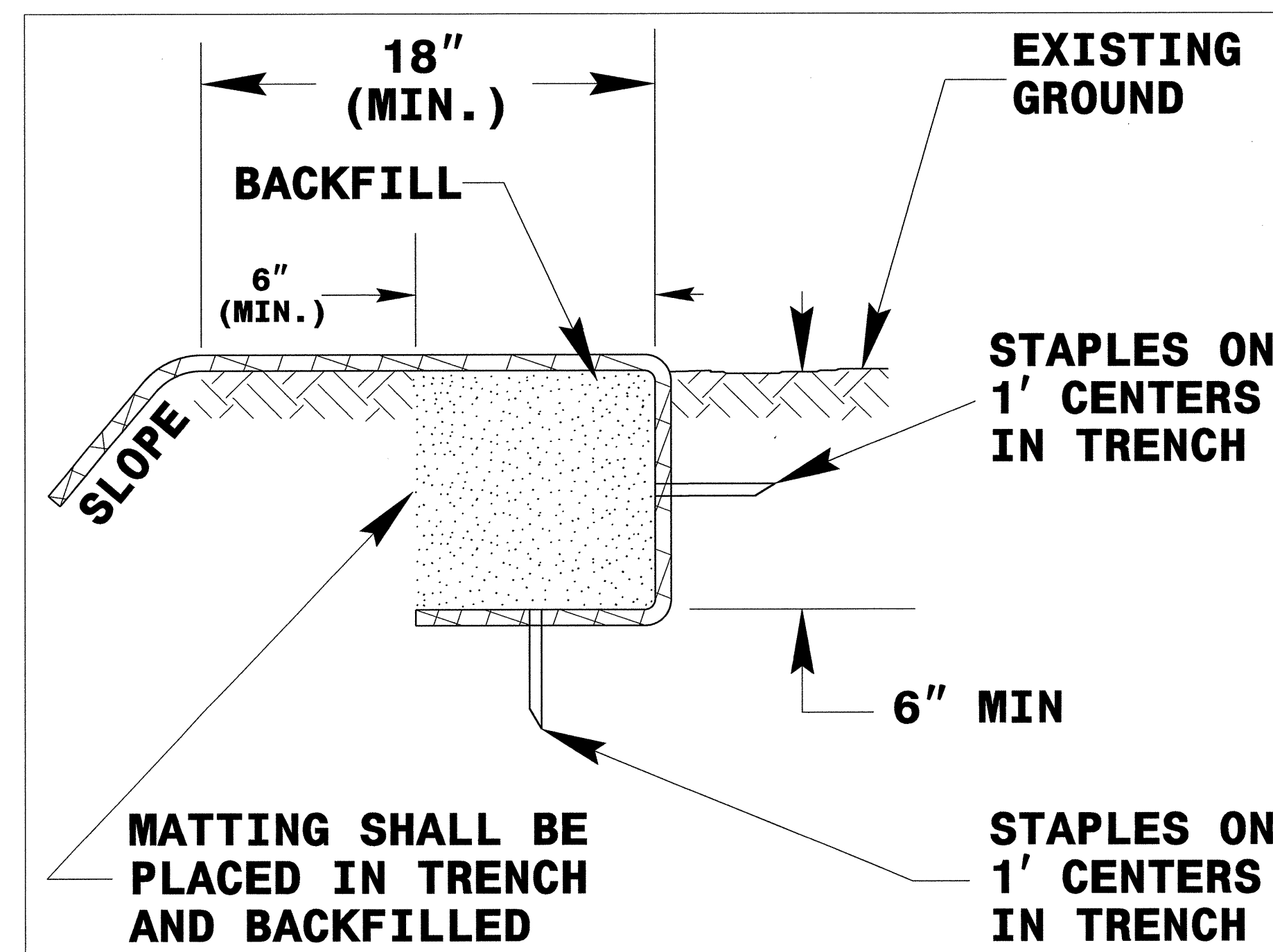
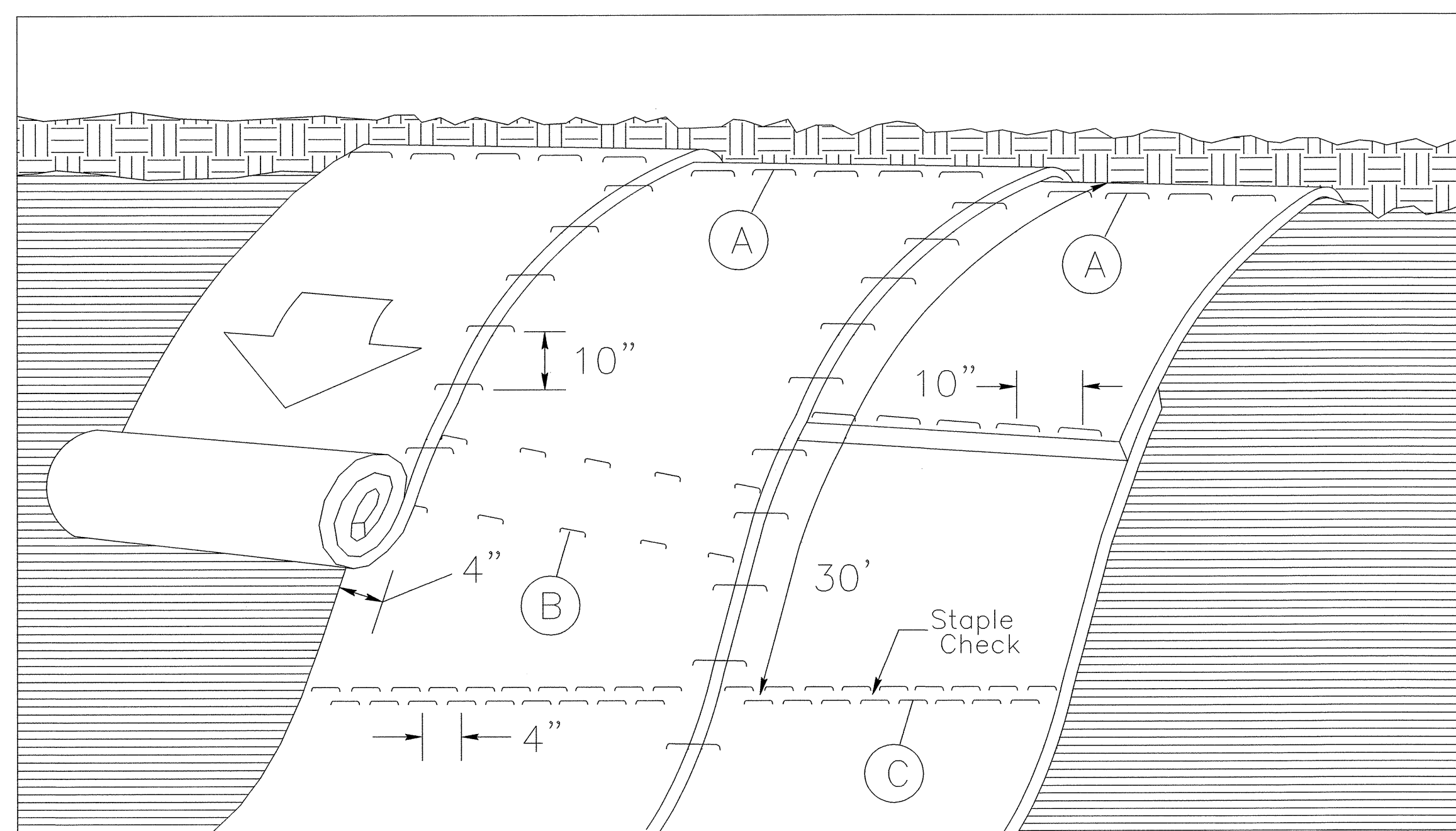


DIAGRAM (A)



MATTING ON SLOPES

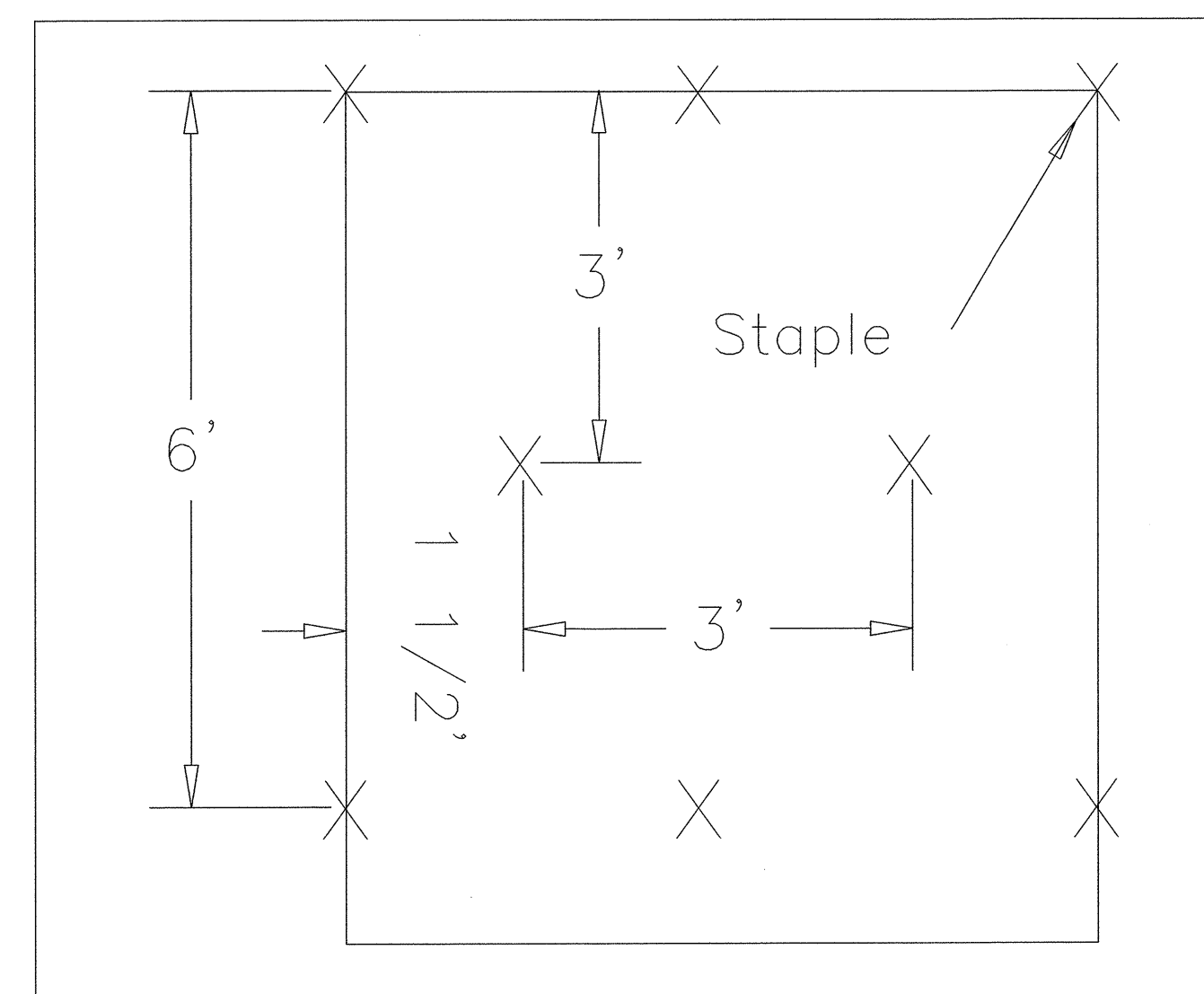


DIAGRAM (B)

Staple Check Pattern

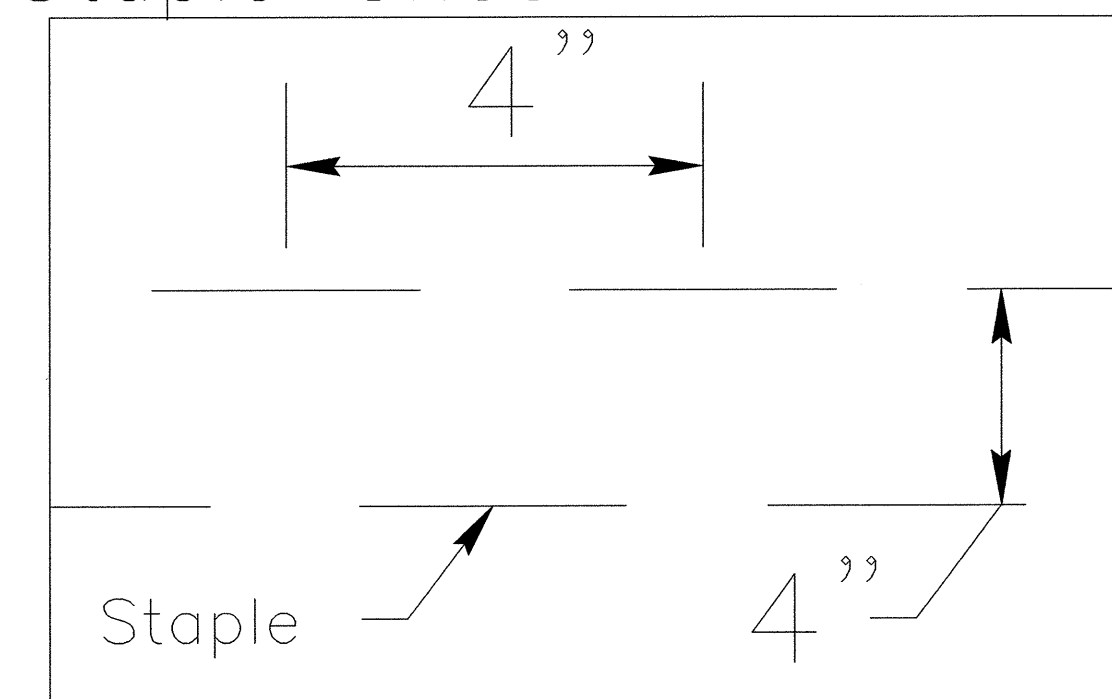


DIAGRAM (C)

NOTES:

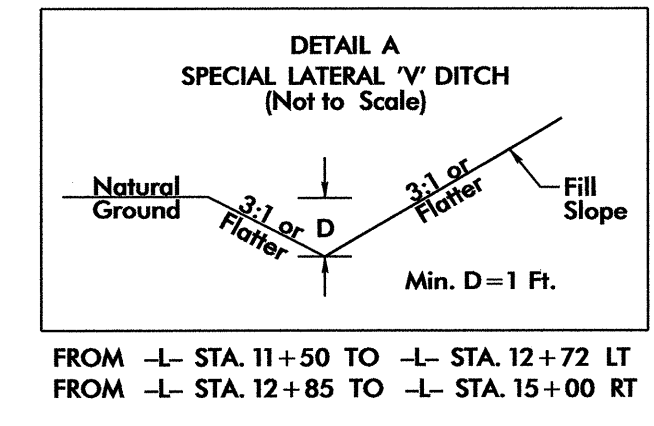
THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

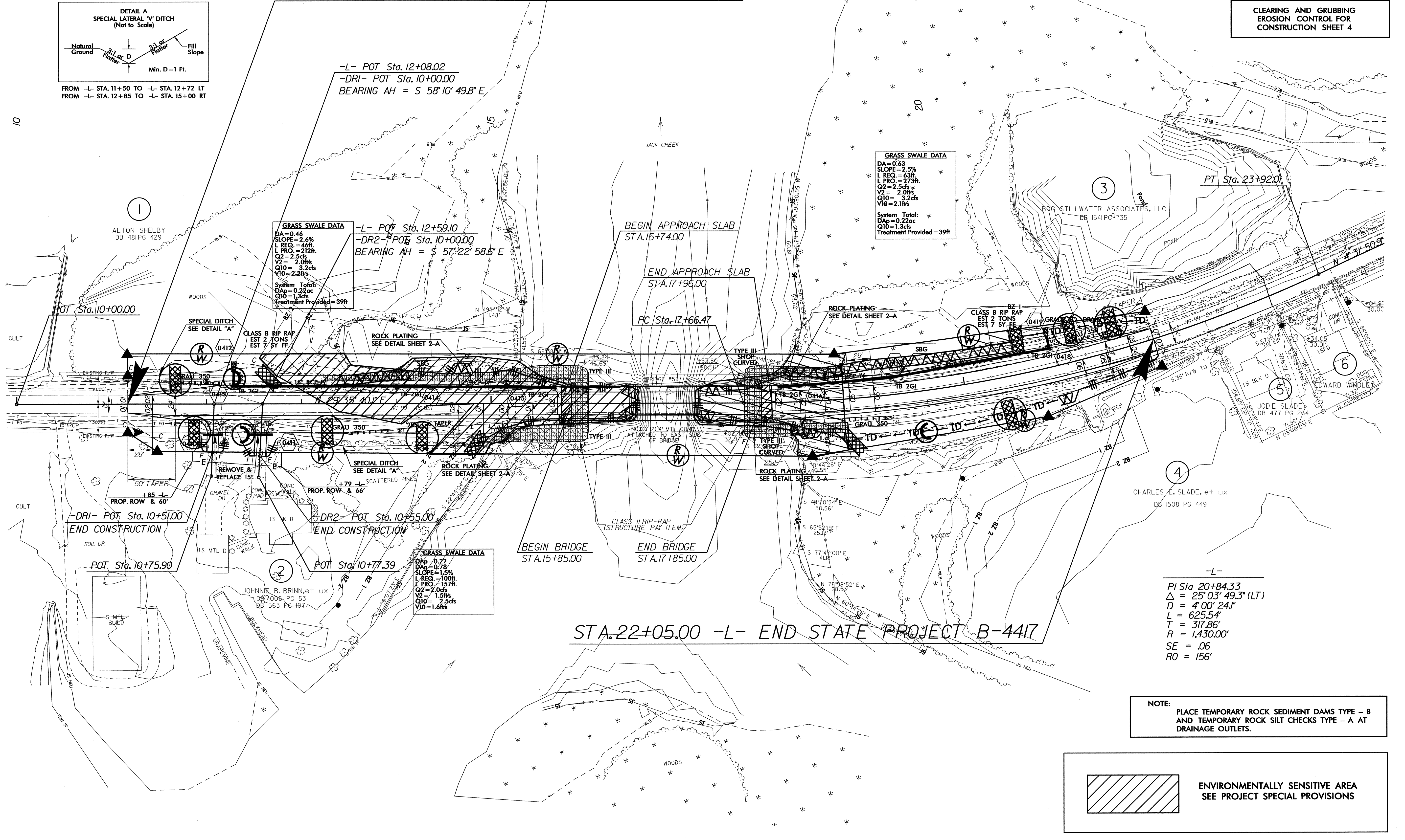
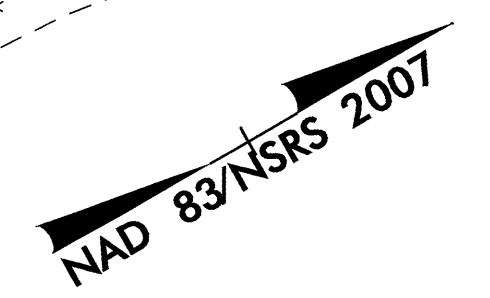
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-4417	EC-03/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



STA.11+17.00 -L- BEGIN STATE PROJECT B-4417



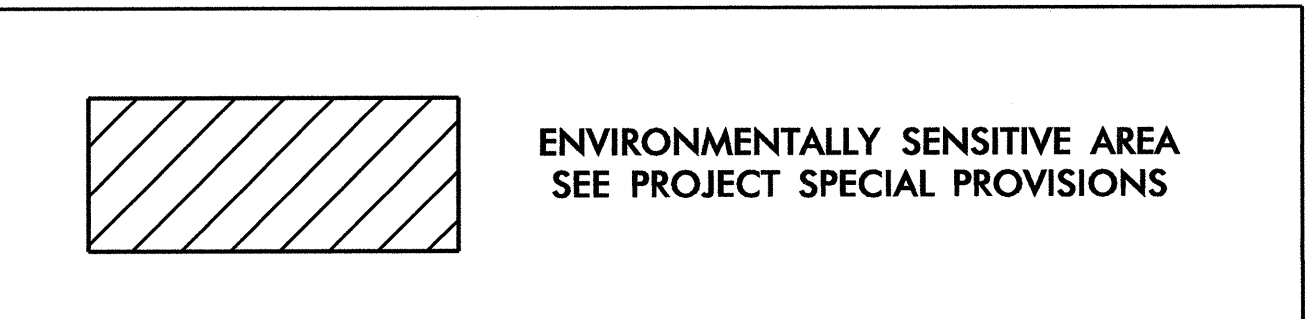
GRASS SWALE DATA
DA=0.63
SLOPE=2.5%
L REQ.=63ft.
L PRO.=273ft.
Q2=2.5cfs
V2=2.0fps
Q10=3.2cfs
V10=2.1fps
System Total:
DAP=0.22ac
Q10=1.3cfs
Treatment Provided=39ft

GRASS SWALE DATA
DA=0.46
SLOPE=2.6%
L REQ.=46ft.
L PRO.=212ft.
Q2=2.5cfs
V2=2.0fps
Q10=3.2cfs
V10=2.2fps
System Total:
DAP=0.22ac
Q10=1.3cfs
Treatment Provided=39ft

GRASS SWALE DATA
DAP=0.77
SLOPE=1.5%
L REQ.=100ft.
L PRO.=157ft.
Q2=2.0cfs
V2=1.5fps
Q10=2.5cfs
V10=1.6fps

-L-
PI Sta 20+84.33
Δ = 25°03'49.3" (LT)
D = 4'00"24"
L = 625.54'
R = 1,430.00'
SE = .06
RO = 156'

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

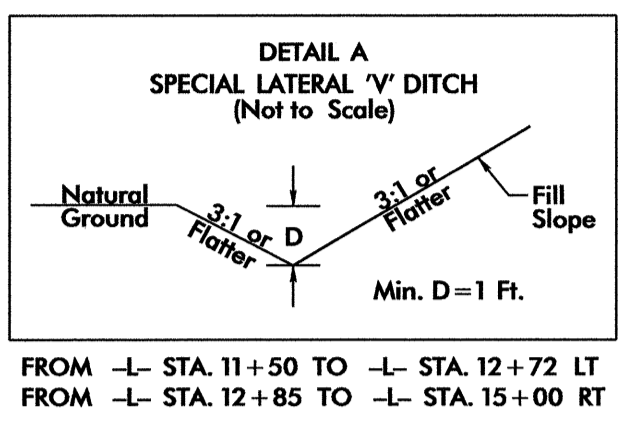


REVISIONS

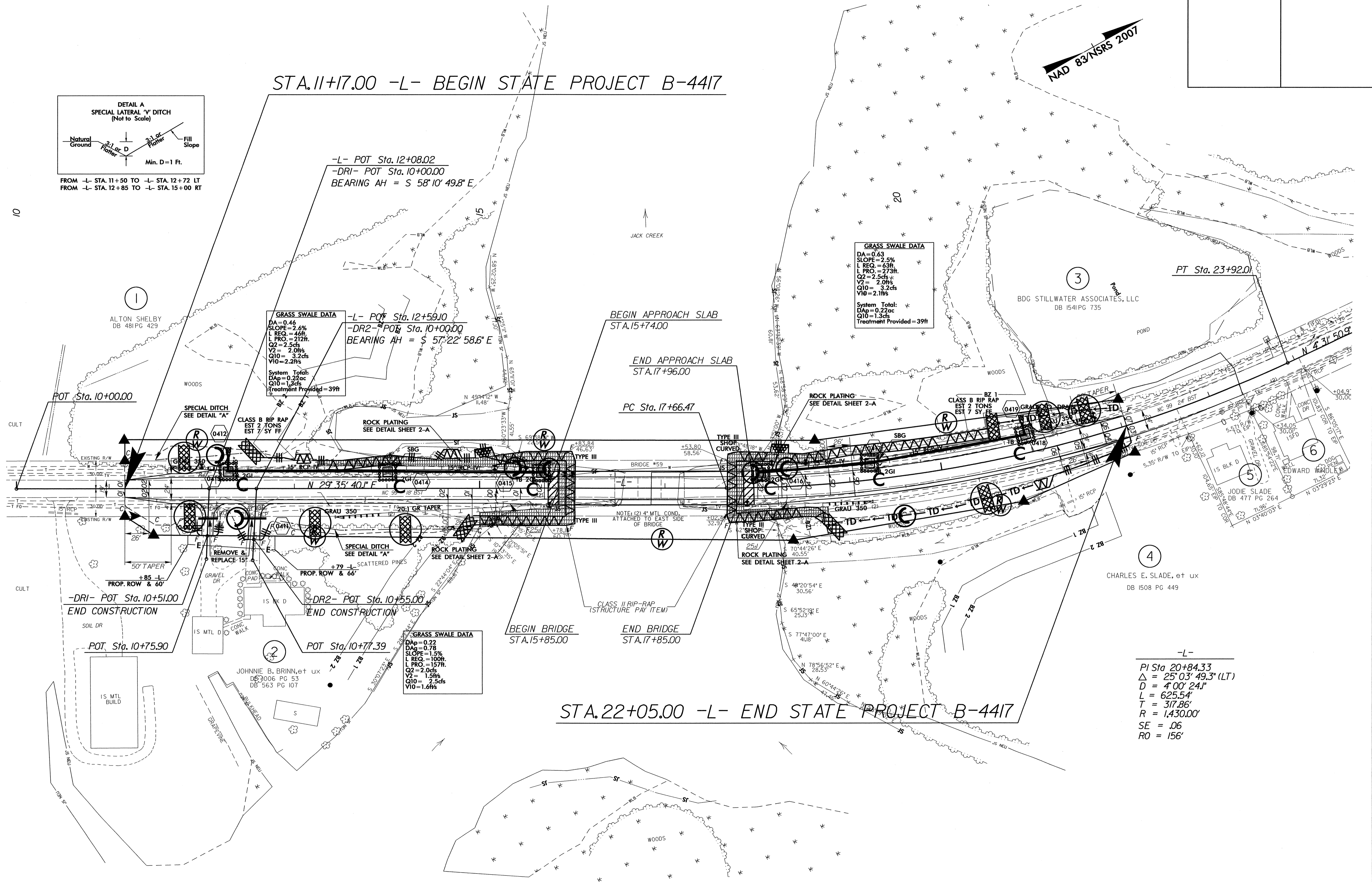
8/17/99
15-NOV-2010 09:43 D:\proj\104417-EC-psht.dgn
104417-EC-03-CONST.04

PROJECT REFERENCE NO.		SHEET NO.	
B-4417		EC-04/CONST.04	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

STA.11+17.00 -L- BEGIN STATE PROJECT B-4417



FROM -L- STA. 11+50 TO -L- STA. 12+72 LT
FROM -L- STA. 12+85 TO -L- STA. 15+00 RT



GRASS SWALE DATA
DA=0.63
SLOPE=2.5%
L REQ=43ft
L PRO=273ft
Q2=2.5cfs
V2=2.0fps
Q10=3.2cfs
V10=2.1fps
System Total:
DAp=0.22oc
Q10=1.3cfs
Treatment Provided=39ft

GRASS SWALE DATA
DA=0.46
SLOPE=2.6%
L REQ=46ft
L PRO=212ft
Q2=2.5cfs
V2=2.0fps
Q10=3.2cfs
V10=2.2fps
System Total:
DAp=0.22oc
Q10=1.3cfs
Treatment Provided=39ft

GRASS SWALE DATA
DAp=0.22
DAg=0.78
SLOPE=1.5%
L REQ=100ft
L PRO=157ft
Q2=2.0cfs
V2=1.5fps
Q10=2.5cfs
V10=1.6fps

-L-
PI Sta 20+84.33
Δ = 25°03' 49.3" (LT)
D = 4'00' 24"
L = 625.54'
T = 317.86'
R = 1,430.00'
SE = .06
RO = 156'

STA.22+05.00 -L- END STATE PROJECT B-4417

8/17/99

REVISIONS

15-NOV-2010 09:36 D:\gpc\154417_EC.pst.dgn
PLT: 154417_EC_04.dwg
PLOT: 154417_EC_04.dwg