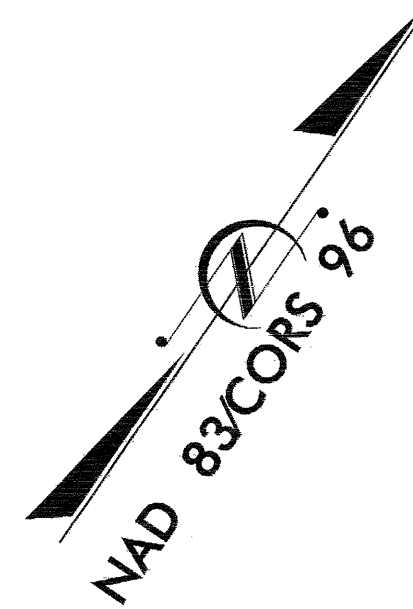


TIP PROJECT: B-4517

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

LOCATION: BRIDGE NO. 49 OVER CROWDERS CREEK
ON SR 1103

TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURE



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4517	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

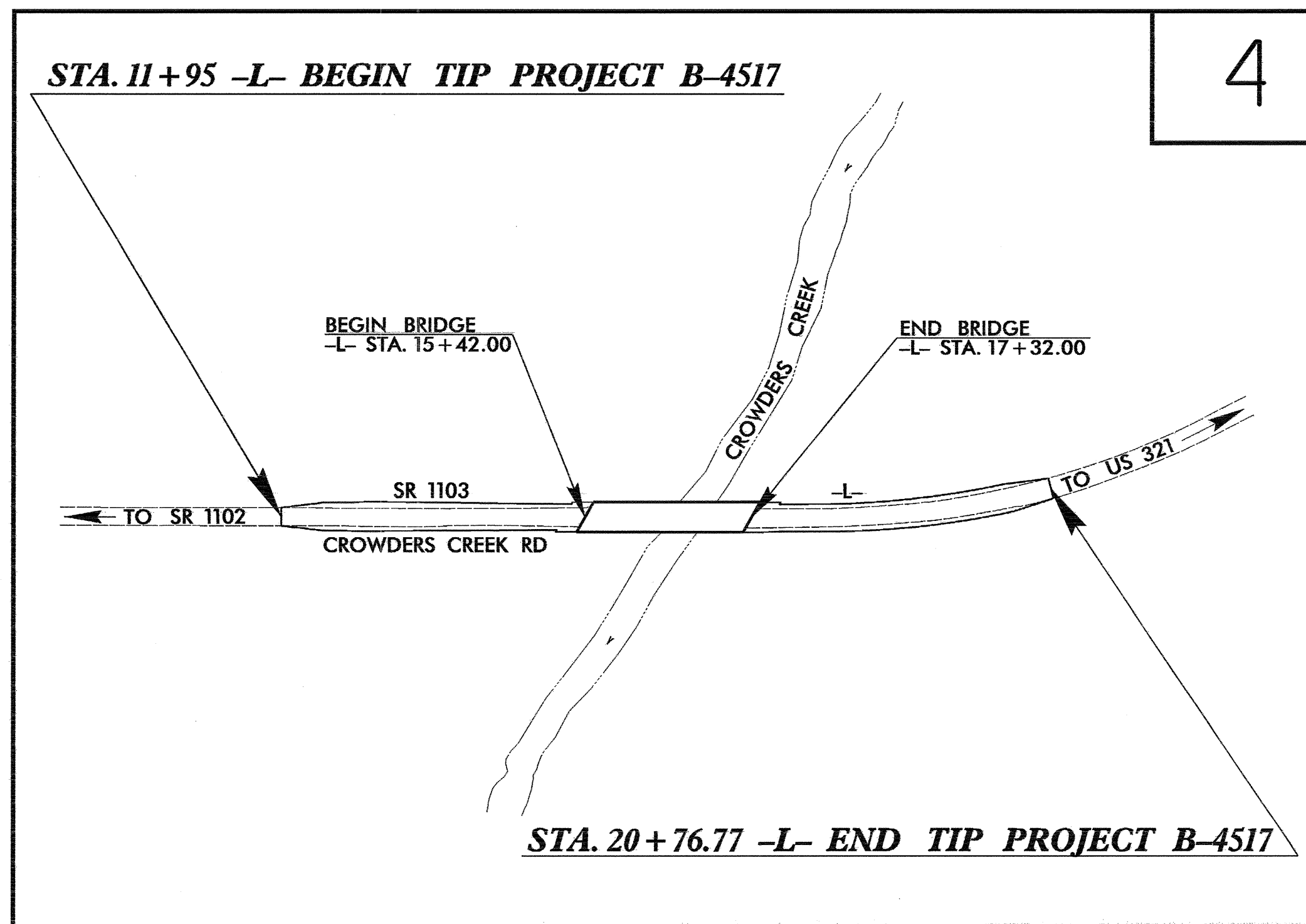
EROSION AND SEDIMENT CONTROL MEASURES

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	
1633.01	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
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	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

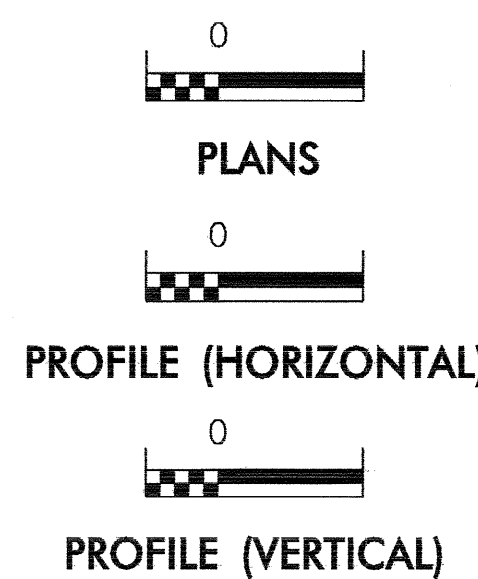
**THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.**

**303(d) IMPAIRED WATER(S) EXIST
ON THIS PROJECT**

303(d) Impaired Water Zone(s) Exist
From Sta. _____ Begin
to Sta. _____ End
Refer To E. C. Special Provisions
for Special Considerations.



GRAPHIC SCALE



**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

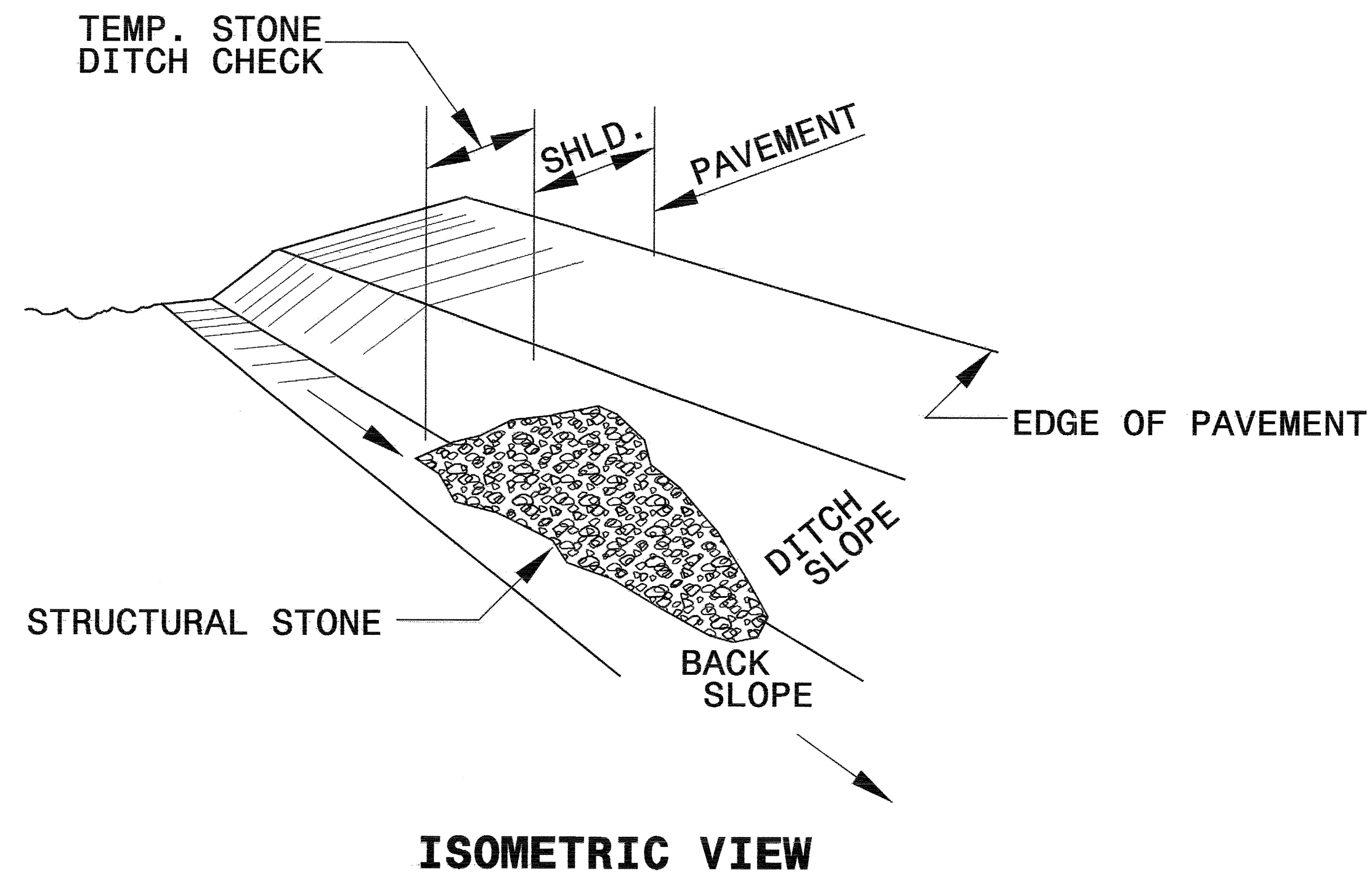
Roadway Standard Drawings

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 | |

PROJECT REFERENCE NO. B-4517	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

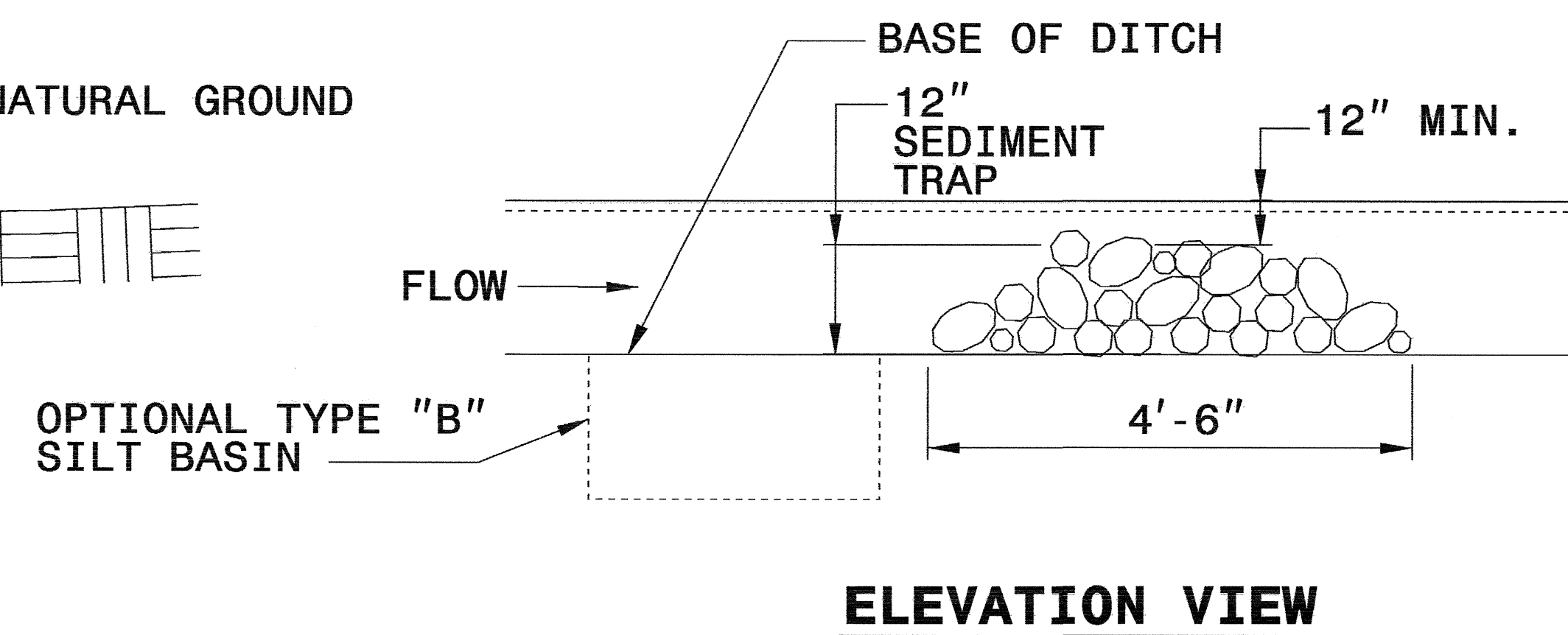
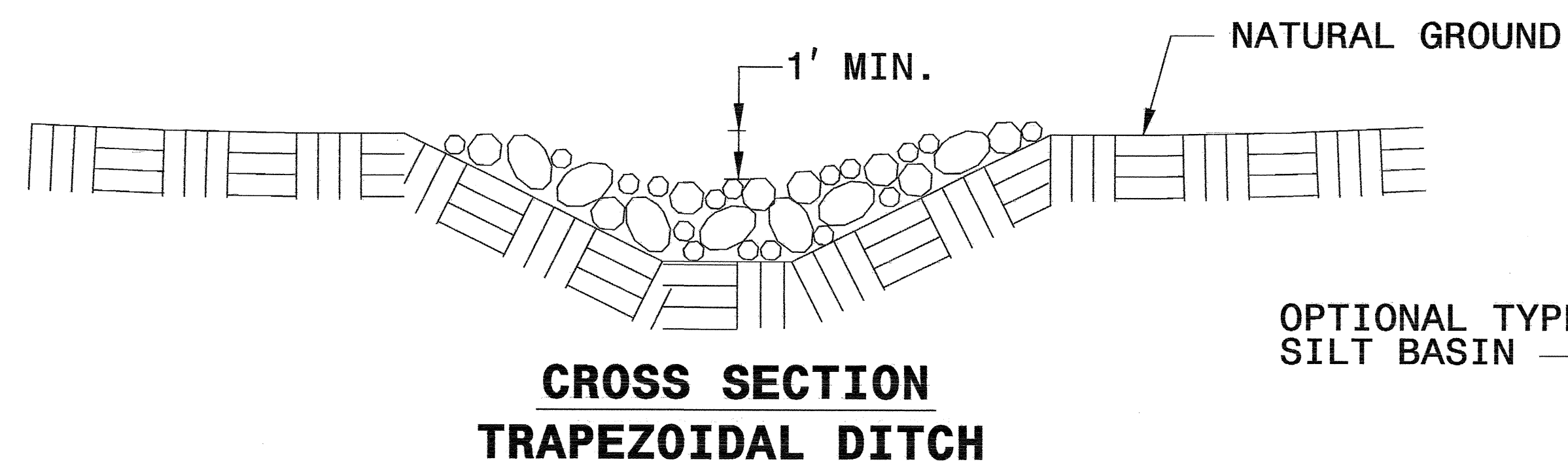
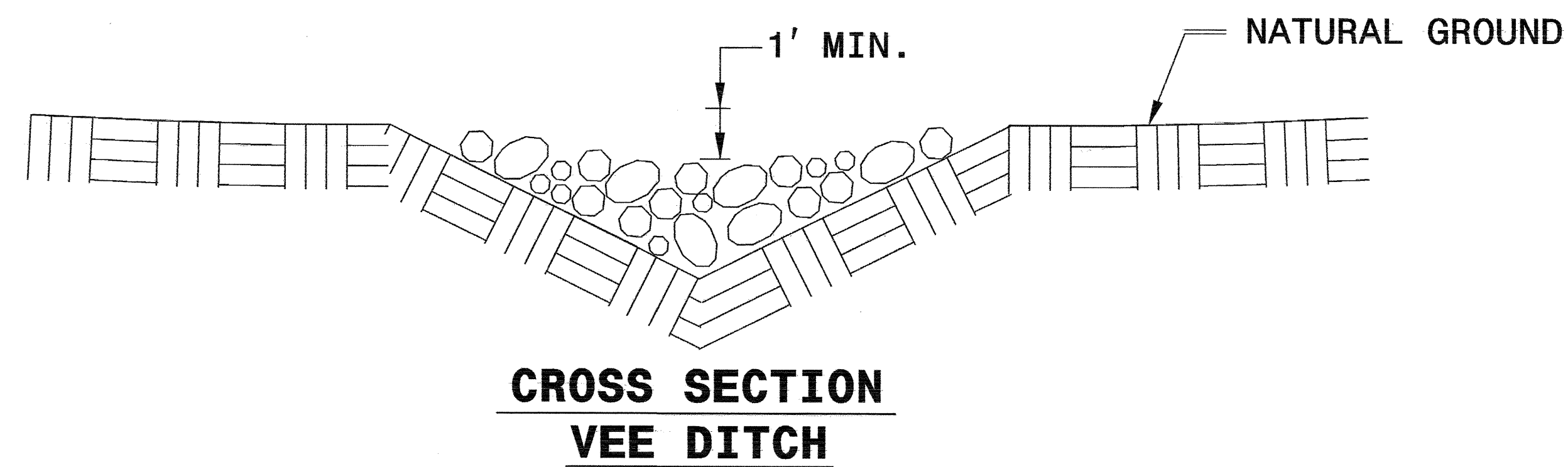
TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



NOTES:

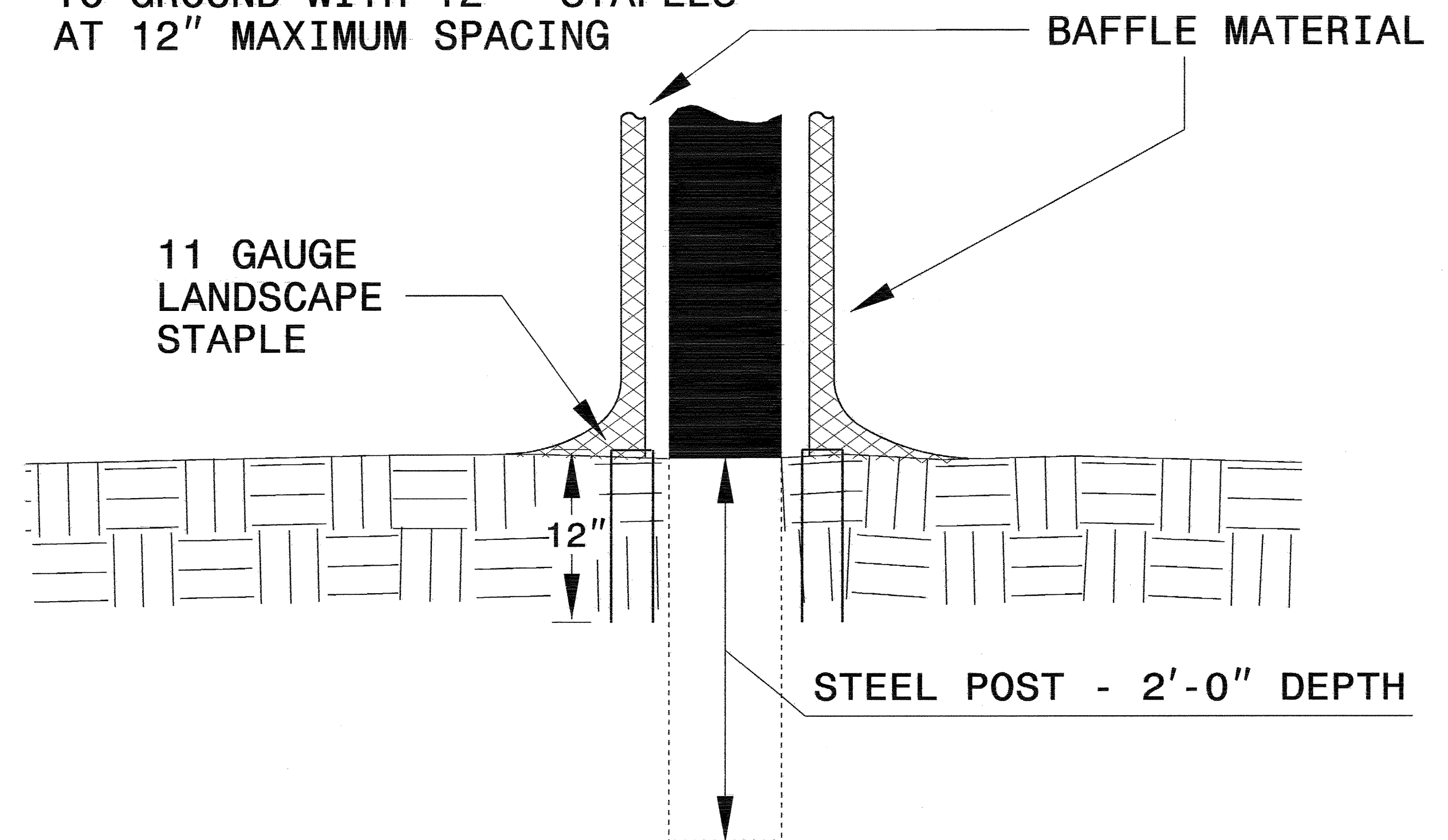
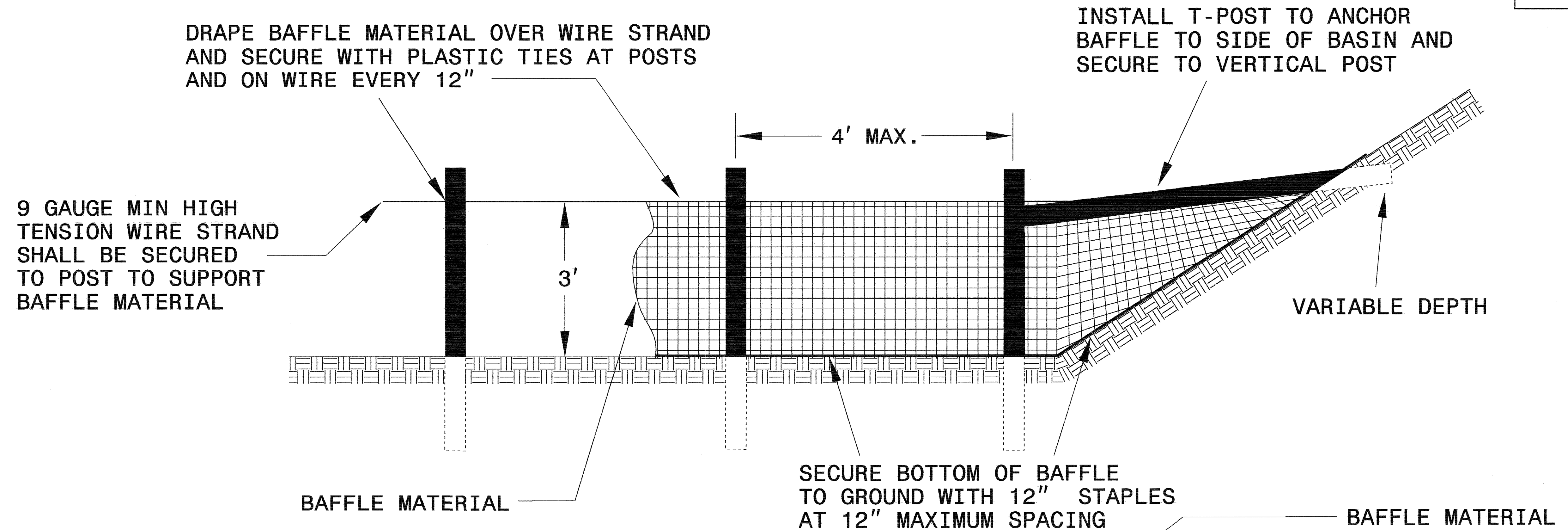
USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

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%.



PROJECT REFERENCE NO. B-4517	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



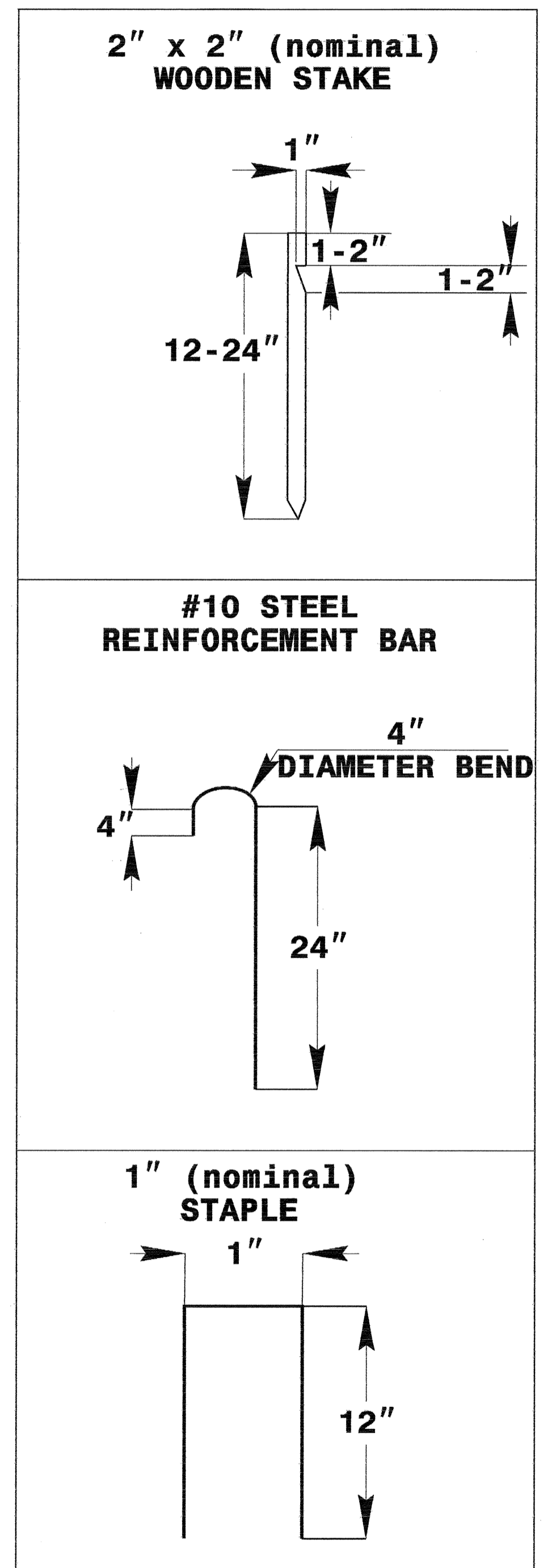
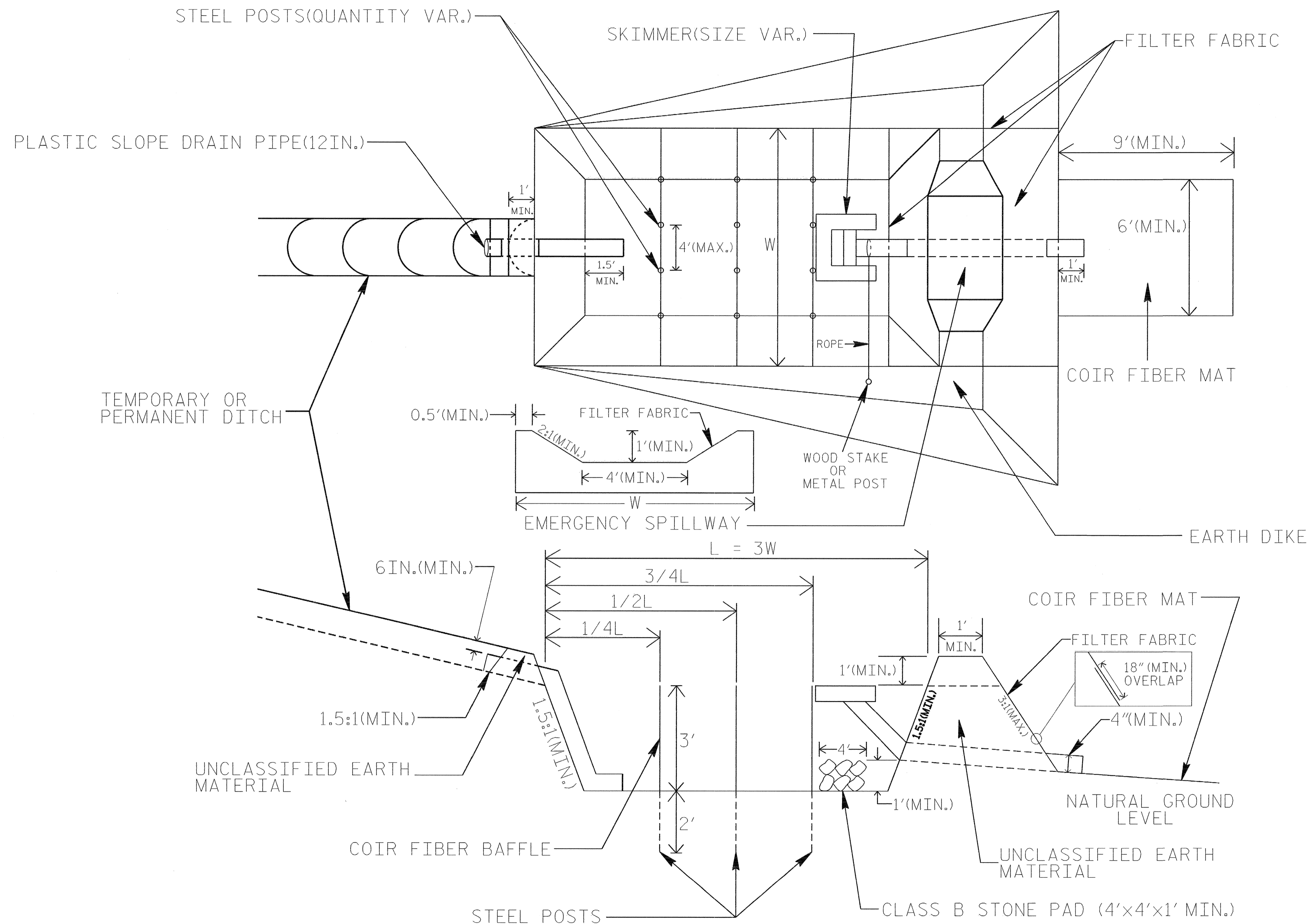
NOTES:

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

SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. B-4517	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



COIR FIBER MAT ANCHOR OPTIONS

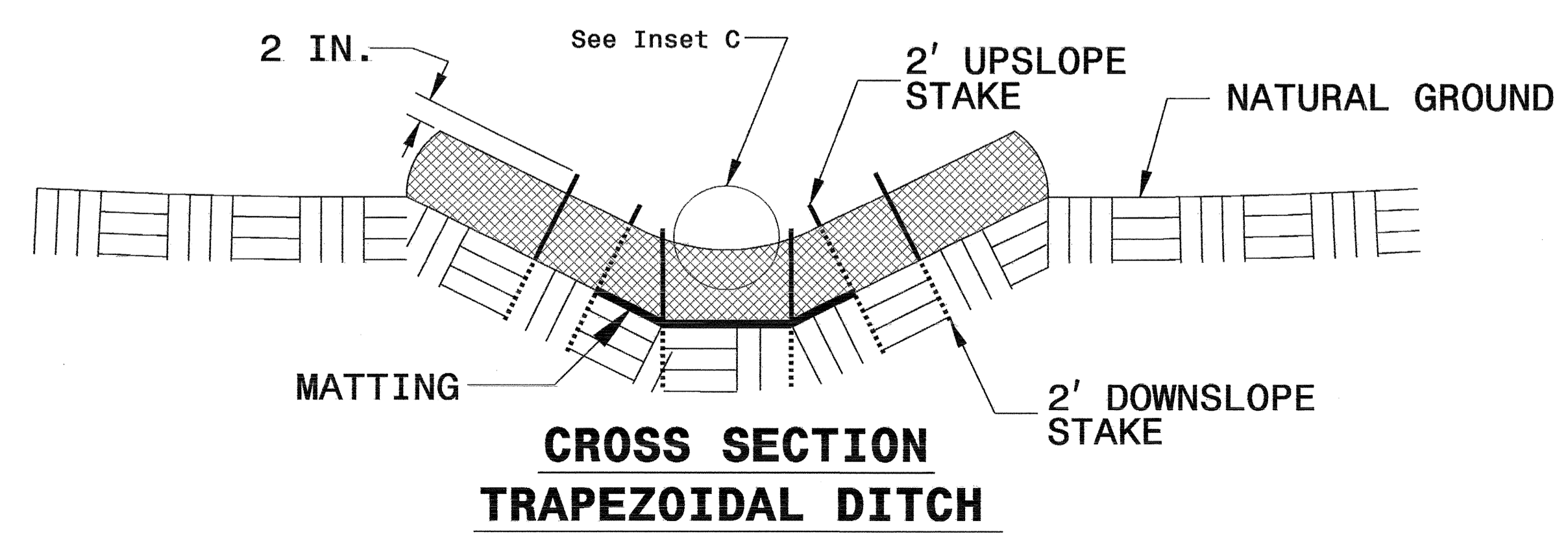
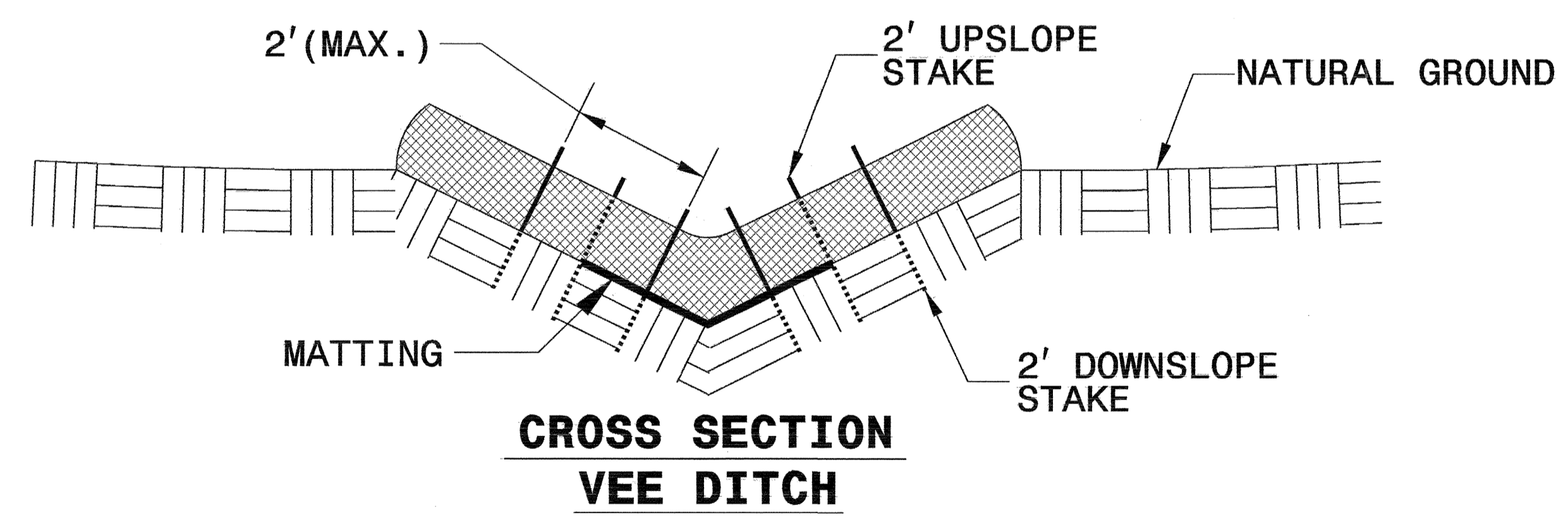
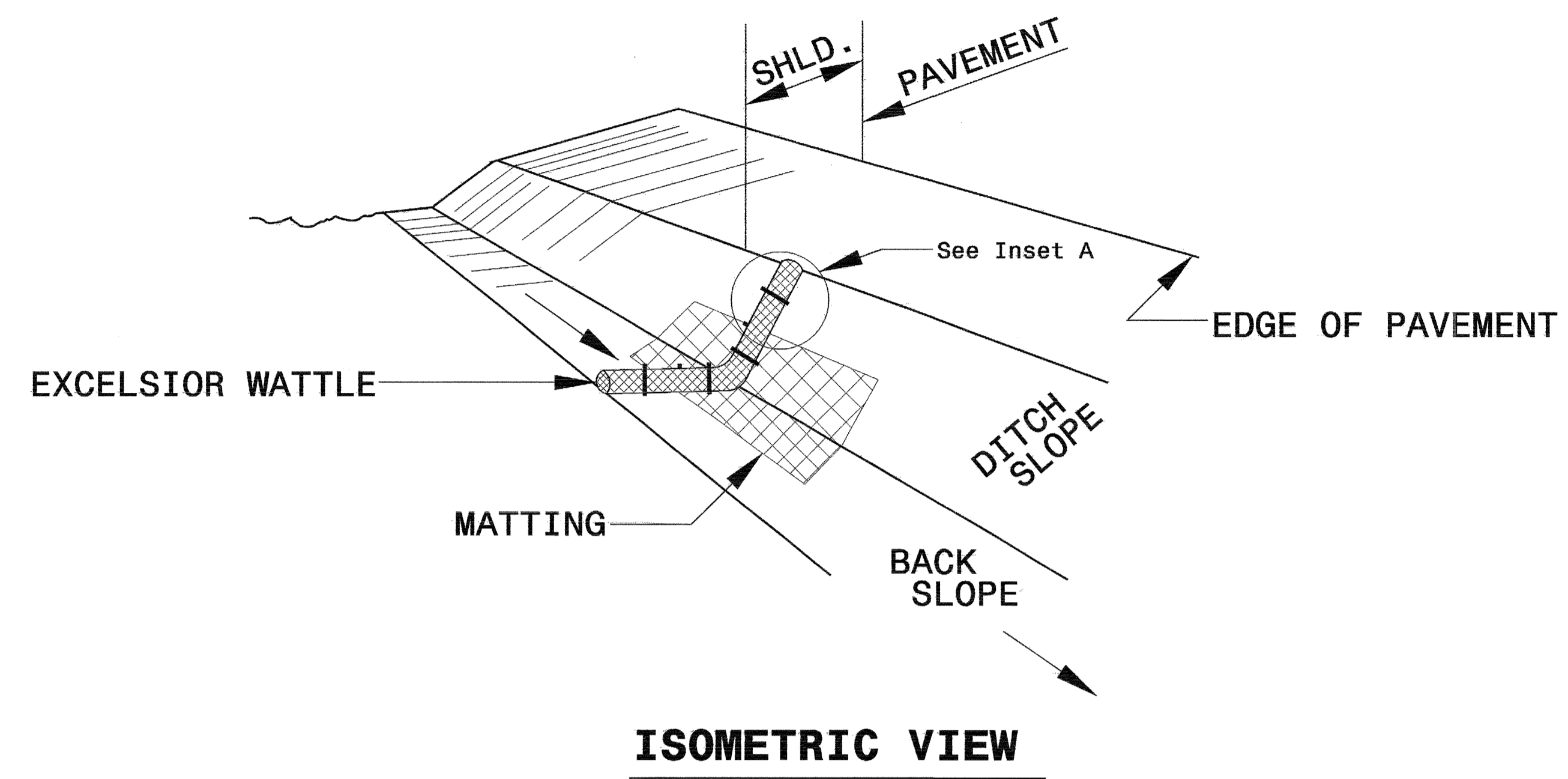
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., 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.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTER FABRIC AS DIRECTED.
6. FILTER FABRIC FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18" (MIN.) AS SHOWN.

NOT TO SCALE

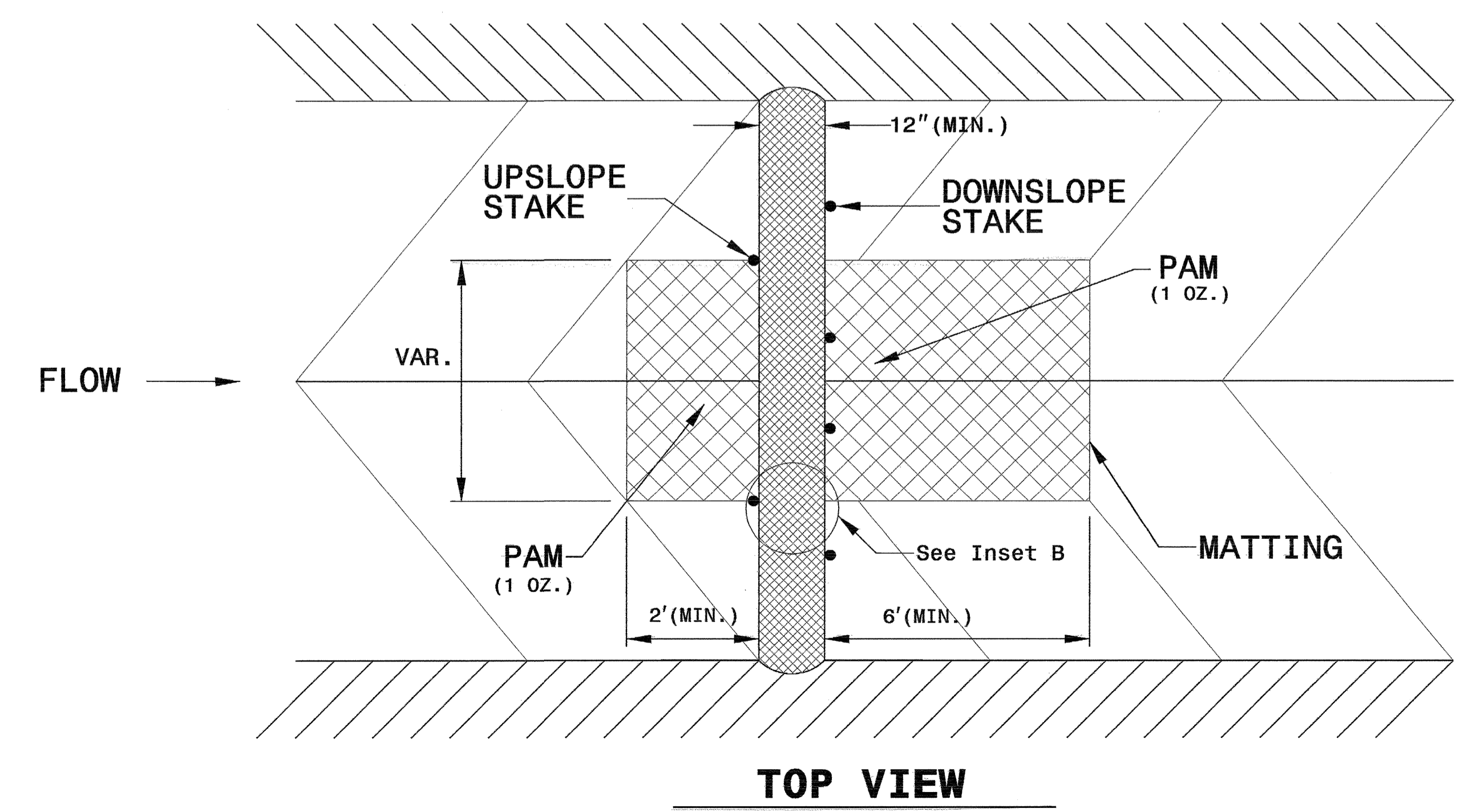
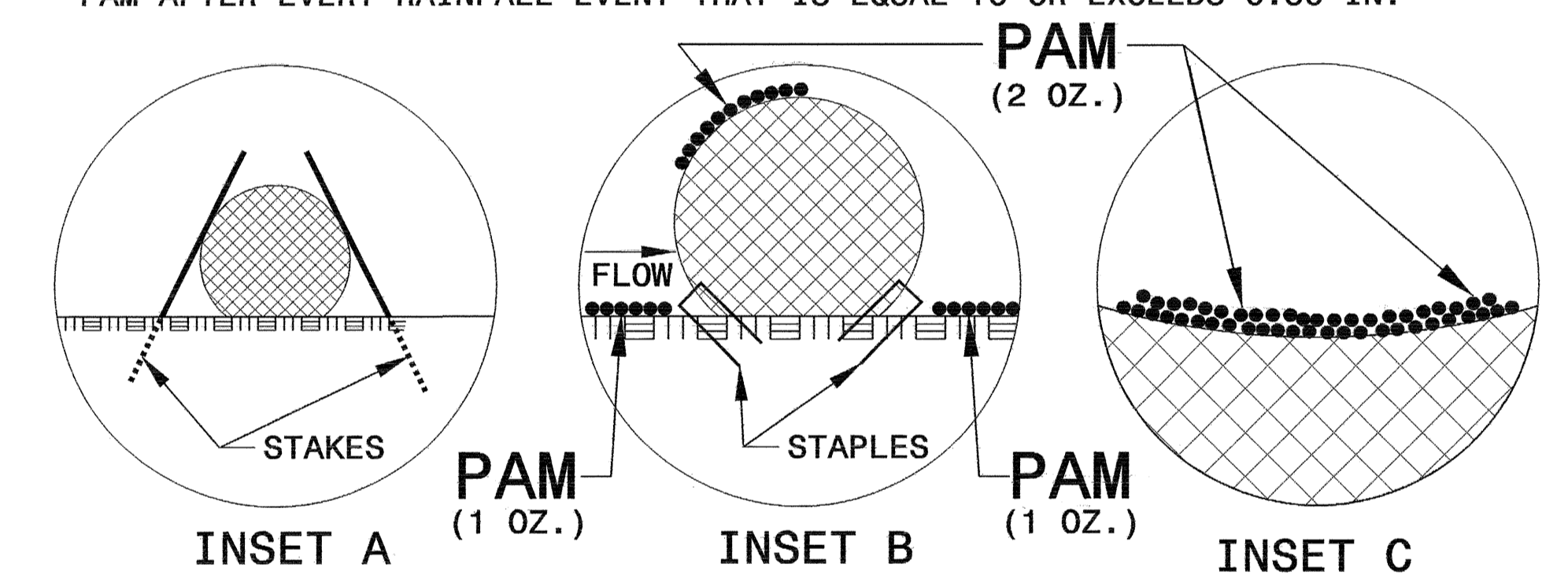
PROJECT REFERENCE NO. B-4517	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



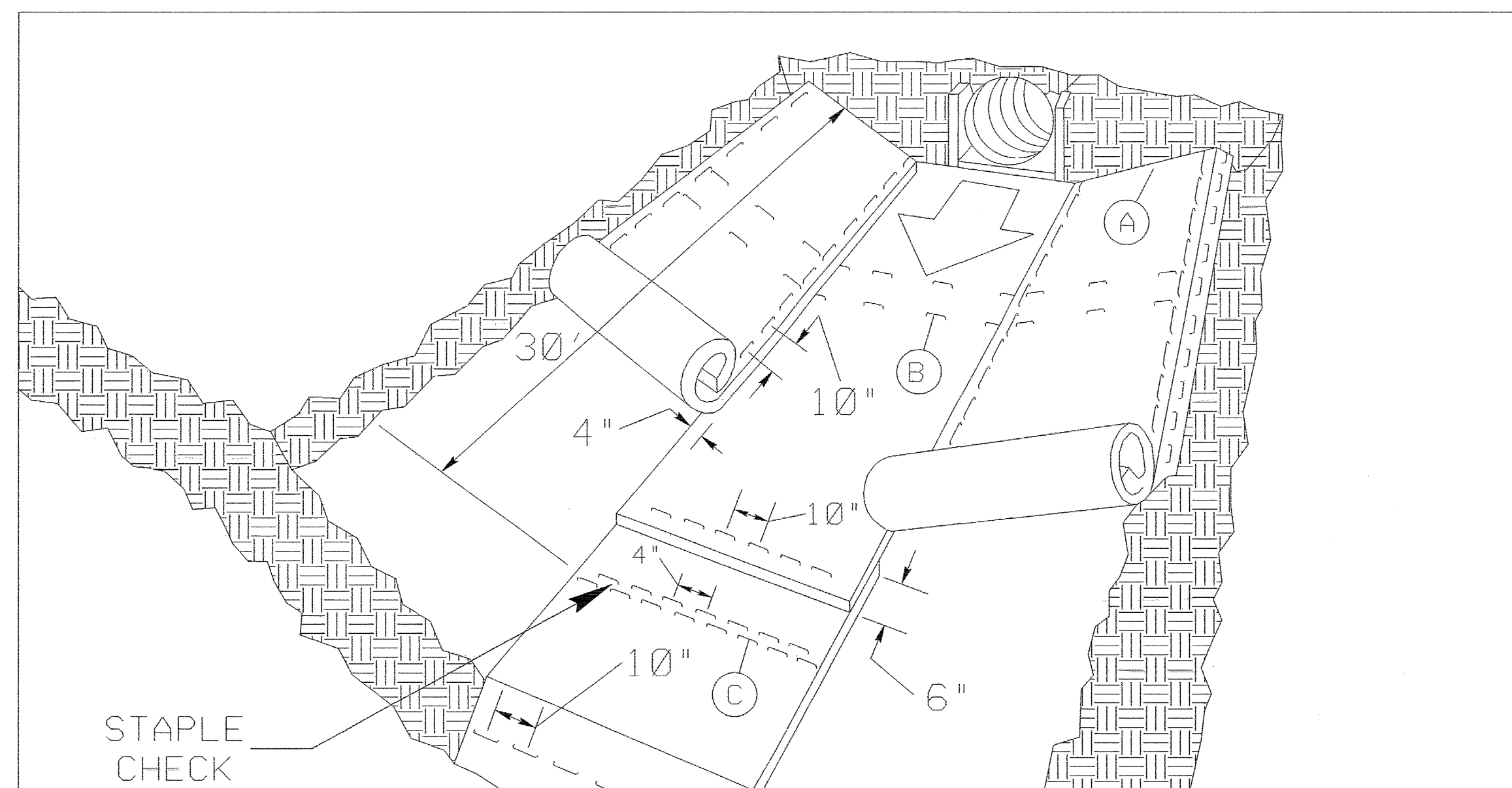
NOTES:

- 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-4517	SHEET NO. EC-2D
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

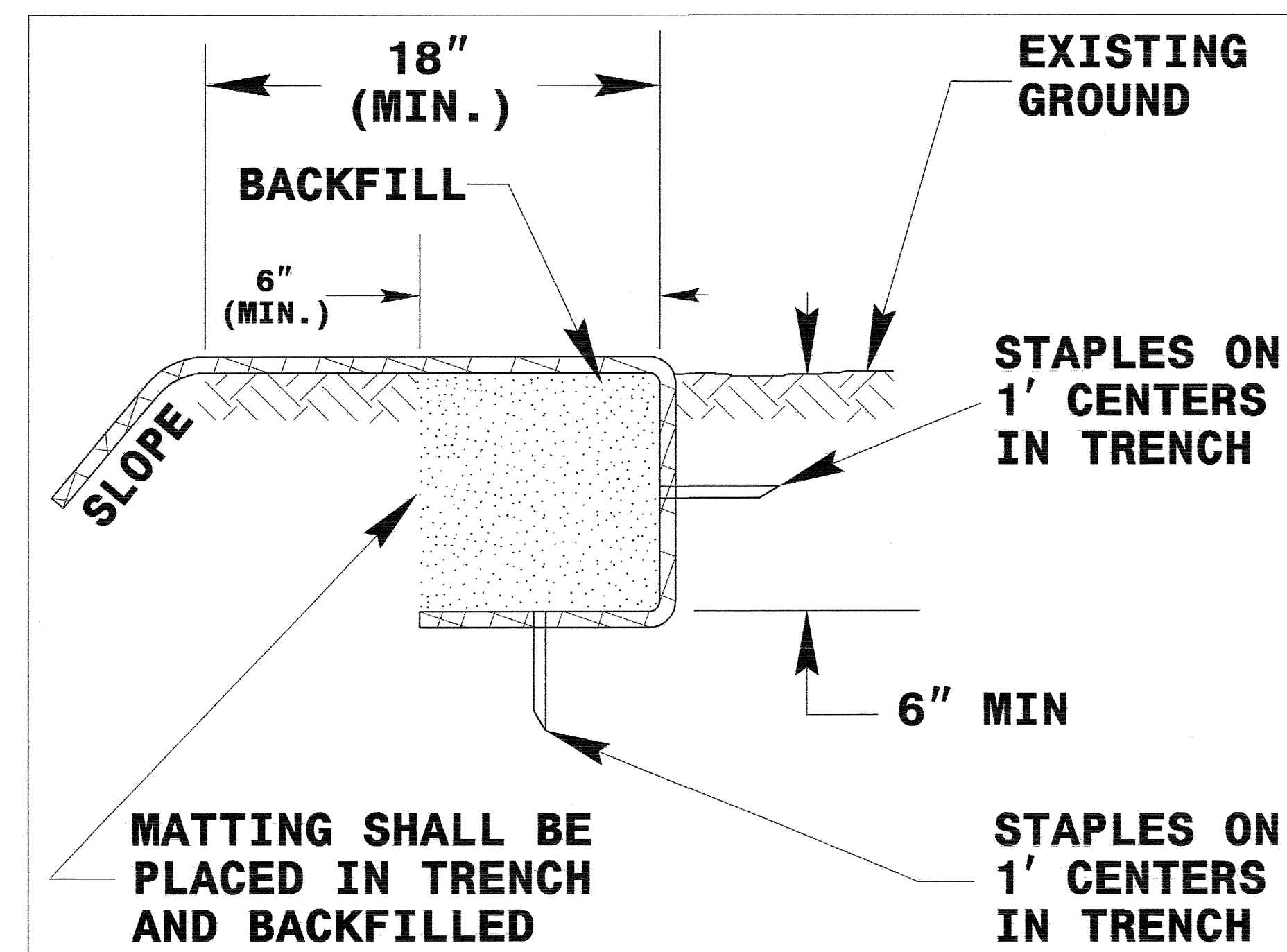
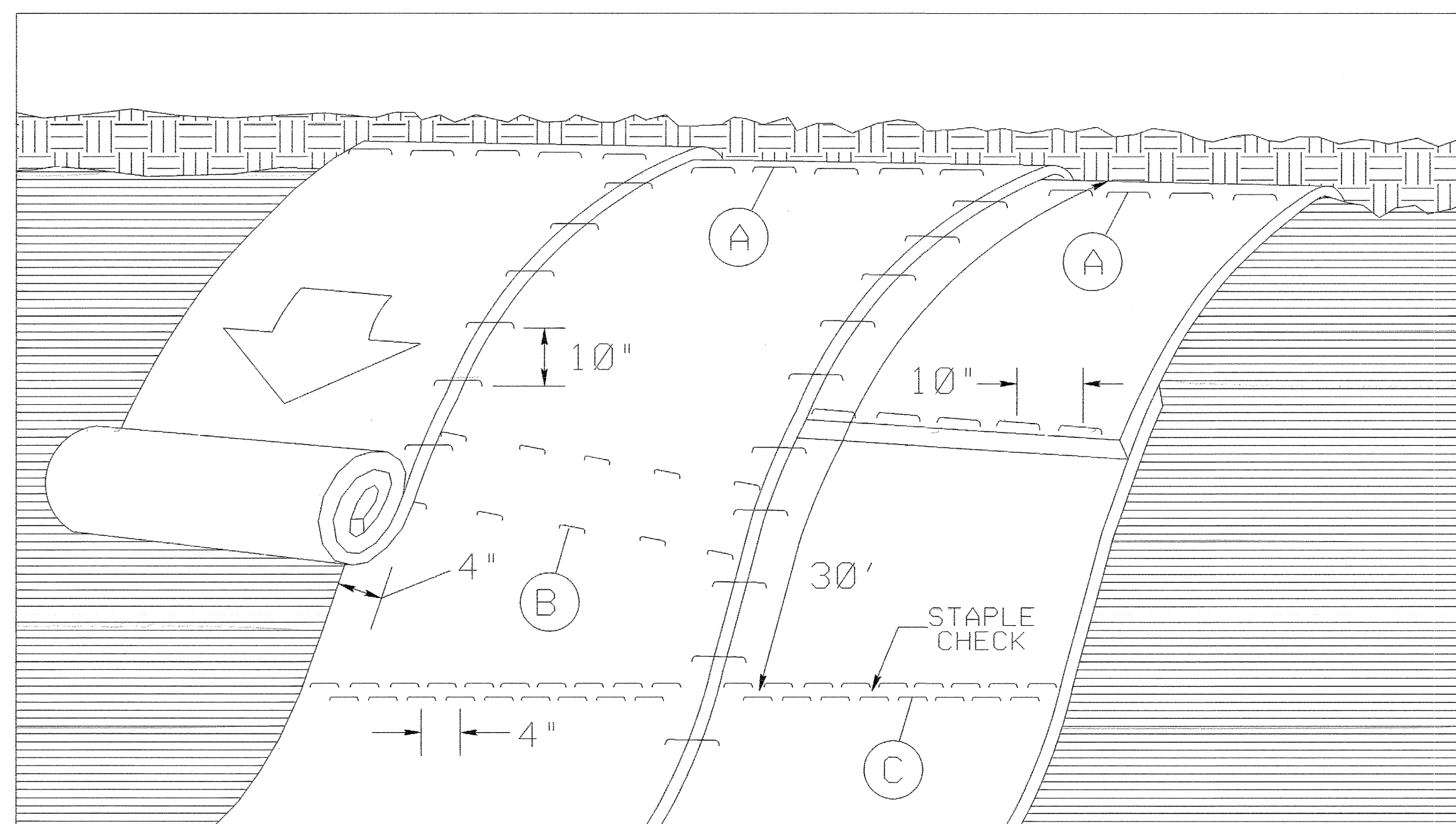


DIAGRAM (A)



MATTING ON SLOPES

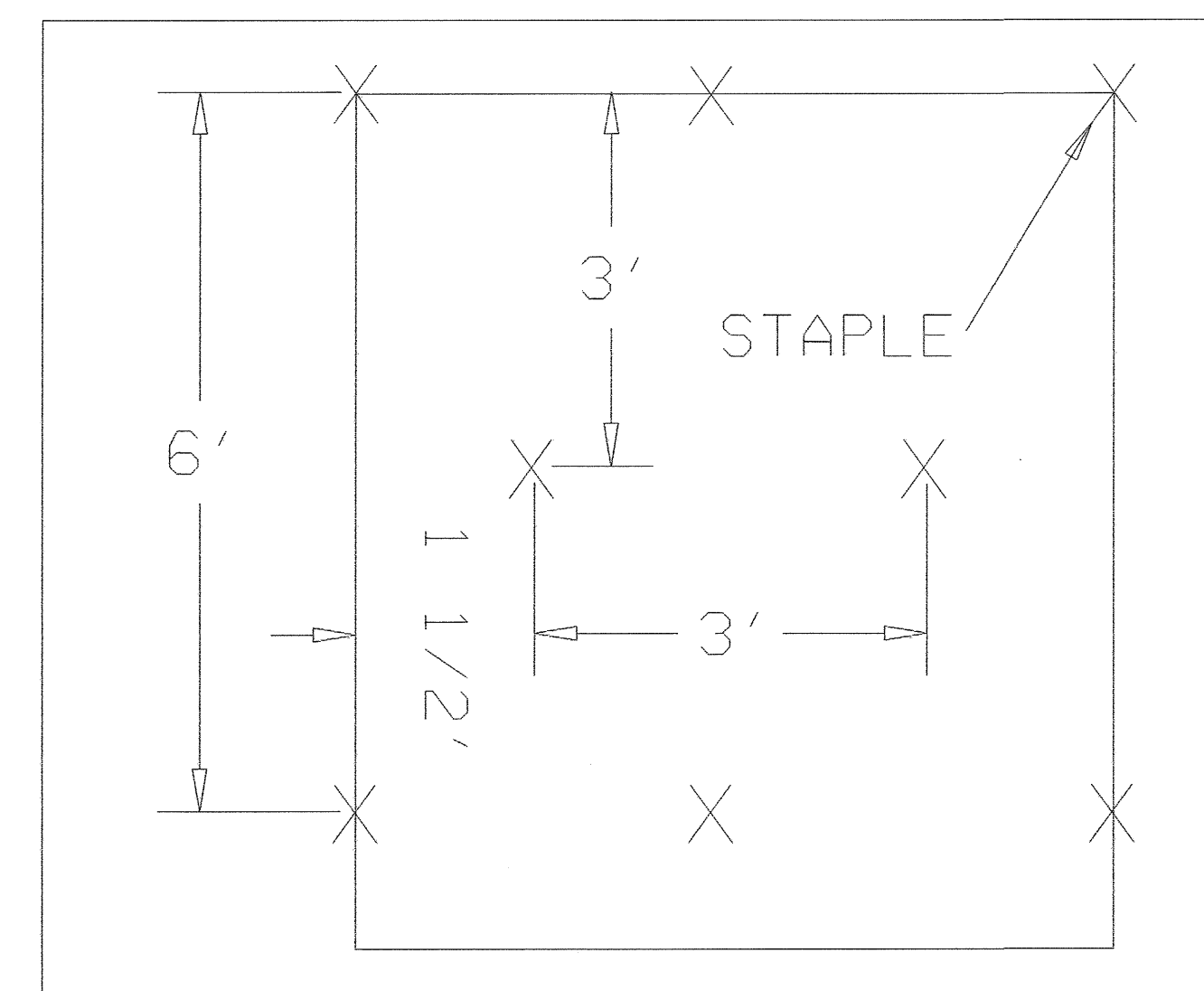


DIAGRAM (B)

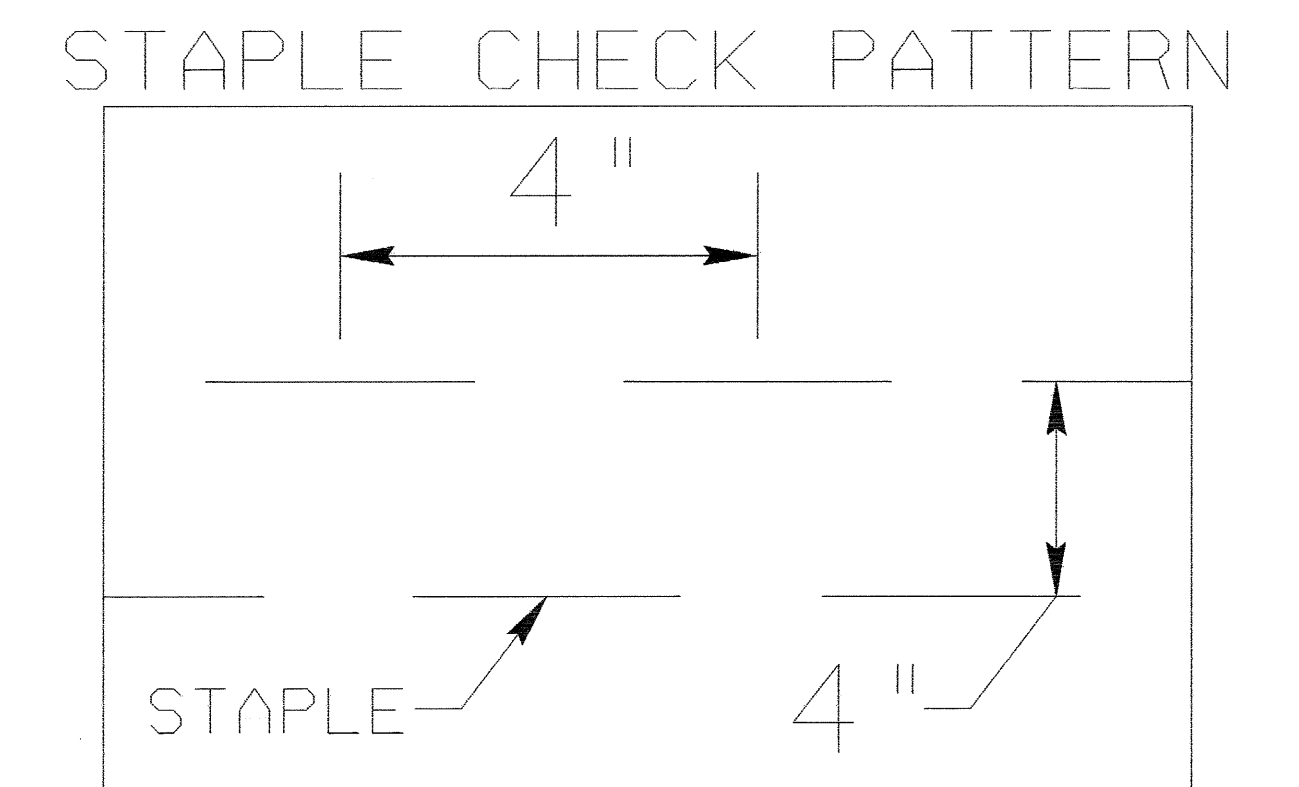


DIAGRAM (C)

NOTES:

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

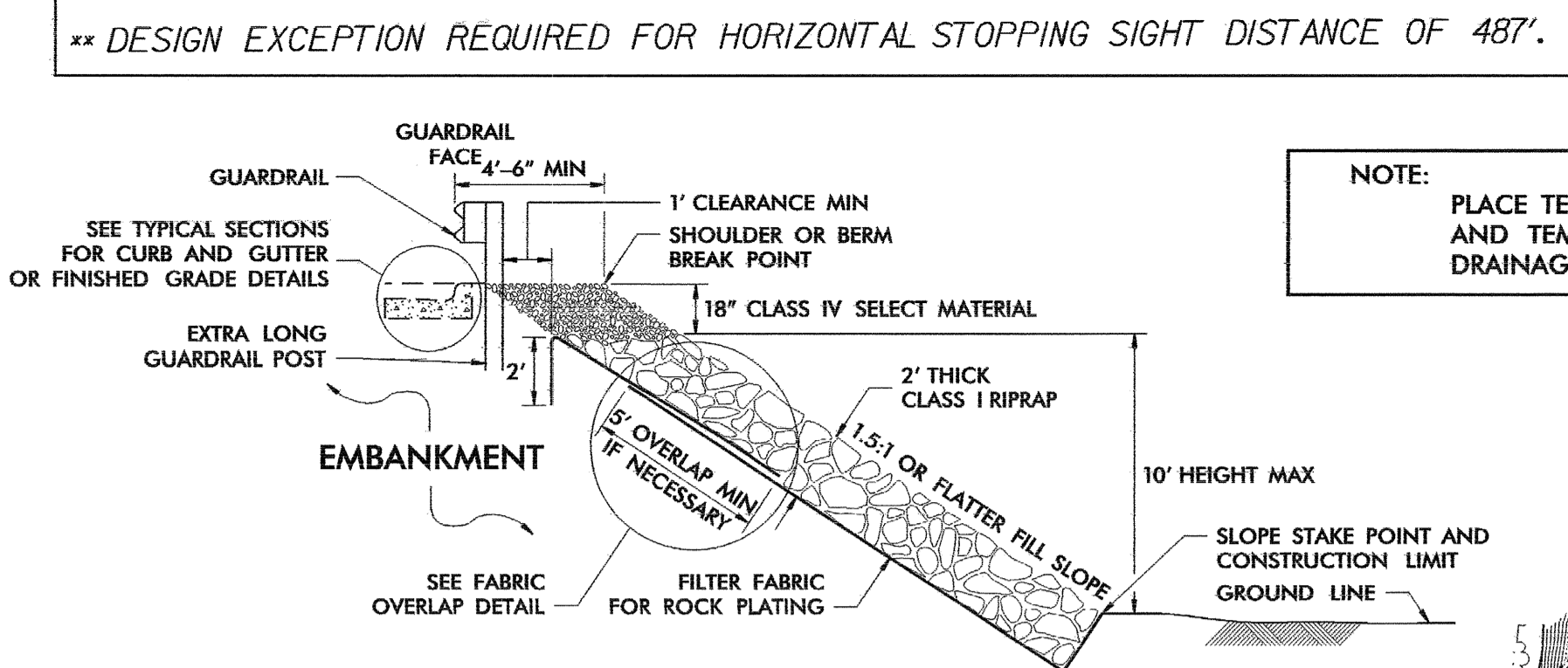
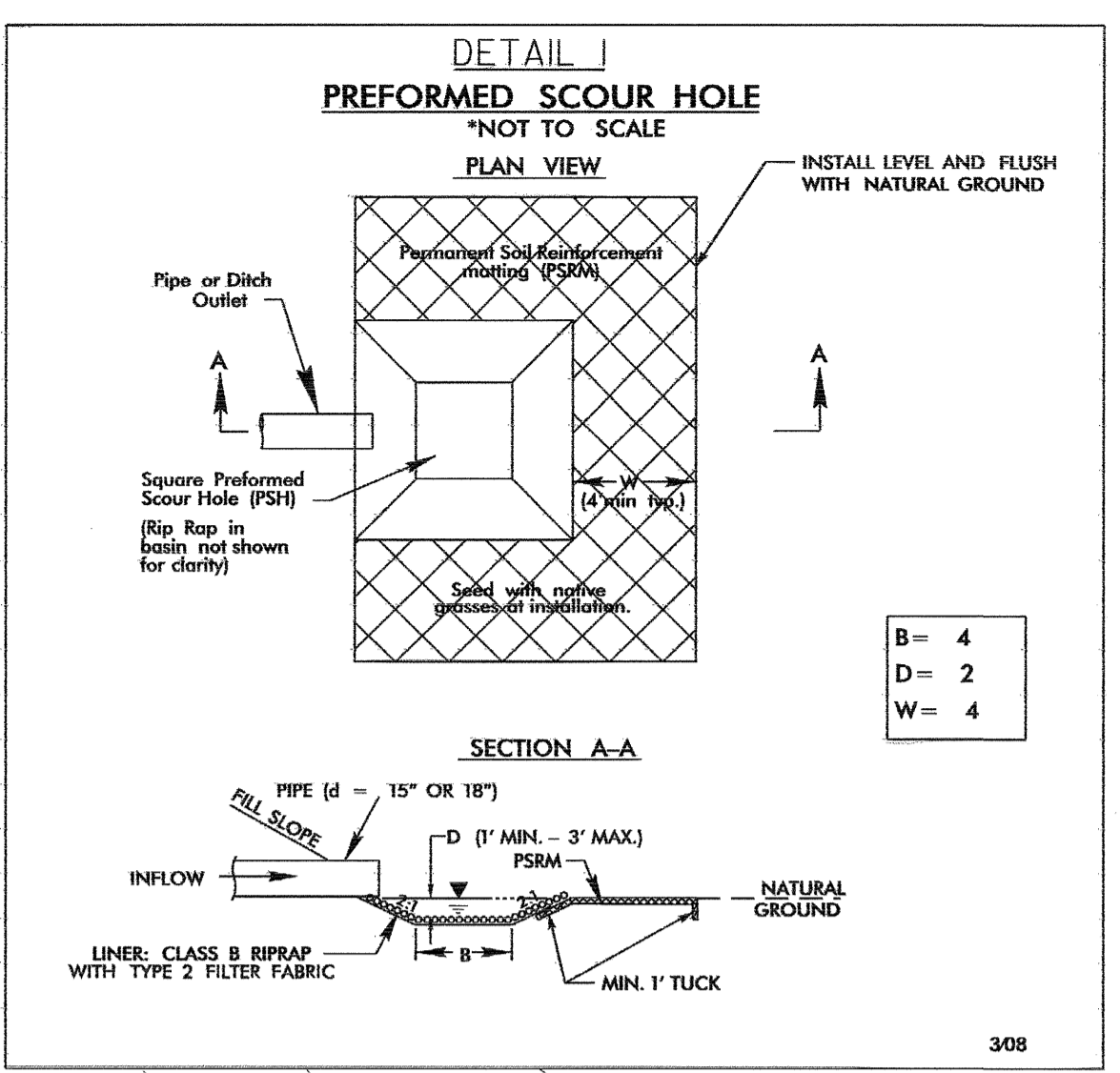
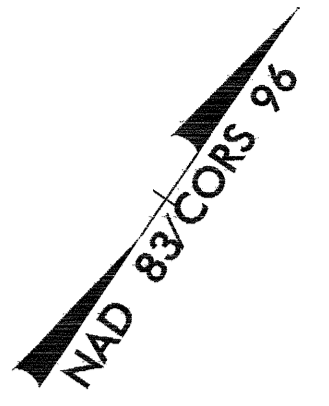
STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

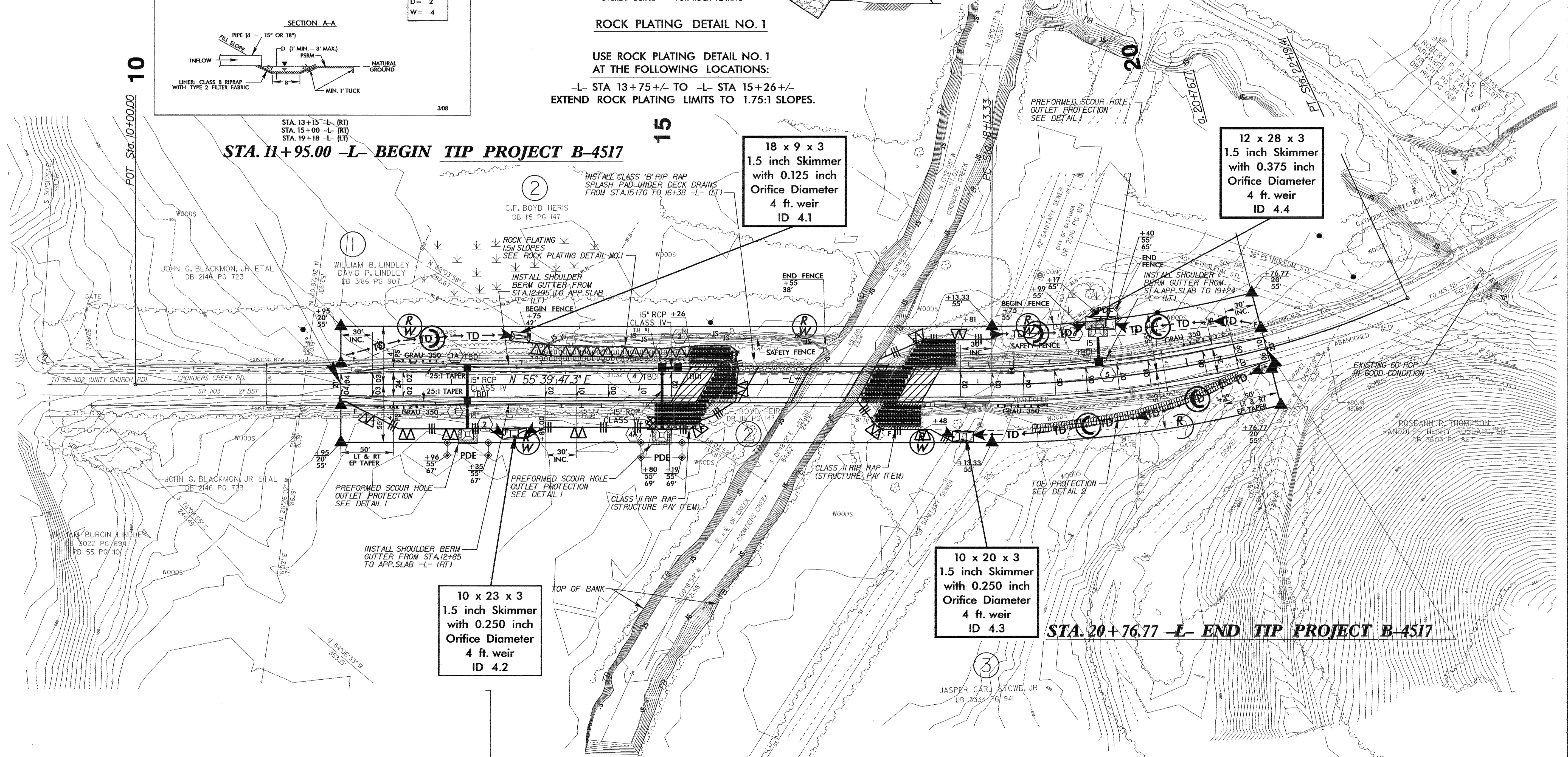
PROJECT REFERENCE NO. B-4517	SHEET NO. EC-03/CONST.04
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

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.



USE ROCK PLATING DETAIL NO. 1
AT THE FOLLOWING LOCATIONS:
-L- STA 13+75+/- TO -L- STA 15+26+/-
EXTEND ROCK PLATING LIMITS TO 1.75:1 SLOPES.



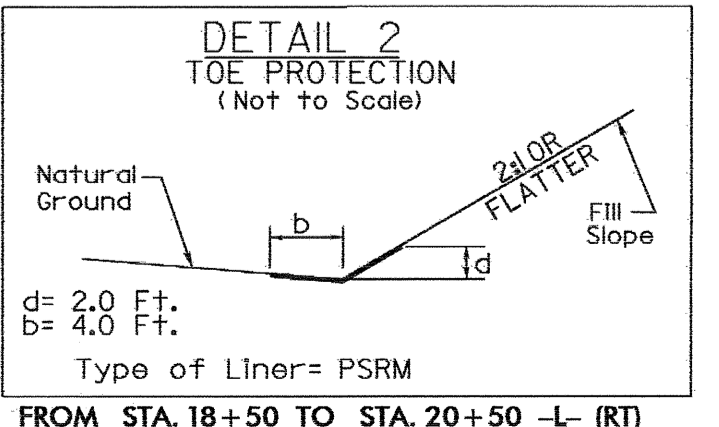
18 x 9 x 3
1.5 inch Skimmer
with 0.125 inch
Orifice Diameter
4 ft. weir
ID 4.1

12 x 28 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 4.4

10 x 23 x 3
1.5 inch Skimmer
with 0.250 inch
Orifice Diameter
4 ft. weir
ID 4.2

10 x 20 x 3
1.5 inch Skimmer
with 0.250 inch
Orifice Diameter
4 ft. weir
ID 4.3

STA. 20+76.77 -L- END TIP PROJECT B-4517



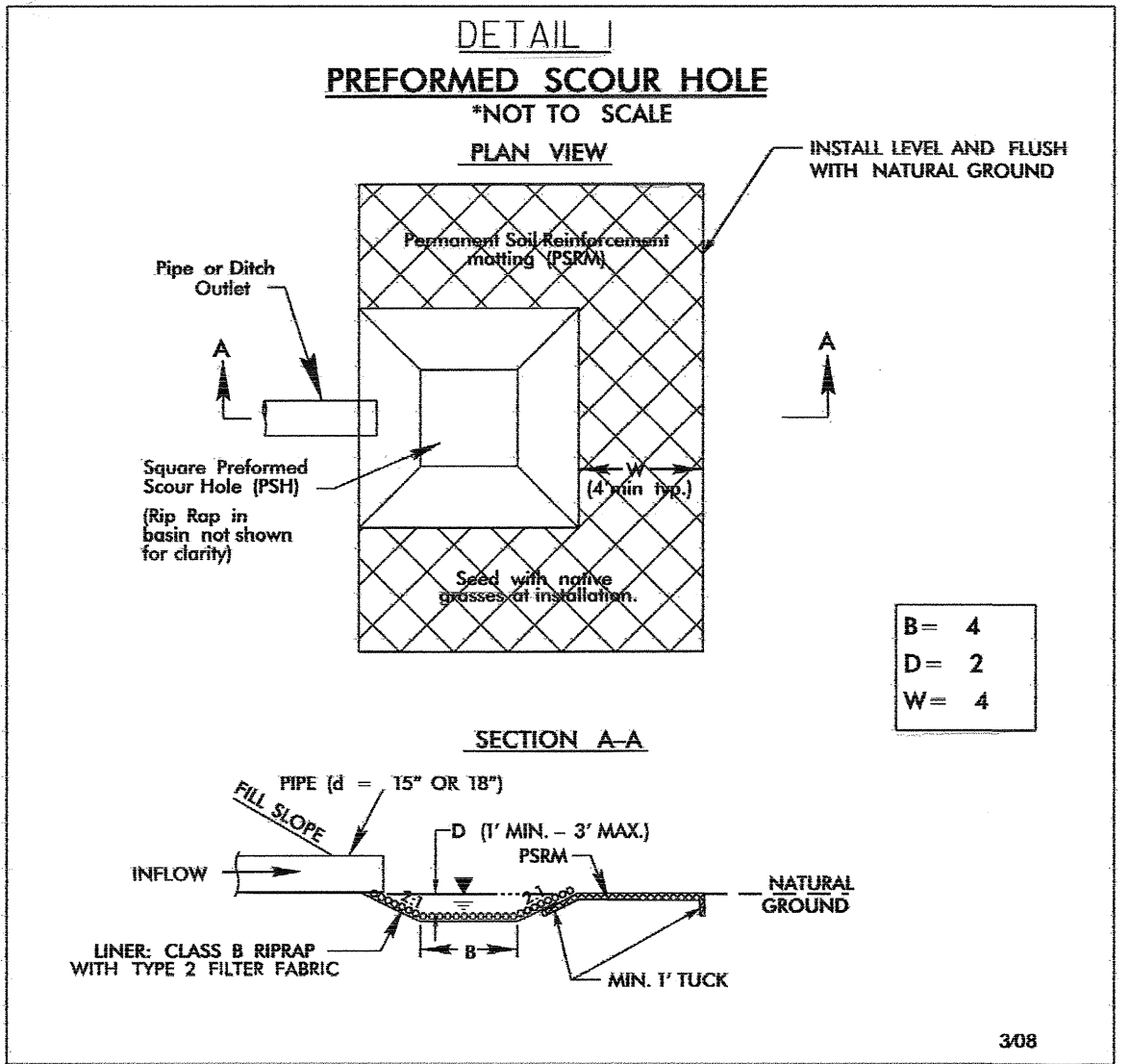
NOTE:
UTILIZE SKIMMER BASIN
AS STILLING BASIN WHERE APPLICABLE.

8/17/99

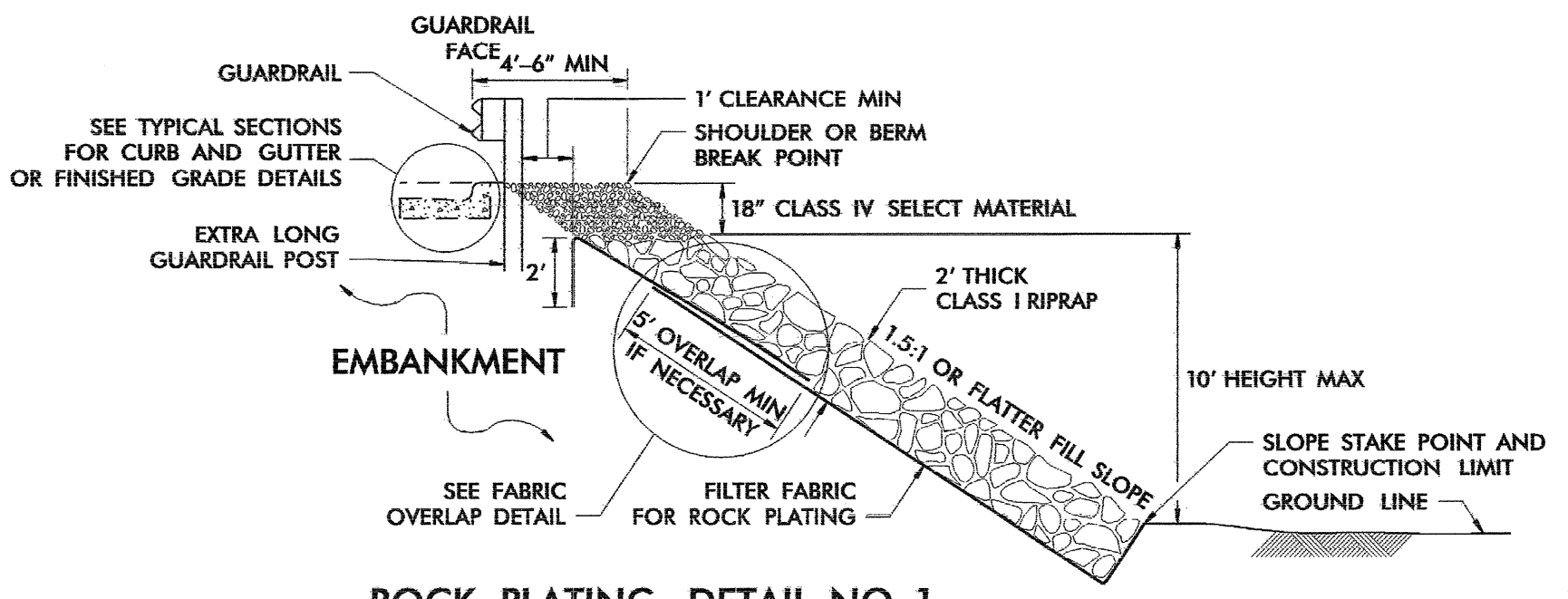
REVISIONS

02-FEB-2000 15:52 Design\4517_EC.psh.dgn
D:\PROJECTS\4517\4517.DWG

PROJECT REFERENCE NO.	SHEET NO.
B-4517	EC-04/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



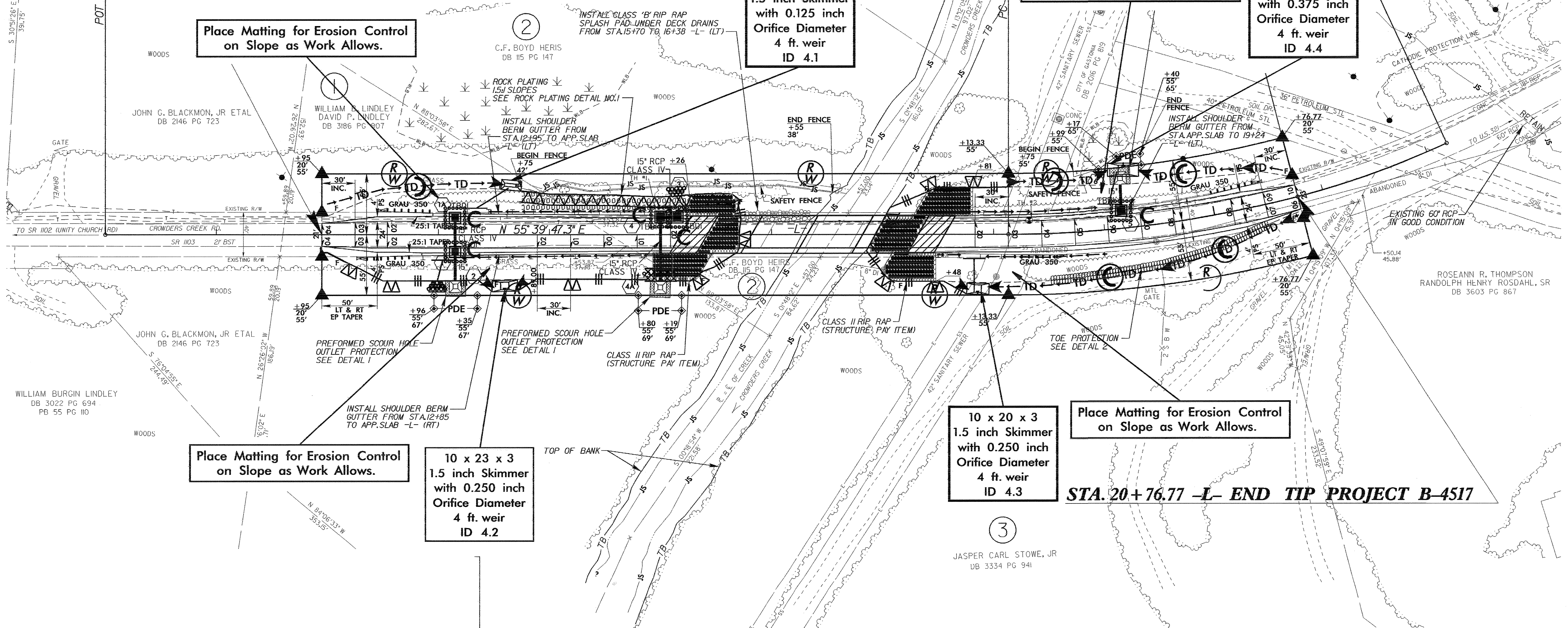
** DESIGN EXCEPTION REQUIRED FOR HORIZONTAL STOPPING SIGHT DISTANCE OF 487'.



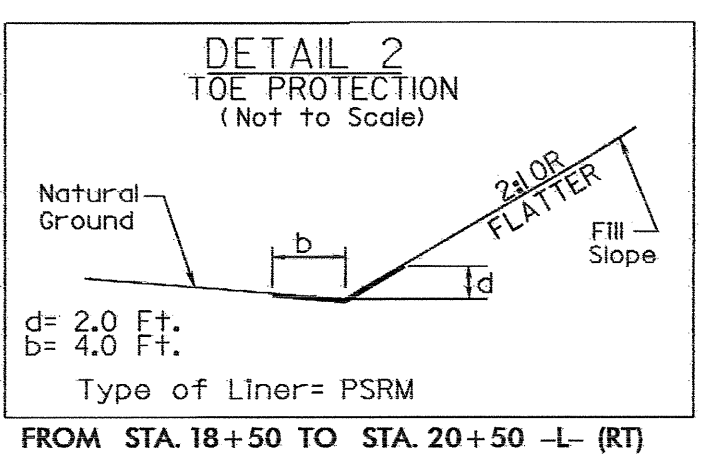
ROCK PLATING DETAIL NO. 1
 USE ROCK PLATING DETAIL NO. 1 AT THE FOLLOWING LOCATIONS:
 -L- STA 13+75+/- TO -L- STA 15+26+/-
 EXTEND ROCK PLATING LIMITS TO 1.75:1 SLOPES.

10
 POT Sta. 10+00.00

STA. 11+95.00 -L- BEGIN TIP PROJECT B-4517



STA. 20+76.77 -L- END TIP PROJECT B-4517



NOTE:
 UTILIZE SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.

REVISIONS

8/17/99
 02-FEB-2010 15:54 N:\Design\B-4517-EC.upsh.dgn
 10