

**TIP PROJECT: B-4211**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

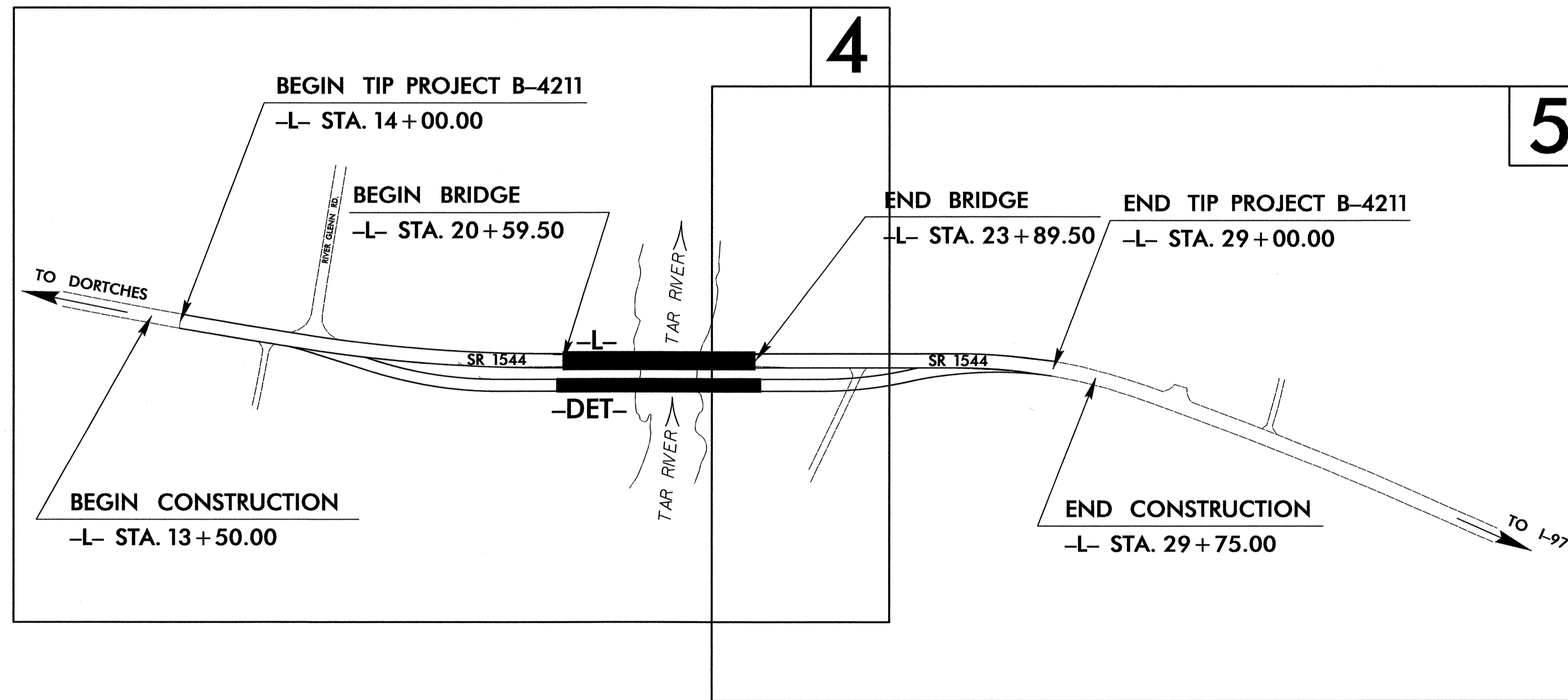
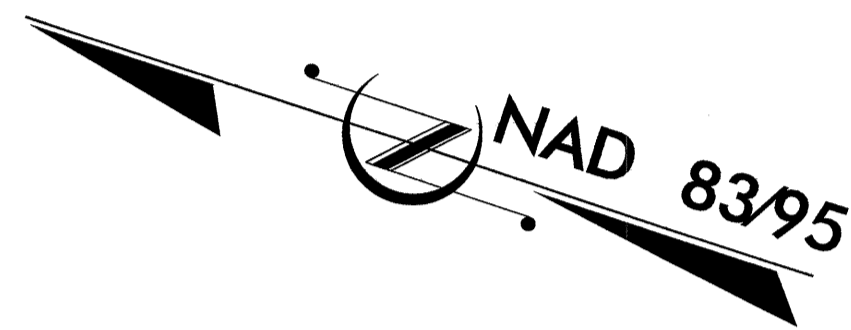
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PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

**NASH COUNTY**

**LOCATION: BRIDGE NO. 56 OVER TAR RIVER ON SR 1544 (S. HALIFAX RD.)**

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



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4211	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	III III III
1606.01	Special Sediment Control Fence	III III III
1622.01	Temporary Berms and Slope Drains	III III III
	Silt Basin Type B	III III III
1633.01	Temporary Rock Silt Check Type-A	III III III
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	III III III
	Temporary Rock Silt Check Type-B	III III III
	Wattle/Coir Fiber Wattle	III III III
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	III III III
1634.01	Temporary Rock Sediment Dam Type-A	III III III
1634.02	Temporary Rock Sediment Dam Type-B	III III III
1635.01	Rock Pipe Inlet Sediment Trap Type-A	III III III
1635.02	Rock Pipe Inlet Sediment Trap Type-B	III III III
1630.04	Stilling Basin	III III III
1630.06	Special Stilling Basin	III III III
	Rock Inlet Sediment Trap:	III III III
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	III III III
	Tiered Skimmer Basin	III III III
	Infiltration Basin	III III III

**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

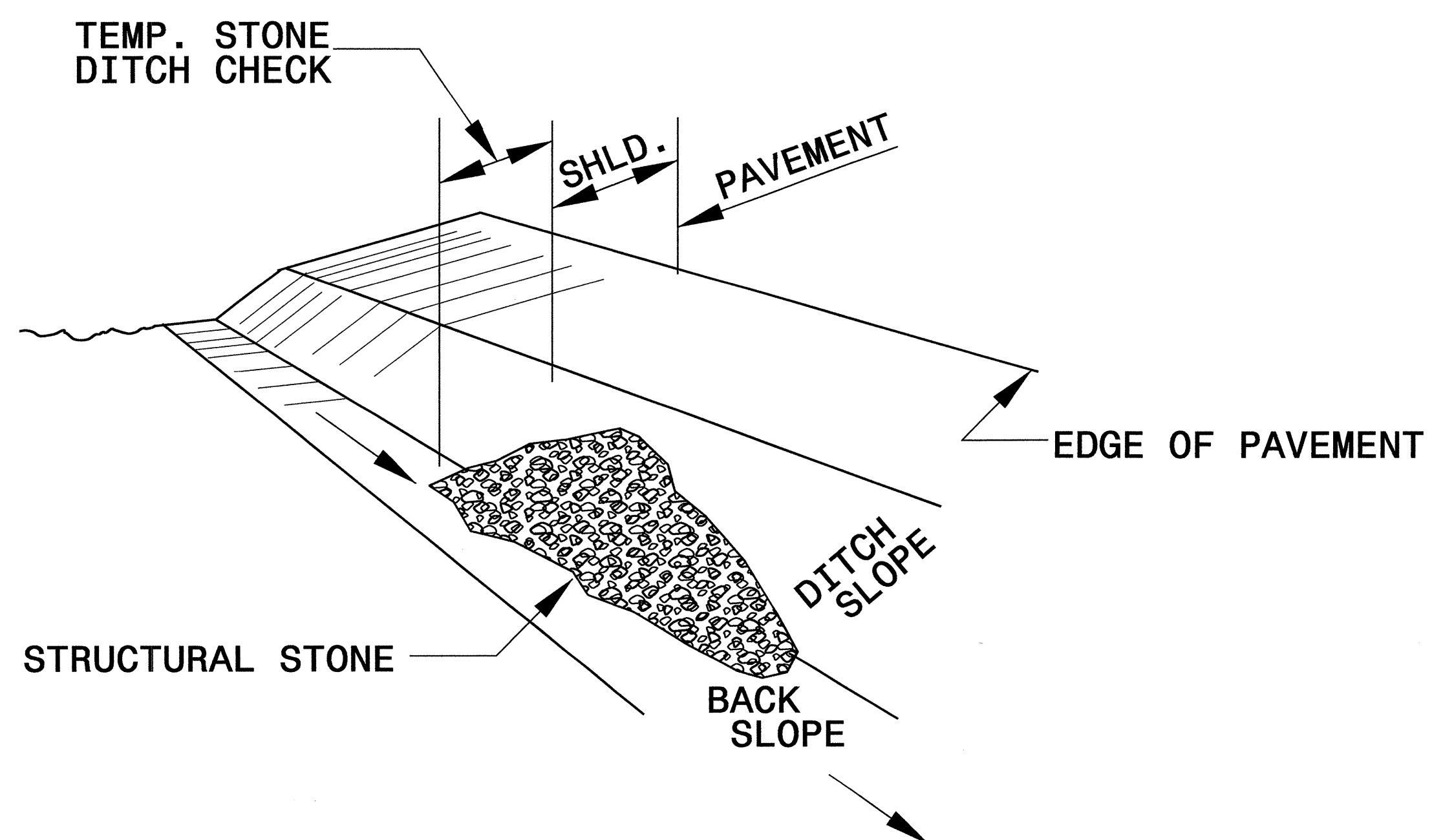
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1630.06 Special Stilling Basin
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	
1630.05 Temporary Diversion	

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PROJECT REFERENCE NO. B-4211	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

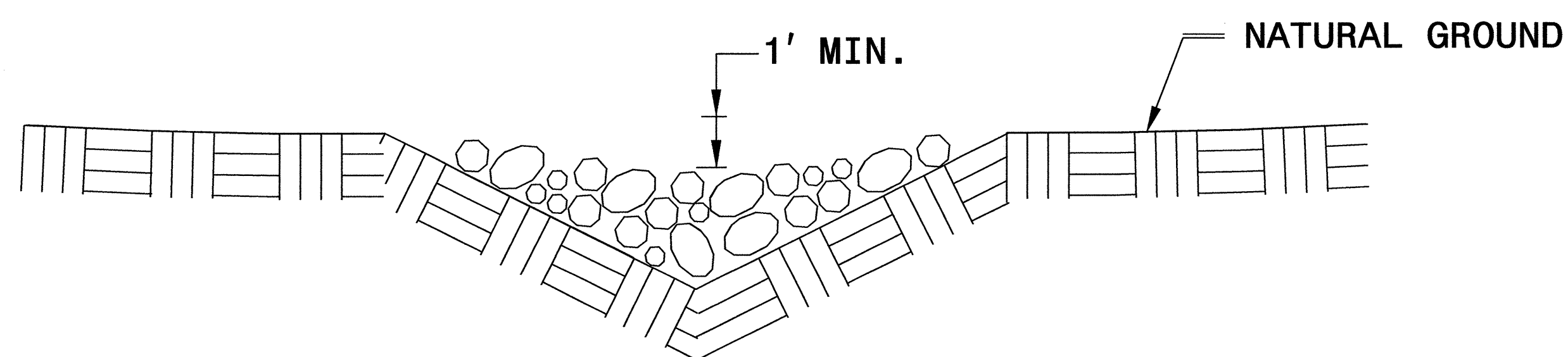


**ISOMETRIC VIEW**

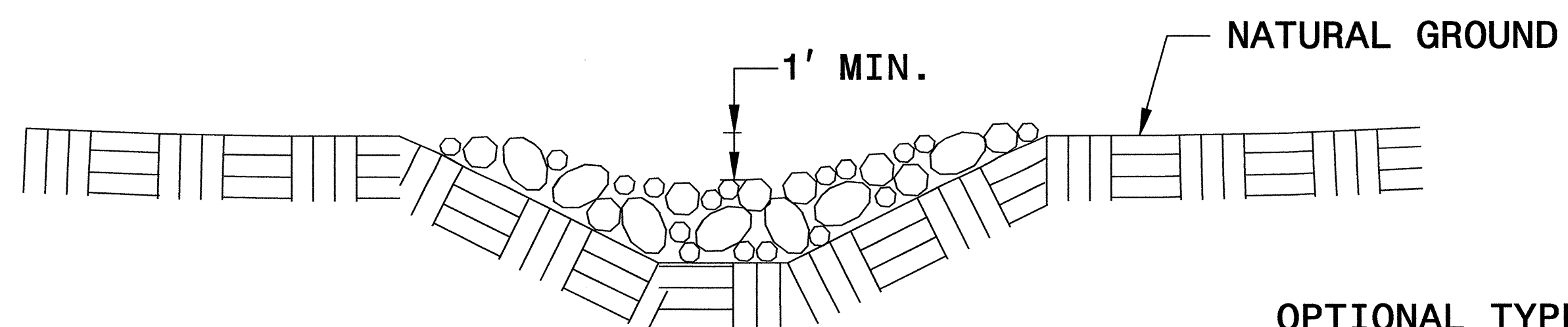
**NOTES:**

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

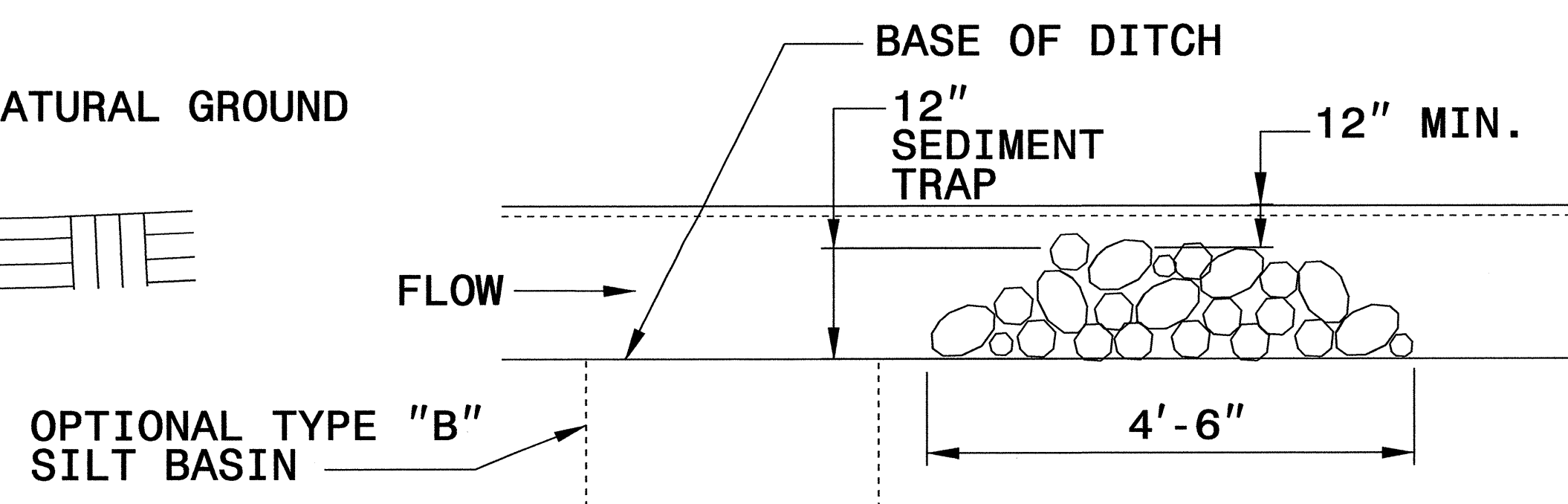
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



**CROSS SECTION  
VEE DITCH**



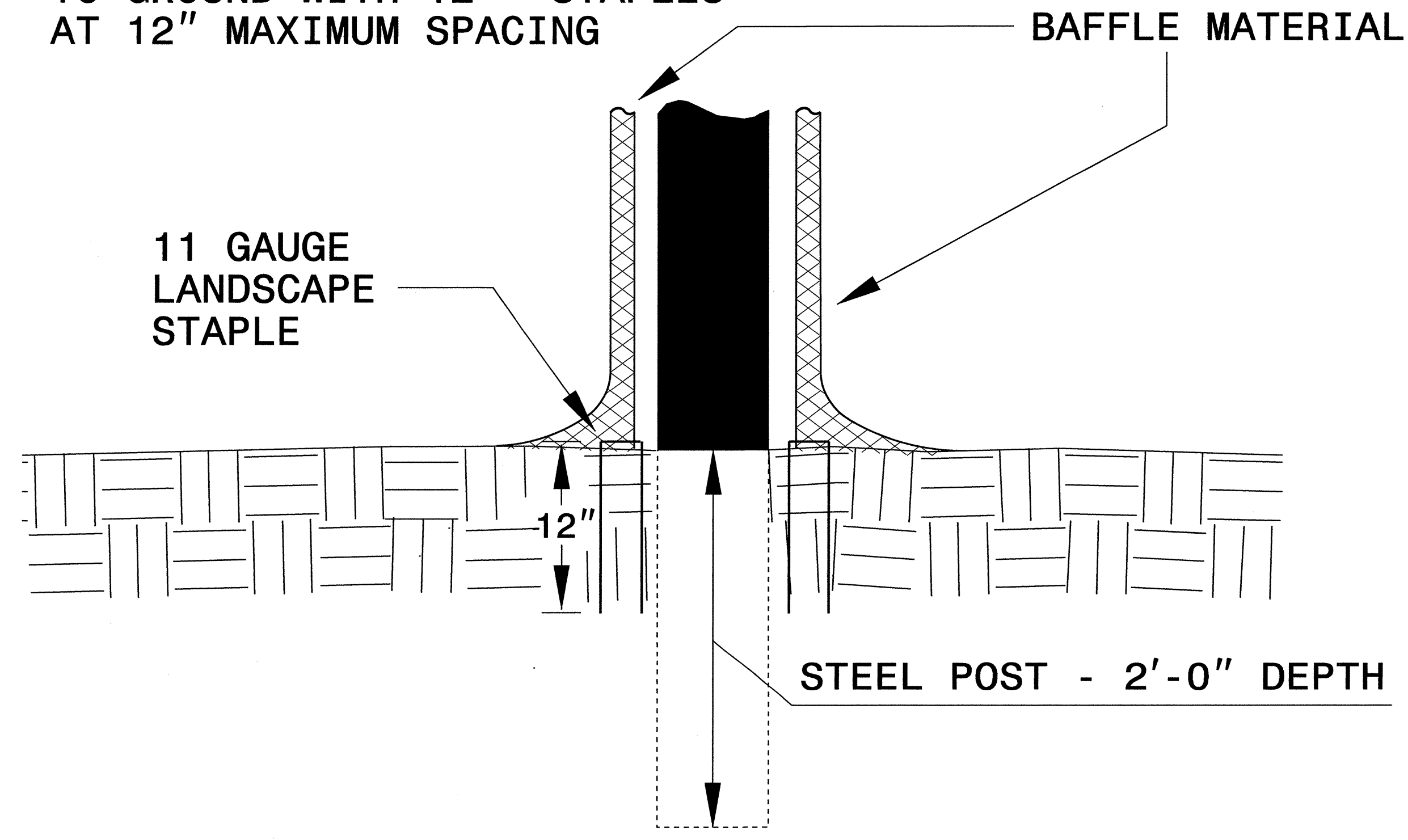
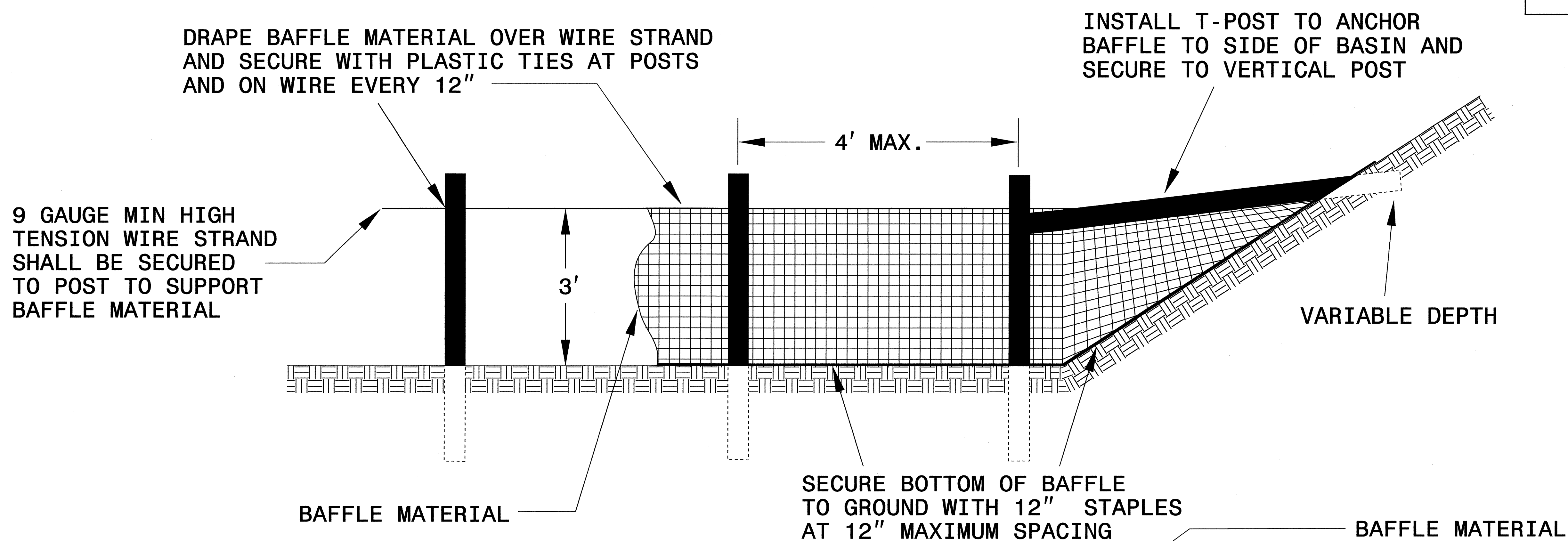
**CROSS SECTION  
TRAPEZOIDAL DITCH**



**ELEVATION VIEW**

PROJECT REFERENCE NO. <i>B-4211</i>	SHEET NO. <i>EC-2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# COIR FIBER BAFFLE DETAIL



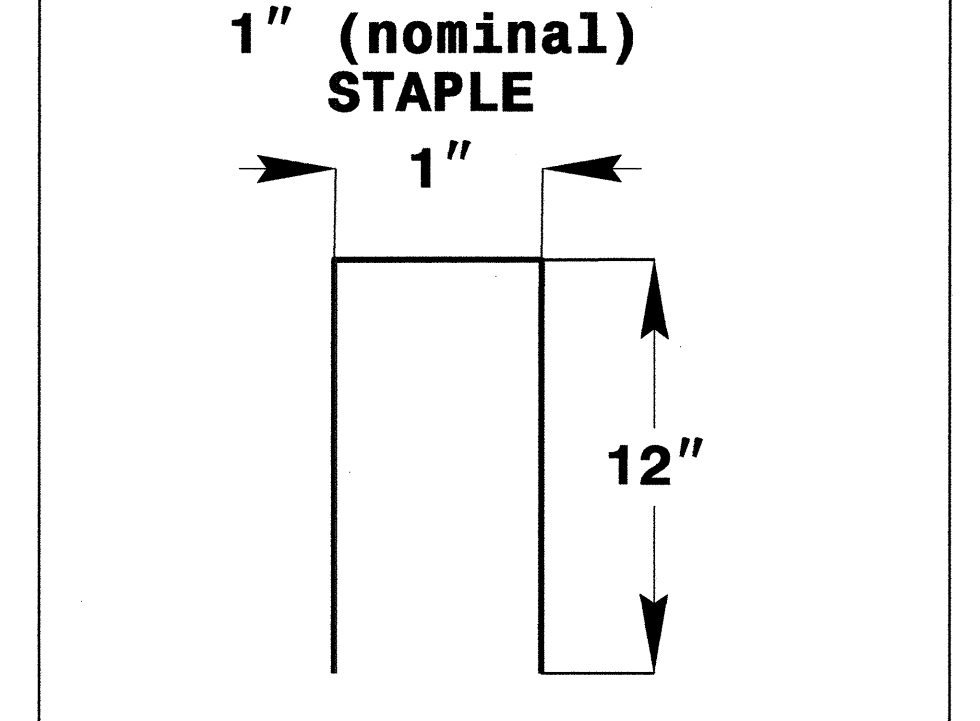
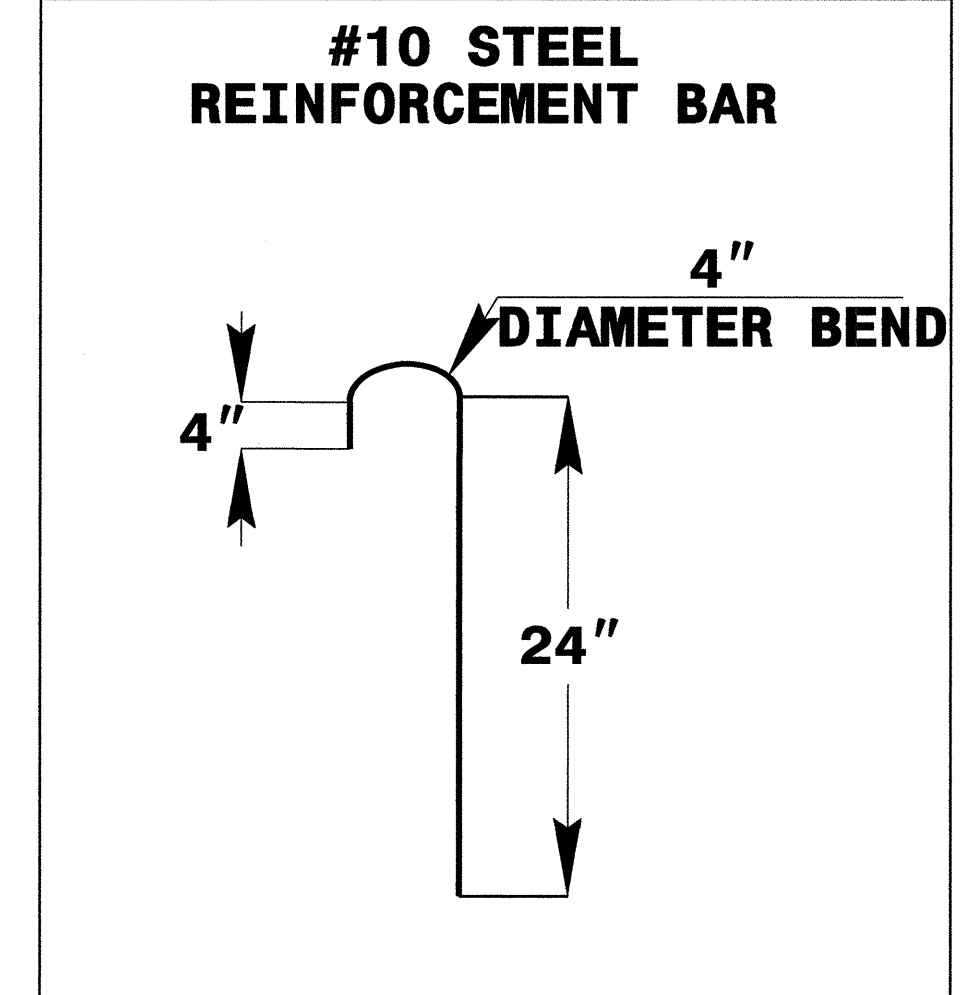
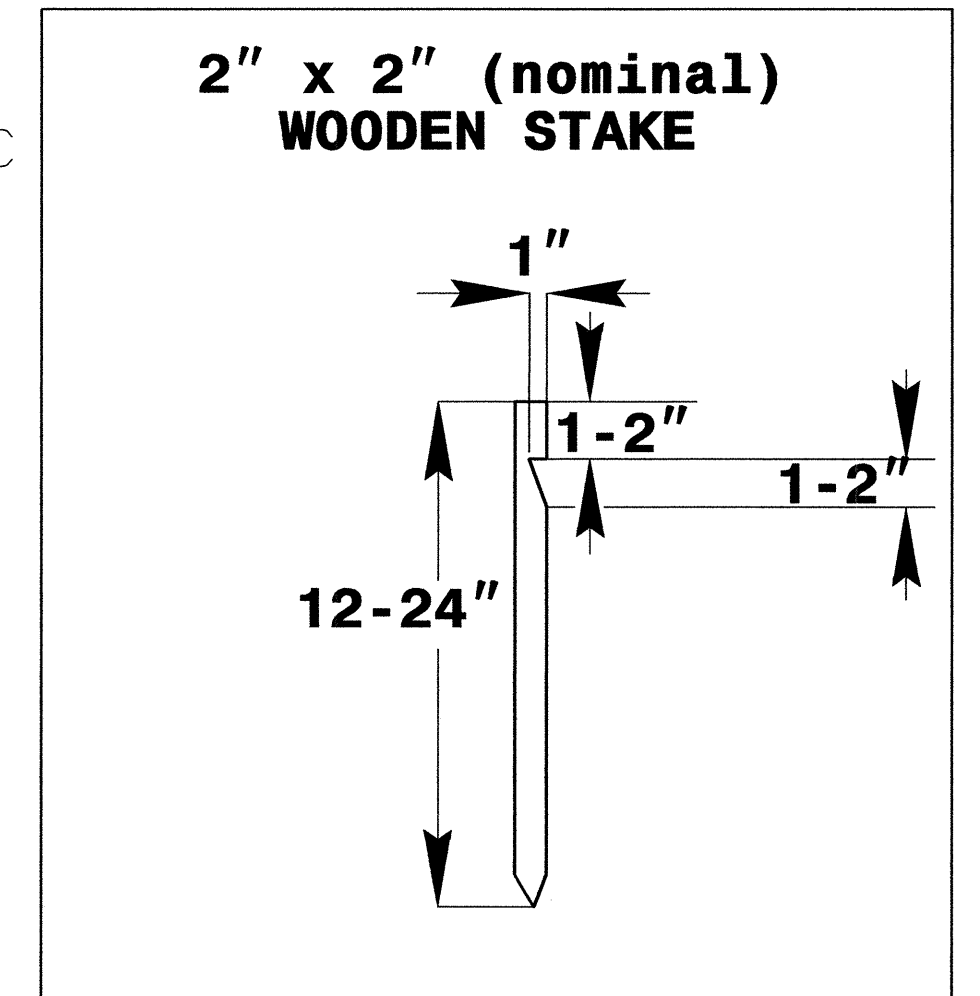
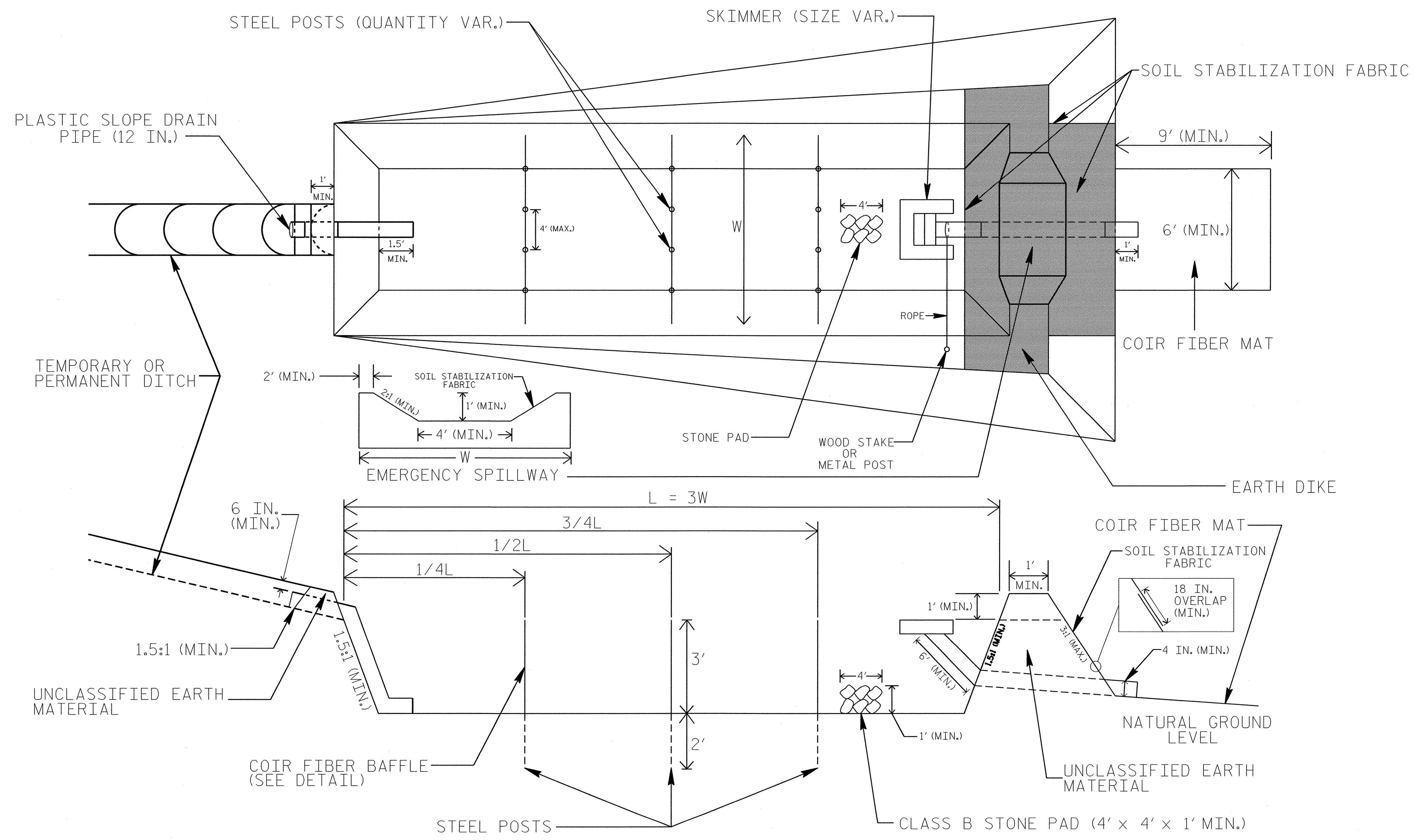
**NOTES:**

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-4211	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SKIMMER BASIN WITH BAFFLES DETAIL



## COIR FIBER MAT ANCHOR OPTIONS

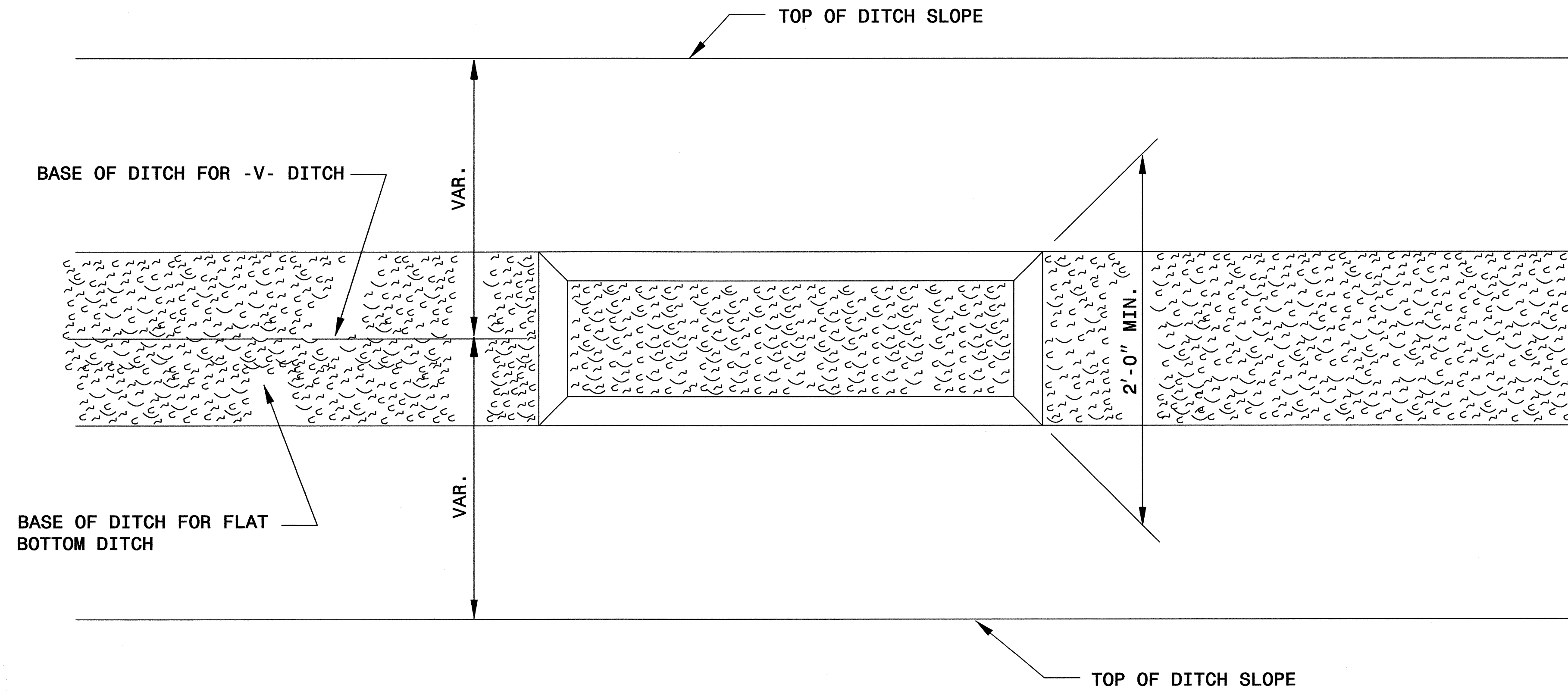
### NOTES

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. SOIL STABILIZATION FABRIC FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

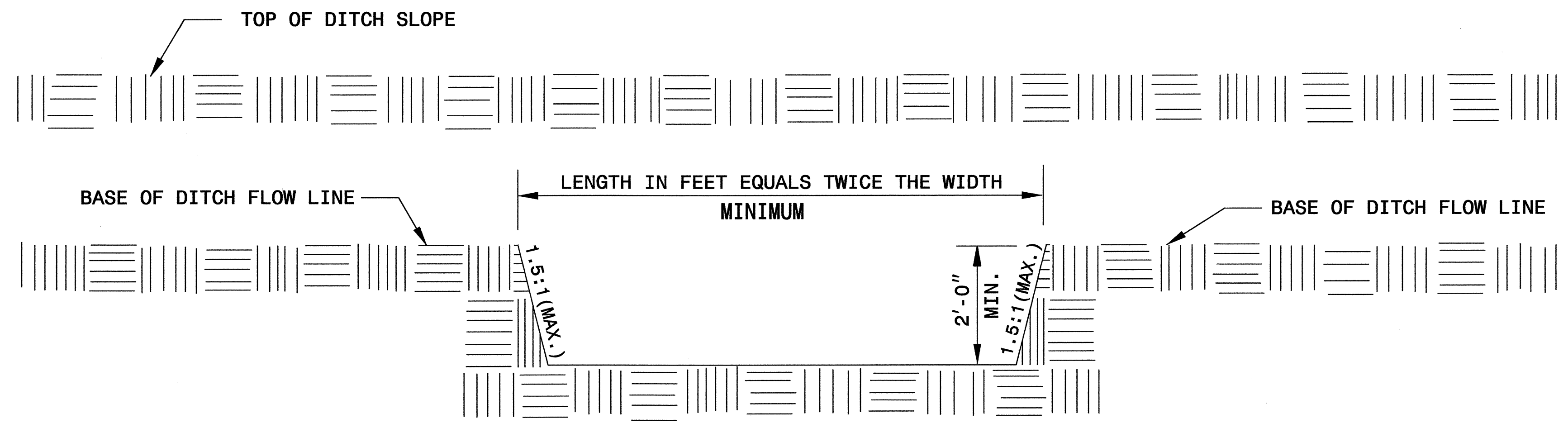
NOT TO SCALE

PROJECT REFERENCE NO. B-4211	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SILT BASIN 'B' DETAIL



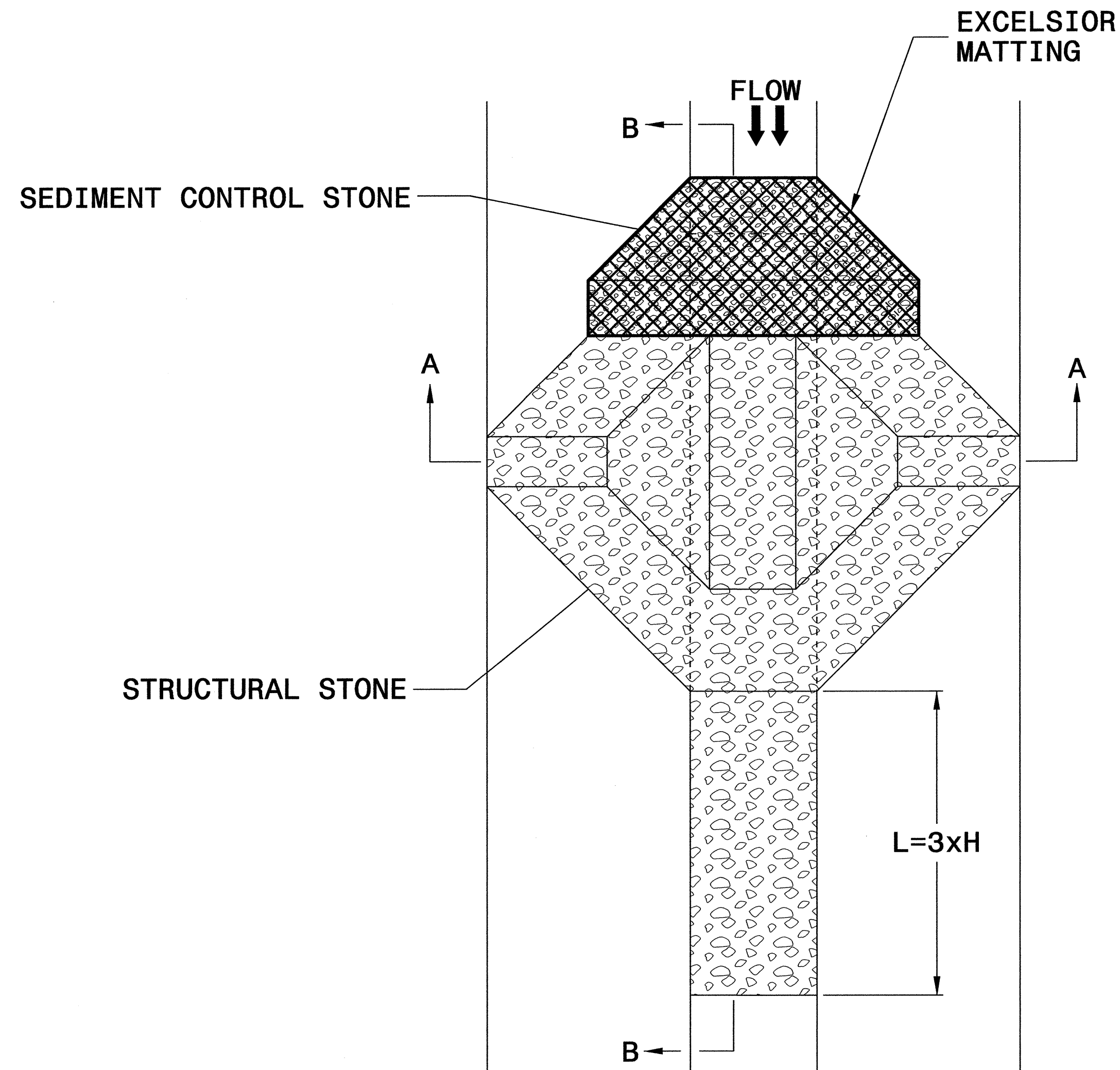
**PLAN**



**ELEVATION**

PROJECT REFERENCE NO. B-4211	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



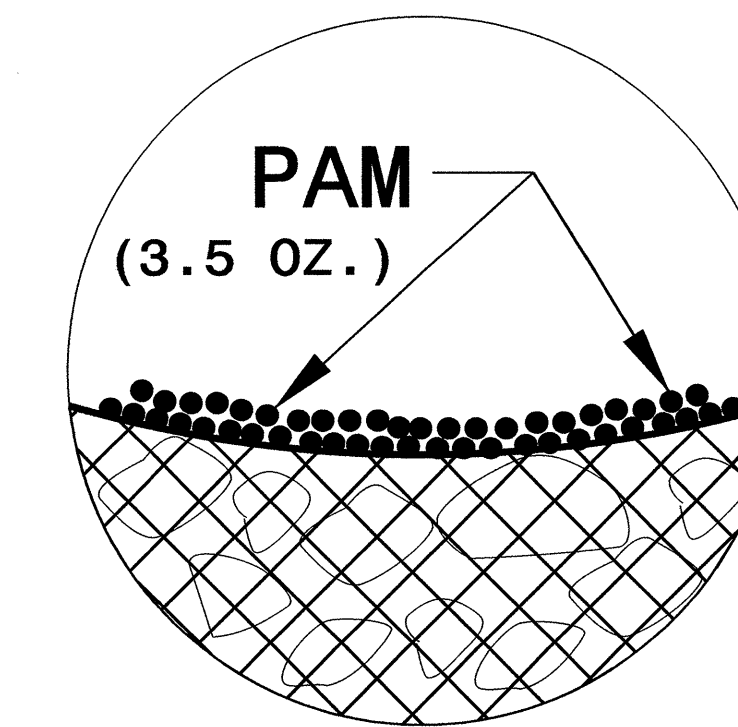
PLAN

## NOTES

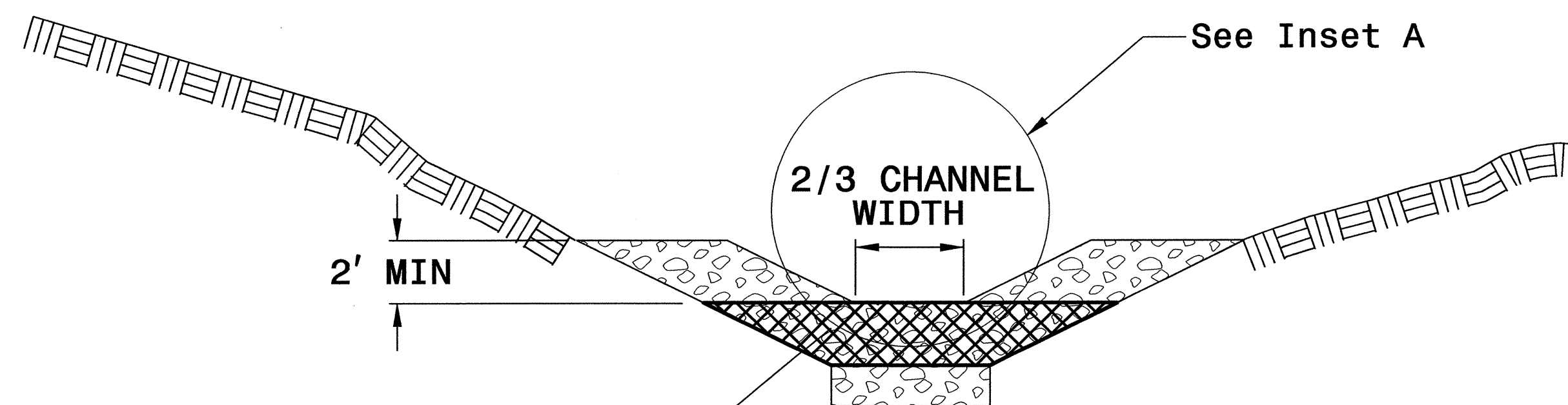
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

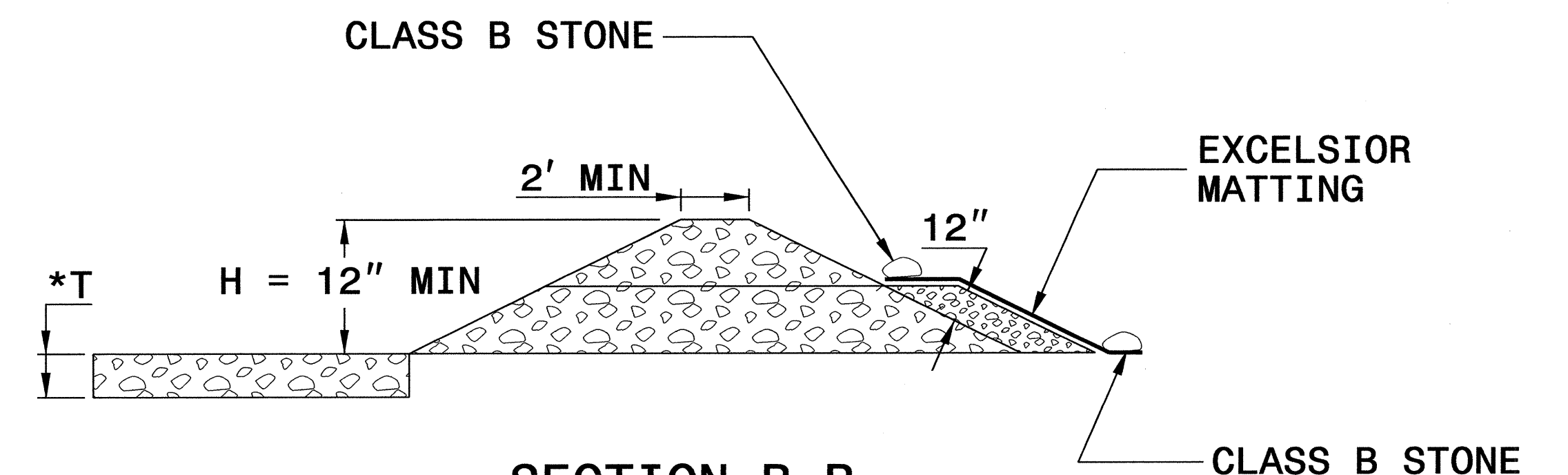
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



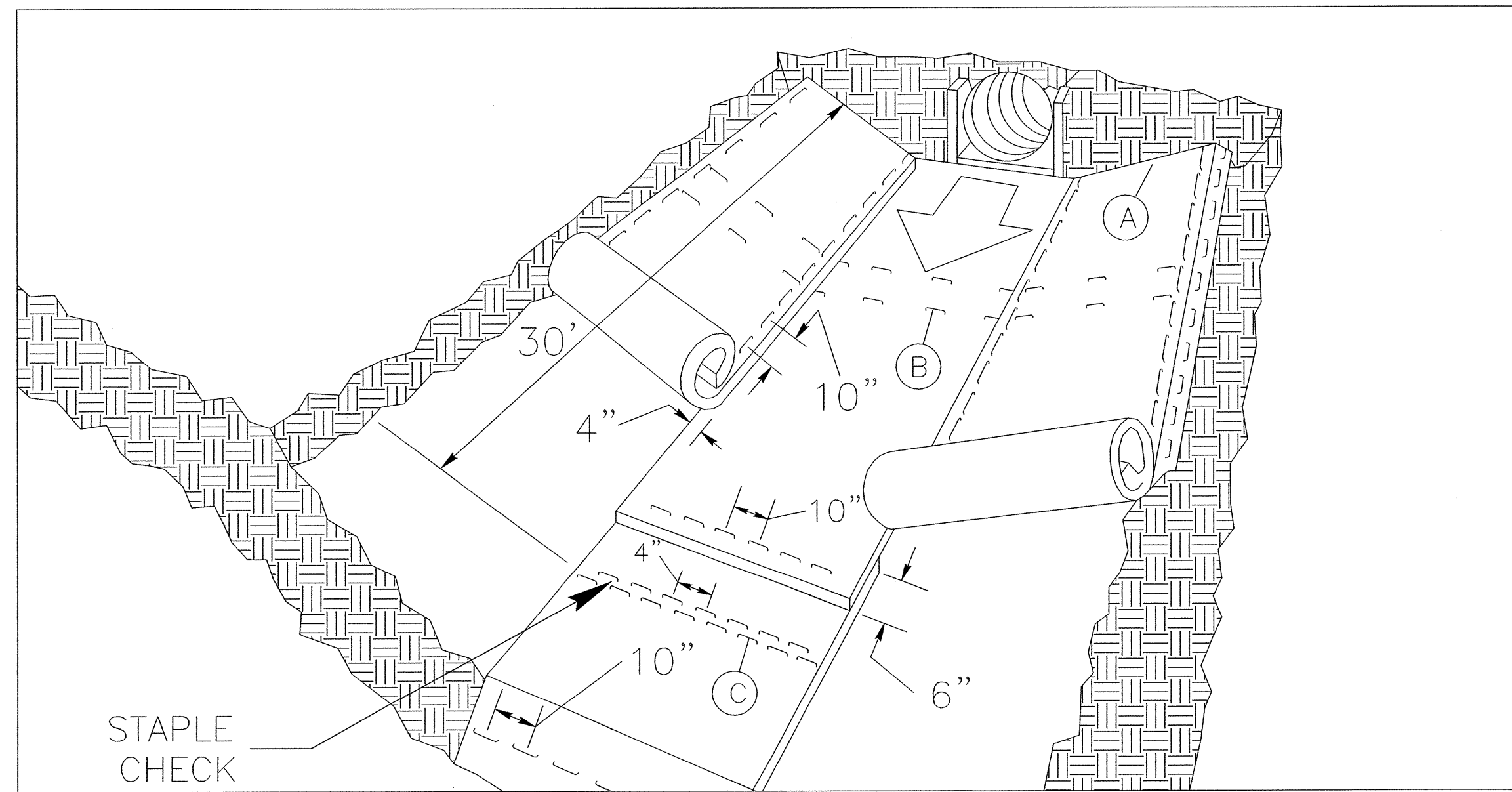
SECTION B-B

\*T = 12" MIN., 18" MAX.

NOT TO SCALE

PROJECT REFERENCE NO. B-4211	SHEET NO. EC-2E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# MATTING INSTALLATION DETAIL



**MATTING IN DITCHES**

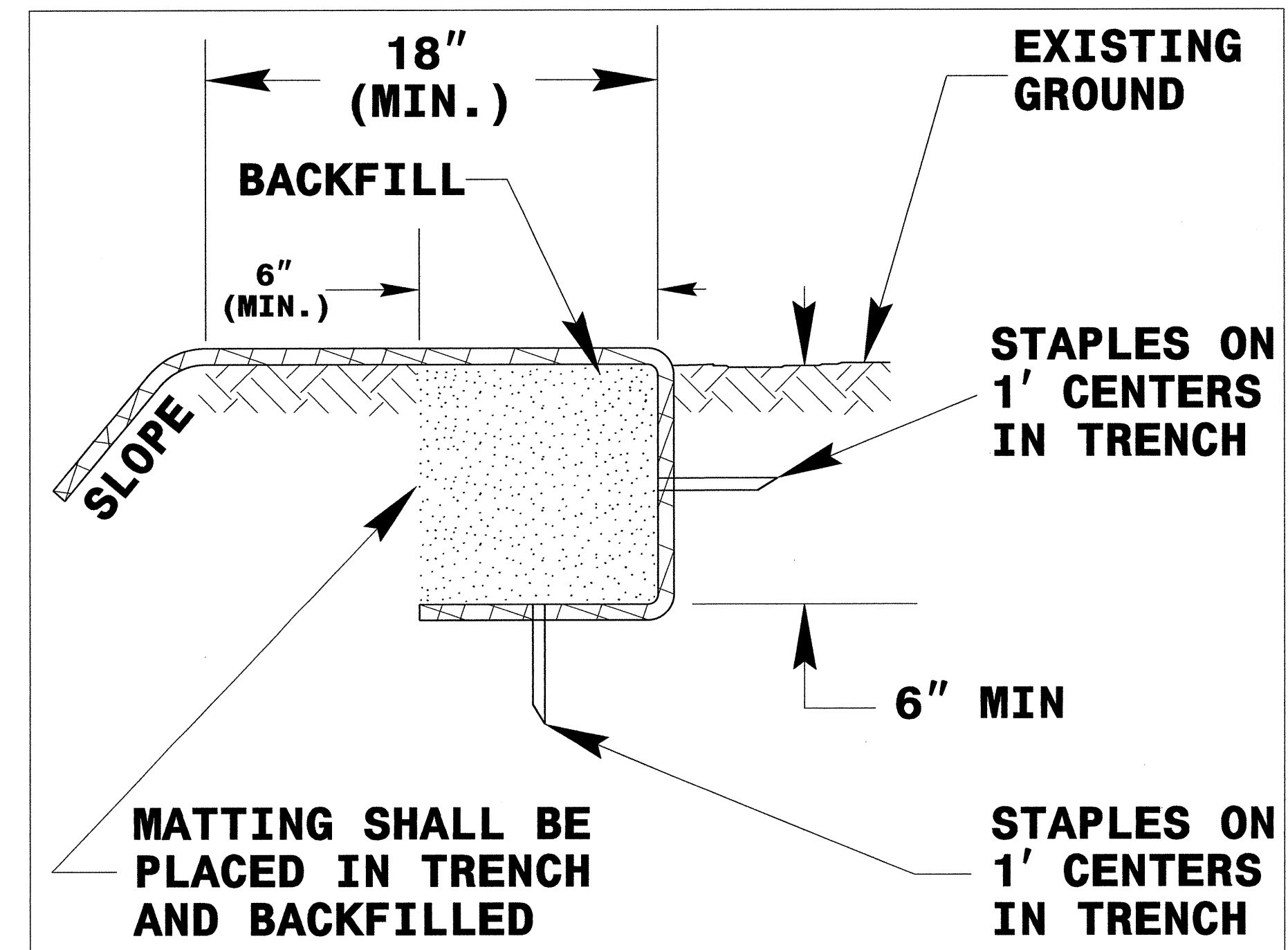
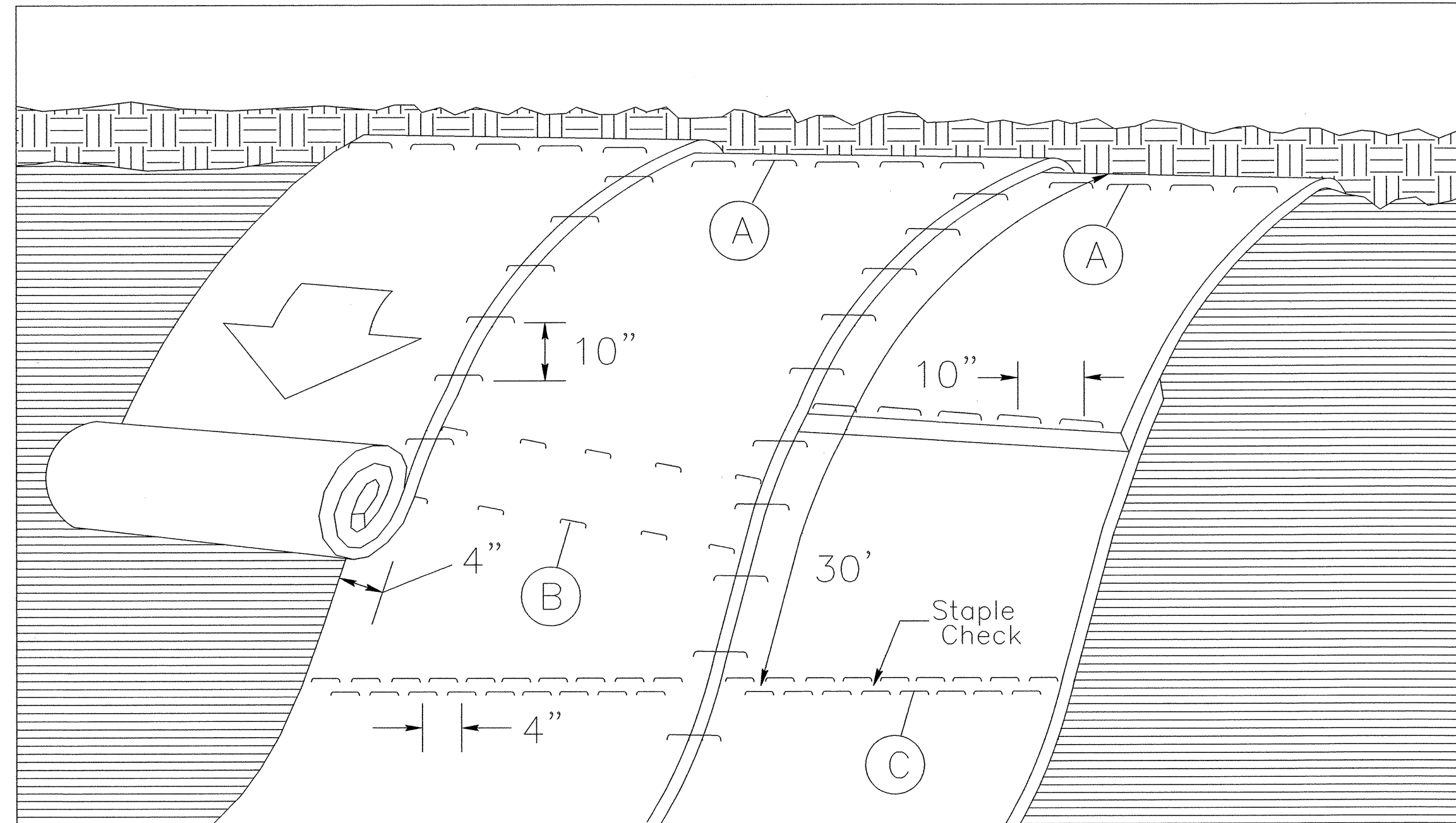


DIAGRAM (A)



**MATTING ON SLOPES**

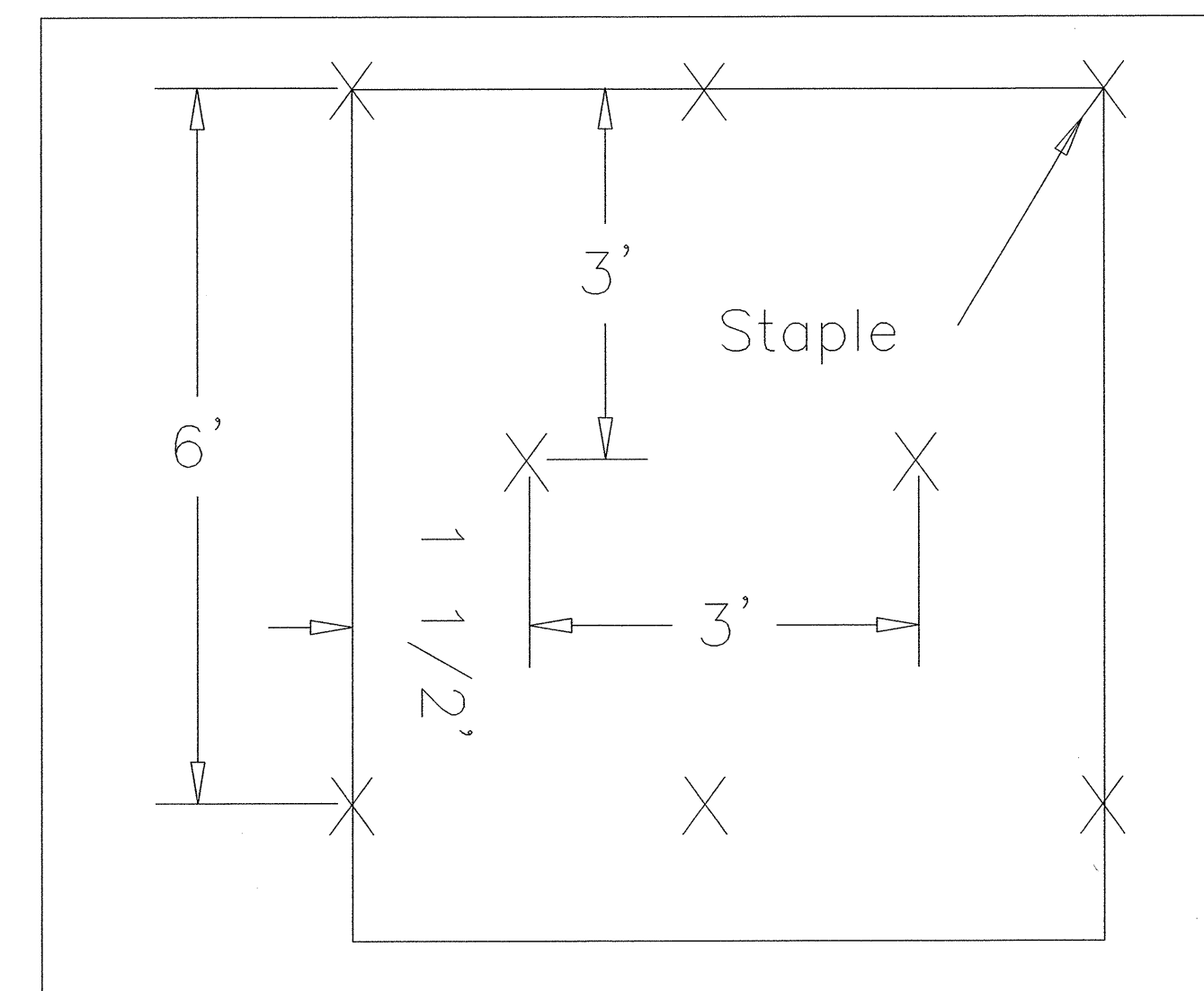


DIAGRAM (B)

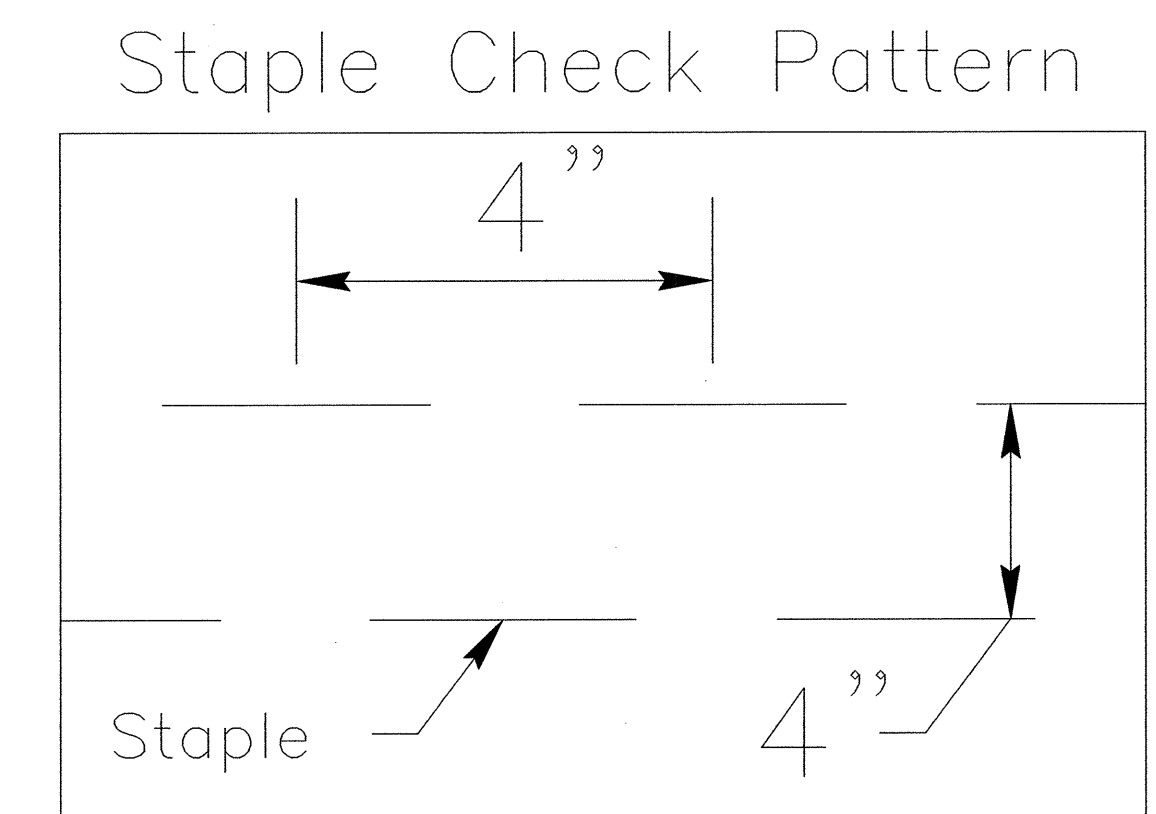


DIAGRAM (C)

**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.

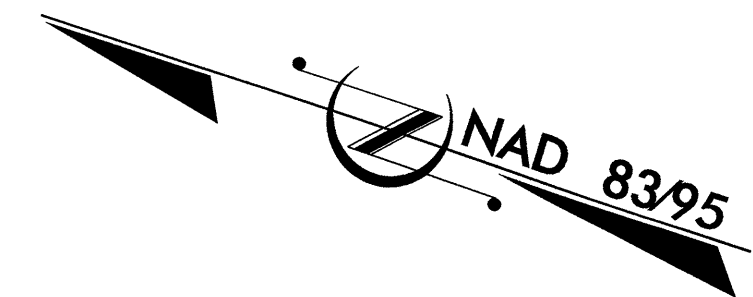
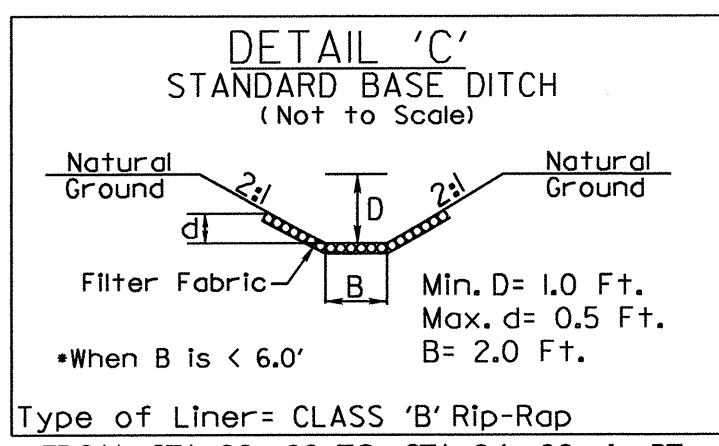
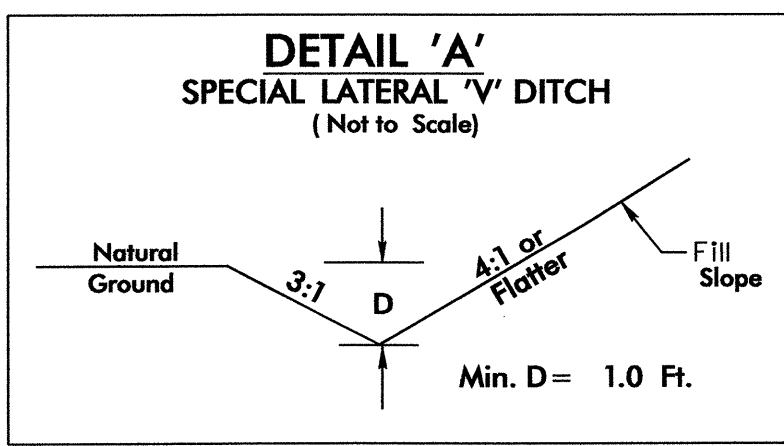
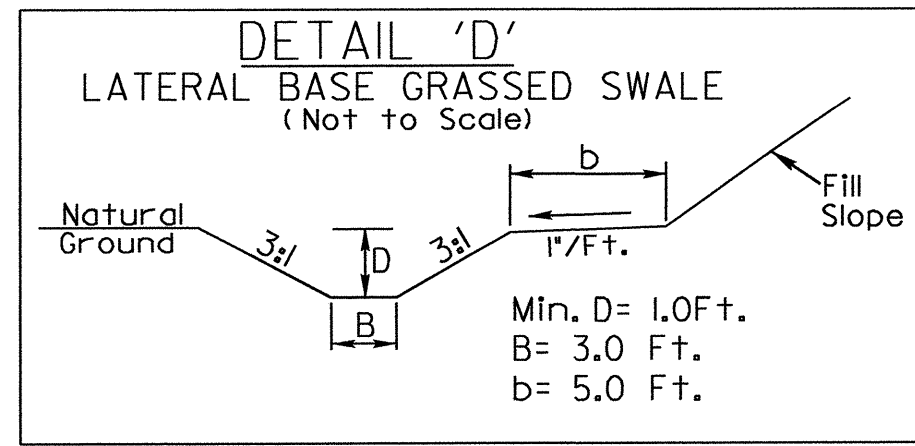
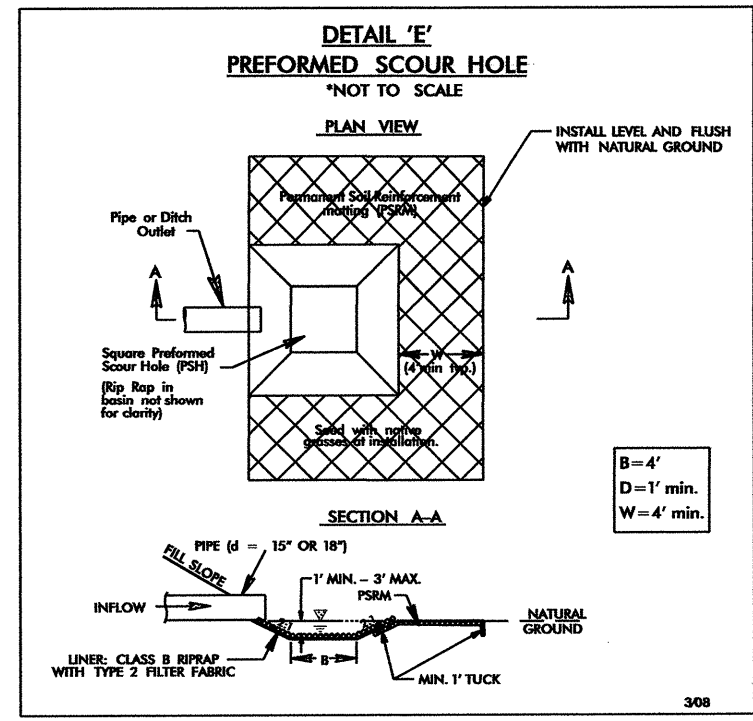
NOT TO SCALE



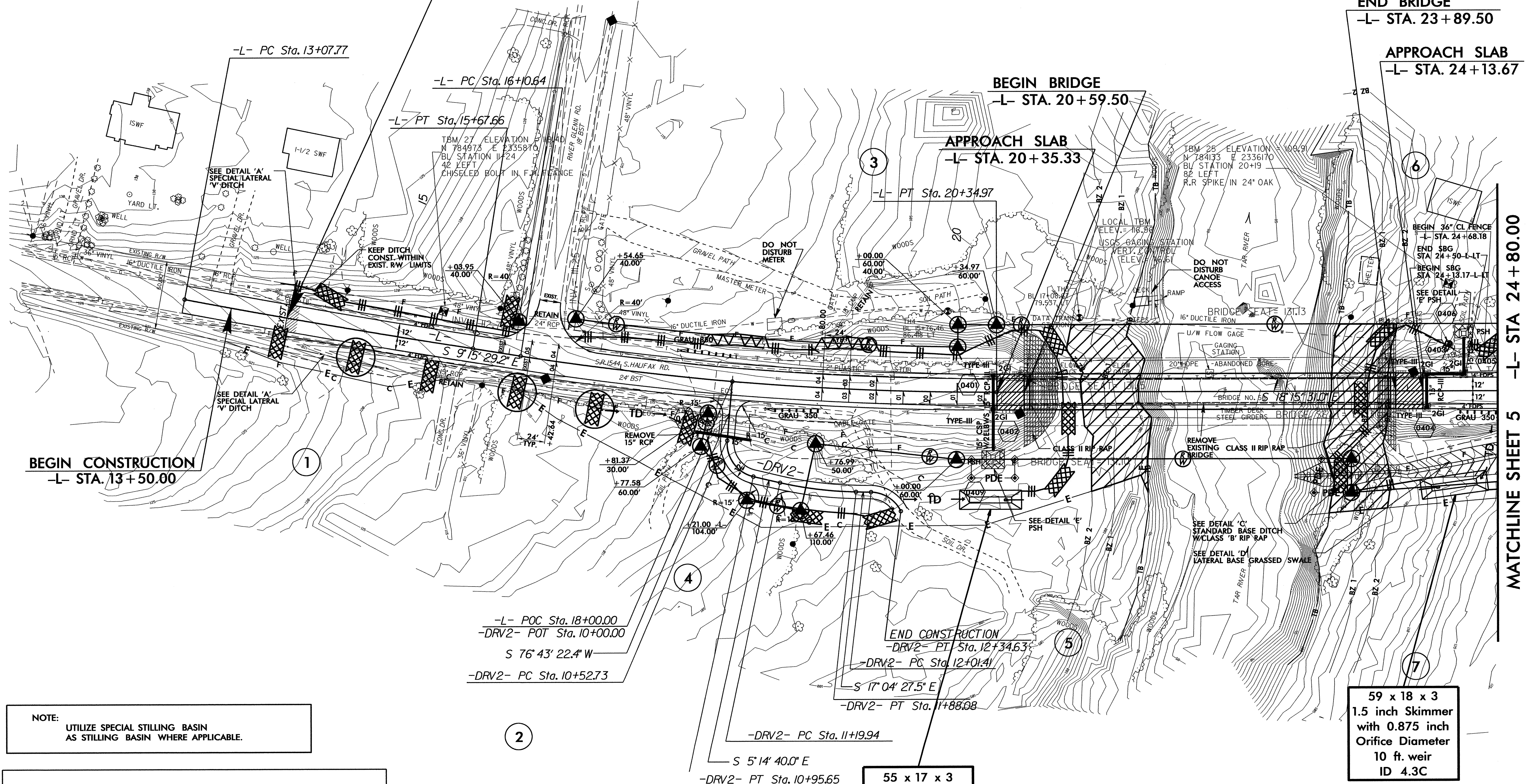


PROJECT REFERENCE NO.	SHEET NO.
B-4211	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4



BEGIN TIP PROJECT B-4211  
-L- POC STA. 14+00.00



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

NOTE:  
UTILIZE SPECIAL STILLING BASIN  
AS STILLING BASIN WHERE APPLICABLE.

ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

55 x 17 x 3  
1.5 inch Skimmer  
with 0.75 inch  
Orifice Diameter  
9 ft. weir  
ID 4.2B

59 x 18 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
10 ft. weir  
ID 4.3C

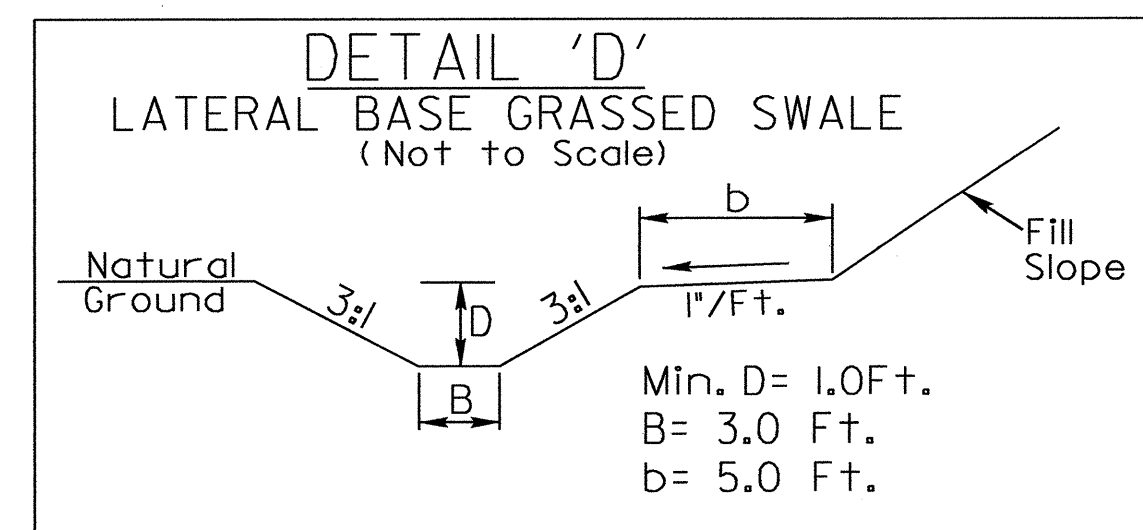
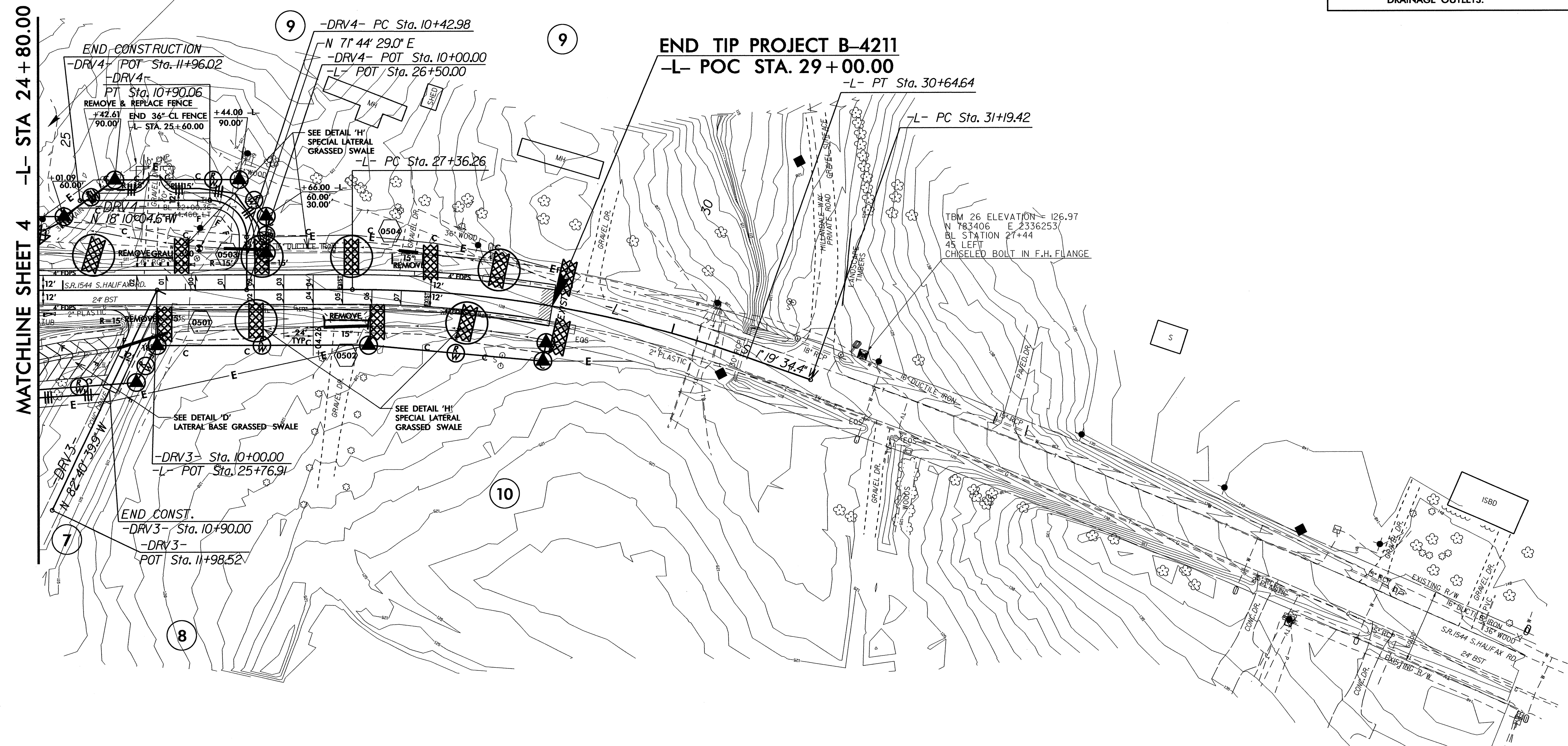
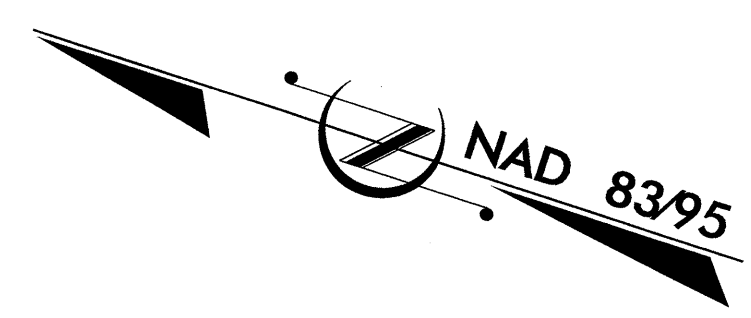
NOTE:  
SEE SHEET No.6 FOR DET ALIGNMENT  
SEE SHEET No.7 FOR -L- & -DET- PROFILE  
SEE SHEET S-1THRU S- FOR STRUCTURE PLANS

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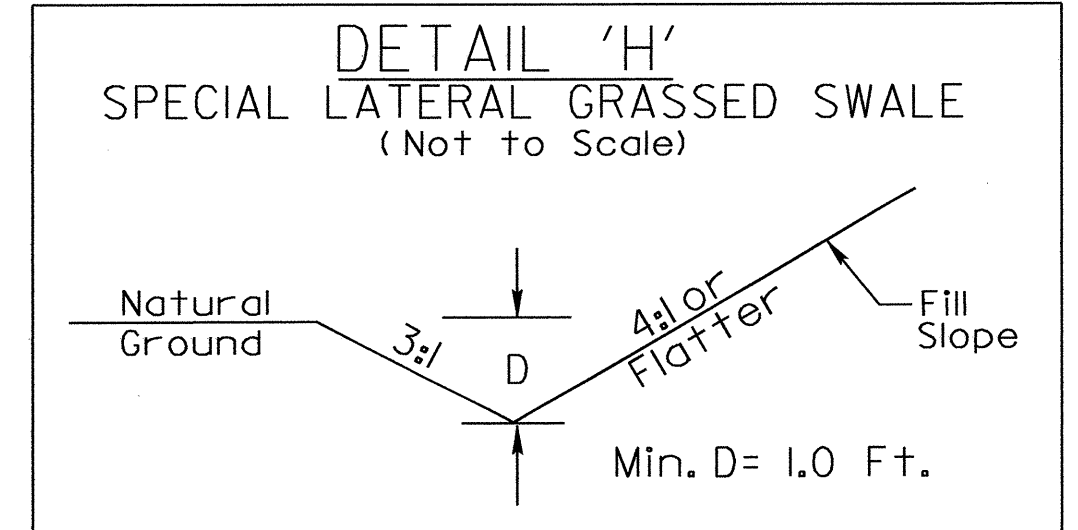
PROJECT REFERENCE NO. <b>B-4211</b>	SHEET NO. EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.



FROM STA. 24+00 TO STA. 25+50 -L- RT

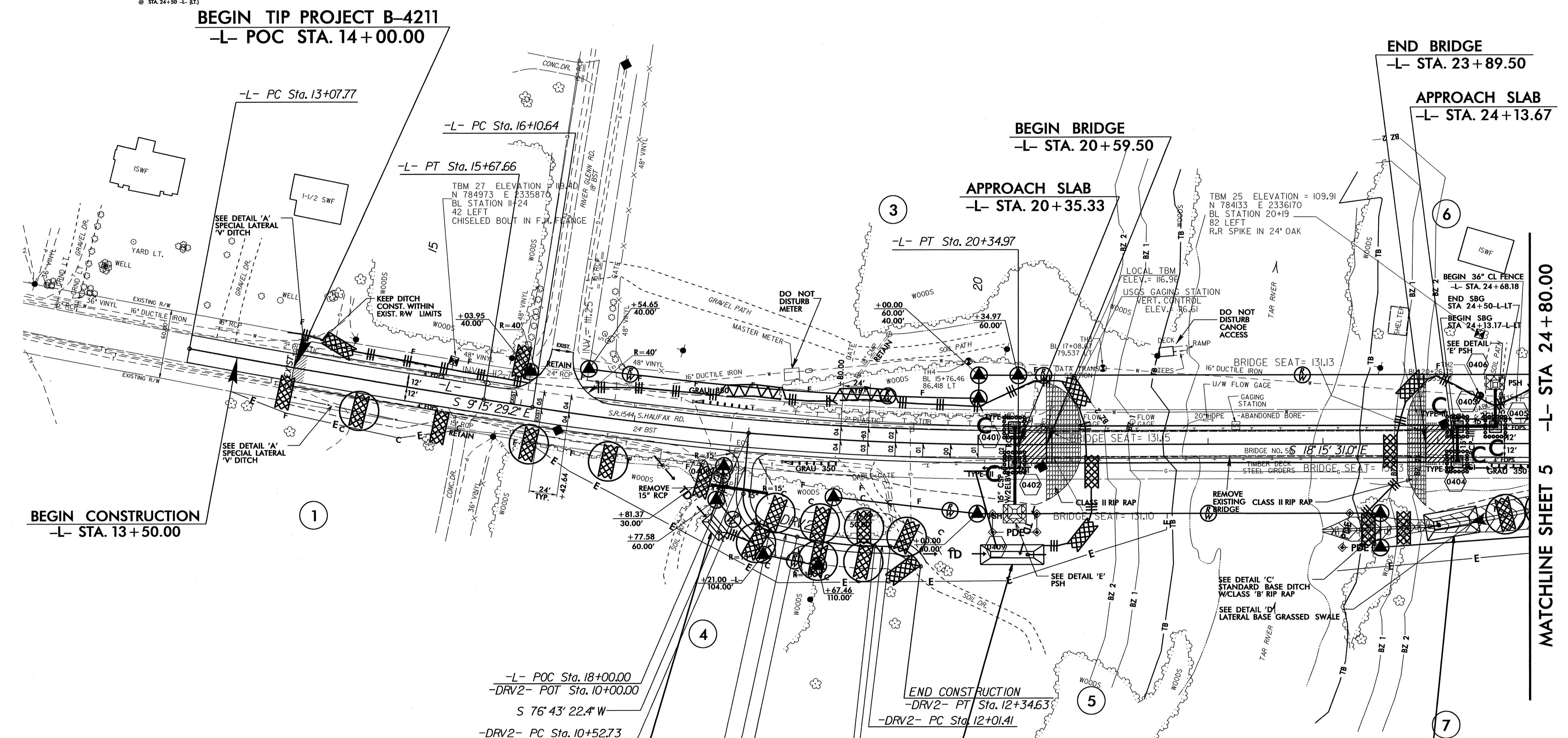
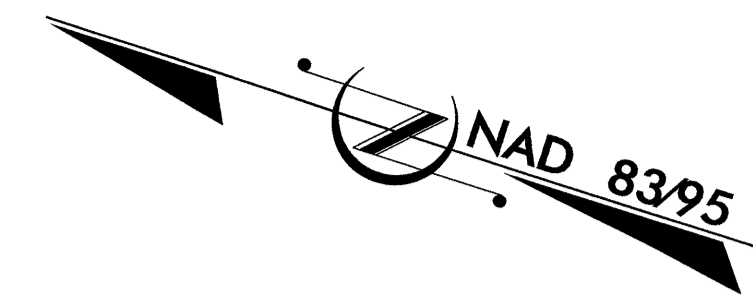
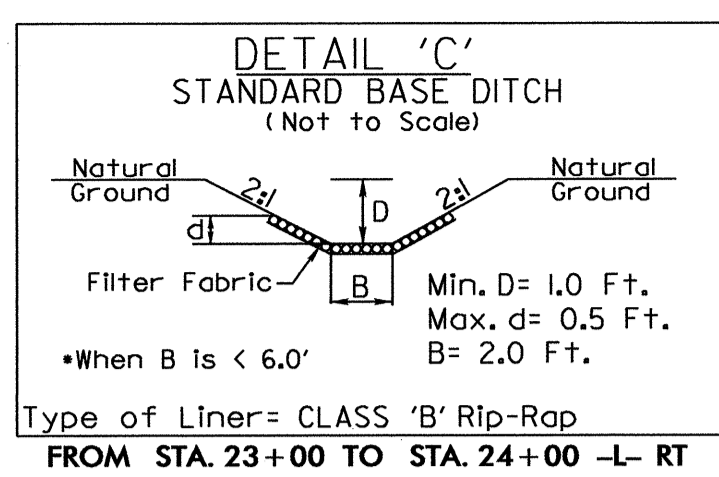
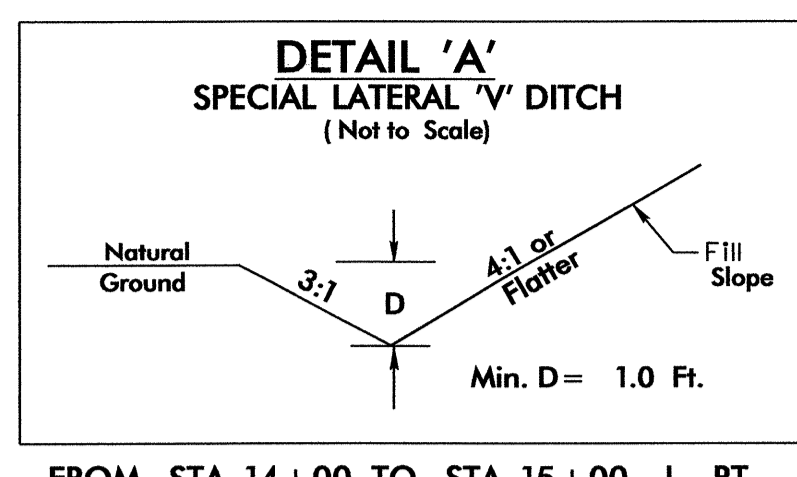
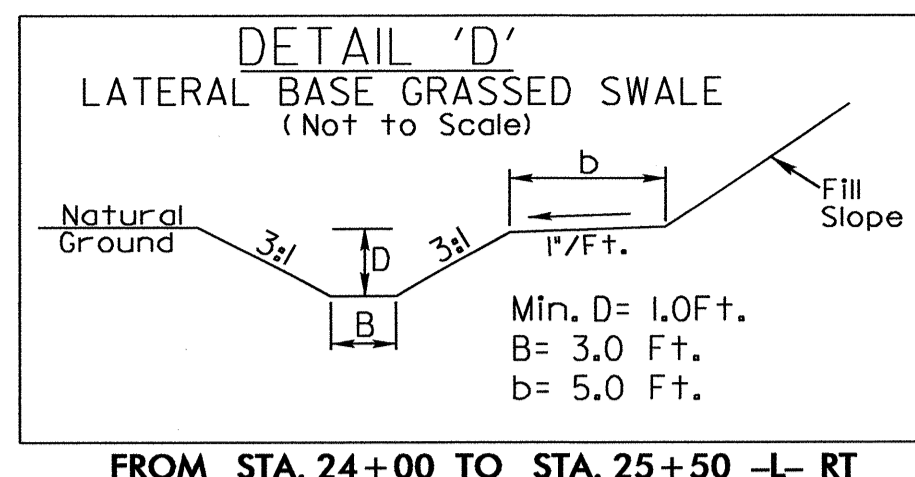
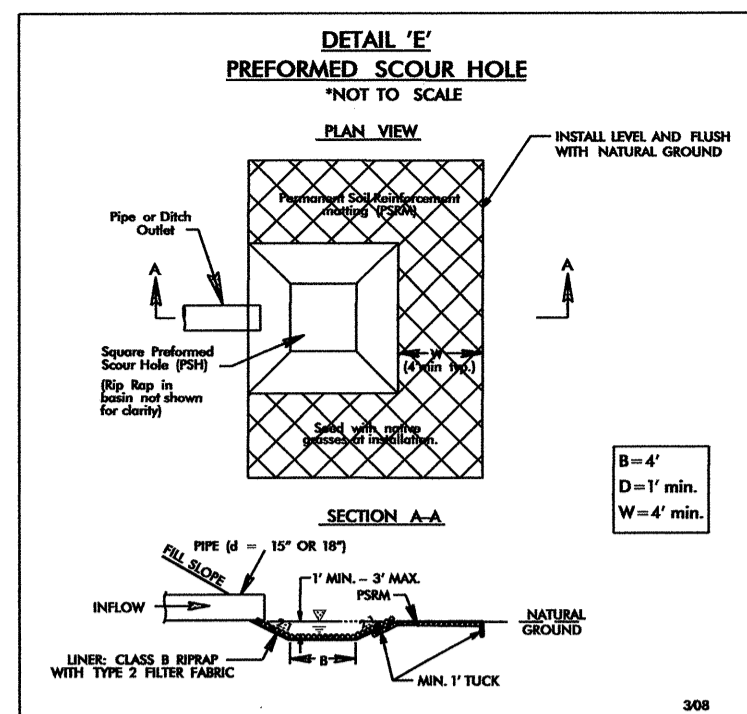


FROM STA. 25+85 TO STA. 29+00 -L- RT  
FROM STA. 25+00 TO STA. 28+50 -L- LT

NOTE: SEE SHEET No.6 FOR DET ALIGNMENT  
SEE SHEET No.7 FOR -L- & -DET- PROFILE  
SEE SHEET S-1THRU S- FOR STRUCTURE PLANS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4211	EC-6/CONST.A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTE:  
UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.

22 x 11 x 3  
1.5 inch Skimmer  
with 0.25 inch  
Orifice Diameter  
4 ft. weir  
ID 4.1F

55 x 17 x 3  
1.5 inch Skimmer  
with 0.75 inch  
Orifice Diameter  
9 ft. weir  
ID 4.2B

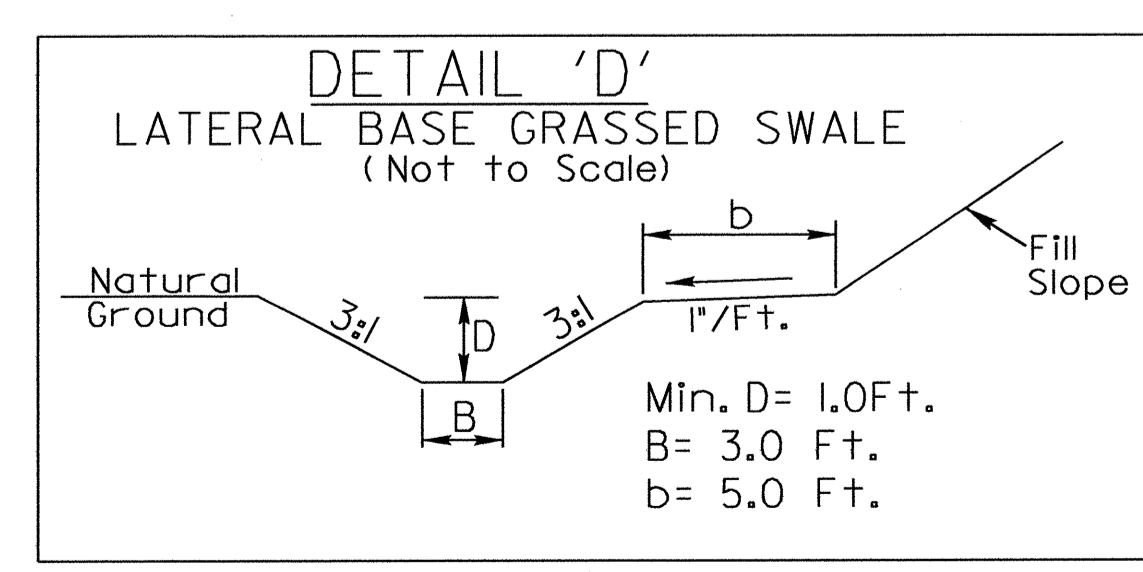
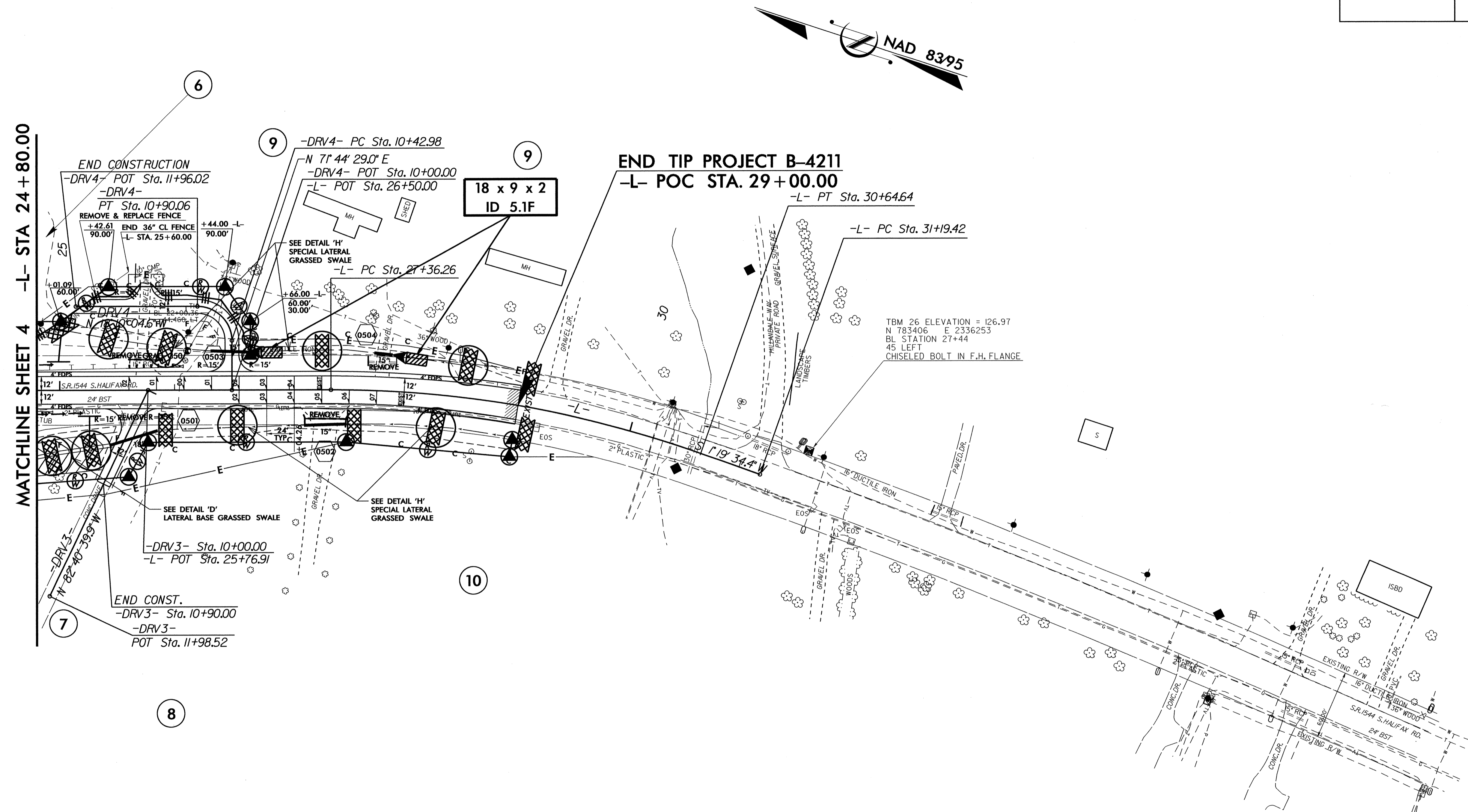
46 x 23 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
15 ft. weir  
ID 4.4F

NOTE:  
SEE SHEET No.6 FOR DET ALIGNMENT  
SEE SHEET No.7 FOR -L- & -DET- PROFILE  
SEE SHEET S-I THRU S- FOR STRUCTURE PLANS

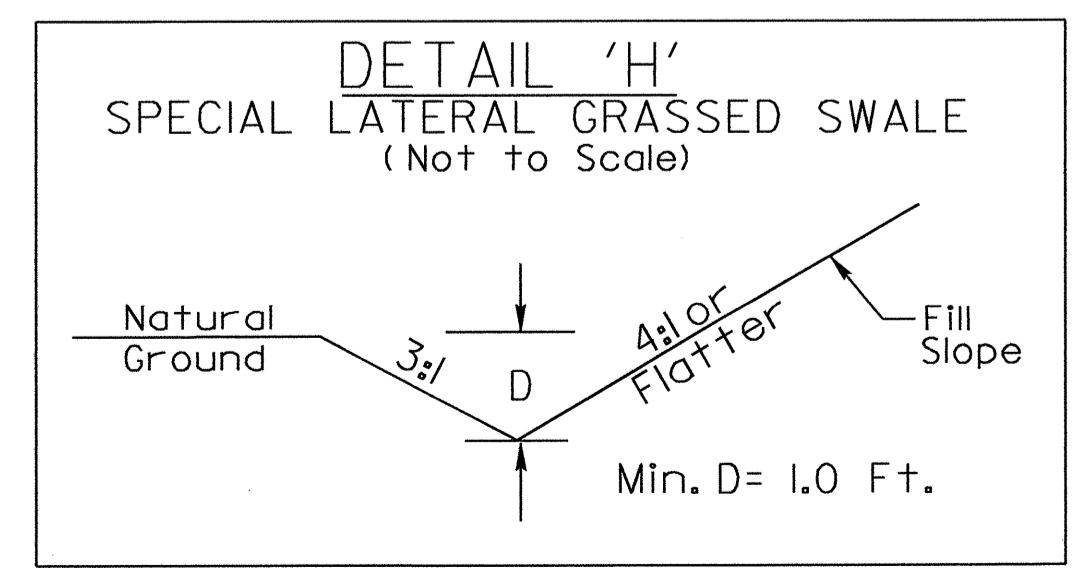
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PROJECT REFERENCE NO.	SHEET NO.
B-4211	EC-7/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99  
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 RICHAN



FROM STA. 24+00 TO STA. 25+50 -L- RT

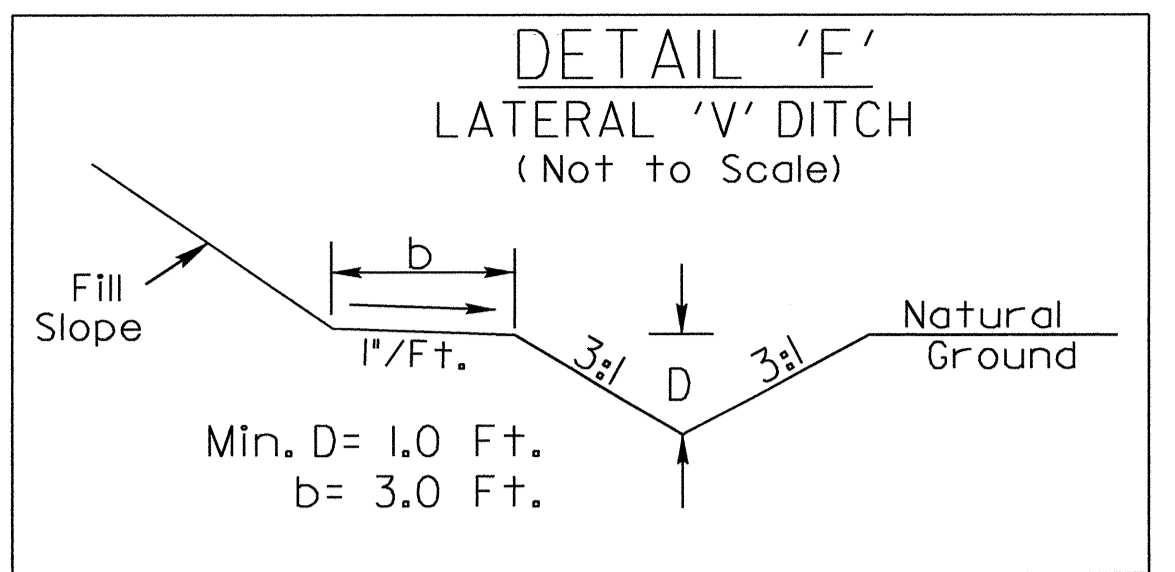


FROM STA. 25+85 TO STA. 29+00 -L- RT  
 FROM STA. 25+00 TO STA. 28+50 -L- LT

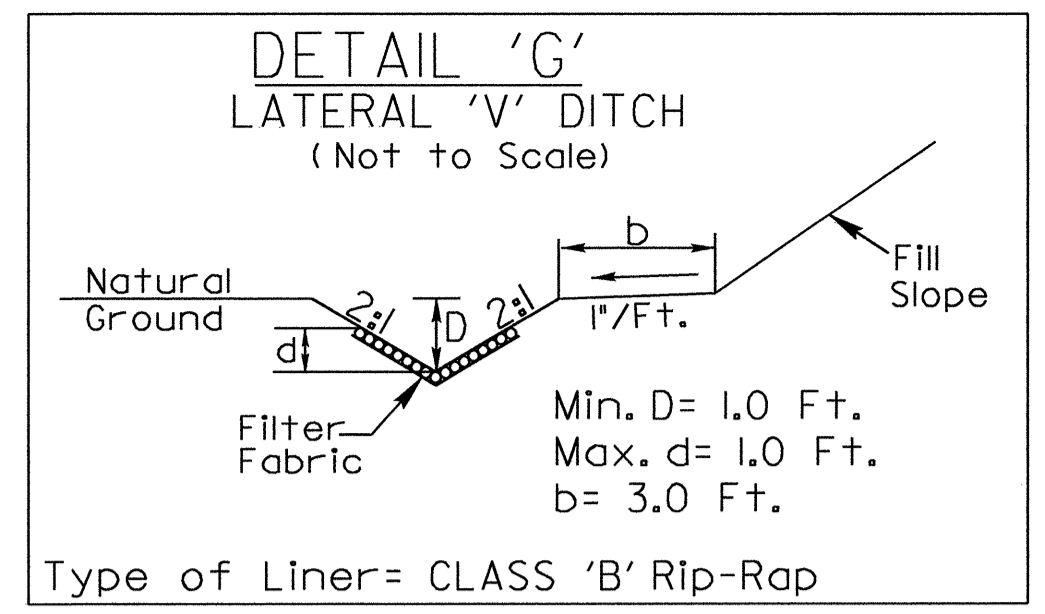
NOTE: SEE SHEET No.6 FOR DET ALIGNMENT  
 SEE SHEET No.7 FOR -L- & -DET- PROFILE  
 SEE SHEET S-1 THRU S- FOR STRUCTURE PLANS

PROJECT REFERENCE NO.	SHEET NO.
B-4211	EC-8/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE: UTILIZE SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.



FROM STA. 11+50 TO STA. 13+00 -DET- RT

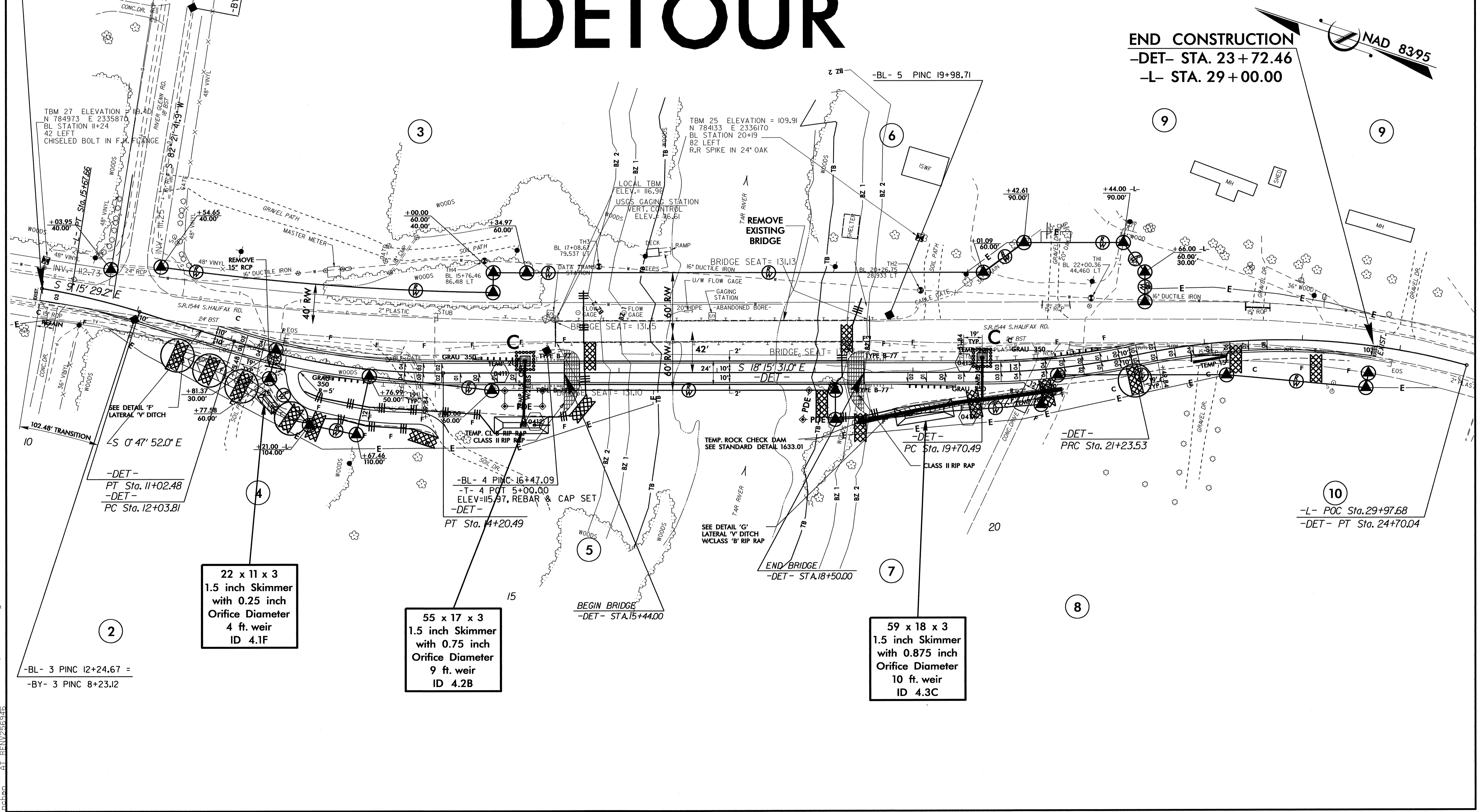
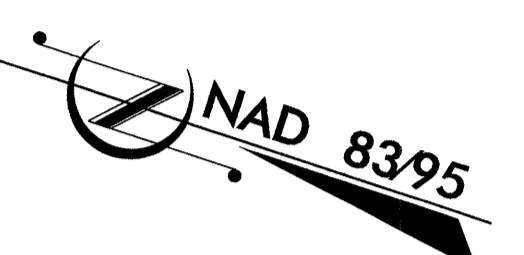


Type of Liner = CLASS 'B' Rip-Rap  
FROM STA. 18+50 TO STA. 20+50 -DET- RT

# DETOUR

BEGIN CONSTRUCTION  
-DET- PC STA. 10+00.00  
-L- POC STA. 15+37.37

END CONSTRUCTION  
-DET- STA. 23+72.46  
-L- STA. 29+00.00



22 x 11 x 3  
1.5 inch Skimmer  
with 0.25 inch  
Orifice Diameter  
4 ft. weir  
ID 4.1F

55 x 17 x 3  
1.5 inch Skimmer  
with 0.75 inch  
Orifice Diameter  
9 ft. weir  
ID 4.2B

59 x 18 x 3  
1.5 inch Skimmer  
with 0.875 inch  
Orifice Diameter  
10 ft. weir  
ID 4.3C

8/17/99  
D:\j\N-2011\0558  
AT\REVISED\REVISED  
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