

0271DEL_P10c3

TIP PROJECT: C-4901C

CONTRACT: C203142



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	C-4901C	EC-1	11
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
49010.1.STRO7TIB			



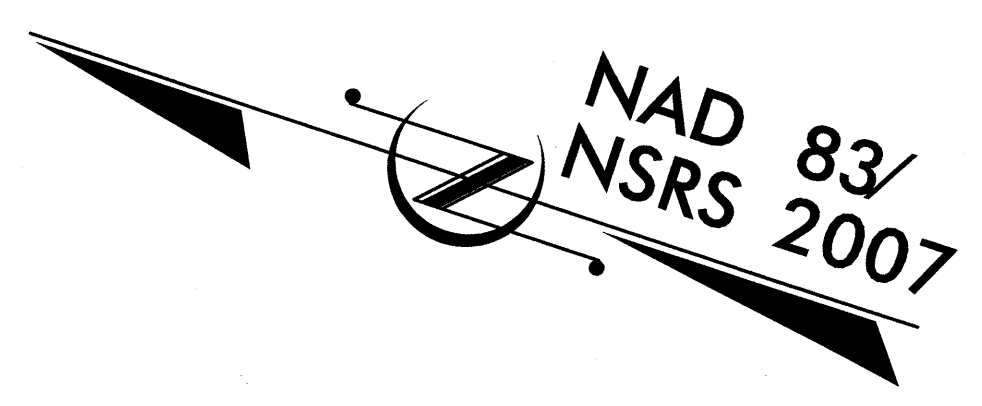
STATE OF NORTH CAROLINA
RAIL DIVISION

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

DAVIDSON COUNTY

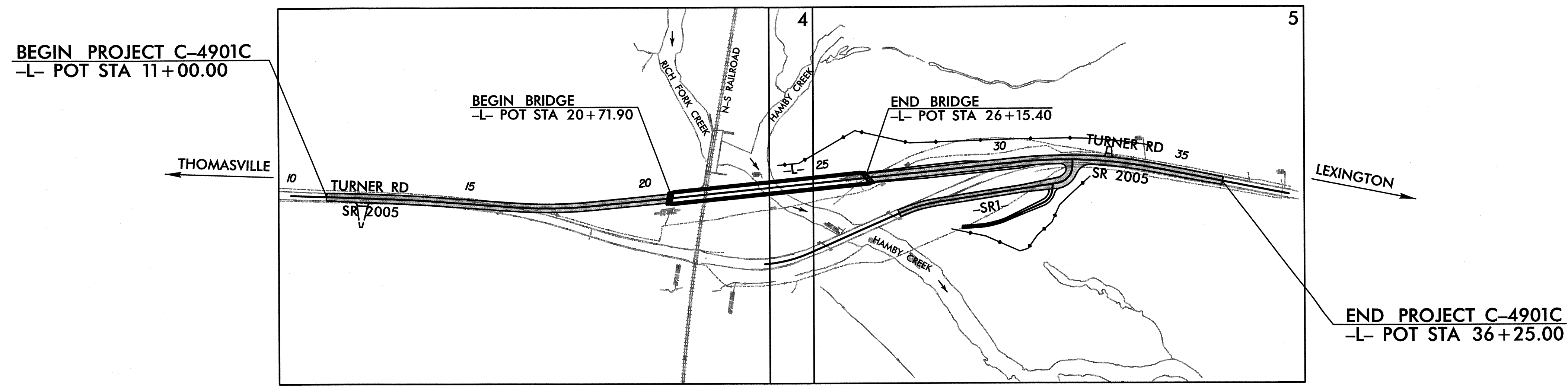
LOCATION: TURNER RD (SR 2005) GRADE SEPARATION OVER
NORFOLK SOUTHERN RAILROAD "BOWERS TO LAKE"

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



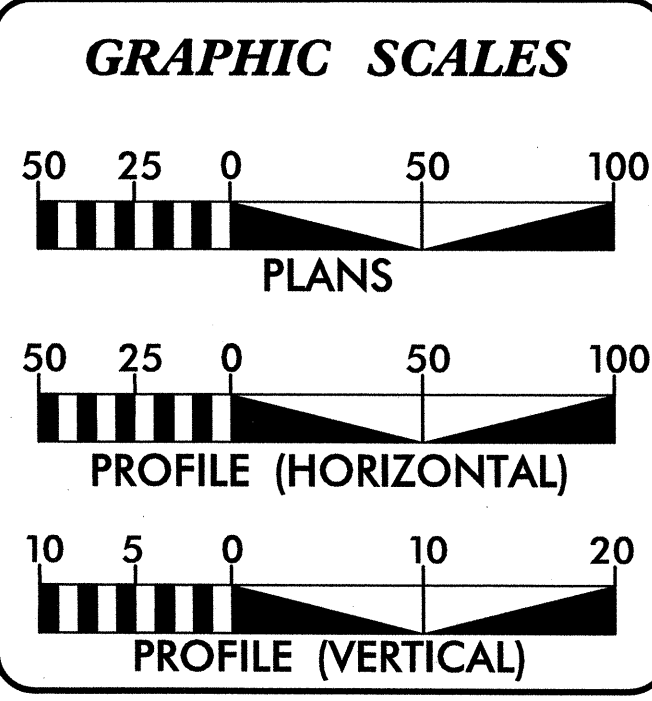
EROSION AND SEDIMENT CONTROL MEASURES

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	—
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	⊗
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	⊗
1635.02	Rock Pipe Inlet Sediment Trap Type-B	⊗
	Rock Inlet Sediment Trap:	
	Type B	⊗
	Type C	⊗
	Skimmer Basin	⊗



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

DESIGNED BY: RENE REMY CPESC, CPSWQ (AECOM)
LEVEL III CERTIFICATION # 3135



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:
AECOM NC FIRM LICENSE No: F-0342
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

For:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2012 STANDARD SPECIFICATIONS

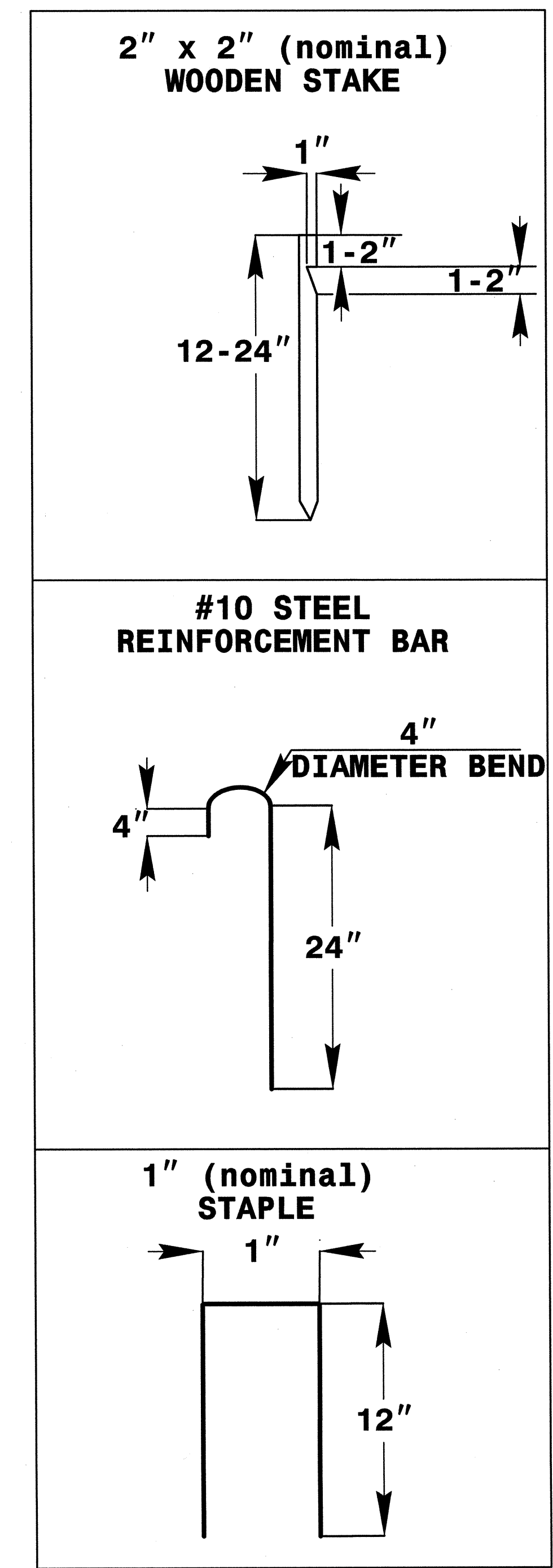
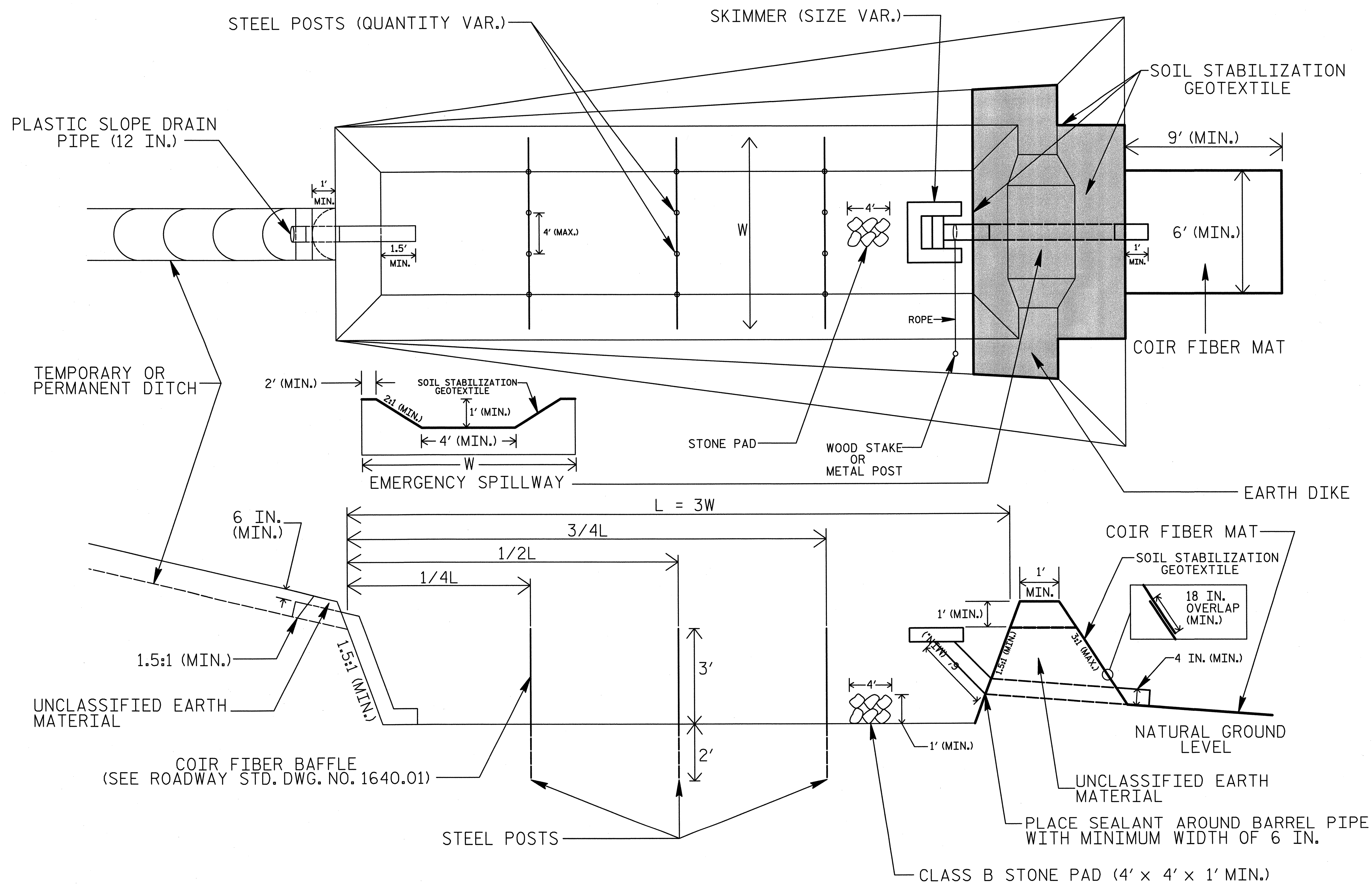
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 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	

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SKIMMER BASIN WITH BAFFLES DETAIL



COIR FIBER MAT ANCHOR OPTIONS

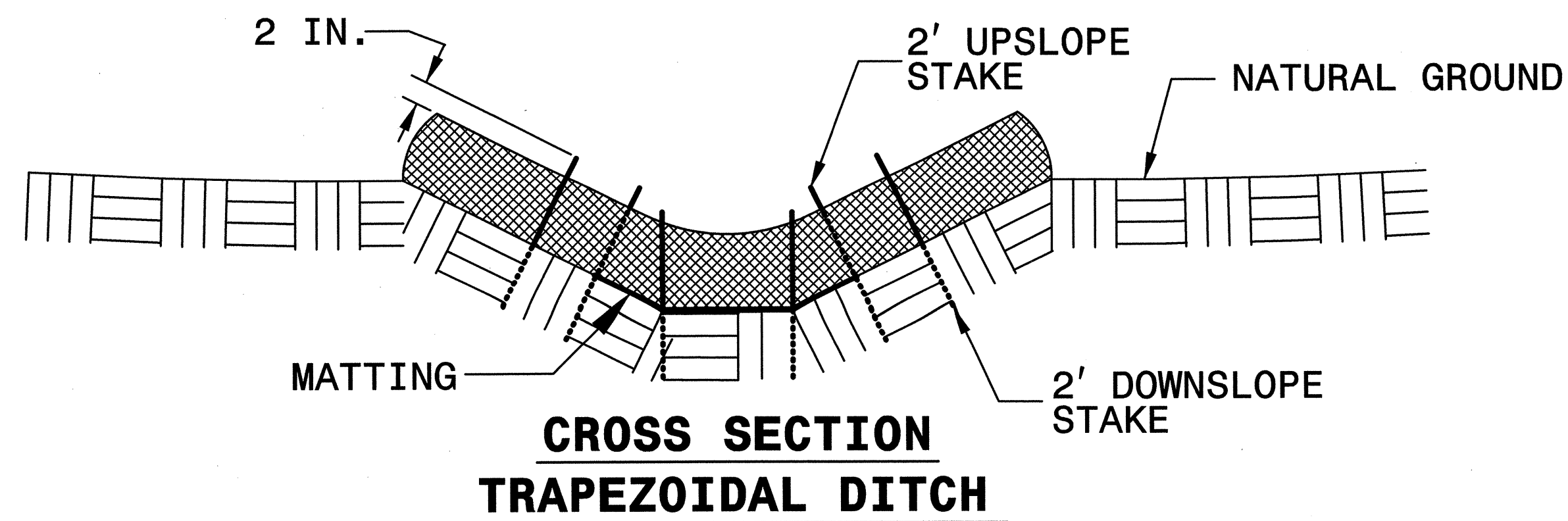
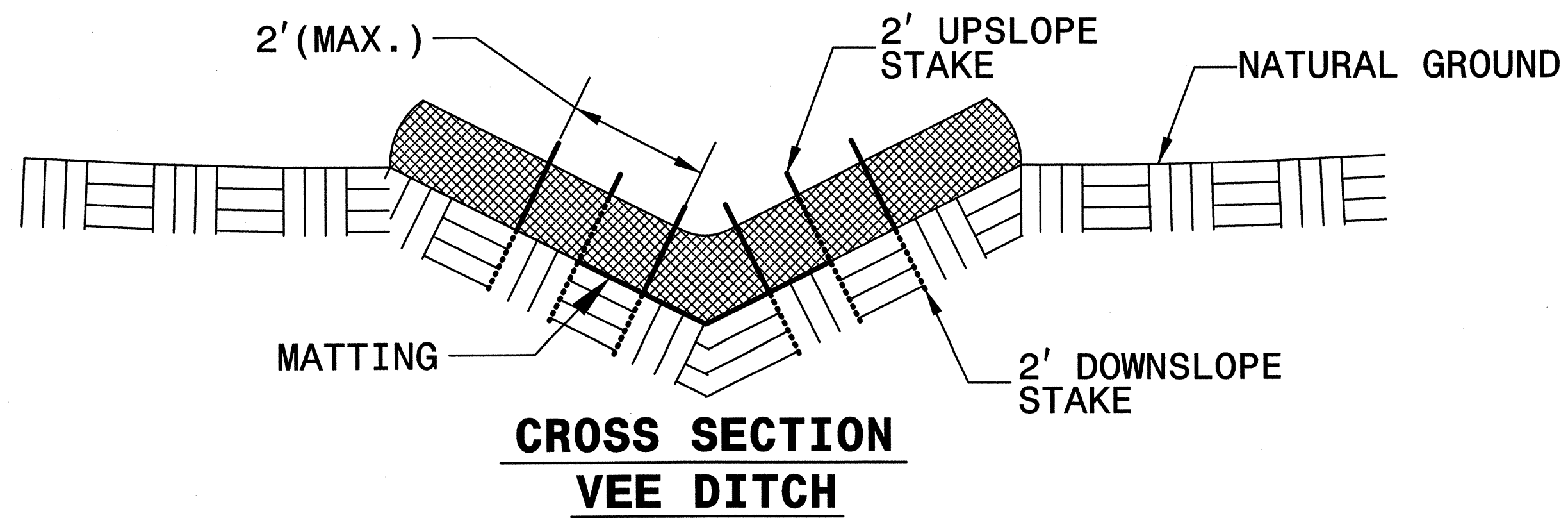
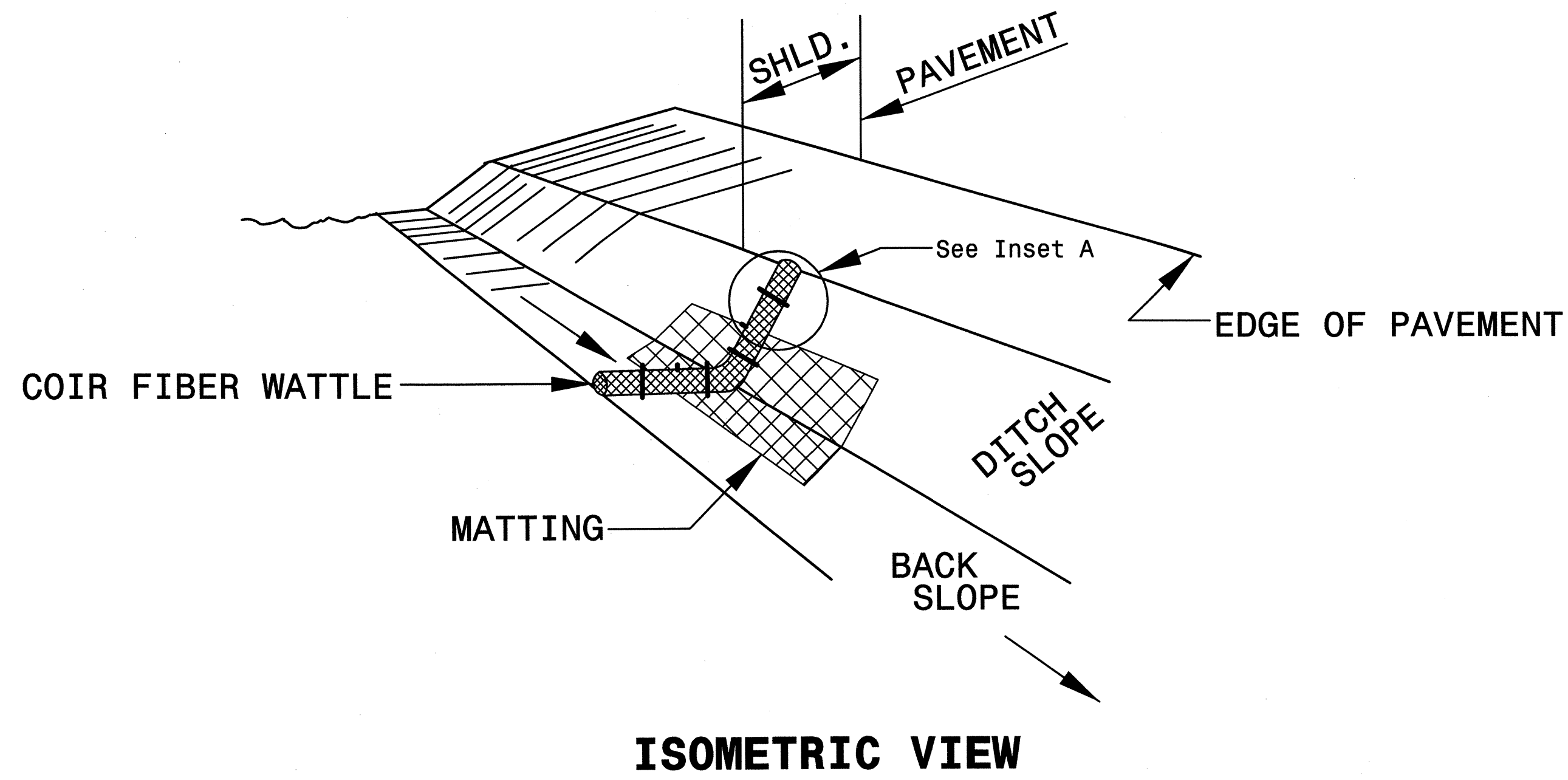
NOTES

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 FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

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COIR FIBER WATTLE 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.

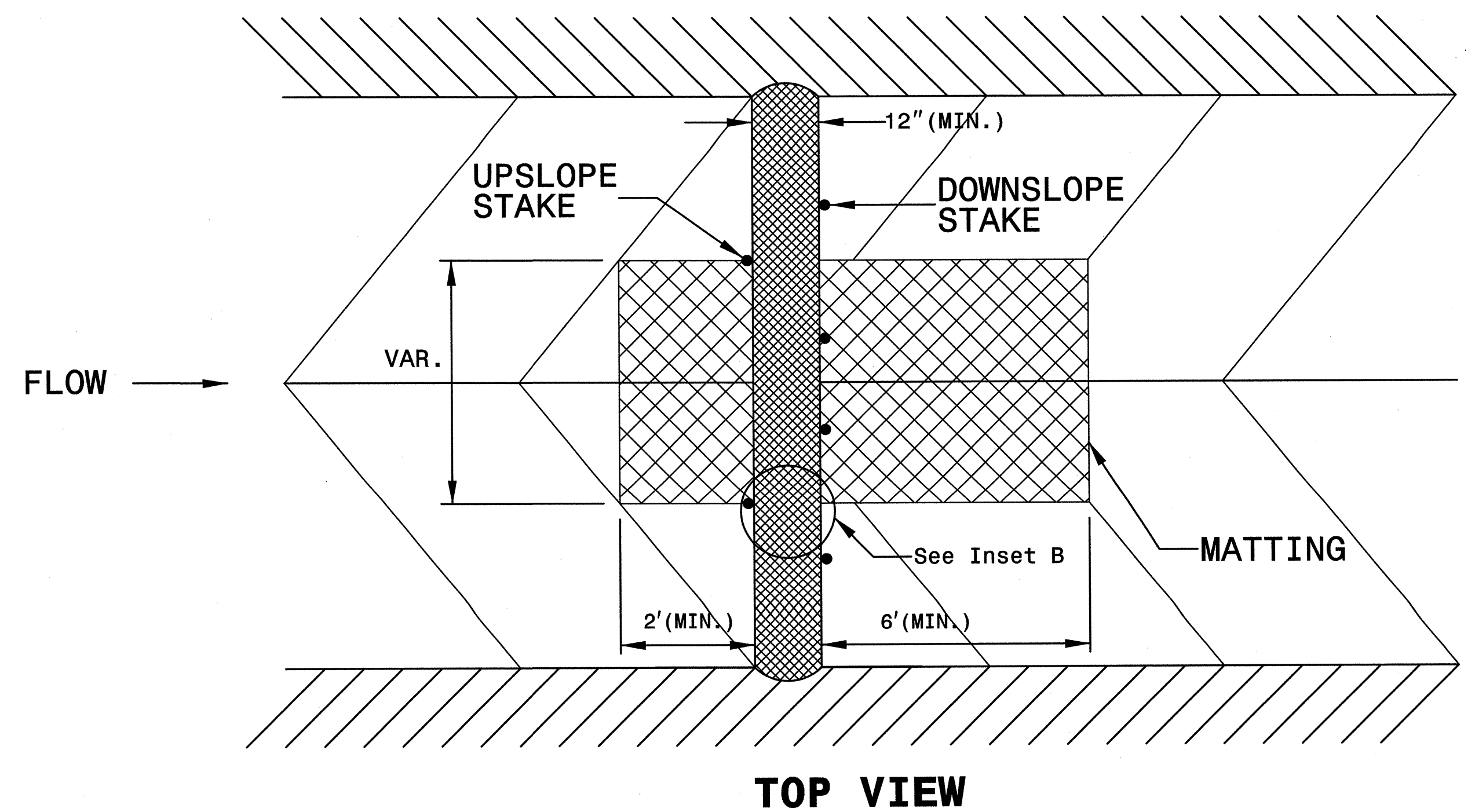
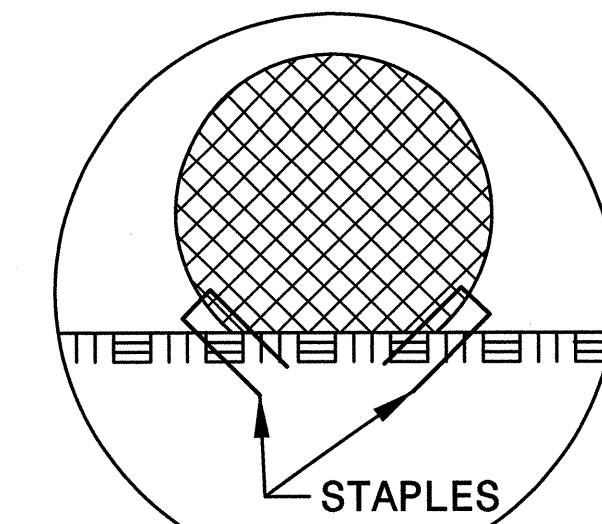
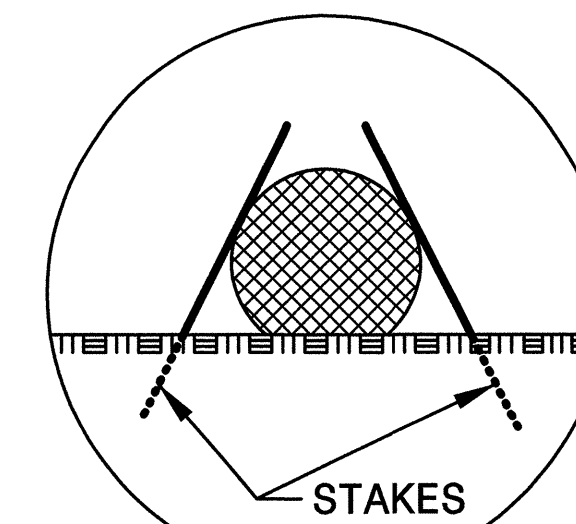
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

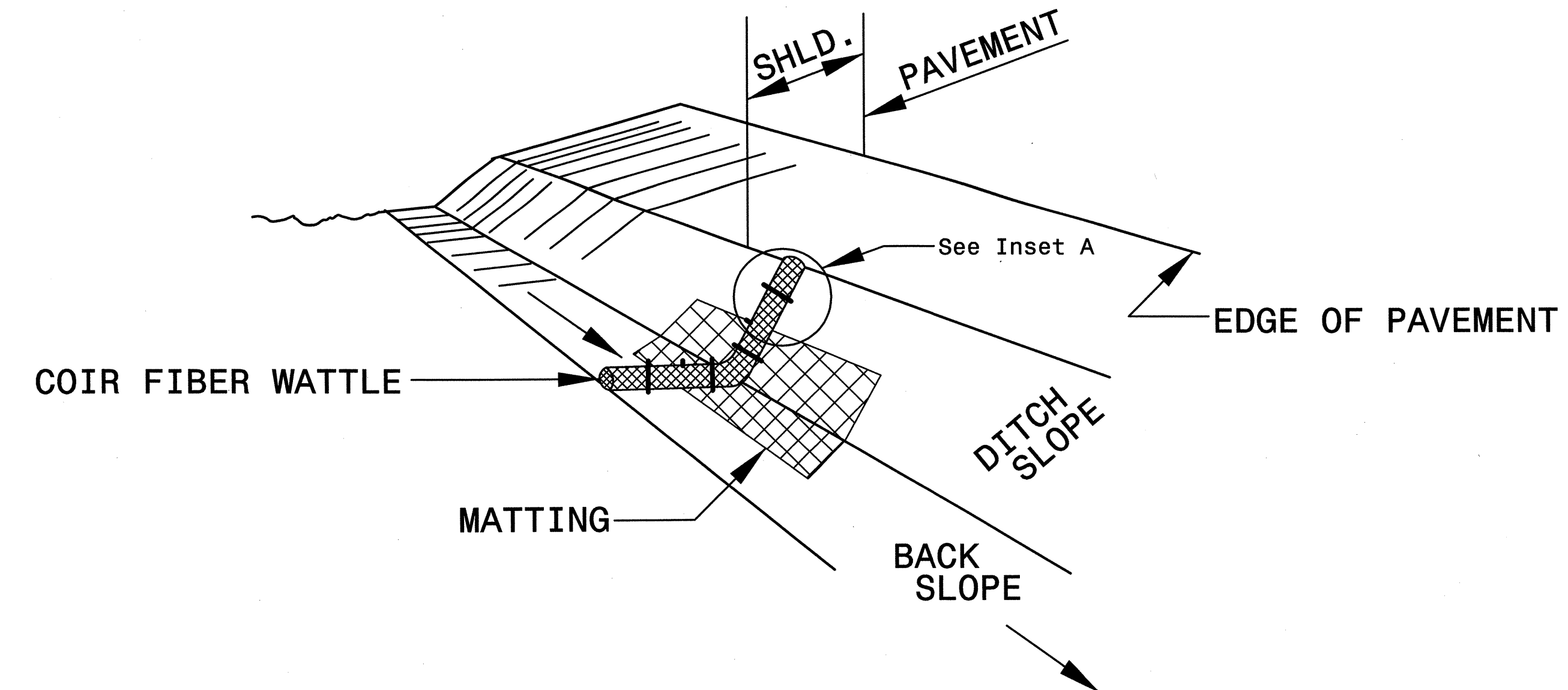
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

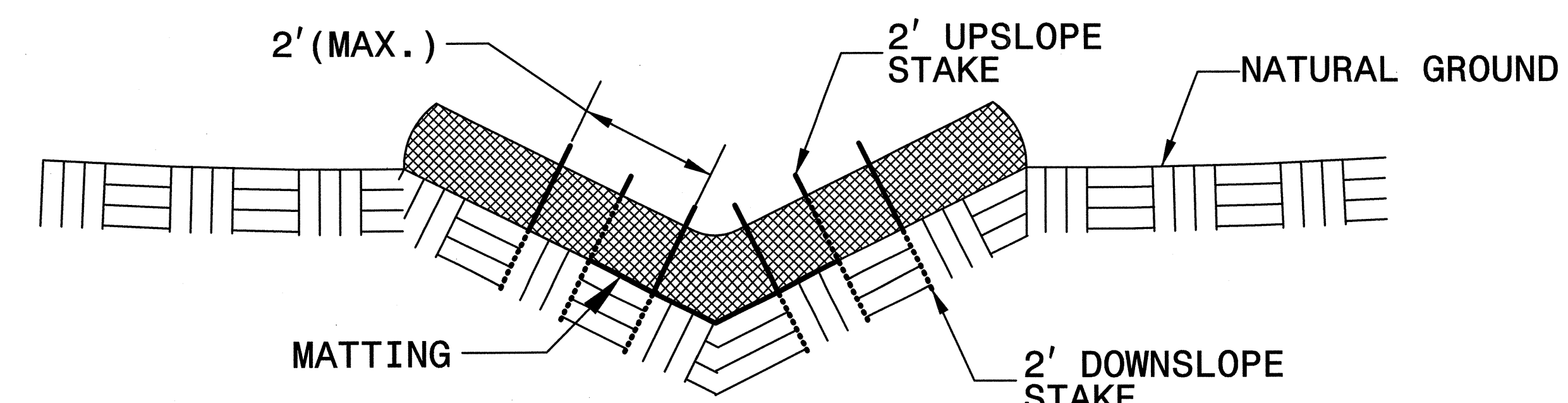
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



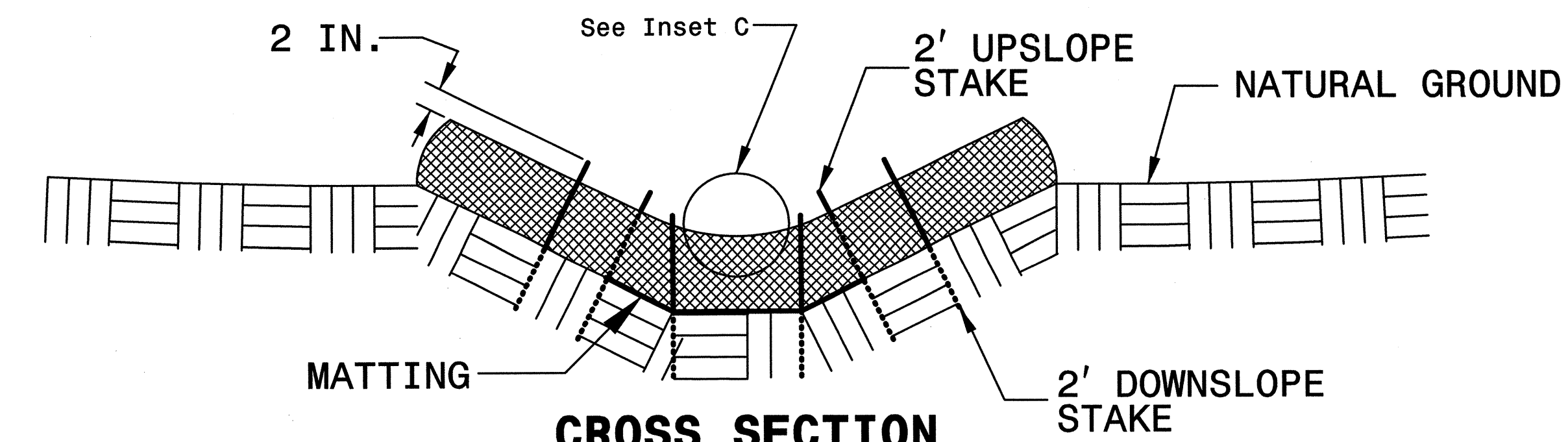
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



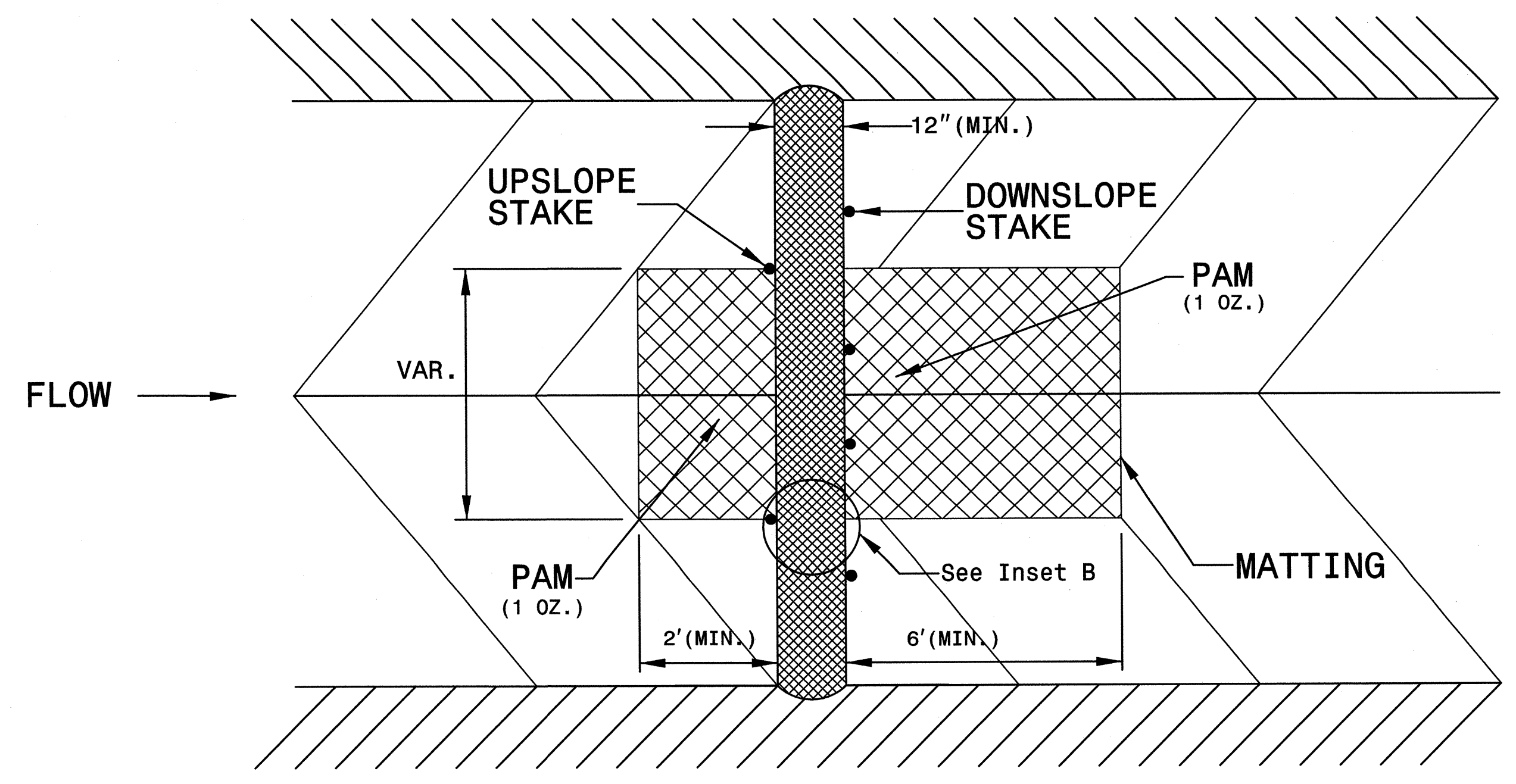
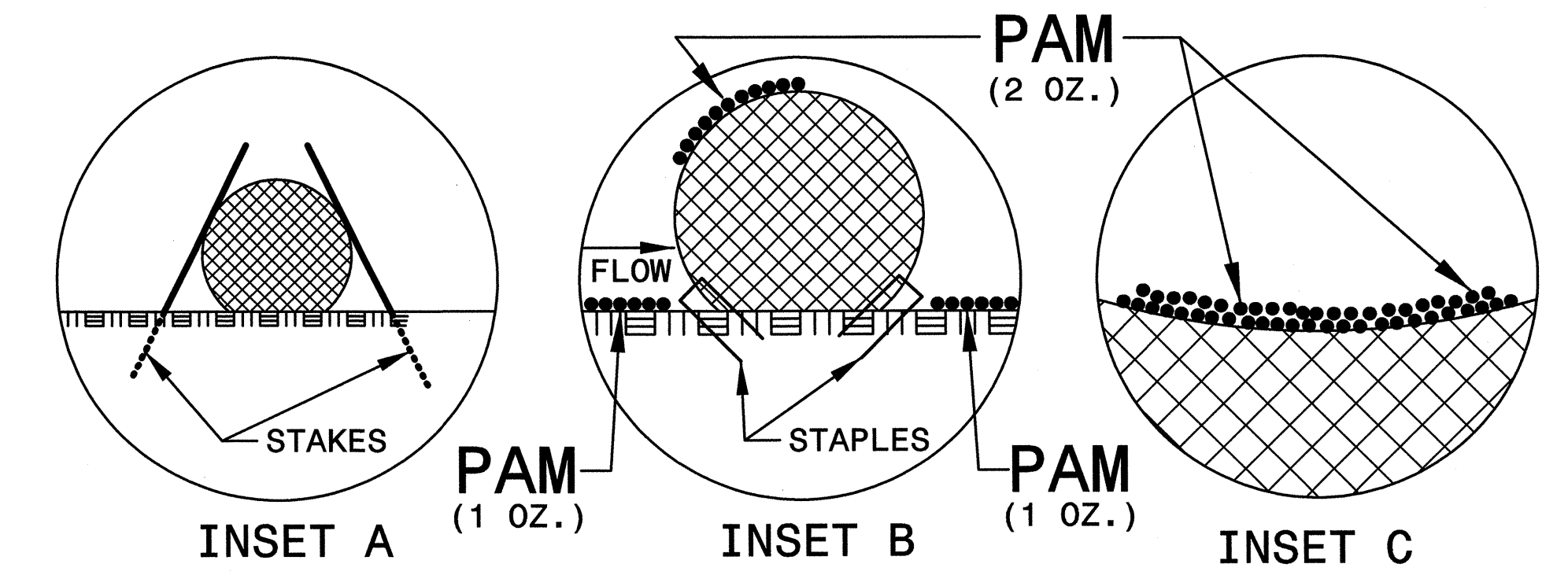
CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

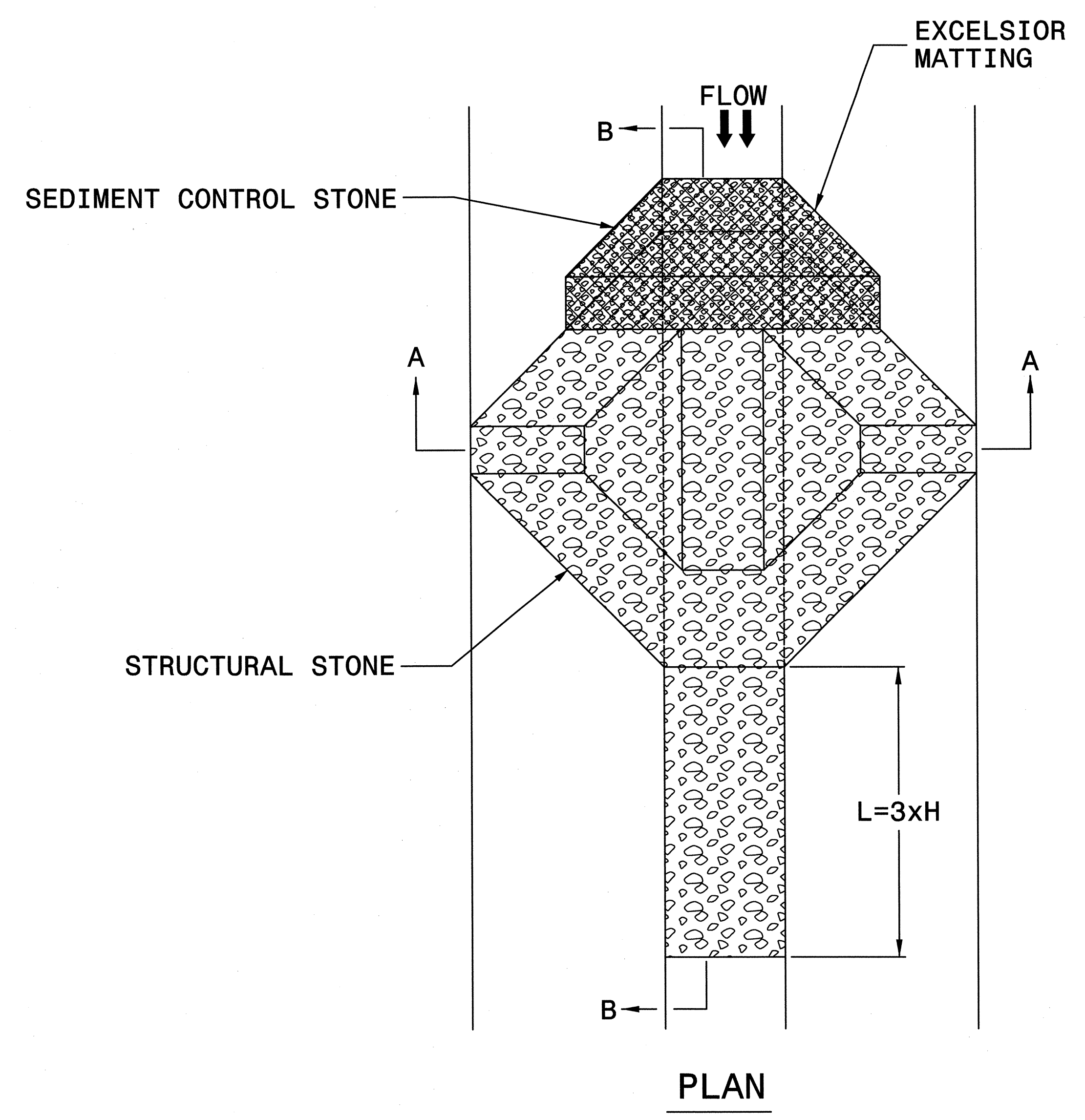
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND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



TOP VIEW

DCN 0271DEL_P10c3

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

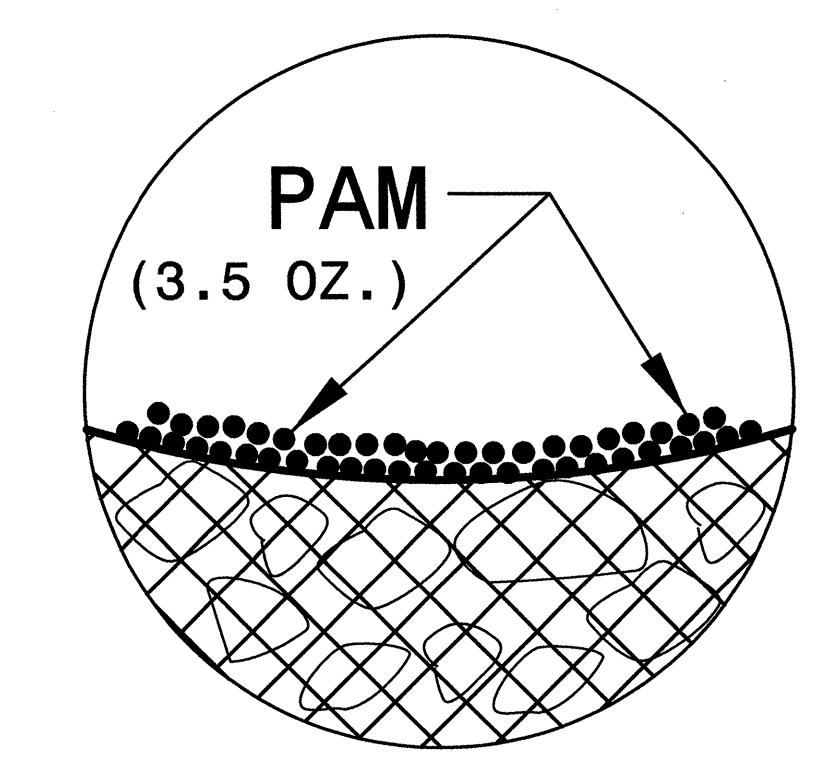


NOTES

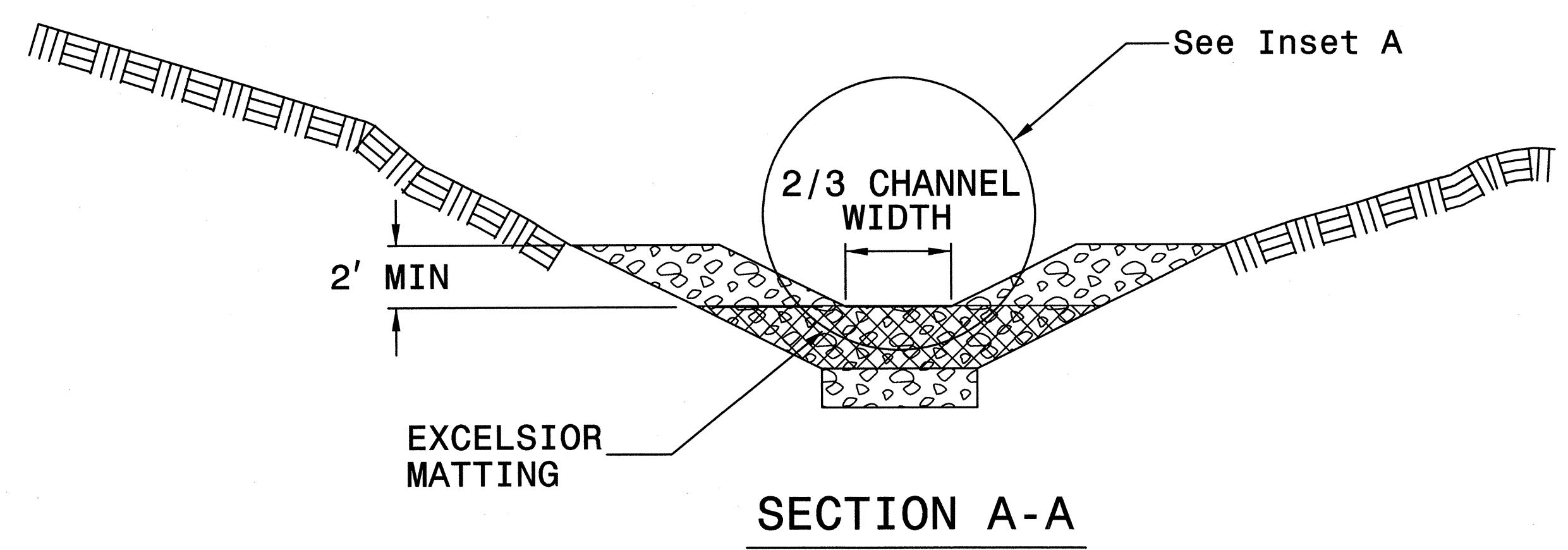
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

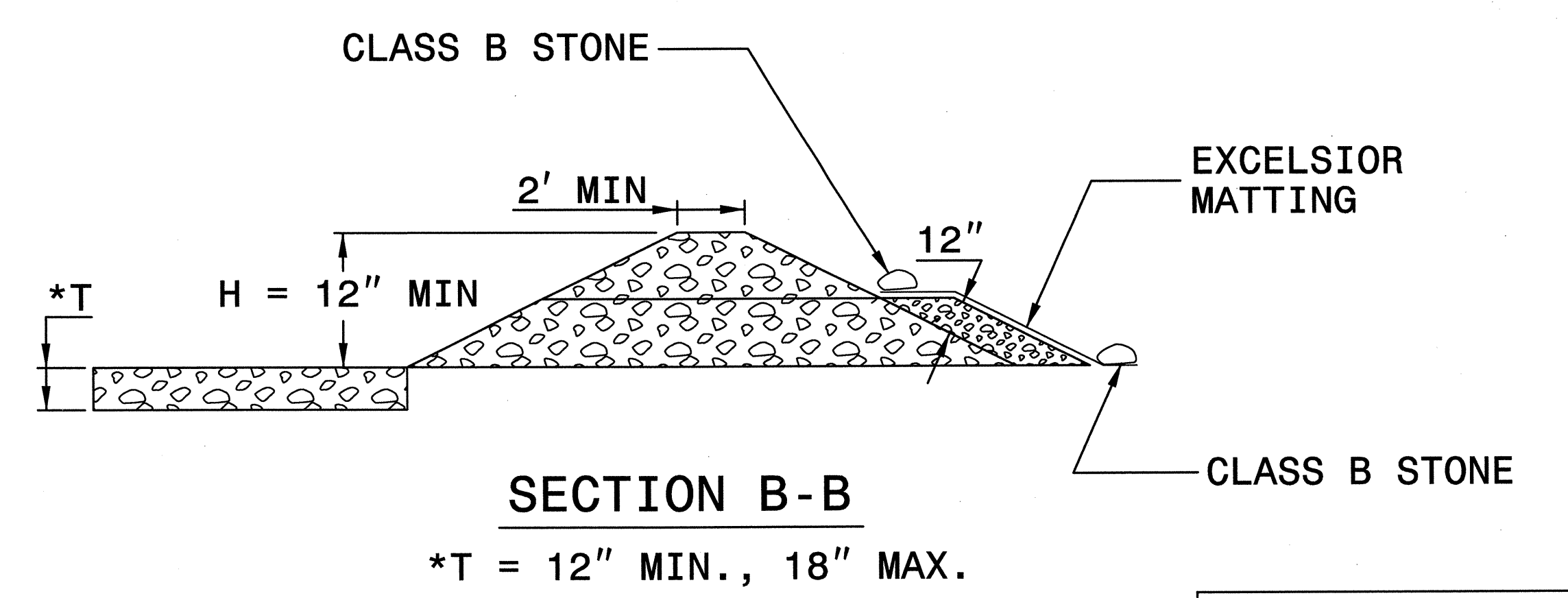
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

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

NOT TO SCALE

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0271DEL_P10c3

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. SHEET NO.
C-4901C EC-3A
RW SHEET NO.
Prepared in the Office of: **AECOM** NC FIRM LICENSE No. F-0542
701 Corporate Center, Drive, Suite 415
Raleigh, NC 27604
(919) 854-4200 • (919) 854-6299 FAX

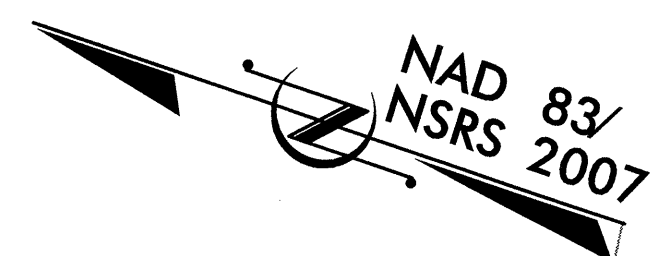
SOIL STABILIZATION TIMEFRAMES

<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.

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NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

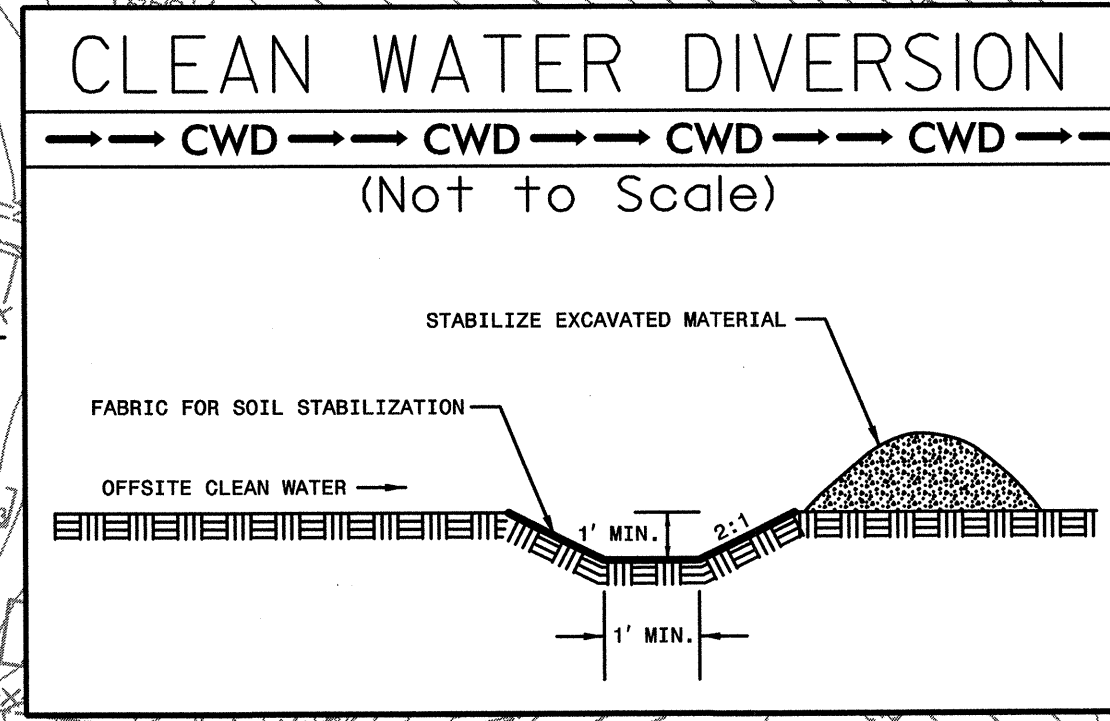
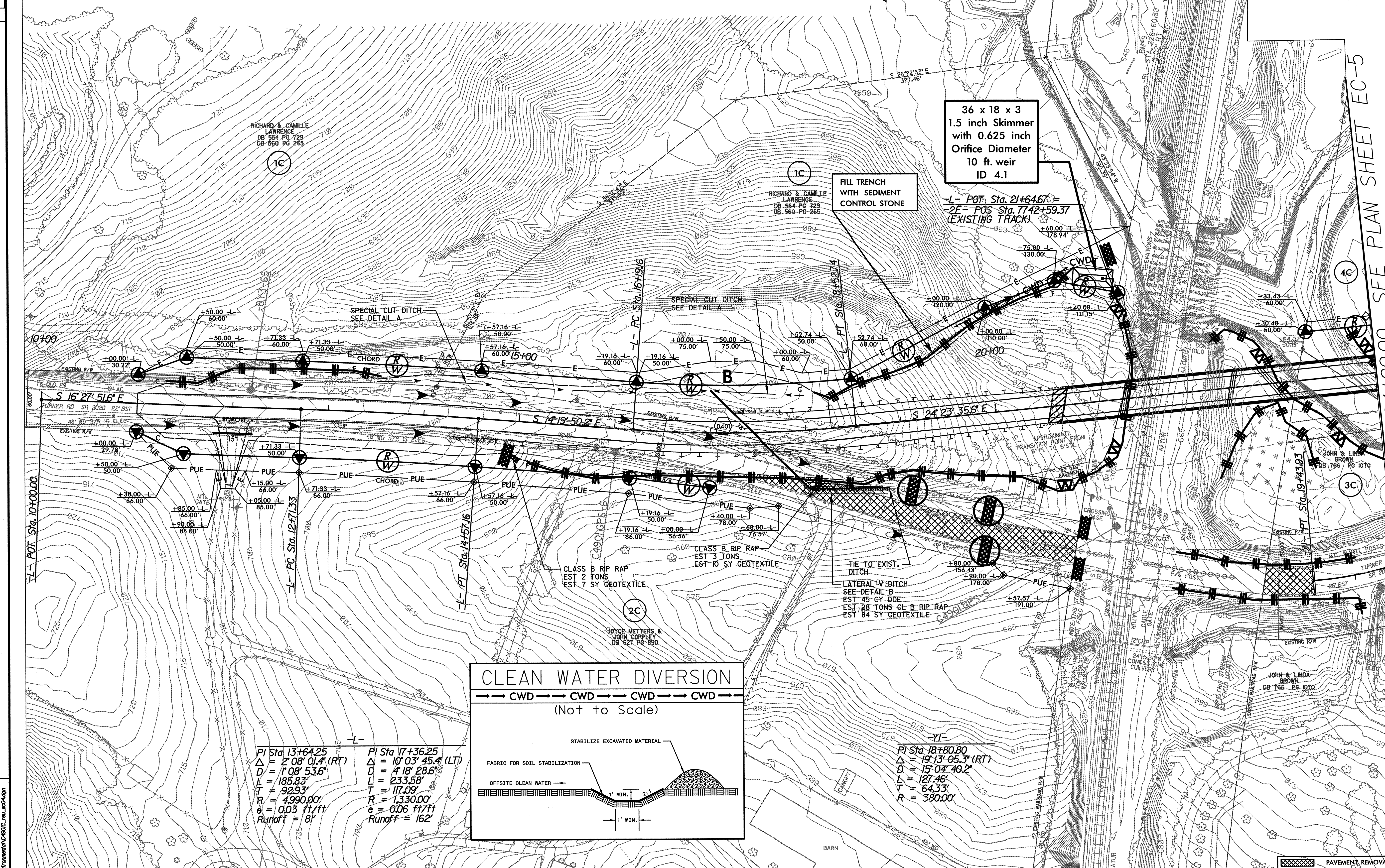
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4



36 x 18 x 3
 1.5 inch Skimmer
 with 0.625 inch
 Orifice Diameter
 10 ft. weir
 ID 4.1

FILL TRENCH
 WITH SEDIMENT
 CONTROL STONE

L- POT Sta. 21+64.67 =
 2E- POS Sta. 7742+59.37
 (EXISTING TRACK)



<p>PI Sta 13+64.25 $\Delta = 2' 08" 01.4 (RT)$ $D = 1' 08" 53.6'$ $L = 185.83'$ $T = 92.93'$ $R = 4,990.00'$ $e = 0.03 \text{ ft/ft}$ $\text{Runoff} = 8'$</p>	<p>PI Sta 17+36.25 $\Delta = 10' 03' 45.4 (LT)$ $D = 4' 18' 28.6'$ $L = 233.58'$ $T = 117.09'$ $R = 1,330.00'$ $e = 0.06 \text{ ft/ft}$ $\text{Runoff} = 162'$</p>
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PI Sta 18+80.80
 $\Delta = 19' 13' 05.3 (RT)$
 $D = 15' 04' 40.2'$
 $L = 127.46'$
 $T = 64.33'$
 $R = 380.00'$

PAVEMENT REMOVAL

FOR L- PROFILE, SEE SHEET NO. 6

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REVISIONS

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MATCHLINE -L- STA 24+00.00 SEE PLAN SHEET EC-5

0271DEL_P10c3

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 5



SEE PLAN SHEET EC-4

44 x 22 x 3
 1.5 inch Skimmer
 with 0.875 inch
 Orifice Diameter
 14 ft. weir
 ID 5.1

CLASS B RIP RAP
 EST 1 TONS
 EST 5 SY
 GEOTEXTILE

36 x 18 x 3
 1.5 inch Skimmer
 with 0.625 inch
 Orifice Diameter
 10 ft. weir
 ID 5.2

CLASS B RIP RAP
 EST 2 TONS
 EST 7 SY
 GEOTEXTILE

CLASS B RIP RAP
 EST 2 TONS
 EST 7 SY
 GEOTEXTILE

CLASS B RIP RAP
 EST 2 TONS
 EST 7 SY
 GEOTEXTILE

FILL TRENCH
 WITH SEDIMENT
 CONTROL STONE

EST 315 TONS
 EST 880 SY GEOTEXTILE

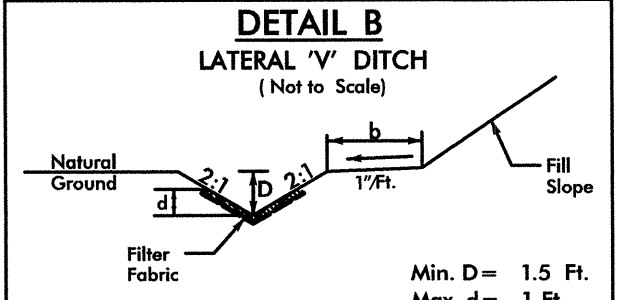
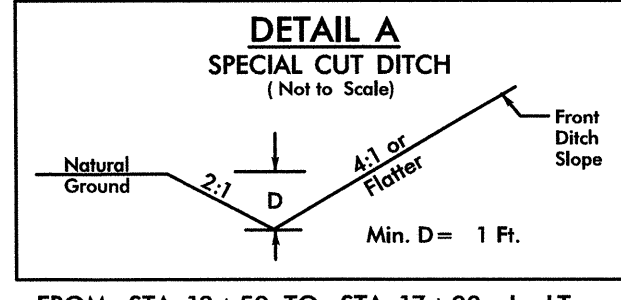
EST 155 TONS
 EST 431 SY GEOTEXTILE -YI-

PI Sta 10+59.34 $\Delta = 80' 31'' 03.3''$ (RT) $D = 114' 35'' 29.6''$ $L = 70.26'$ $T = 42.34'$ $R = 50.00'$	PI Sta 14+80.46 $\Delta = 14' 36'' 55.5''$ (LT) $D = 14' 19'' 26.2''$ $L = 102.03'$ $T = 51.30'$ $R = 400.00'$	PI Sta 18+80.80 $\Delta = 19' 13'' 05.3''$ (RT) $D = 15' 04'' 40.2''$ $L = 127.46'$ $T = 64.33'$ $R = 380.00'$	-L- PI Sta 32+42.04 $\Delta = 16' 34'' 29.3''$ (RT) $D = 4' 18'' 28.6''$ $L = 384.75'$ $T = 193.73'$ $R = 1,330.00'$ $e = 0.06$ ft/ft $Runoff = 162'$	-DWI- PI Sta 10+42.24 $\Delta = 59' 11'' 58.7''$ (RT) $D = 127' 19'' 26.2''$ $L = 46.50'$ $T = 25.56'$ $R = 45.00'$	-L- PI Sta 12+42.40 $\Delta = 27' 00'' 23.6''$ (RT) $D = 22' 55'' 05.9''$ $L = 91.66'$ $T = 46.35'$ $R = 250.00'$
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FOR -L- PROFILE, SEE SHEET NO. 6

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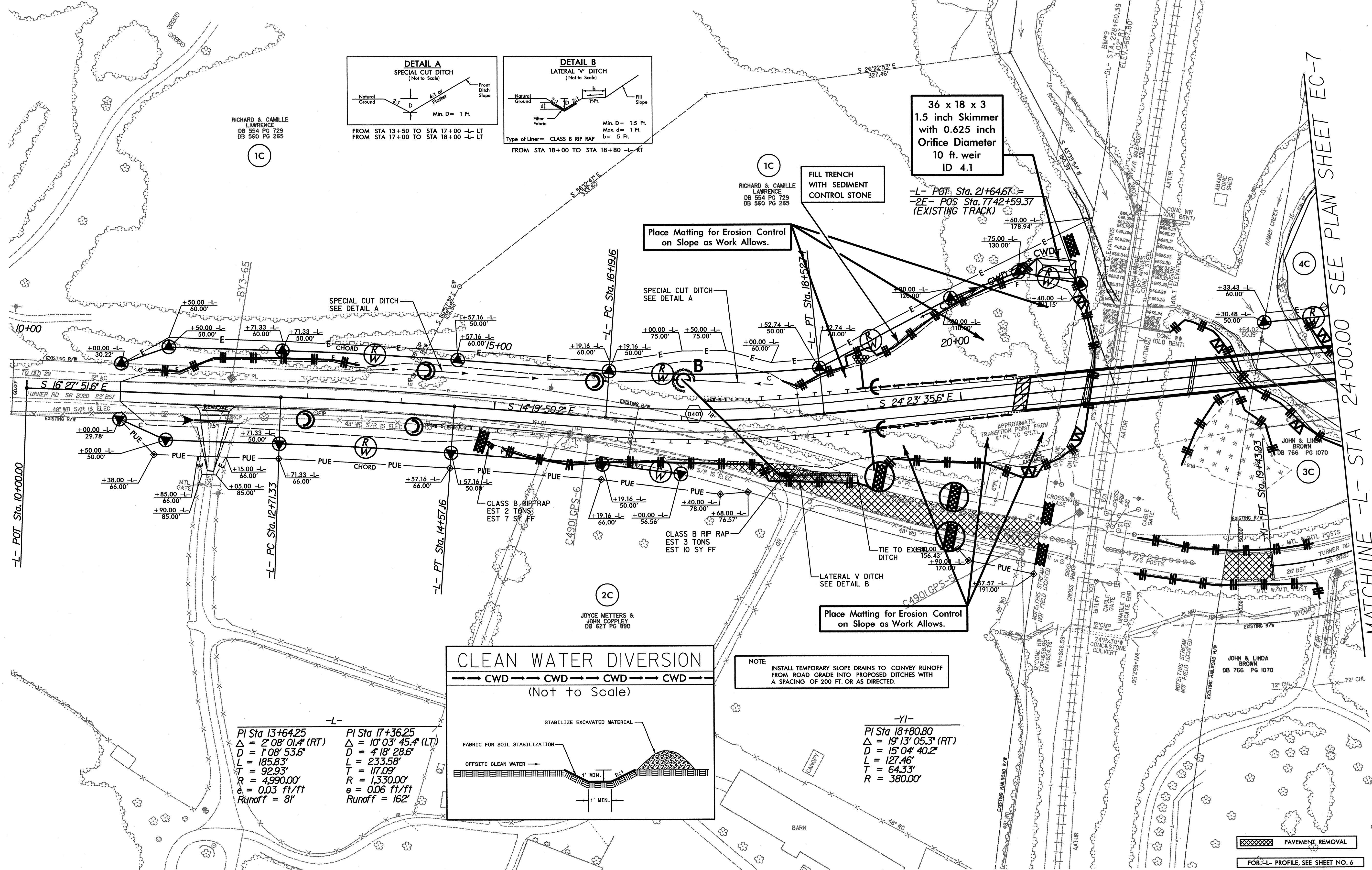
0271DEL_P10c3



36 x 18 x 3
 1.5 inch Skimmer
 with 0.625 inch
 Orifice Diameter
 10 ft. weir
 ID 4.1

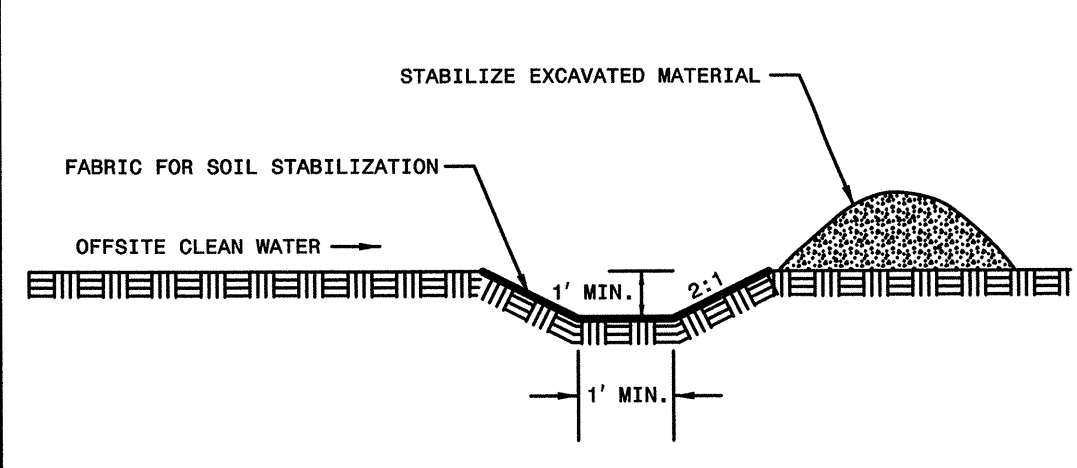
Place Matting for Erosion Control
 on Slope as Work Allows.

FILL TRENCH
 WITH SEDIMENT
 CONTROL STONE



CLEAN WATER DIVERSION

→ CWD → CWD → CWD → CWD →
 (Not to Scale)



NOTE: INSTALL TEMPORARY SLOPE DRAINS TO CONVEY RUNOFF FROM ROAD GRADE INTO PROPOSED DITCHES WITH A SPACING OF 200 FT. OR AS DIRECTED.

-L-
 PI Sta 13+64.25
 $\Delta = 2' 08'' 01.4''$ (RT)
 $D = 1' 08'' 53.6''$
 $L = 185.83'$
 $T = 92.93'$
 $R = 4990.00'$
 $e = 0.03$ ft/ft
 Runoff = 8'

-L-
 PI Sta 17+36.25
 $\Delta = 10' 03'' 45.4''$ (LT)
 $D = 4' 18'' 28.6''$
 $L = 233.58'$
 $T = 117.09'$
 $R = 1,330.00'$
 $e = 0.06$ ft/ft
 Runoff = 162'

-YI-
 PI Sta 18+80.80
 $\Delta = 19' 13'' 05.3''$ (RT)
 $D = 15' 04'' 40.2''$
 $L = 127.46'$
 $T = 64.33'$
 $R = 380.00'$

PAVEMENT REMOVAL

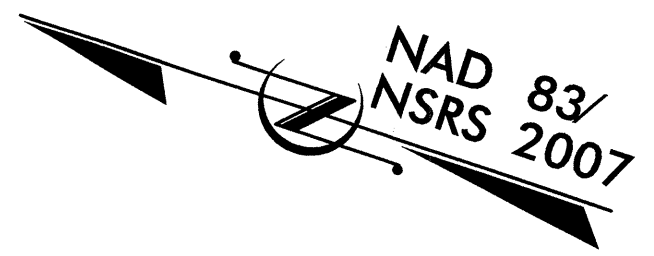
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MATCHLINE -L- STA 24+00.00 SEE PLAN SHEET EC-7

REVISIONS

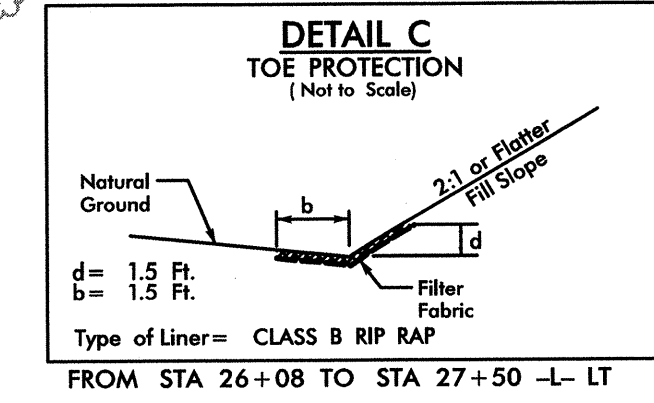
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0271DEL_P10c3

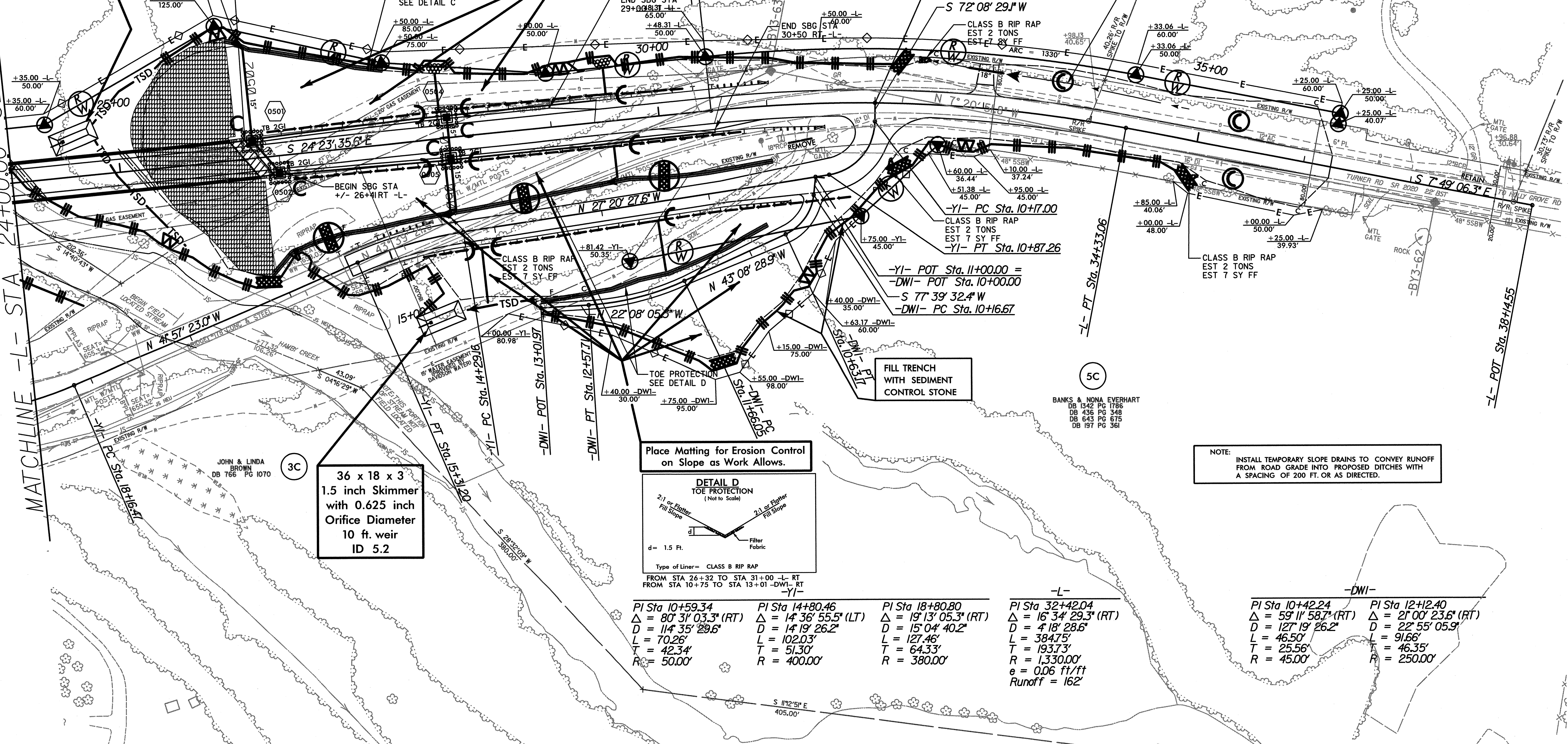
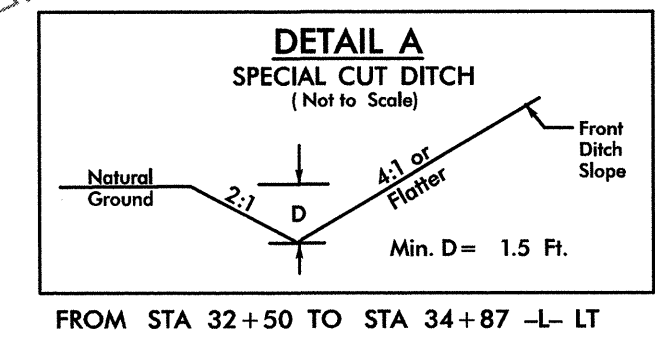


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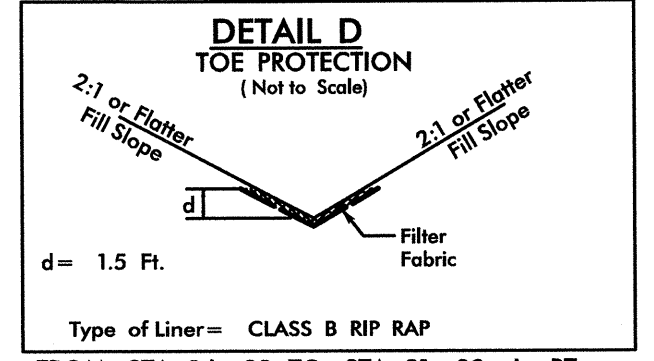
44 x 22 x 3
 1.5 inch Skimmer
 with 0.875 inch
 Orifice Diameter
 14 ft. weir
 ID 5.1



Place Matting for Erosion Control
 on Slope as Work Allows.



36 x 18 x 3
 1.5 inch Skimmer
 with 0.625 inch
 Orifice Diameter
 10 ft. weir
 ID 5.2



PI Sta	Δ	D	L	T	R
10+59.34	80° 31' 03.3" (RT)	114.35'	70.26'	42.34'	50.00'
14+80.46	14° 36' 55.5" (LT)	14.19'	102.03'	51.30'	400.00'
18+80.80	19° 13' 05.3" (RT)	15.04'	127.46'	64.33'	380.00'
32+42.04	16° 34' 29.3" (RT)	4.18'	384.75'	193.73'	1,330.00'
10+42.24	59° 11' 58.7" (RT)	127.19'	46.50'	25.56'	45.00'
12+12.40	21° 00' 23.6" (RT)	22° 55' 05.9"	91.66'	46.35'	250.00'

Runoff = 162'

FOR -L- PROFILE, SEE SHEET NO. 6

REVISIONS

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