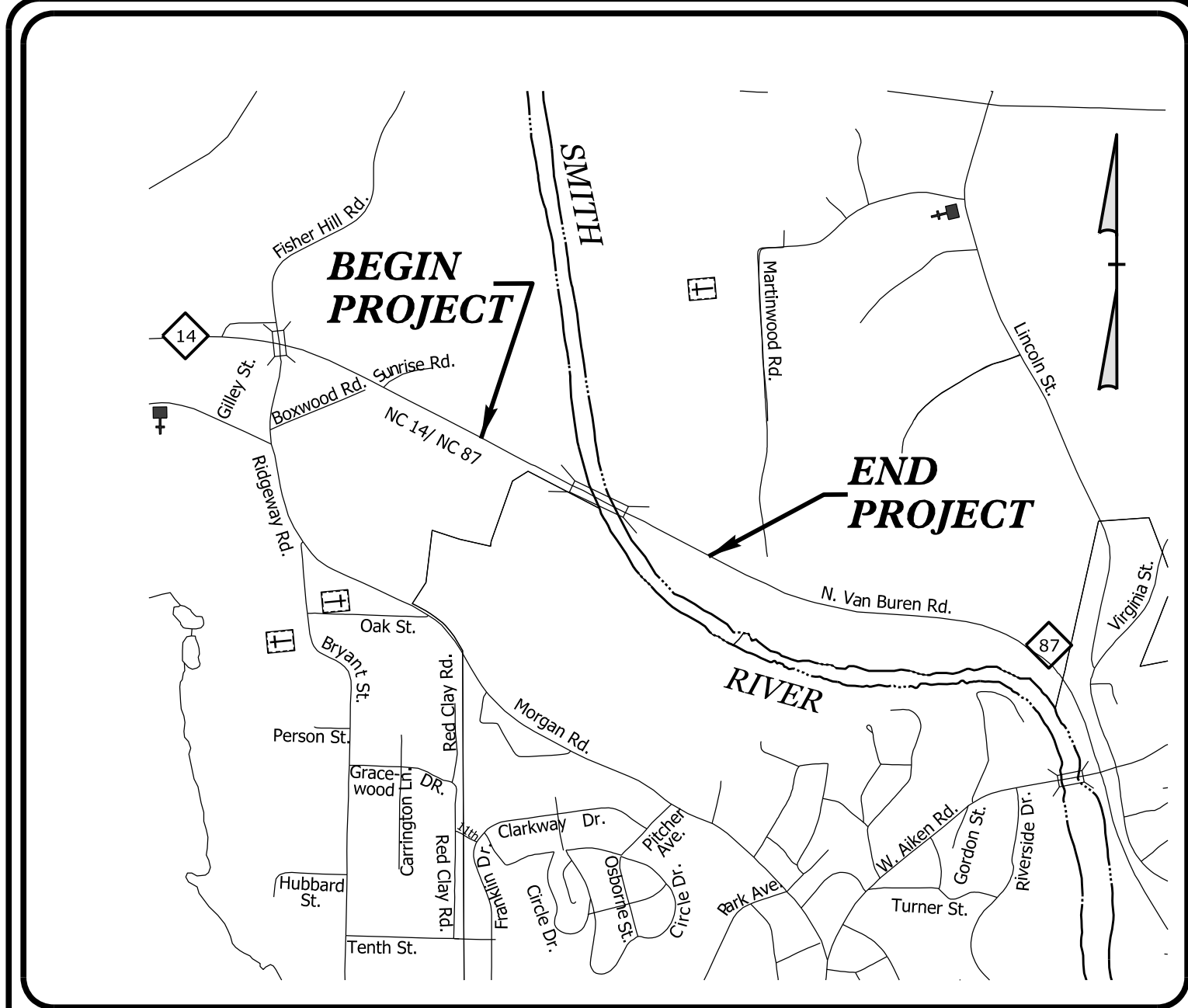


**This electronic collection of documents is provided  
for the convenience of the user  
and is Not a Certified Document –**

**The documents contained herein were originally issued  
and sealed by the individuals whose names and license  
numbers appear on each page, on the dates appearing  
with their signature on that page.**

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

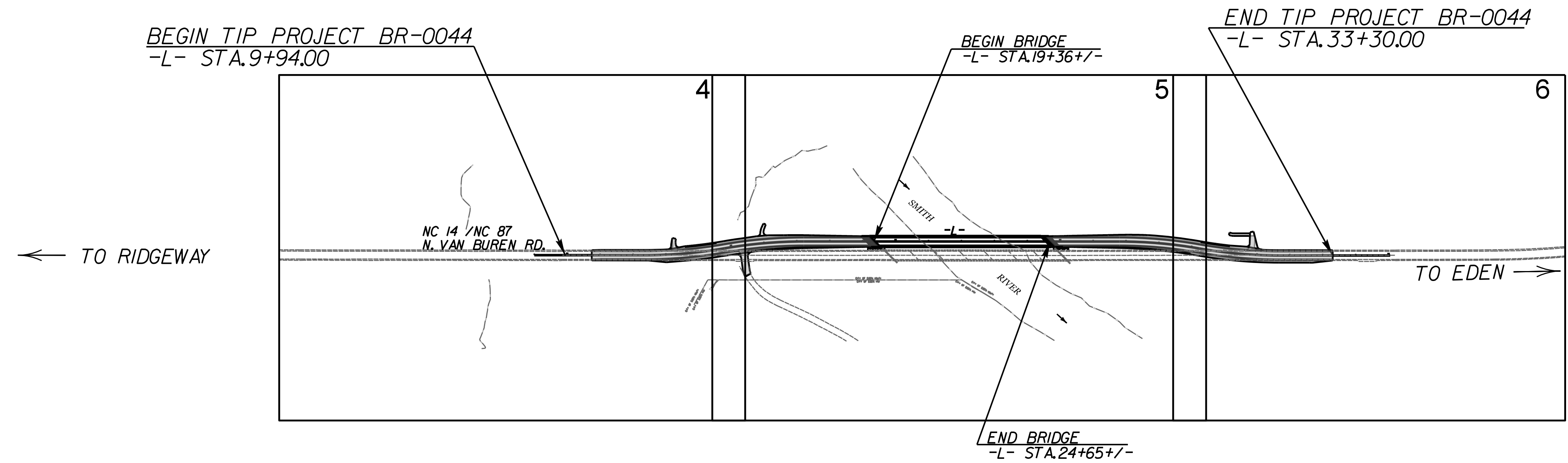
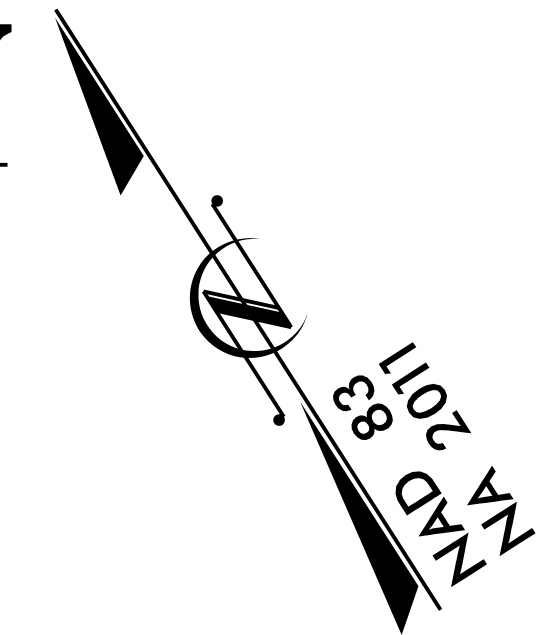
**TIP PROJECT: BR-0044**



**VICINITY MAP**  
NOT TO SCALE

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

**LOCATION: BRIDGE NO. 168 ON NC 14/NC 87  
(N. VAN BUREN ROAD) OVER  
SMITH RIVER**  
**TYPE OF WORK: GRADING, DRAINAGE, PAVING,  
AND STRUCTURE**



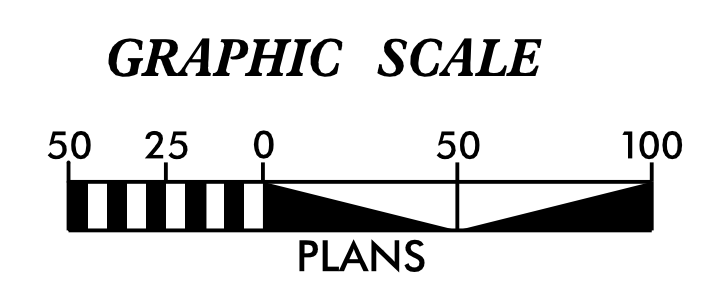
**EROSION AND SEDIMENT CONTROL MEASURES**

Sta. #	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	
1630.02	Silt Basin Type B	
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)	
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	

**ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT**  
Refer To E. C. Special Provisions for Special Considerations.

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

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared In the Office of:  
**AECOM**  
Firm License No. F-0342  
5438 Wade Park Boulevard, Suite 200  
Raleigh NC 27607  
+1-919-461-1100

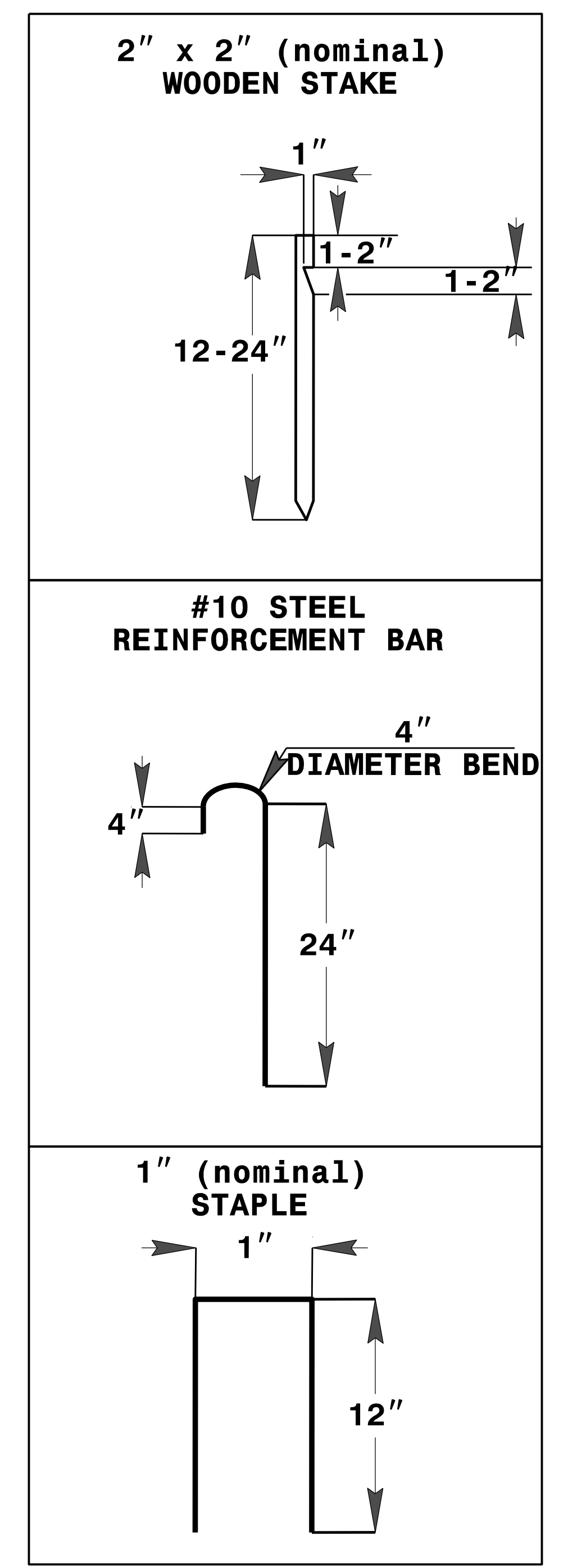
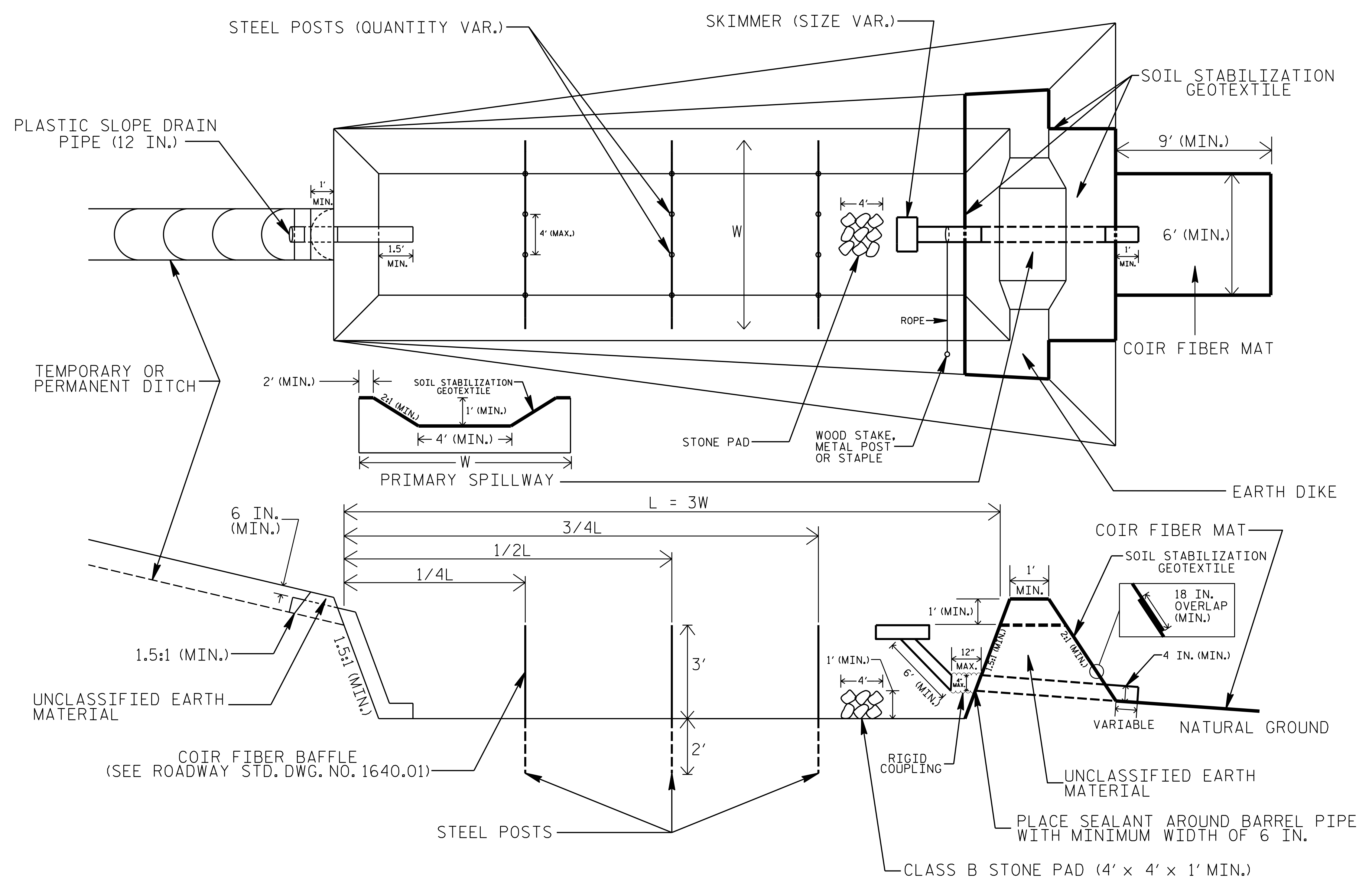
Designed by:  
**RENE REMY, CPESC, CPSWQ** 3125  
NAME LEVEL III CERTIFICATION NO.

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 2018 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	

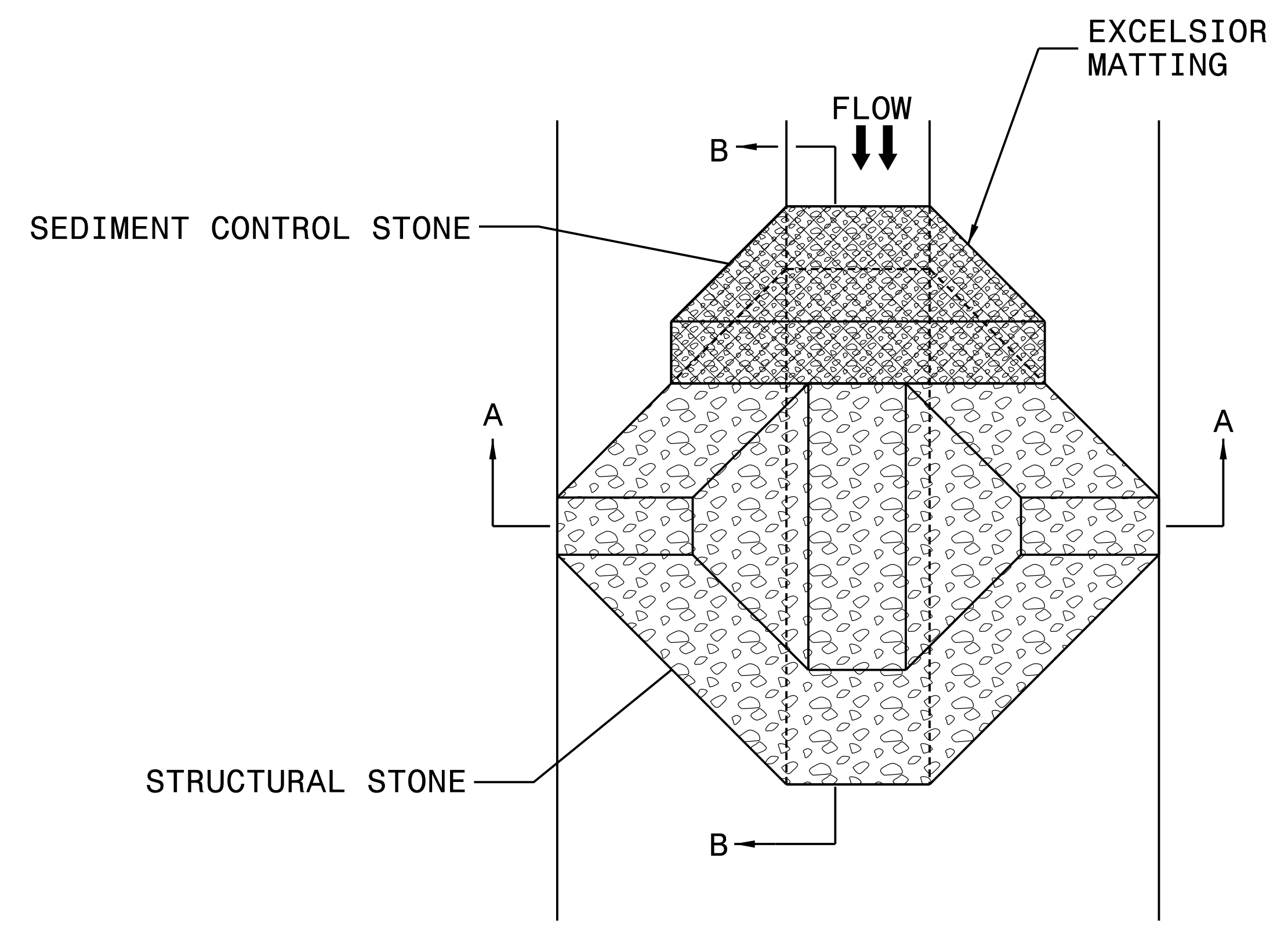
# SKIMMER BASIN WITH BAFFLES DETAIL



- 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 PRIMARY SPILLWAY WEIR LENGTH (FT.) USING  $Q/0.4$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
  5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
  6. SOIL STABILIZATION GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).
- NOT TO SCALE

5/14/99  
3:36:55 PM  
RA\Envr\Projects\BR0044\REU\EC02.dgn

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



PLAN

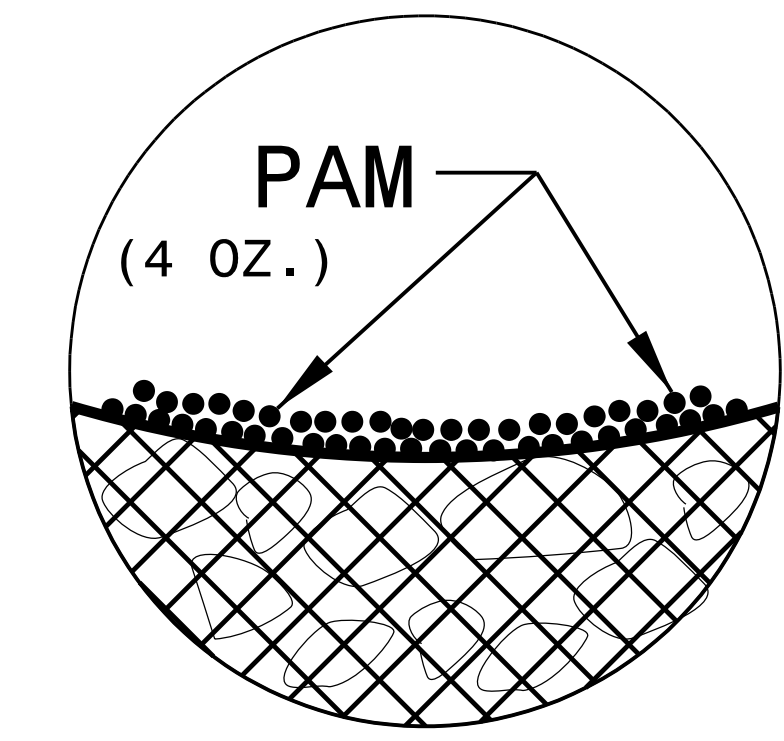
**NOTES:**

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

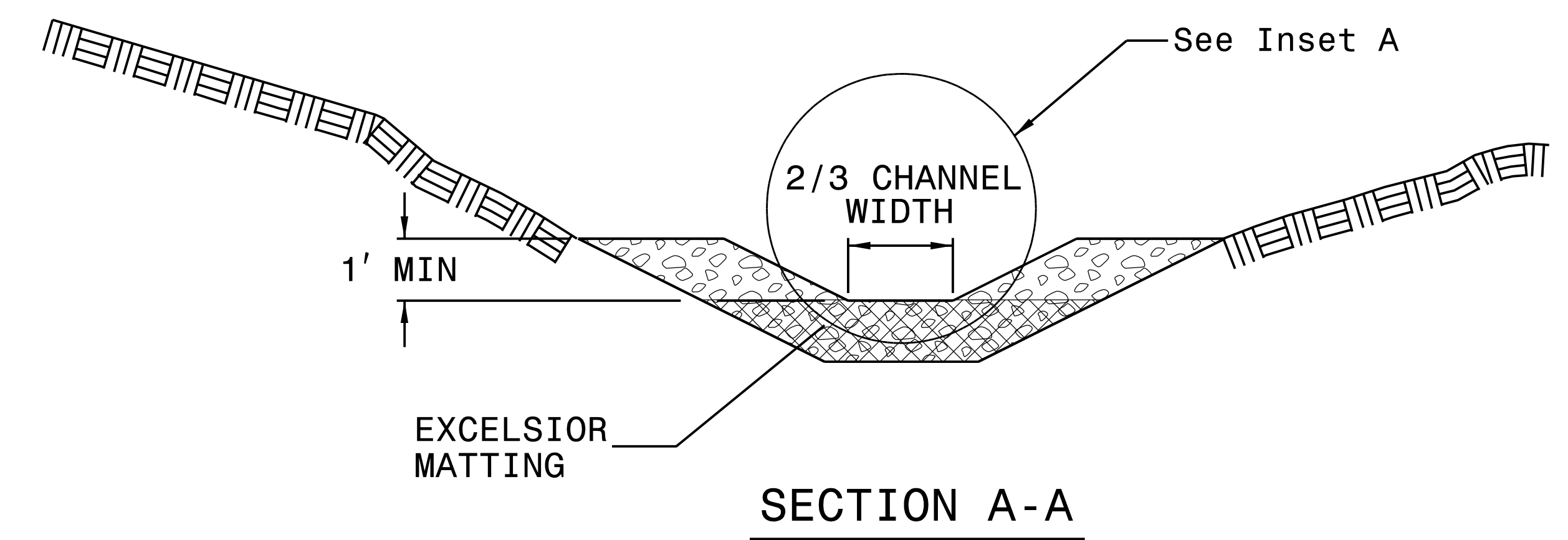
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

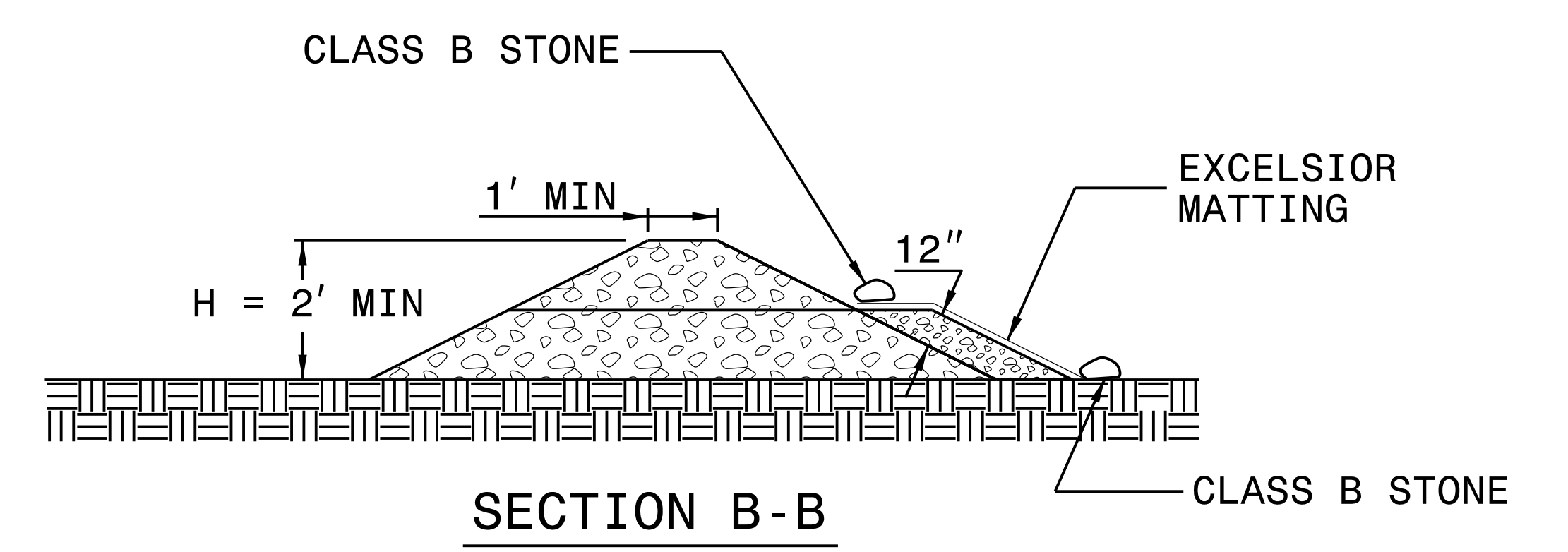
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

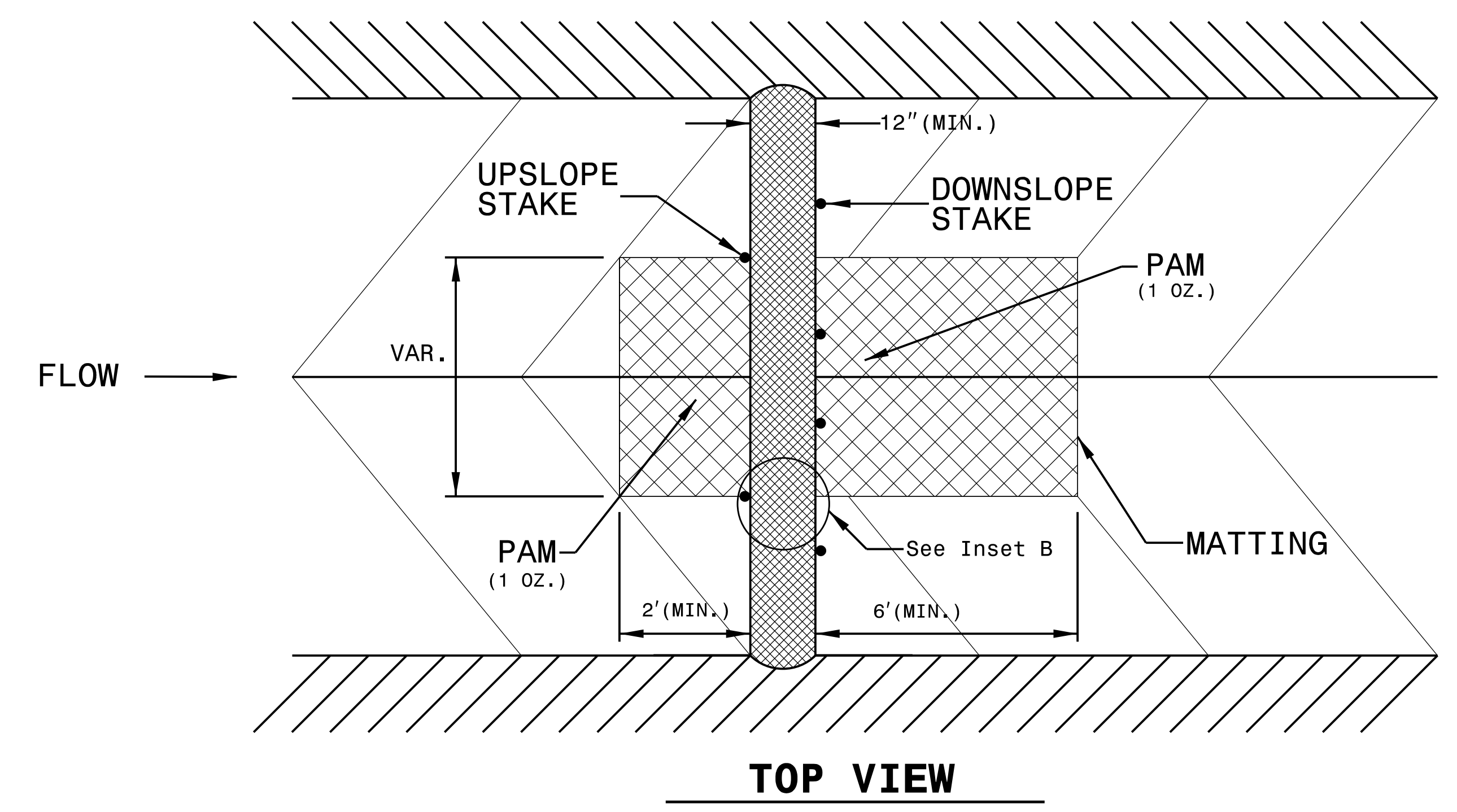
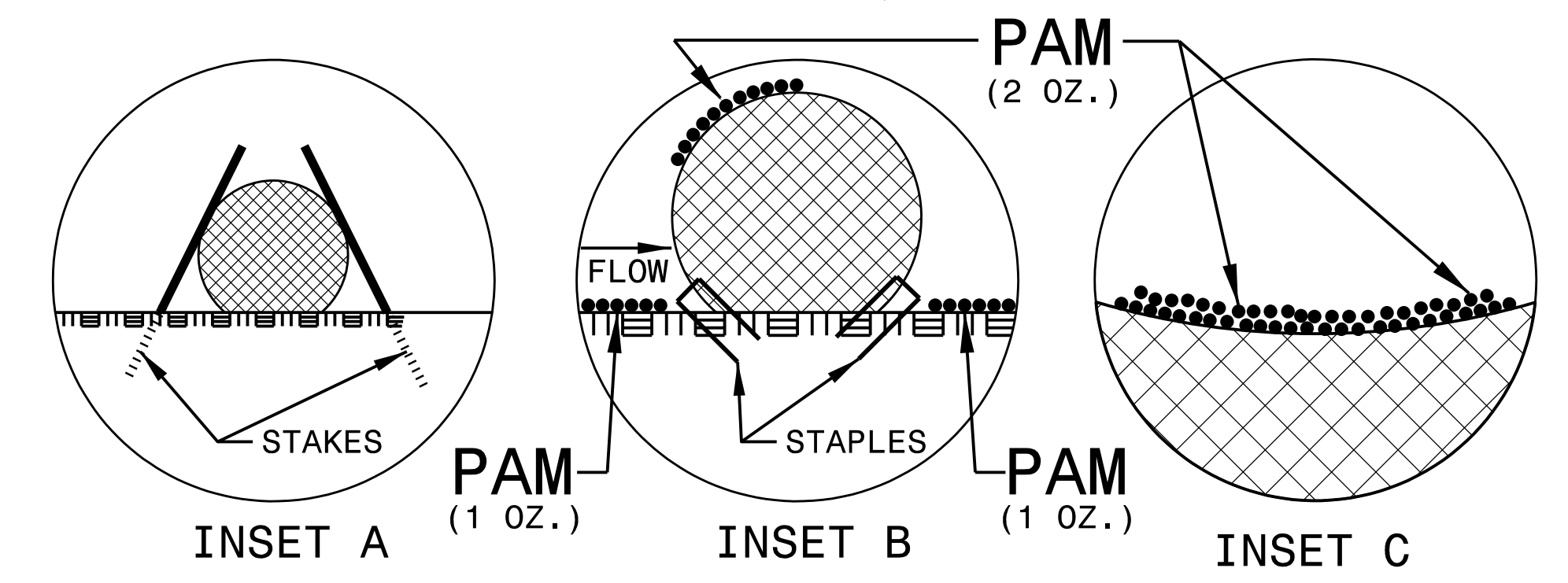
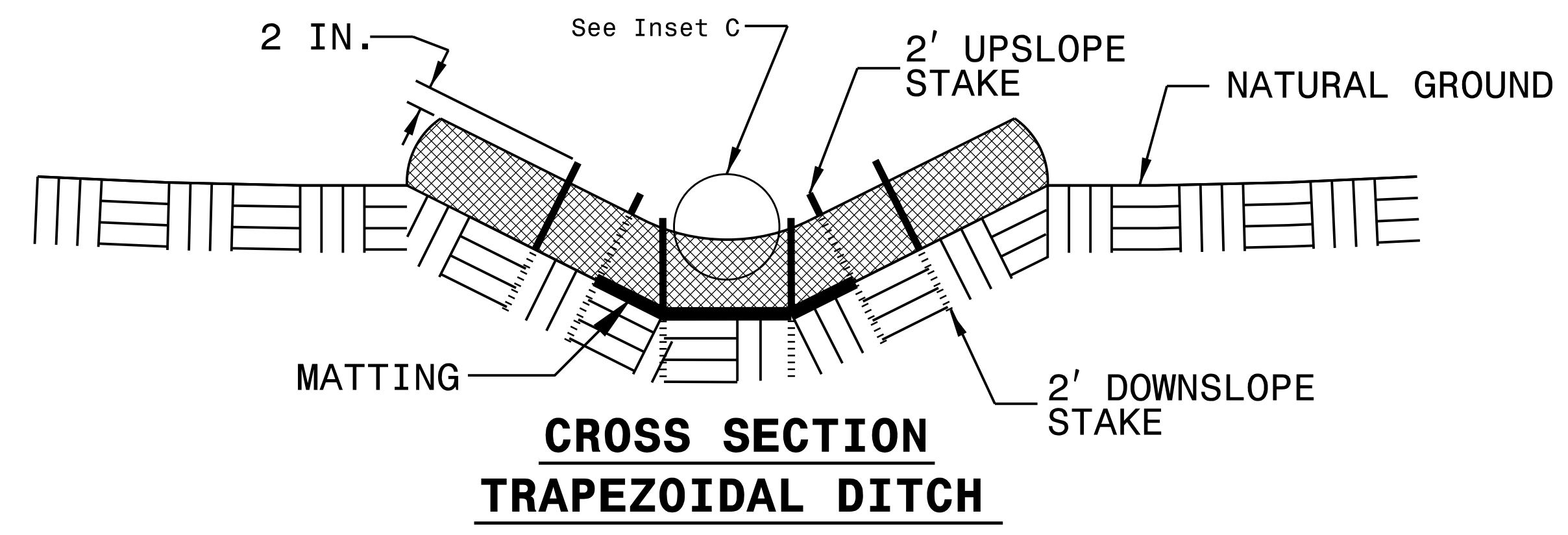
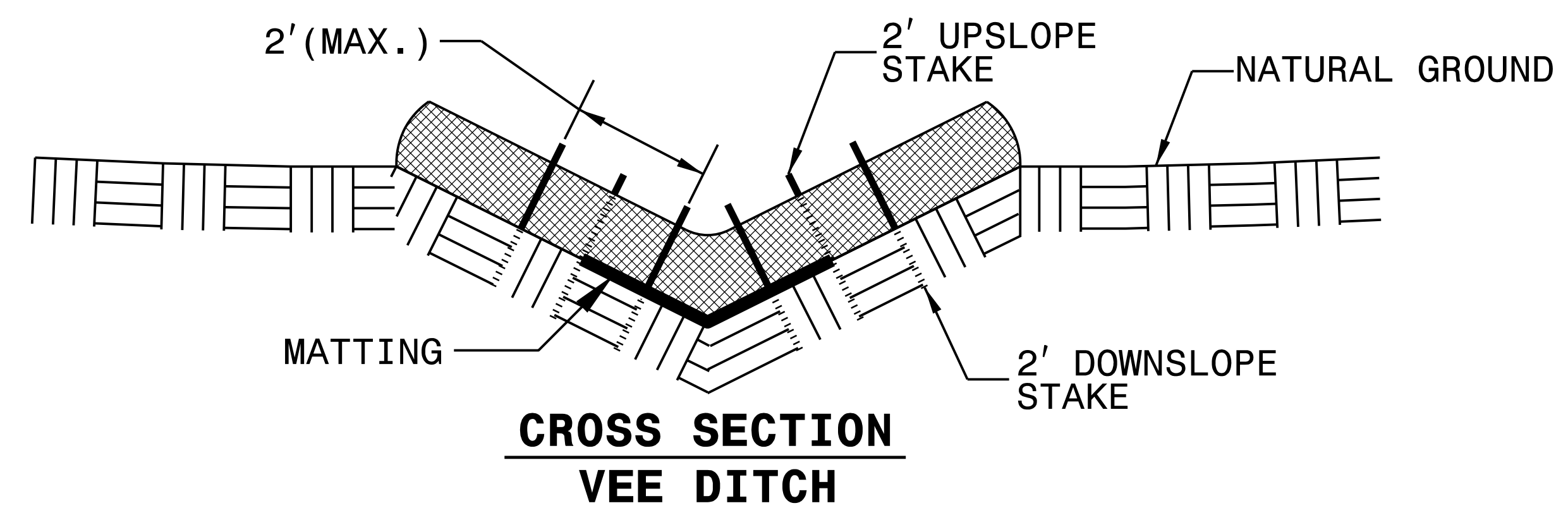
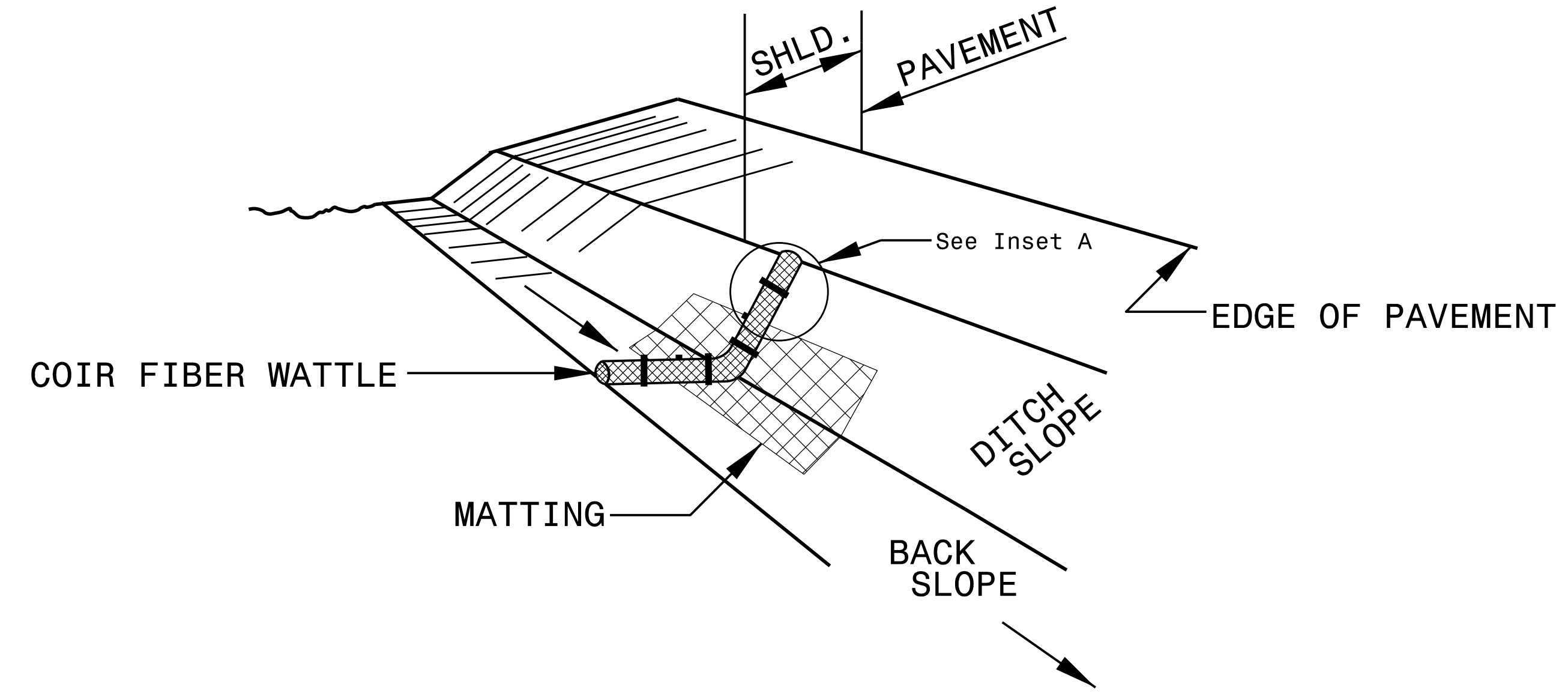
NOT TO SCALE

5/14/99  
 3:37:47 PM  
 R:\Environment\Design\BR0044.REU.EC02A.dgn

# COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

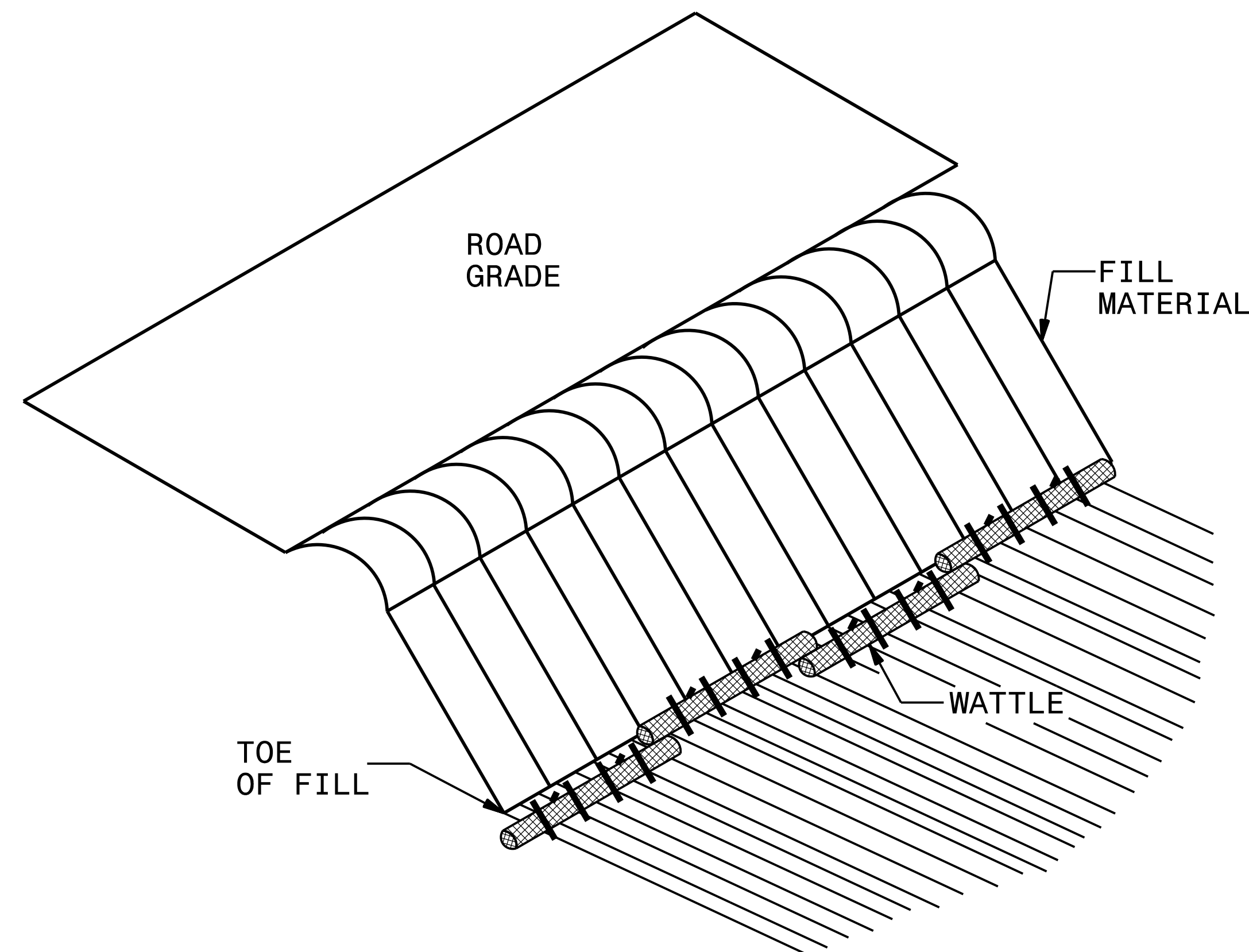
**NOTES:**

- 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 MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

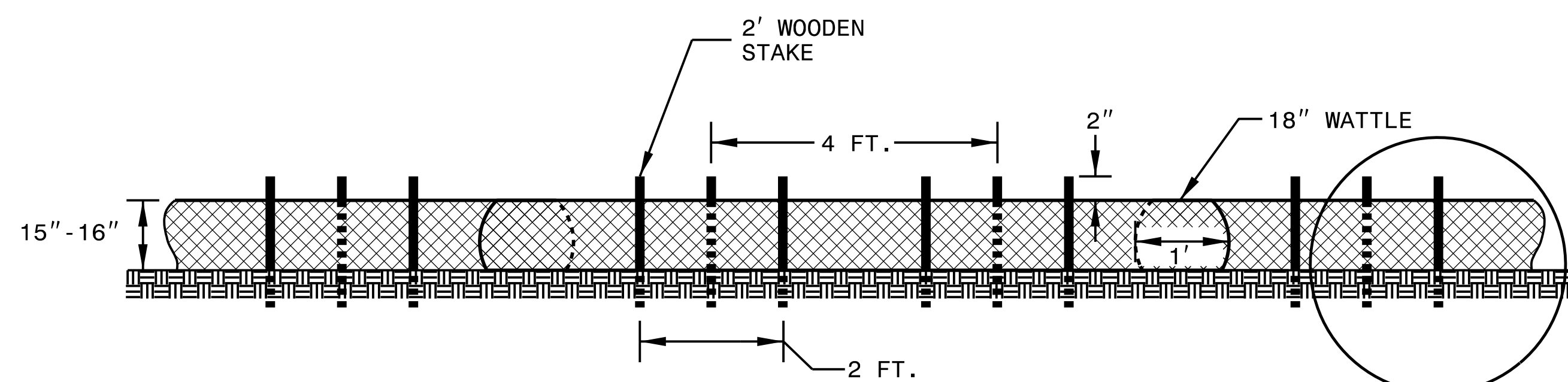


5/14/99  
 3:38:36 PV Design\BR0044.REU.EC02B.dgn  
 R:\Environ\Design\BR0044.REU.EC02B.dgn

# WATTLE BARRIER DETAIL



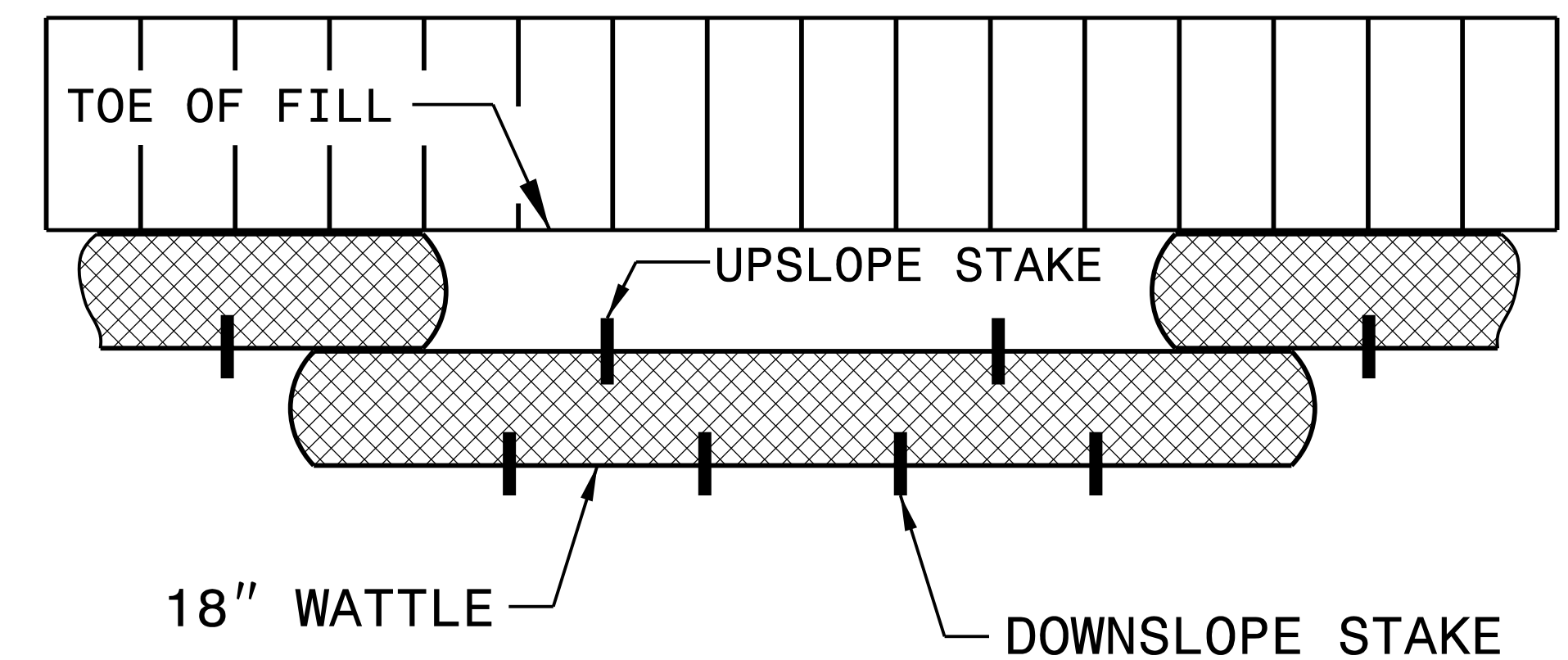
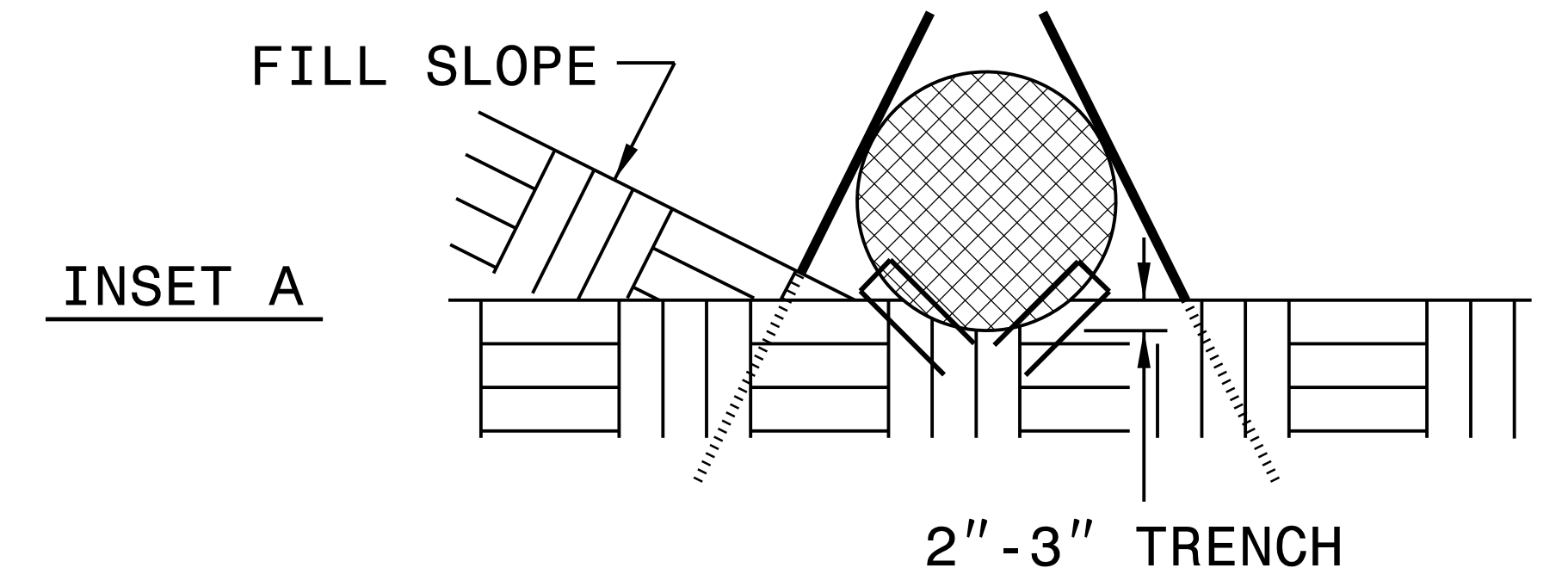
**ISOMETRIC VIEW**



**FRONT VIEW**

**NOTES:**

- USE MINIMUM 18 IN. NOMINAL DIAMETER EXCELSIOR 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**

5/14/99  
 3:39:26 PM  
 R:\Environment\Design\BR0044\_REU\_EC02C.dgn



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

---



---

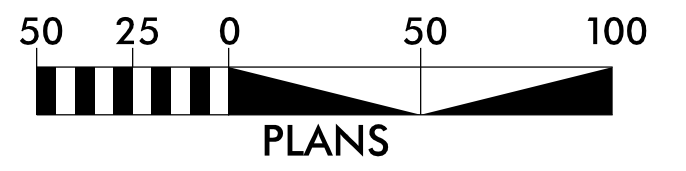
# *SOIL STABILIZATION TIMEFRAMES*

<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.

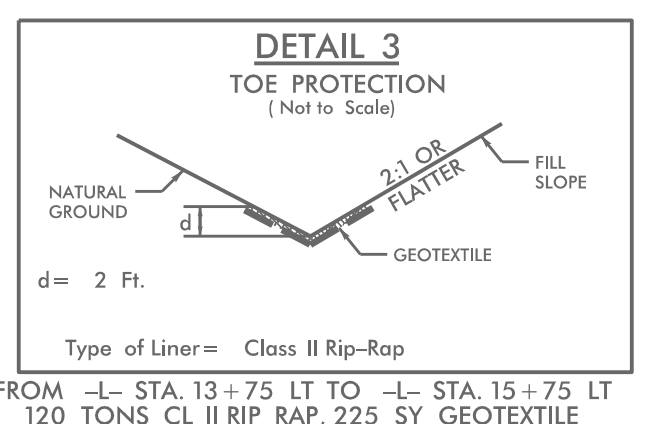
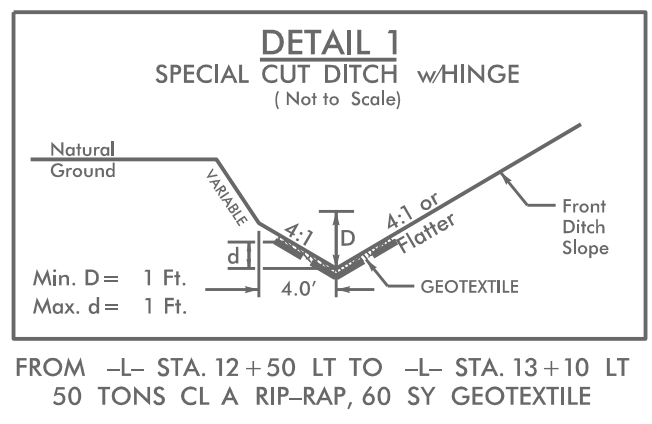
5/14/99

R:\Environment\BR0044\Design\BR0044\_REU\_EC03A.dgn  
3/01/22 PM  
Remig



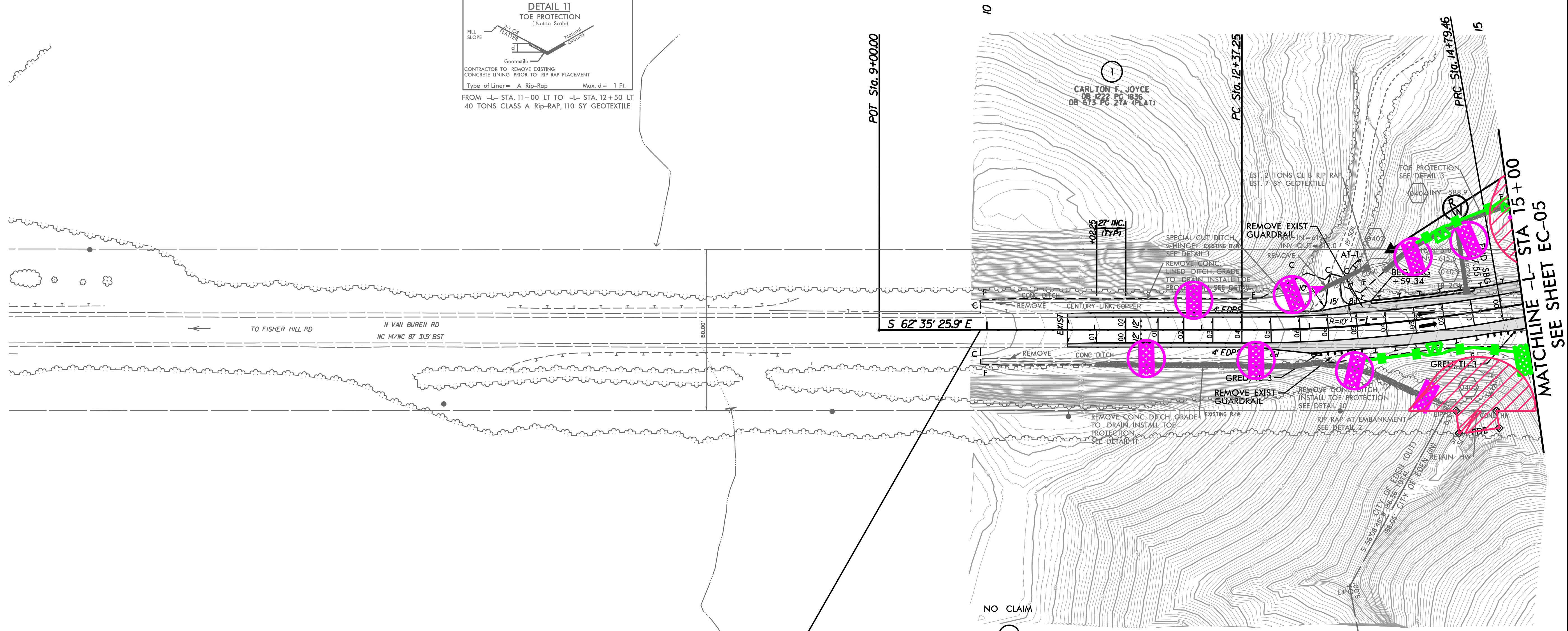
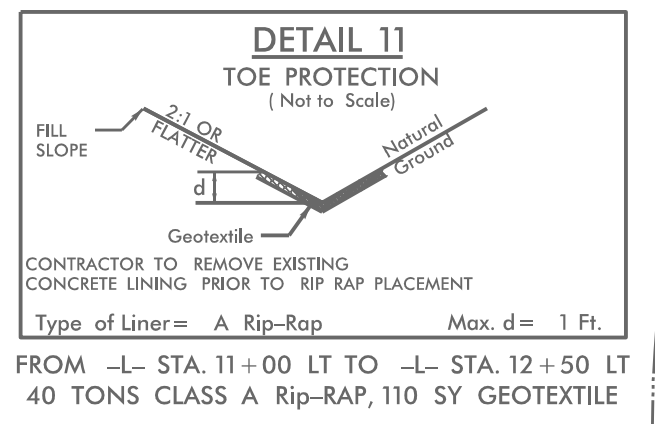


 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

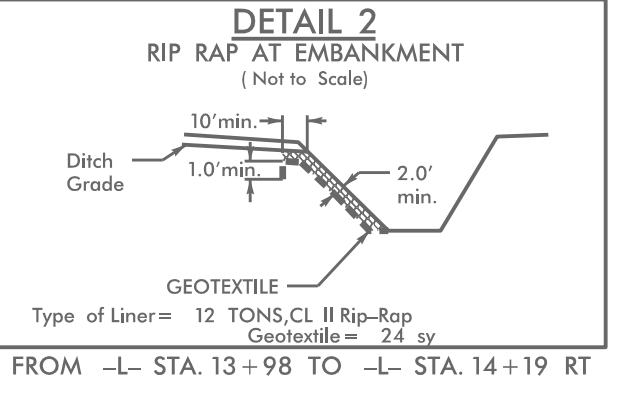
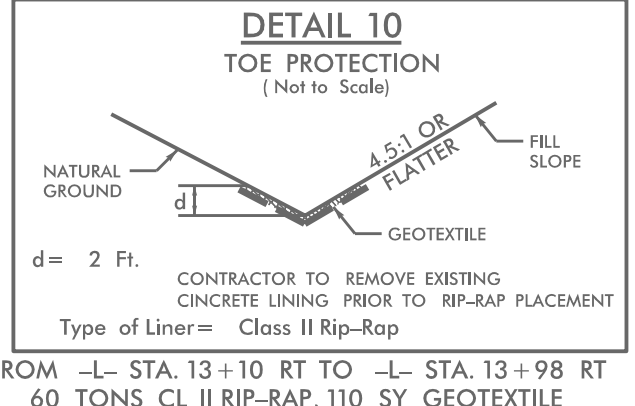
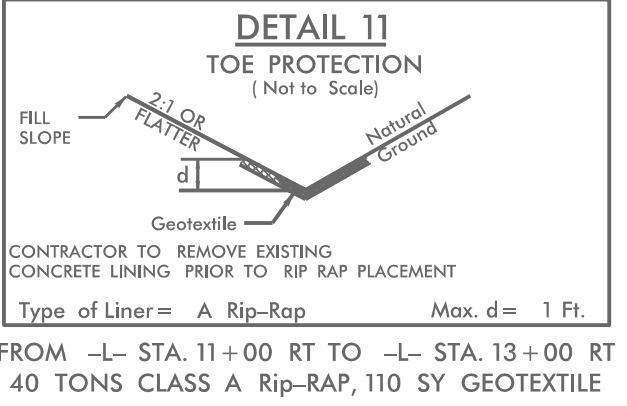


**NOTE:** PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 04

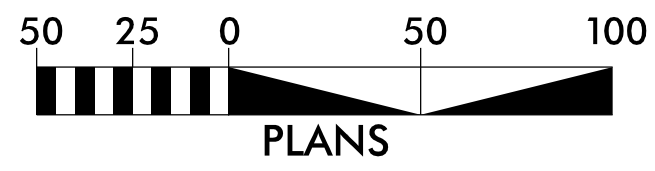


**BEGIN TIP PROJECT BR-0044**  
-L- STA. 9+94.00

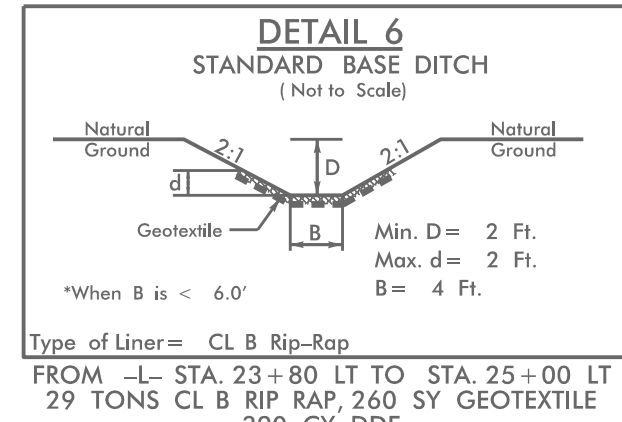
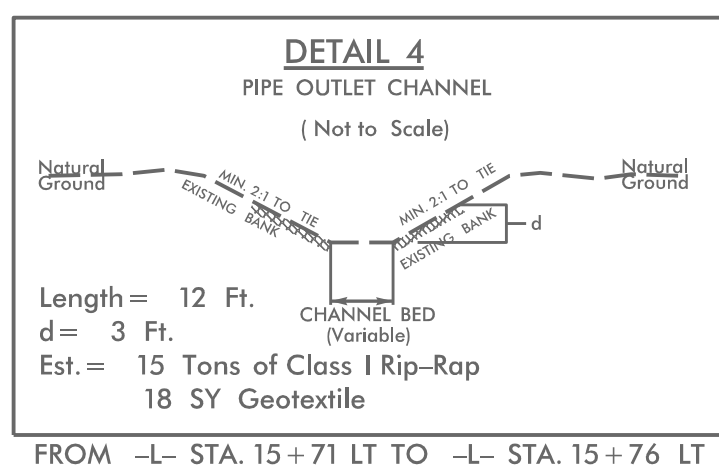


FOR -L- PROFILE SEE SHEET 7

5/14/2011  
2:49:44 PM  
R:\Enviro\Projects\BR0044\_rev\_EC04.dgn

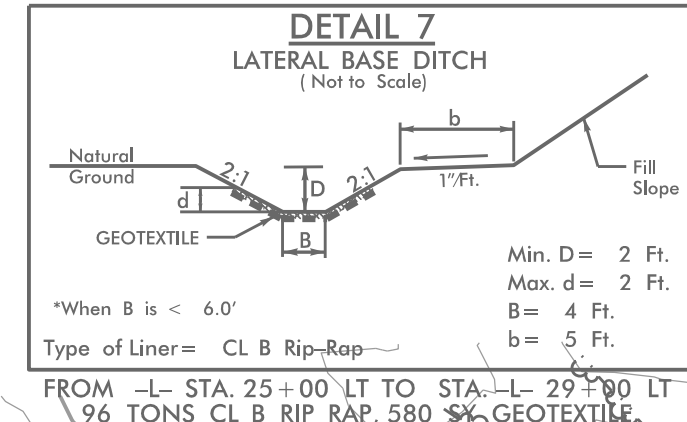


**NOTE:**  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



**ENVIRONMENTALLY SENSITIVE AREA**  
SEE PROJECT SPECIAL PROVISIONS

**CLEARING AND GRUBBING**  
EROSION CONTROL FOR CONSTRUCTION SHEET 05



**60' x 30' x 3'**  
1.5 inch Skimmer  
with 1.250 inch  
Orifice Diameter  
6 ft. weir  
ID 5.1

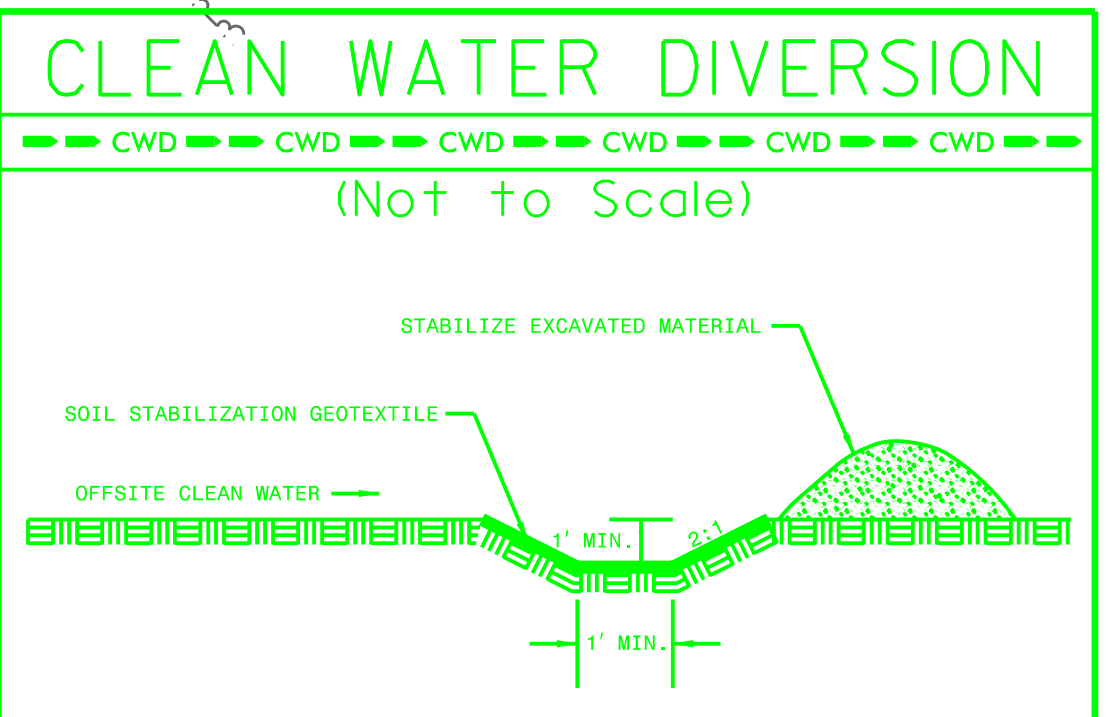
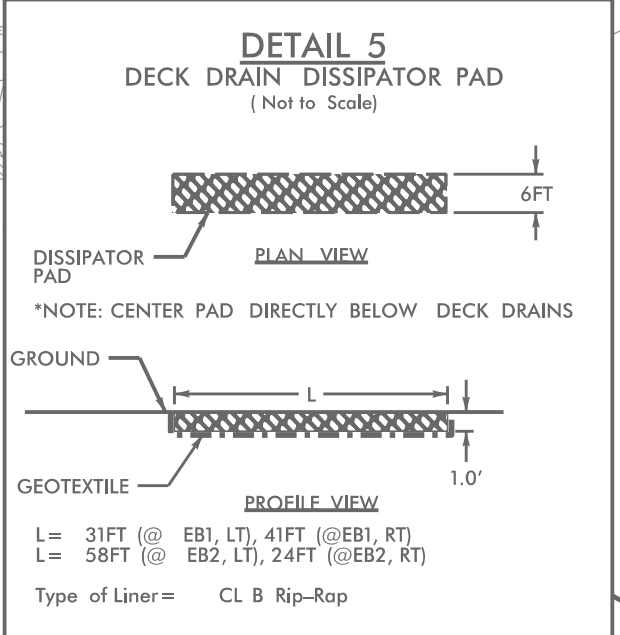
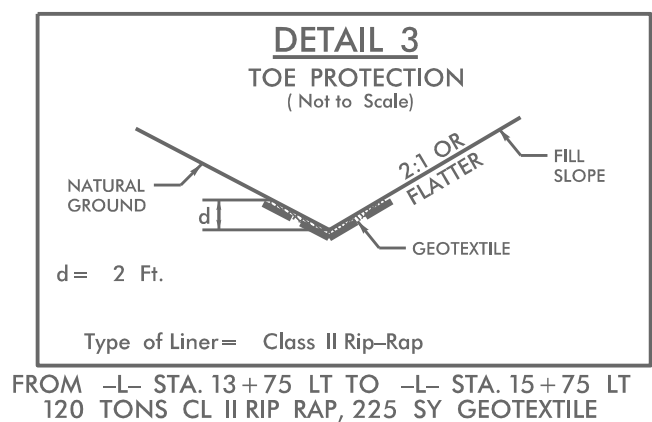
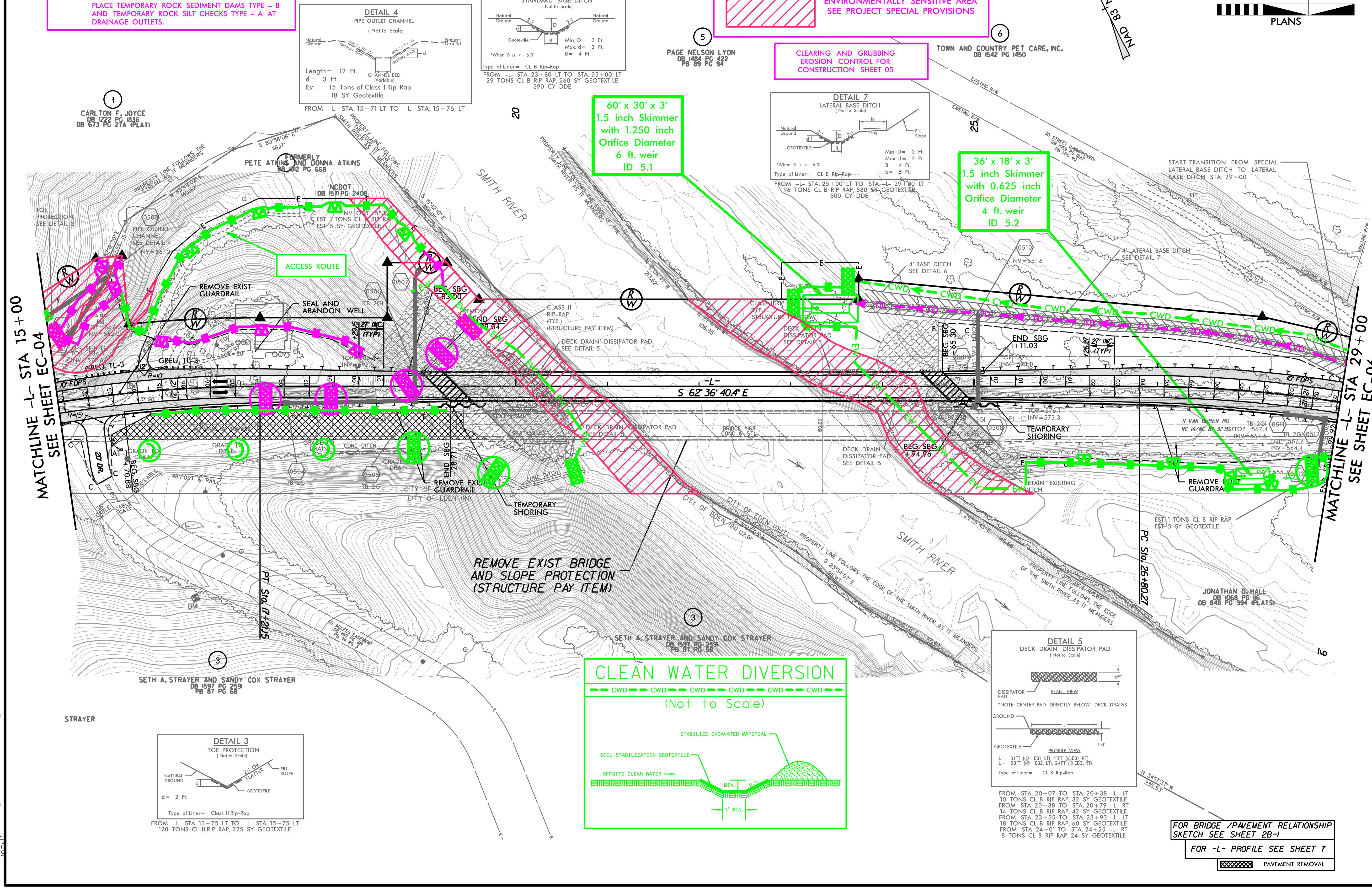
**36' x 18' x 3'**  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
4 ft. weir  
ID 5.2

MATCHLINE -L- STA 15+00  
SEE SHEET EC-04

MATCHLINE -L- STA 29+00  
SEE SHEET EC-06

2:50:49 PX Design\BR0044\_rev\_EC05.dgn

5/14/99



FROM STA. 20+07 TO STA. 20+38 -L- LT  
10 TONS CL B RIP RAP, 32 SY GEOTEXTILE  
FROM STA. 20+38 TO STA. 20+79 -L- RT  
14 TONS CL B RIP RAP, 42 SY GEOTEXTILE  
FROM STA. 23+35 TO STA. 23+93 -L- LT  
18 TONS CL B RIP RAP, 60 SY GEOTEXTILE  
FROM STA. 24+01 TO STA. 24+25 -L- RT  
8 TONS CL B RIP RAP, 24 SY GEOTEXTILE

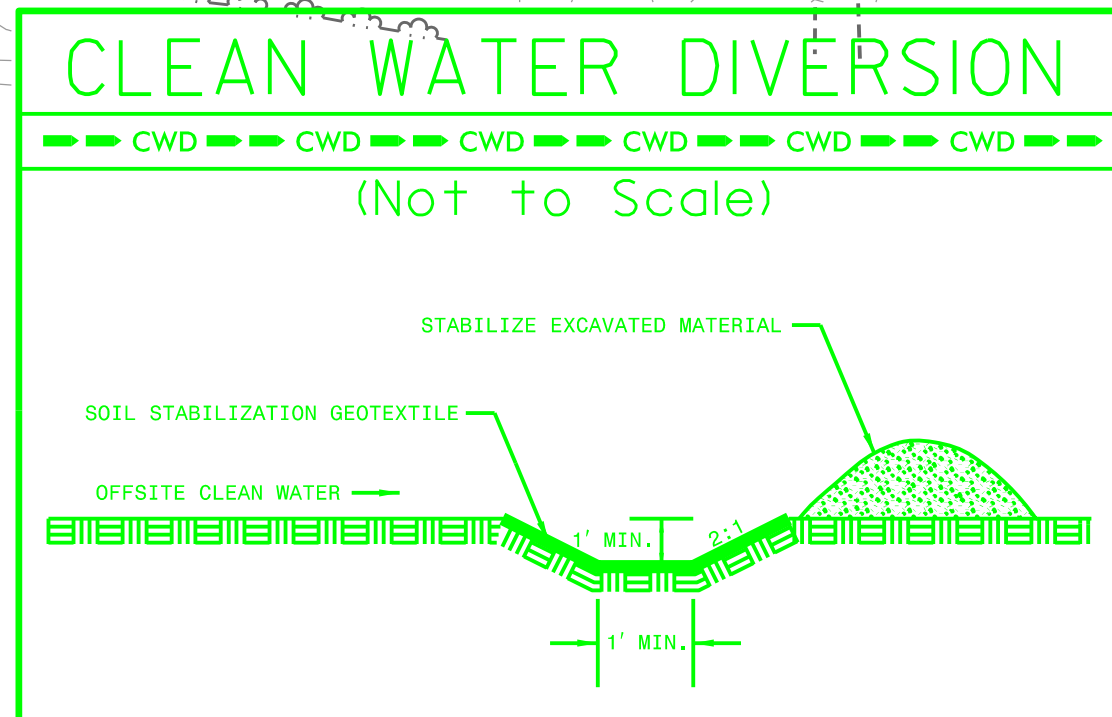
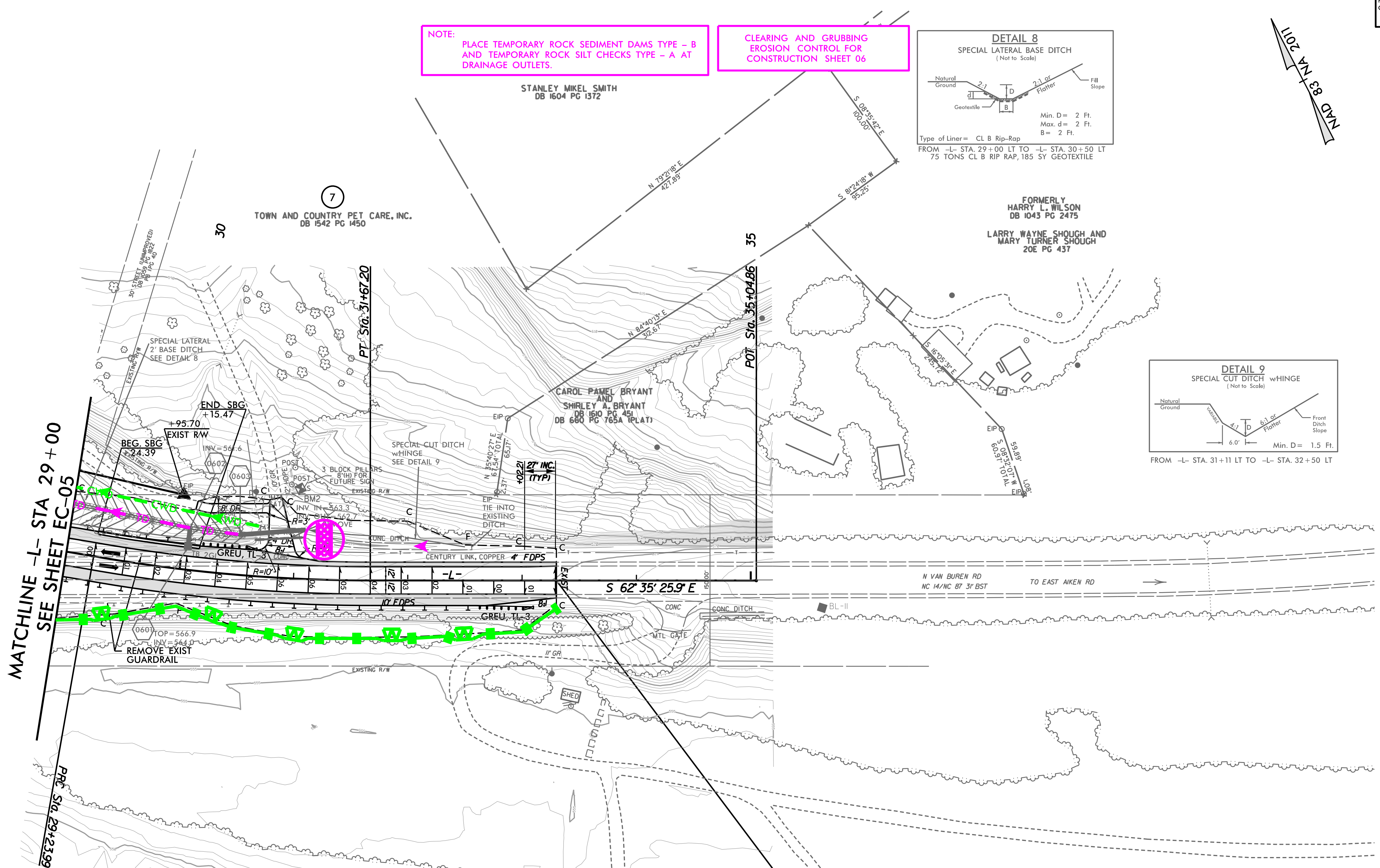
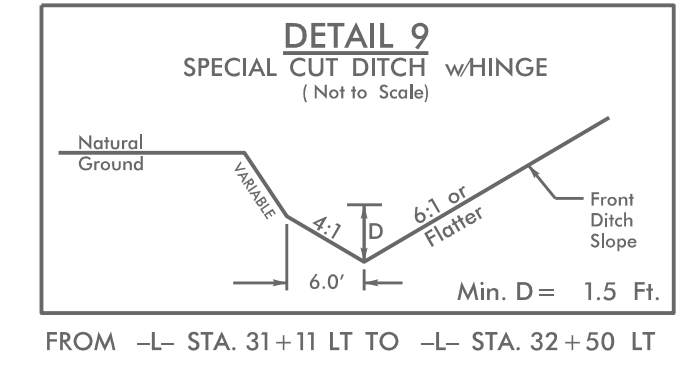
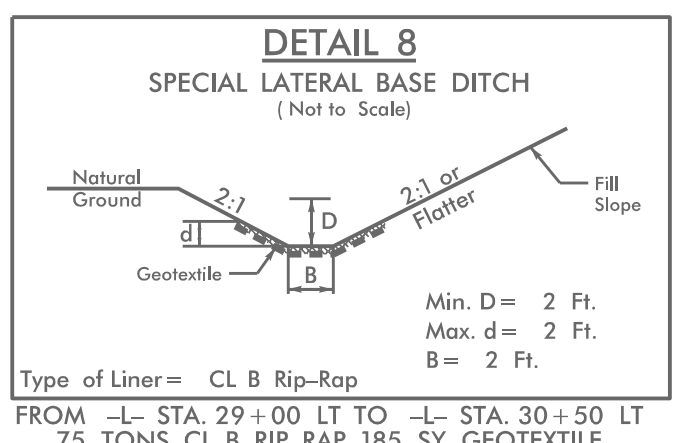
FOR BRIDGE /PAVEMENT RELATIONSHIP  
SKETCH SEE SHEET 2B-1  
FOR -L- PROFILE SEE SHEET 7

PAVEMENT REMOVAL



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

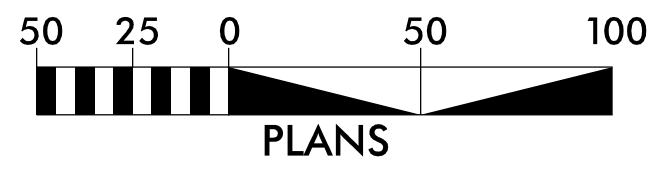
**CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 06**



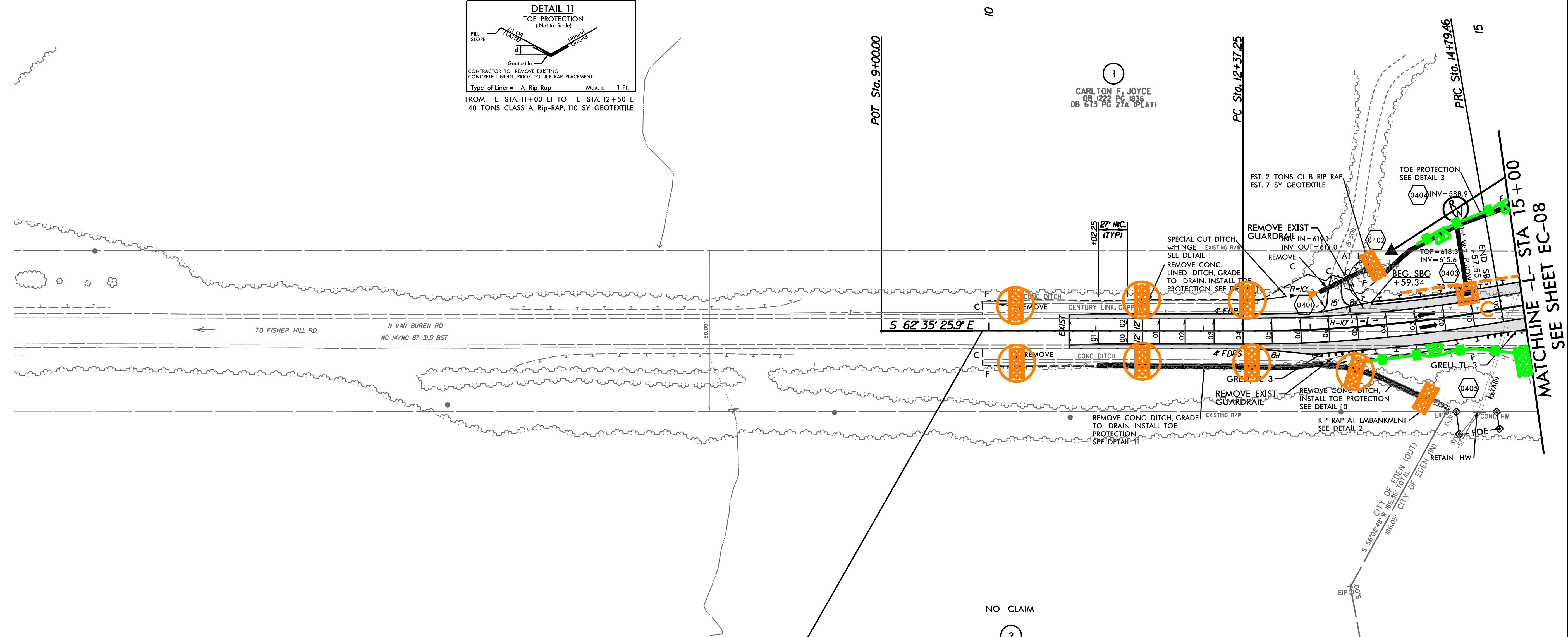
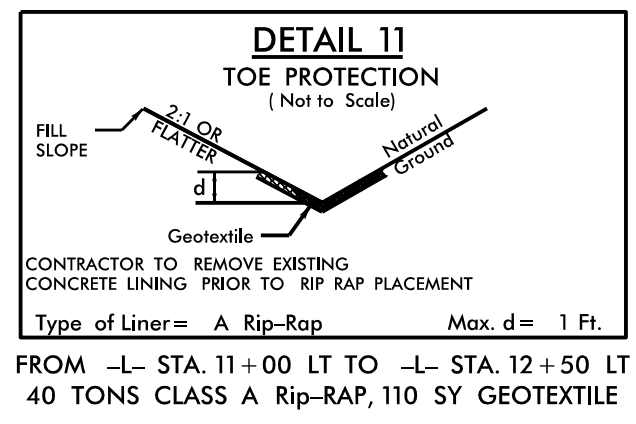
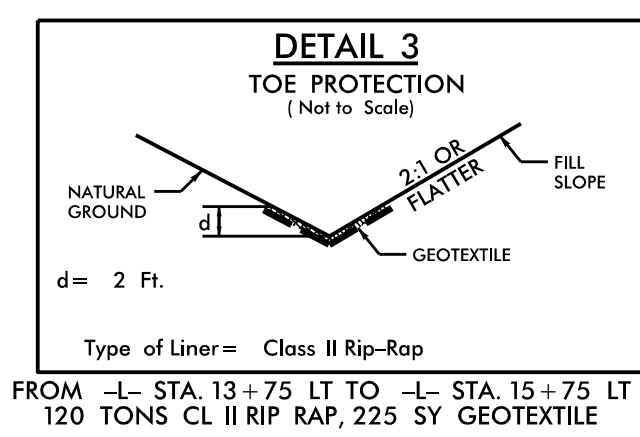
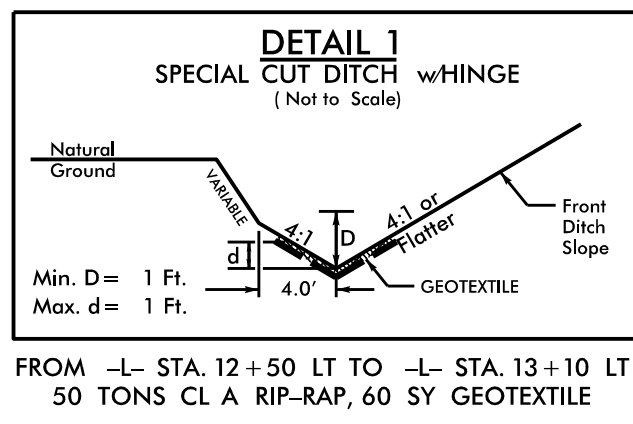
END TIP PROJECT BR-0044  
-L- STA. 33+30.00

FOR -L- PROFILE SEE SHEET 8

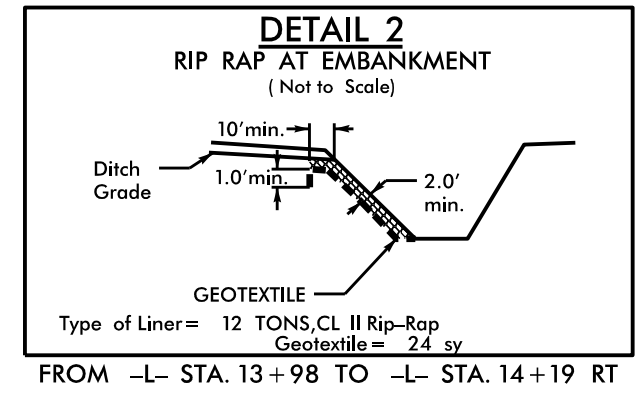
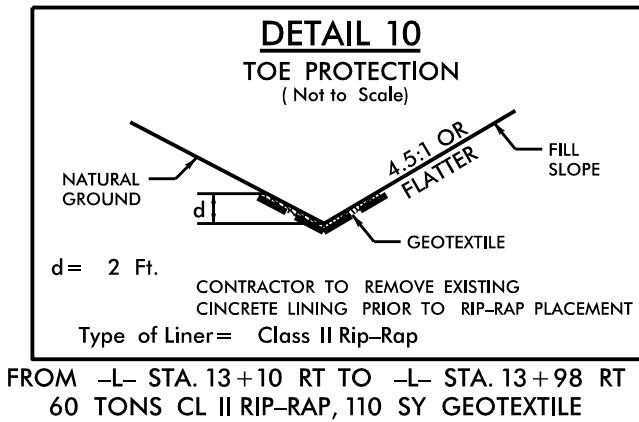
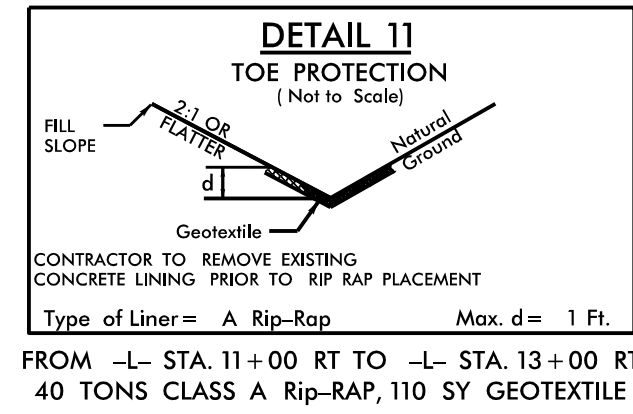
5/14/99  
 R:\Enviro\Projects\BR0044\Design\BR0044\_rev\_EC06.dgn  
 2:51:55 PM  
 JONATHAN D. HALL DB 1068 PG 116 DB 848 PG 994 (PLATS)



Place Matting for Erosion Control  
on Slope as Work Allows.  
-L- Sta. 14+00 to Sta. 15+50 LT

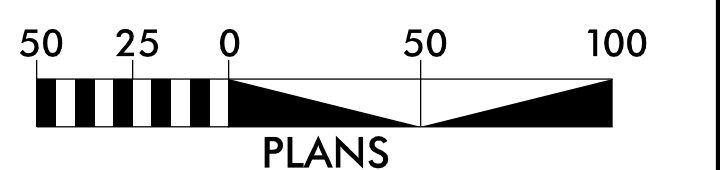


**BEGIN TIP PROJECT BR-0044**  
-L- STA. 9+94.00

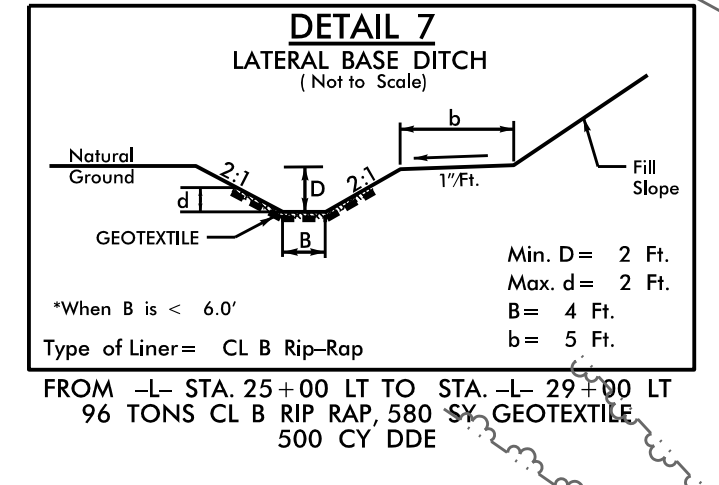
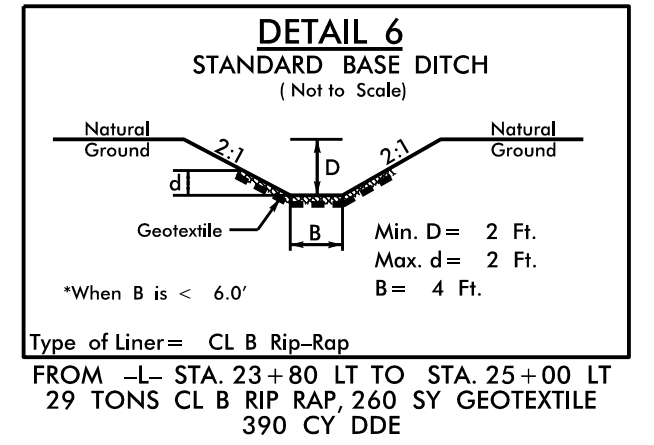
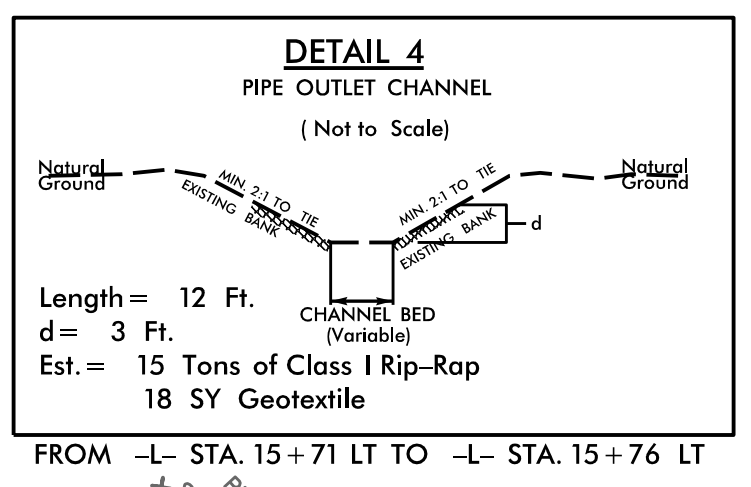


FOR -L- PROFILE SEE SHEET 7

5/14/2011  
2:52:59 PM  
R:\Enviromental\Design\BR0044\_rev-EC07.dgn

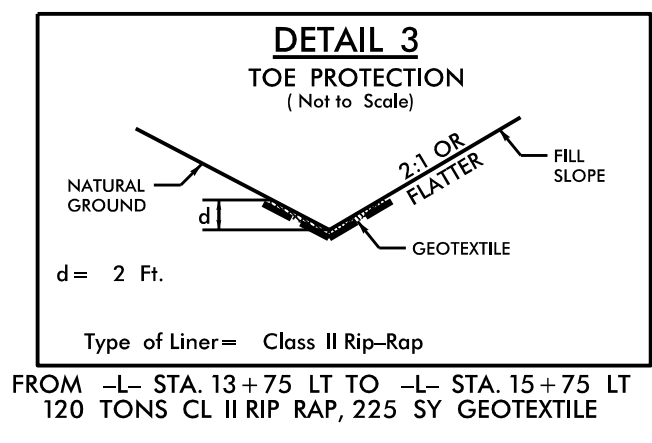
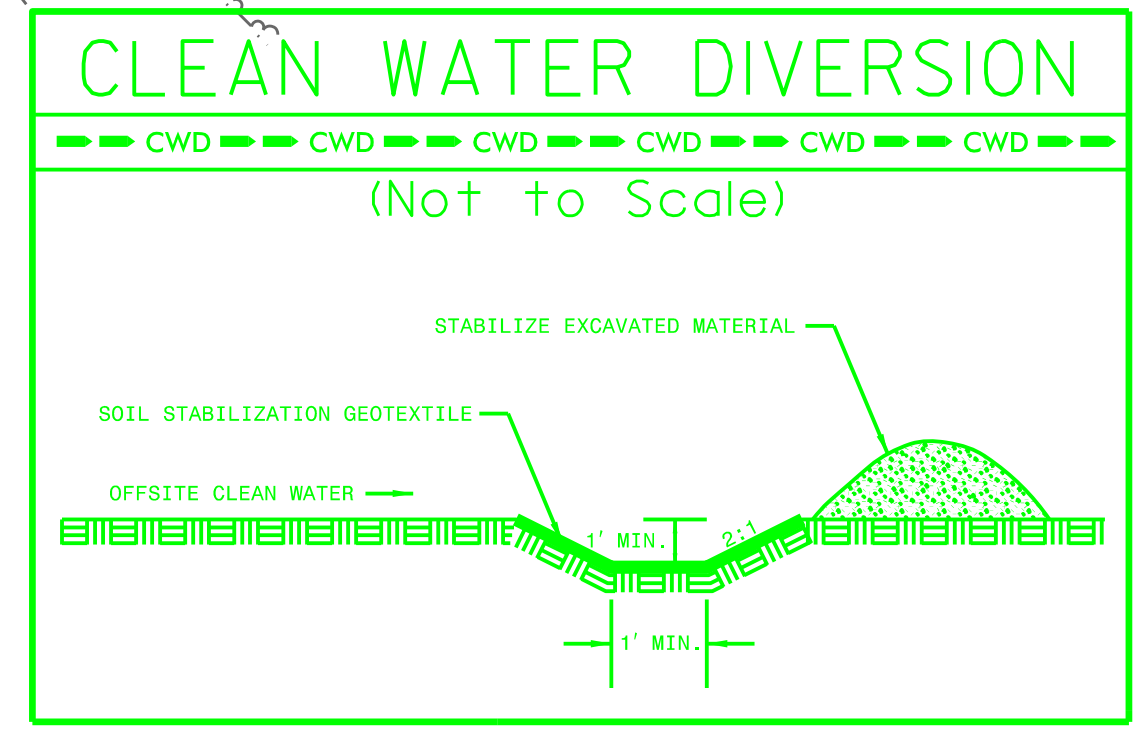
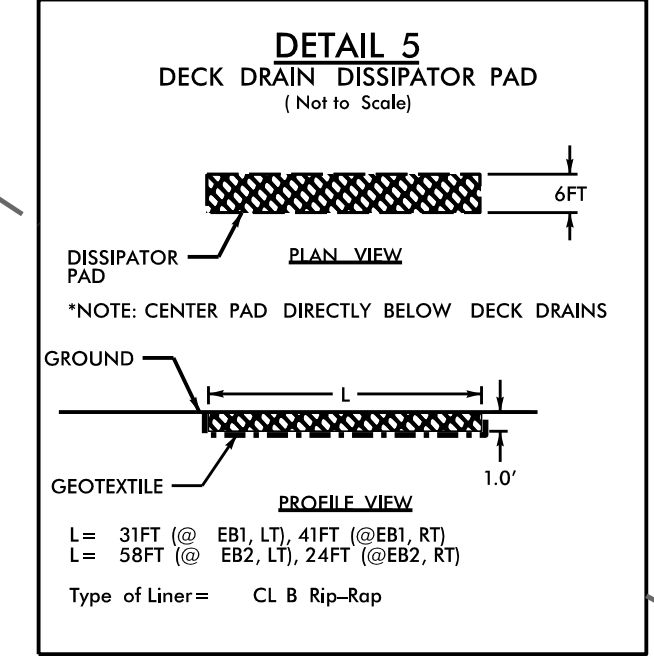


Place Matting for Erosion Control on Slope as Work Allows.  
-L- Sta. 25+00 to Sta. 28+80 LT



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

60' x 30' x 3'  
1.5 inch Skimmer  
with 1.250 inch  
Orifice Diameter  
6 ft. weir  
ID 5.1



MATCHLINE -L- STA 15+00  
SEE SHEET EC-07

MATCHLINE -L- STA 29+00  
SEE SHEET EC-09

REMOVE EXIST BRIDGE  
AND SLOPE PROTECTION  
(STRUCTURE PAY ITEM)

5/14/2019  
R:\Enviromental\Design\BR0044\_rev\_EC08.dgn

1  
CARLTON F. JOYCE  
DB 1222 PG 1836  
DB 675 PG 27A (PLAT)

FORMERLY  
PETE ATKINS AND DONNA ATKINS  
DB 1012 PG 668

NCDOT  
DB 1571 PG 2408

5  
PAGE NELSON LYON  
DB 1484 PG 422  
PB 89 PG 94

6  
TOWN AND COUNTRY PET CARE, INC.  
DB 1542 PG 1450

JONATHAN D. HALL  
DB 1068 PG 16  
DB 648 PG 95A (PLAT)

3  
SETH A. STRAYER AND SANDY COX STRAYER  
DB 1597 PG 2591  
PB 87 PG 68

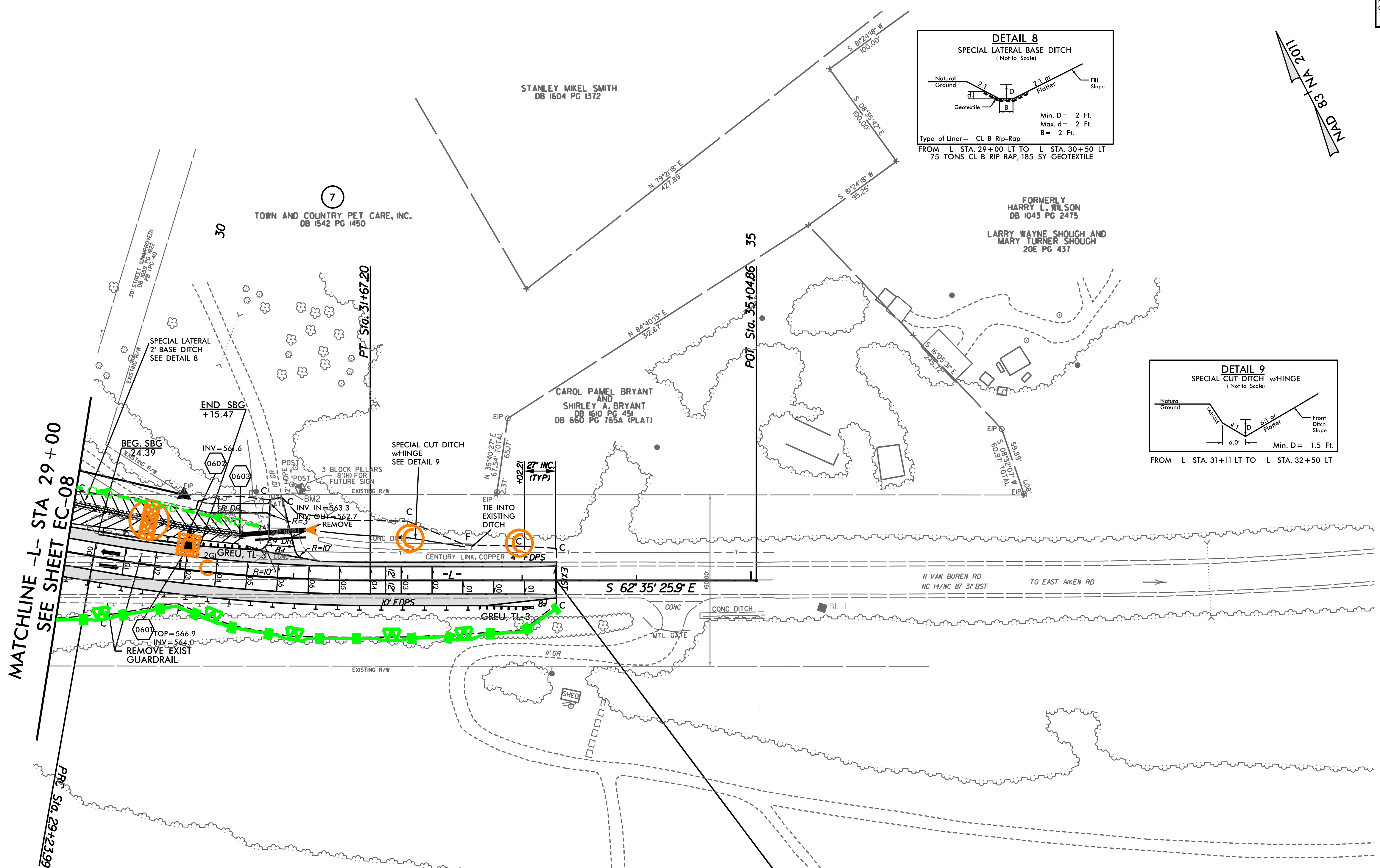
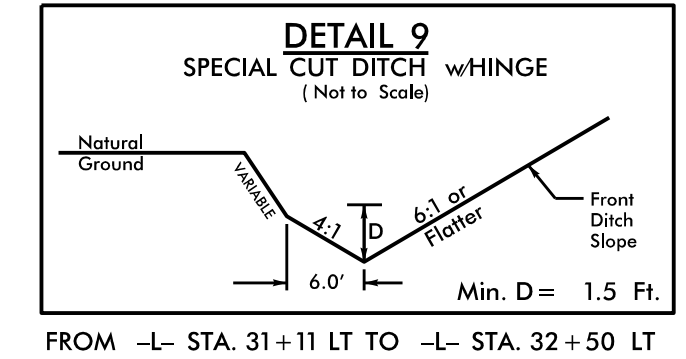
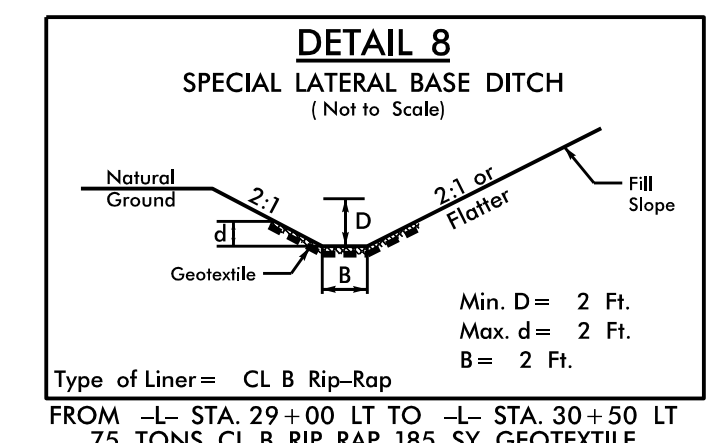
3  
SETH A. STRAYER AND SANDY COX STRAYER  
DB 1597 PG 2591  
PB 87 PG 68

STRAYER

FOR BRIDGE /PAVEMENT RELATIONSHIP  
SKETCH SEE SHEET 2B-1

FOR -L- PROFILE SEE SHEET 7

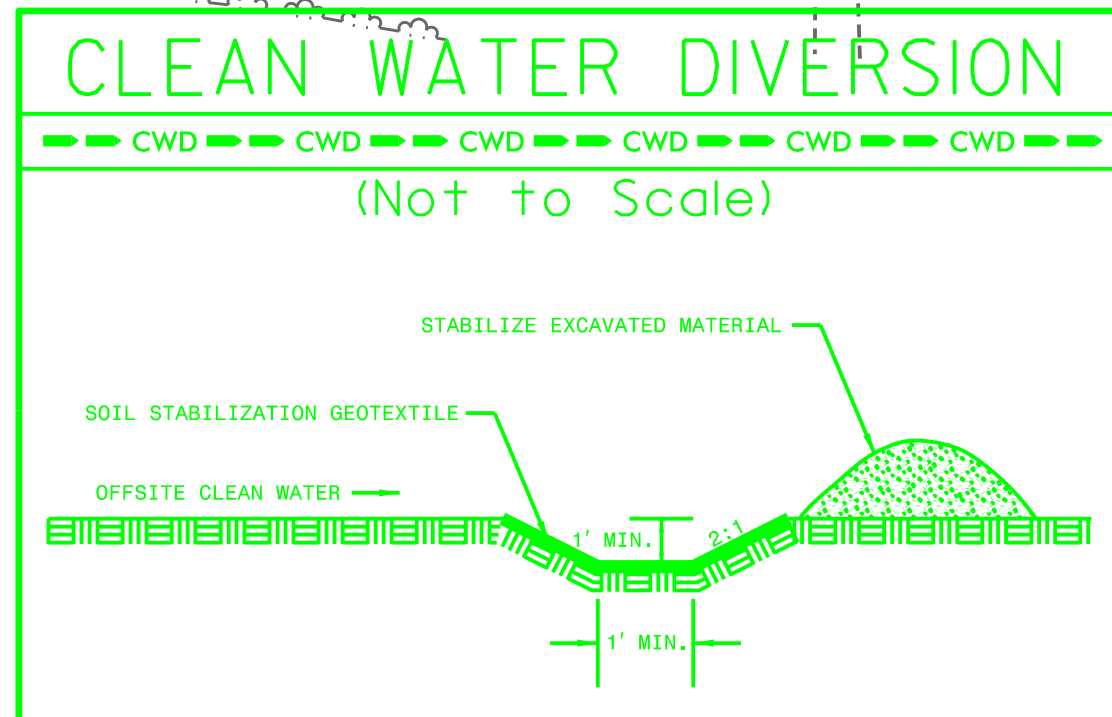
PAVEMENT REMOVAL



MATCHLINE -L- STA 29+00  
SEE SHEET EC-08

PRC Sta. 29+23.99

POT Sta. 30+04.86



END TIP PROJECT BR-0044  
-L- STA. 33+30.00

FOR -L- PROFILE SEE SHEET 8

5/14/99  
  
 R:\Enviro\Projects\BR0044\Design\BR0044\_rev\_EC09.dgn  
 2:55:07 PM  
 R:\Enviro\Projects\BR0044\Design\BR0044\_rev\_EC09.dgn