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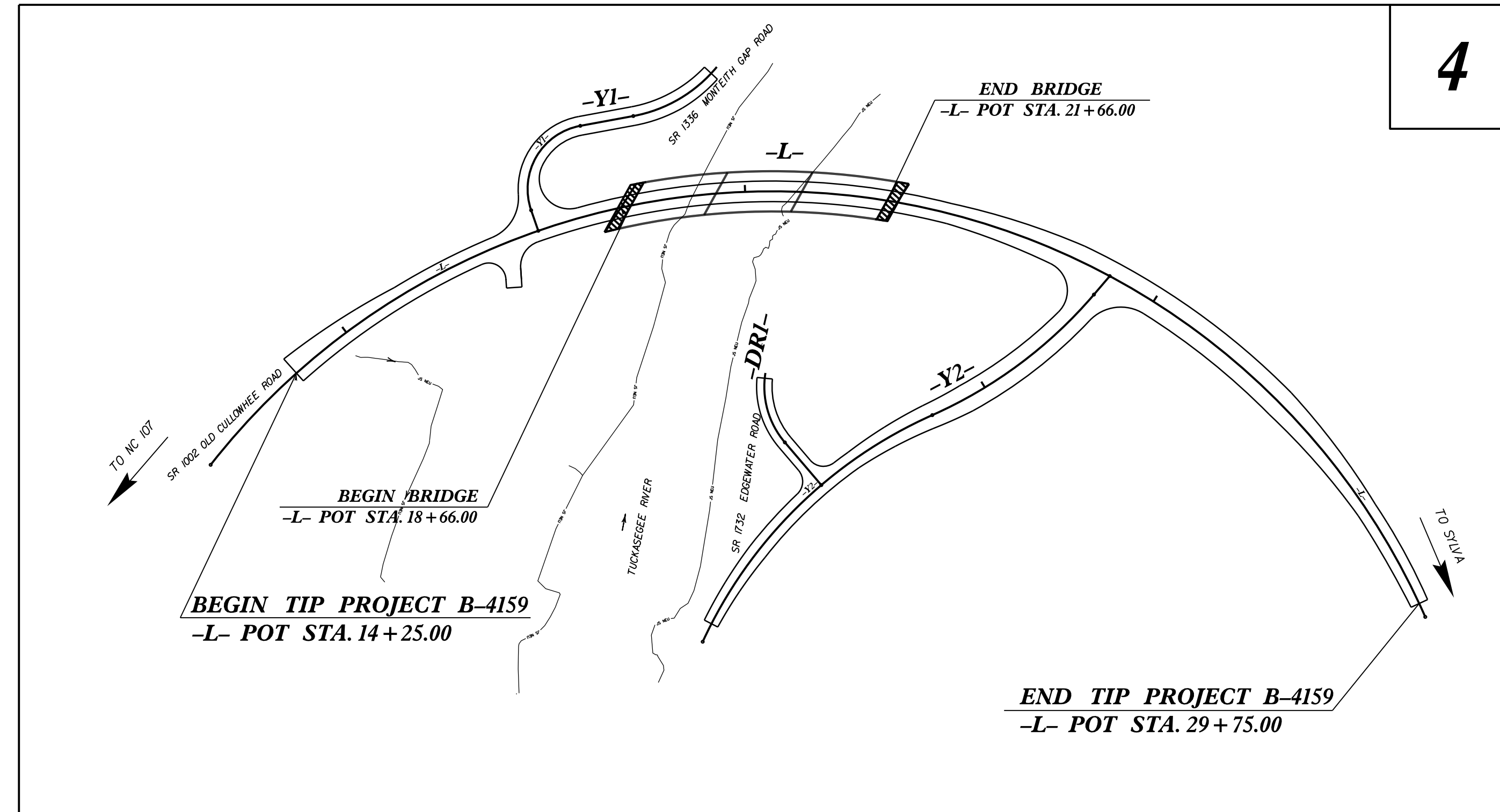
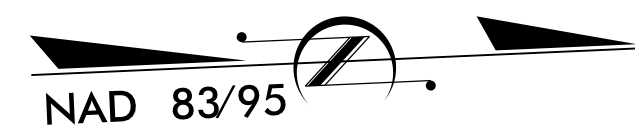
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TIP PROJECT: B-4159

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

**LOCATION: BRIDGE NO. 108 OVER THE TUCKASEGEE RIVER
ON SR 1002 (OLD CULLOWHEE RD.)**
**TYPE OF WORK: GRADING, PAVING, DRAINAGE,
SIGNALS AND STRUCTURE**



4

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4159	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

EROSION AND SEDIMENT CONTROL MEASURES

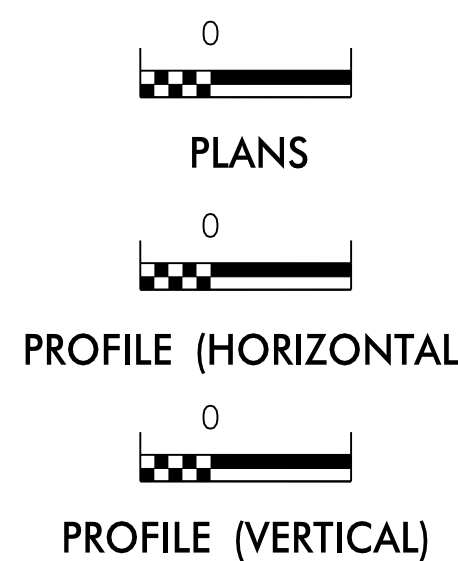
Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with 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	

**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



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:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611
2012 STANDARD SPECIFICATIONS

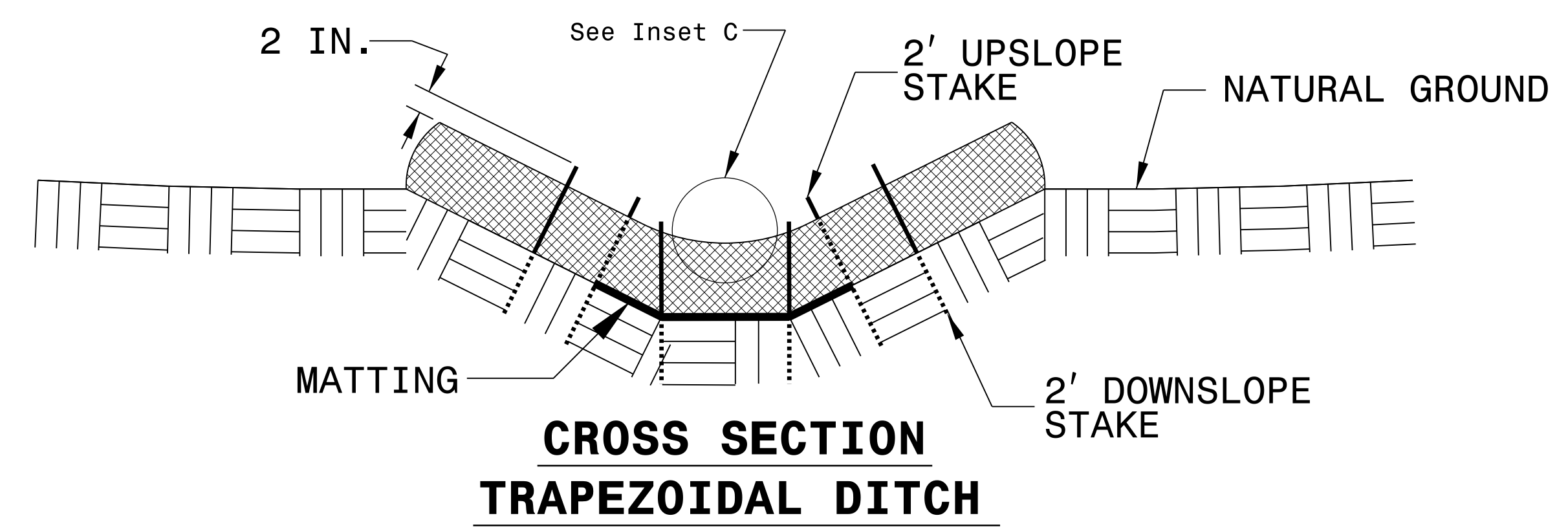
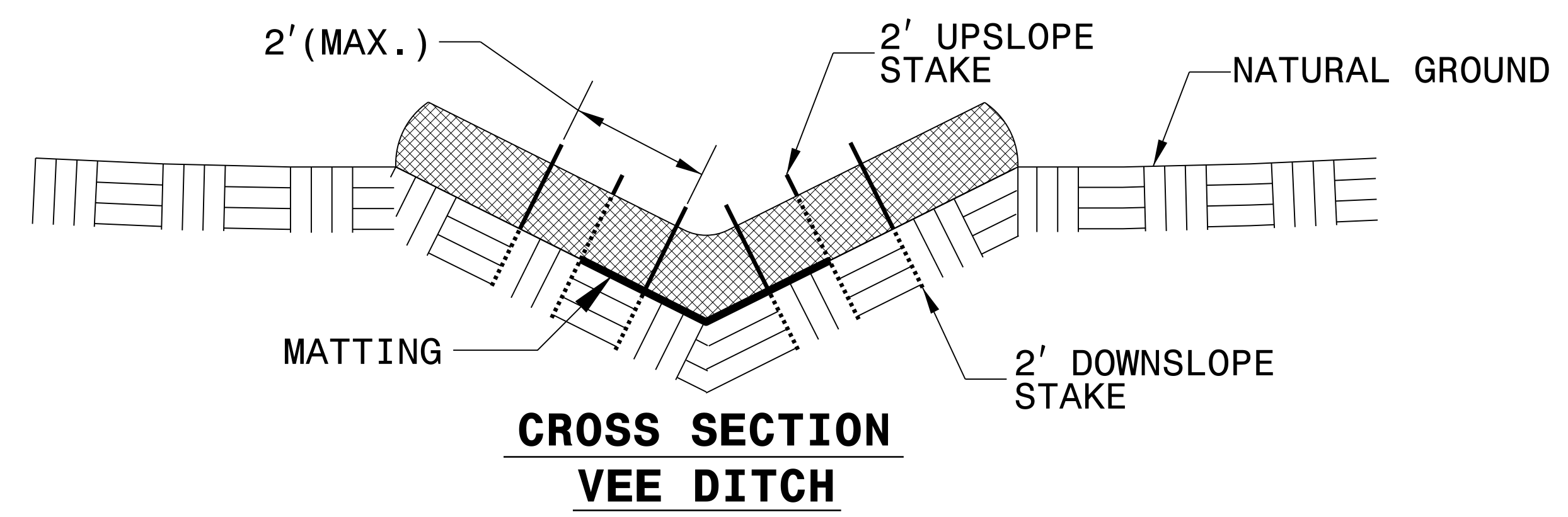
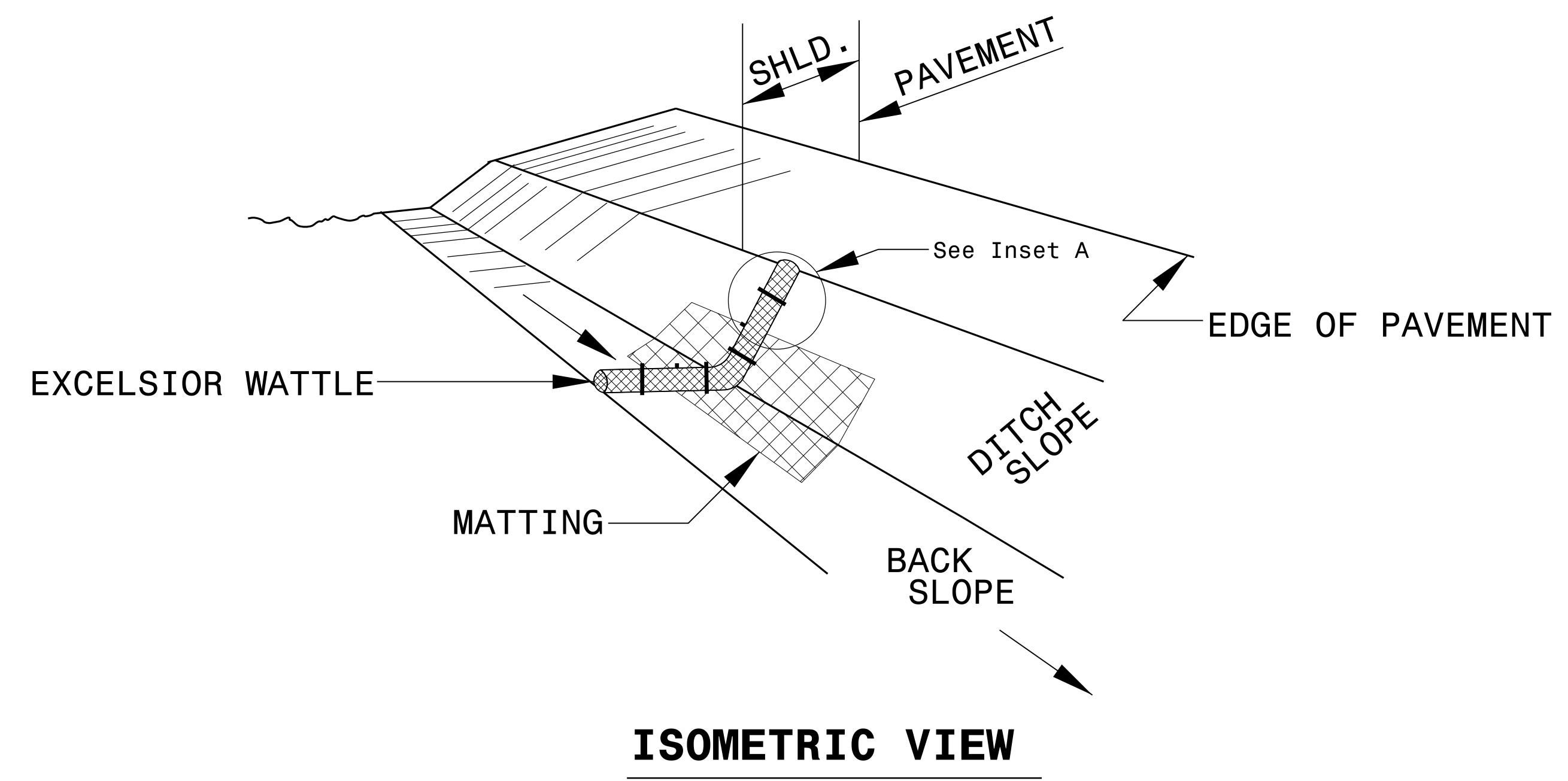
Roadway Standard Drawings

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.

<p>1604.01 Railroad Erosion Control Detail</p> <p>1605.01 Temporary Silt Fence</p> <p>1606.01 Special Sediment Control Fence</p> <p>1607.01 Gravel Construction Entrance</p> <p>1622.01 Temporary Berms and Slope Drains</p> <p>1630.01 Riser Basin</p> <p>1630.02 Silt Basin Type B</p> <p>1630.03 Temporary Silt Ditch</p> <p>1630.04 Stilling Basin</p> <p>1630.05 Temporary Diversion</p> <p>1630.06 Special Stilling Basin</p> <p>1631.01 Matting Installation</p>	<p>1632.01 Rock Inlet Sediment Trap Type A</p> <p>1632.02 Rock Inlet Sediment Trap Type B</p> <p>1632.03 Rock Inlet Sediment Trap Type C</p> <p>1633.01 Temporary Rock Silt Check Type A</p> <p>1633.02 Temporary Rock Silt Check Type B</p> <p>1634.01 Temporary Rock Sediment Dam Type A</p> <p>1634.02 Temporary Rock Sediment Dam Type B</p> <p>1635.01 Rock Pipe Inlet Sediment Trap Type A</p> <p>1635.02 Rock Pipe Inlet Sediment Trap Type B</p> <p>1640.01 Coir Fiber Baffle</p> <p>1645.01 Temporary Stream Crossing</p>
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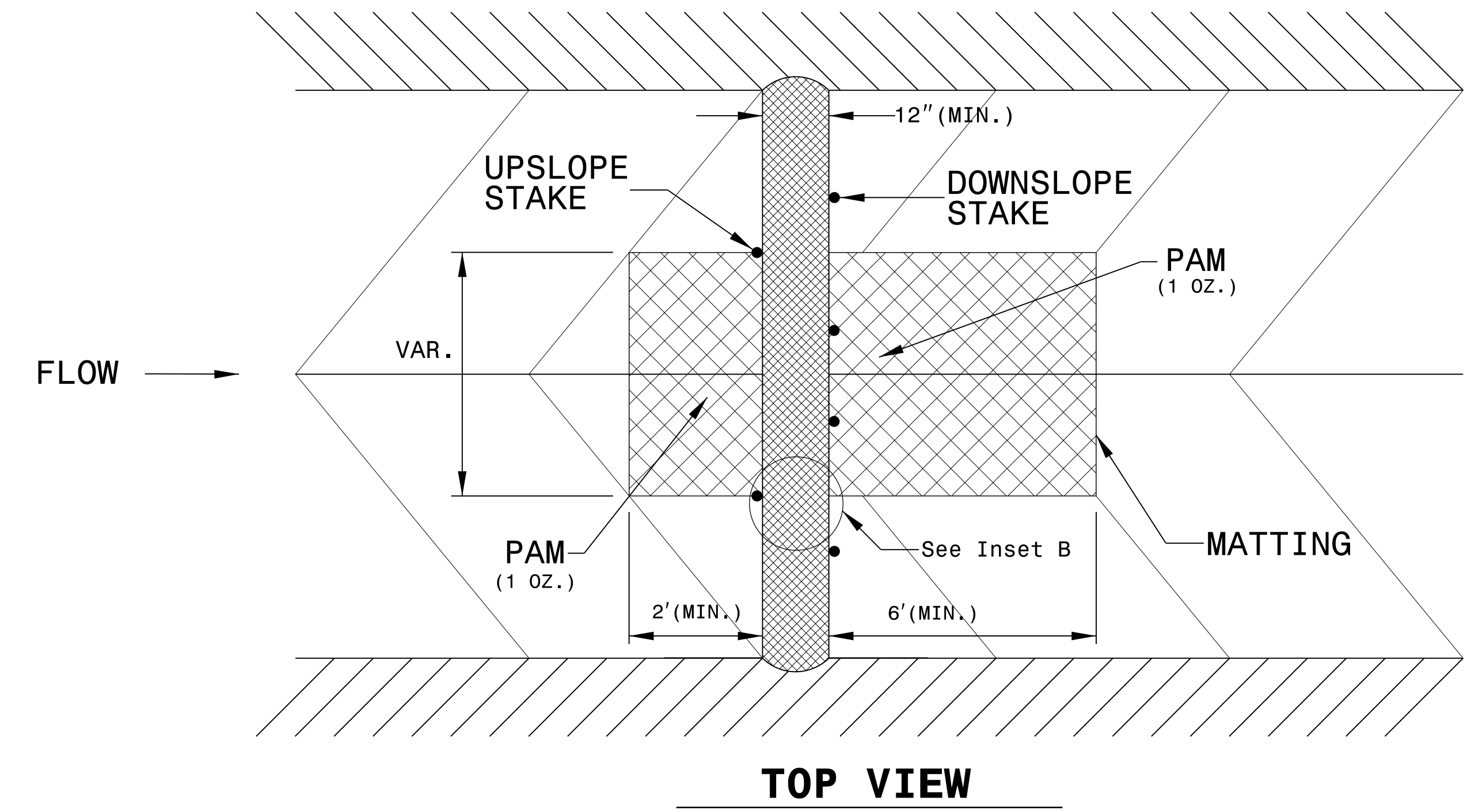
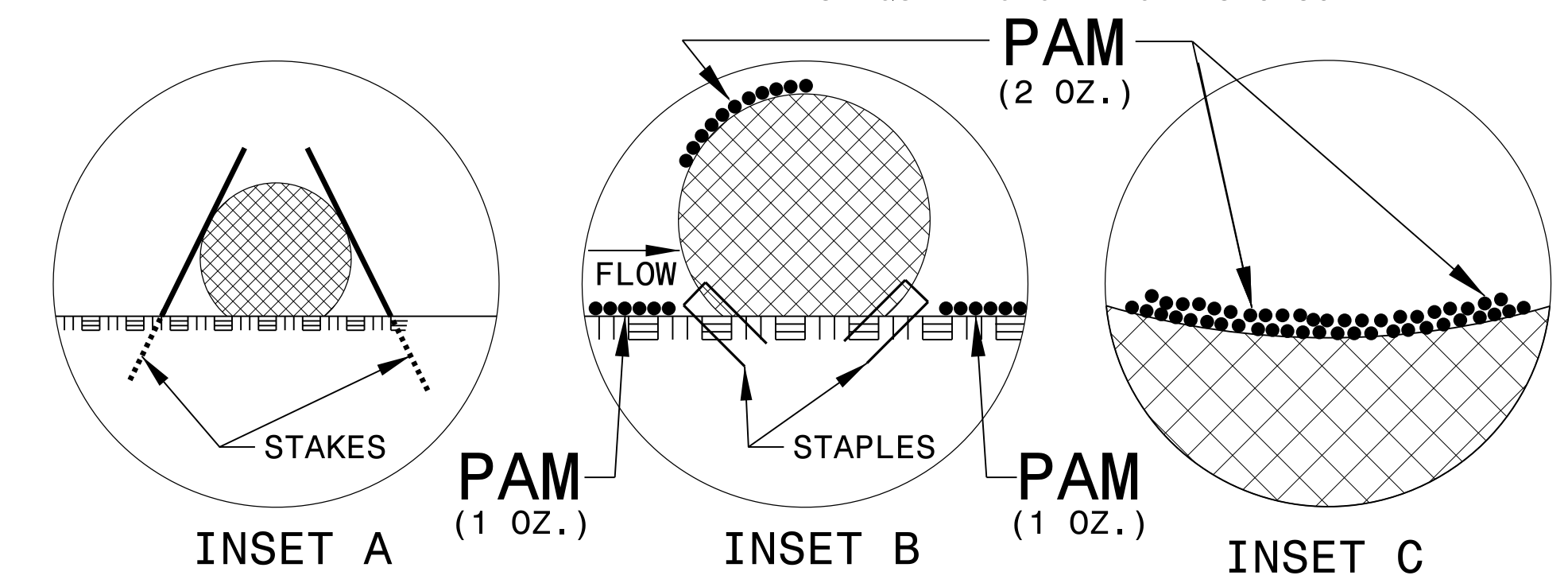
PROJECT REFERENCE NO. B-4159	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



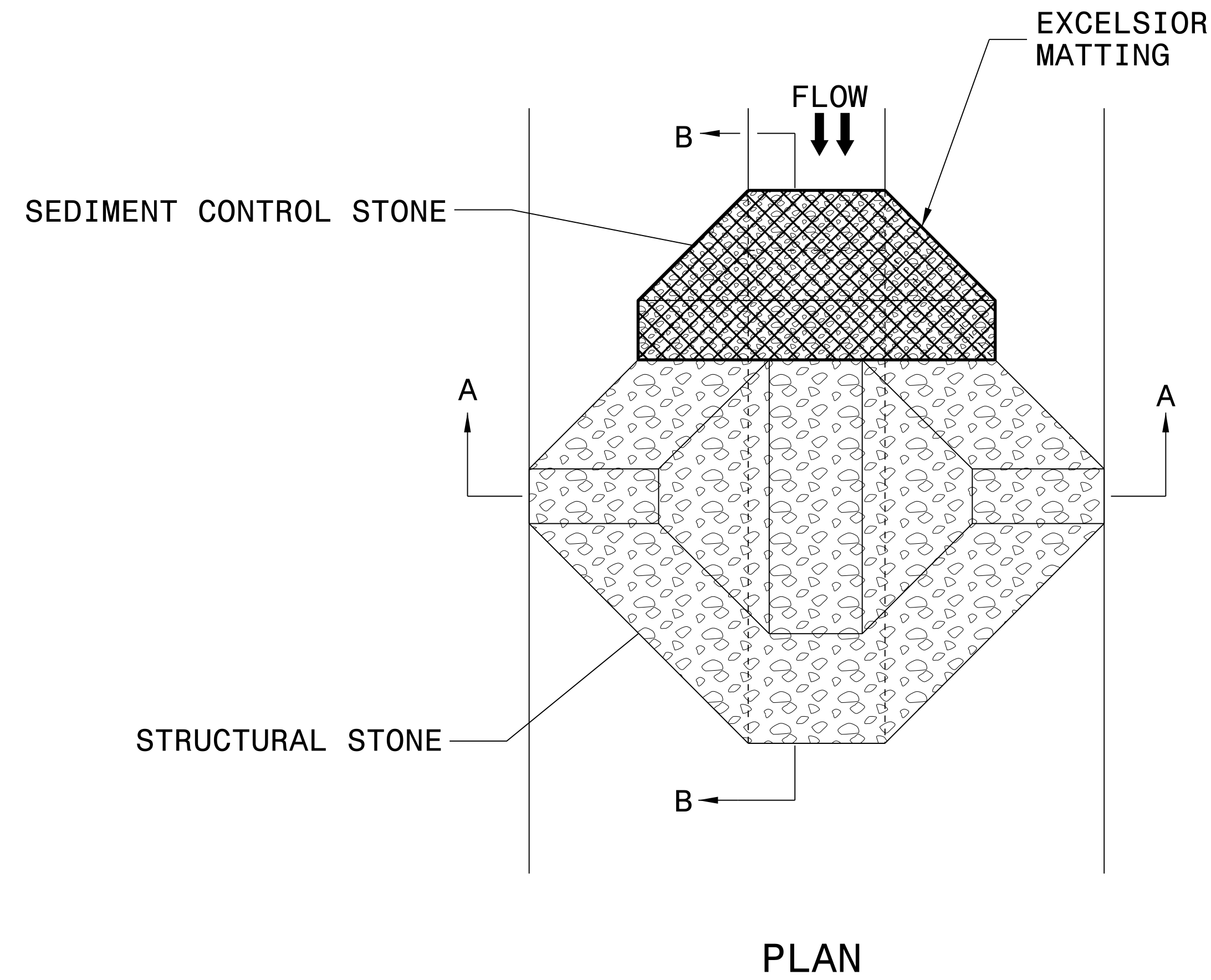
NOTES:

- 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-4159	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



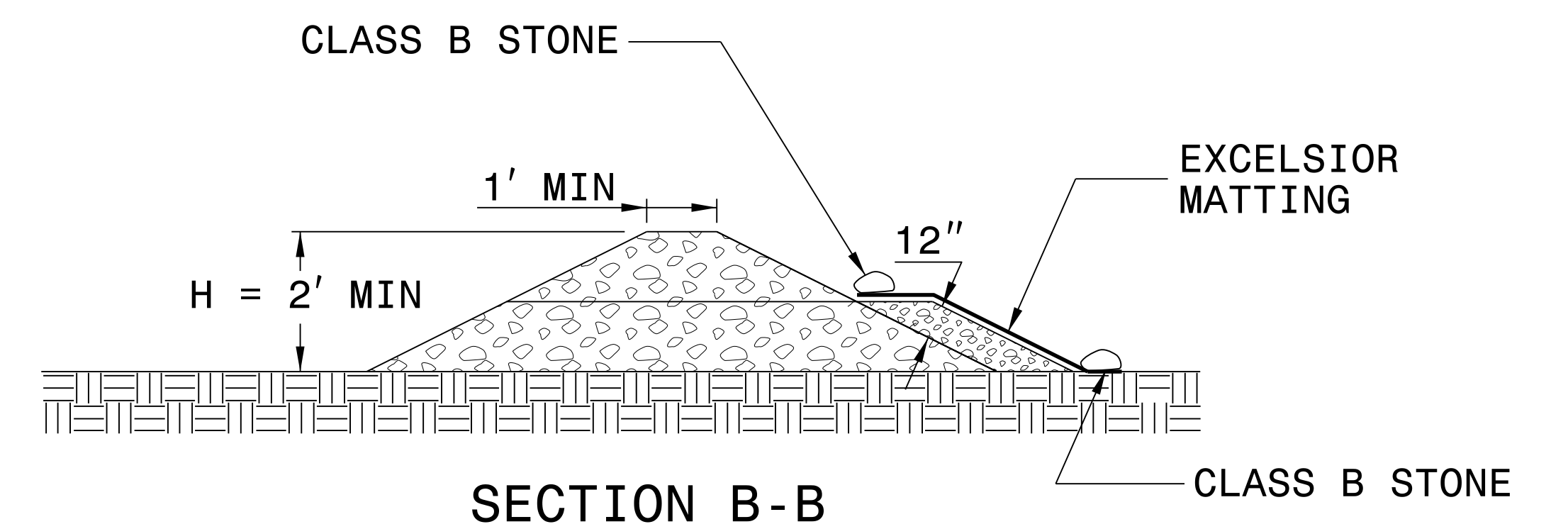
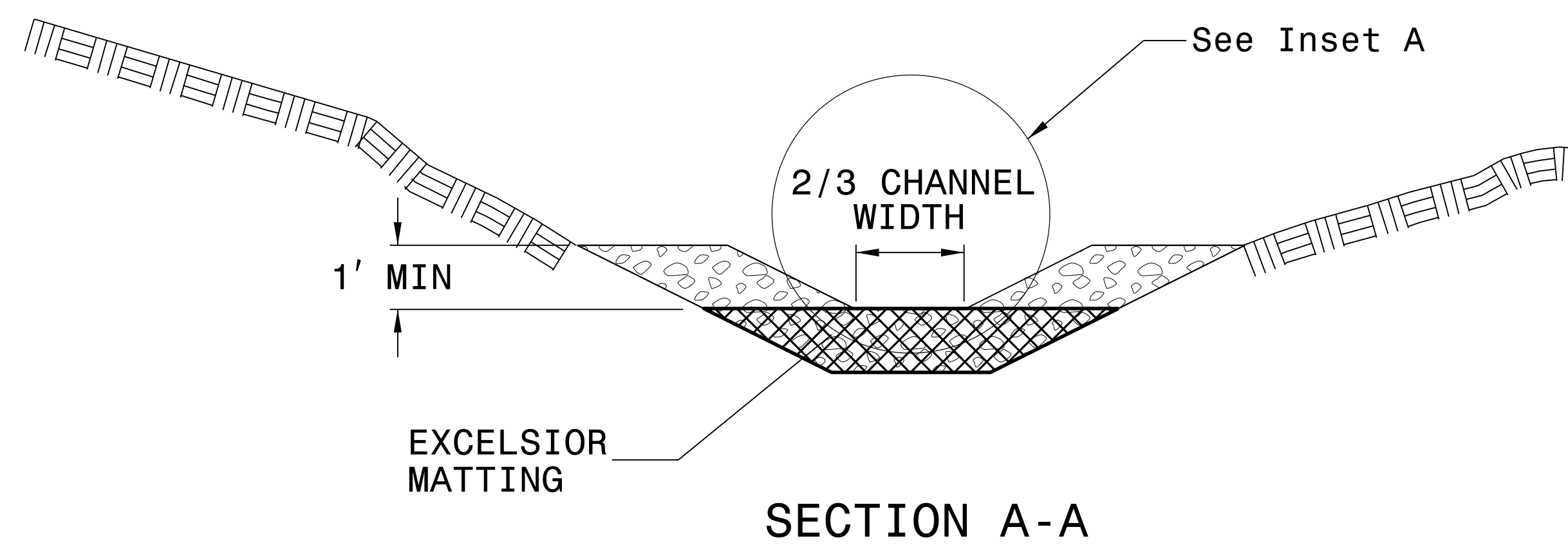
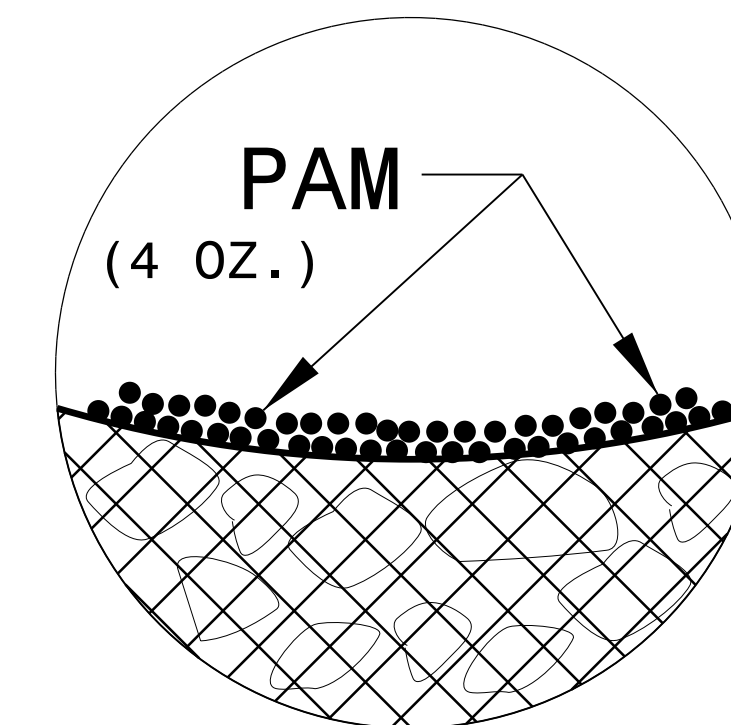
NOTES:

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.



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-4159</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-Y1-	11+25	12+25	RT	140
4	-Y2-	13+00	16+00	RT	420
4	-DRI-	10+50	11+75	LT	90
SUBTOTAL					650
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					17,300
TOTAL					17,950
SAY					18,000

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	14+50	16+00	LT	210
4	-L-	14+50	15+00	RT	240
4	-Y1-	12+75	13+25	RT	70
4	-DRI-	11+50	11+75	RT	20
SUBTOTAL					540
ADDITIONAL PRGM TO BE INSTALLED					0
TOTAL					540
SAY					550

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-4159</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

PROJECT REFERENCE NO.	SHEET NO.
B-4159	EC-4/CONST. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

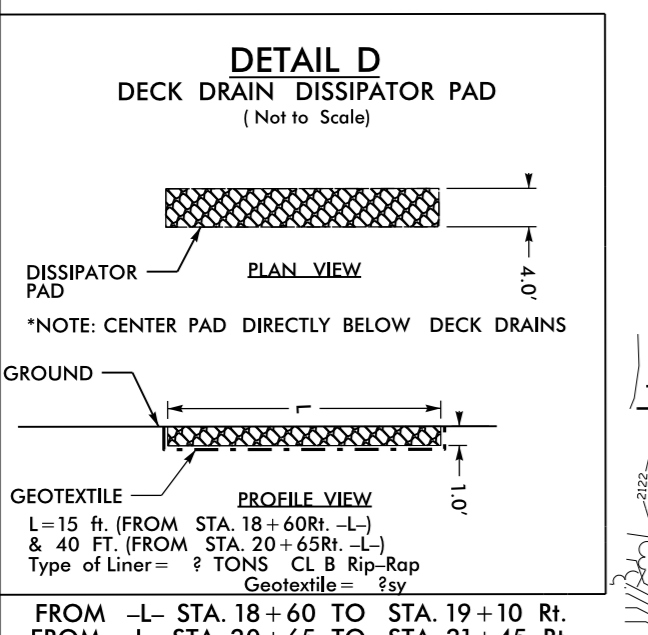
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

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

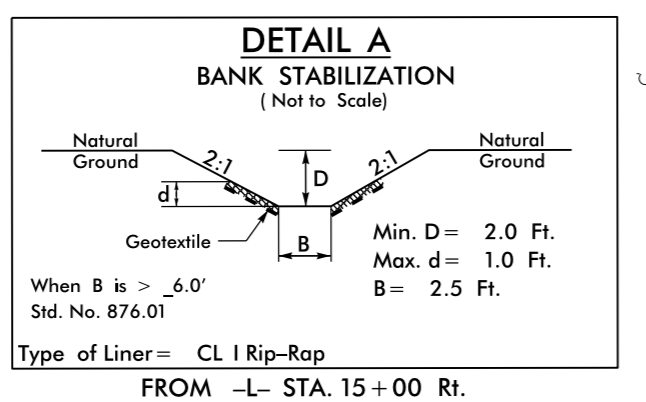
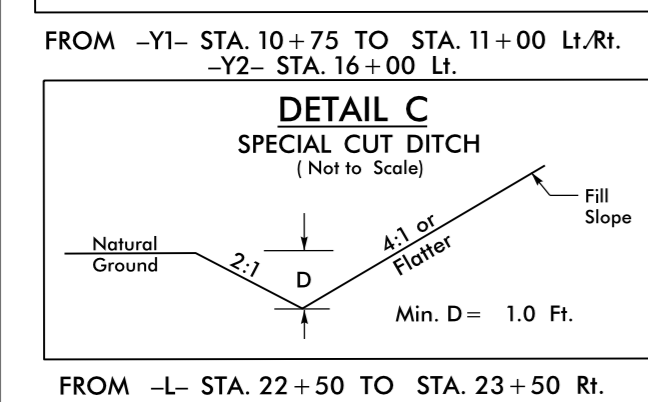
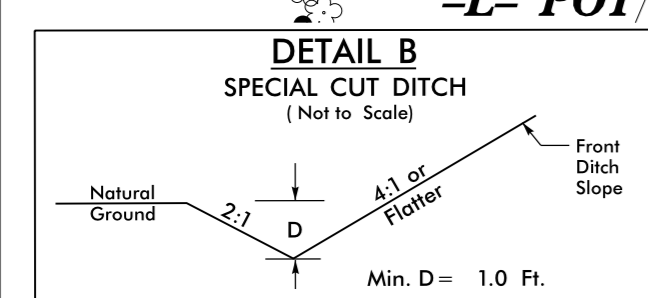
 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

NOTE:
UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED.

NAD 83/95

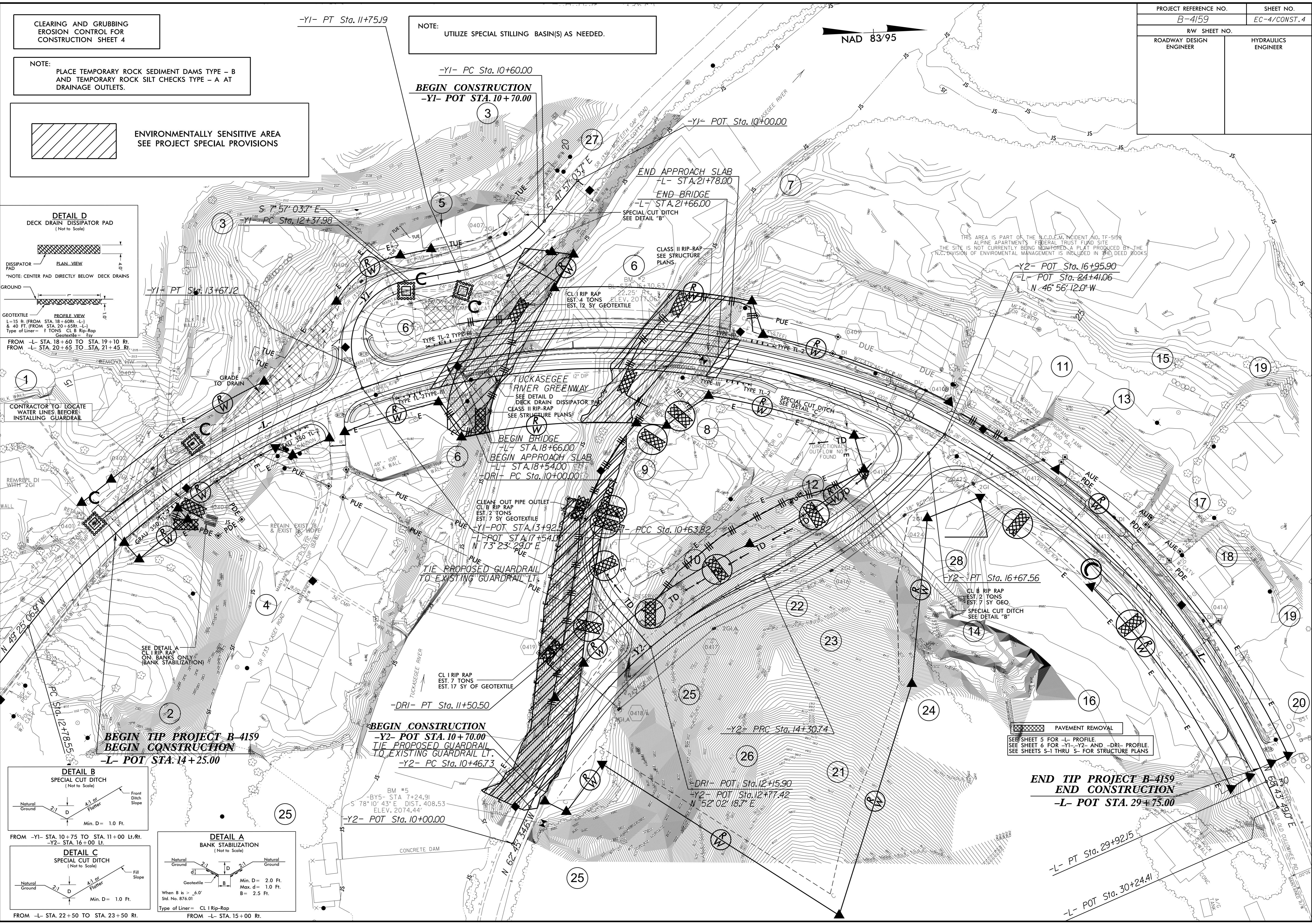


CONTRACTOR TO LOCATE
WATER LINES BEFORE
INSTALLING GUARDRAIL



FROM -L- STA. 22+50 TO STA. 23+50 Rt.

FROM -L- STA. 15+00 Rt.

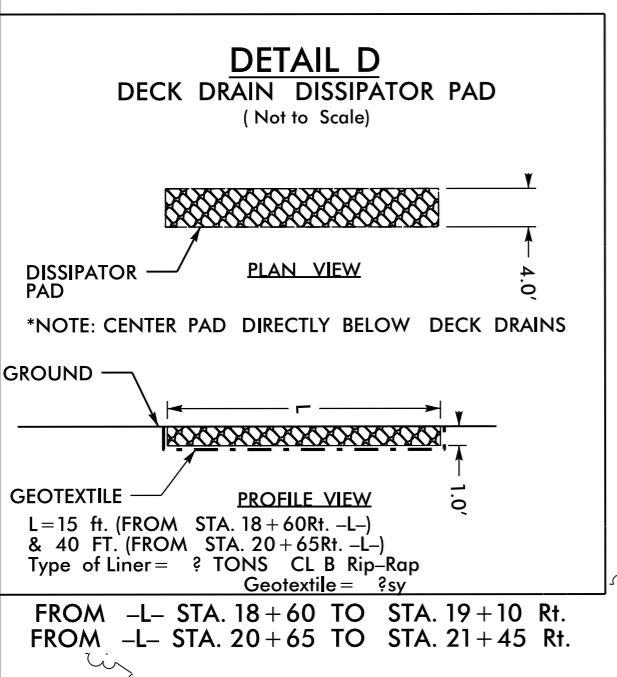
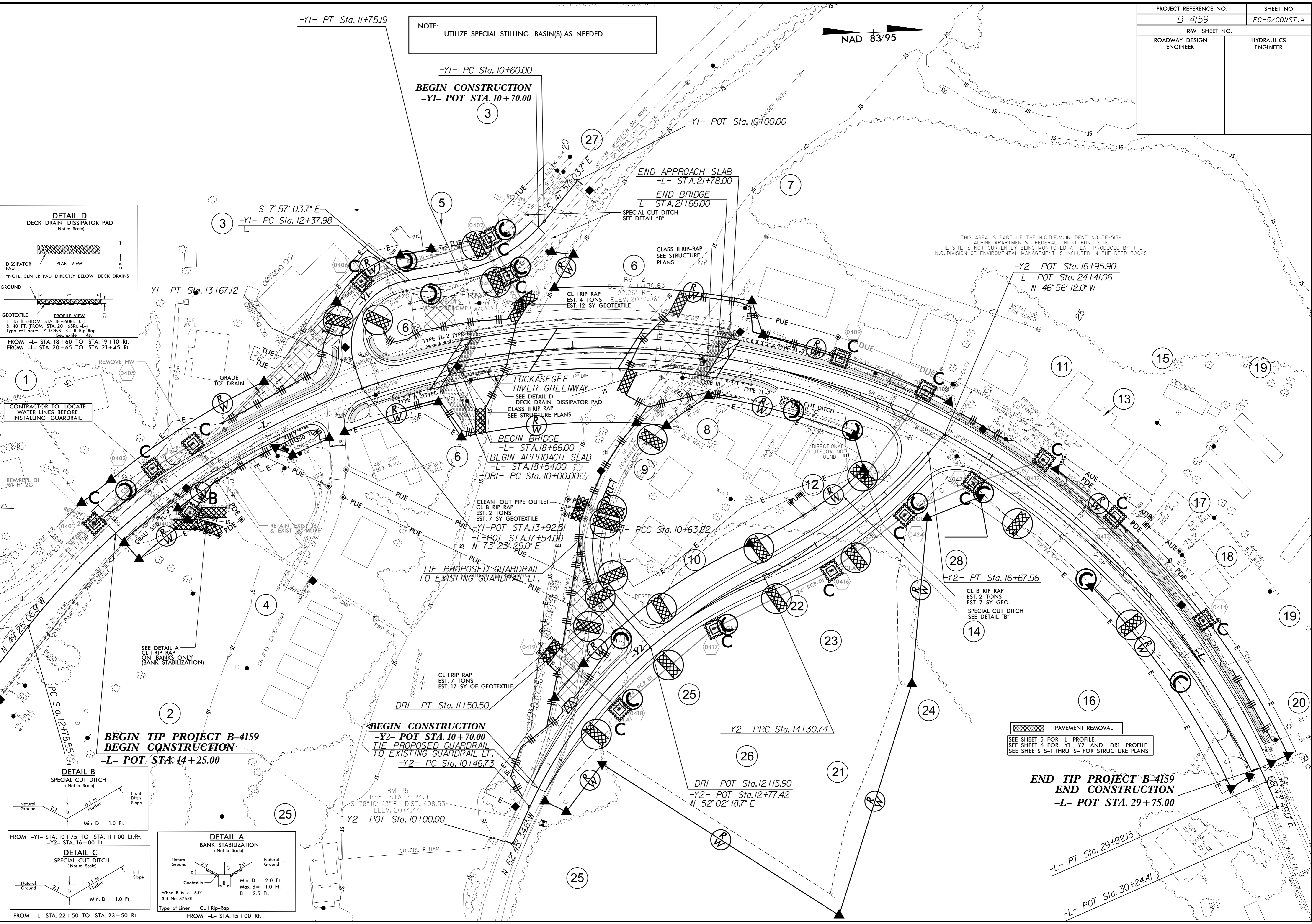


REVISIONS

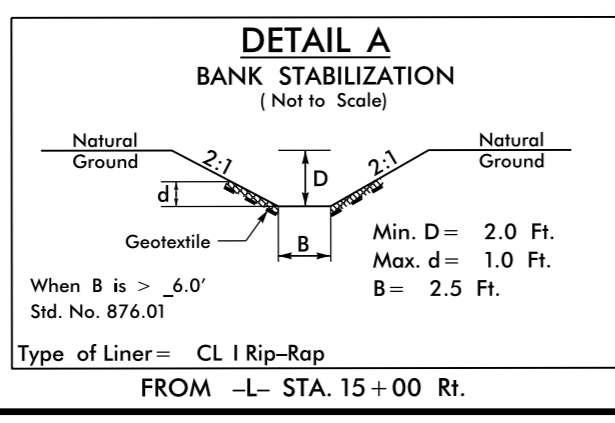
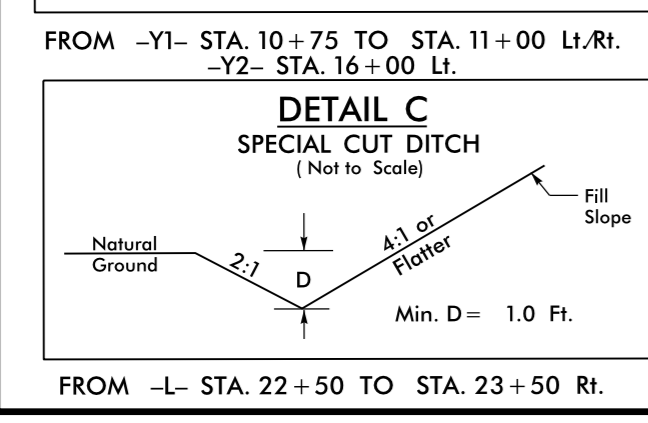
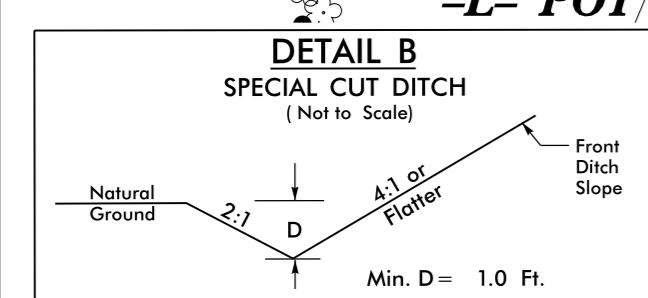
PROJECT REFERENCE NO.	SHEET NO.
B-4159	EC-5/CONST. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/95

NOTE:
UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED.



CONTRACTOR TO LOCATE WATER LINES BEFORE INSTALLING GUARDRAIL



PAVEMENT REMOVAL

SEE SHEET 5 FOR -L- PROFILE.
SEE SHEET 6 FOR -Y1-, -Y2-, AND -DRI- PROFILE.
SEE SHEETS S-1 THRU S- FOR STRUCTURE PLANS

**END TIP PROJECT B-4159
END CONSTRUCTION**
-L- POT STA. 29+75.00

REVISIONS

**BEGIN TIP PROJECT B-4159
BEGIN CONSTRUCTION**
-L- POT STA. 14+25.00

BEGIN CONSTRUCTION
-Y2- POT STA. 10+70.00
TIE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL LT.
-Y2- PC STA. 10+46.73

BEGIN BRIDGE
-L- STA. 18+66.00
BEGIN APPROACH SLAB
-L- STA. 18+54.00
-DRI- PC STA. 10+00.00

END APPROACH SLAB
-L- STA. 21+78.00
END BRIDGE
-L- STA. 21+66.00
SPECIAL CUT DITCH
SEE DETAIL "B"

-Y2- POT Sta. 16+95.90
-L- POT Sta. 24+41.06
N 46° 56' 12.0" W

-DRI- POT Sta. 12+15.90
-Y2- POT Sta. 12+77.42
N 52° 02' 18.7" E

-DRI- PT Sta. 11+50.50

-Y2- PRC Sta. 14+30.74

-Y2- PT Sta. 16+67.56

-Y1- PT Sta. 11+75.19

-Y1- PC Sta. 10+60.00
BEGIN CONSTRUCTION
-Y1- POT STA. 10+70.00

-Y1- POT Sta. 10+00.00

S 7° 57' 03.7" E
-Y1- PC Sta. 12+37.98

-Y1- PT Sta. 13+67.12

CLEAN OUT PIPE OUTLET
CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE
-Y1-POT STA. 13+92.51
-L-POT STA. 17+54.00
N 73° 23' 29.0" E

TIE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL LT.

CL I RIP RAP
EST. 7 TONS
EST. 17 SY OF GEOTEXTILE

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEO.
SPECIAL CUT DITCH
SEE DETAIL "B"

BM #5
-BY5- STA 7+24.91
S 78° 10' 43" E DIST. 408.53
ELEV. 2074.44'

-Y2- POT Sta. 10+00.00

CONCRETE DAM

N 62° 45' 34.6" W

-L- PT Sta. 29+92.15

-L- POT Sta. 30+24.41