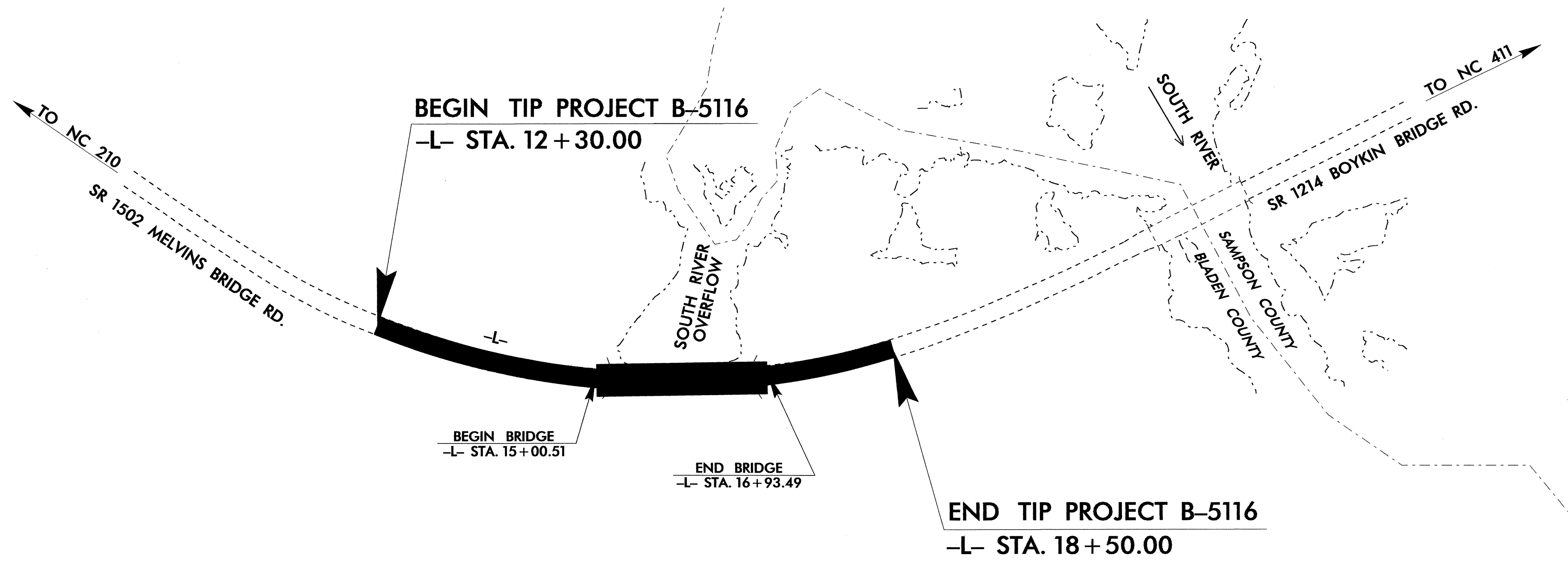


TIP PROJECT: B-5116

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

BLADEN COUNTY

**LOCATION: BRIDGE NO. 150 OVER THE SOUTH RIVER OVERFLOW
AND APPROACHES ON SR 1502 (MELVINS BRIDGE RD.)**
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5116	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.....	
1606.01	Special Sediment Control Fence.....	---X---
1622.01	Temporary Berms and Slope Drains.....	---X---
	Silt Basin Type B.....	---X---
1633.01	Temporary Rock Silt Check Type-A.....	---X---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM).....	---X---
	Temporary Rock Silt Check Type-B.....	---X---
	Wattle / Coir Fiber Wattle.....	---X---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM).....	---X---
1634.01	Temporary Rock Sediment Dam Type-A.....	---X---
1634.02	Temporary Rock Sediment Dam Type-B.....	---X---
1635.01	Rock Pipe Inlet Sediment Trap Type-A.....	---X---
1635.02	Rock Pipe Inlet Sediment Trap Type-B.....	---X---
1630.04	Stilling Basin.....	---X---
1630.06	Special Stilling Basin.....	---X---
	Rock Inlet Sediment Trap:	
1632.01	Type A.....	A
1632.02	Type B.....	B
1632.03	Type C.....	C
	Skimmer Basin.....	---X---
	Tiered Skimmer Basin.....	---X---
	Infiltration Basin.....	---X---

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

HIGH QUALITY WATER(S) EXIST ON THIS PROJECT
High Quality Water Zone(s) Exist From Sta. Beginning Project to Sta. End Project Refer To E. C. Special Provisions for Special Considerations.

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

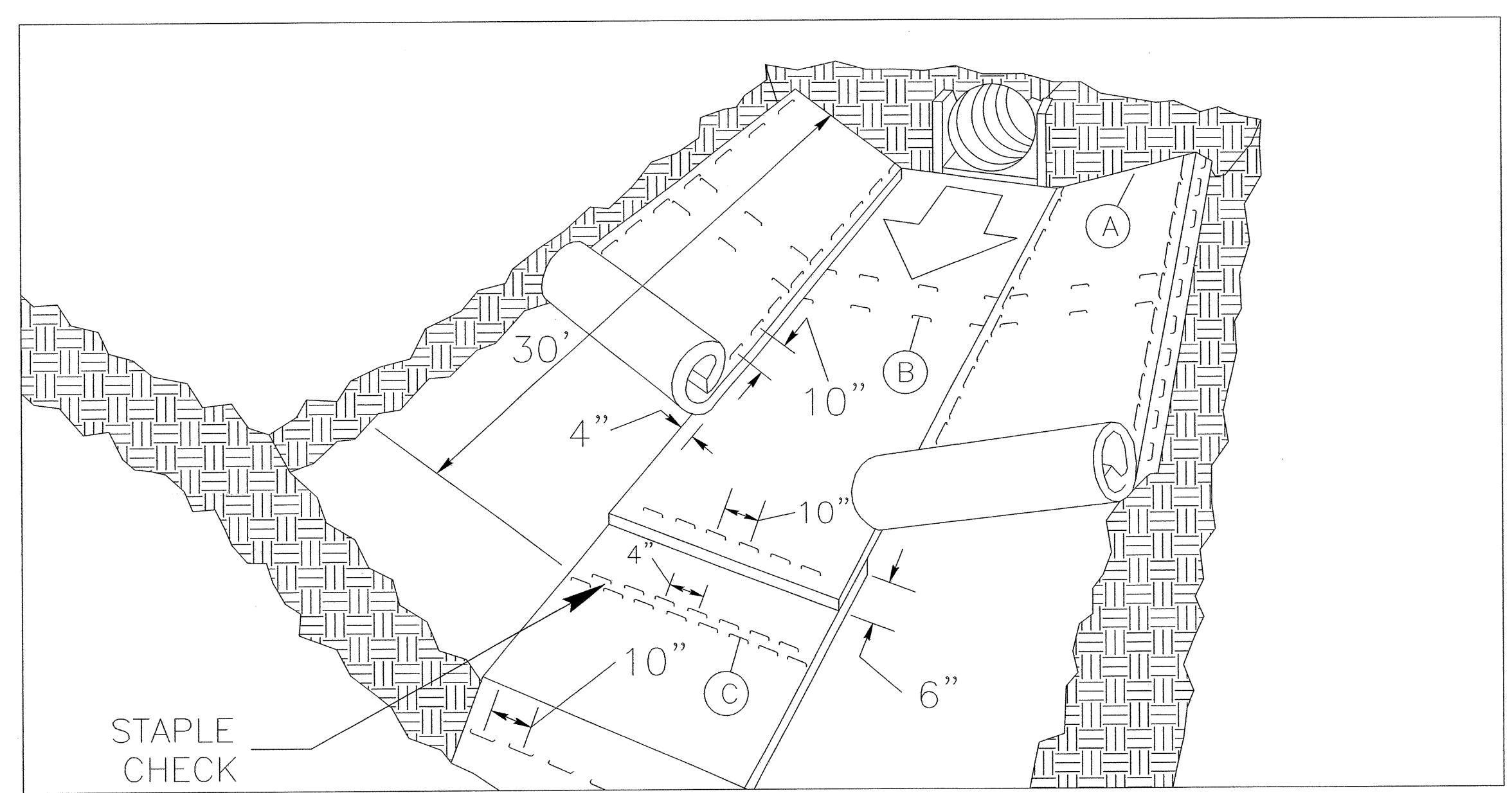
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1622.01 Temporary Berms and Slope Drains
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	

10-AUG-2010 09:38 AM
me:\projects\10-1116\B-5116-EC-1.dgn

PROJECT REFERENCE NO. B-5116	SHEET NO. EC-2
RW SHEET NO.	
DESIGNED BY ENGINEER	CHECKED BY ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

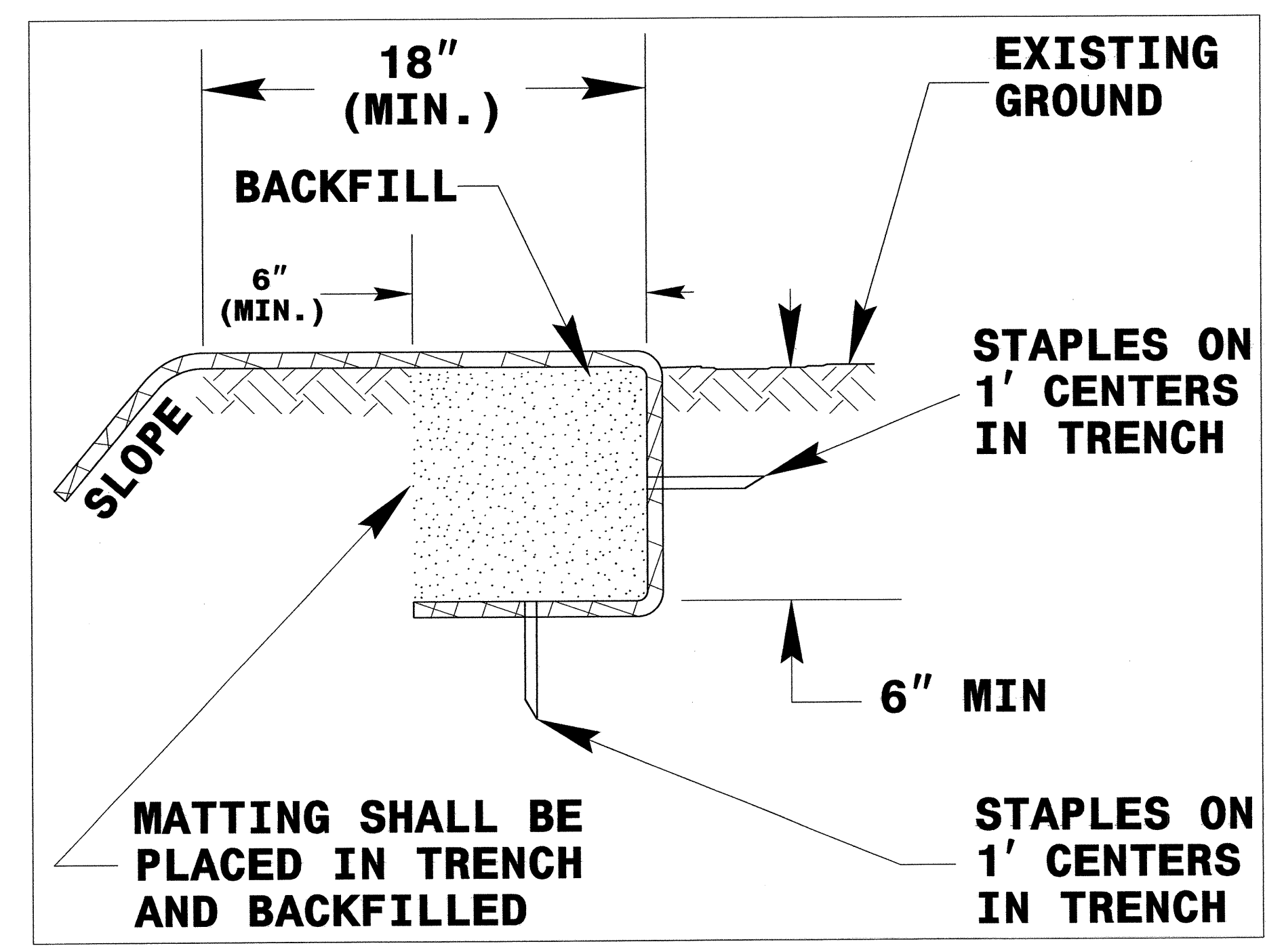
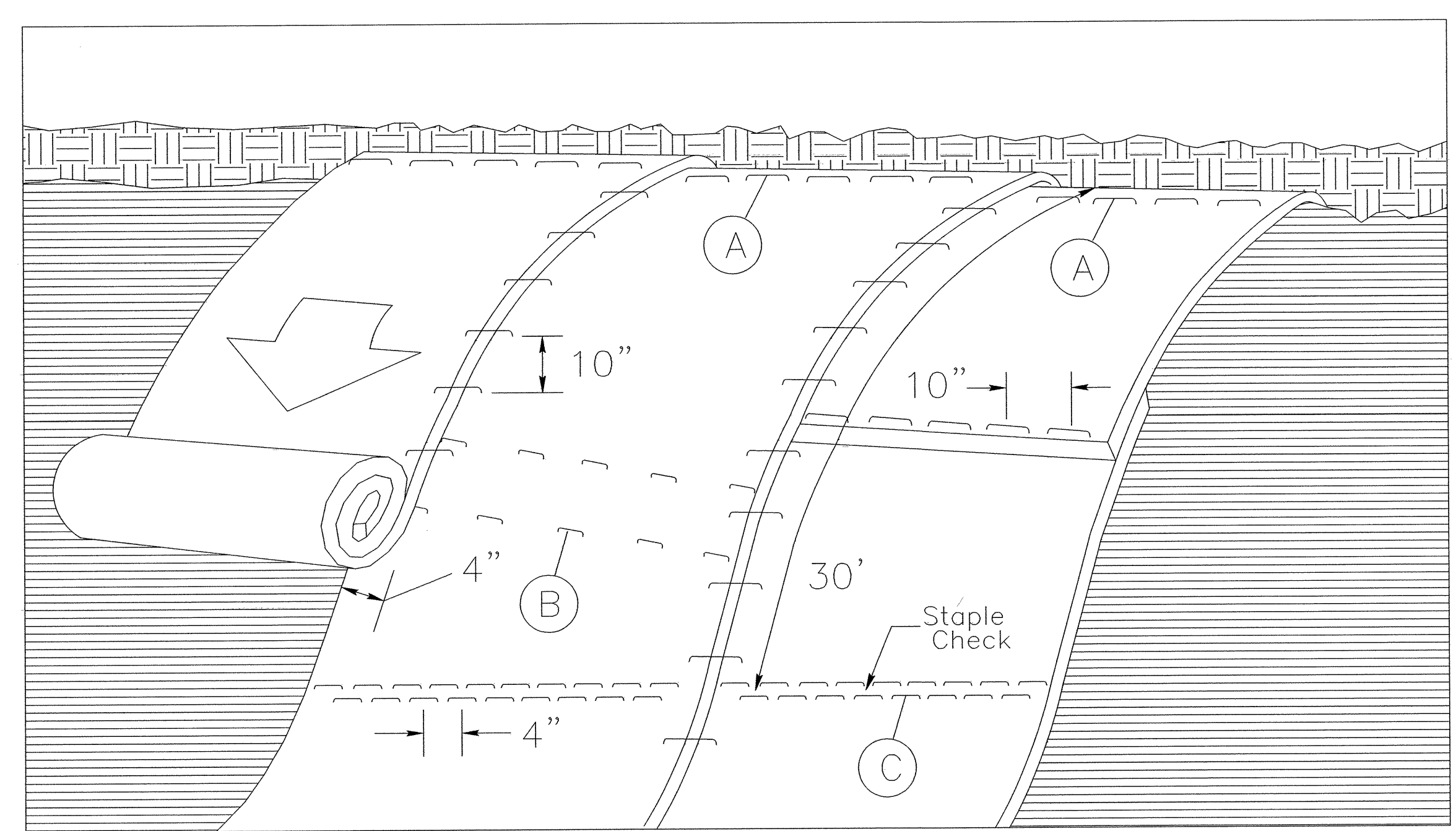


DIAGRAM (A)



MATTING ON SLOPES

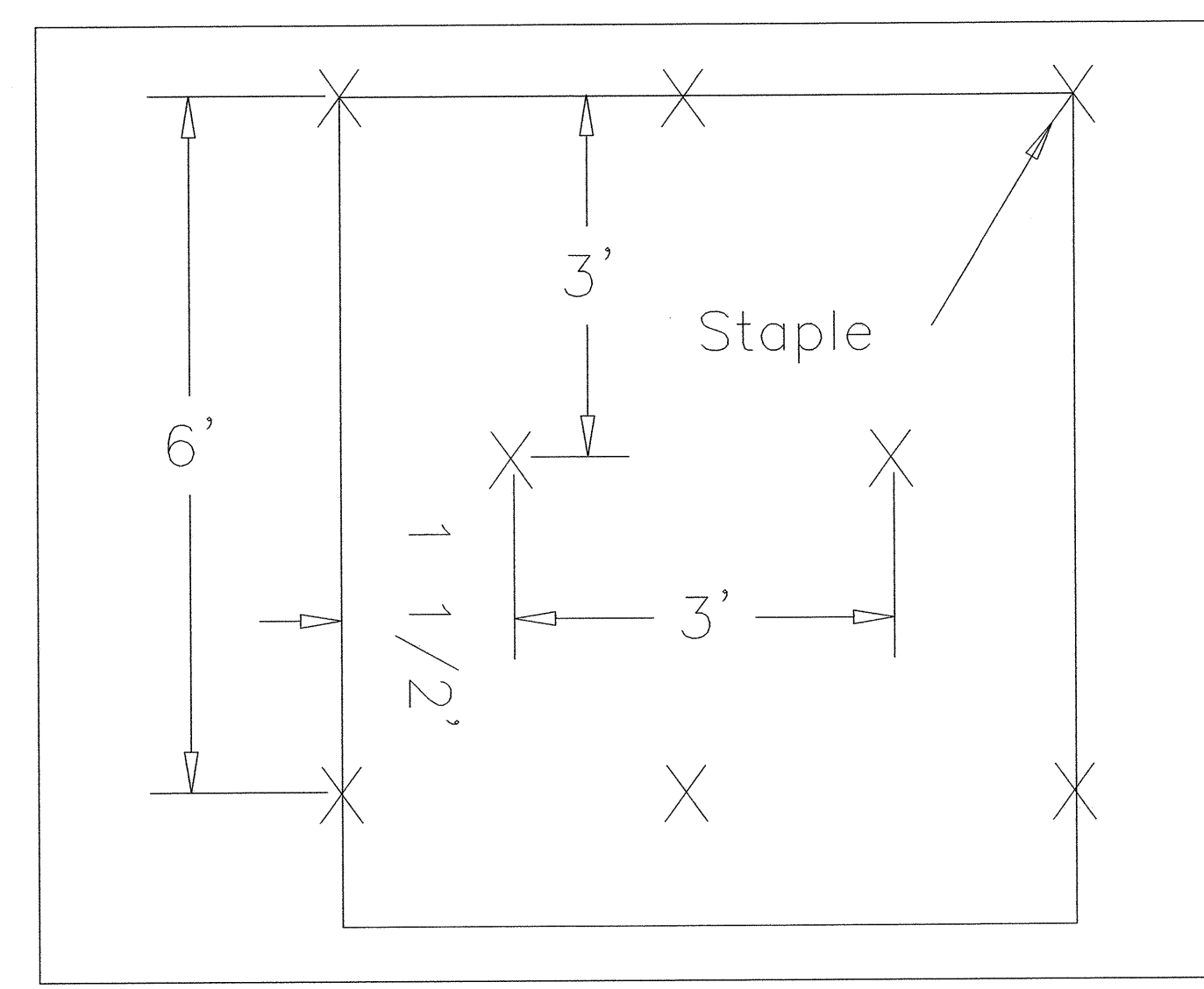


DIAGRAM (B)

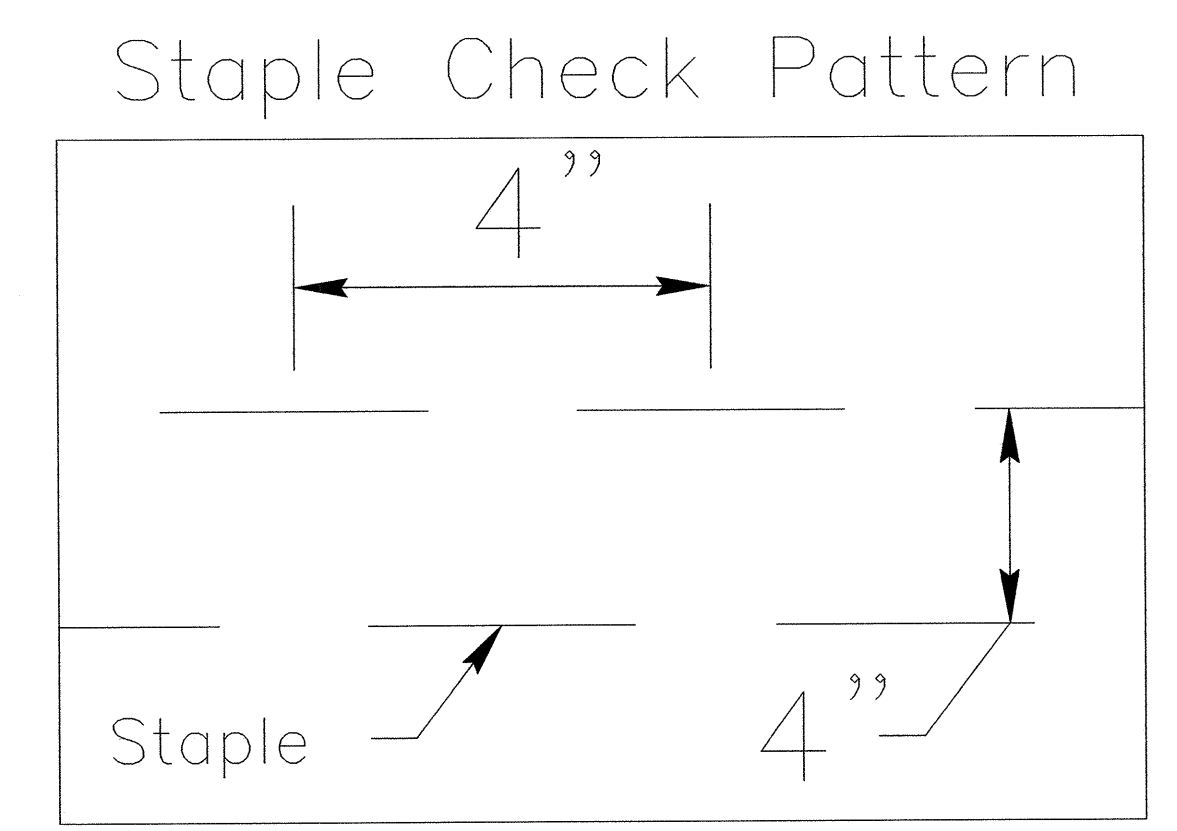


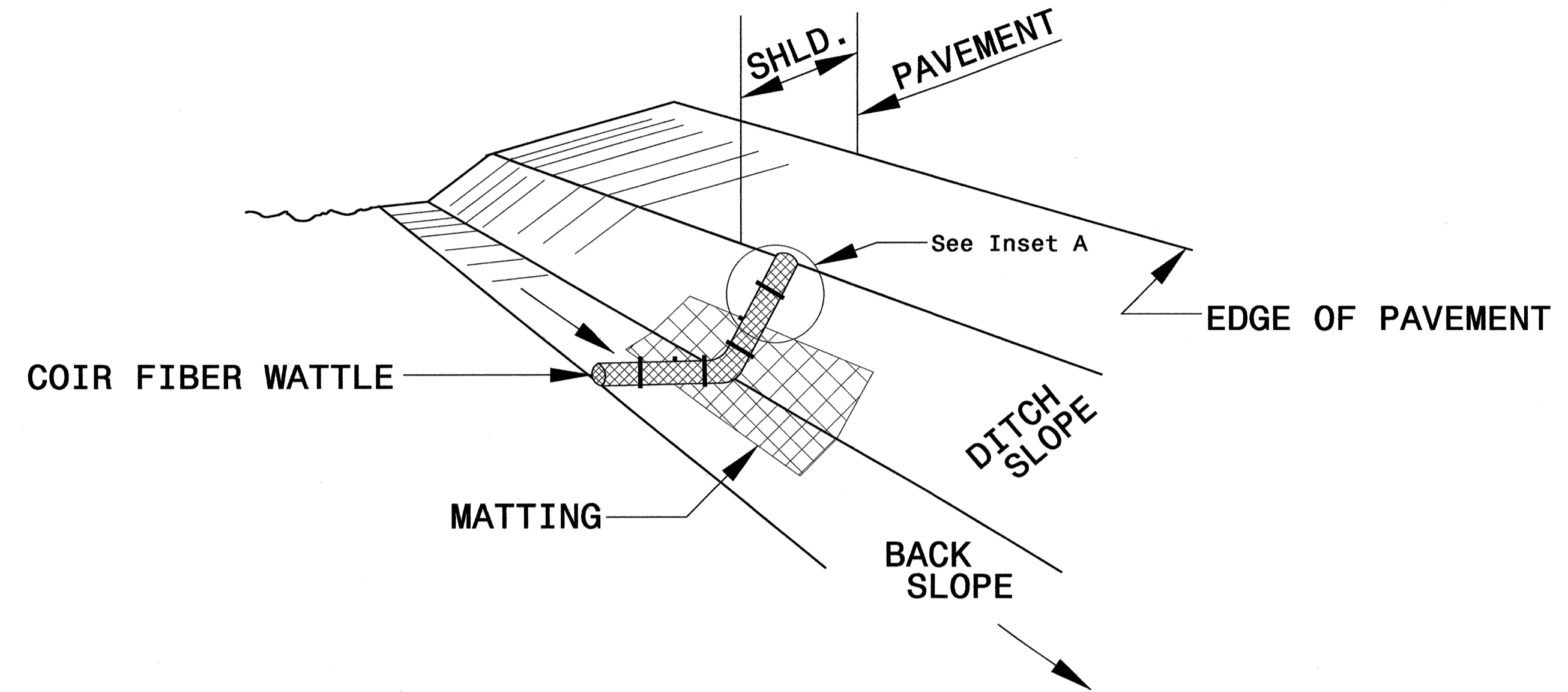
DIAGRAM (C)

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.

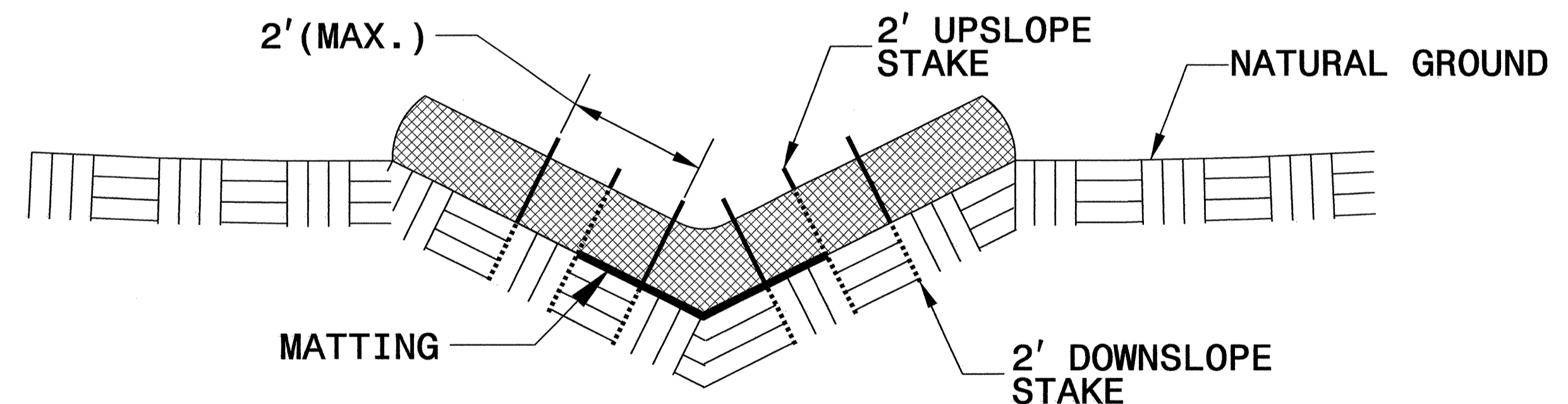
NOT TO SCALE

PROJECT REFERENCE NO. B-5116	SHEET NO. EC-2A
RW SHEET NO.	
DESIGNER ENGINEER	CHECKER ENGINEER

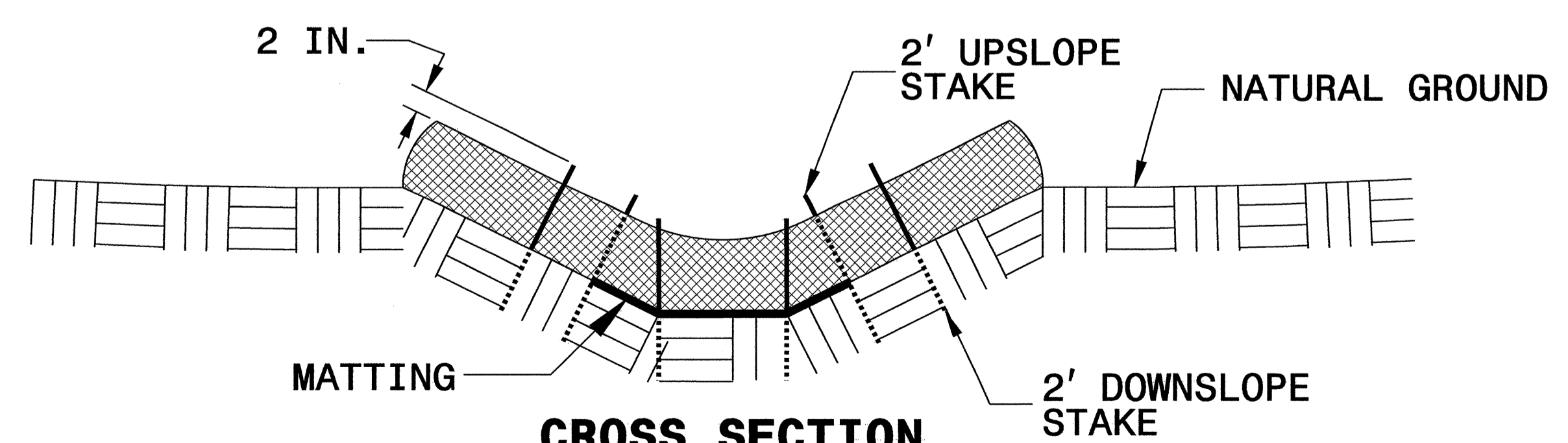
COIR FIBER WATTLE DETAIL



ISOMETRIC VIEW



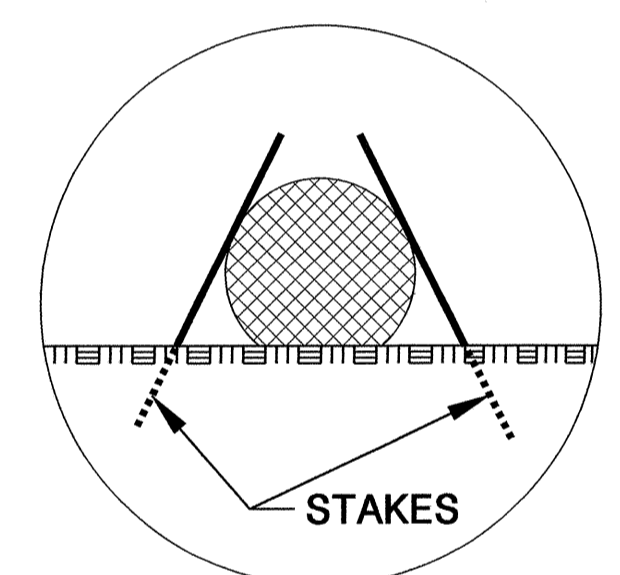
CROSS SECTION VEE DITCH



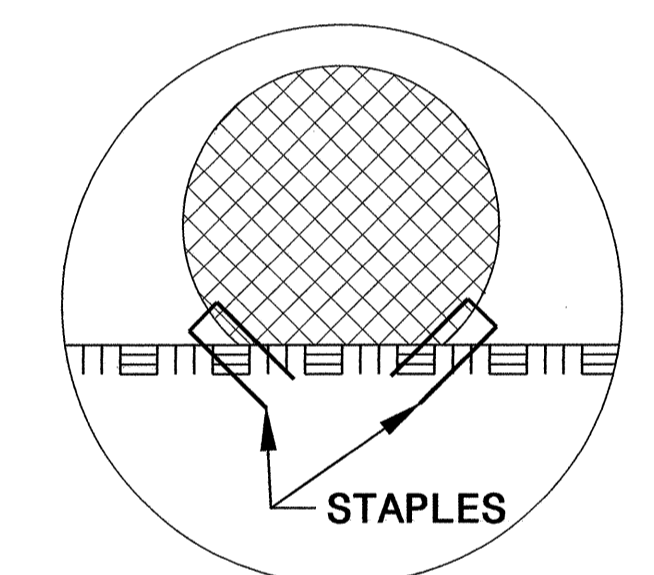
CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

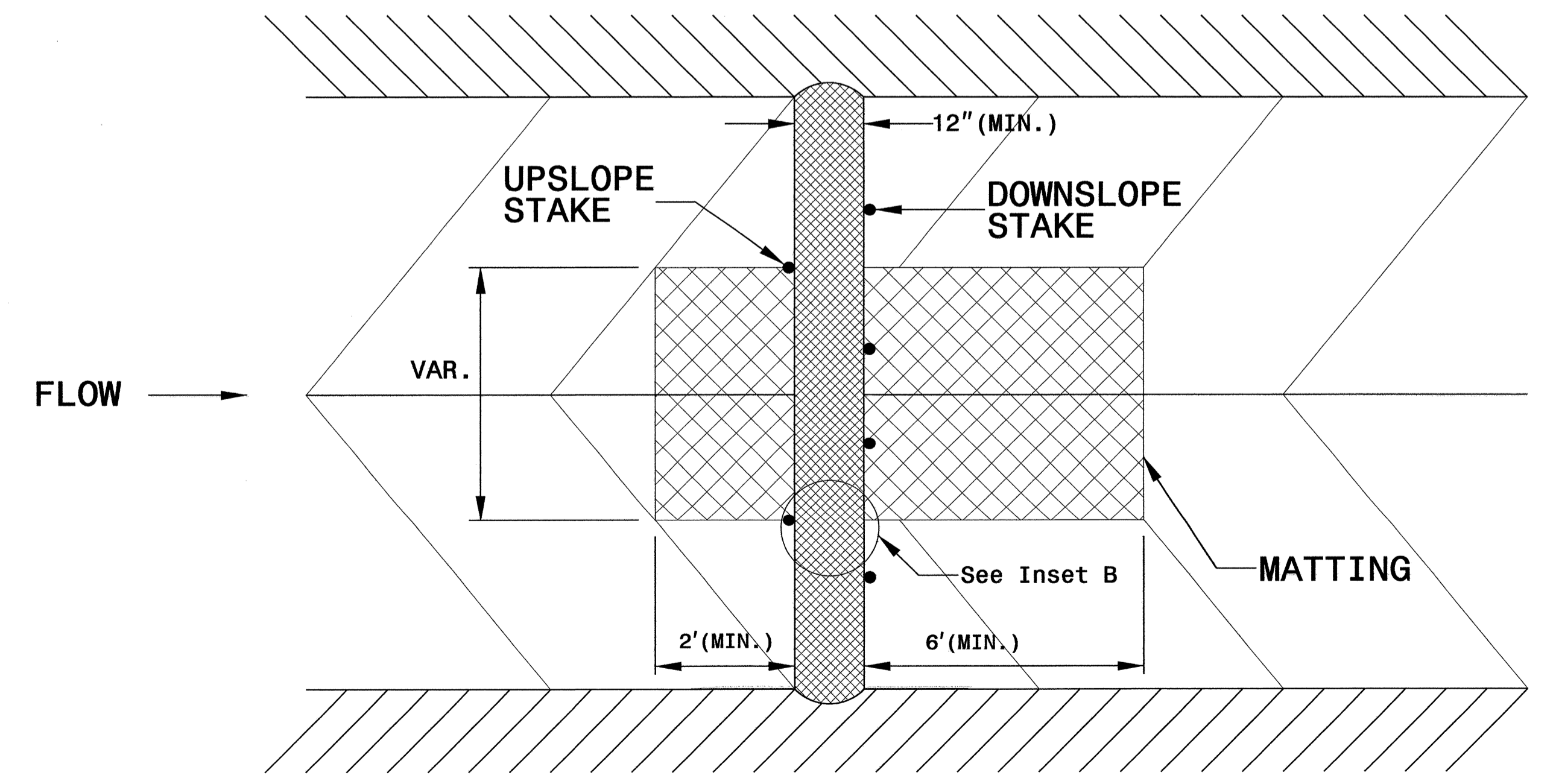
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 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.



INSET A



INSET B



TOP VIEW

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-5116</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

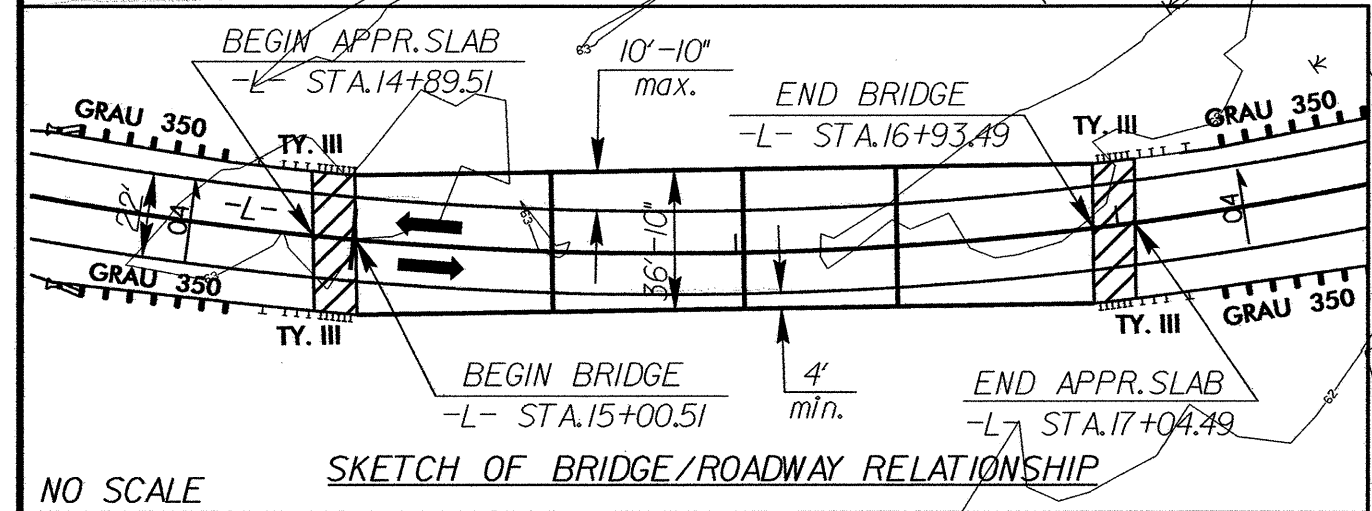
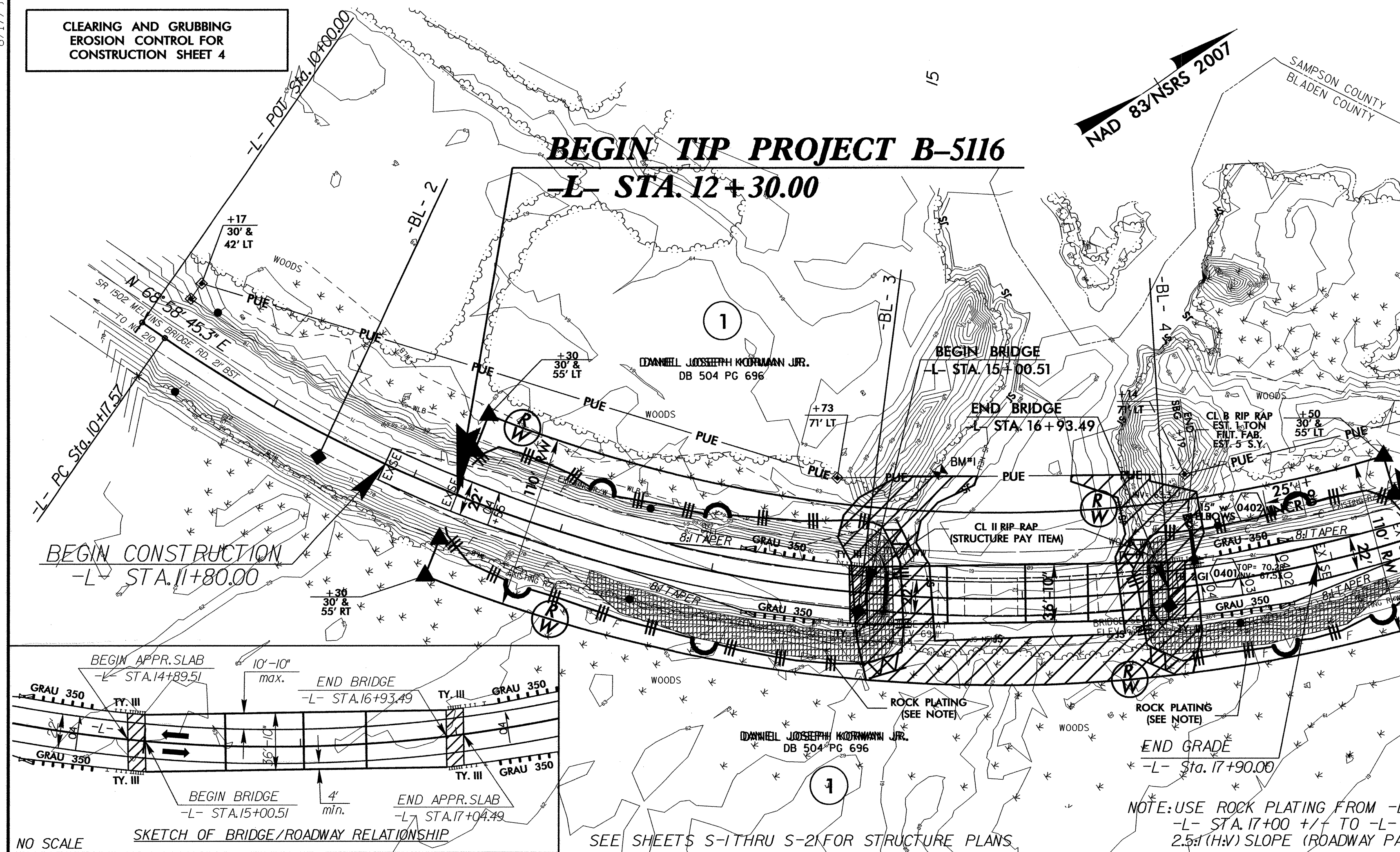
SOIL STABILIZATION TIMEFRAMES

<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-5116	EC-04/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

END TIP PROJECT B-5116

-L- STA. 18 + 50.00

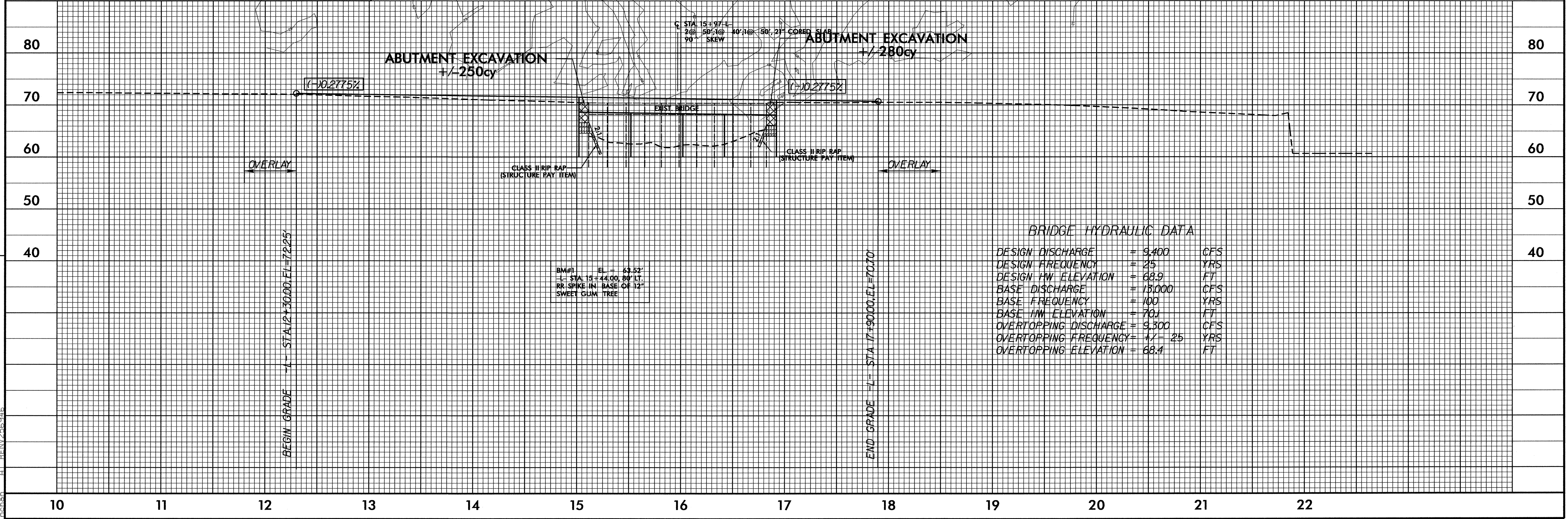


ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

-L-
 $PI Sta 15+16.54$
 $\Delta = 56' 25' 44.4" (LT)$
 $D = 6' 09' 39.0"$
 $L = 915.93'$
 $T = 498.96'$
 $R = 930.00'$
 $SE = 04$
 $RO = SEE PLANS$

-L-
 $PI Sta 20+42.22$
 $\Delta = 4' 53' 38.3" (LT)$
 $D = 2' 15' 07.9"$
 $L = 217.30'$
 $T = 108.71'$
 $R = 2,544.00'$

NOTE: USE ROCK PLATING FROM -L- STA. 13+25 +/- TO -L- STA. 14+94 +/- (RIGHT) AND FROM -L- STA. 17+00 +/- TO -L- STA. 18+29 +/- (RIGHT). EXTEND ROCK PLATING LIMITS TO 2.5% (HW) SLOPE (ROADWAY PAY ITEM). SEE ROCK PLATING DETAIL SHT 2-D.



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 9,400	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 68.9	FT
BASE DISCHARGE	= 15,000	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 70.1	FT
OVERTOPPING DISCHARGE	= 9,300	CFS
OVERTOPPING FREQUENCY	= +/- 25	YRS
OVERTOPPING ELEVATION	= 68.4	FT

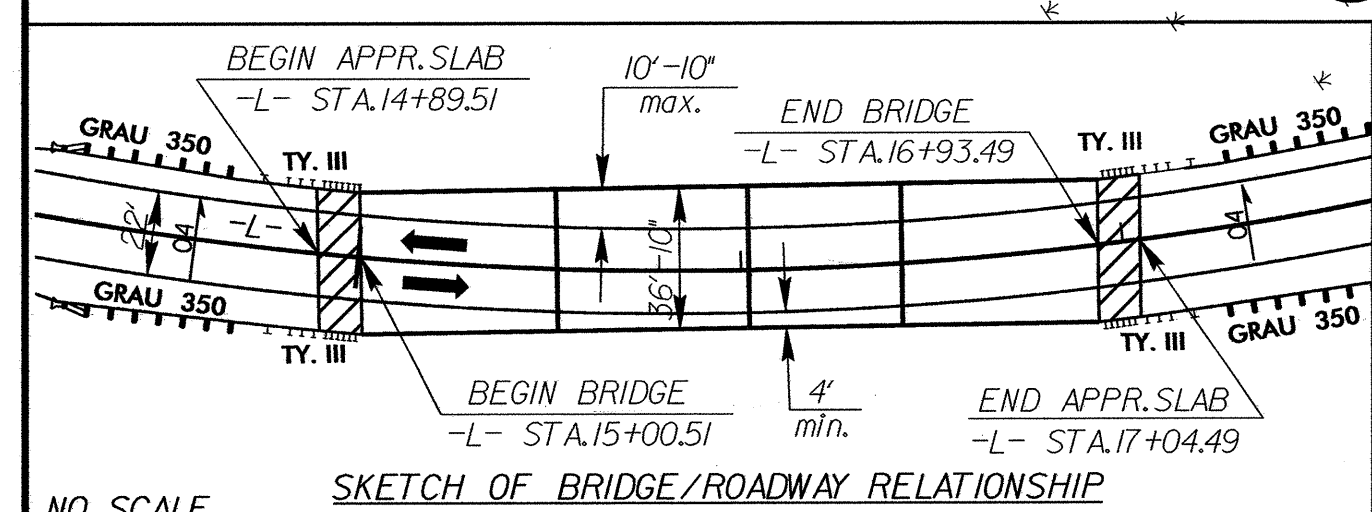
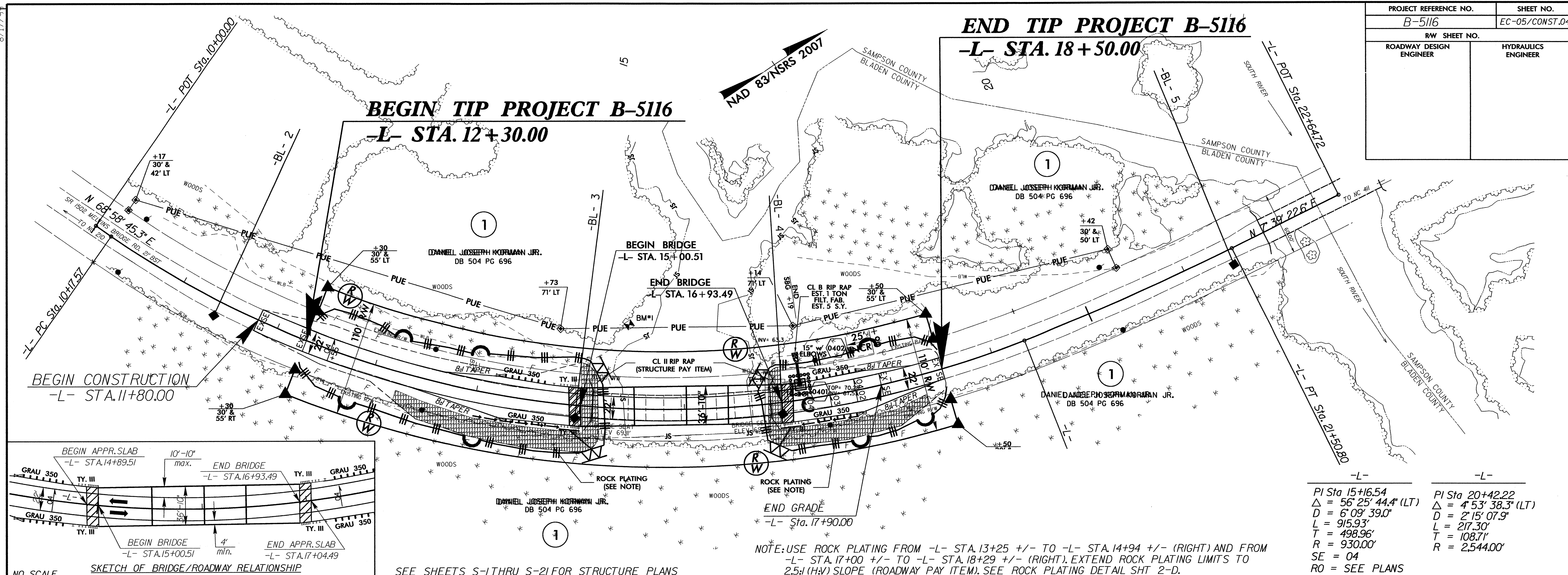
BM#1 EL. = 63.52'
 -L- STA. 13 + 44.00, 80' LT.
 RR SPIKE IN BASE OF 12" SWEET GUM TREE

8/17/91
 REVISIONS
 RW REV. (24/11) - INCREASED PUE ON PARCEL 1, DCS
 12-OCT-2011 10:25
 K:\Environmental\Design\B-5116_EC.dwg
 dcbob

PROJECT REFERENCE NO.	SHEET NO.
B-5116	EC-05/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

END TIP PROJECT B-5116
-L- STA. 18+50.00

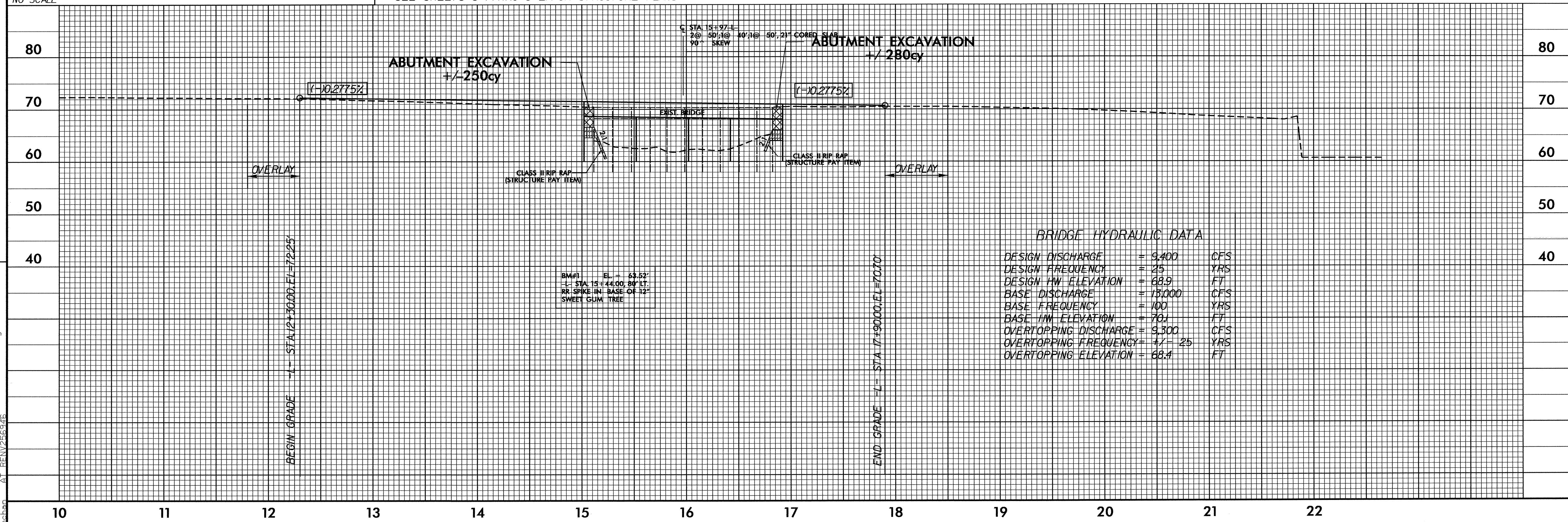
BEGIN TIP PROJECT B-5116
-L- STA. 12+30.00



SEE SHEETS S-1 THRU S-21 FOR STRUCTURE PLANS

NOTE: USE ROCK PLATING FROM -L- STA. 13+25 +/- TO -L- STA. 14+94 +/- (RIGHT) AND FROM -L- STA. 17+00 +/- TO -L- STA. 18+29 +/- (RIGHT). EXTEND ROCK PLATING LIMITS TO 2.5:1 (HW) SLOPE (ROADWAY PAY ITEM). SEE ROCK PLATING DETAIL SHT 2-D.

-L-	-L-
PI Sta 15+16.54	PI Sta 20+42.22
$\Delta = 56^{\circ} 25' 44.4''$ (LT)	$\Delta = 4^{\circ} 53' 38.3''$ (LT)
D = 6' 09" 39.0"	D = 2' 15" 07.9"
L = 915.93'	L = 217.30'
T = 498.96'	T = 108.71'
R = 930.00'	R = 2,544.00'
SE = 04	
RO = SEE PLANS	



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 9,400	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 68.9	FT
BASE DISCHARGE	= 15,000	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 70.1	FT
OVERTOPPING DISCHARGE	= 9,300	CFS
OVERTOPPING FREQUENCY	= +/- 25	YRS
OVERTOPPING ELEVATION	= 68.4	FT

BM#1 EL. = 53.52'
 -L- STA. 15+44.00, 80' LT.
 RR SPIKE IN BASE OF 12" SWEET GUM TREE

REVISIONS

RW REV. (3/4/11) - INCREASED PUE ON PARCEL 1, DCS

12:00:11 10/10/10:36
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 jrd