

TIP PROJECT: U-4011

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

DURHAM COUNTY

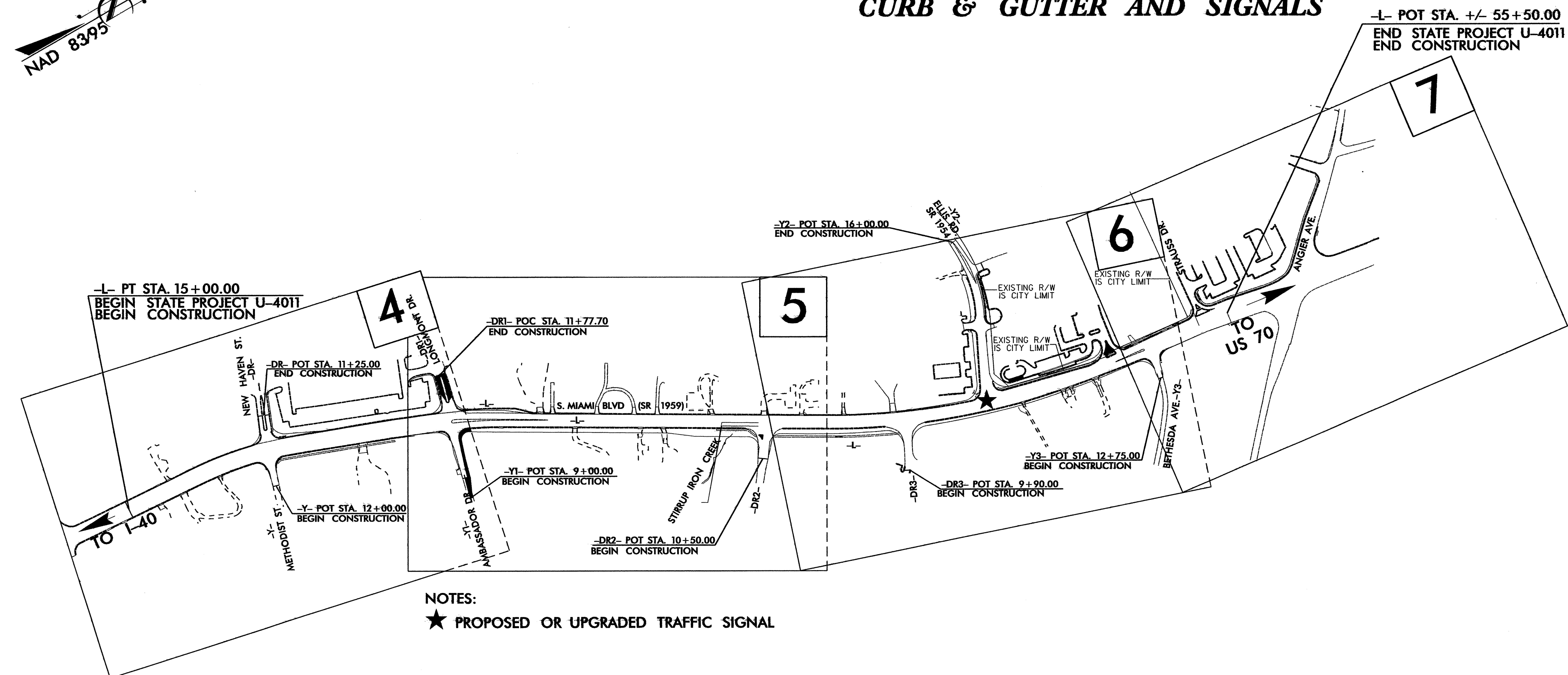
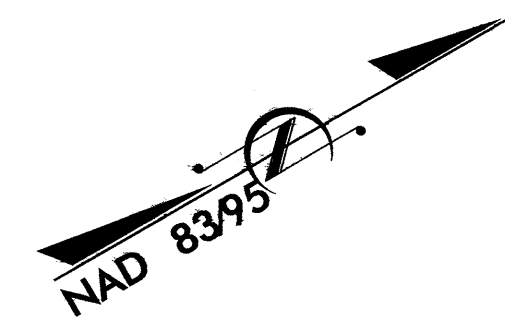
LOCATION: SR 1959 (SOUTH MIAMI BLVD.) FROM SOUTH OF SR 2112 (METHODIST ST.) TO NORTH OF SR 1960 (BETHESDA AVE.)

TYPE OF WORK: WIDENING, DRAINAGE, GRADING, PAVING, CURB & GUTTER AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4011	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	--- TD ---
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	△△△△△△△△
1622.01	Temporary Berms and Slope Drains	--->---
	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	⊗
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	⊗
	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	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭



NOTES:
★ PROPOSED OR UPGRADED TRAFFIC SIGNAL

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

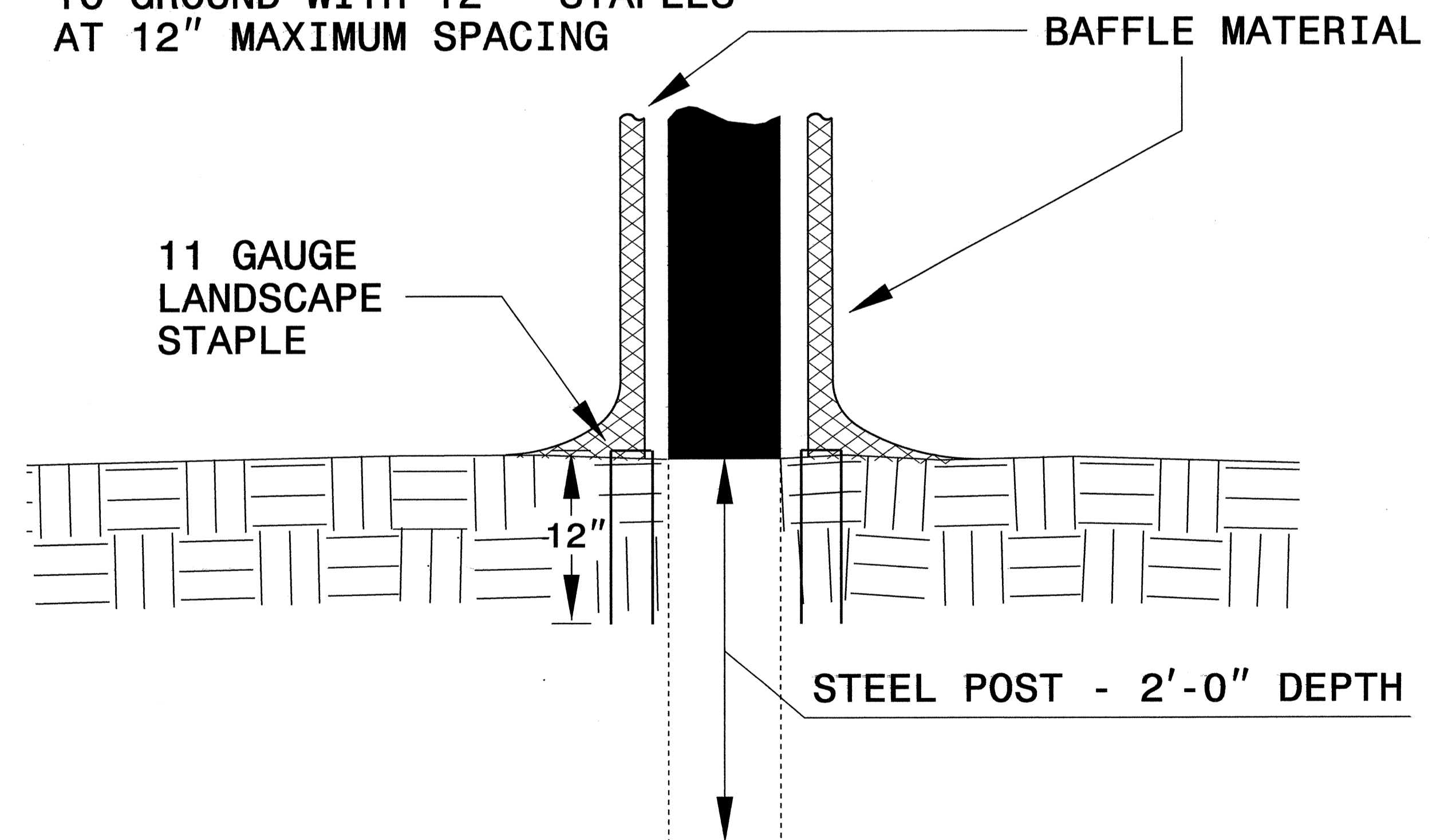
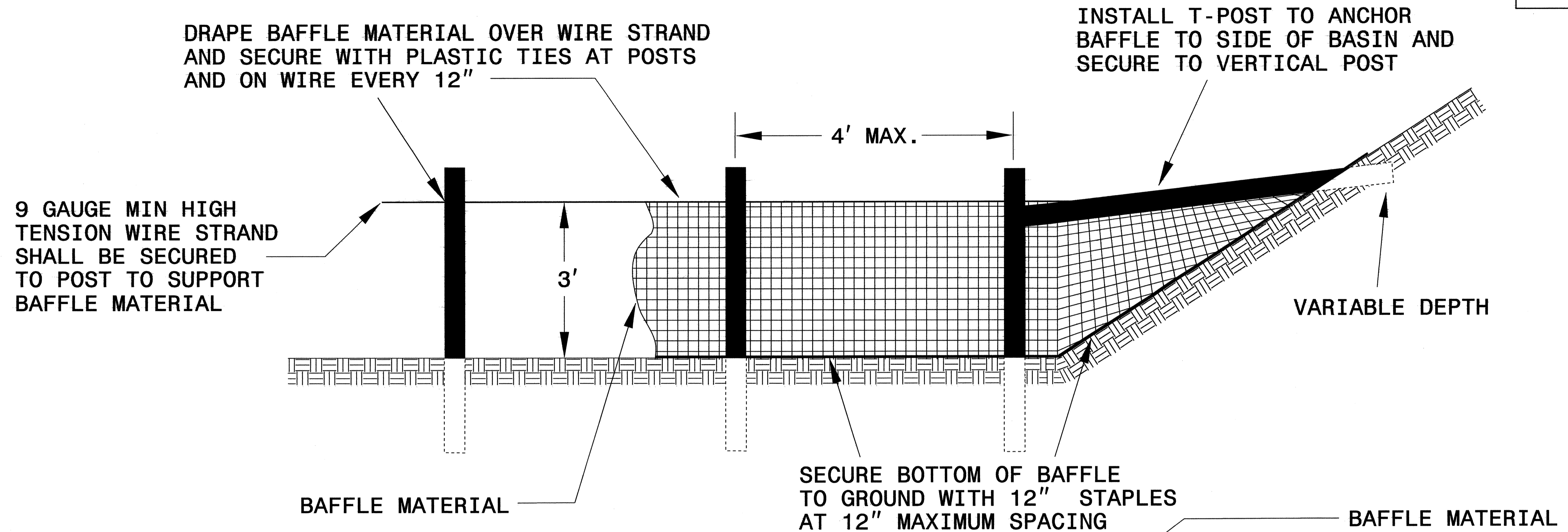
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence	1632.03 Rock Inlet Sediment Trap Type C
1606.01 Special Sediment Control Fence	1633.01 Temporary Rock Silt Check Type A
1607.01 Gravel Construction Entrance	1635.02 Rock Pipe Inlet Sediment Trap Type B
1622.01 Temporary Berms and Slope Drains	

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PROJECT REFERENCE NO. U-4011	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



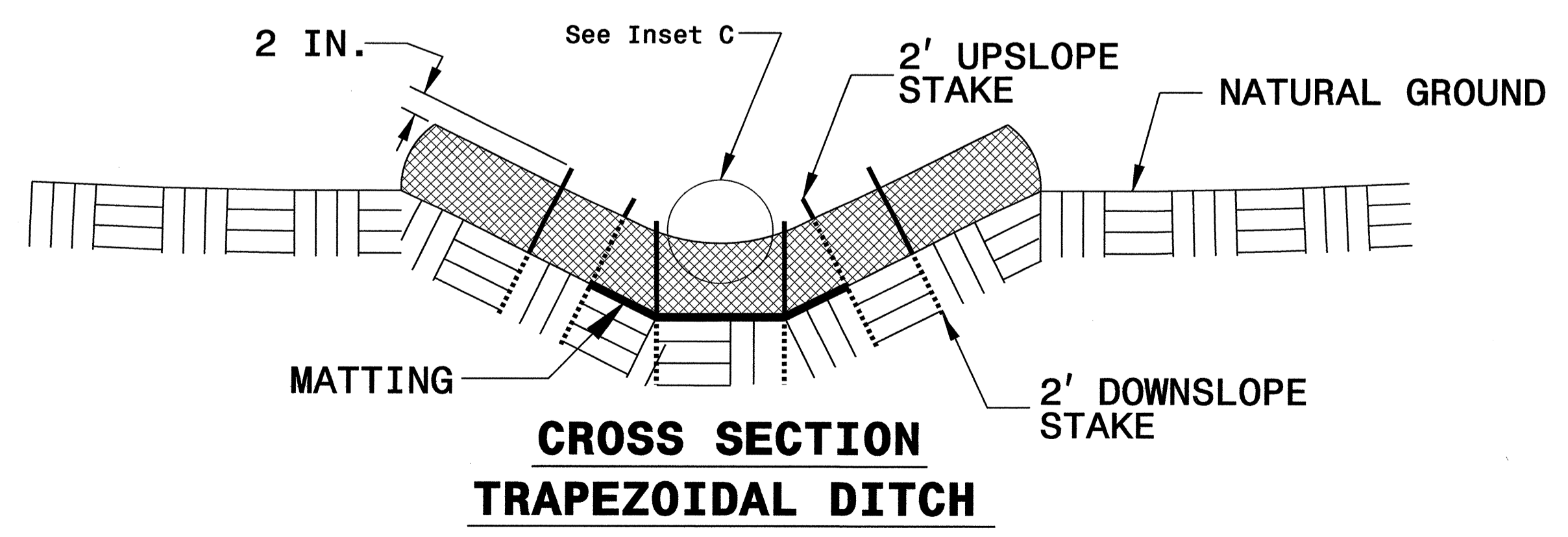
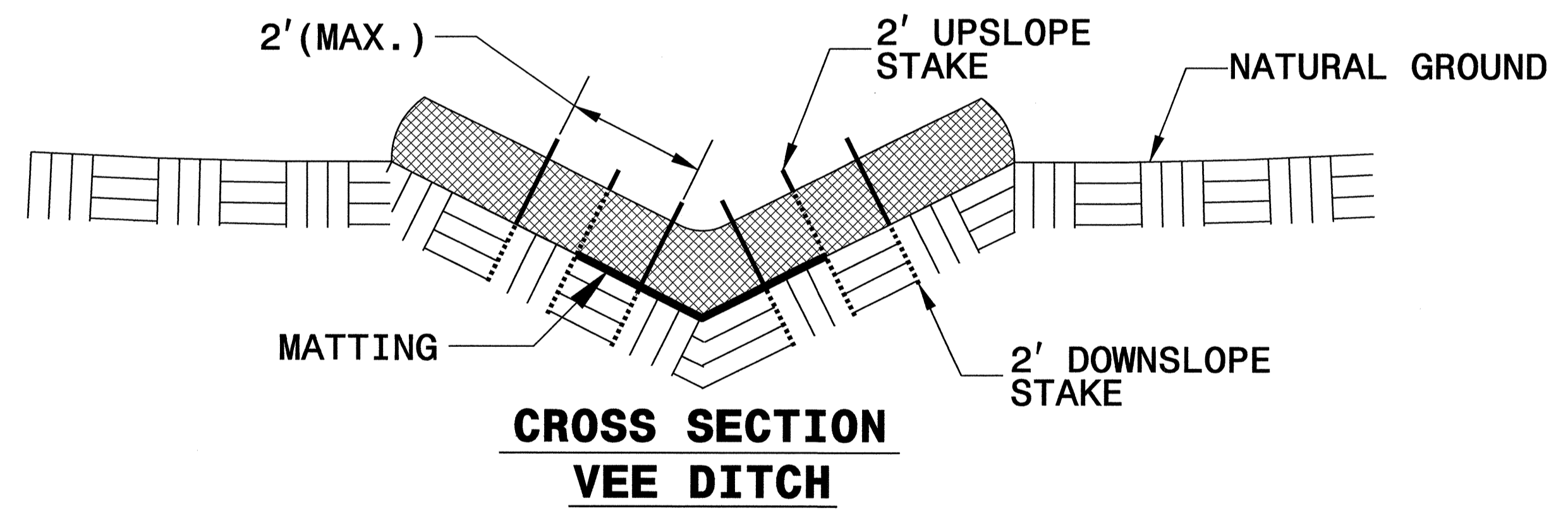
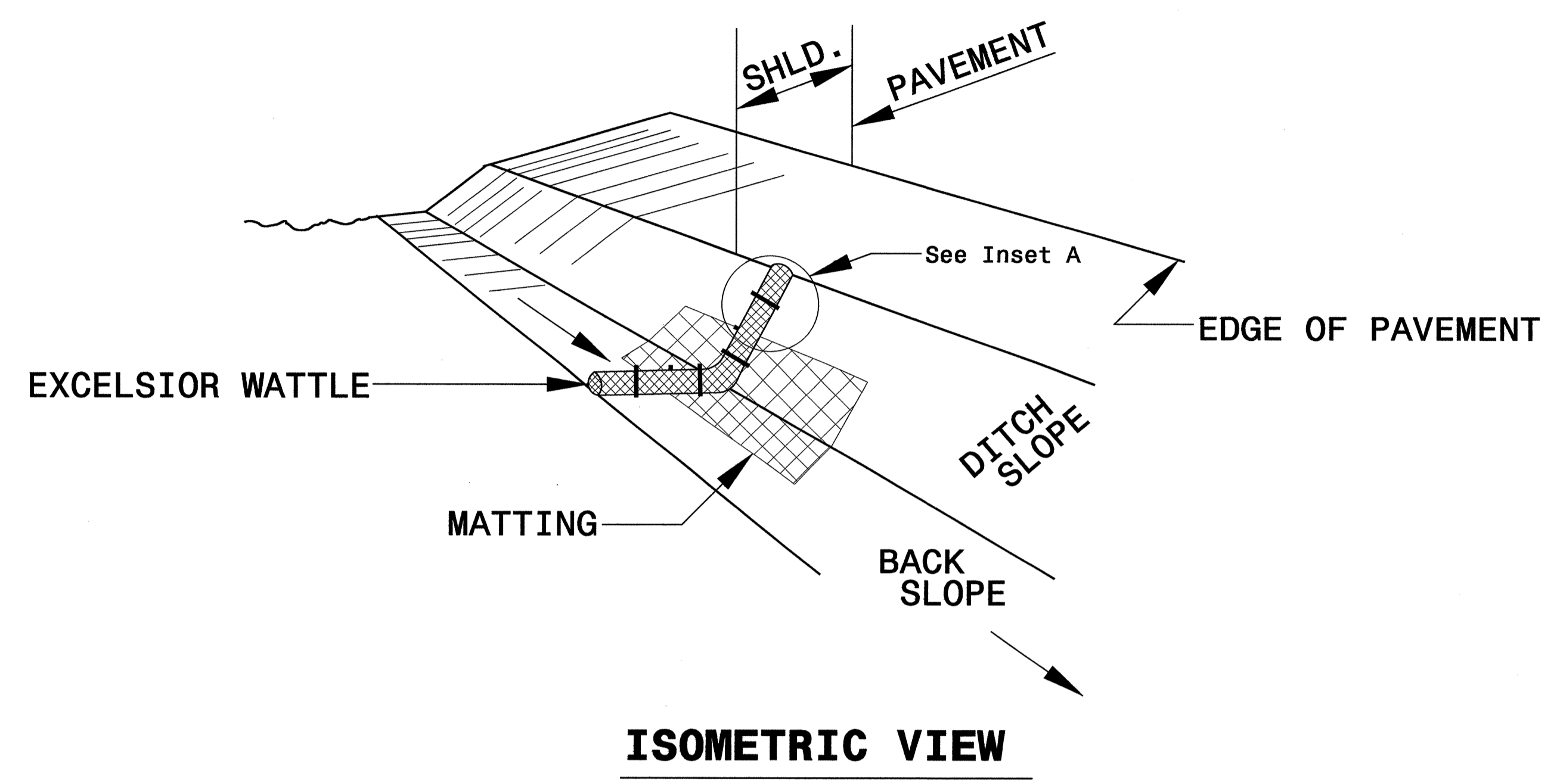
NOTES:

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.

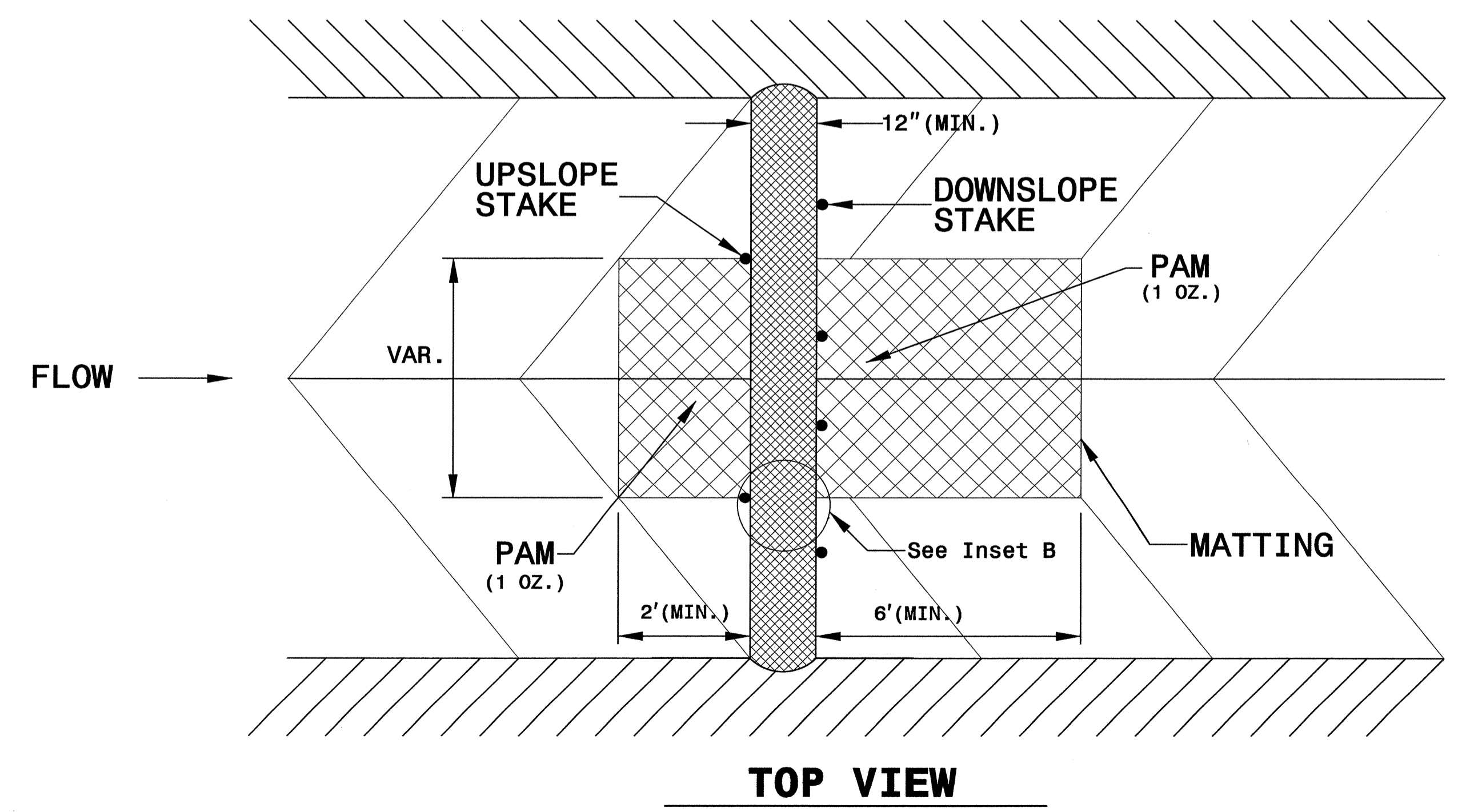
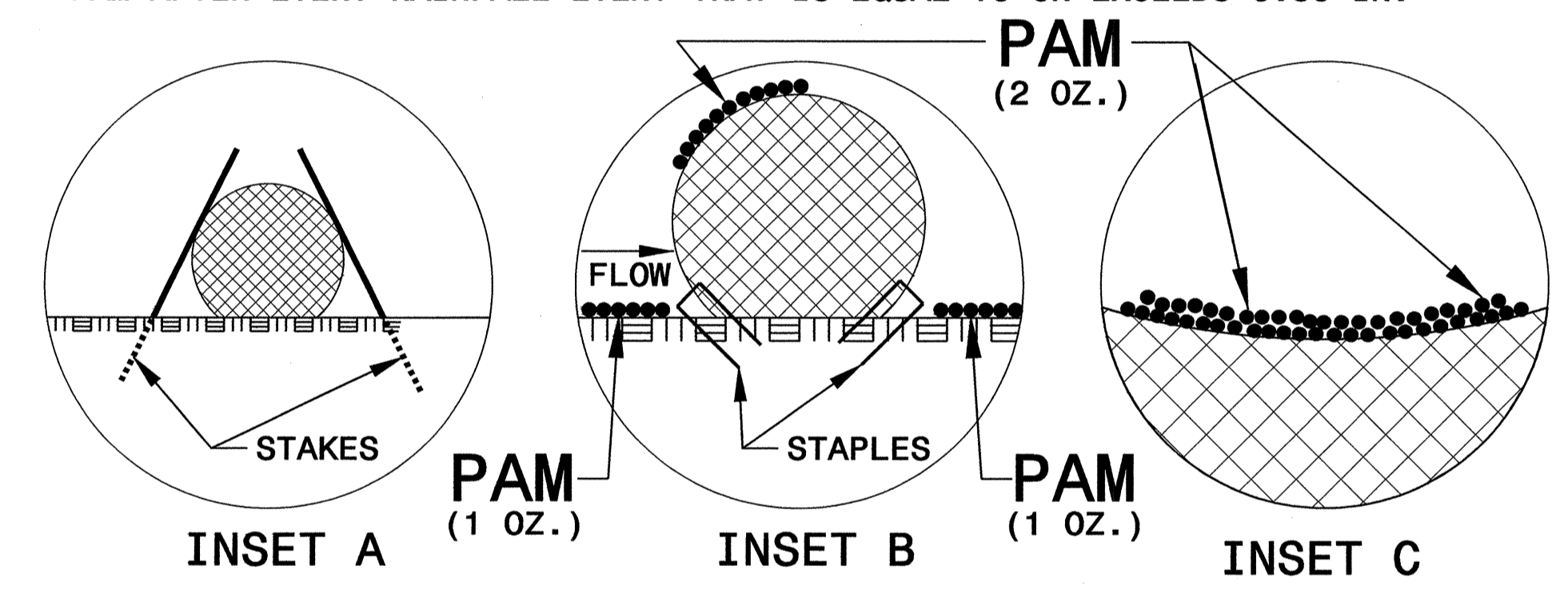
BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

PROJECT REFERENCE NO. U-4011	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

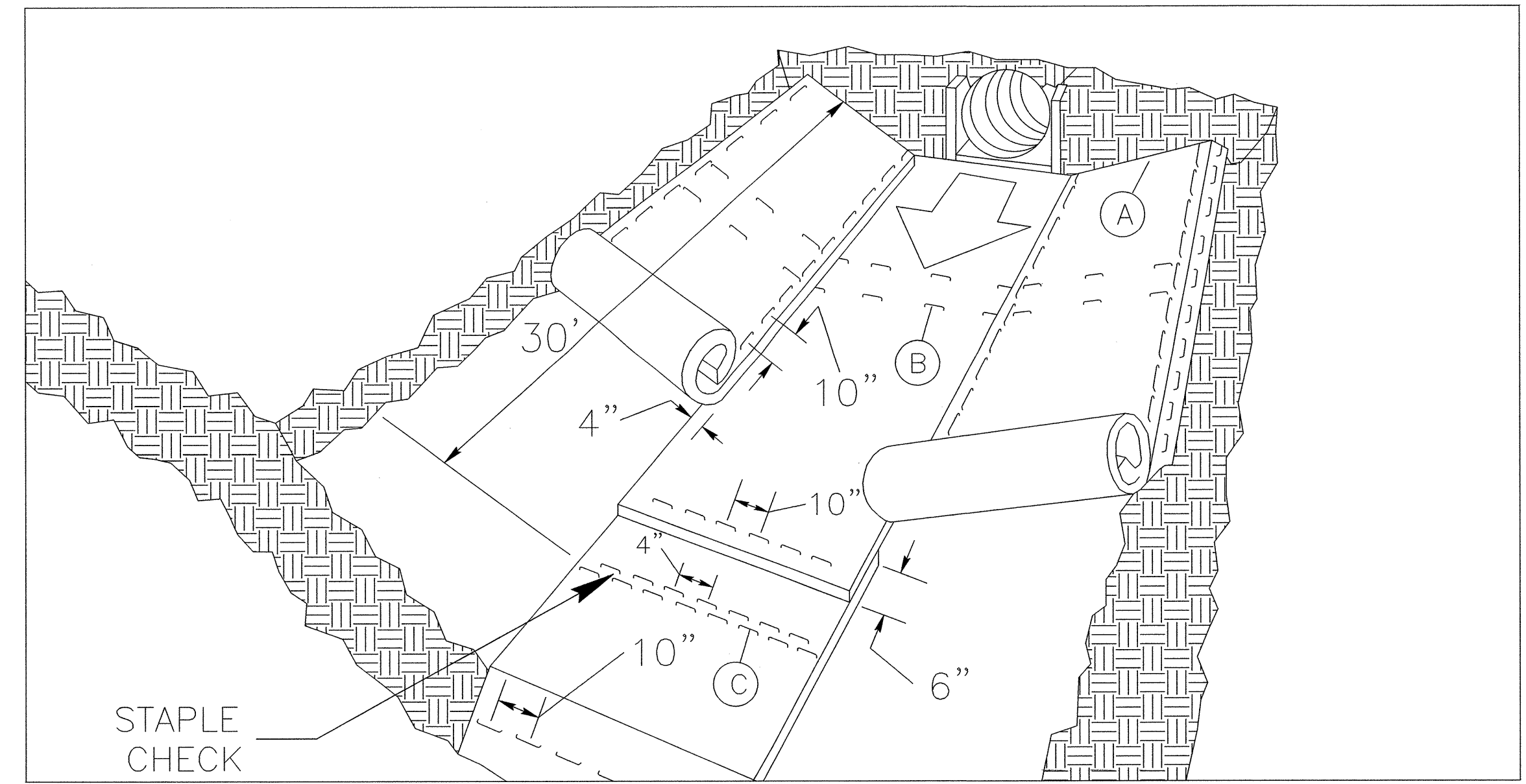


- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 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 EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. U-4011	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

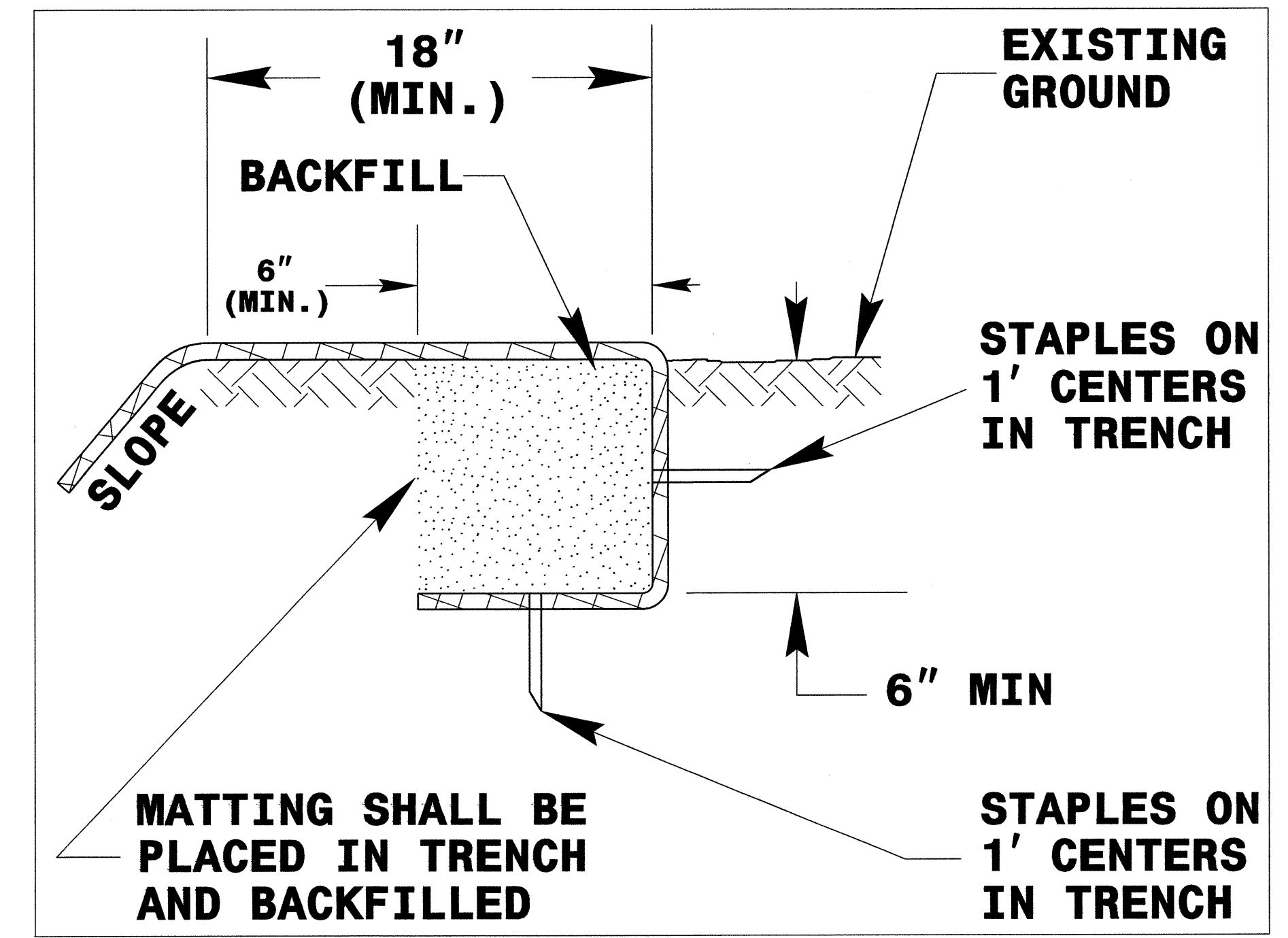
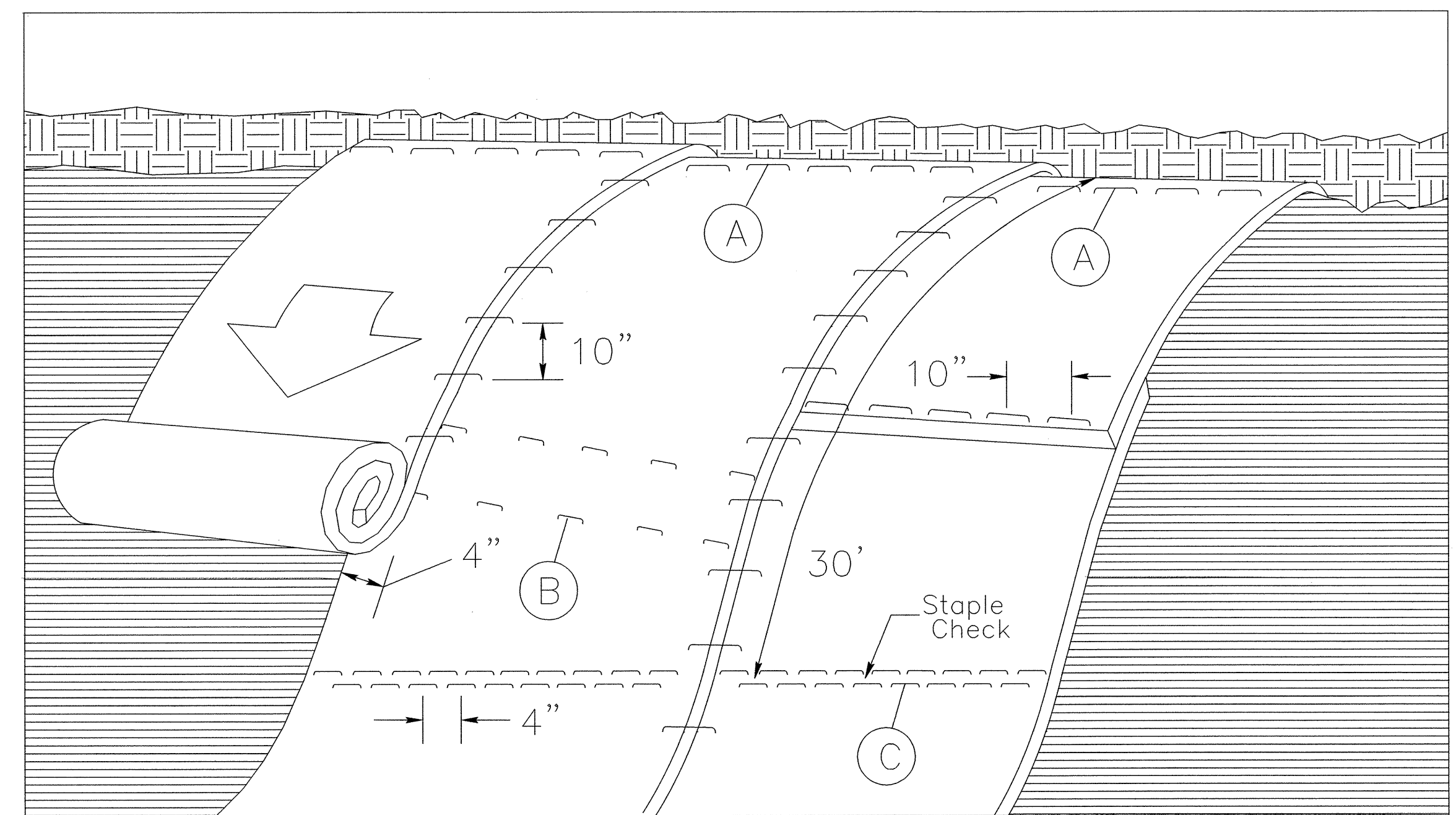


DIAGRAM (A)



MATTING ON SLOPES

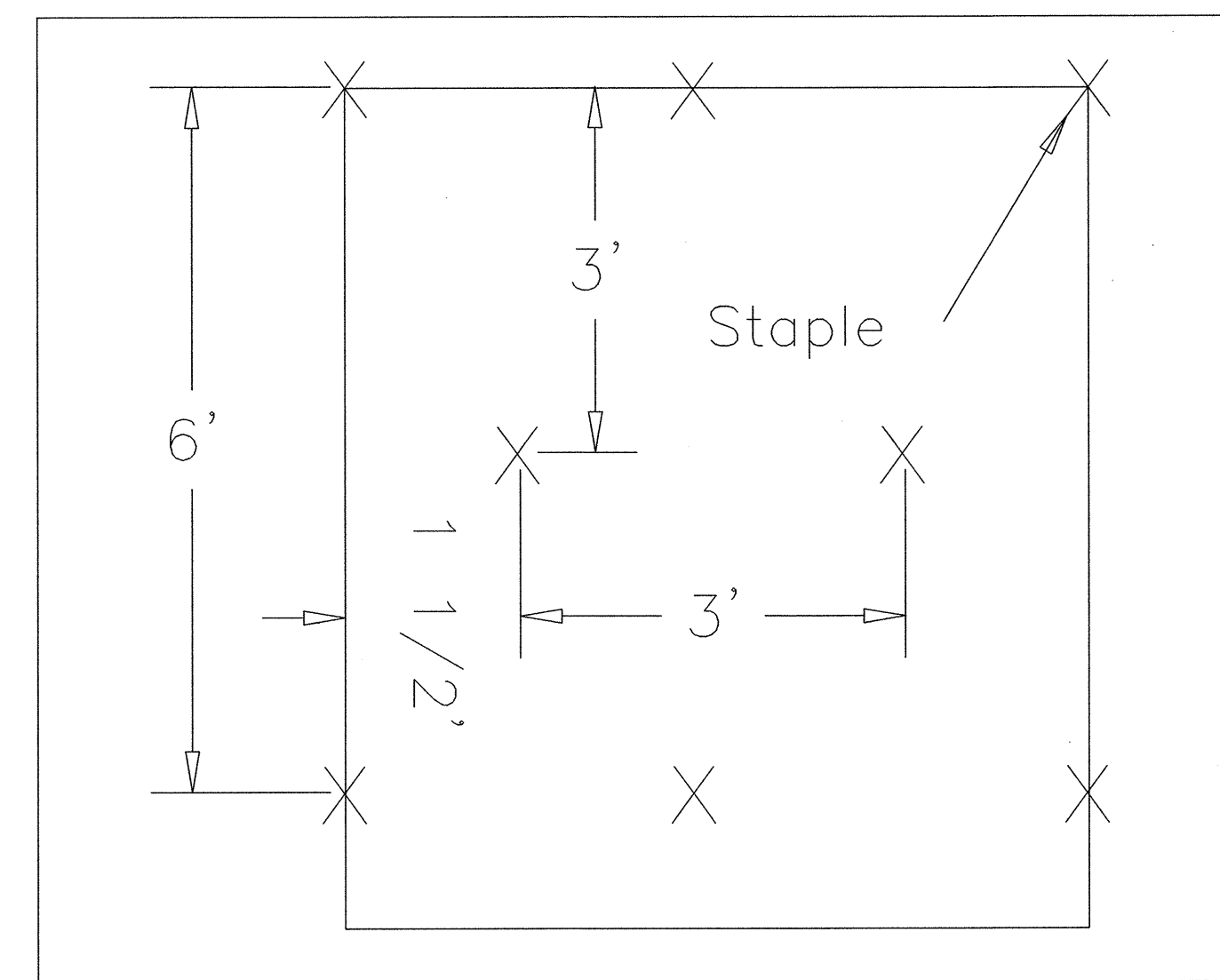


DIAGRAM (B)

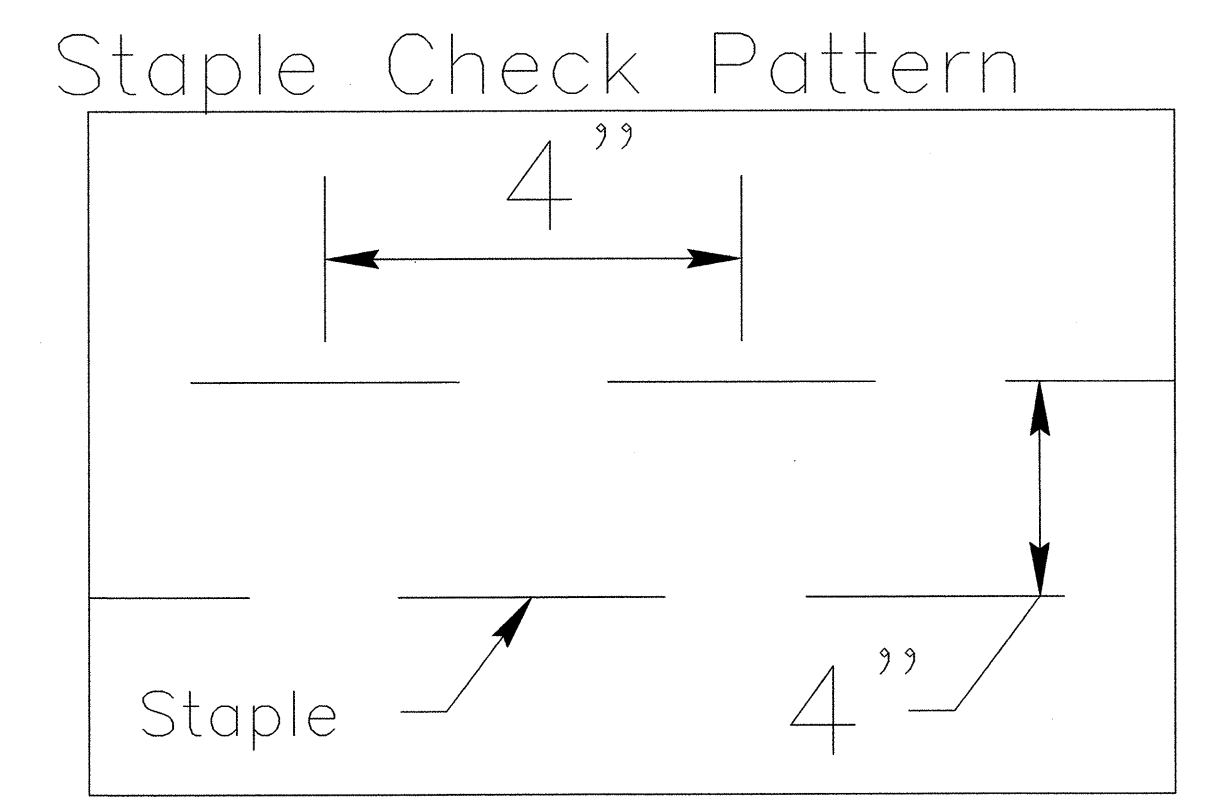


DIAGRAM (C)

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.

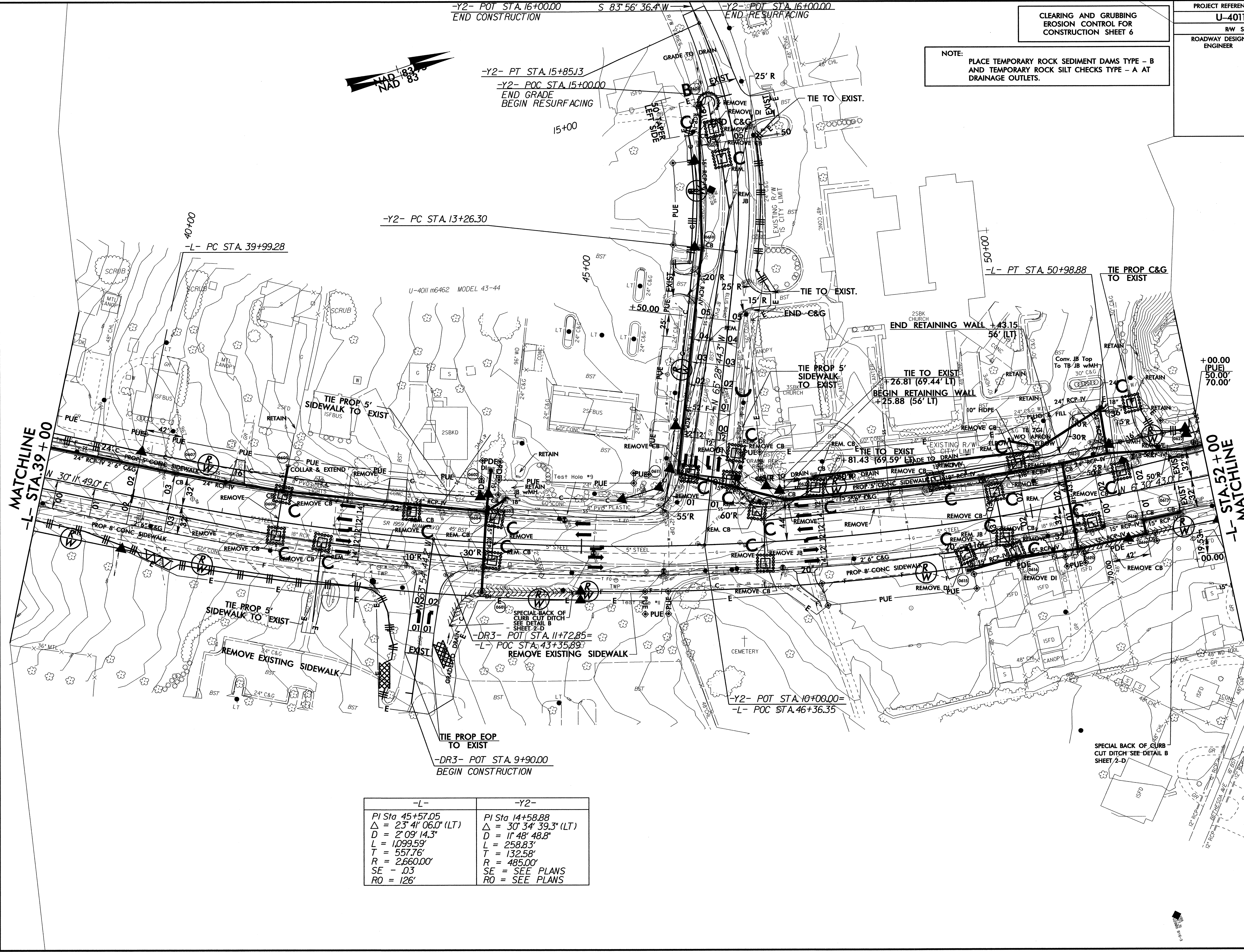
STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

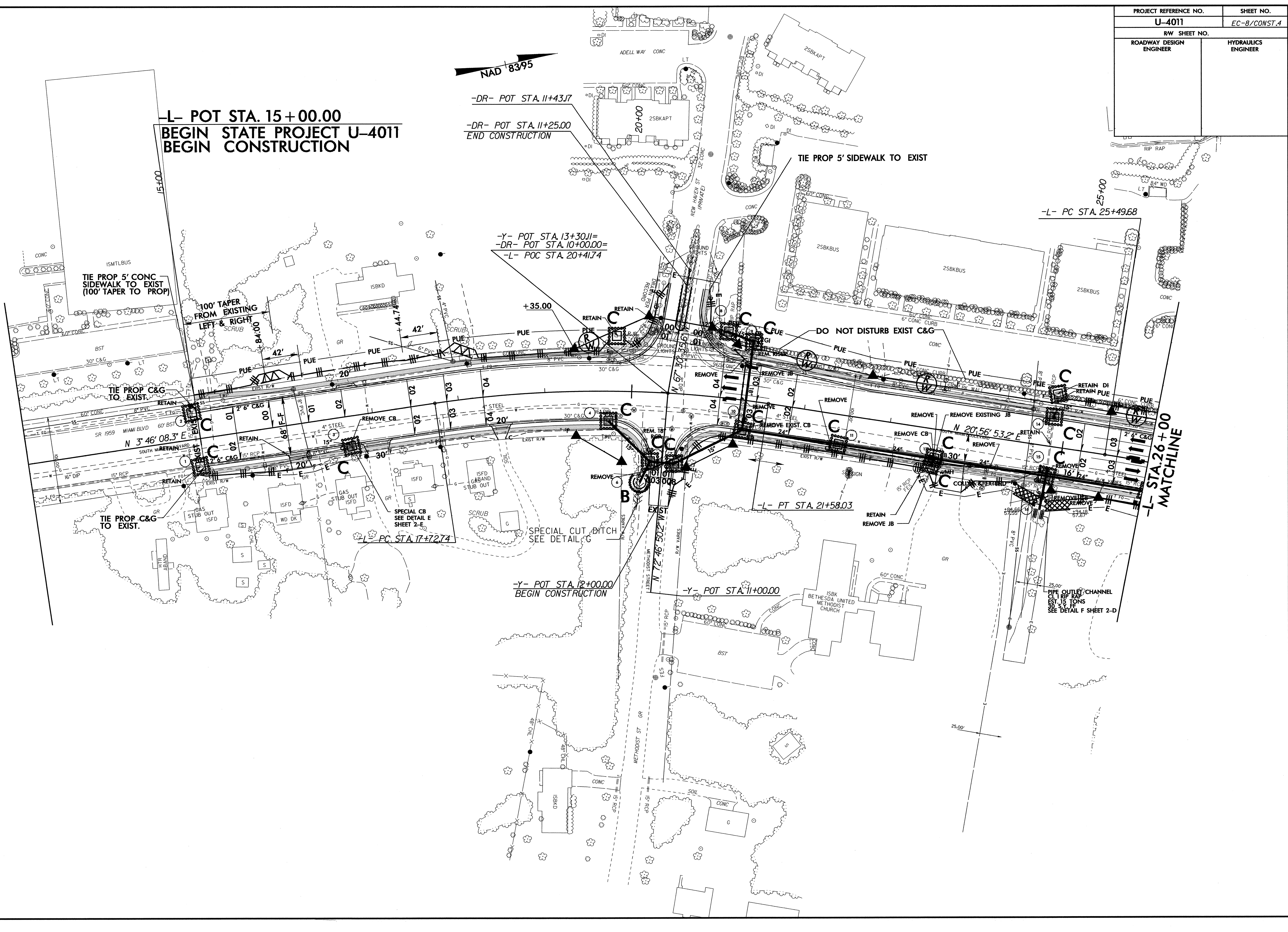
PROJECT REFERENCE NO. U-4011	SHEET NO. EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



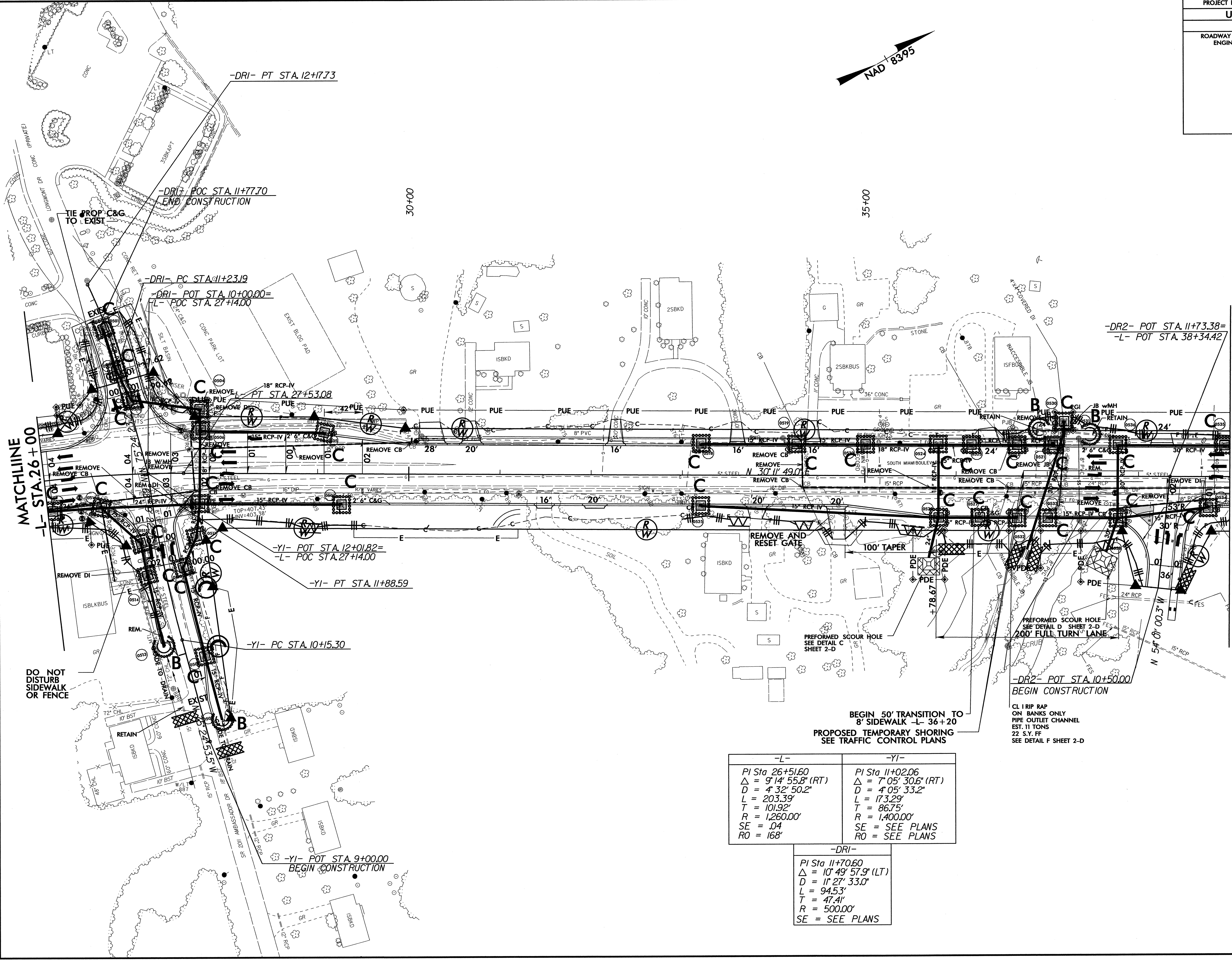
-L-	-Y2-
PI Sta 45+57.05	PI Sta 14+58.88
Δ = 23° 41' 06.0" (LT)	Δ = 30° 34' 39.3" (LT)
D = 2' 09" 14.3"	D = 11' 48" 48.8"
L = 1,099.59'	L = 258.83'
T = 557.76'	T = 132.58'
R = 2,660.00'	R = 485.00'
SE = .03	SE = SEE PLANS
RO = 126'	RO = SEE PLANS

PROJECT REFERENCE NO.	SHEET NO.
U-4011	EC-8/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-4011	EC-9/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE
-L- STA. 26+00

MATCHLINE
-L- STA. 39+00

DO NOT
DISTURB
SIDEWALK
OR FENCE

BEGIN 50' TRANSITION TO
8' SIDEWALK -L- 36+20
PROPOSED TEMPORARY SHORING
SEE TRAFFIC CONTROL PLANS

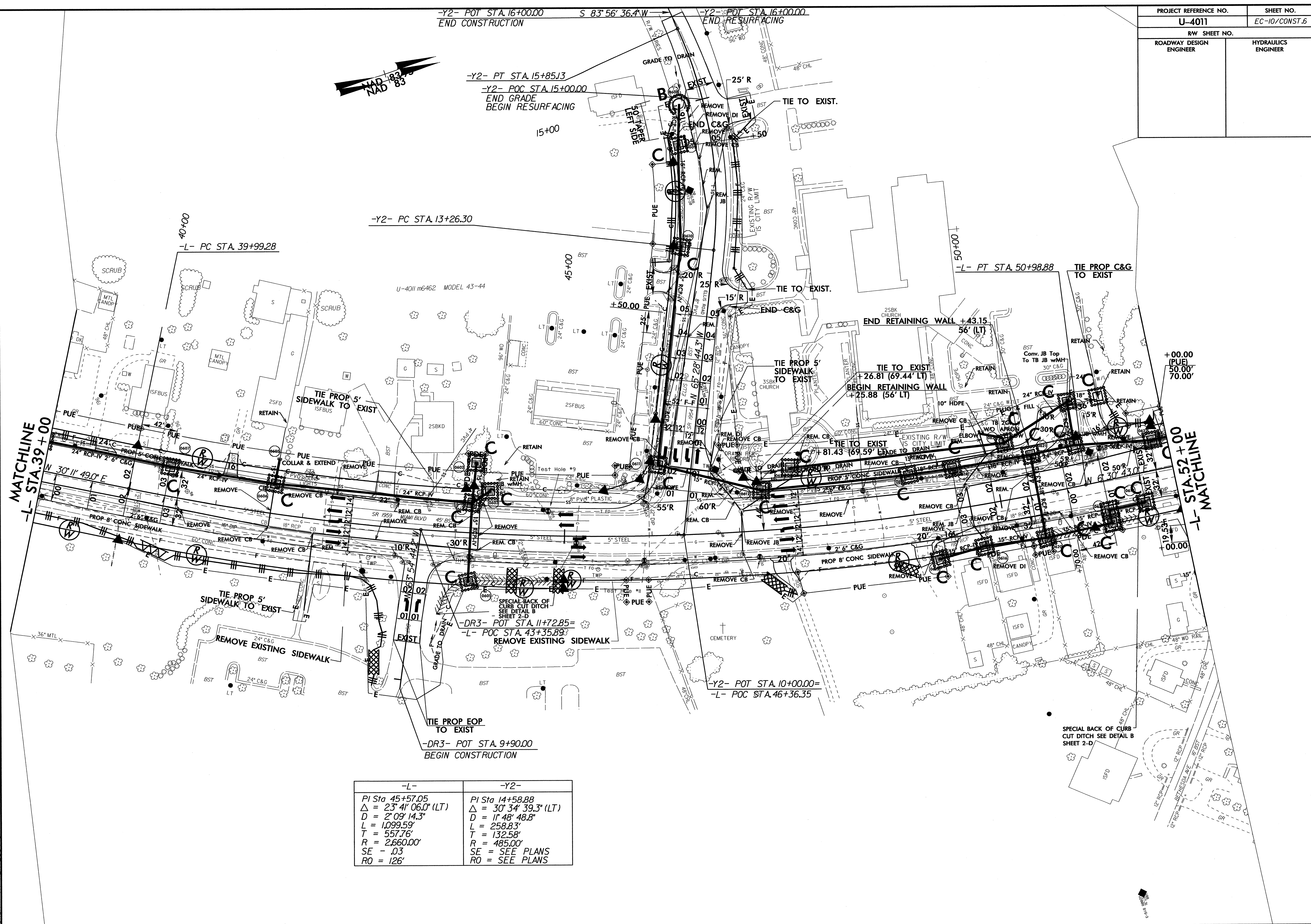
CL 1 RIP RAP
ON BANKS ONLY
PIPE OUTLET CHANNEL
EST. 11 TONS
22 S.Y. FF
SEE DETAIL F SHEET 2-D

-L-	-YI-
PI Sta 26+51.60	PI Sta 11+02.06
$\Delta = 9' 14'' 55.8''$ (RT)	$\Delta = 7' 05'' 30.6''$ (RT)
$D = 4' 32'' 50.2''$	$D = 4' 05'' 33.2''$
$L = 203.39'$	$L = 173.29'$
$T = 101.92'$	$T = 86.75'$
$R = 1,260.00'$	$R = 1,400.00'$
$SE = .04$	$SE = \text{SEE PLANS}$
$RO = 168'$	$RO = \text{SEE PLANS}$

-DRI-
PI Sta 11+70.60
$\Delta = 10' 49'' 57.9''$ (LT)
$D = 11' 27'' 33.0''$
$L = 94.53'$
$T = 47.41'$
$R = 500.00'$
$SE = \text{SEE PLANS}$

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PROJECT REFERENCE NO.	SHEET NO.
U-4011	EC-10/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



-Y2- POT STA. 16+00.00 S 83° 56' 36.4" W
 END CONSTRUCTION END RESURFACING

-Y2- PT STA. 15+85.13
 -Y2- POC STA. 15+00.00
 END GRADE
 BEGIN RESURFACING

-Y2- PC STA. 13+26.30

-L- PC STA. 39+99.28

-L- PT STA. 50+98.88

MATCHLINE
 -L- STA. 39+00

-L- STA. 52+00
 MATCHLINE

-L-	-Y2-
PI Sta 45+57.05	PI Sta 14+58.88
$\Delta = 23^\circ 41' 06.0"$ (LT)	$\Delta = 30^\circ 34' 39.3"$ (LT)
$D = 2^\circ 09' 14.3"$	$D = 1^\circ 48' 48.8"$
$L = 1,099.59'$	$L = 258.83'$
$T = 557.76'$	$T = 132.58'$
$R = 2,660.00'$	$R = 485.00'$
SE = .03	SE = SEE PLANS
RO = 126'	RO = SEE PLANS

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