

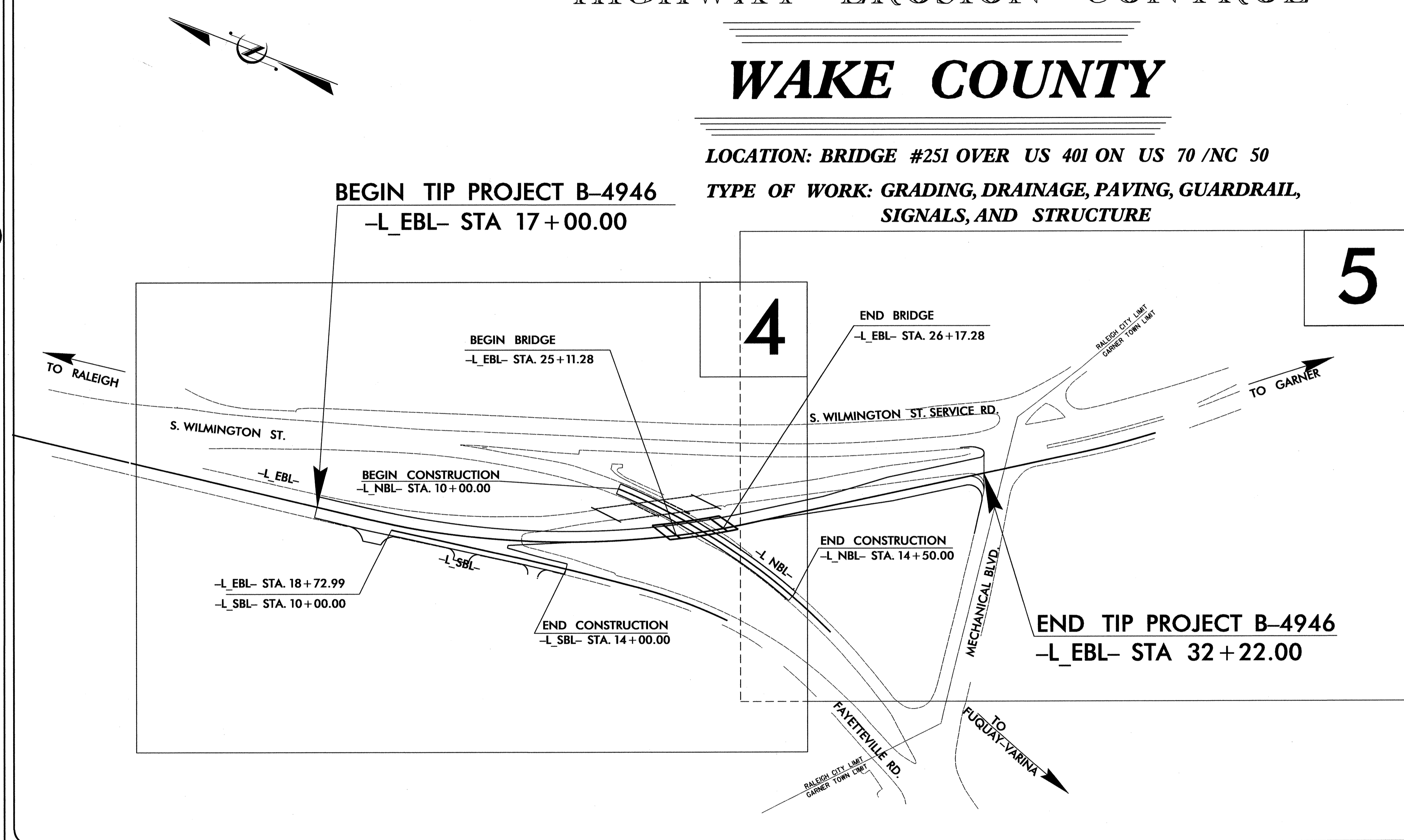
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4946	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

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

LOCATION: BRIDGE #251 OVER US 401 ON US 70 /NC 50

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

**TIP PROJECT: B-4946**



**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1650.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III
1606.01	Special Sediment Control Fence	III
1622.01	Temporary Berms and Slope Drains	TD
1630.02	Silt Basin Type B	Silt Basin
1633.01	Temporary Rock Silt Check Type-A	Rock Silt Check
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	Rock Silt Check with Matting
1633.02	Temporary Rock Silt Check Type-B	Rock Silt Check
	Wattle / Coir Fiber Wattle	Wattle
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	Wattle with Matting
1634.01	Temporary Rock Sediment Dam Type-A	Rock Sediment Dam
1634.02	Temporary Rock Sediment Dam Type-B	Rock Sediment Dam
1635.01	Rock Pipe Inlet Sediment Trap Type-A	Rock Pipe Inlet
1635.02	Rock Pipe Inlet Sediment Trap Type-B	Rock Pipe Inlet
1630.04	Stilling Basin	Stilling Basin
1630.06	Special Stilling Basin	Special Stilling Basin
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	Skimmer Basin
	Tiered Skimmer Basin	Tiered Skimmer Basin
	Infiltration 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.

**GRAPHIC SCALE**

0

PLANS

0

PROFILE (HORIZONTAL)

0

PROFILE (VERTICAL)

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

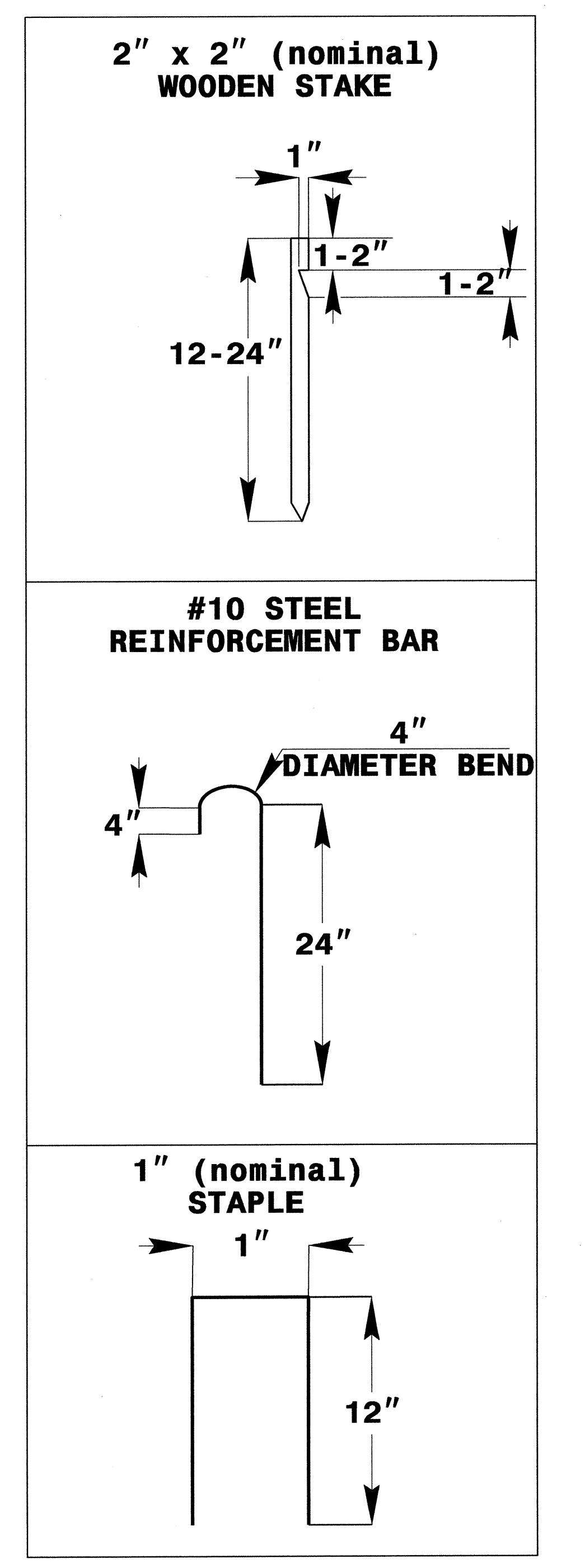
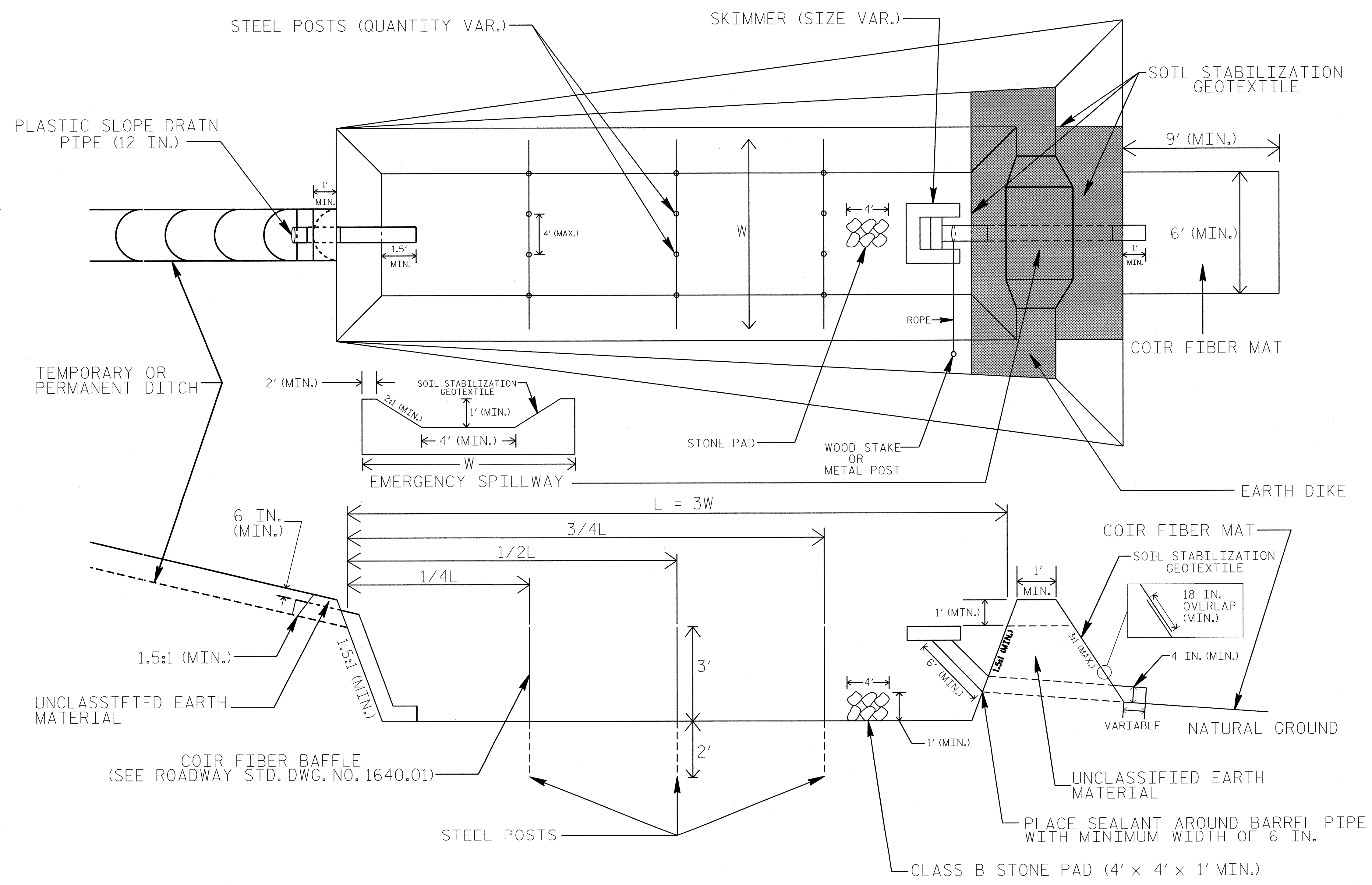
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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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PROJECT REFERENCE NO. B-4946	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SKIMMER BASIN WITH BAFFLES DETAIL

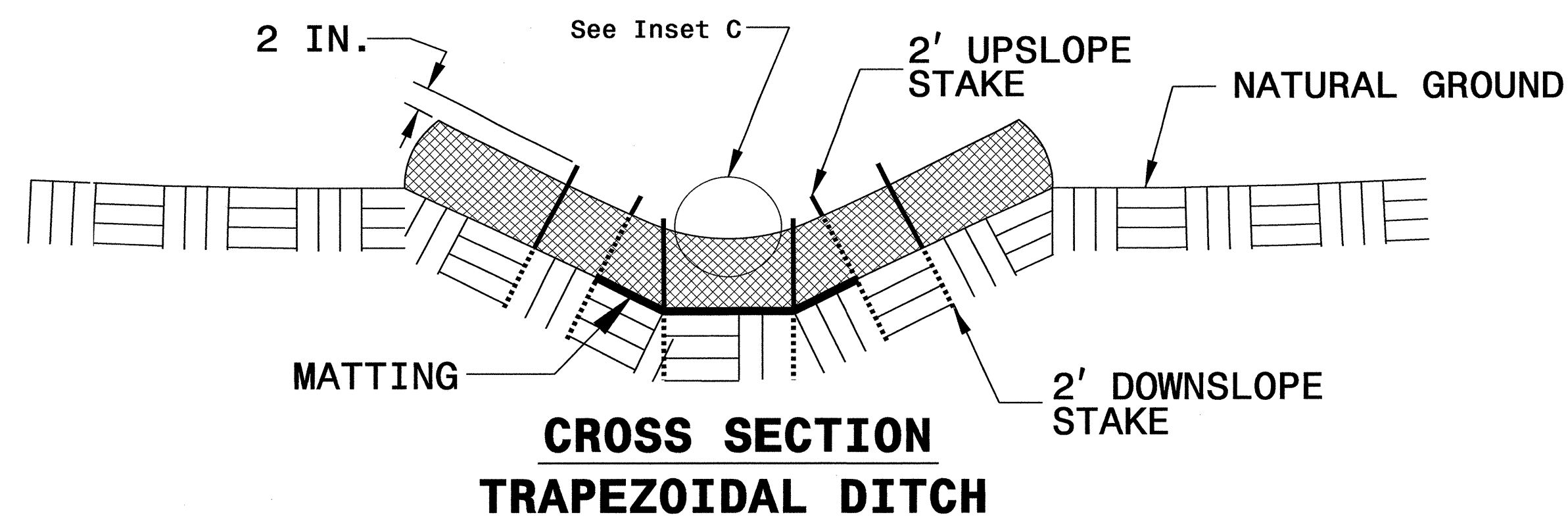
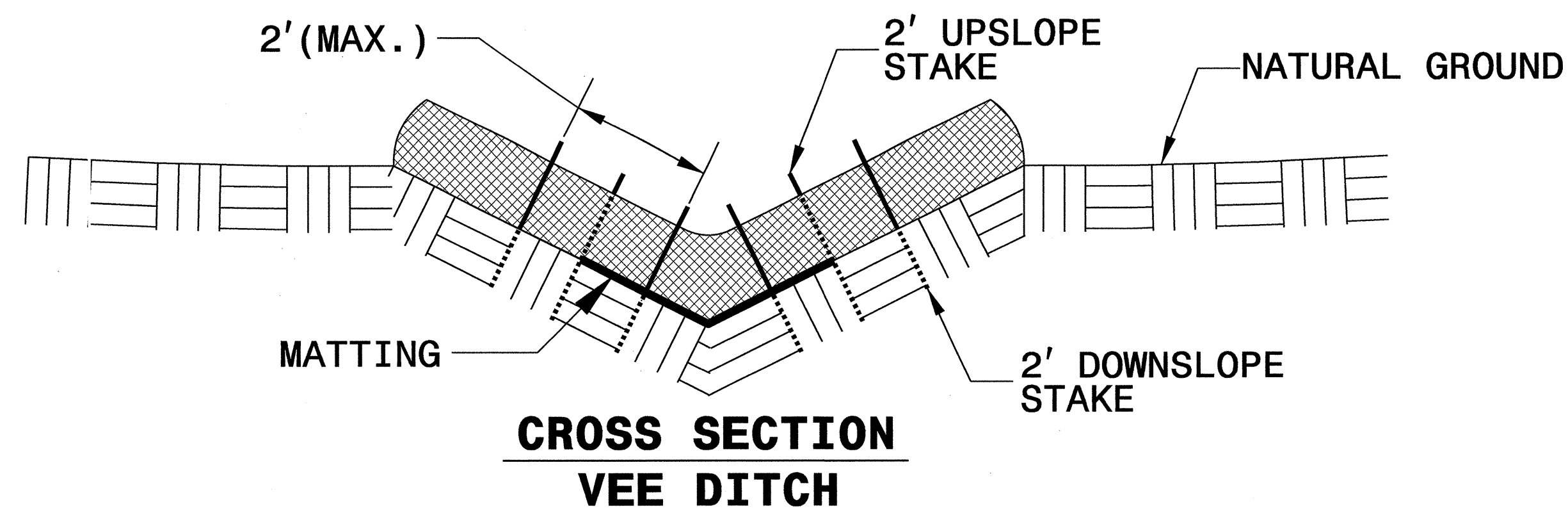
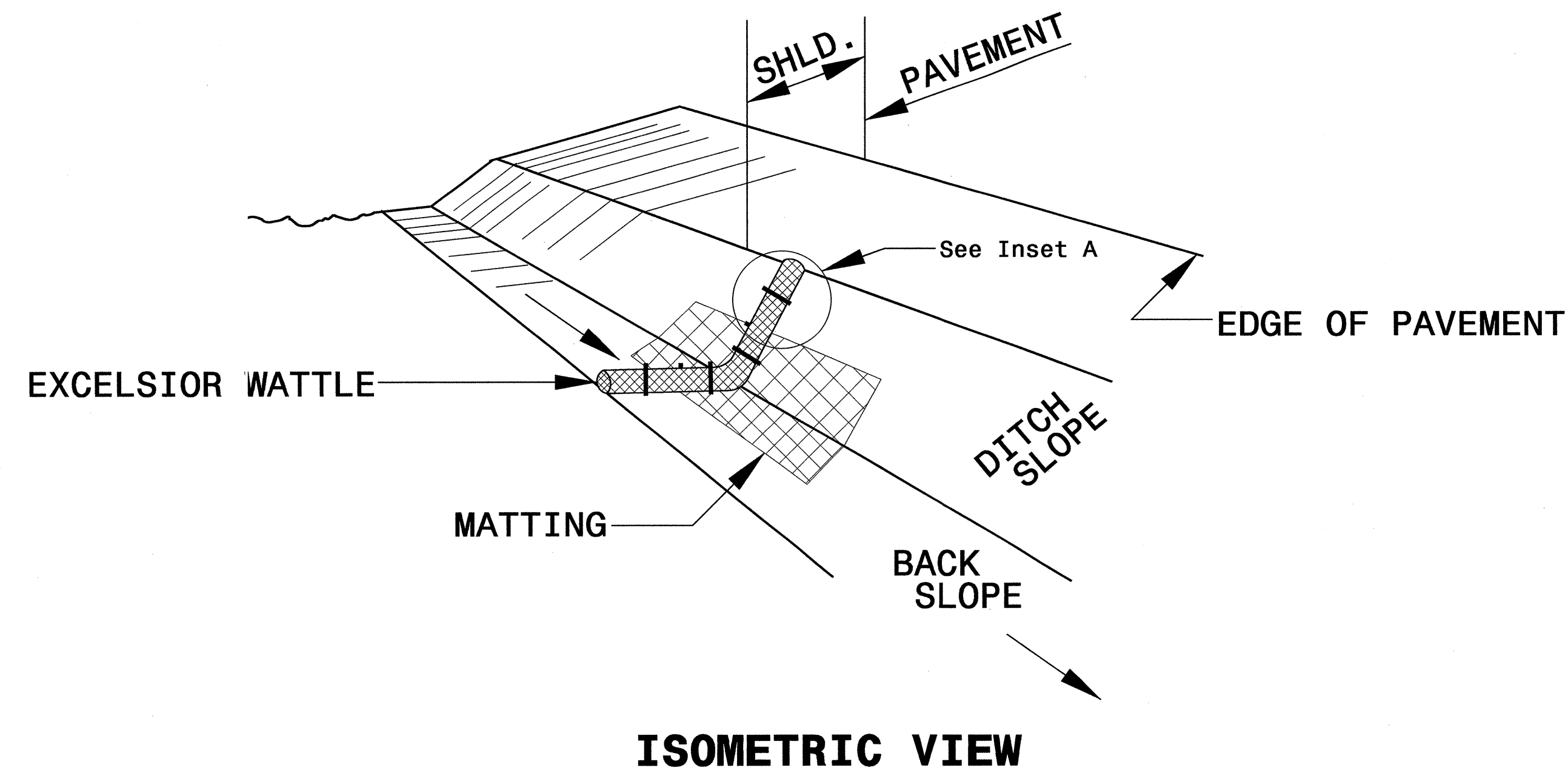


- NOTES**
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
  2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
  3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
  4. DETERMINE EMERGENCY SPILLWAY WEIR LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.
  5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
  6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).
- NOT TO SCALE

## COIR FIBER MAT ANCHOR OPTIONS

PROJECT REFERENCE NO. B-4946	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.

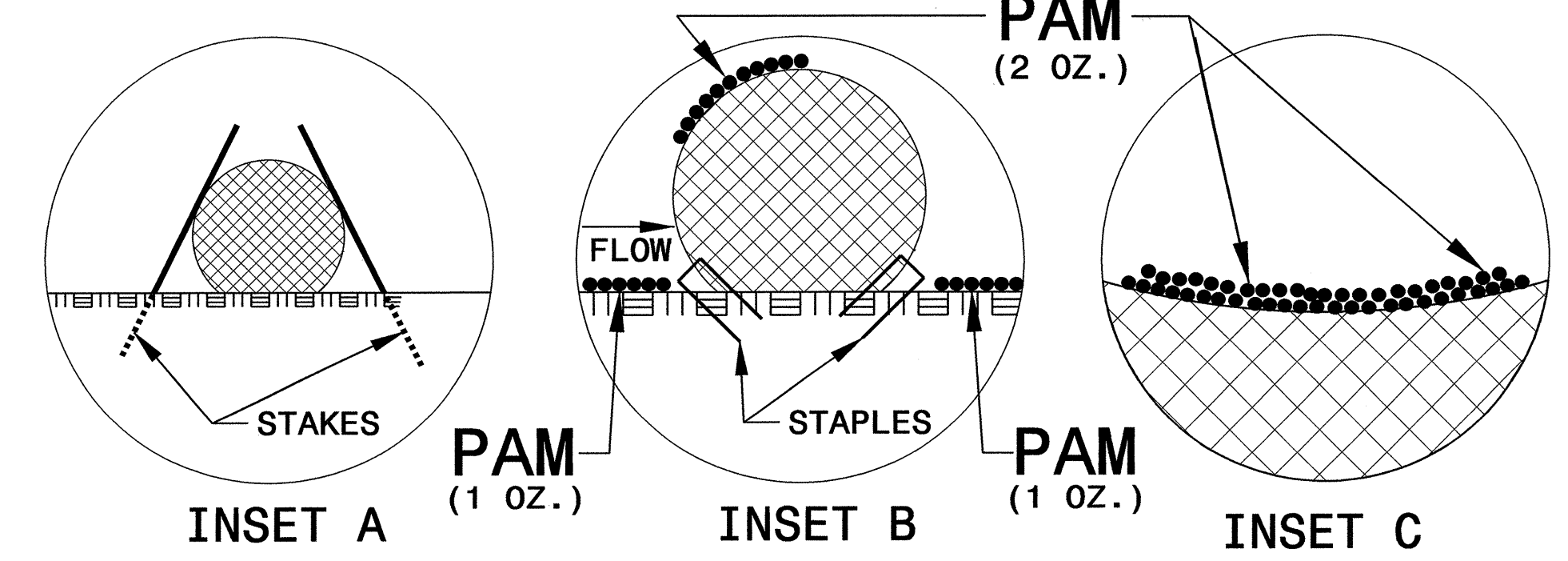
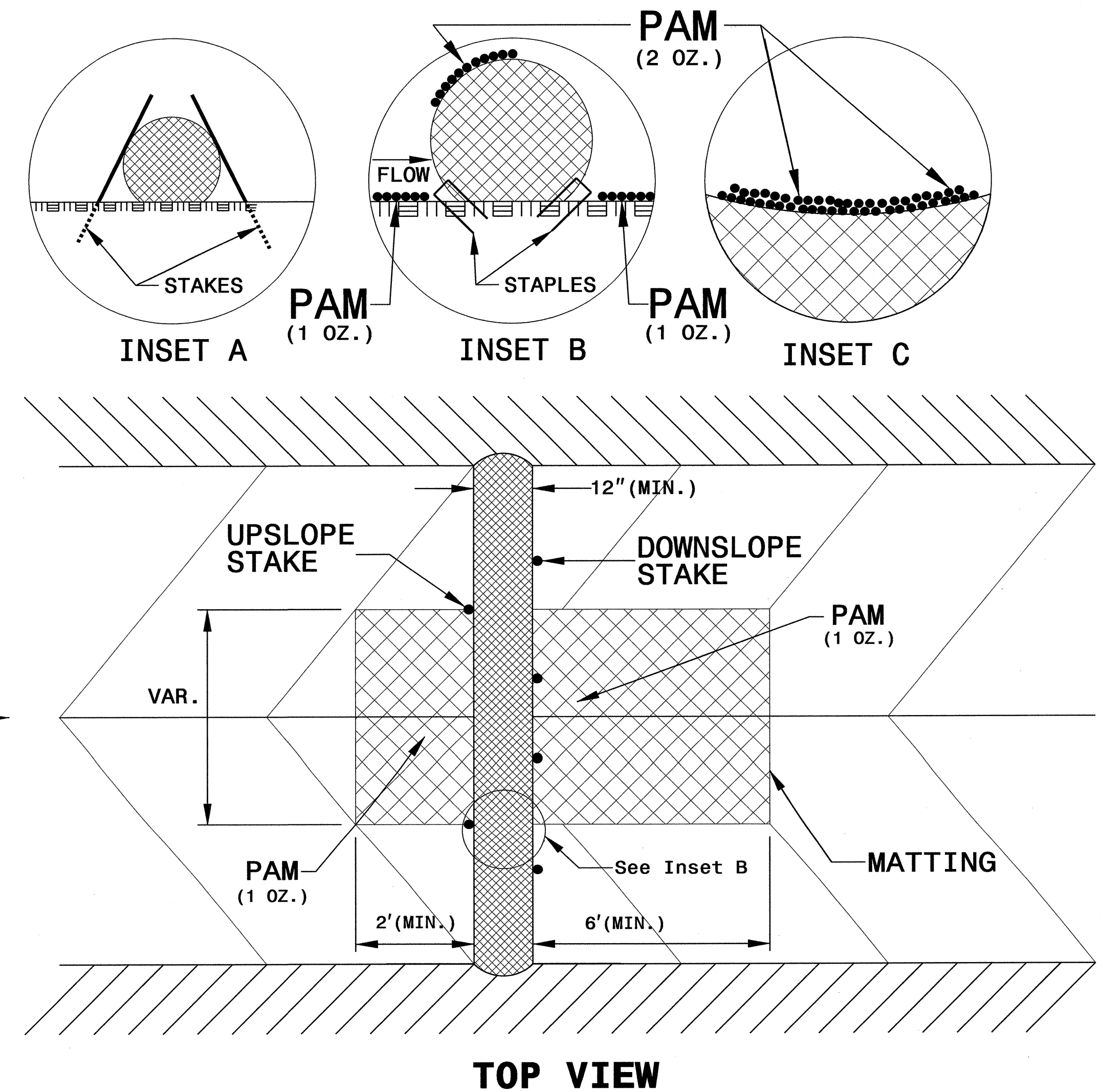
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

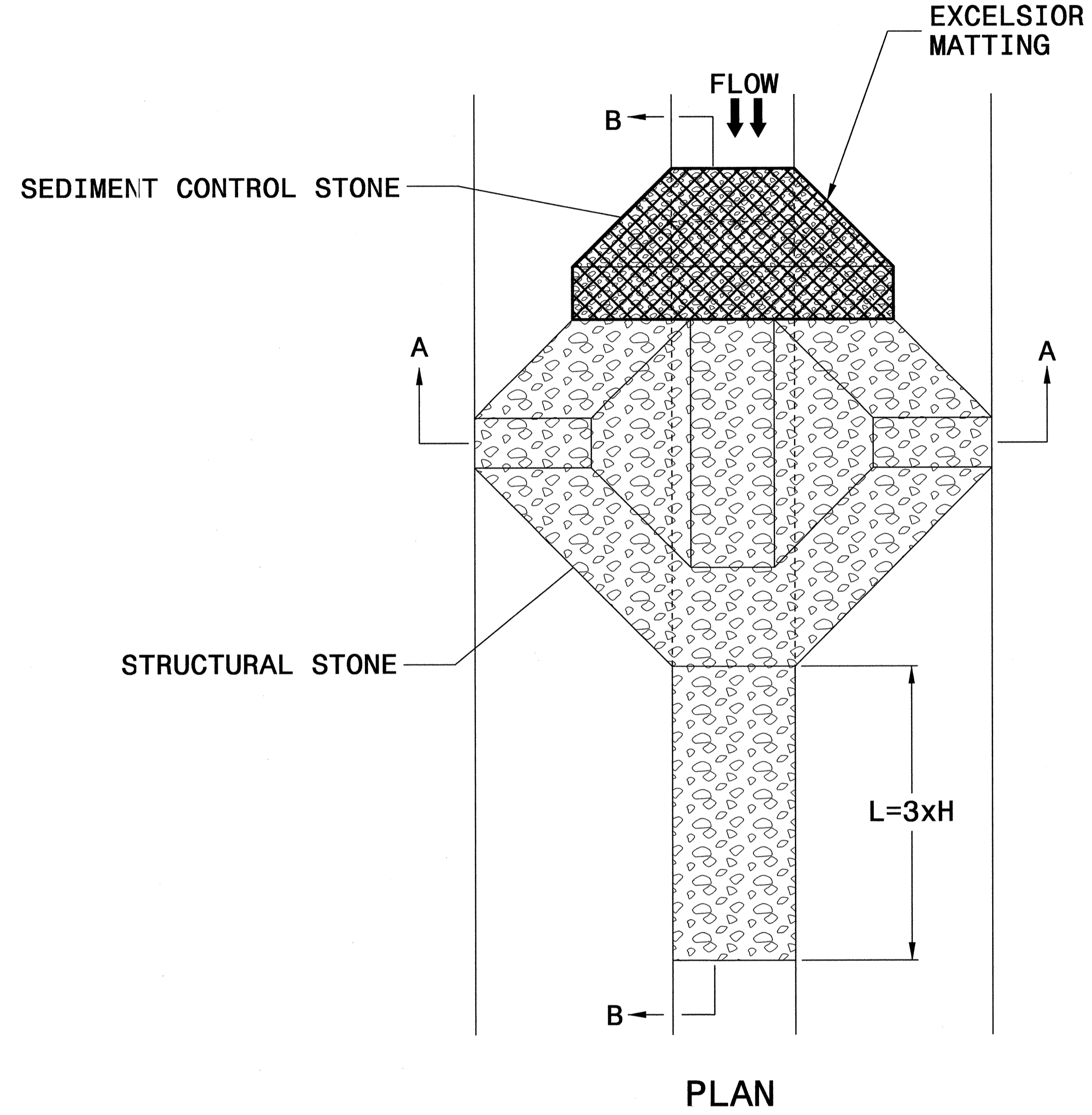
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON 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-4946	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

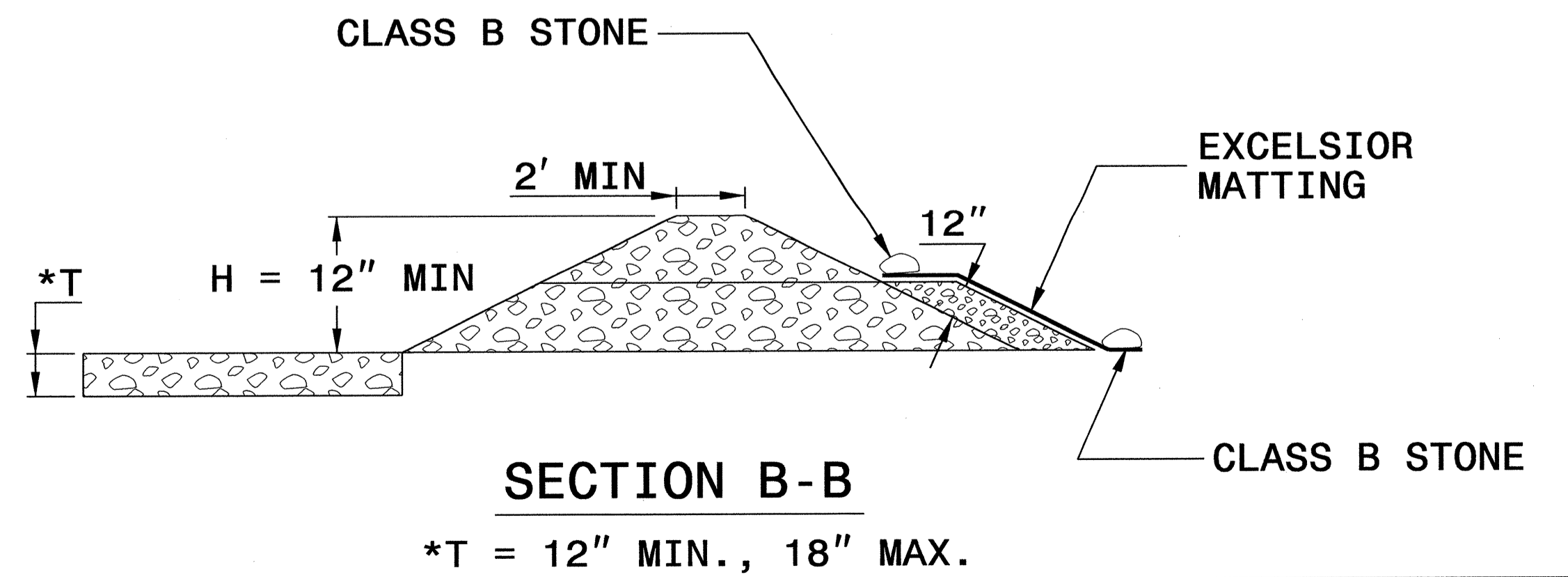
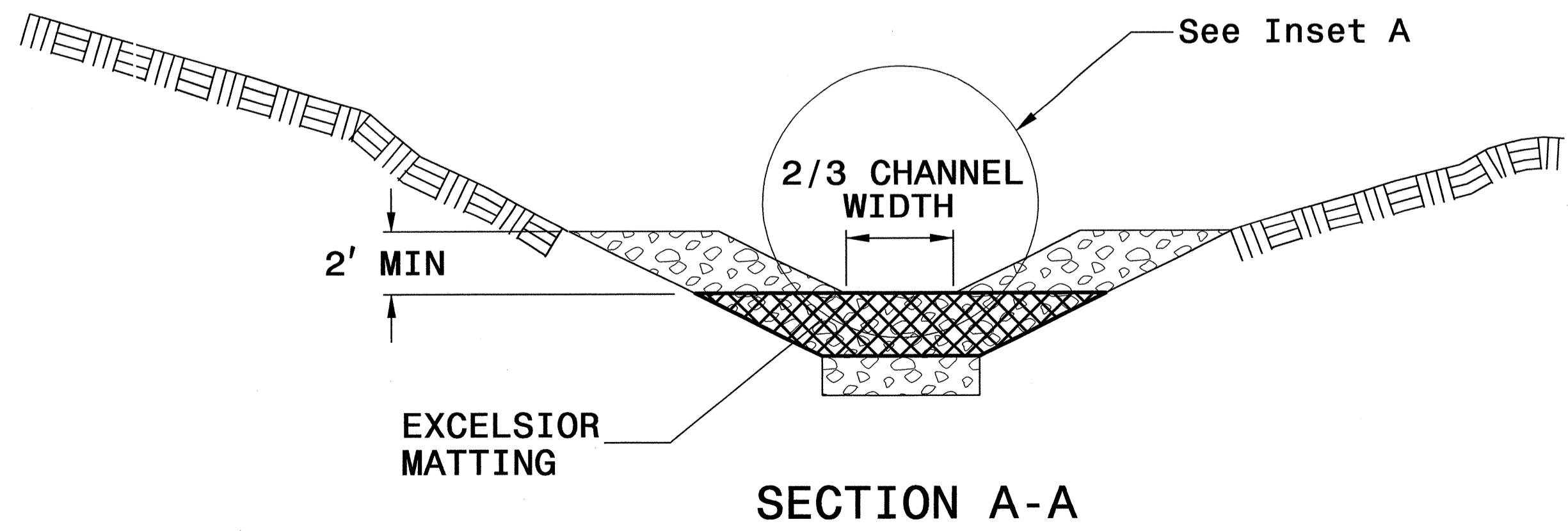
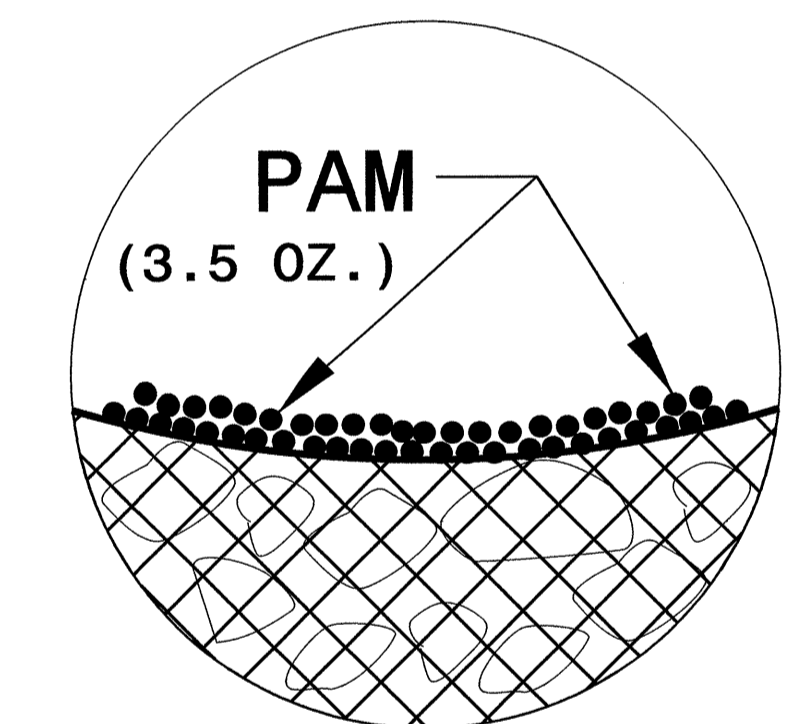


## NOTES

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.



NOT TO SCALE



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>B-4946</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# ***SOIL STABILIZATION TIMEFRAMES***

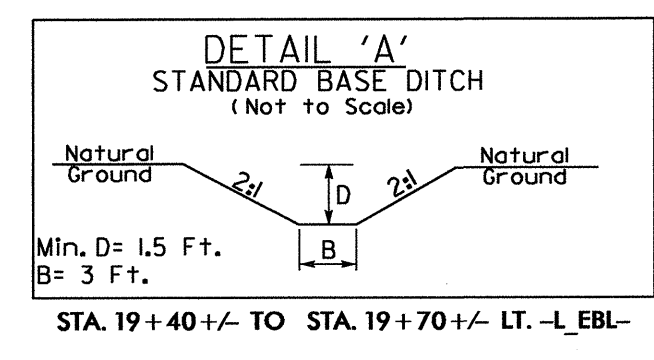
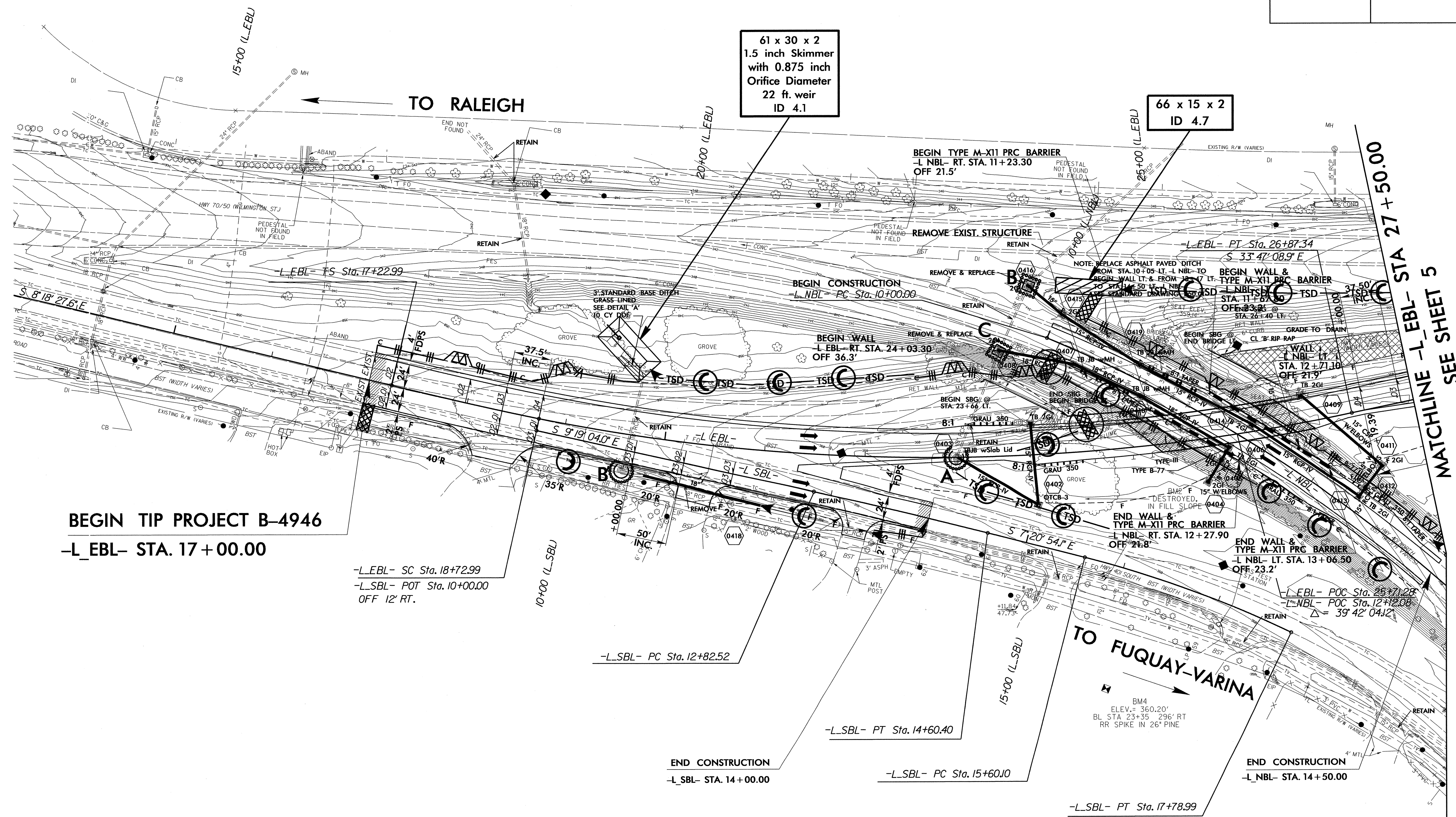
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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. B-4946	SHEET NO. EC-04/CONST.04
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.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

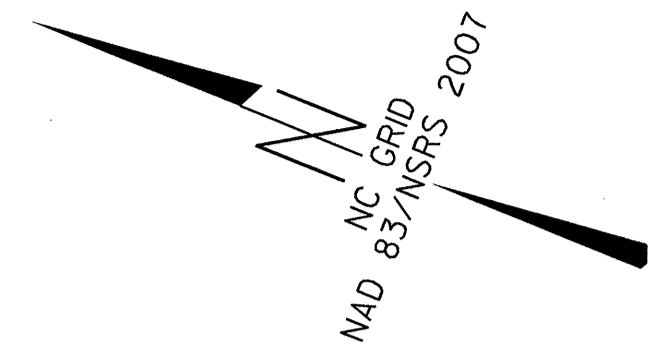
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REVISIONS  
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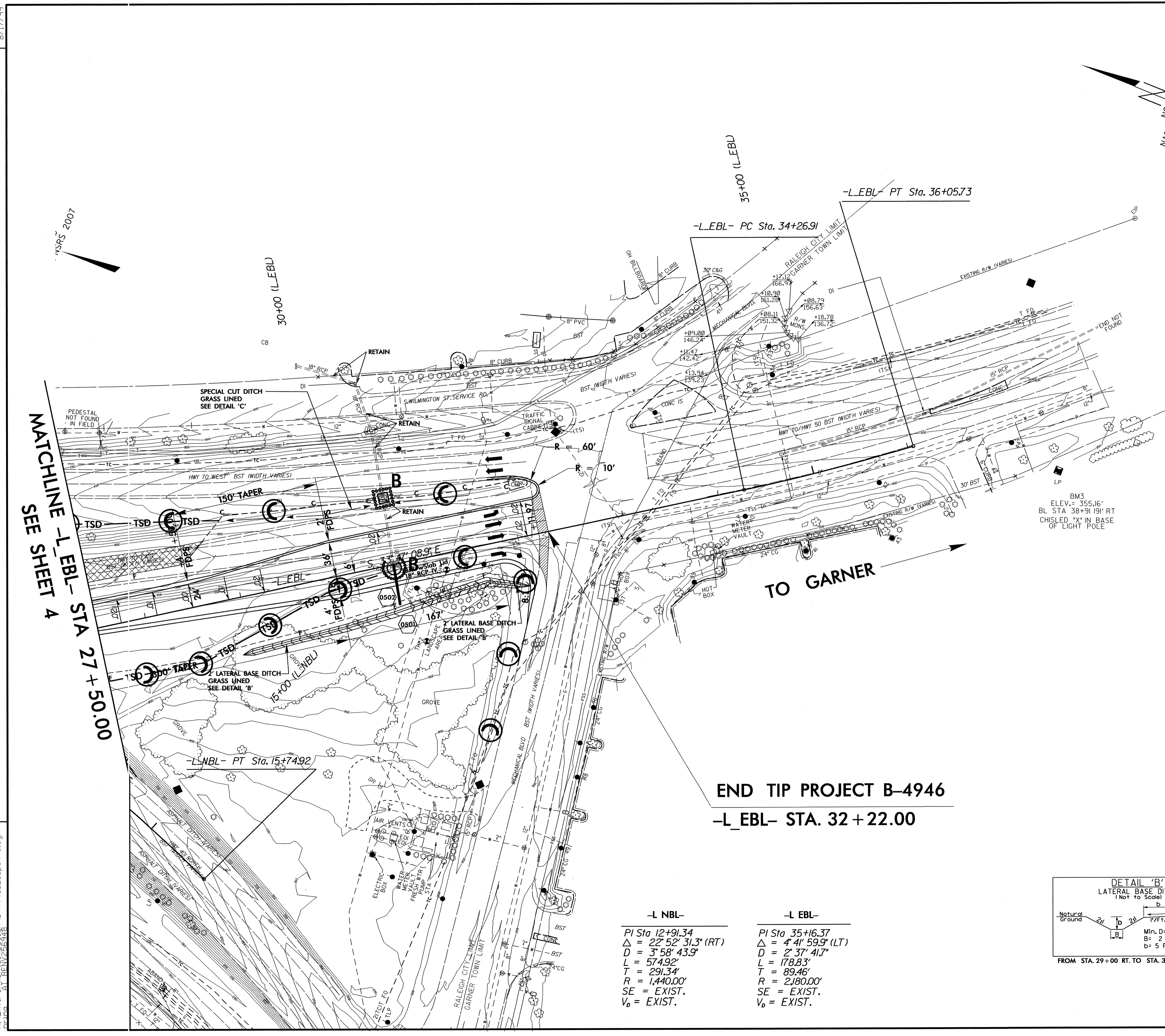
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PROJECT REFERENCE NO.	SHEET NO.
B-4946	EC-05/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5



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



REVISIONS

MATCHLINE -L\_EBL- STA 27 + 50.00  
SEE SHEET 4

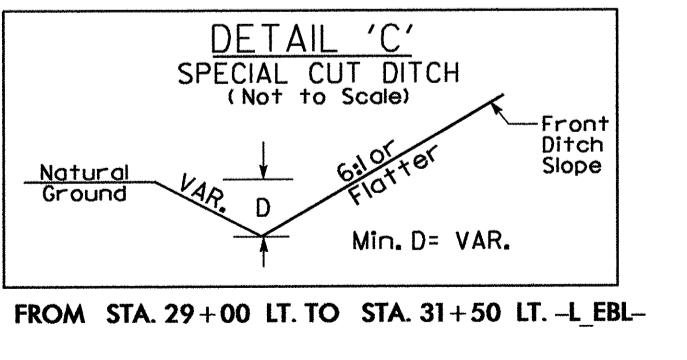
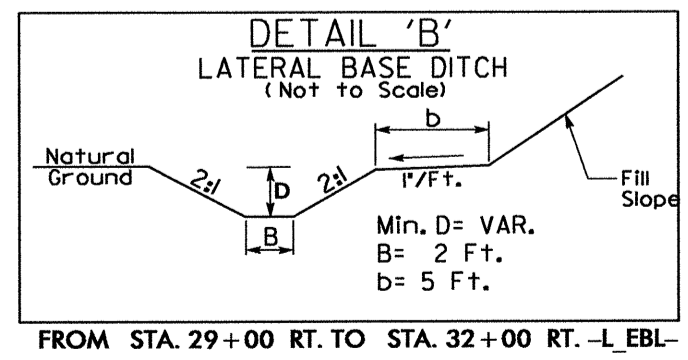
END TIP PROJECT B-4946  
-L\_EBL- STA. 32 + 22.00

-L NBL-

PI Sta 12+91.34  
Δ = 22° 52' 31.3" (RT)  
D = 3' 58" 43.9"  
L = 574.92'  
T = 291.34'  
R = 1,440.00'  
SE = EXIST.  
V<sub>0</sub> = EXIST.

-L EBL-

PI Sta 35+16.37  
Δ = 4° 41' 59.9" (LT)  
D = 2' 37" 41.7"  
L = 178.83'  
T = 89.46'  
R = 2,180.00'  
SE = EXIST.  
V<sub>0</sub> = EXIST.



PAVEMENT REMOVAL

SEE SHEETS 6 & 7  
FOR PROFILE

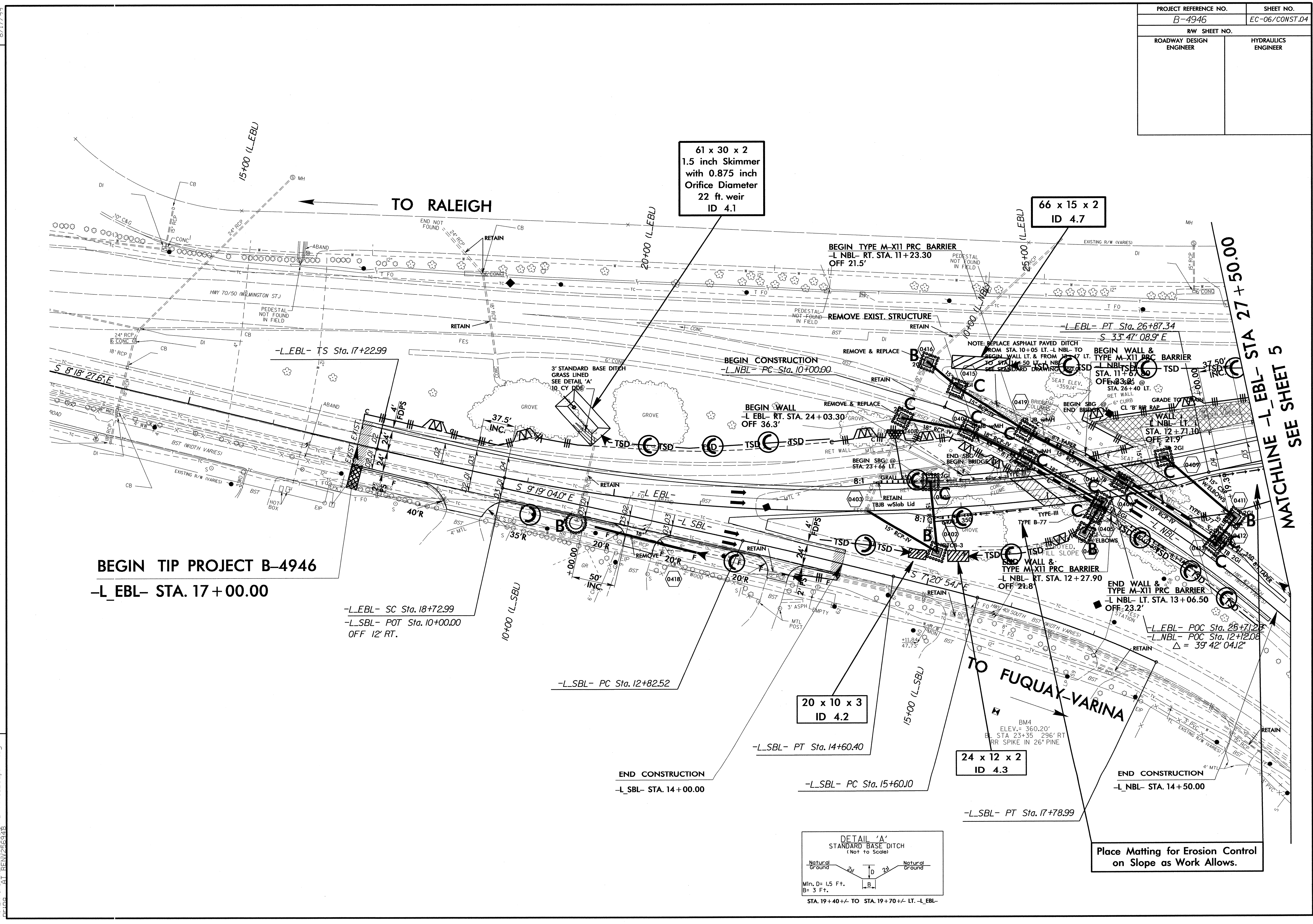
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PROJECT REFERENCE NO. B-4946	SHEET NO. EC-06/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS



**BEGIN TIP PROJECT B-4946**  
-L\_EBL- STA. 17+00.00

-L\_EBL- SC Sta. 18+72.99  
-L\_SBL- POT Sta. 10+00.00  
OFF 12' RT.

-L\_SBL- PC Sta. 12+82.52

END CONSTRUCTION  
-L\_SBL- STA. 14+00.00

20 x 10 x 3  
ID 4.2

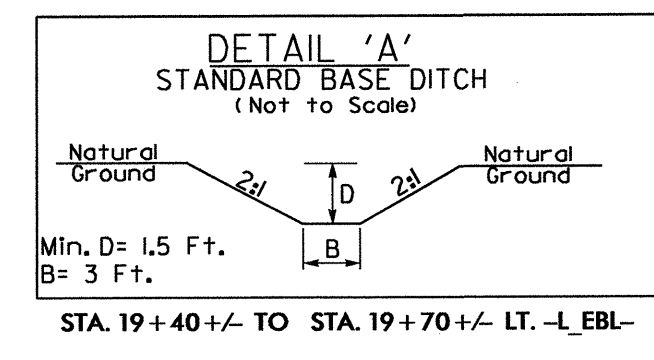
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-L\_SBL- PC Sta. 15+60.10

24 x 12 x 2  
ID 4.3

-L\_SBL- PT Sta. 17+78.99

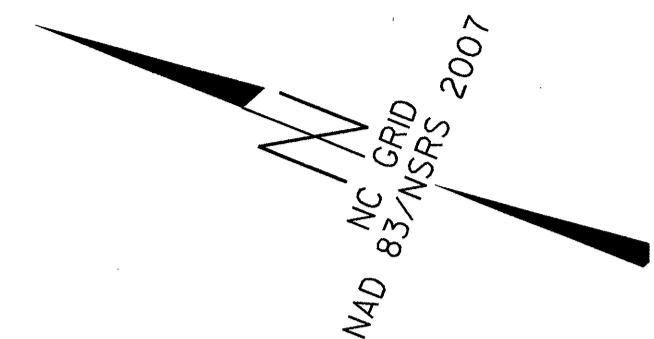
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-L\_NBL- STA. 14+50.00



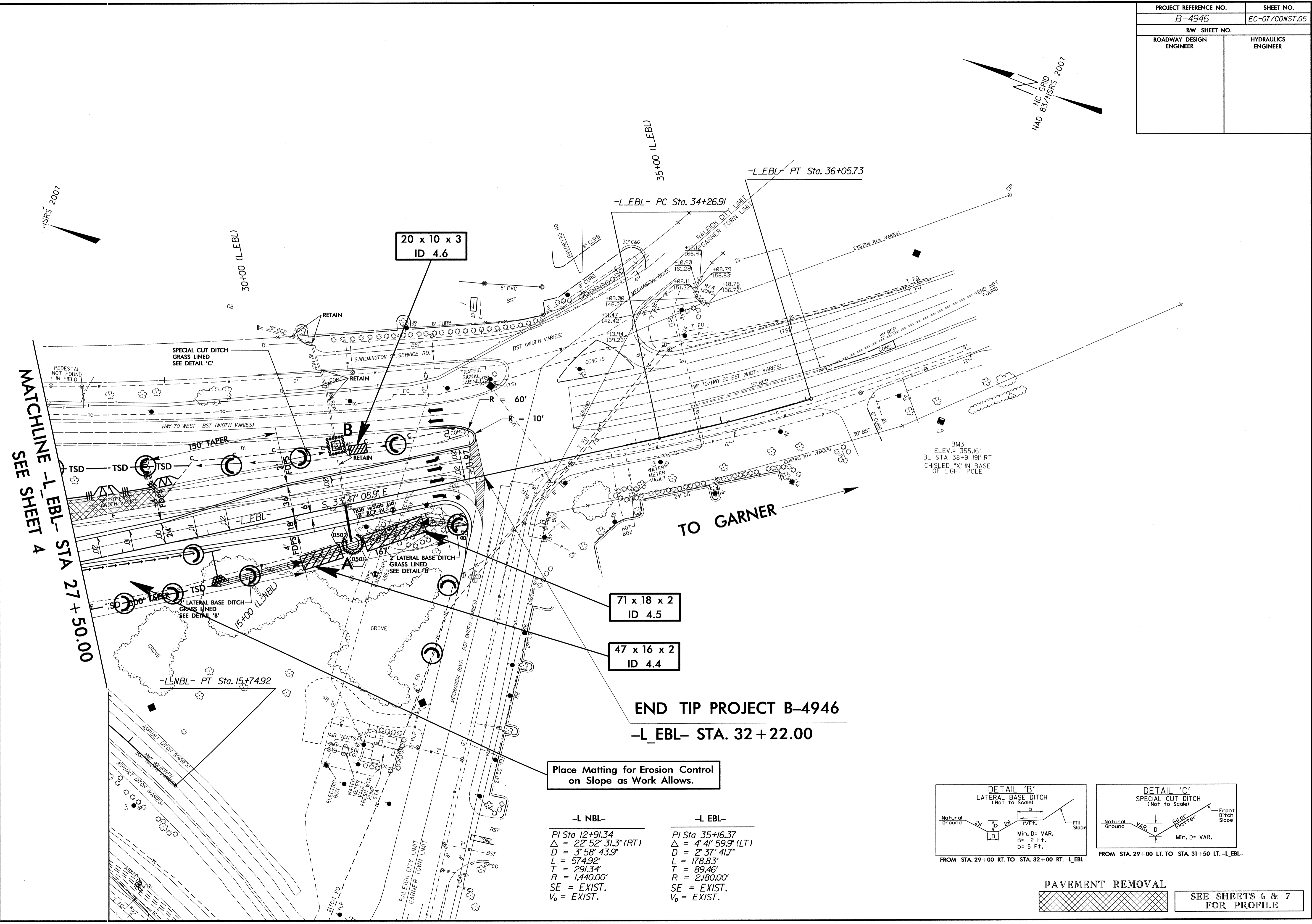
Place Matting for Erosion Control  
on Slope as Work Allows.

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PROJECT REFERENCE NO.	SHEET NO.
B-4946	EC-07/CONST.05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



8/17/99



REVISIONS  
 MATCHLINE -L EBL- STA 27+50.00  
 SEE SHEET 4

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ID 4.6

71 x 18 x 2  
ID 4.5

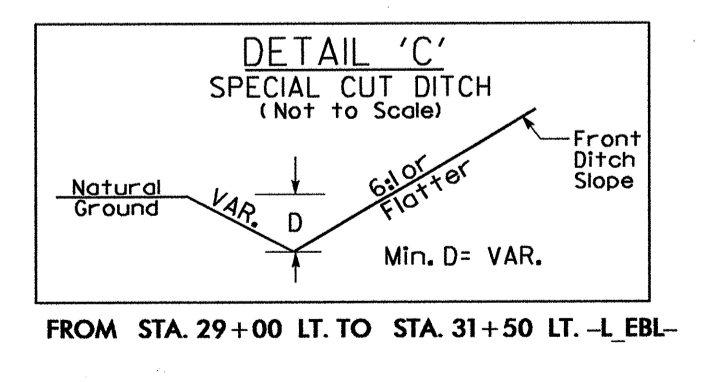
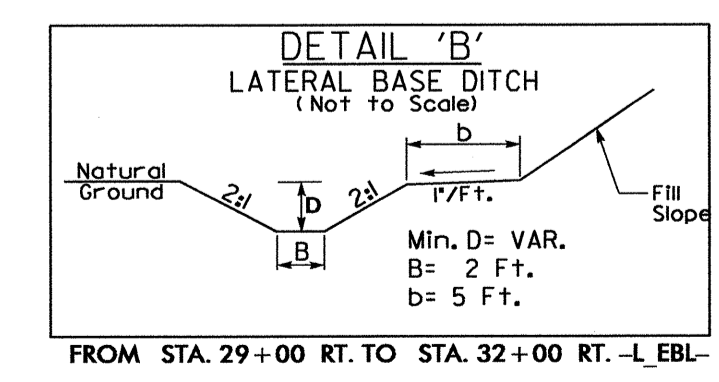
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ID 4.4

END TIP PROJECT B-4946  
-L EBL- STA. 32+22.00

Place Matting for Erosion Control  
on Slope as Work Allows.

-L NBL-  
 PI Sta 12+91.34  
 $\Delta = 22^\circ 52' 31.3''$  (RT)  
 $D = 3' 58' 43.9''$   
 $L = 574.92'$   
 $T = 291.34'$   
 $R = 1,440.00'$   
 SE = EXIST.  
 $V_0 =$  EXIST.

-L EBL-  
 PI Sta 35+16.37  
 $\Delta = 4^\circ 41' 59.9''$  (LT)  
 $D = 2' 37' 41.7''$   
 $L = 178.83'$   
 $T = 89.46'$   
 $R = 2,180.00'$   
 SE = EXIST.  
 $V_0 =$  EXIST.



PAVEMENT REMOVAL  
 SEE SHEETS 6 & 7 FOR PROFILE

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