

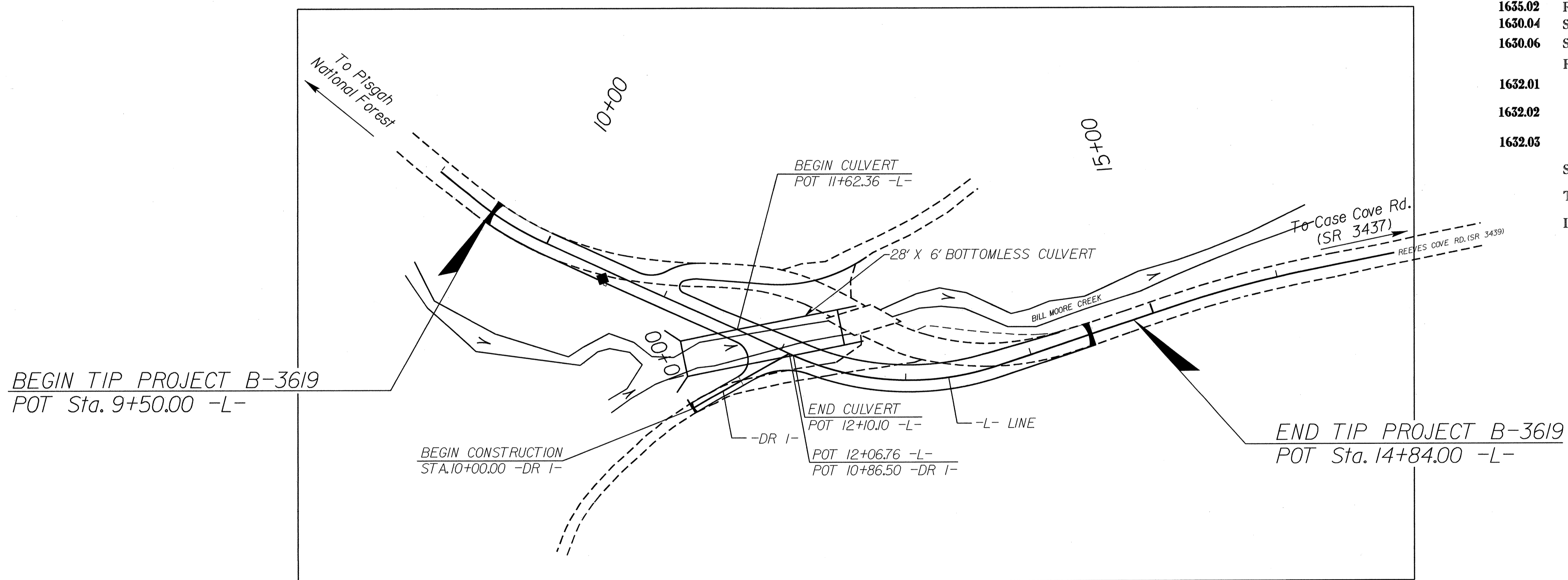
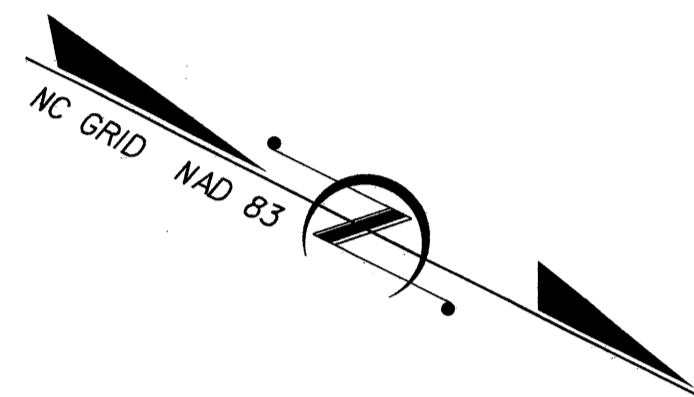
TIP PROJECT: B-3619

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

BUNCOMBE

**LOCATION: BRIDGE No. 56 OVER BILL MOORE CREEK
 ON SR 3439**

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE



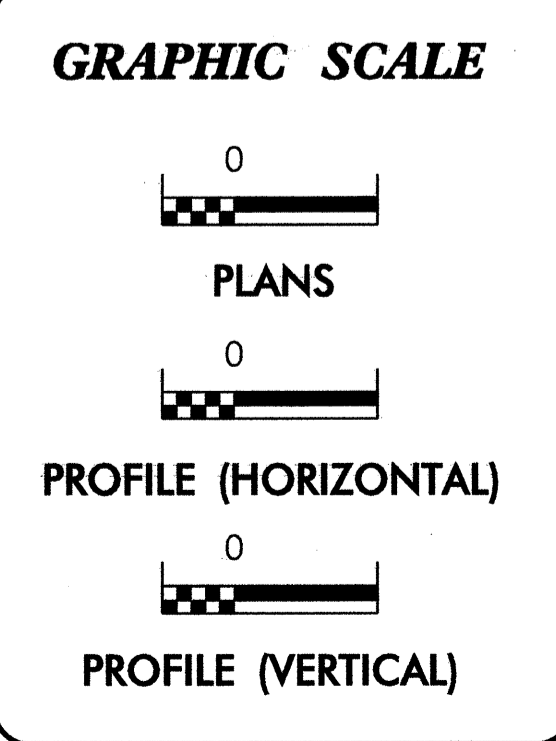
EROSION AND SEDIMENT CONTROL MEASURES

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	▭

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.



**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

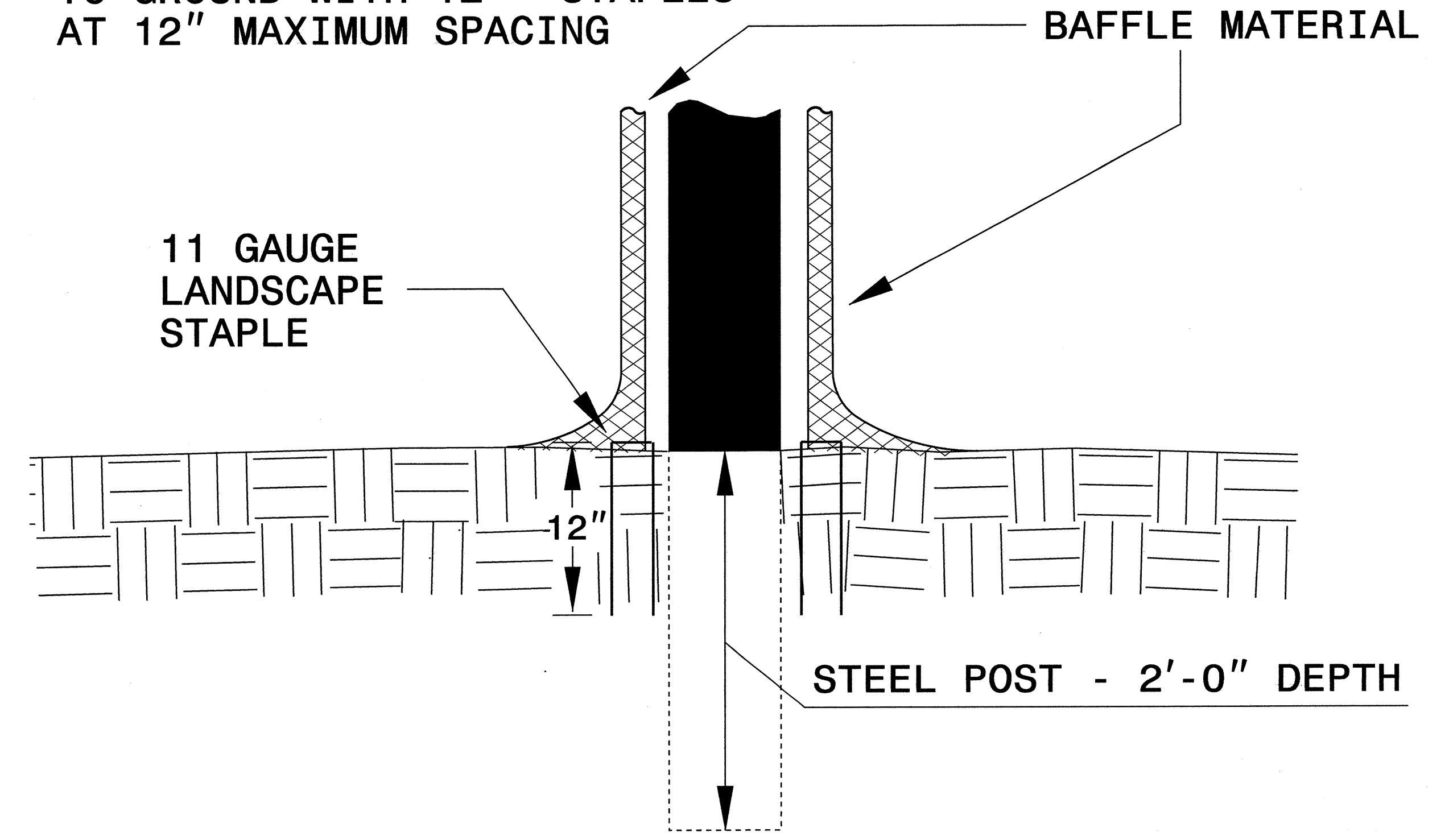
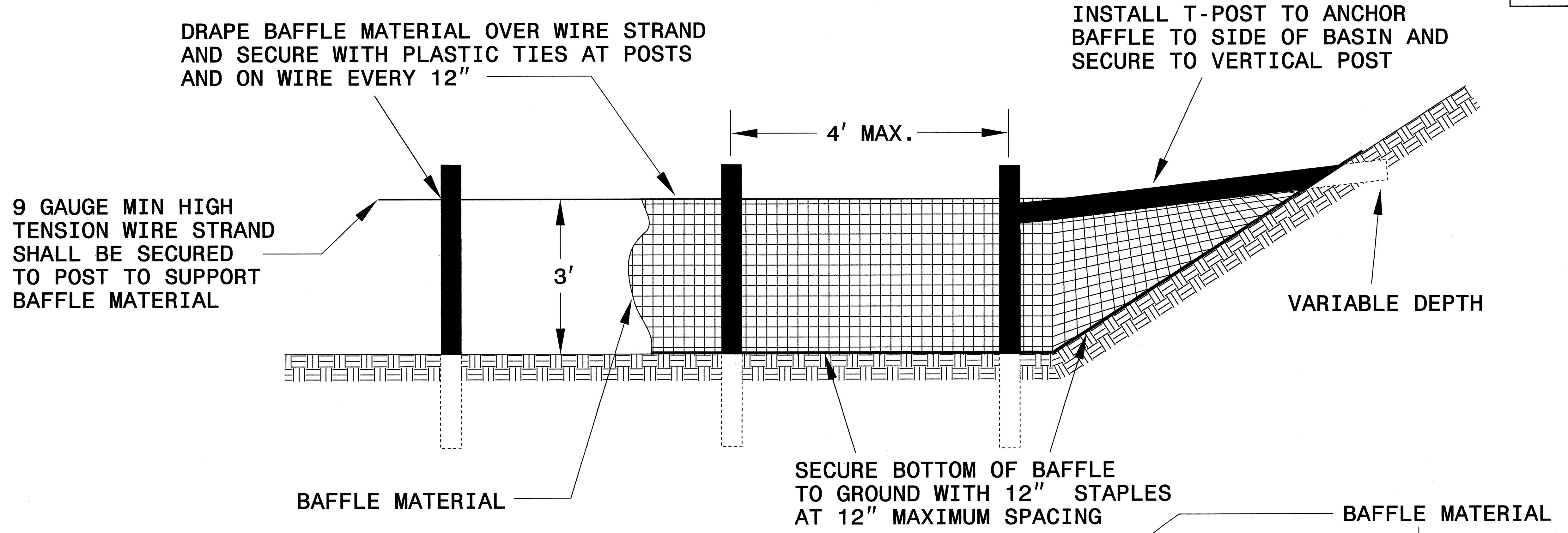
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01	Temporary Silt Fence	1630.06	Special Stilling Basin
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		

P:\03-MAY-2011\144 not a road\env\BUNCOMBE\B-3619_EC.dwg
 15:05:00 15/05/2011
 15:05:00 15/05/2011

PROJECT REFERENCE NO. B-3619	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



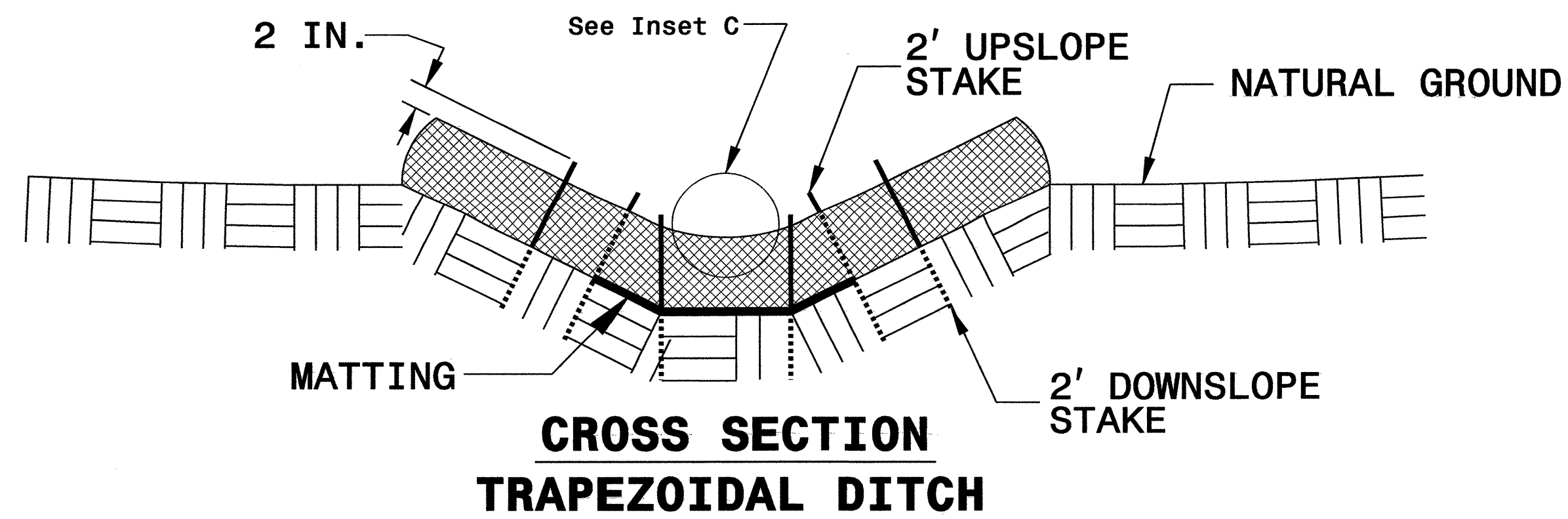
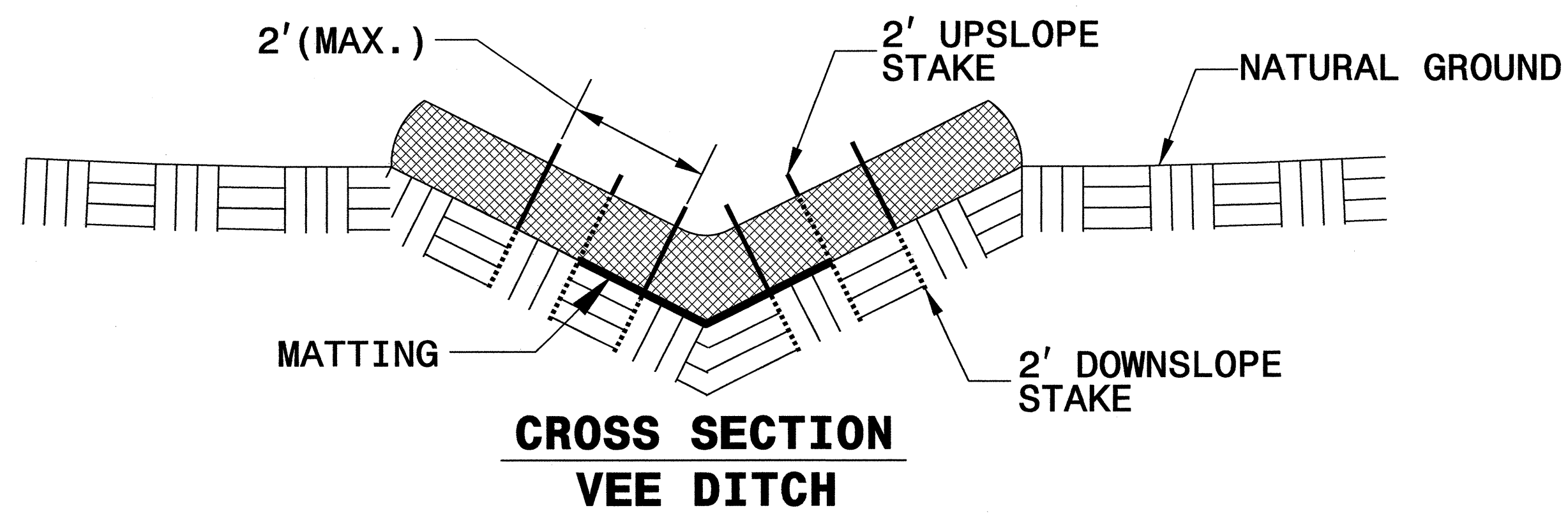
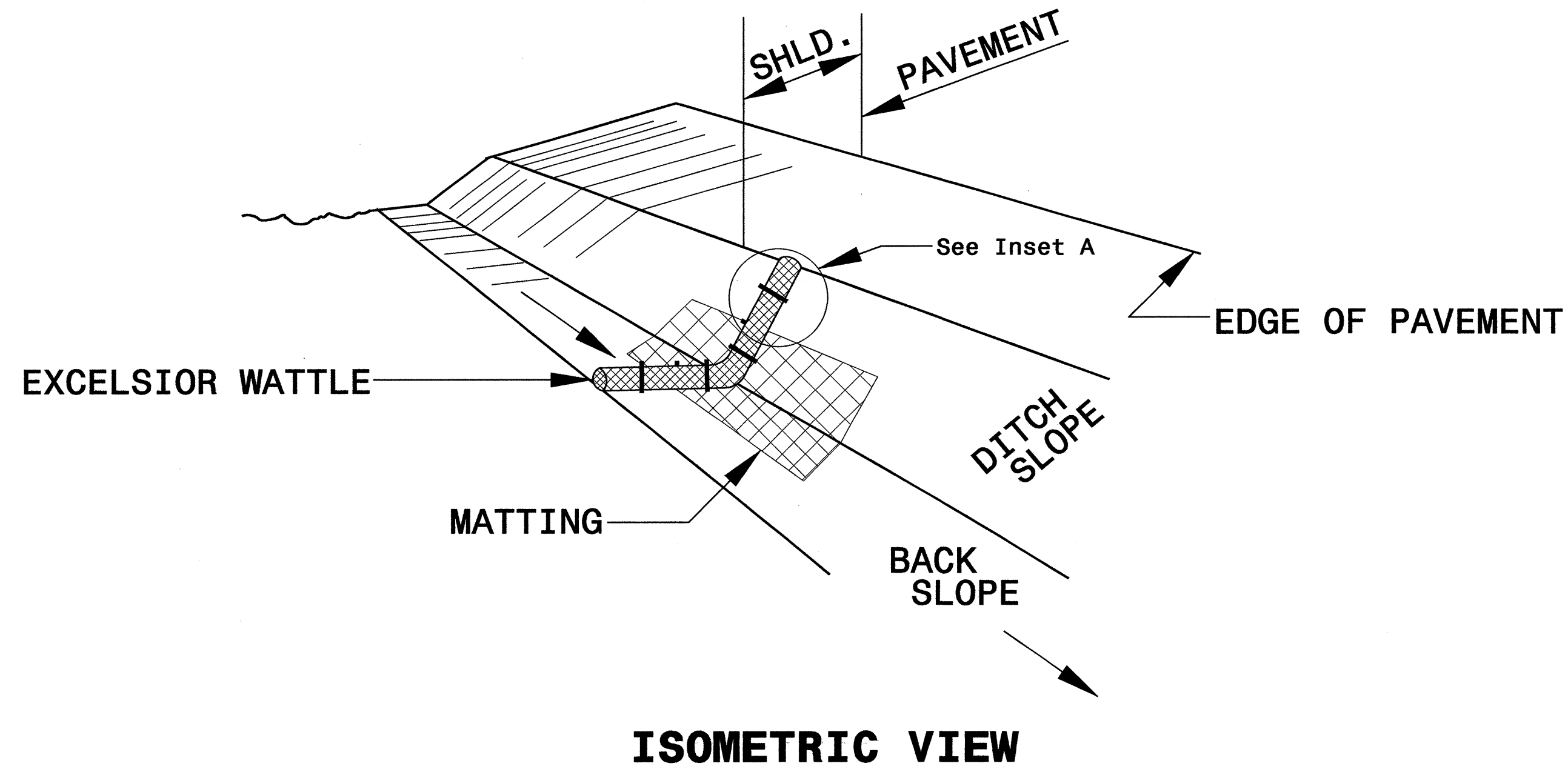
NOTES:

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

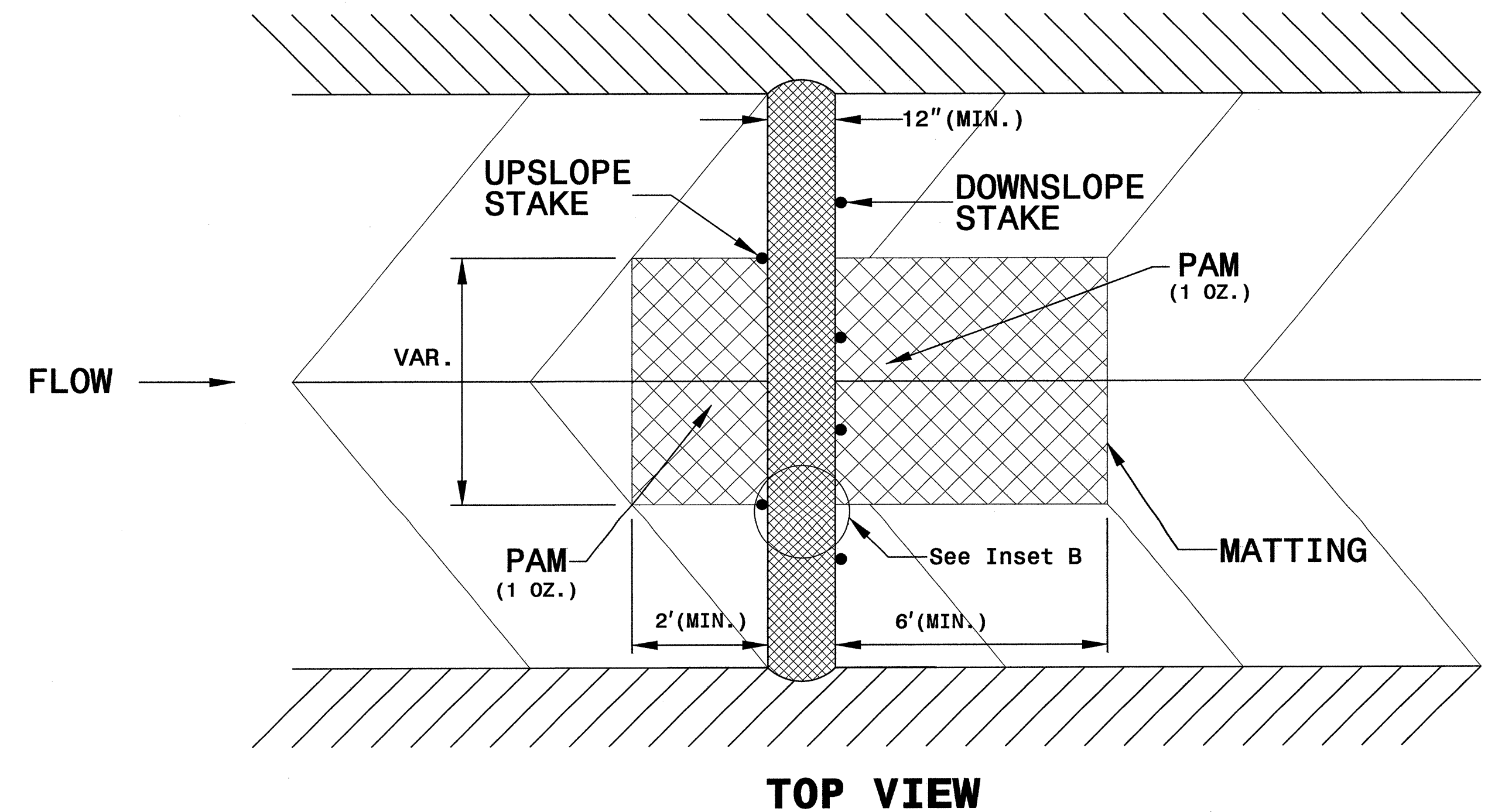
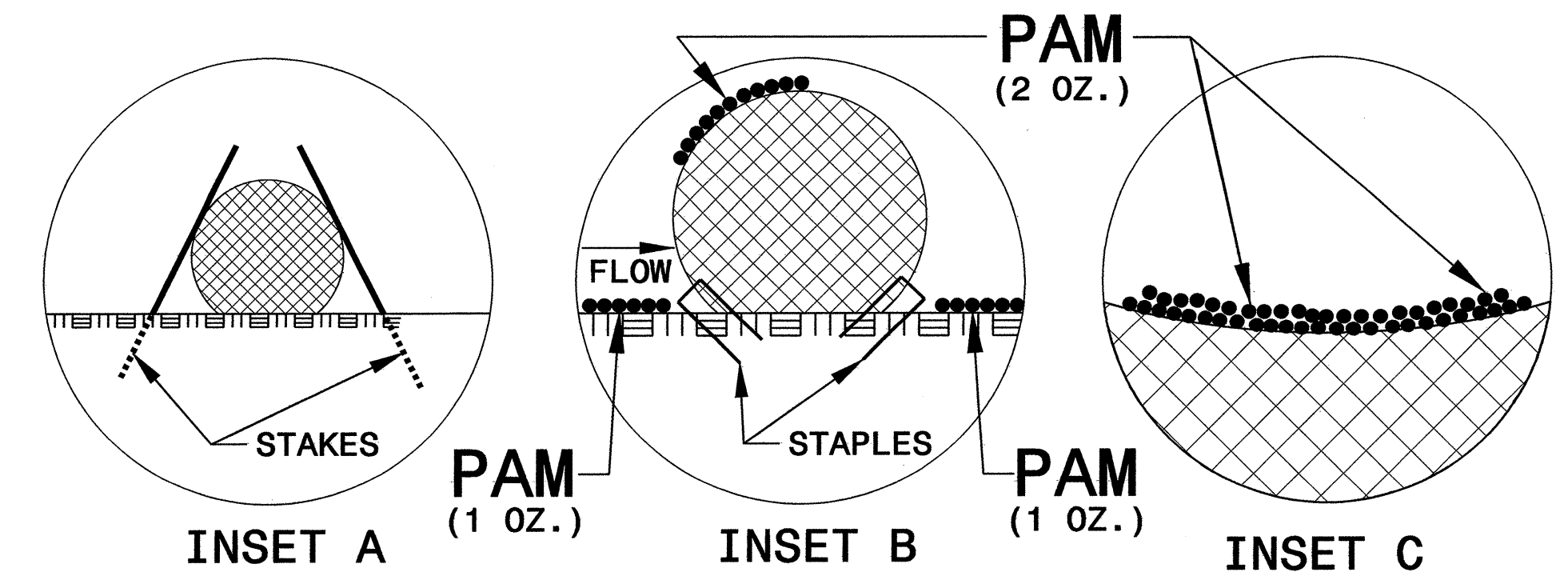
PROJECT REFERENCE NO. B-3619	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



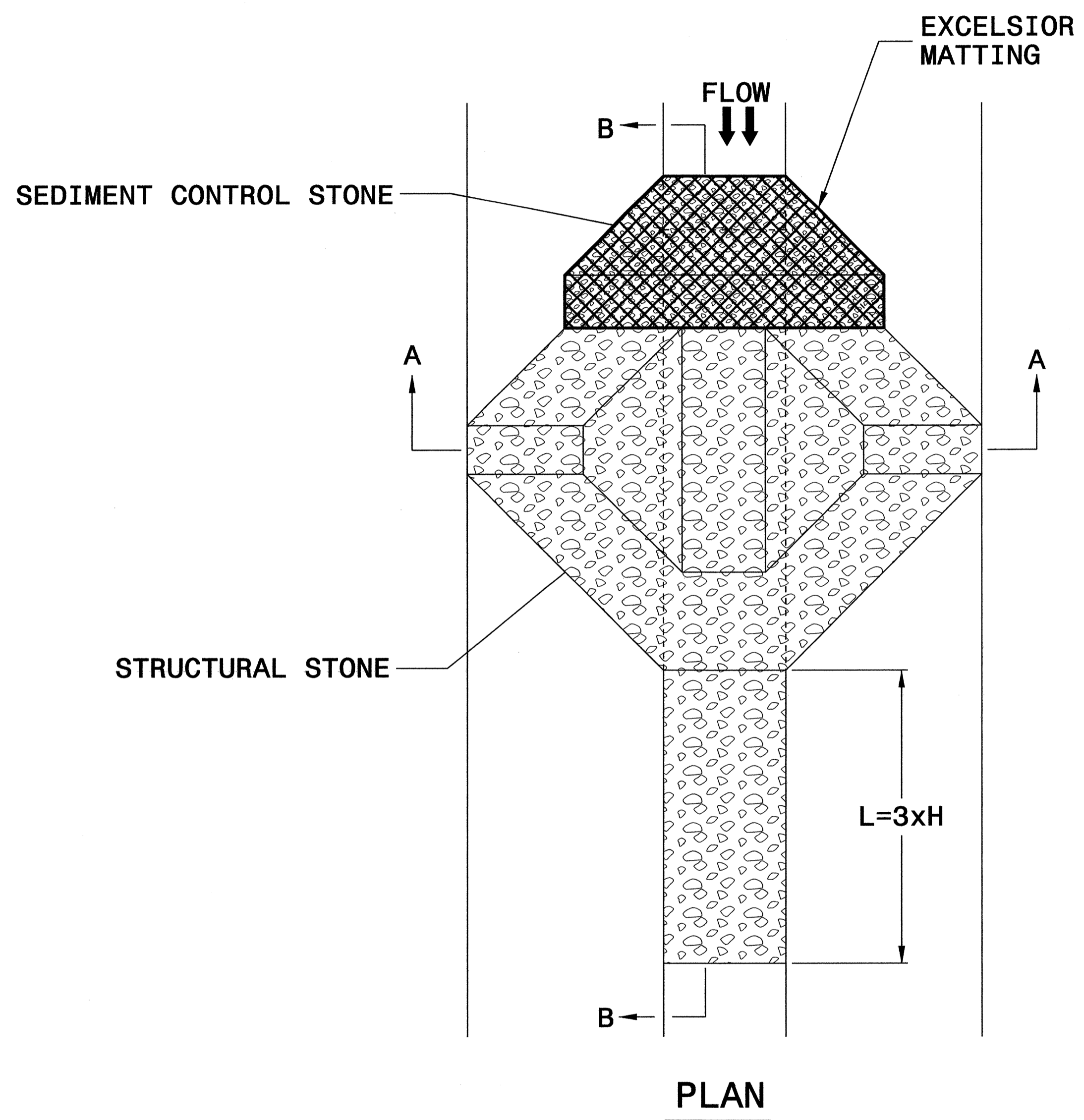
NOTES:

- 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-3619	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

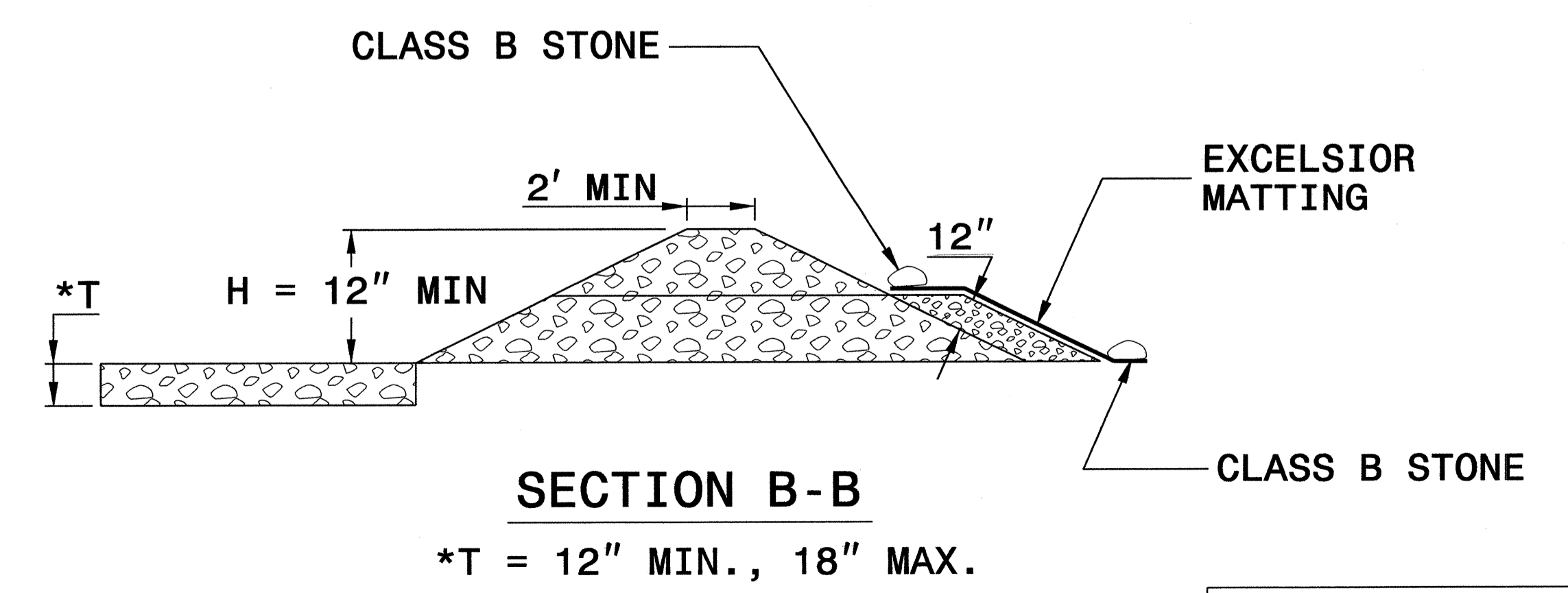
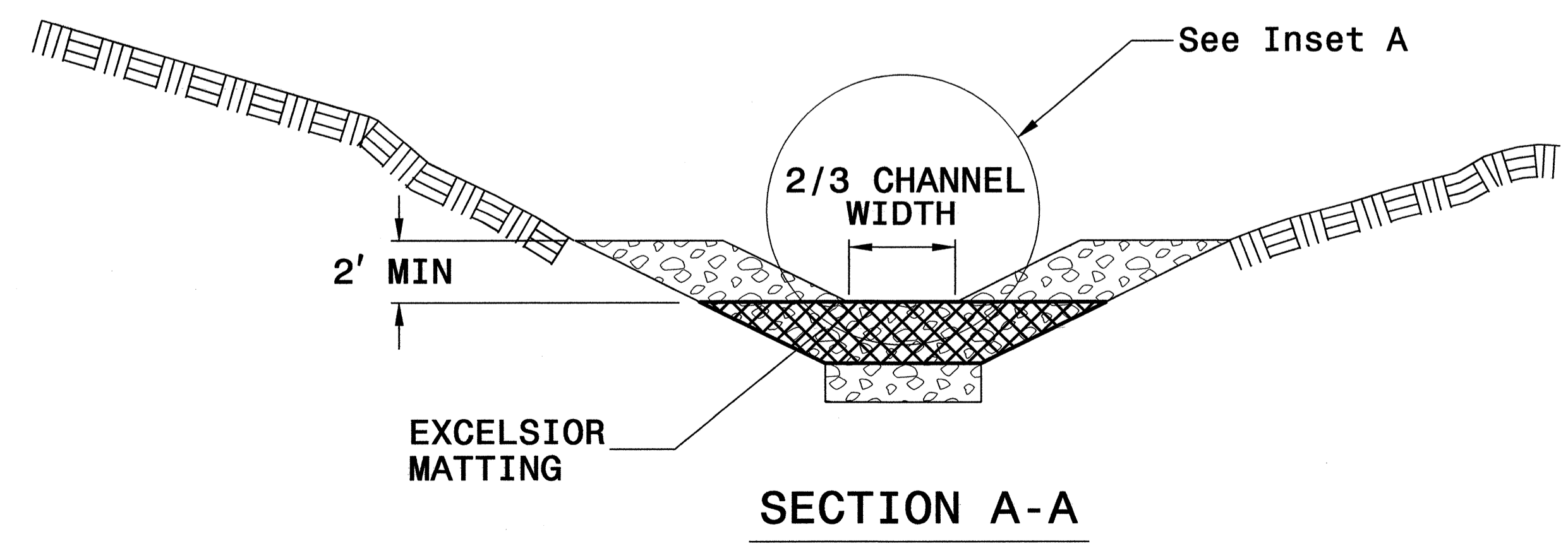
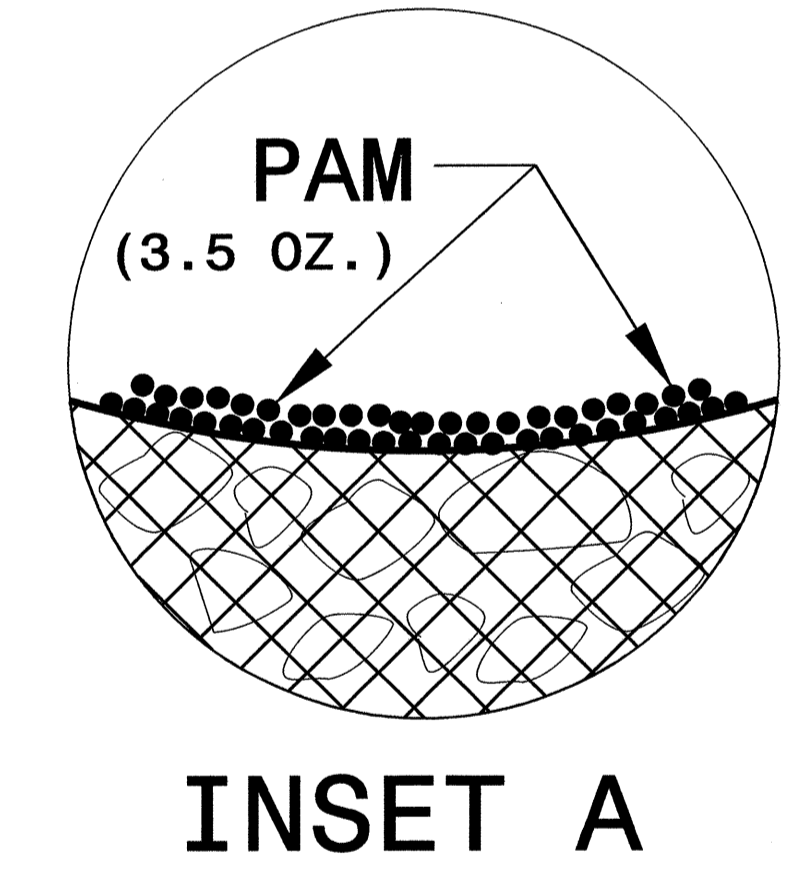


NOTES

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.

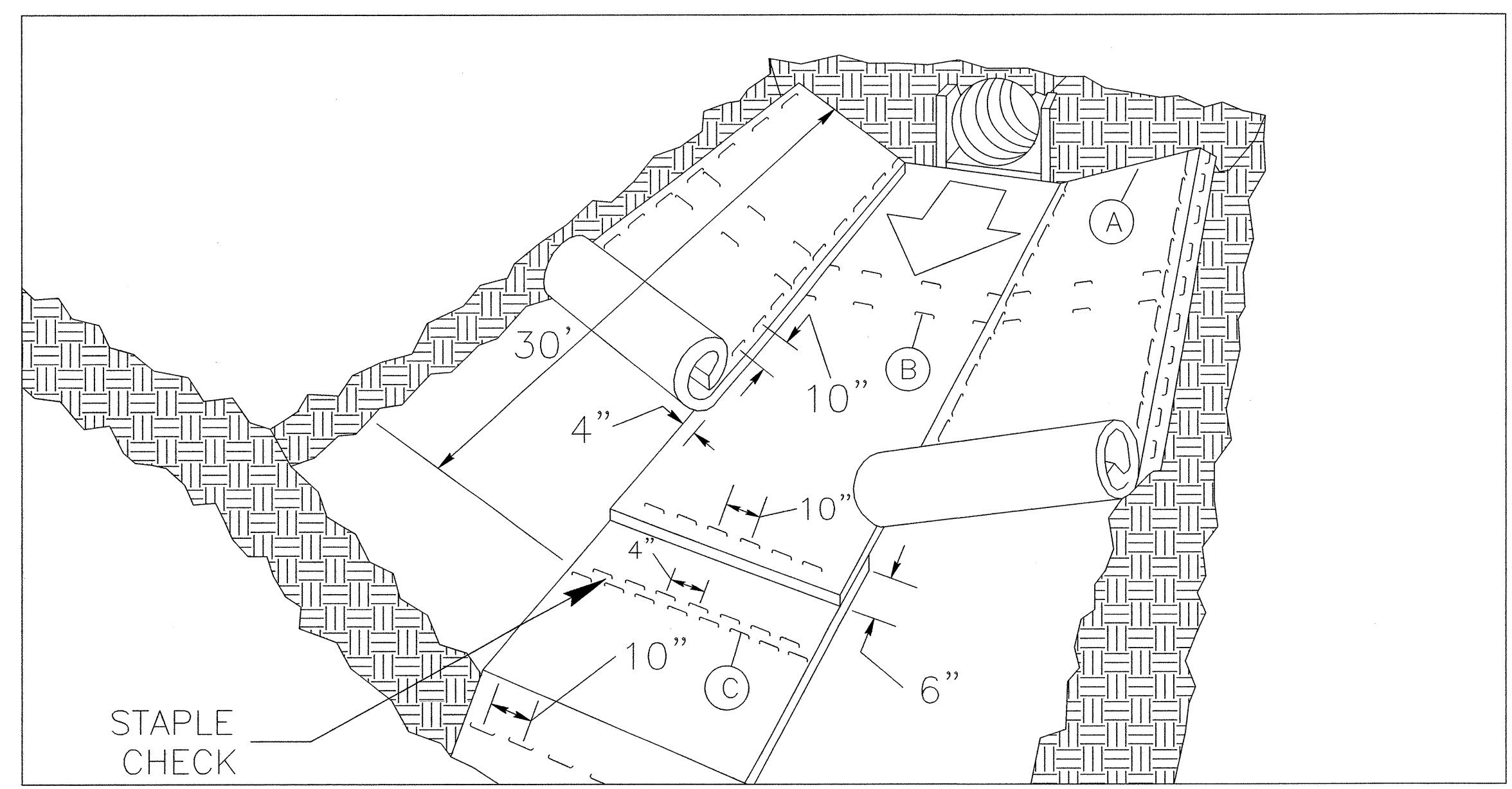
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

PROJECT REFERENCE NO. B-3619	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

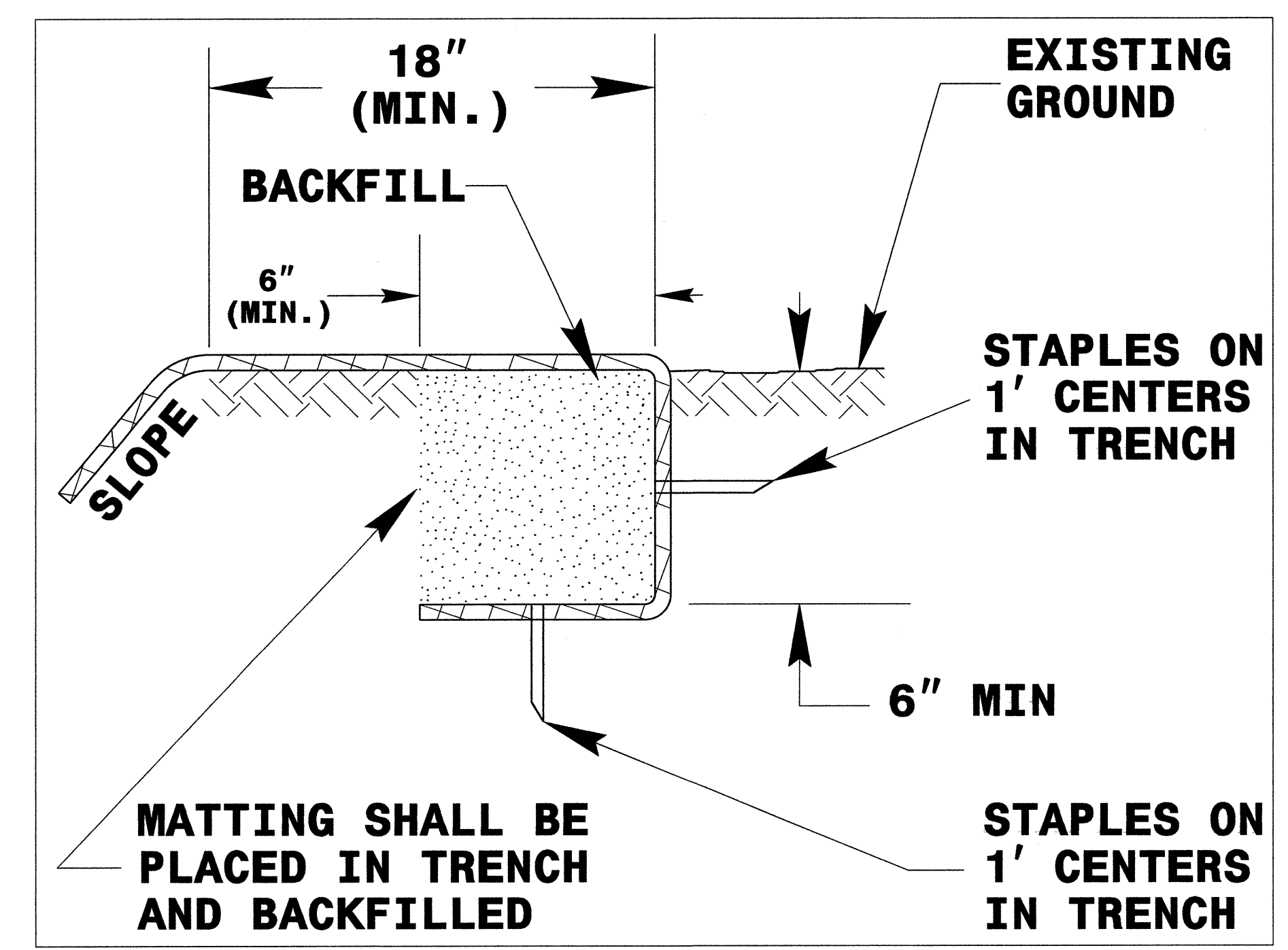
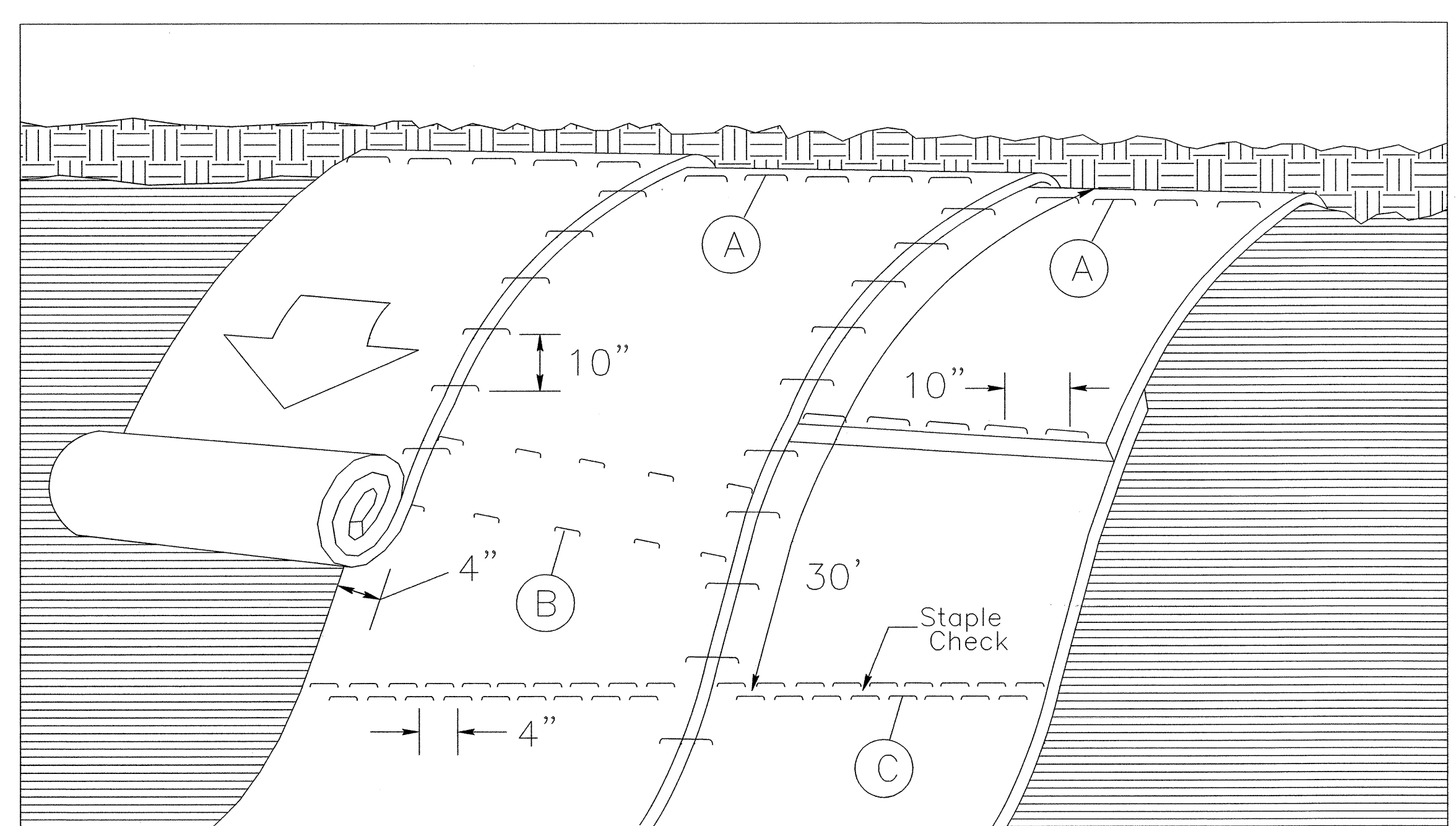


DIAGRAM (A)



MATTING ON SLOPES

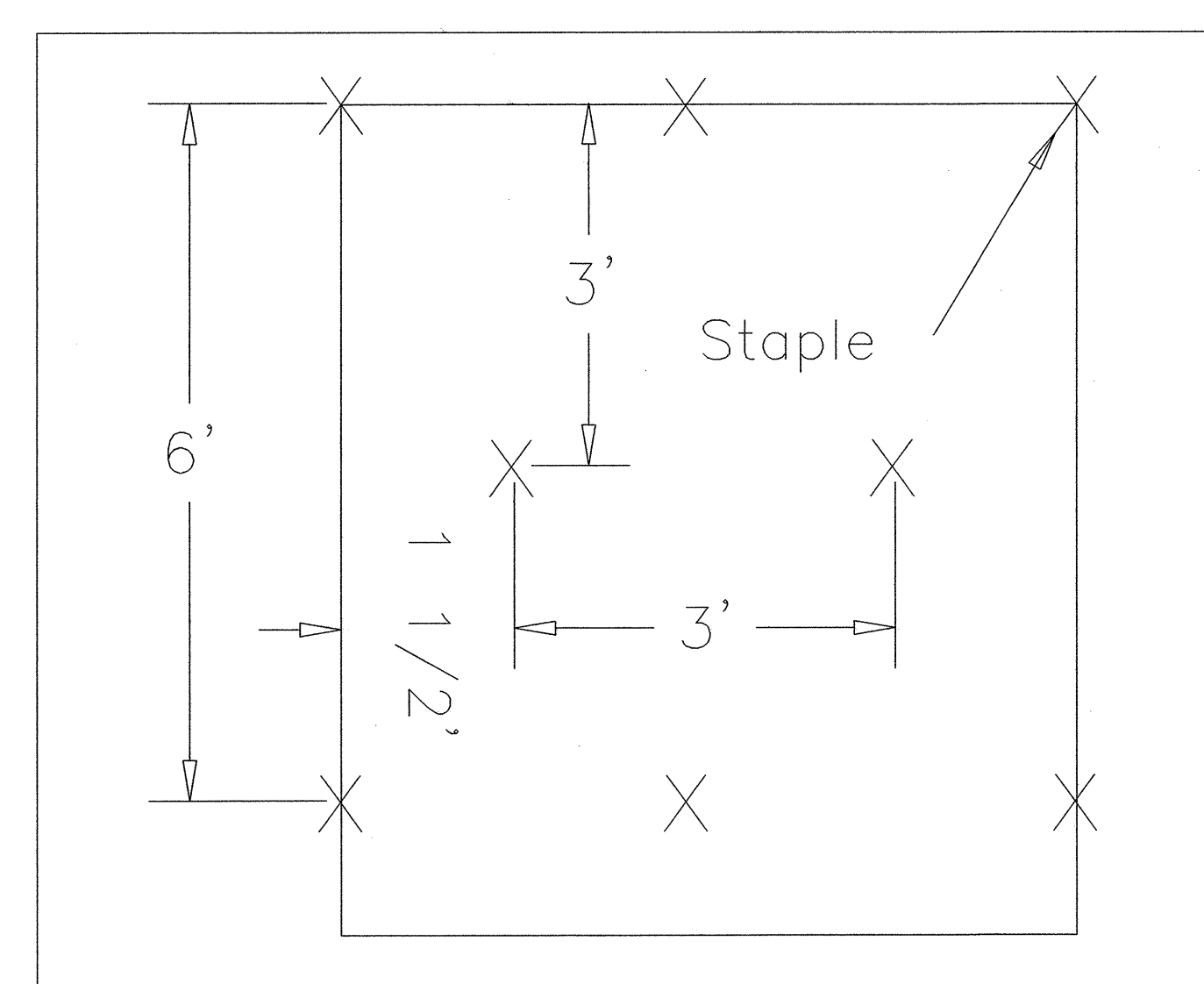


DIAGRAM (B)

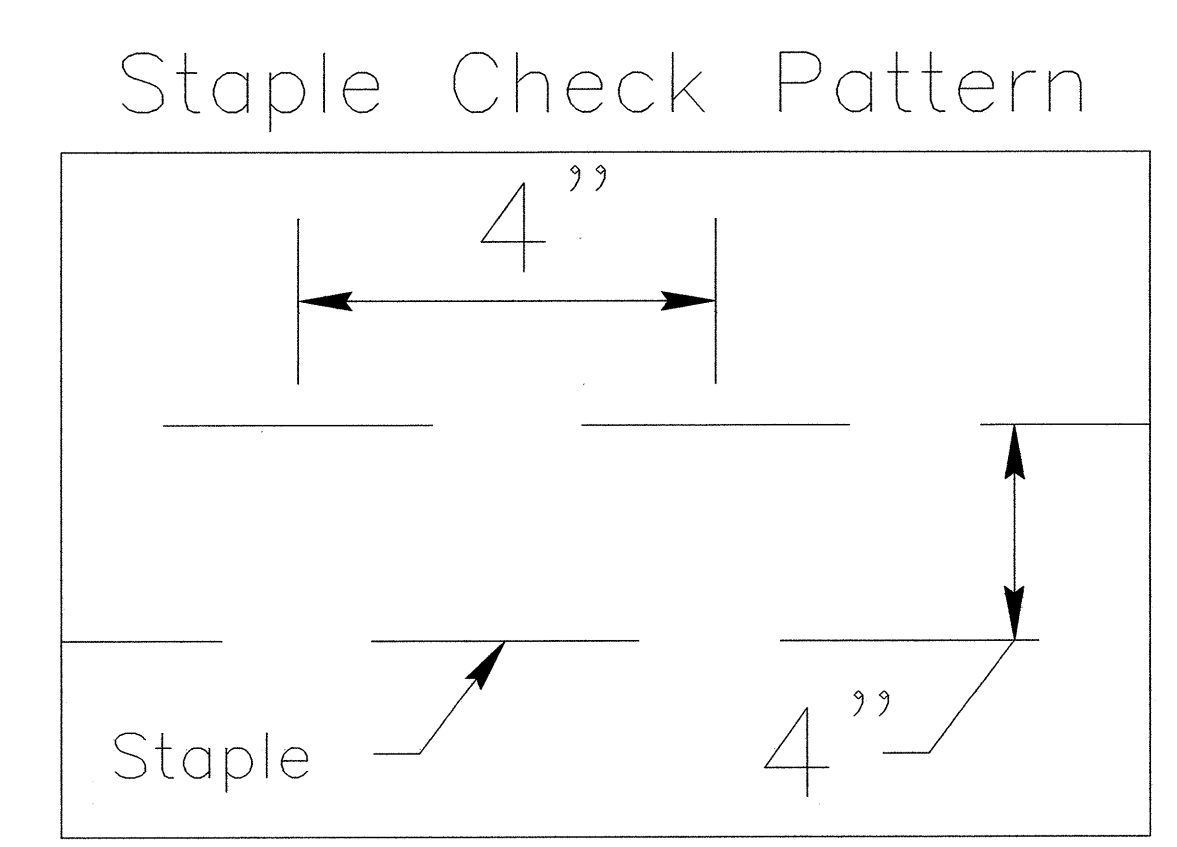


DIAGRAM (C)

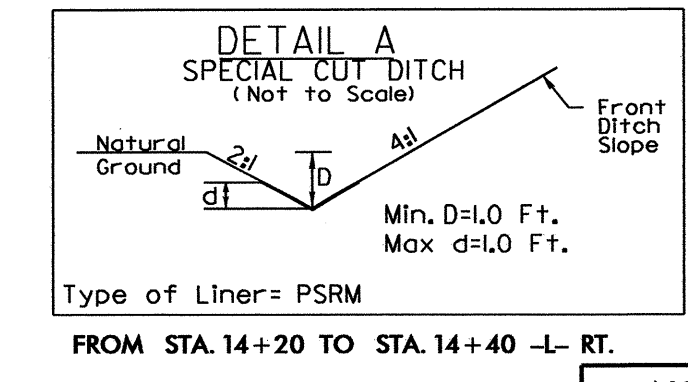
NOTES:

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.

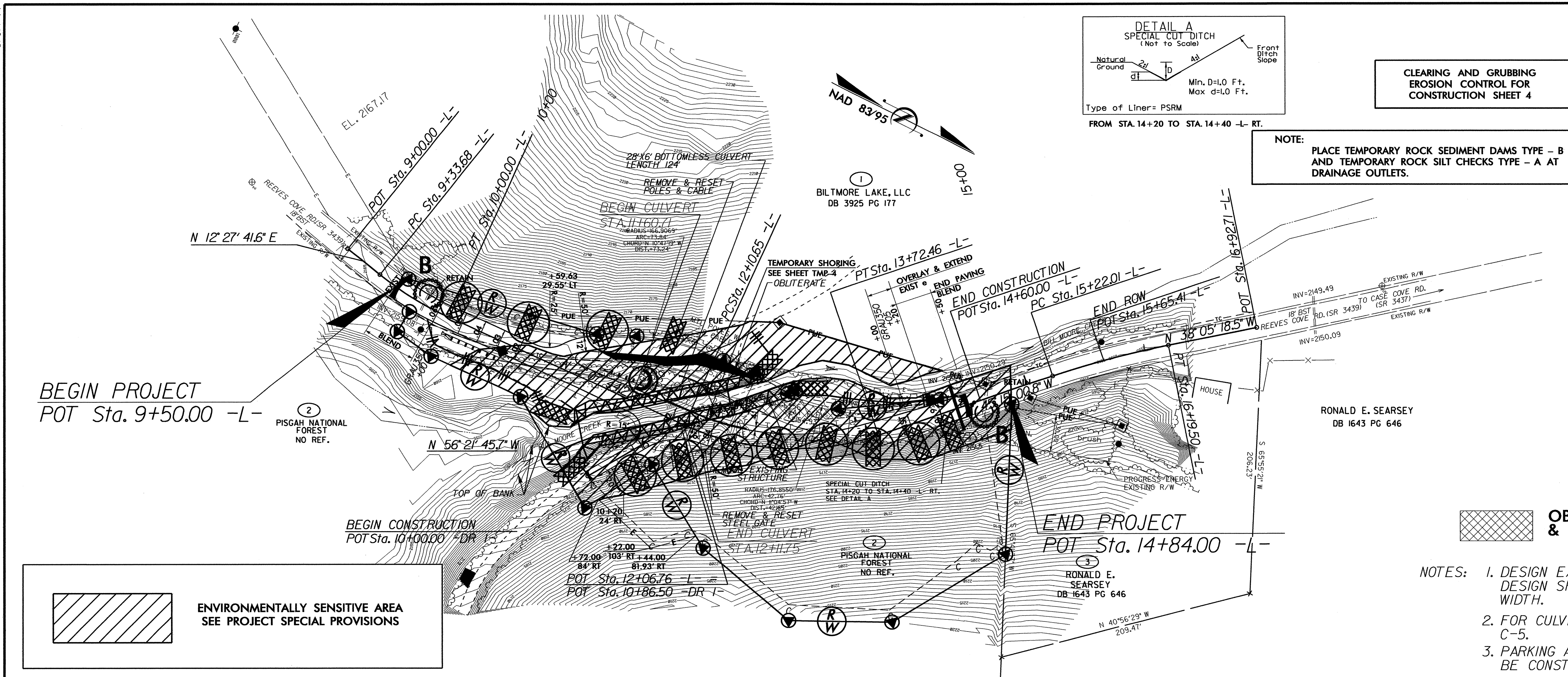
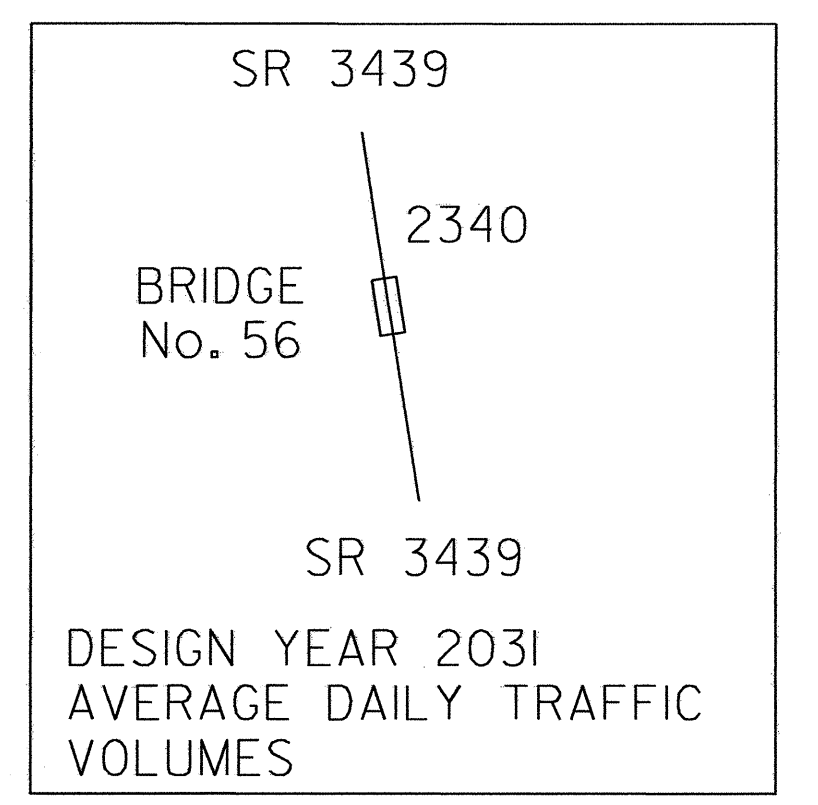
NOT TO SCALE

PROJECT REFERENCE NO. B-3619		SHEET NO. EC-4/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4**

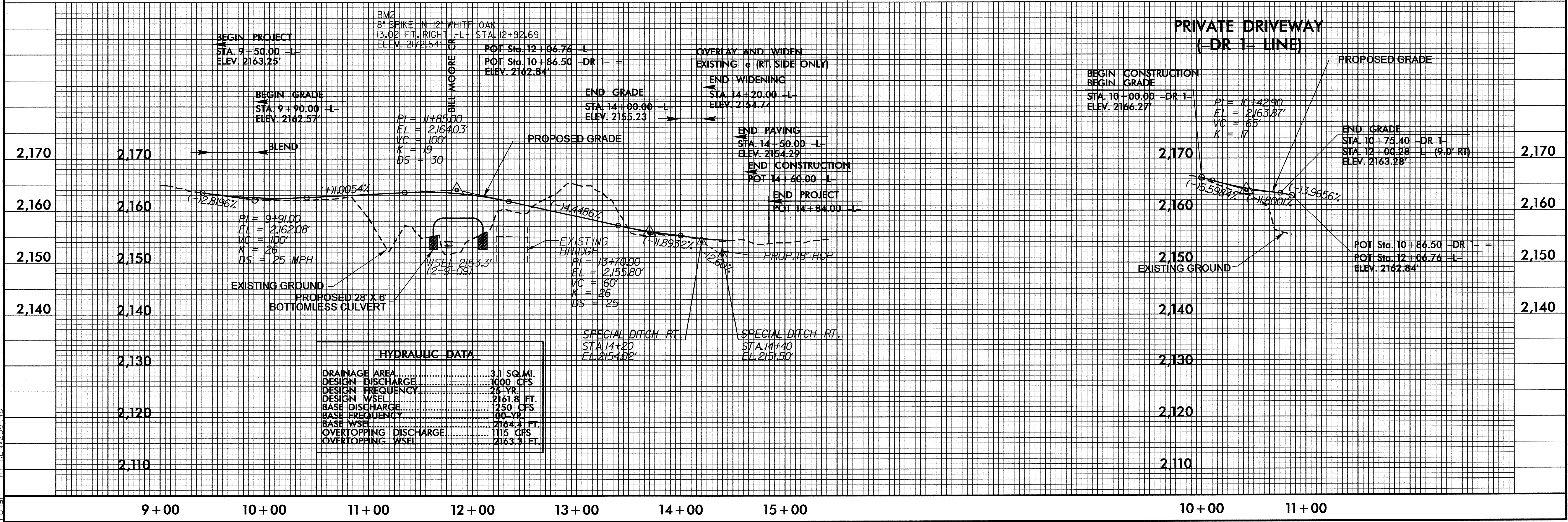
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

OBLITERATE REMOVE & GRADE TO DRAIN

- NOTES:**
- DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED, LANE WIDTH, AND SHOULDER WIDTH.
 - FOR CULVERT PLANS, SEE SHEETS C-1 THRU C-5.
 - PARKING AREA (20' WIDE) OFF OF DR-1 TO BE CONSTRUCTED OF 6" ABC.



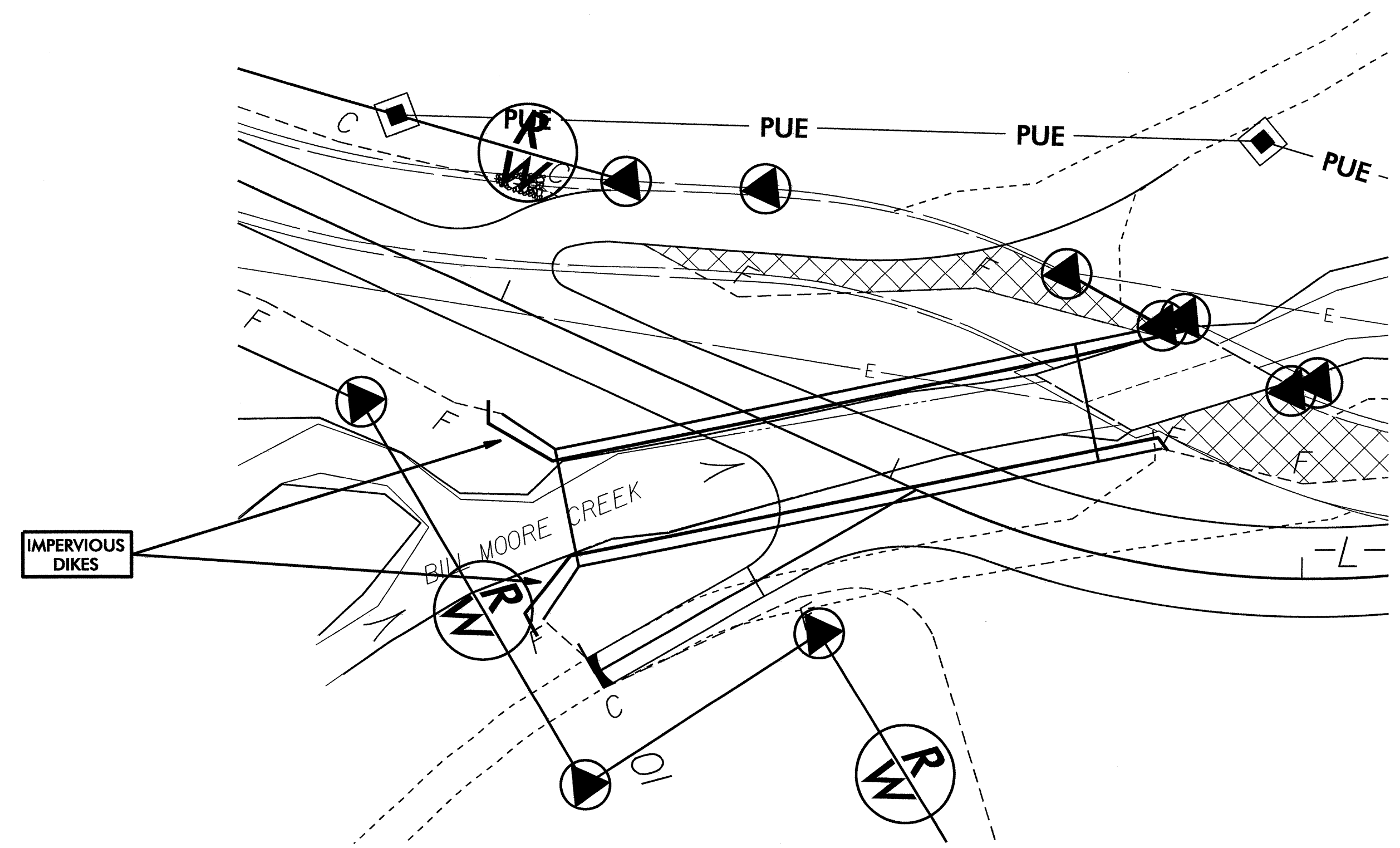
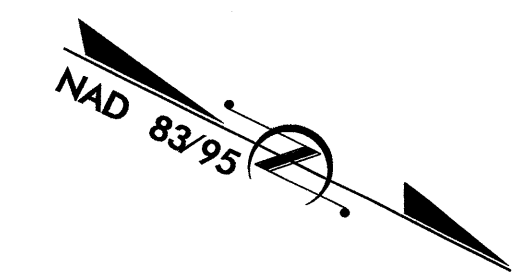
HYDRAULIC DATA

DRAINAGE AREA	3.1 SQ.MI.
DESIGN DISCHARGE	1000 CFS
DESIGN FREQUENCY	25 YR.
DESIGN WSEL	2161.8 FT.
BASE DISCHARGE	1250 CFS
BASE FREQUENCY	100 YR.
BASE WSEL	2164.4 FT.
OVERTOPPING DISCHARGE	1115 CFS
OVERTOPPING WSEL	2163.3 FT.

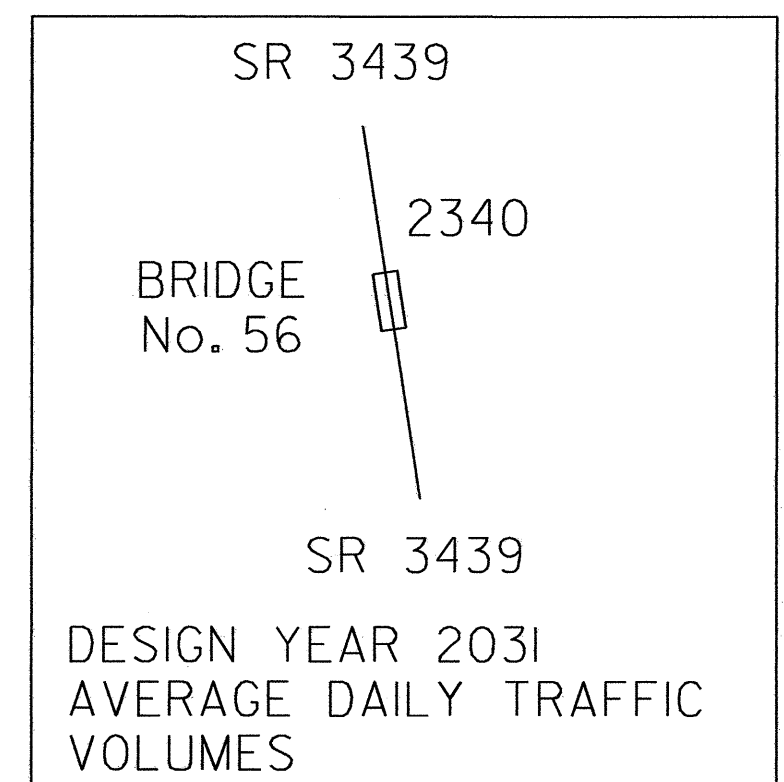
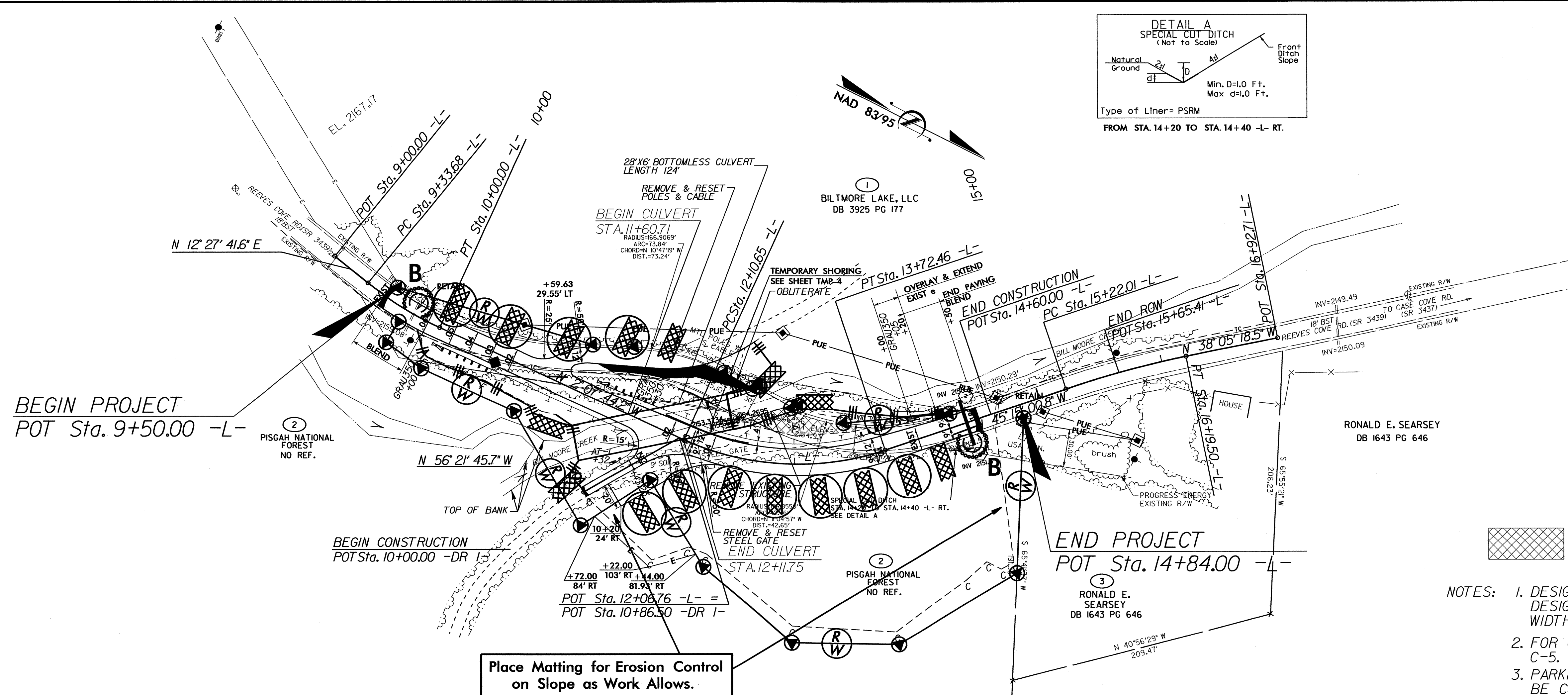
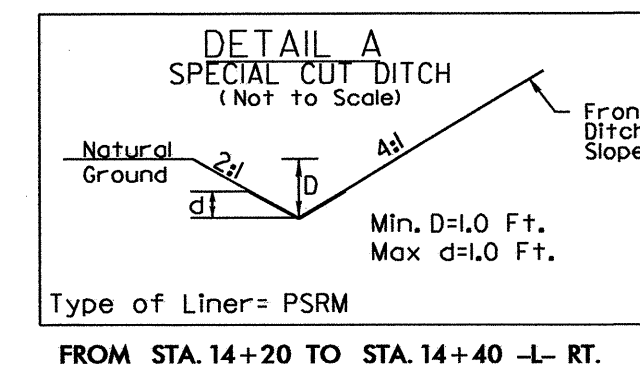
PROJECT REFERENCE NO.	SHEET NO.
B-3619	EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 11+86.23 -L-

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES.
3. CONSTRUCT FOOTINGS FOR BOTTOMLESS CULVERT.
4. CONSTRUCT CULVERT.
5. REMOVE IMPERVIOUS DIKES AND ANY REMAINING SPECIAL STILLING BASIN(S).
6. COMPLETE ROADWAY.



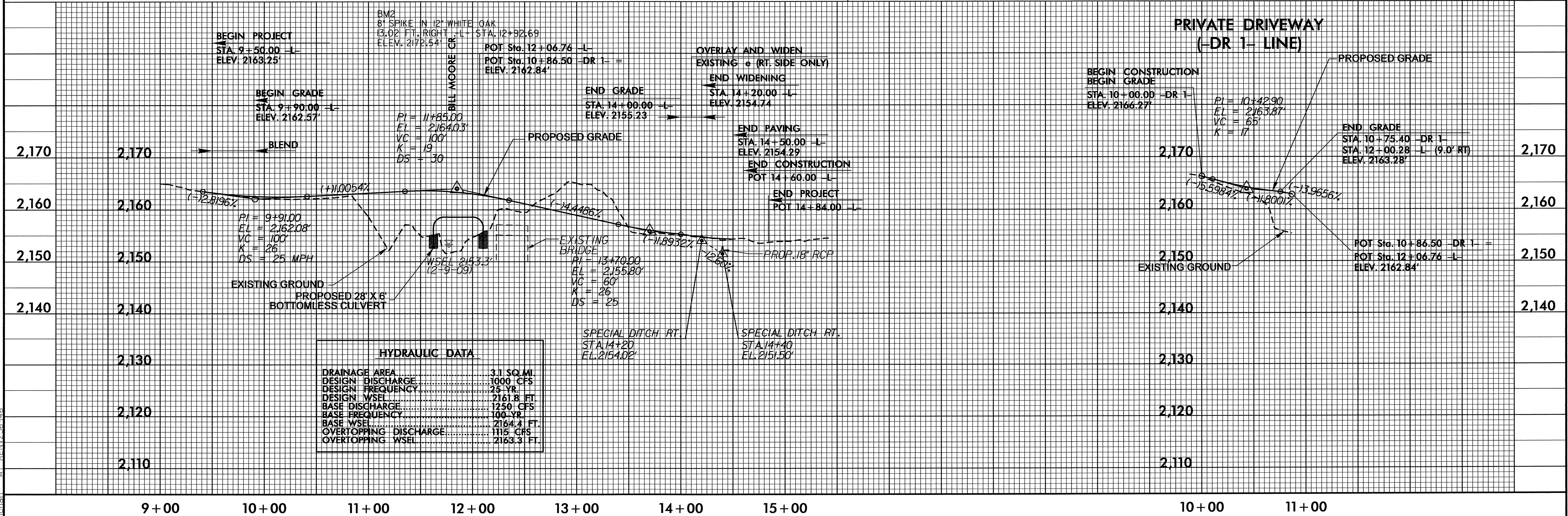
PROJECT REFERENCE NO.	SHEET NO.
B-3619	EC-6/CONST.4
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



OBLITERATE REMOVE & GRADE TO DRAIN

- NOTES:
- DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED, LANE WIDTH, AND SHOULDER WIDTH.
 - FOR CULVERT PLANS, SEE SHEETS C-1 THRU C-5.
 - PARKING AREA (20' WIDE) OFF OF DR-1 TO BE CONSTRUCTED OF 6" ABC.

Place Matting for Erosion Control on Slope as Work Allows.



HYDRAULIC DATA	
DRAINAGE AREA	31 SQMI
DESIGN DISCHARGE	1000 CFS
DESIGN FREQUENCY	25-YR.
DESIGN WSEL	2161.8 FT.
BASE DISCHARGE	1250 CFS
BASE FREQUENCY	100-YR.
BASE WSEL	2164.4 FT.
OVERTOPPING DISCHARGE	1115 CFS
OVERTOPPING WSEL	2163.3 FT.