

**TIP PROJECT: B-4216**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

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PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

**ORANGE COUNTY**

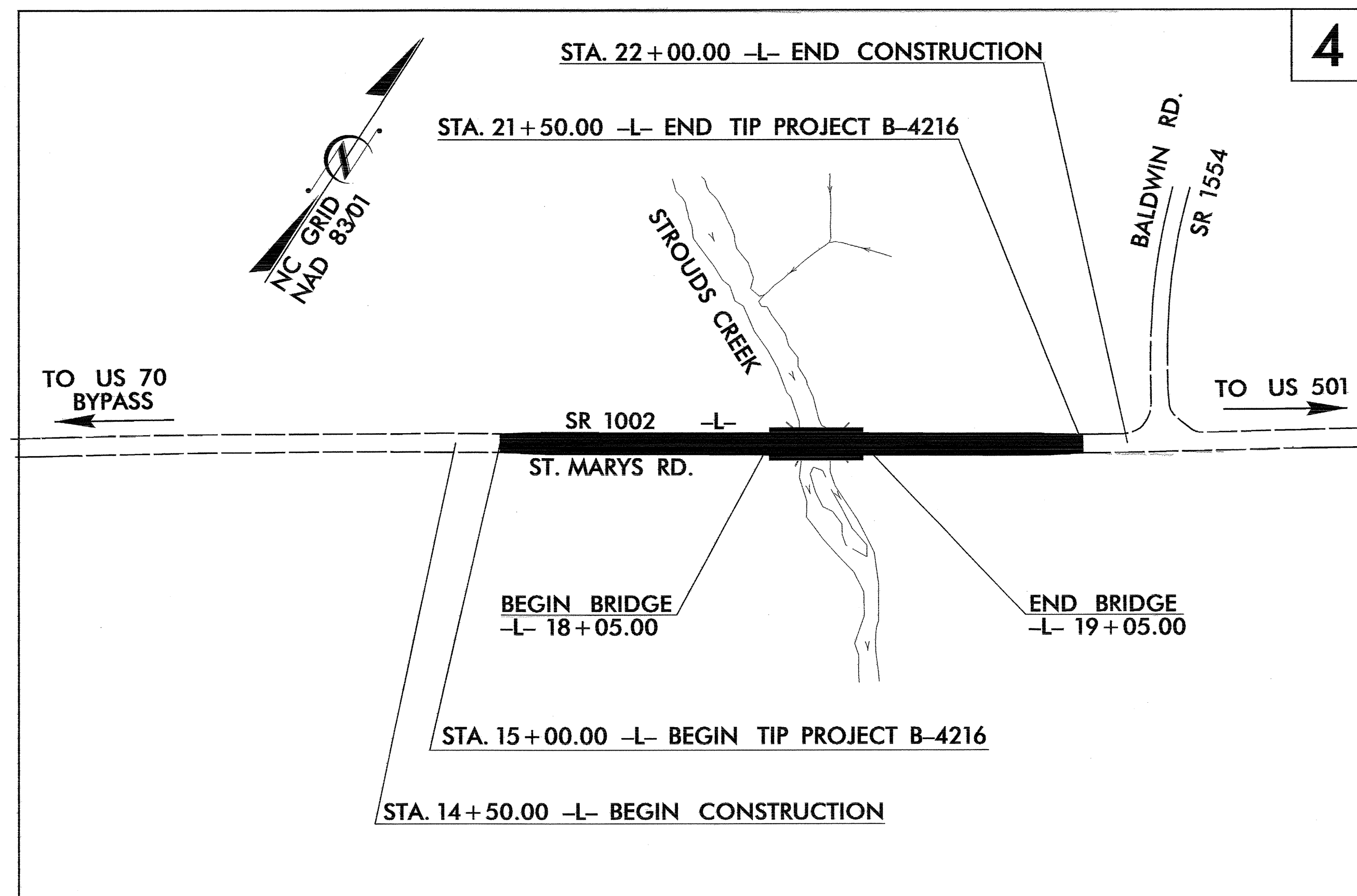
**LOCATION: BRIDGE NO. 66 OVER STROUDS CREEK ON SR 1002**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4216	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	
1630.01	Riser Basin	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
	Wattle	
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**

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

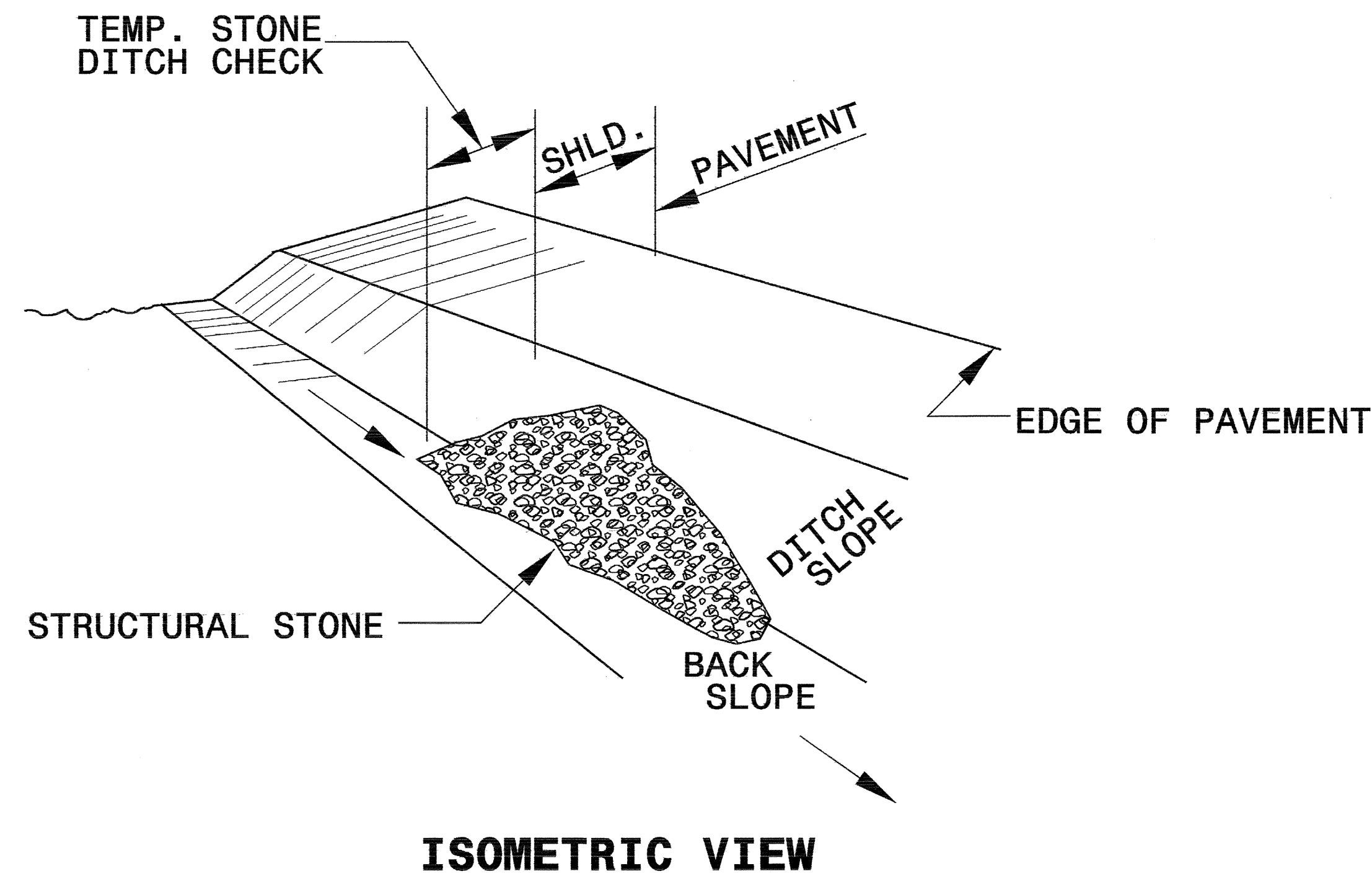
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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	
1622.01 Temporary Berms and Slope Drains	
1630.05 Temporary Diversion	

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PROJECT REFERENCE NO. B-4216	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

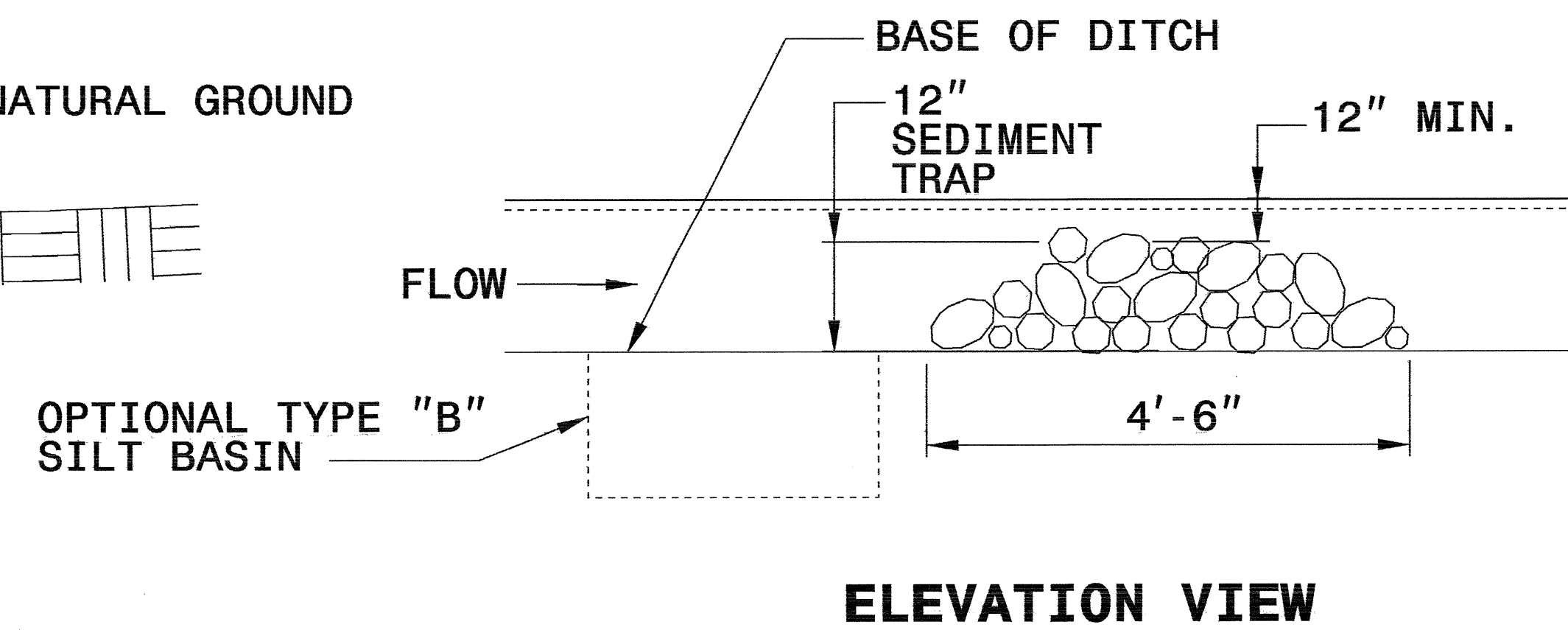
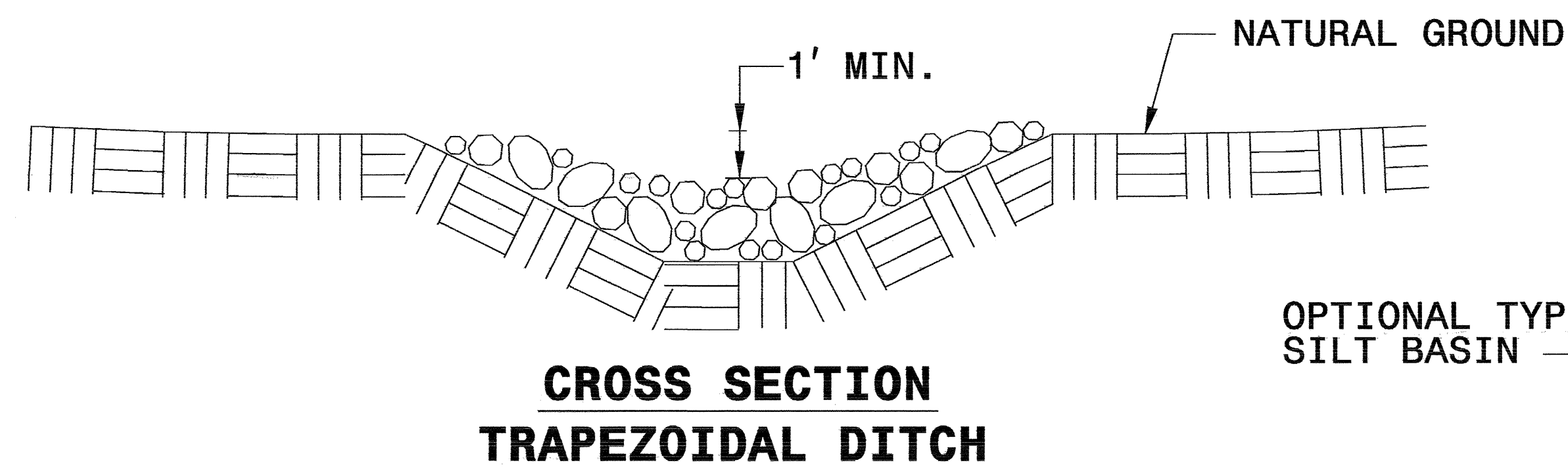
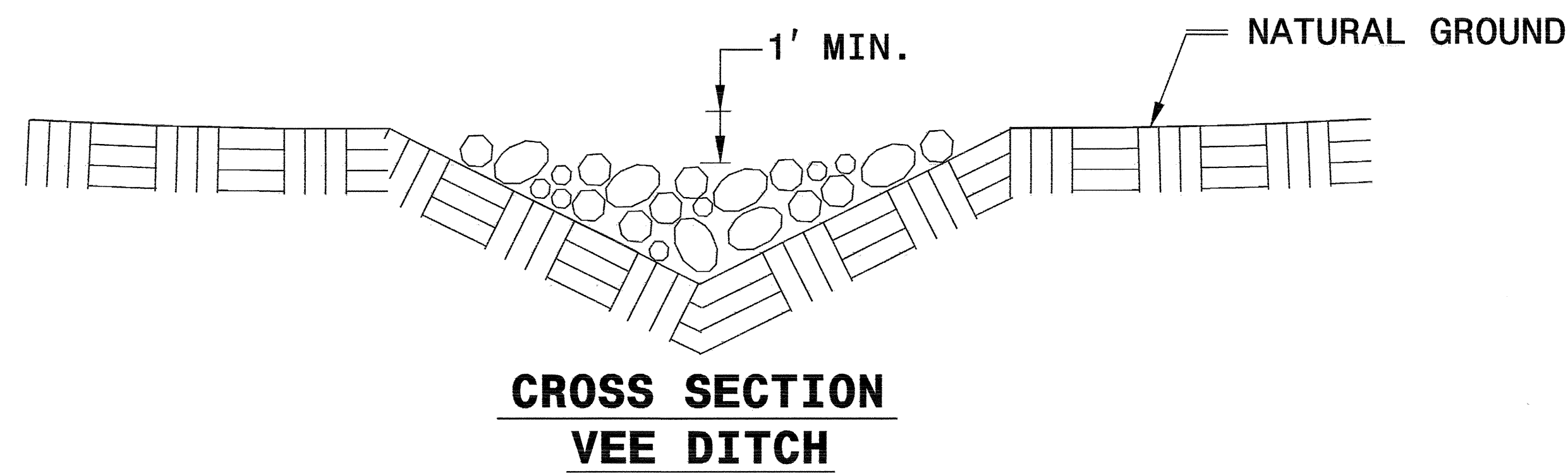
# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



**NOTES:**

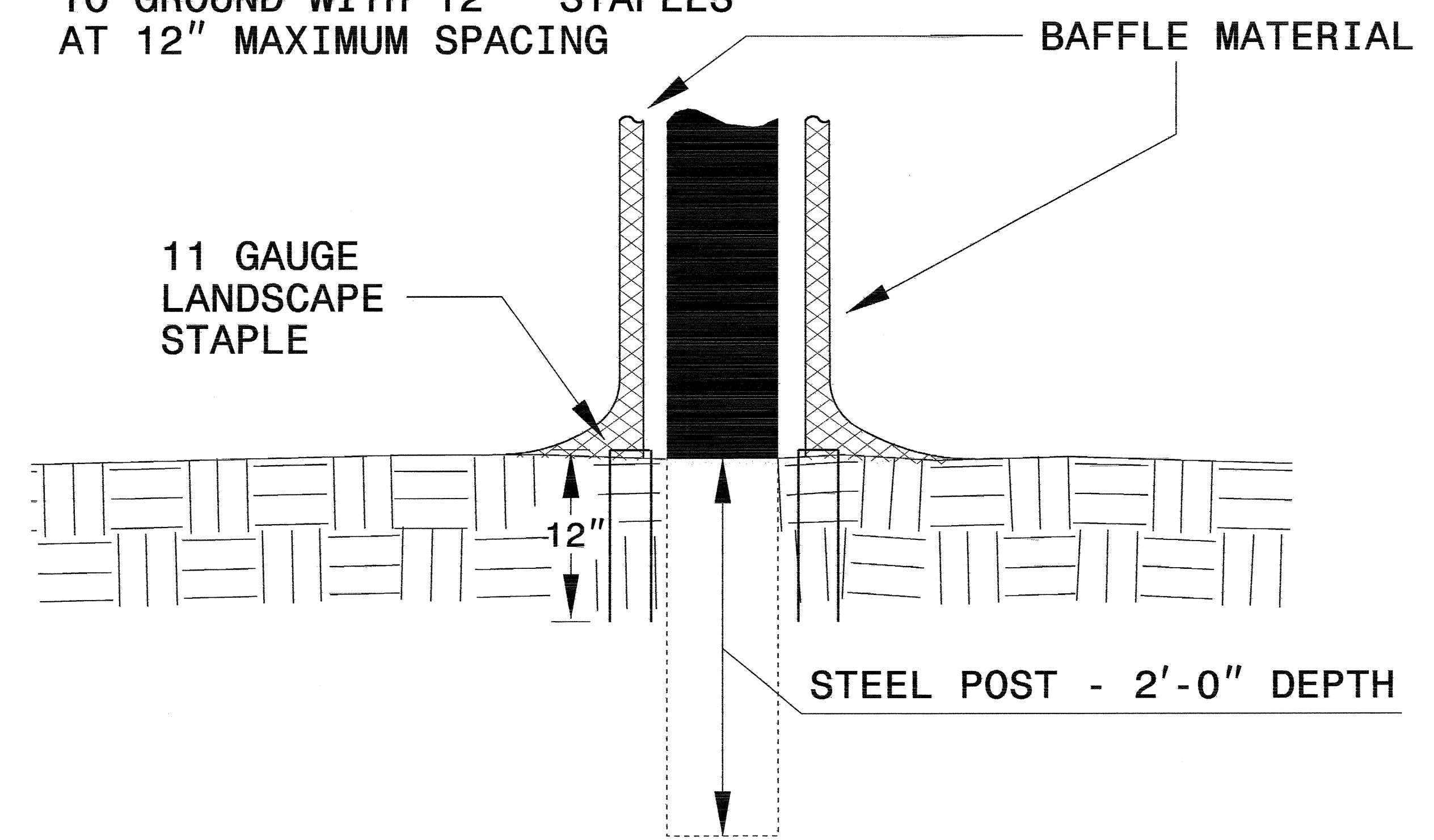
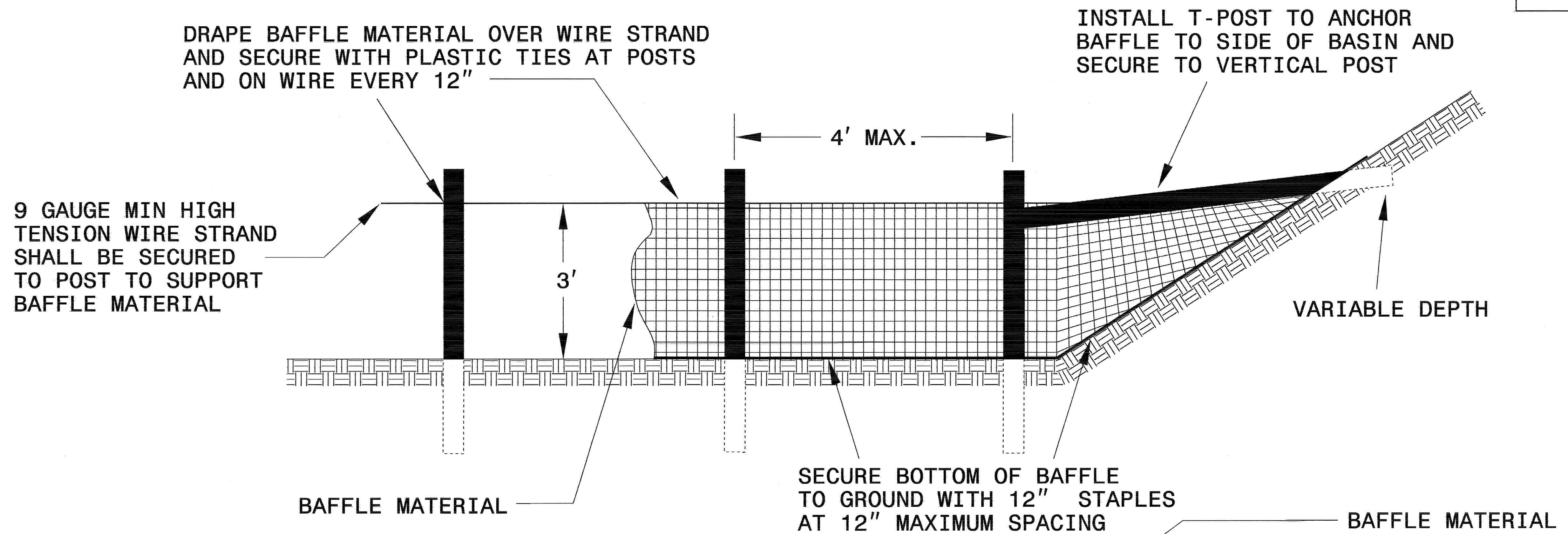
USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



PROJECT REFERENCE NO.	SHEET NO.
B-4216	EC-2A
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.

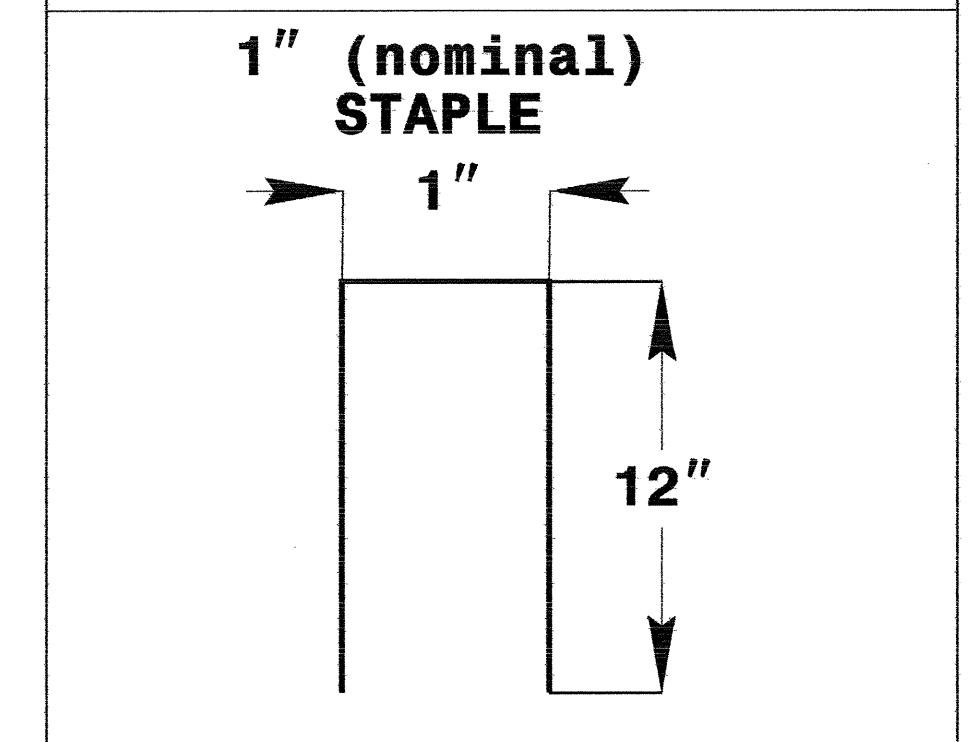
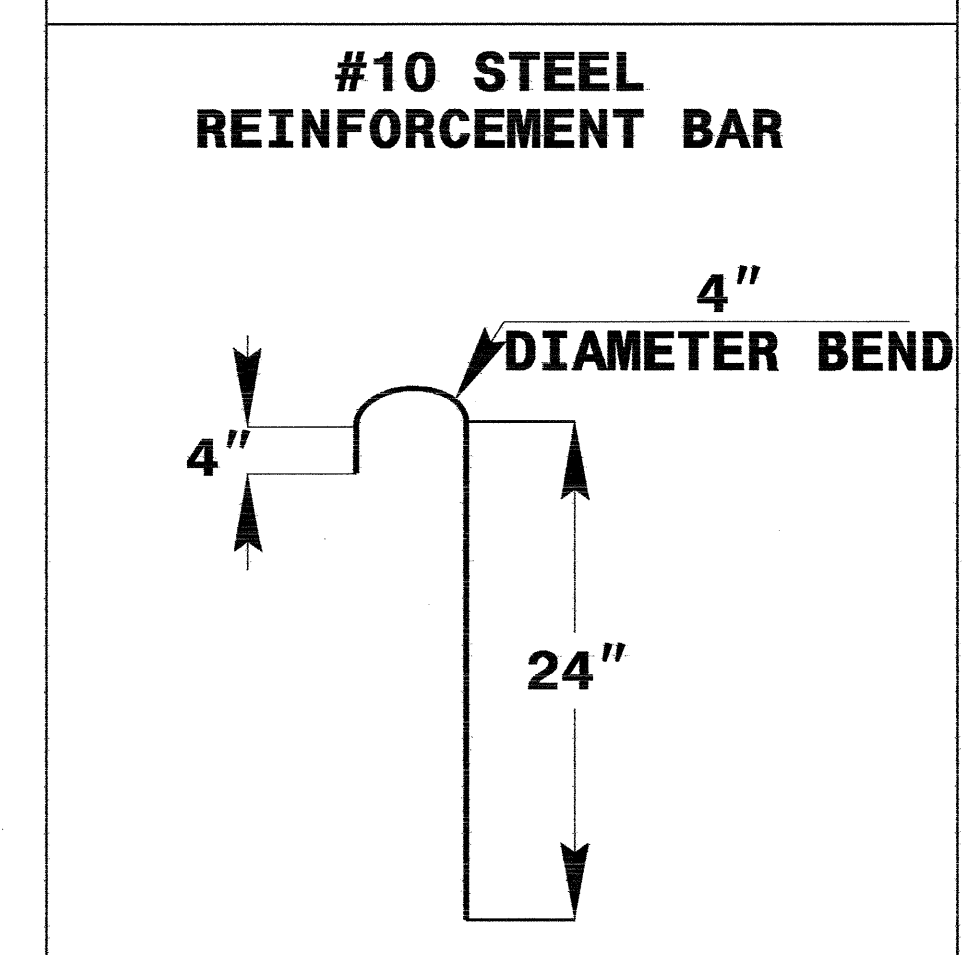
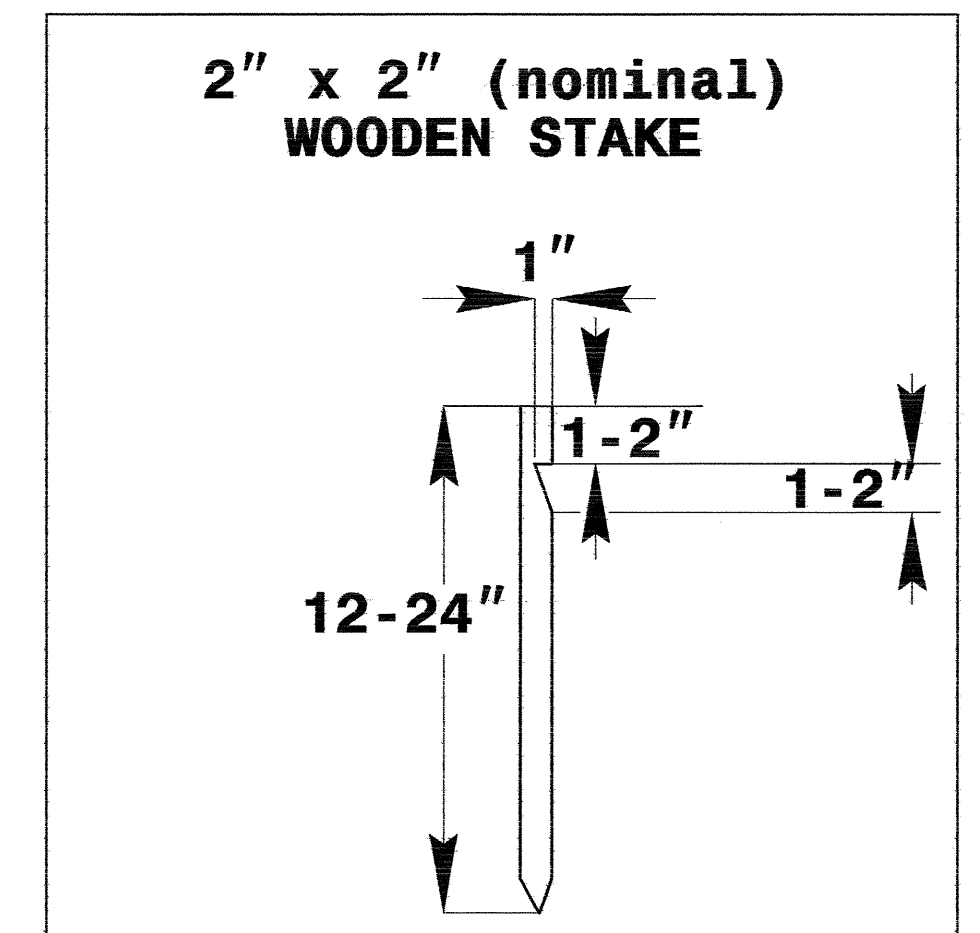
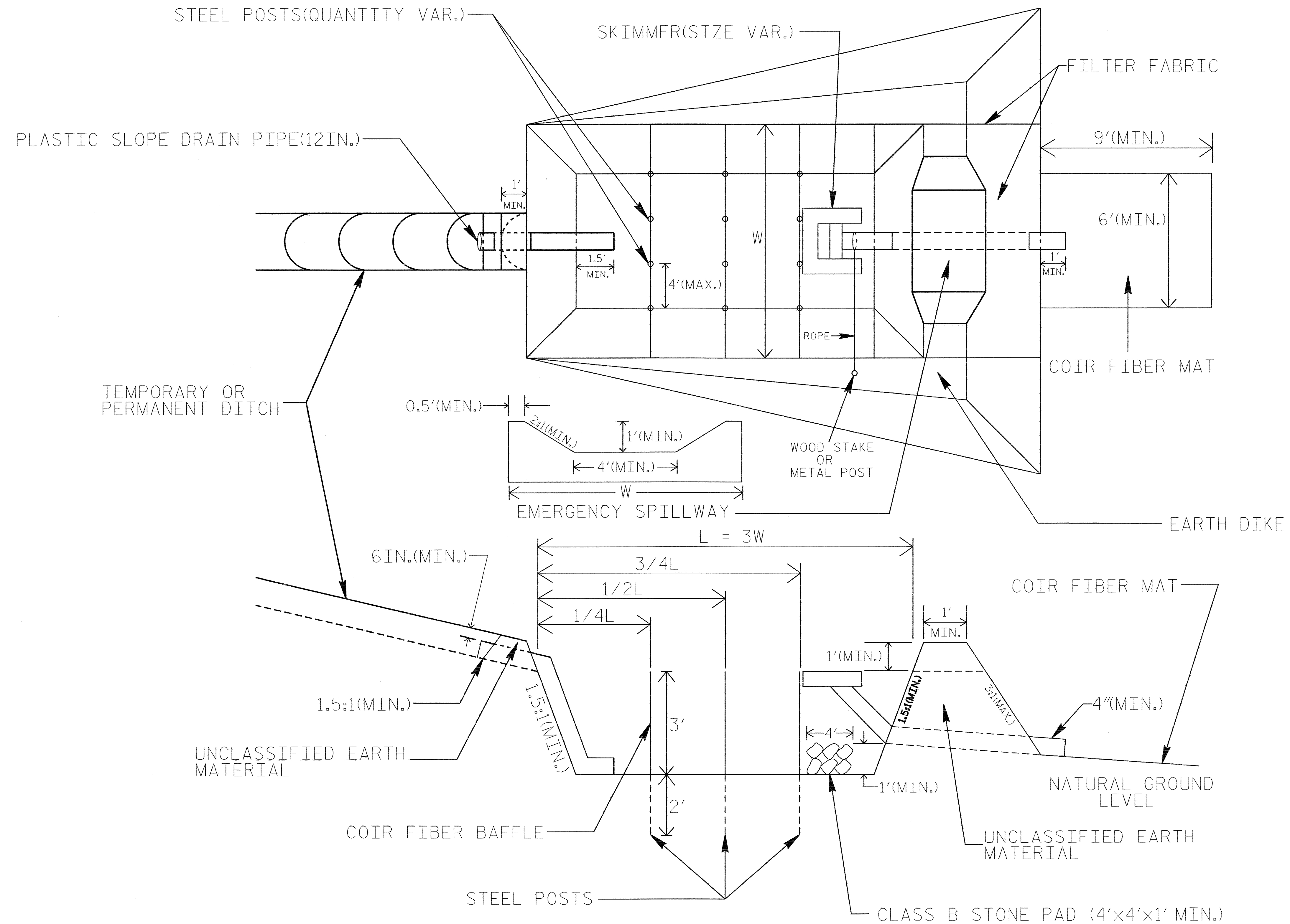
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF  $\frac{1}{3}$  THE BASIN LENGTH.

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

# SKIMMER BASIN WITH BAFFLES DETAIL

PROJECT REFERENCE NO. B-4216	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



**COIR FIBER MAT ANCHOR OPTIONS**

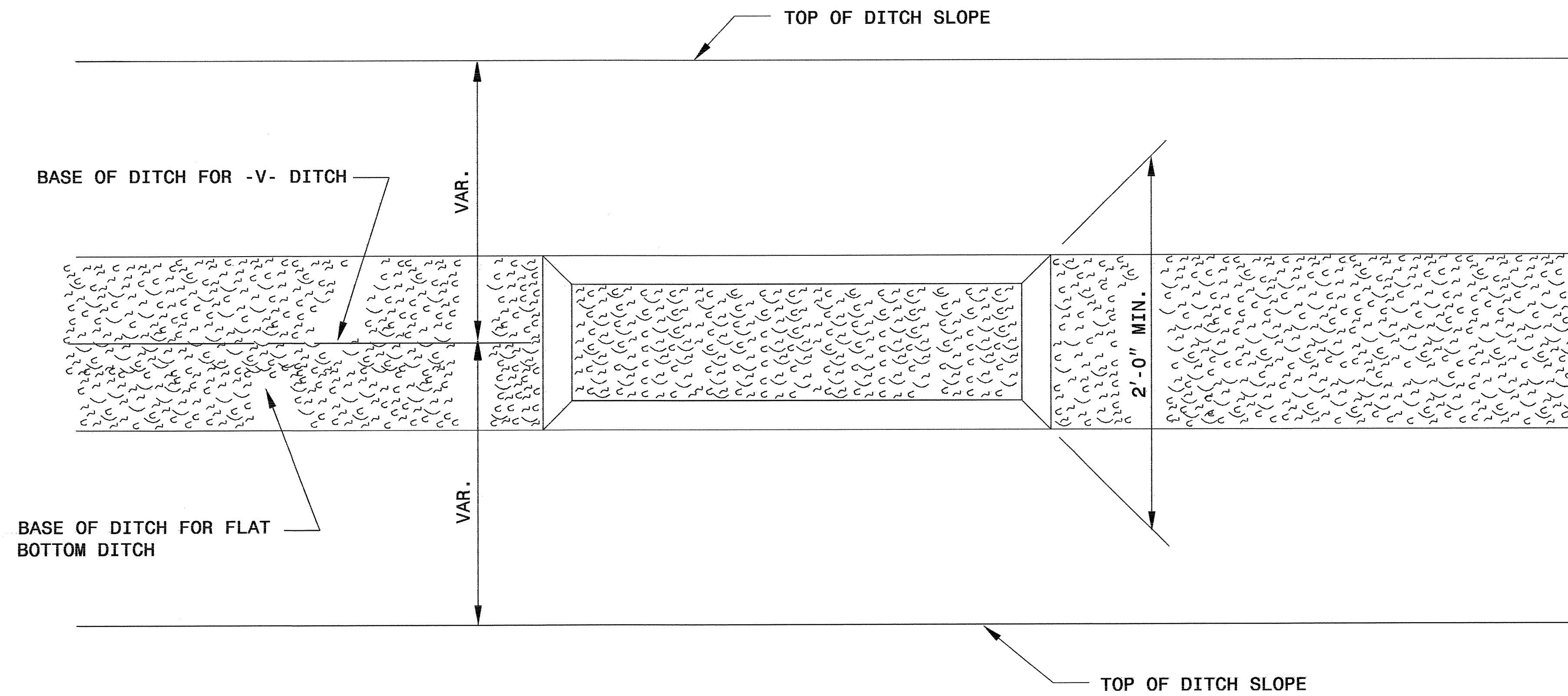
**NOTES**

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.

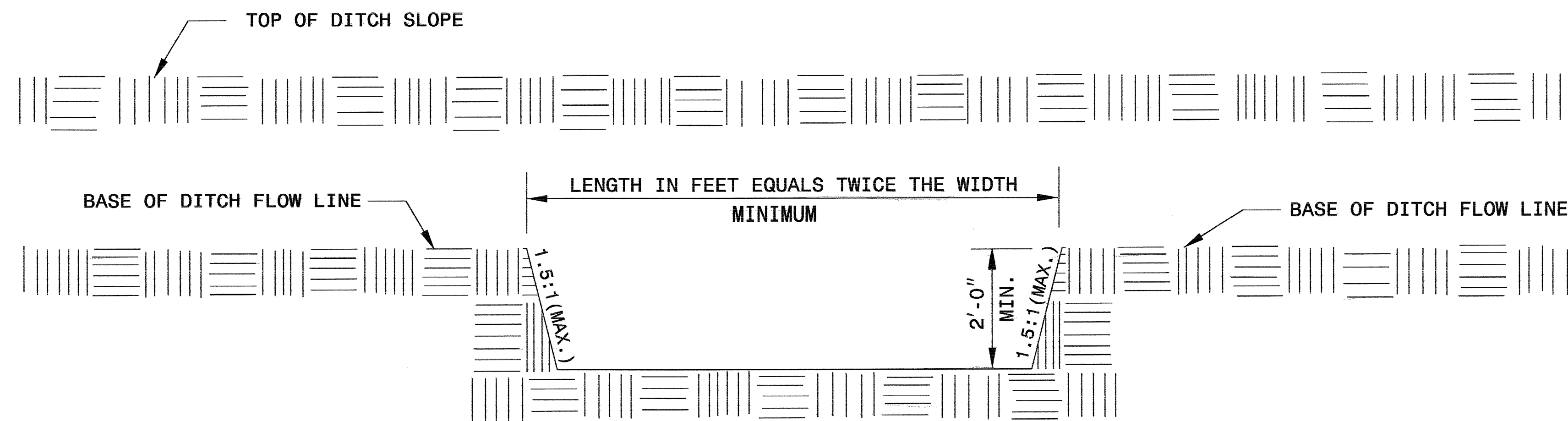
NOT TO SCALE

PROJECT REFERENCE NO. B-4216	SHEET NO. EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# SILT BASIN 'B' DETAIL



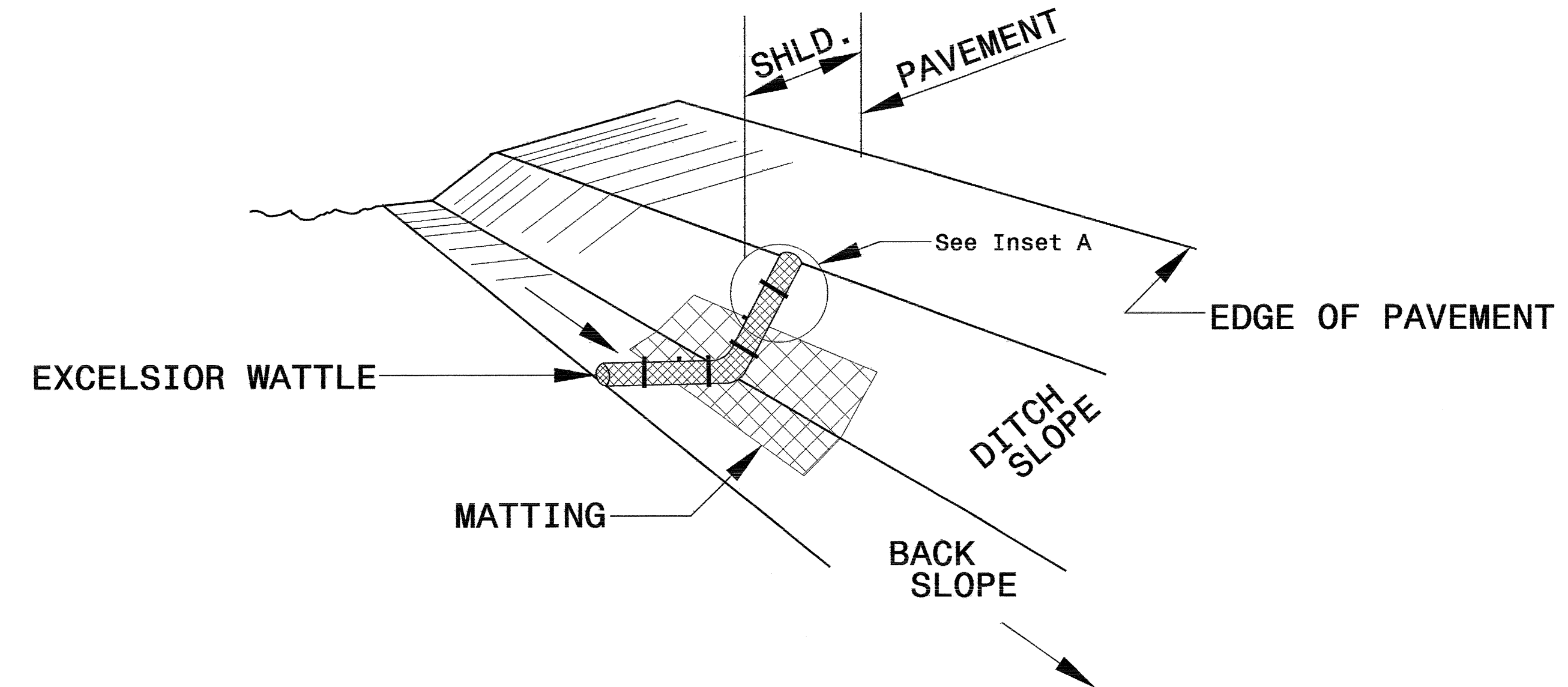
PLAN



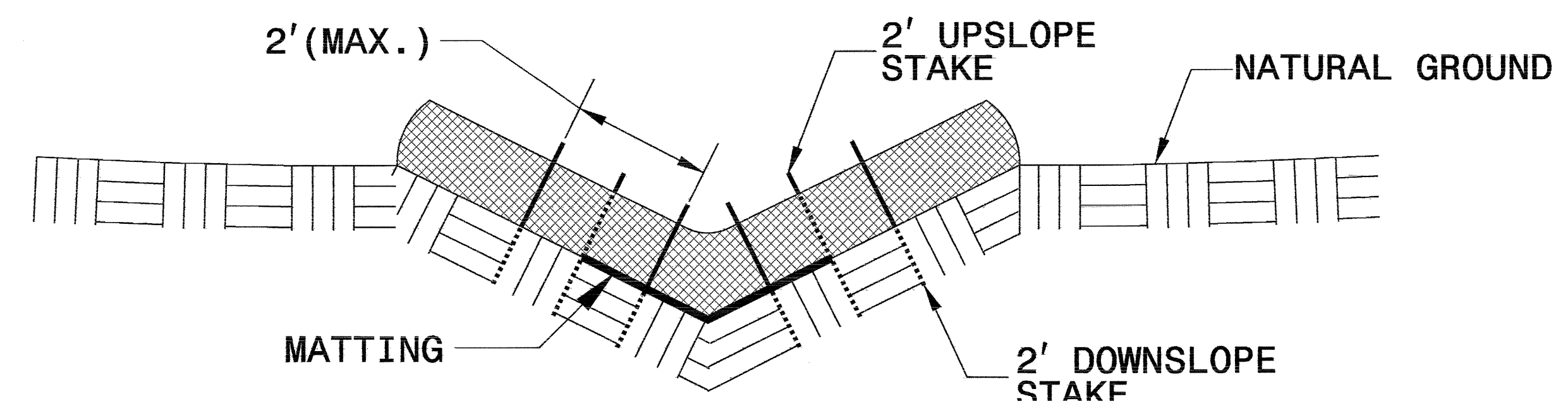
ELEVATION

PROJECT REFERENCE NO. B-4216	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

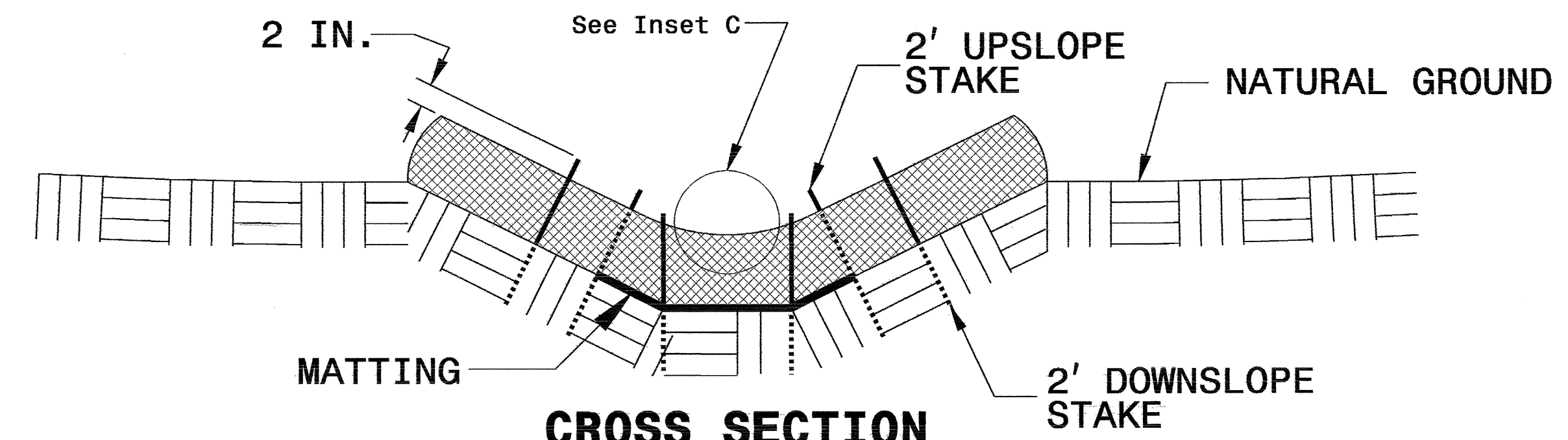
# WATTLE WITH POLYACRYLAMIDE DETAIL



**ISOMETRIC VIEW**



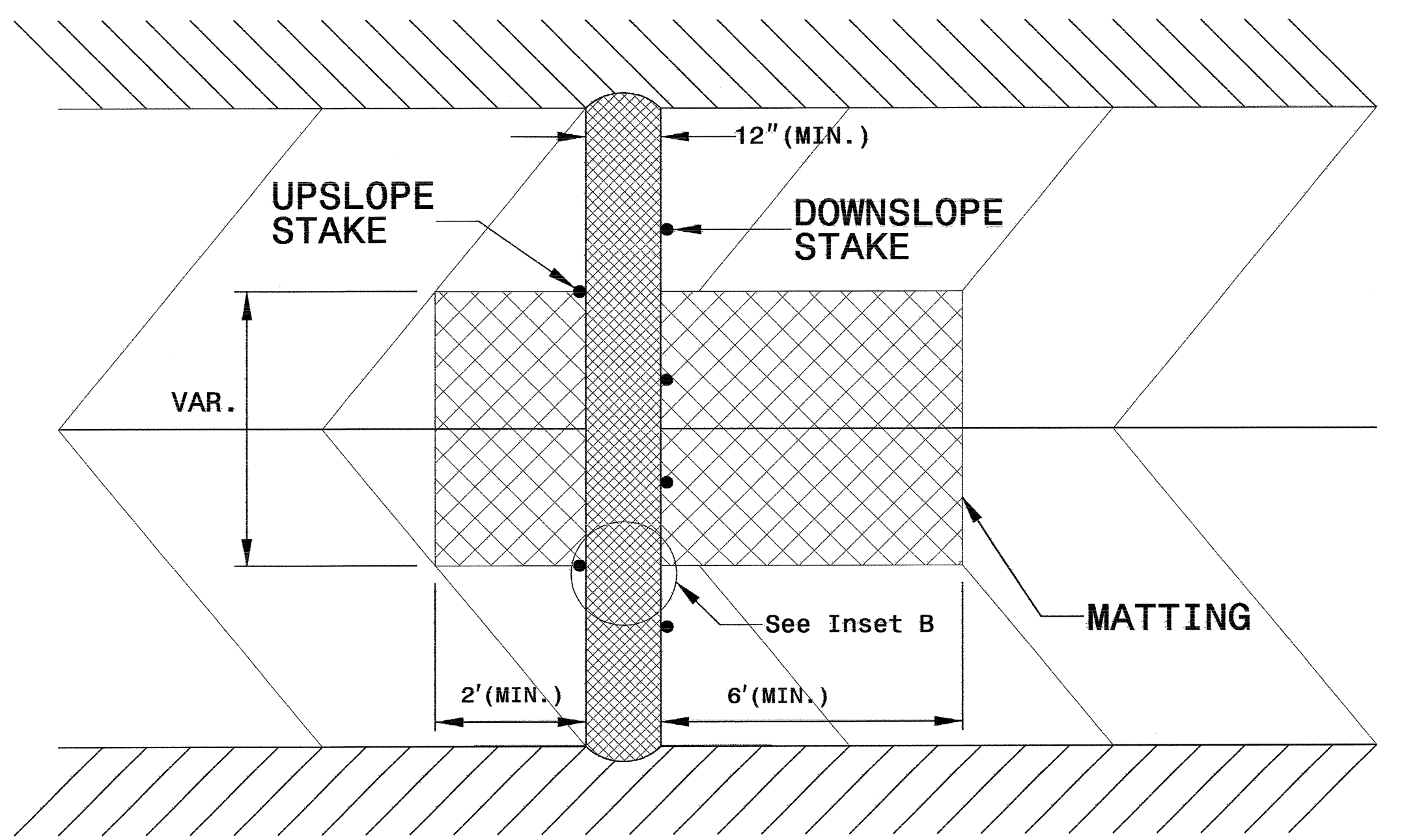
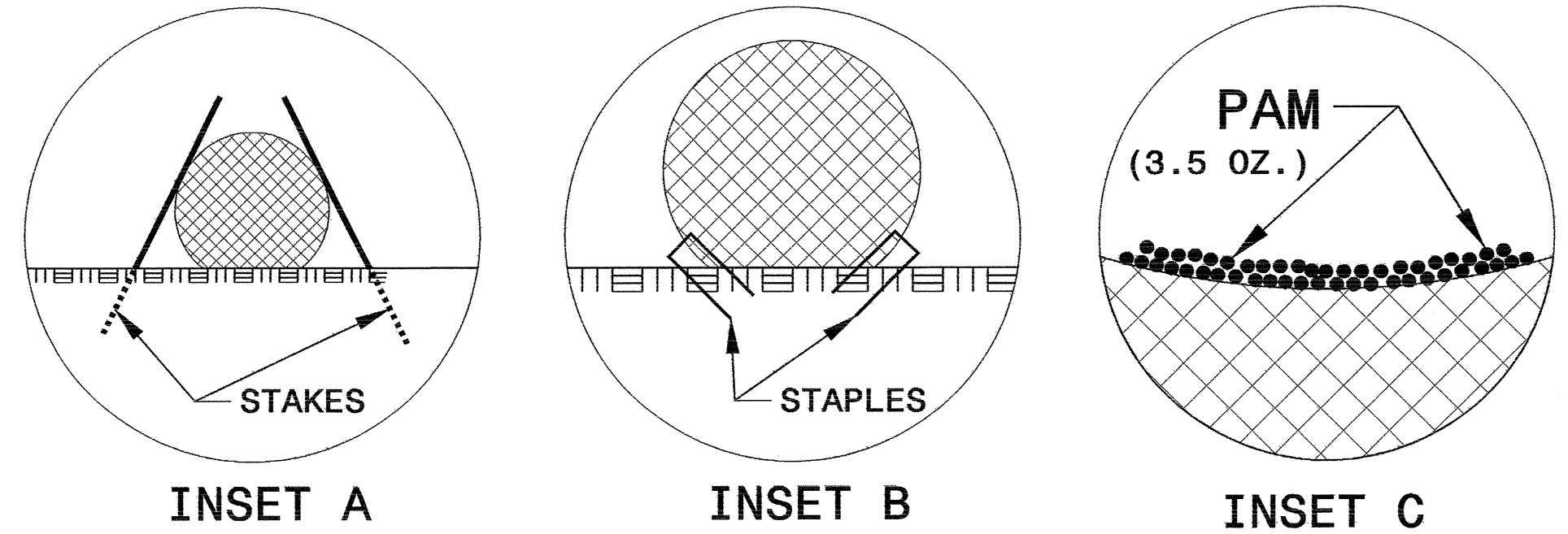
**CROSS SECTION VEE DITCH**



**CROSS SECTION TRAPEZOIDAL DITCH**

**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. 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 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



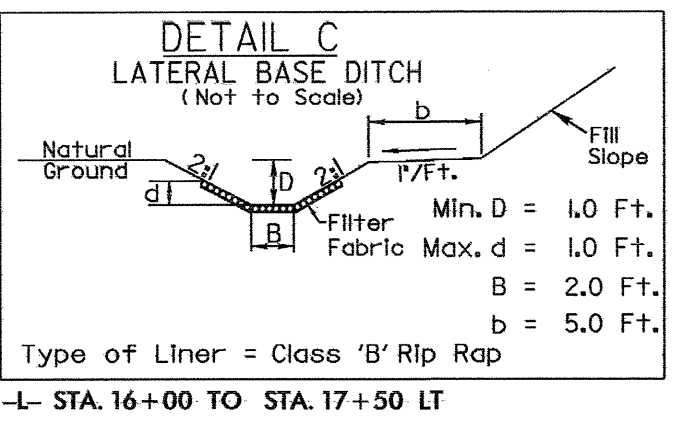
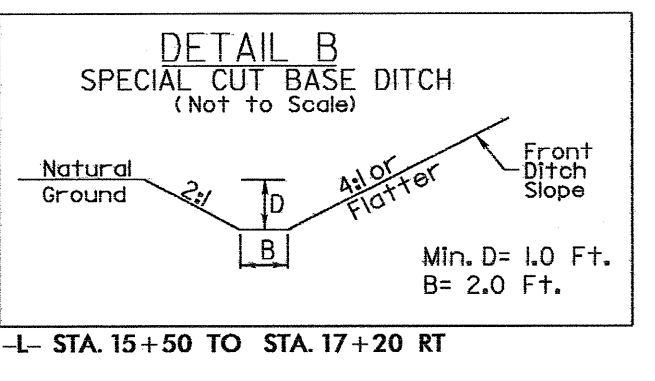
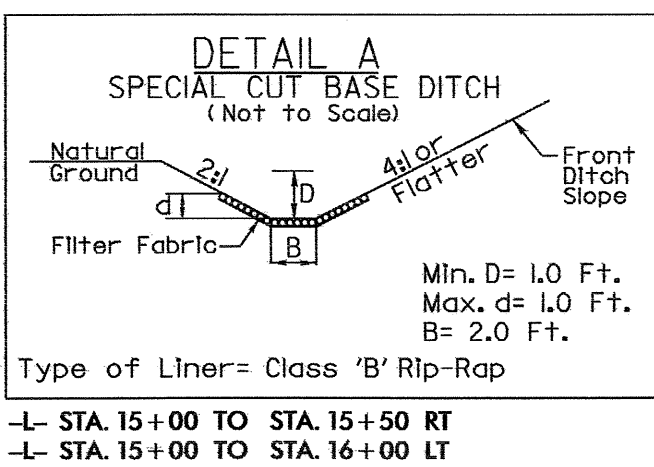
**TOP VIEW**



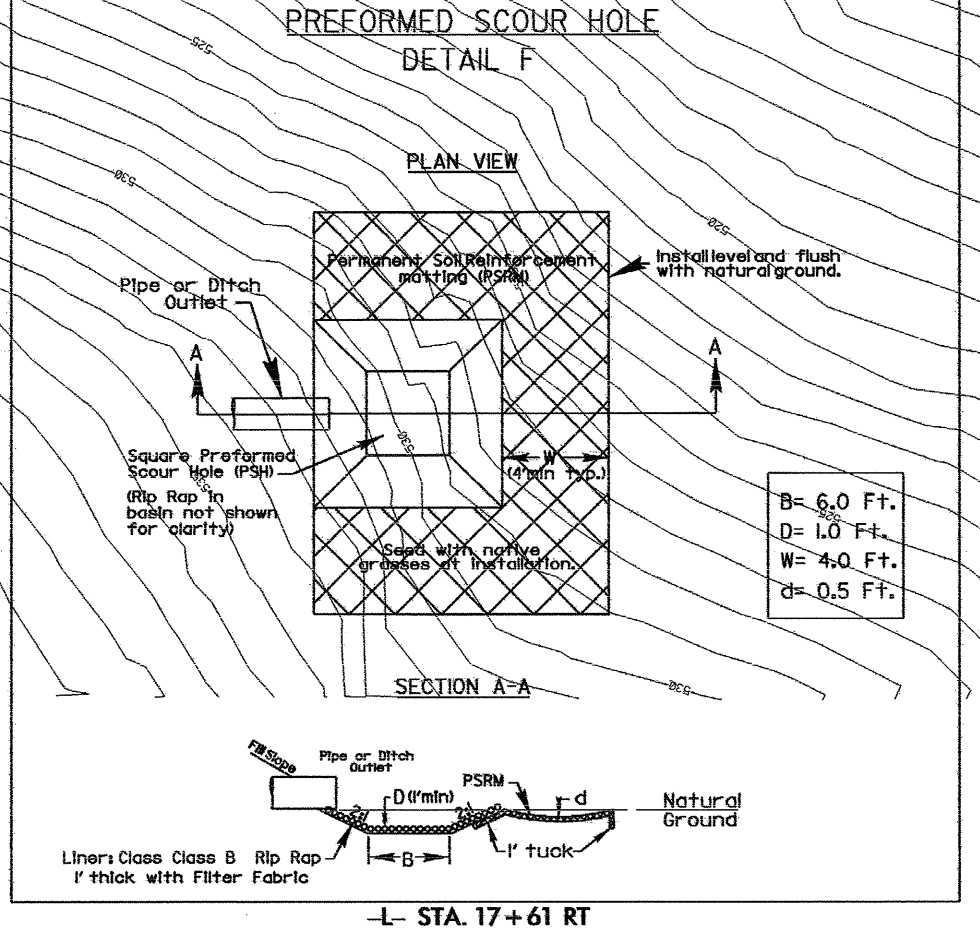
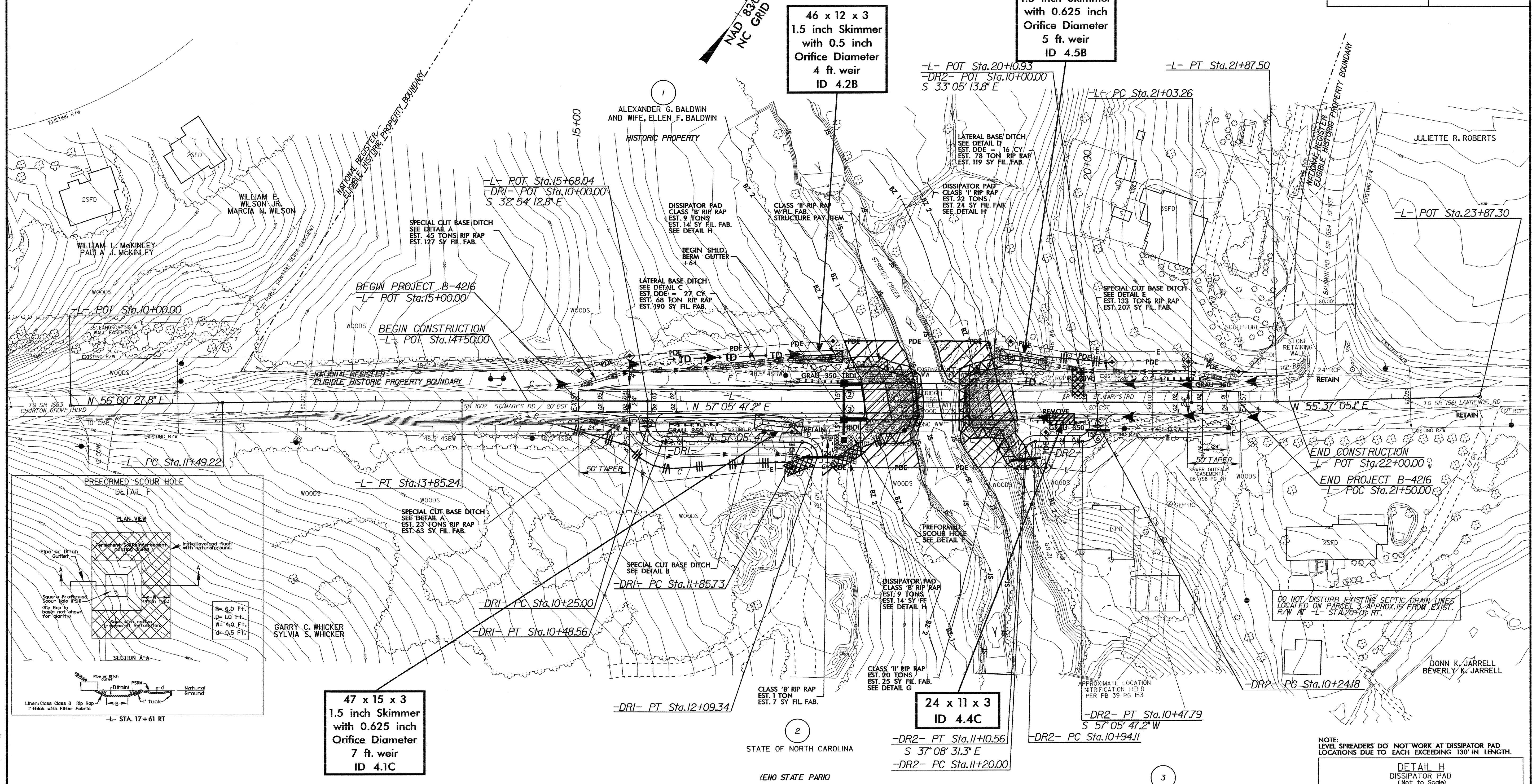
**CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4**

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

**NOTE:**  
UTILIZE TEMPORARY ROCK SILT CHECK TYPE - A  
AND SKIMMER BASIN AS STILLING  
BASIN WHERE APPLICABLE.



PROJECT REFERENCE NO. B-4216	SHEET NO. EC-4/CONST.4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

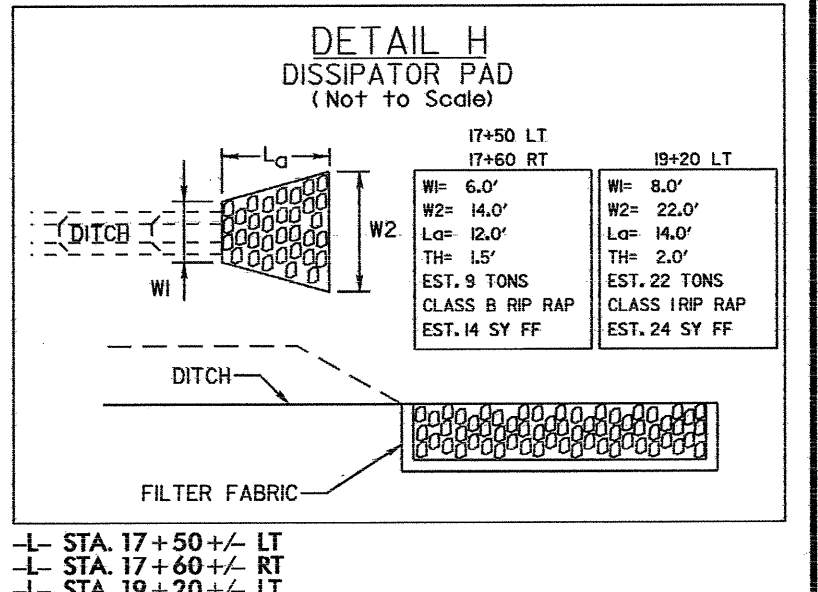
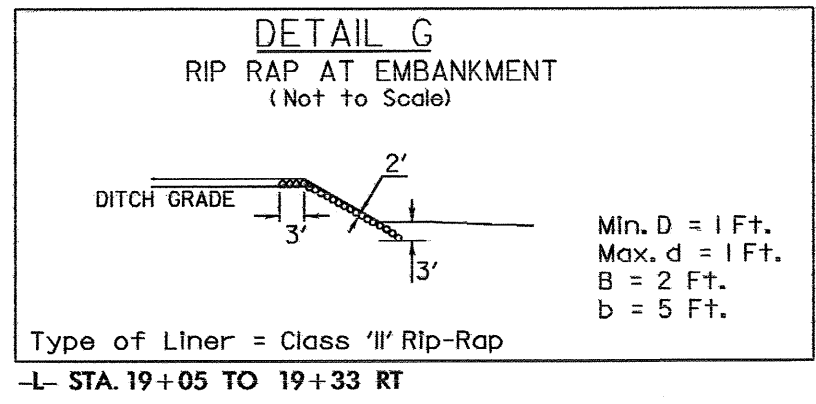
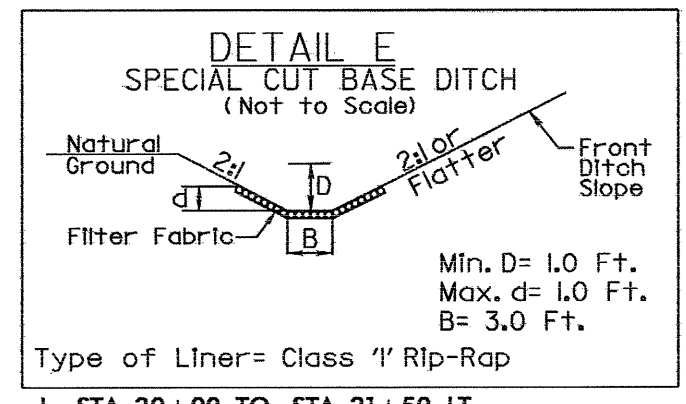
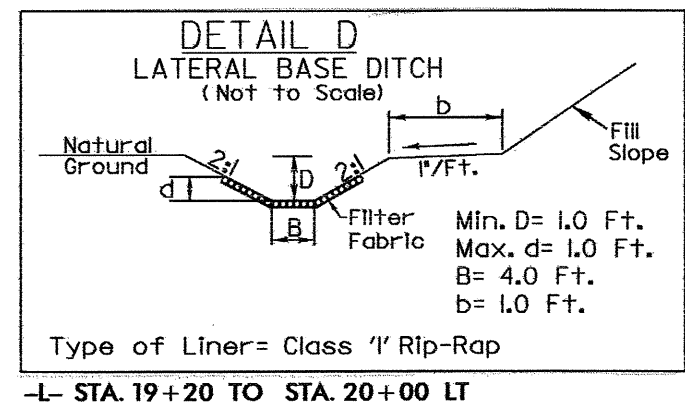


**47 x 15 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
7 ft. weir  
ID 4.1C**

**46 x 12 x 3  
1.5 inch Skimmer  
with 0.5 inch  
Orifice Diameter  
4 ft. weir  
ID 4.2B**

**46 x 13 x 3  
1.5 inch Skimmer  
with 0.625 inch  
Orifice Diameter  
5 ft. weir  
ID 4.5B**

**24 x 11 x 3  
ID 4.4C**



**ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS**

**NOTE:**  
LEVEL SPREADERS DO NOT WORK AT DISSIPATOR PAD  
LOCATIONS DUE TO EACH EXCEEDING 130' IN LENGTH.

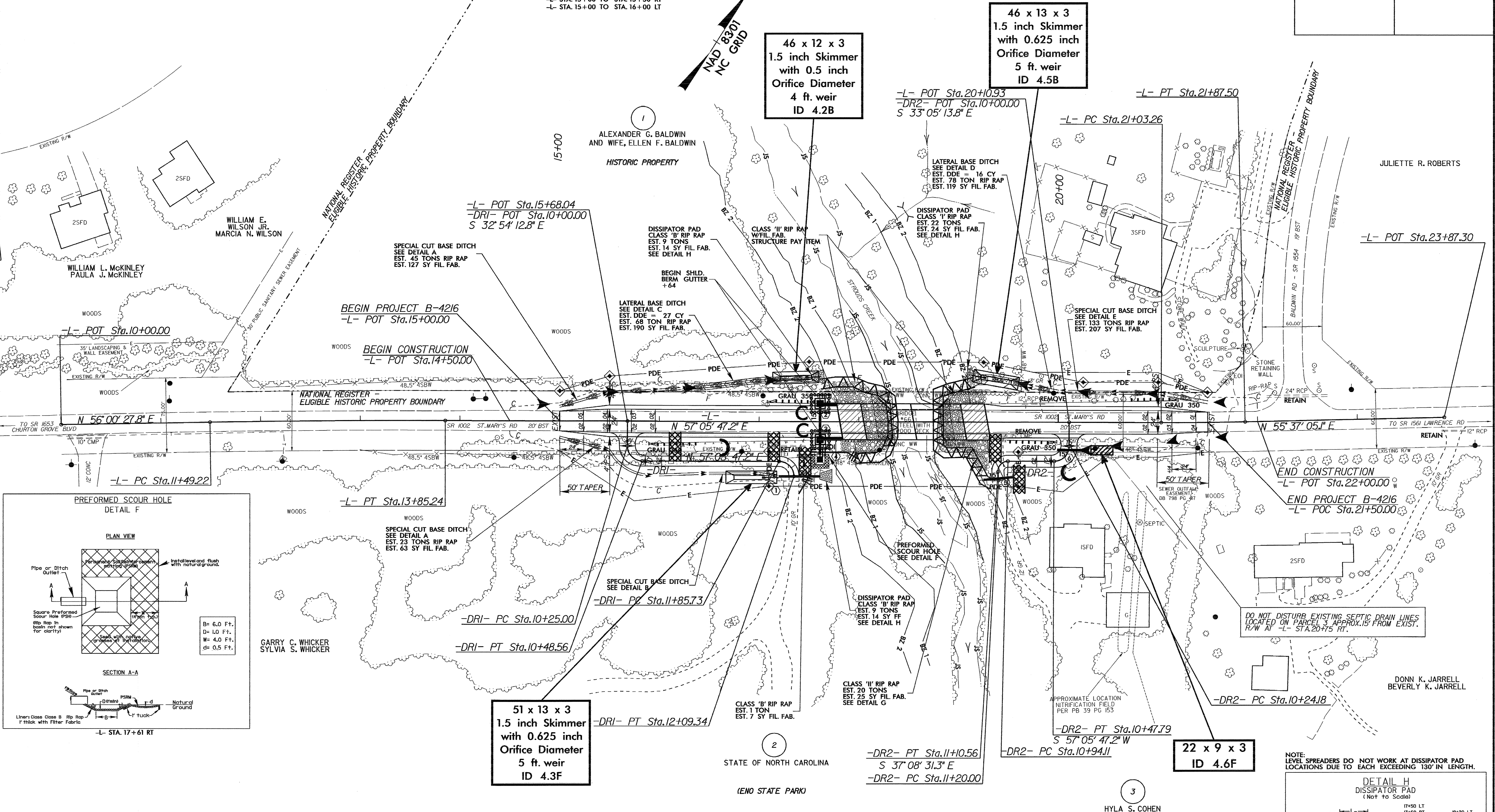
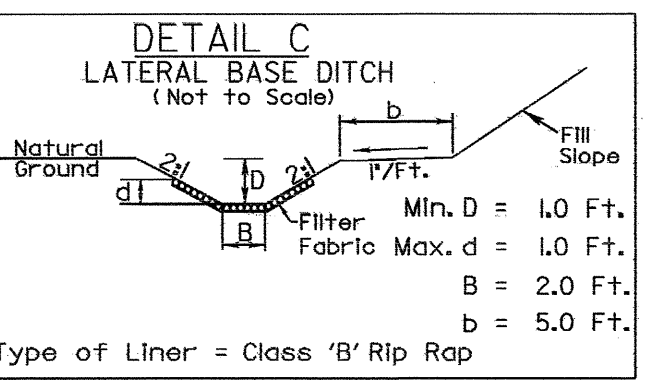
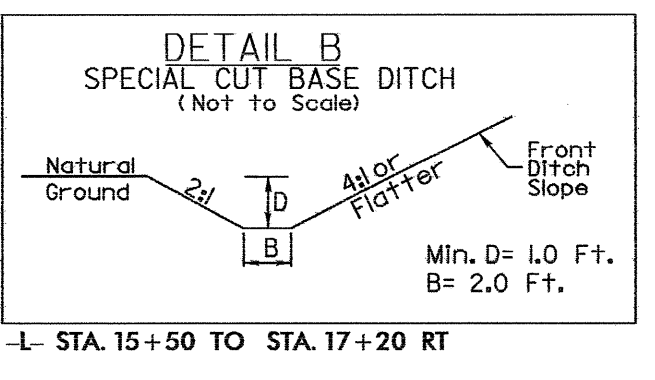
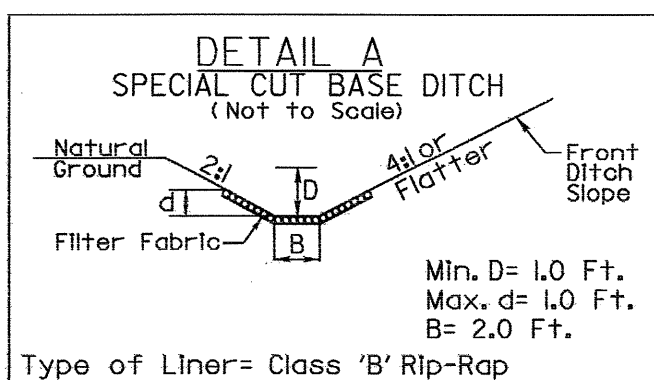
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PROJECT REFERENCE NO.	SHEET NO.
B-4216	EC-5/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**NOTE:**  
UTILIZE TEMPORARY ROCK SILT CHECK TYPE - A AND SKIMMER BASIN AS STILLING BASIN WHERE APPLICABLE.



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