

**TIP PROJECT: B-4533**

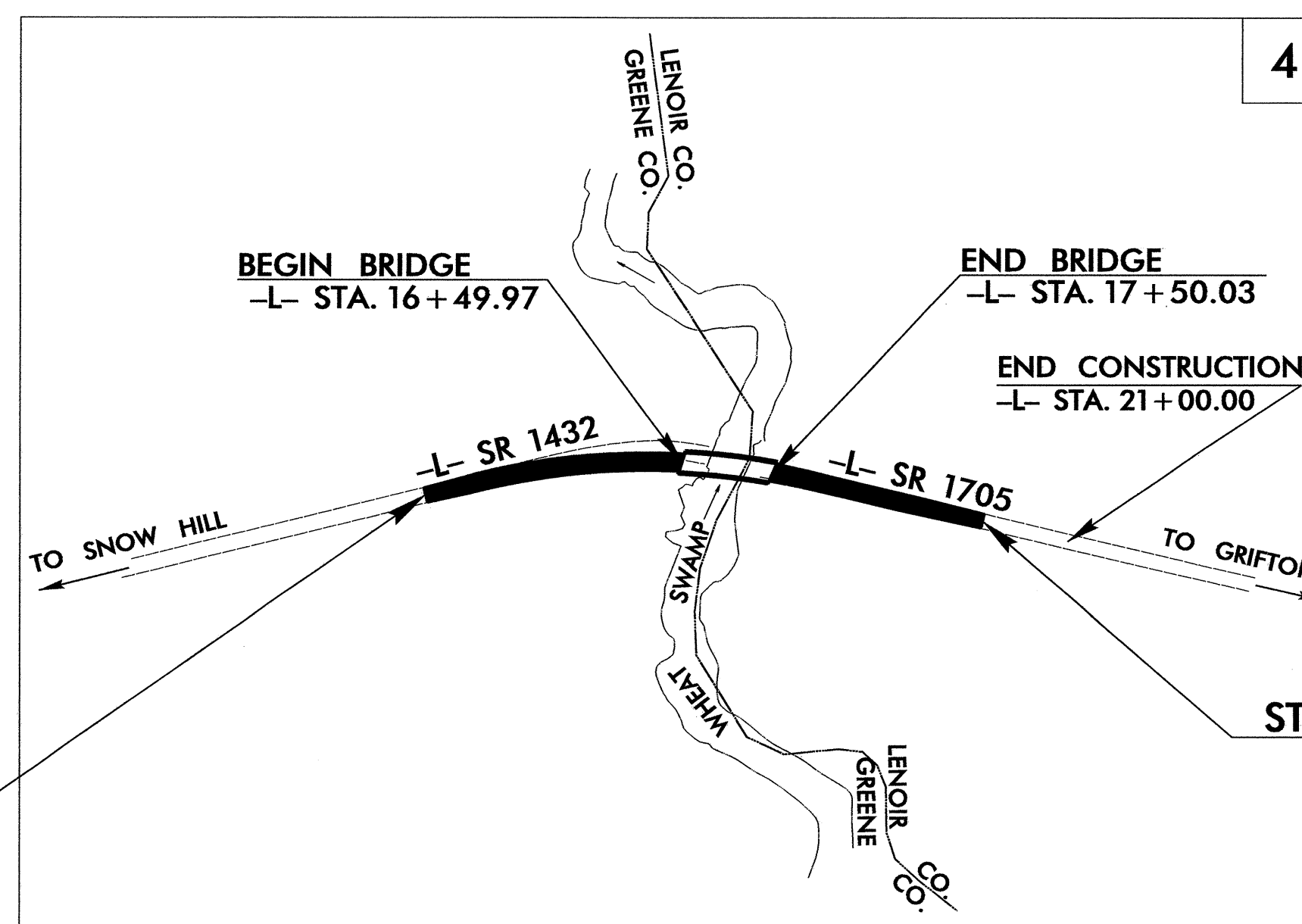
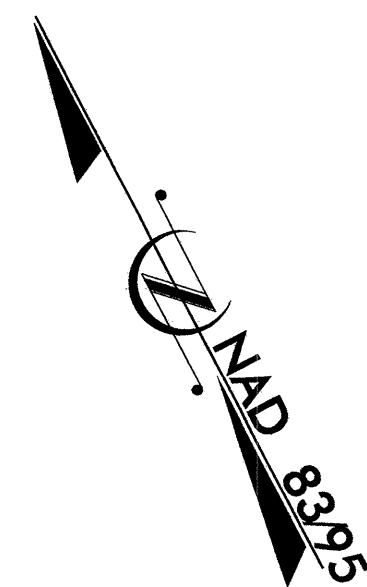
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

**GREENE AND LENOIR COUNTIES**

**LOCATION: REPLACE BRIDGE NO. 48 OVER WHEAT SWAMP CREEK  
ON SR 1432**

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



|                 |                             |             |              |
|-----------------|-----------------------------|-------------|--------------|
| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
| N.C.            | B-4533                      | EC-1        |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |

**EROSION AND SEDIMENT CONTROL MEASURES**

| Std. #  | Description  | Symbol      |
|---------|--|-------------|
| 1630.03 | Temporary Silt Ditch   | TSD         |
| 1630.05 | Temporary Diversion  | TD          |
| 1605.01 | Temporary Silt Fence   | III III III |
| 1606.01 | Special Sediment Control Fence   | △△△△△△△△    |
| 1622.01 | Temporary Berms and Slope Drains                                       | — T —       |
|         | 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.*

**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

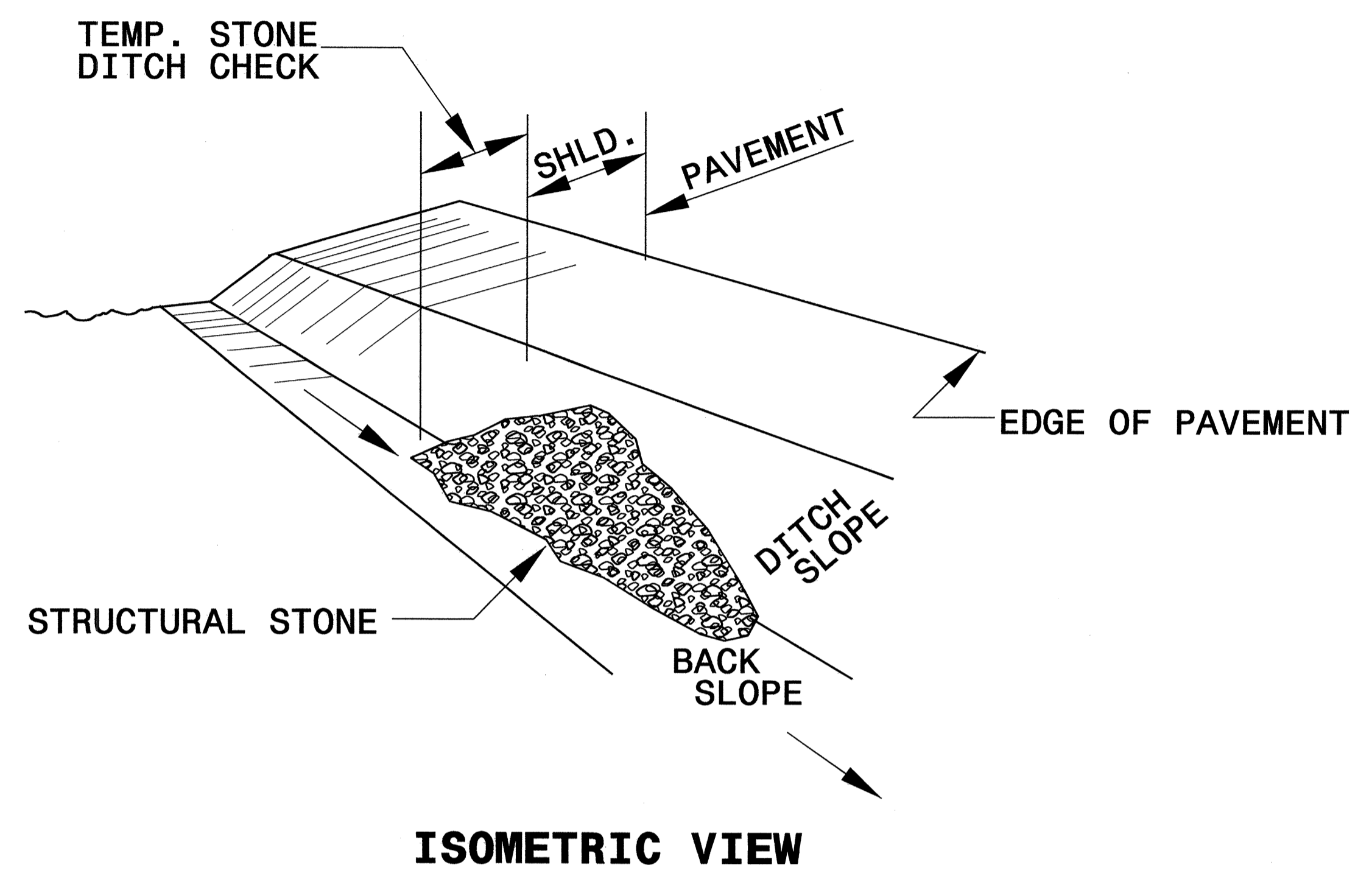
The following roadway english standards as appear in "Roadway Standard Drawings"— Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated July 18, 2006 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

|  |  |
|--|--|
| 1605.01 Temporary Silt Fence             | 1630.05 Temporary Diversion              |
| 1606.01 Special Sediment Control Fence   | 1632.03 Temporary Rock Silt Check Type A |
| 1607.01 Gravel Construction Entrance     | 1633.01 Rock Inlet Sediment Trap Type C  |
| 1622.01 Temporary Berms and Slope Drains |  |

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|                                 |                     |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO.<br>B-4533 | SHEET NO.<br>EC-2   |
| RW SHEET NO.                    |                     |
| ROADWAY DESIGN ENGINEER         | HYDRAULICS ENGINEER |

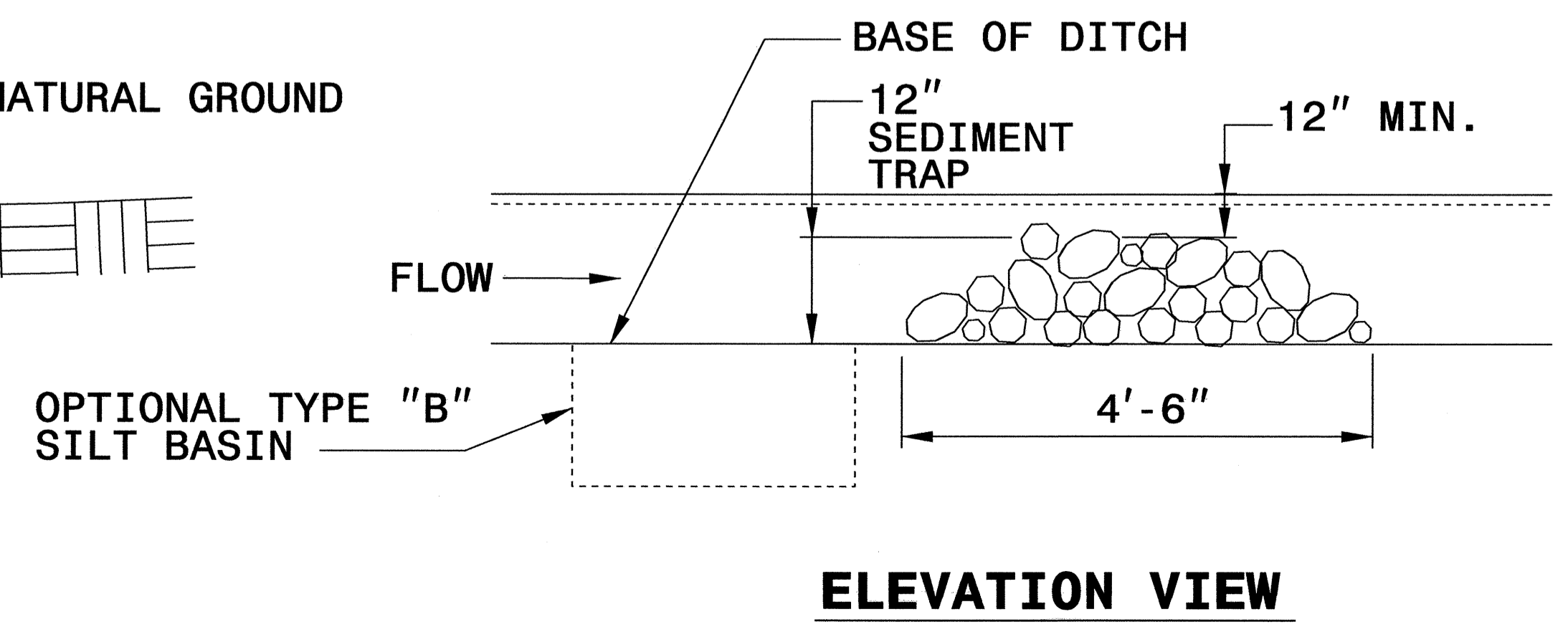
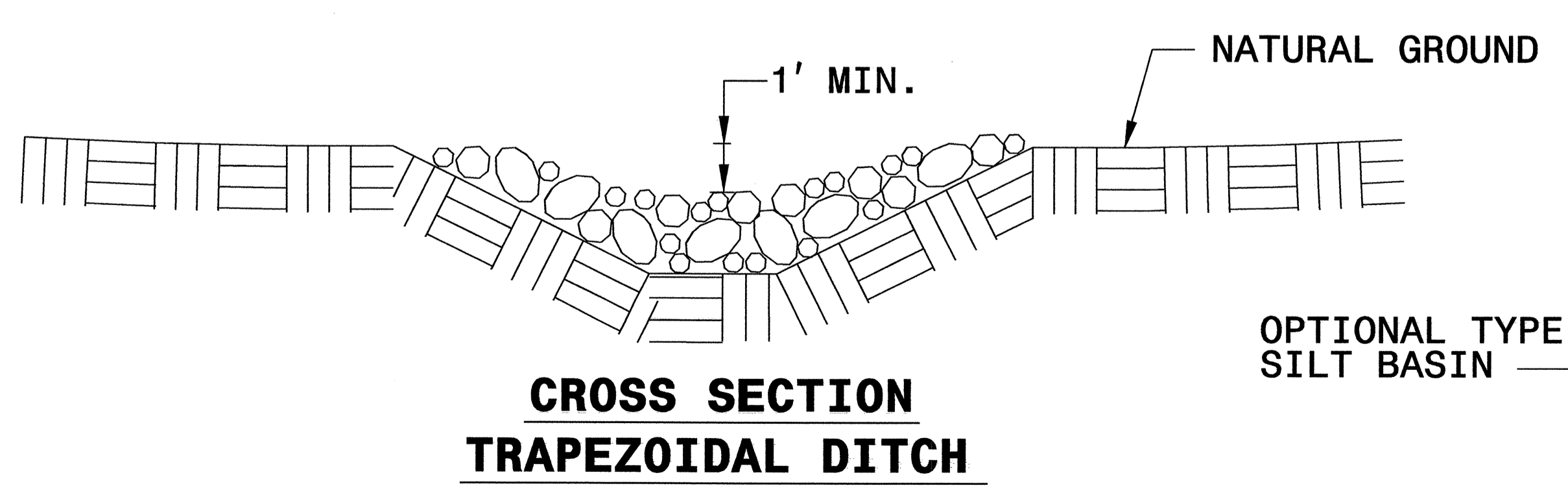
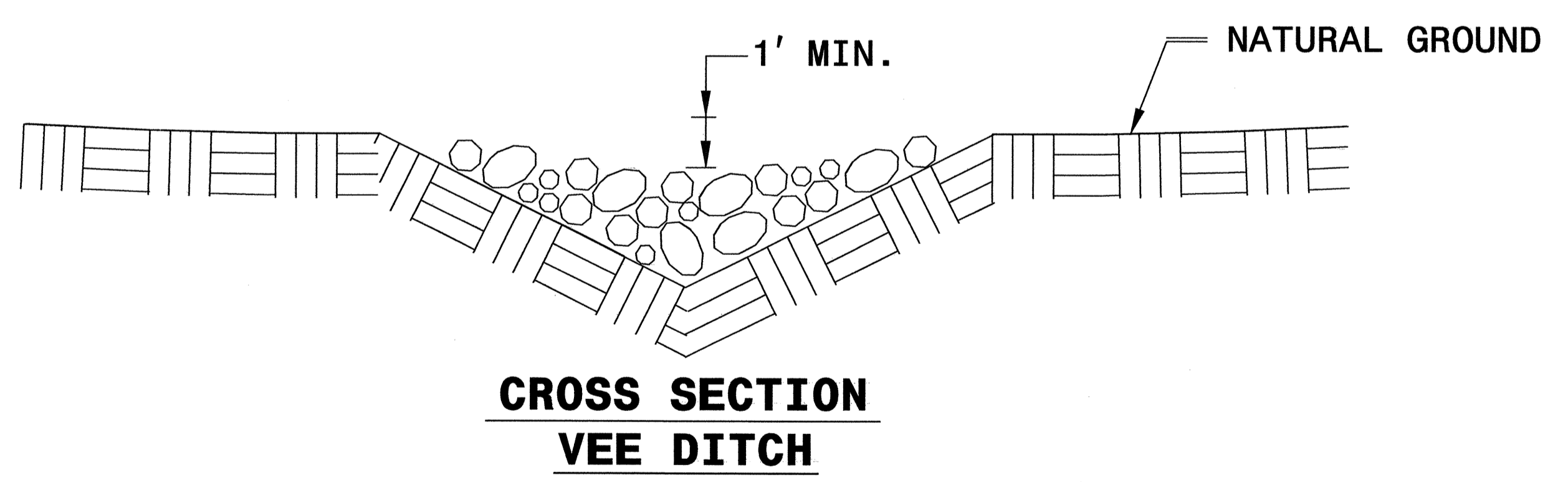
# TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



**NOTES:**

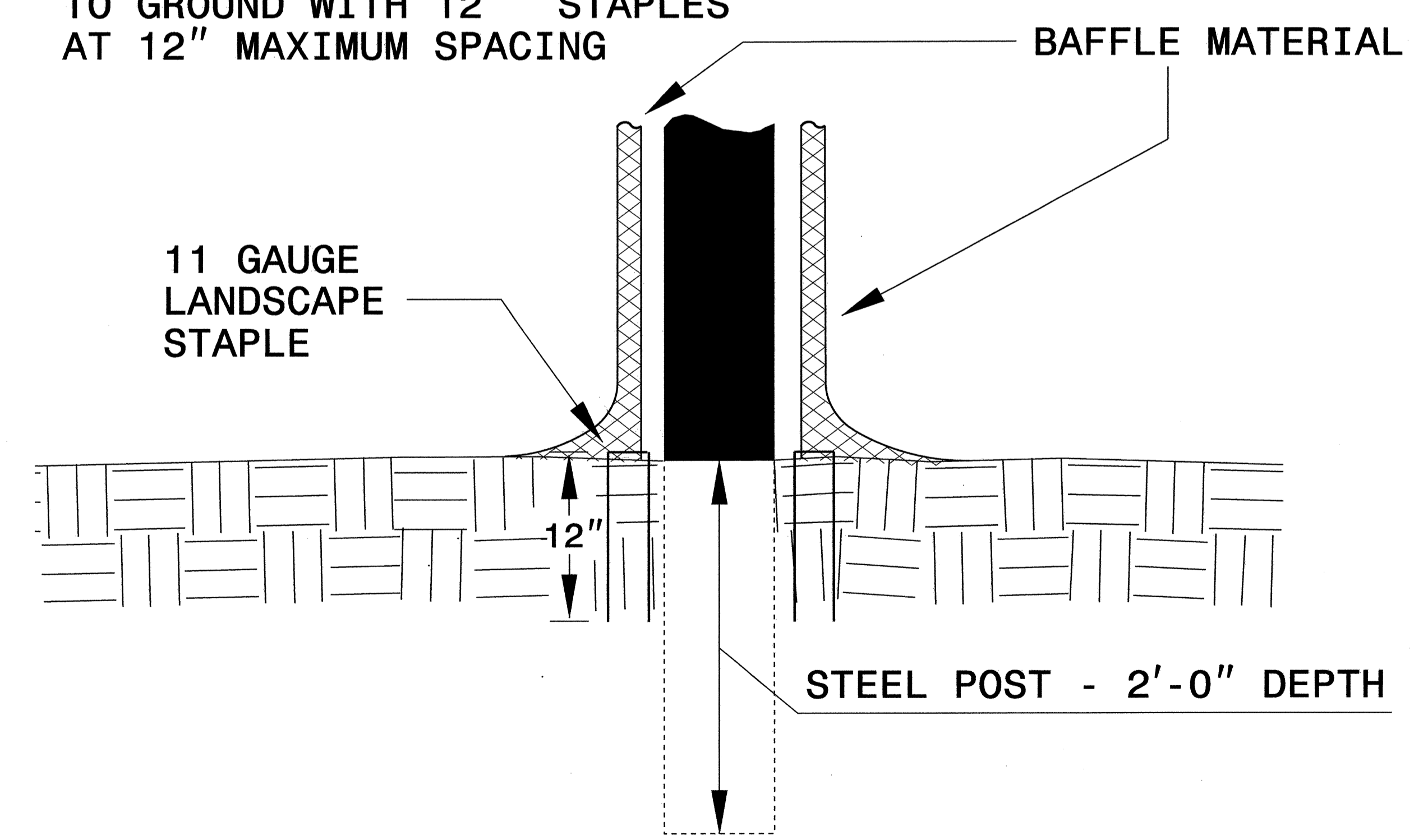
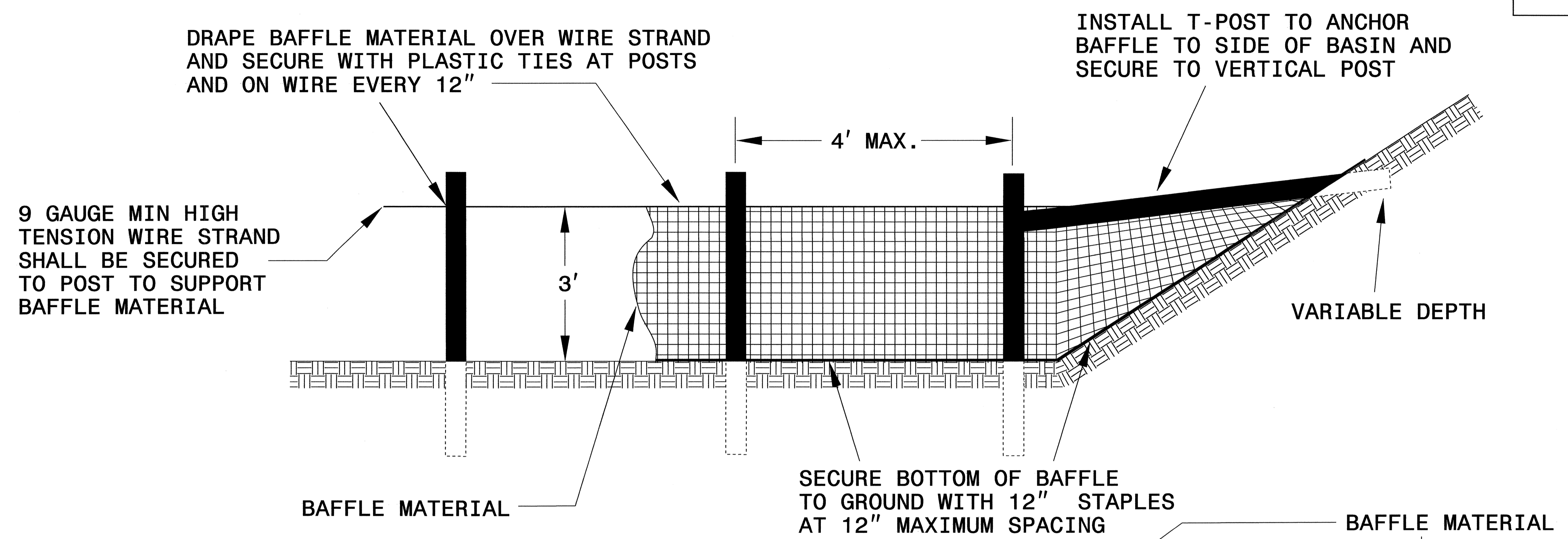
USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

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.<br>B-4533 | SHEET NO.<br>EC-2A     |
| RW SHEET NO.                    |                        |
| ROADWAY DESIGN<br>ENGINEER      | HYDRAULICS<br>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.

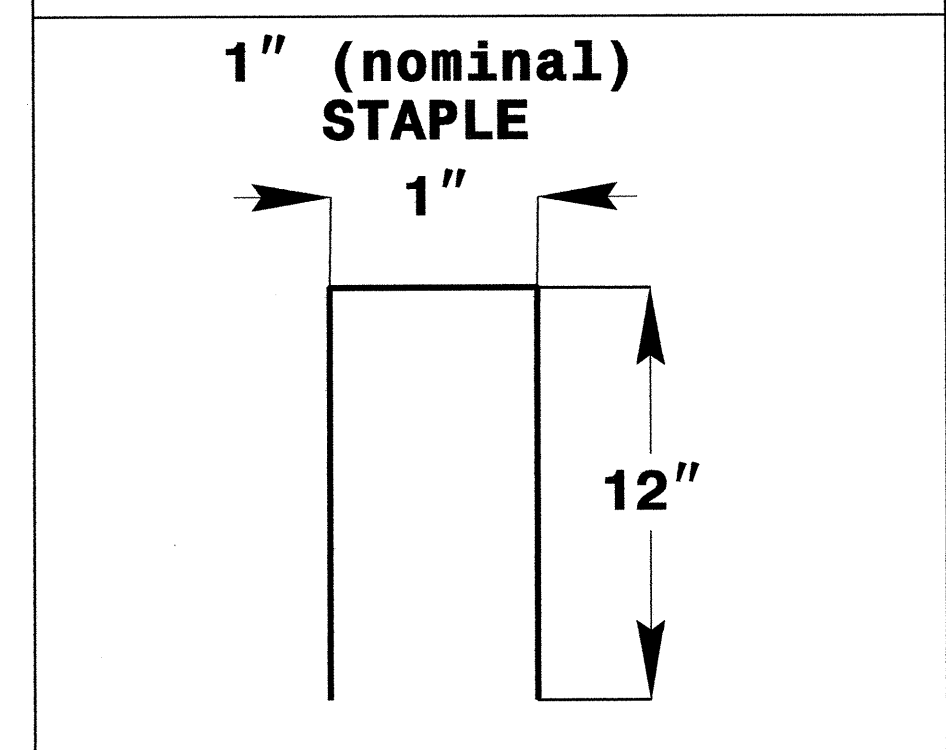
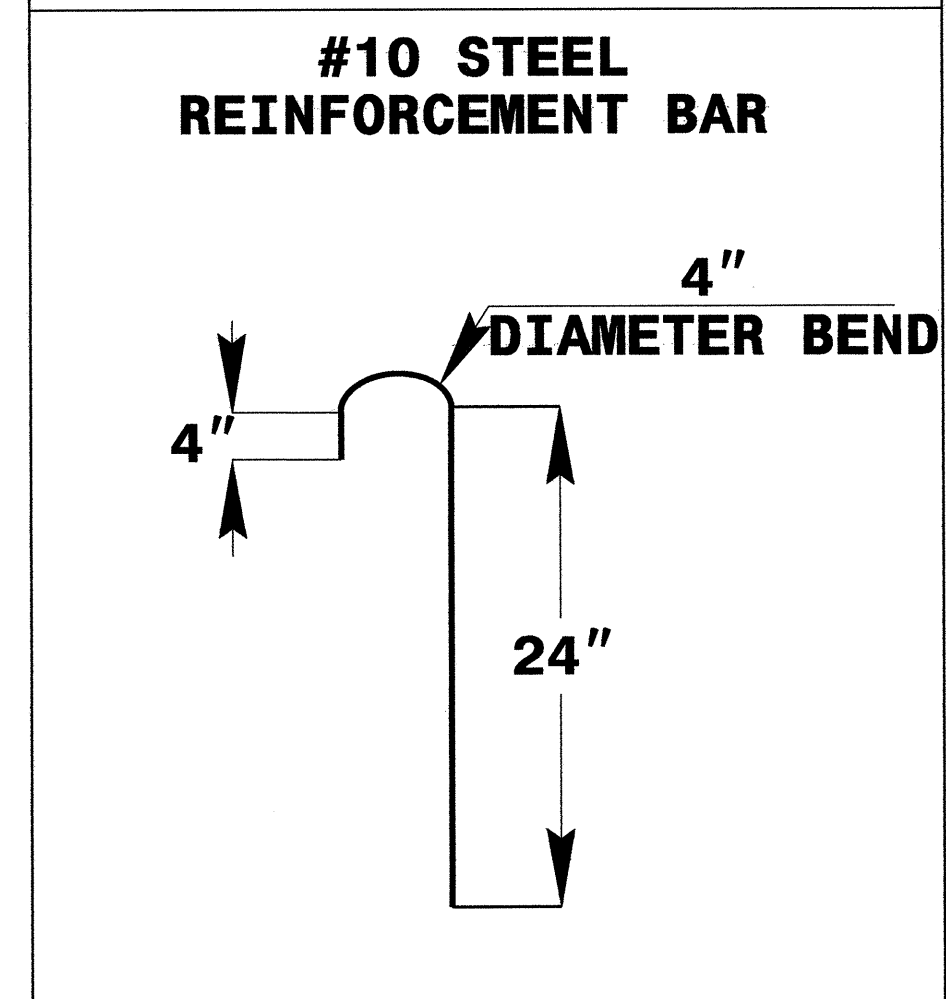
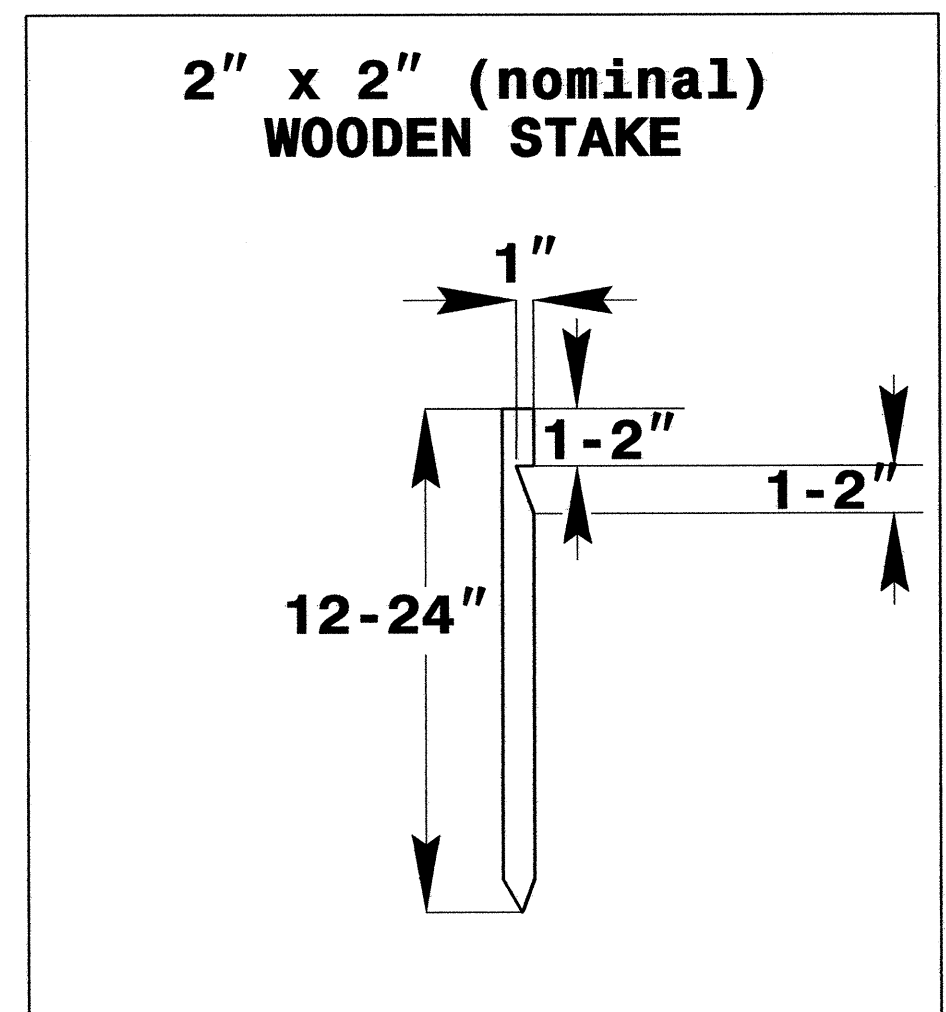
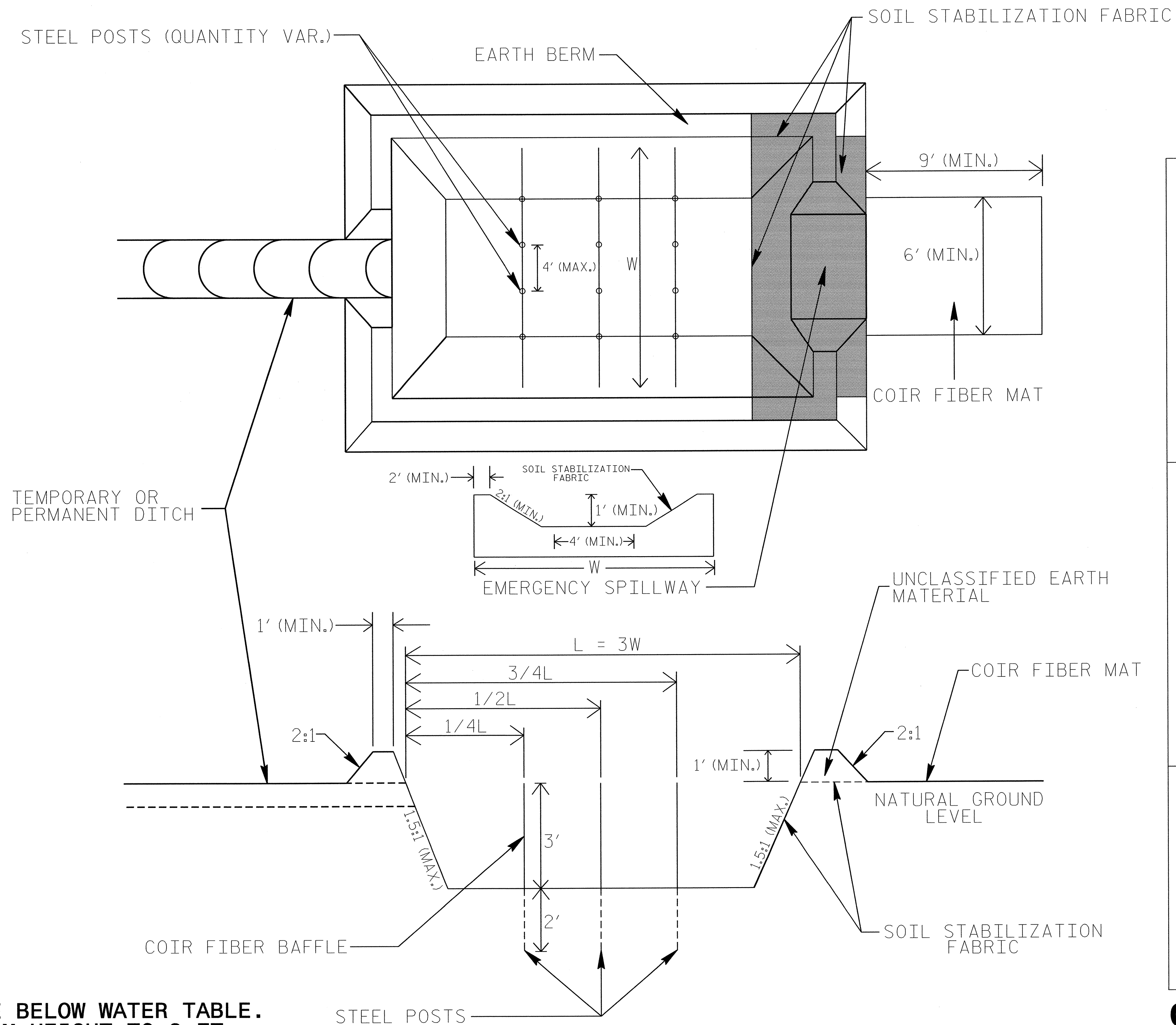
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

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



# INFILTRATION BASIN WITH BAFFLES DETAIL

|                                 |                     |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO.<br>B-4533 | SHEET NO.<br>EC-2B  |
| RW SHEET NO.                    |                     |
| ROADWAY DESIGN ENGINEER         | HYDRAULICS ENGINEER |



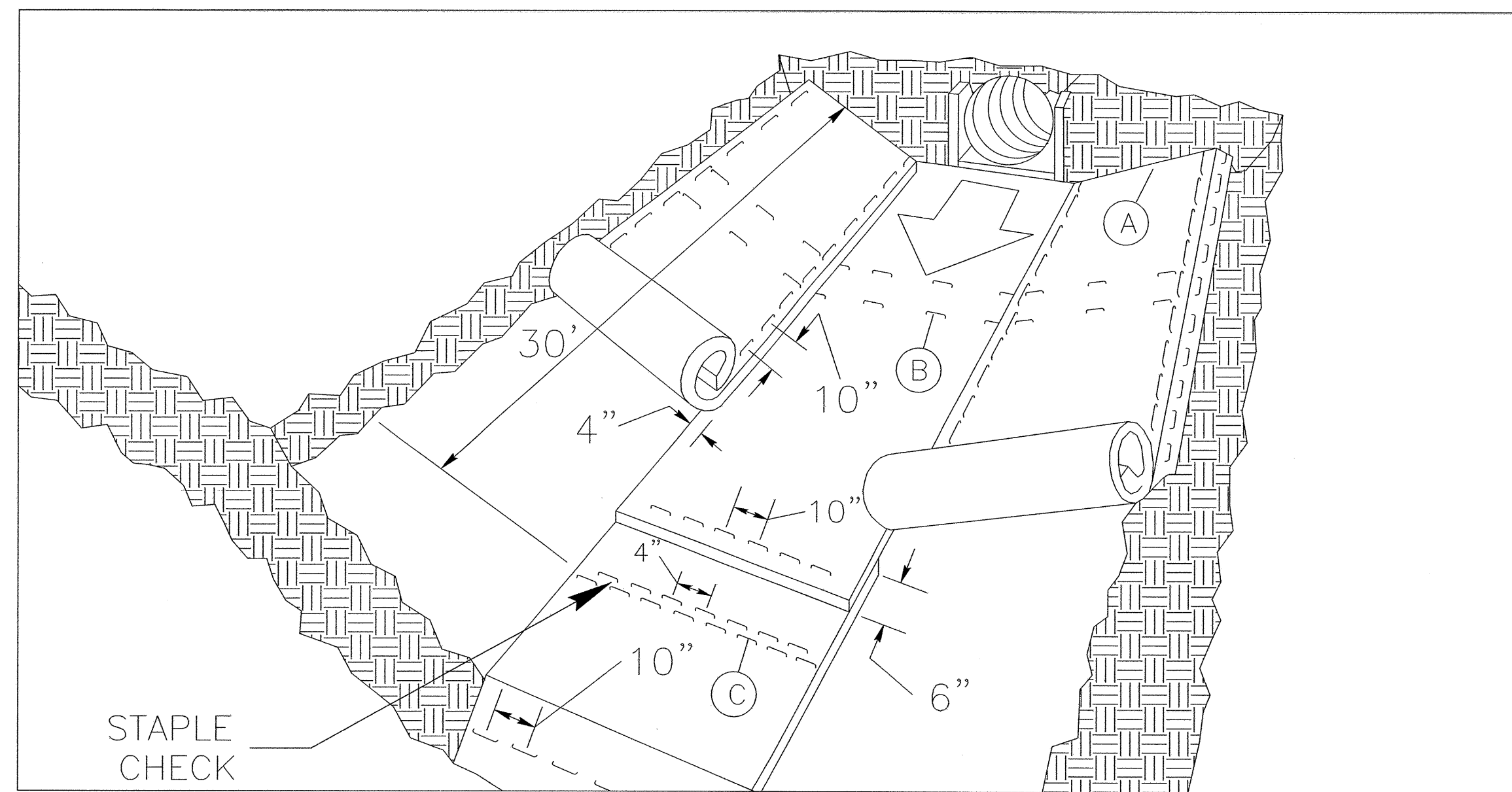
## COIR FIBER MAT ANCHOR OPTIONS

### NOTES

1. DO NOT EXCAVATE BELOW WATER TABLE.
2. LIMIT EARTH BERM HEIGHT TO 3 FT.
3. AVOID COMPACTING BOTTOM OF BASIN.
4. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING  $Q/0.8$ , WHERE Q IS FLOW RATE (CFS) INTO BASIN.

|                                 |                     |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO.<br>B-4533 | SHEET NO.<br>EC-2C  |
| RW SHEET NO.                    |                     |
| ROADWAY DESIGN ENGINEER         | HYDRAULICS ENGINEER |

# MATTING INSTALLATION DETAIL



**MATTING IN DITCHES**

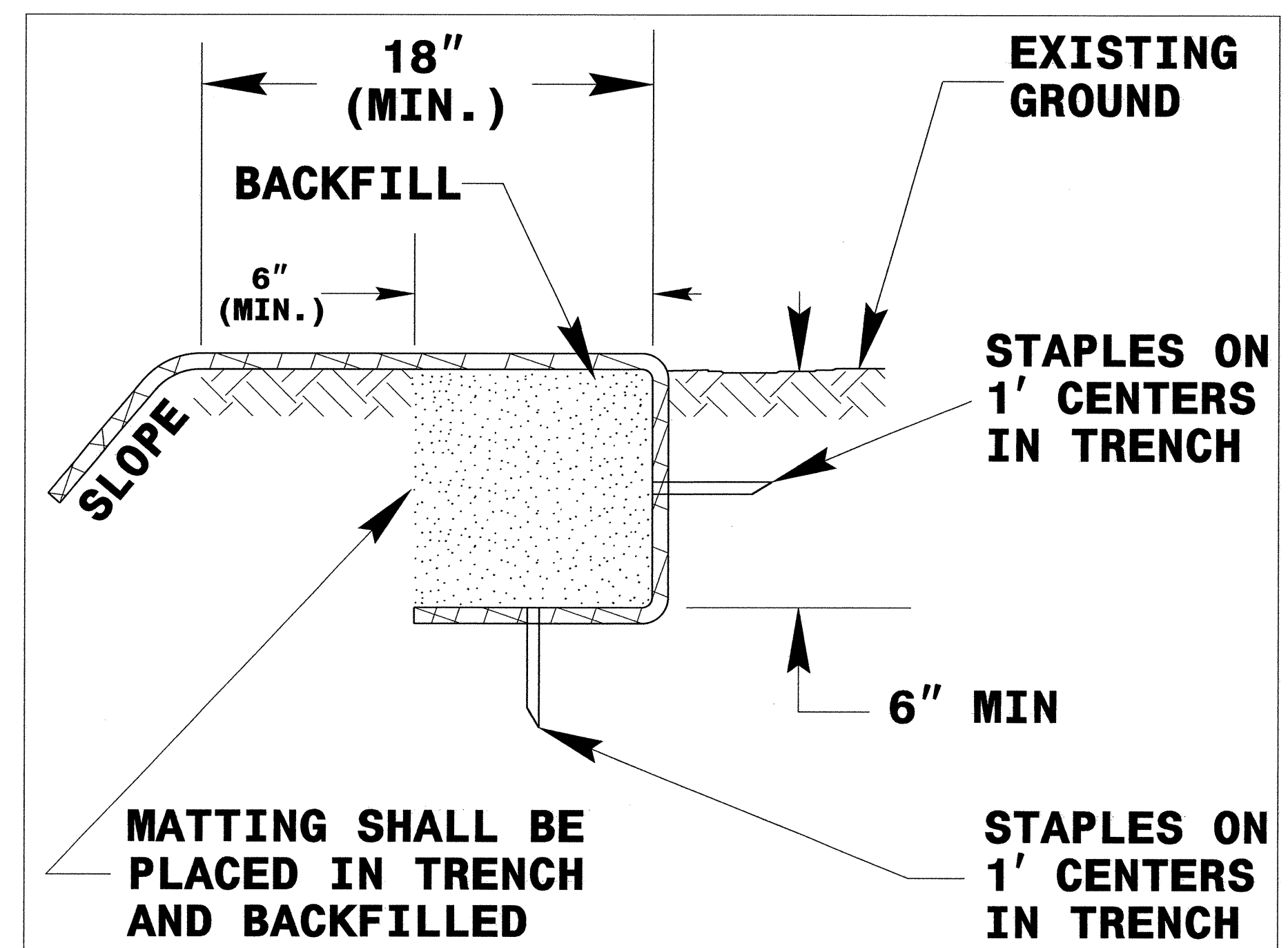
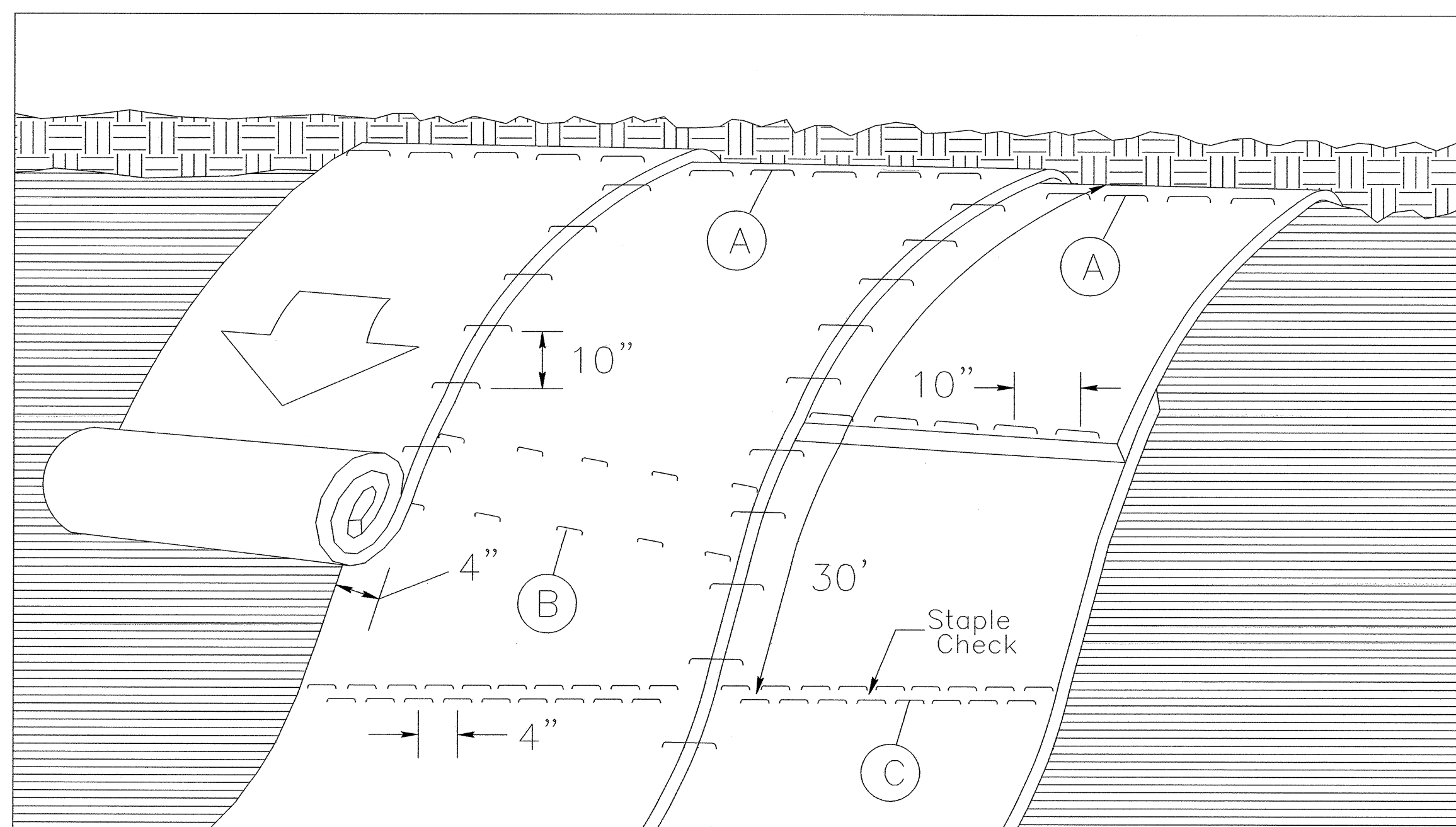


DIAGRAM (A)



**MATTING ON SLOPES**

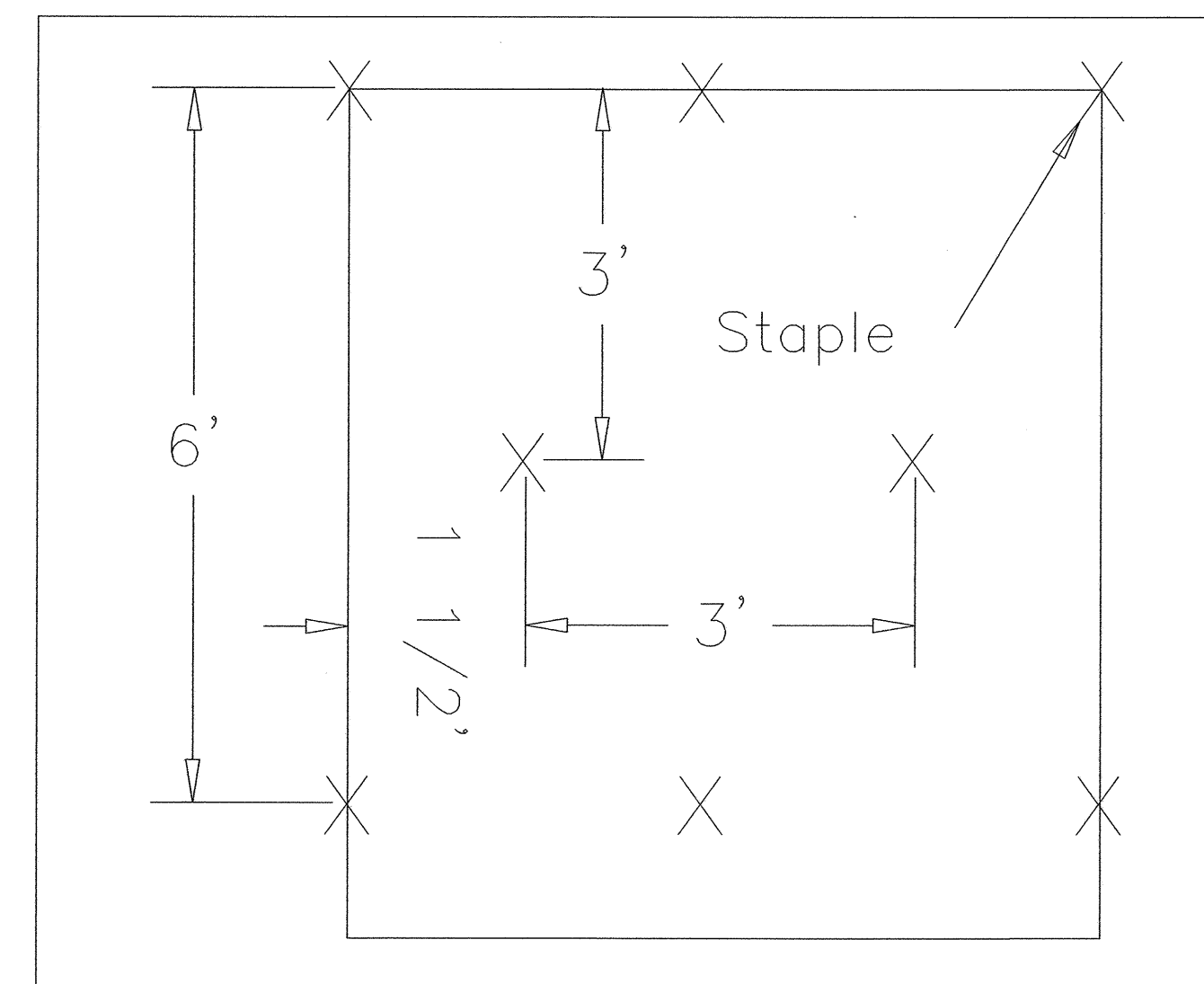


DIAGRAM (B)

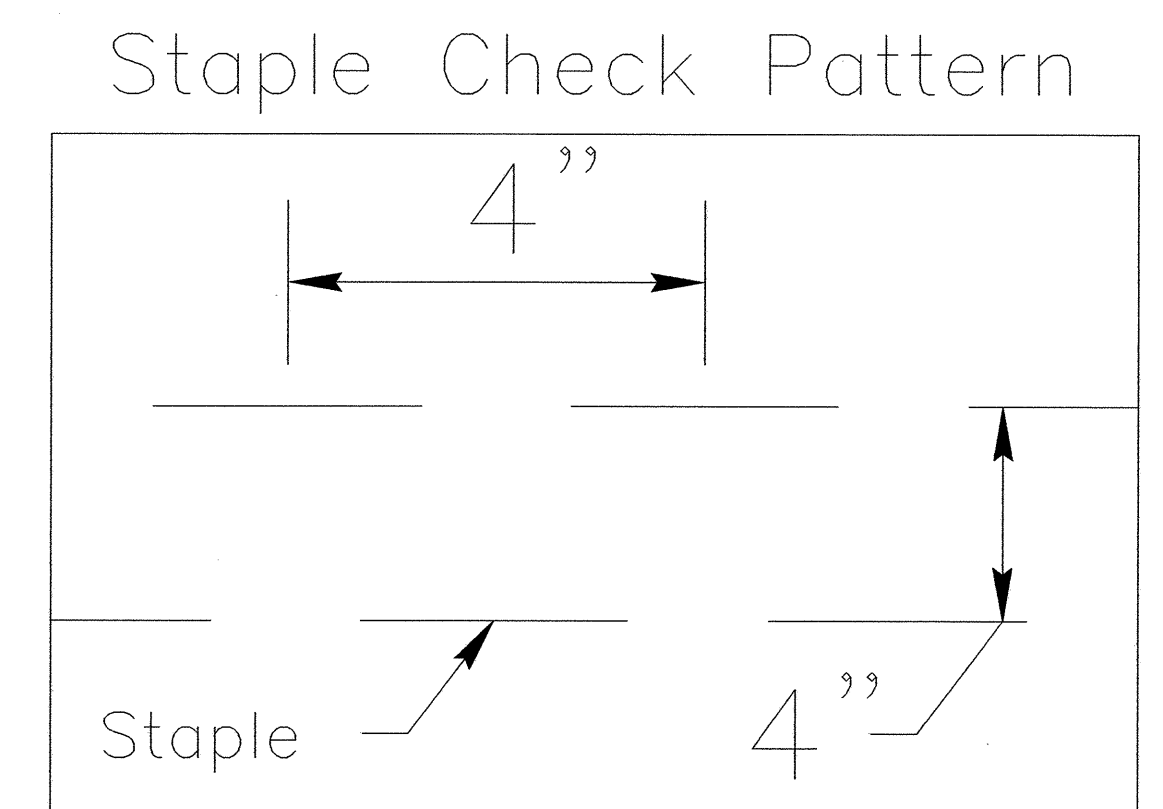


DIAGRAM (C)

**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.

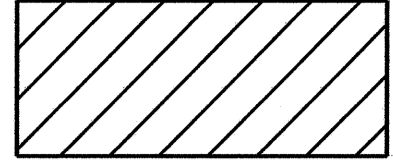
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|                                 |                             |
|---------------------------------|-----------------------------|
| PROJECT REFERENCE NO.<br>B-4533 | SHEET NO.<br>EC-04/CONST.04 |
| ROADWAY DESIGN ENGINEER         | HYDRAULICS ENGINEER         |

 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4

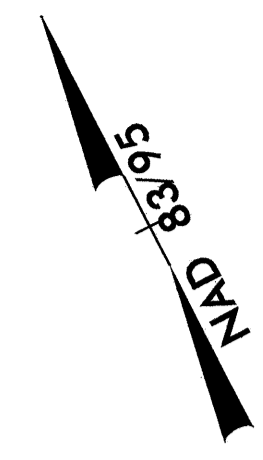
NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

NOTE:  
UTILIZE INFILTRATION BASIN  
AS STILLING BASIN WHERE APPLICABLE.

24 x 12 x 3  
4 ft. weir  
(See Infiltration  
Basin Detail)  
ID 4.1C

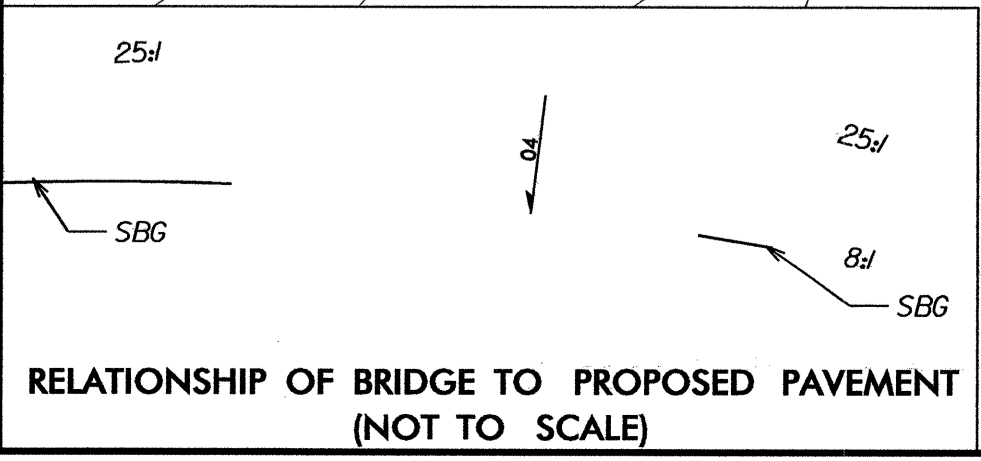
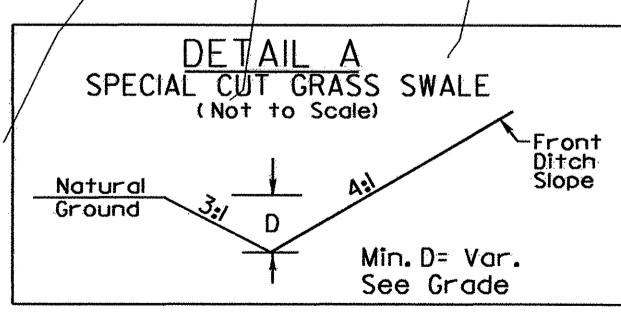
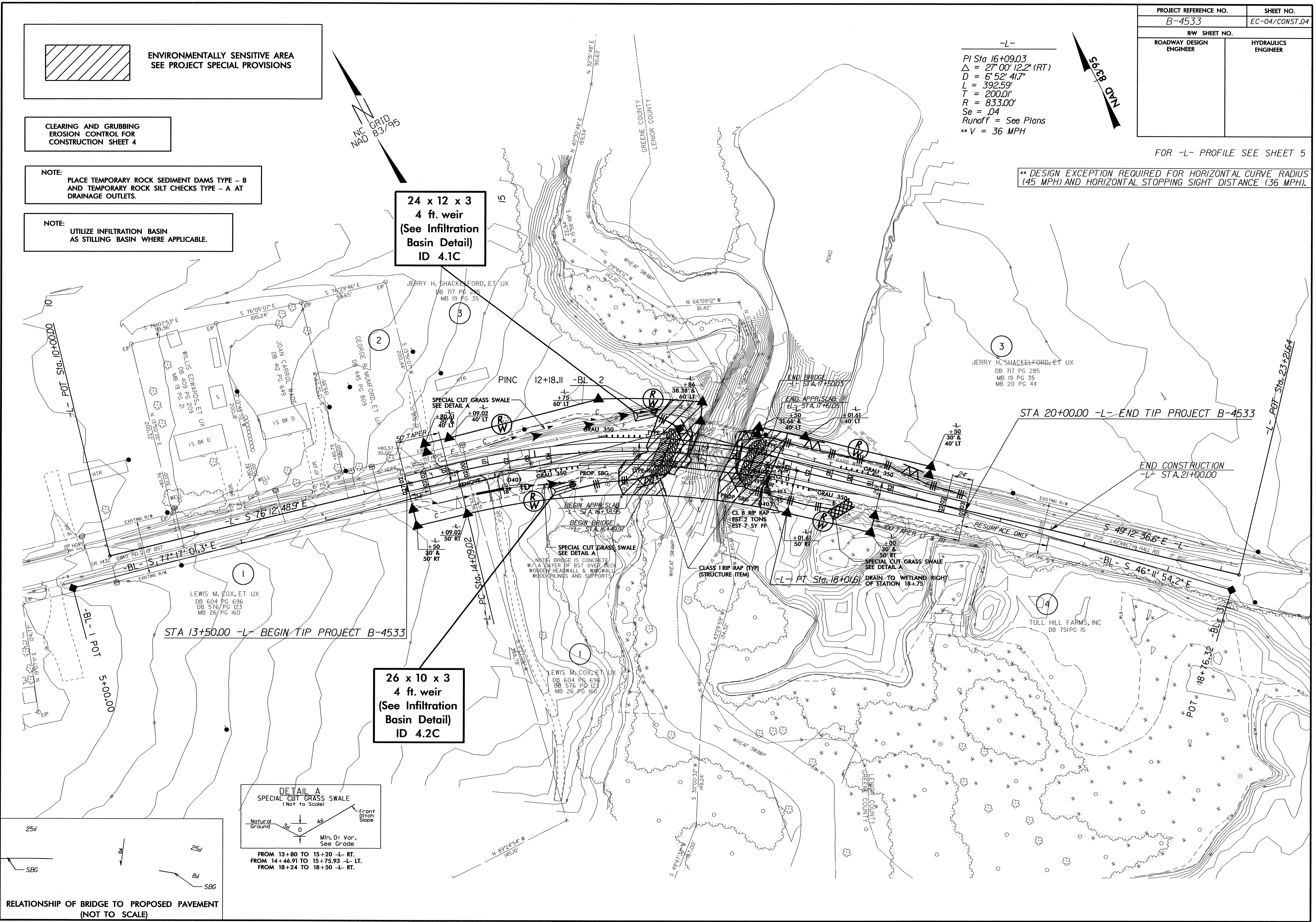
26 x 10 x 3  
4 ft. weir  
(See Infiltration  
Basin Detail)  
ID 4.2C

-L-  
PI Sta 16+09.03  
Δ = 27° 00' 12.2" (RT)  
D = 6° 52' 41.7"  
L = 392.59'  
T = 200.0'  
R = 833.00'  
Se = .04  
Runoff = See Plans  
\*\* V = 36 MPH



FOR -L- PROFILE SEE SHEET 5

\*\* DESIGN EXCEPTION REQUIRED FOR HORIZONTAL CURVE RADIUS  
(45 MPH) AND HORIZONTAL STOPPING SIGHT DISTANCE (36 MPH).



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|                                 |                             |
|---------------------------------|-----------------------------|
| PROJECT REFERENCE NO.<br>B-4533 | SHEET NO.<br>EC-05/CONST.04 |
| RW SHEET NO.                    |                             |
| ROADWAY DESIGN ENGINEER         | HYDRAULICS ENGINEER         |

-L-  
 PI Sta 16+09.03  
 $\Delta = 27^{\circ}00'12.2"$  (RT)  
 $D = 6^{\circ}52'41.7"$   
 $L = 392.59'$   
 $T = 200.01'$   
 $R = 833.00'$   
 $Se = .04$   
 Runoff = See Plans  
 \*\*V = 36 MPH

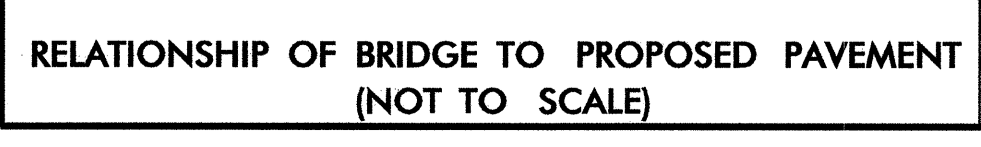
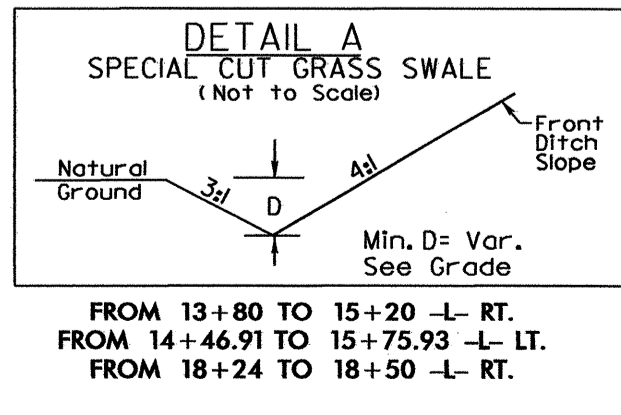
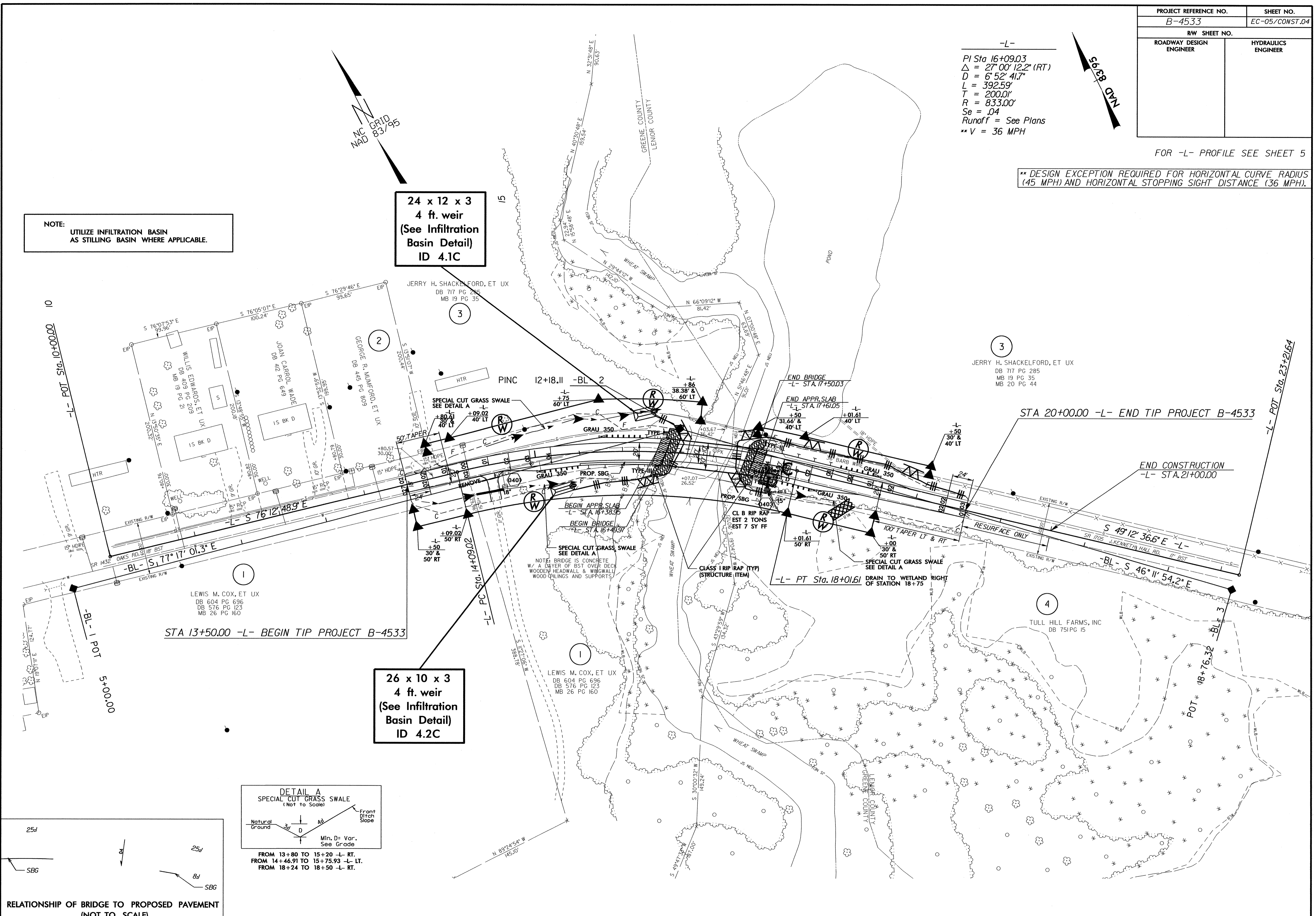
FOR -L- PROFILE SEE SHEET 5

\*\* DESIGN EXCEPTION REQUIRED FOR HORIZONTAL CURVE RADIUS (45 MPH) AND HORIZONTAL STOPPING SIGHT DISTANCE (36 MPH).

NOTE:  
 UTILIZE INFILTRATION BASIN AS STILLING BASIN WHERE APPLICABLE.

24 x 12 x 3  
 4 ft. weir  
 (See Infiltration Basin Detail)  
 ID 4.1C

26 x 10 x 3  
 4 ft. weir  
 (See Infiltration Basin Detail)  
 ID 4.2C



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