

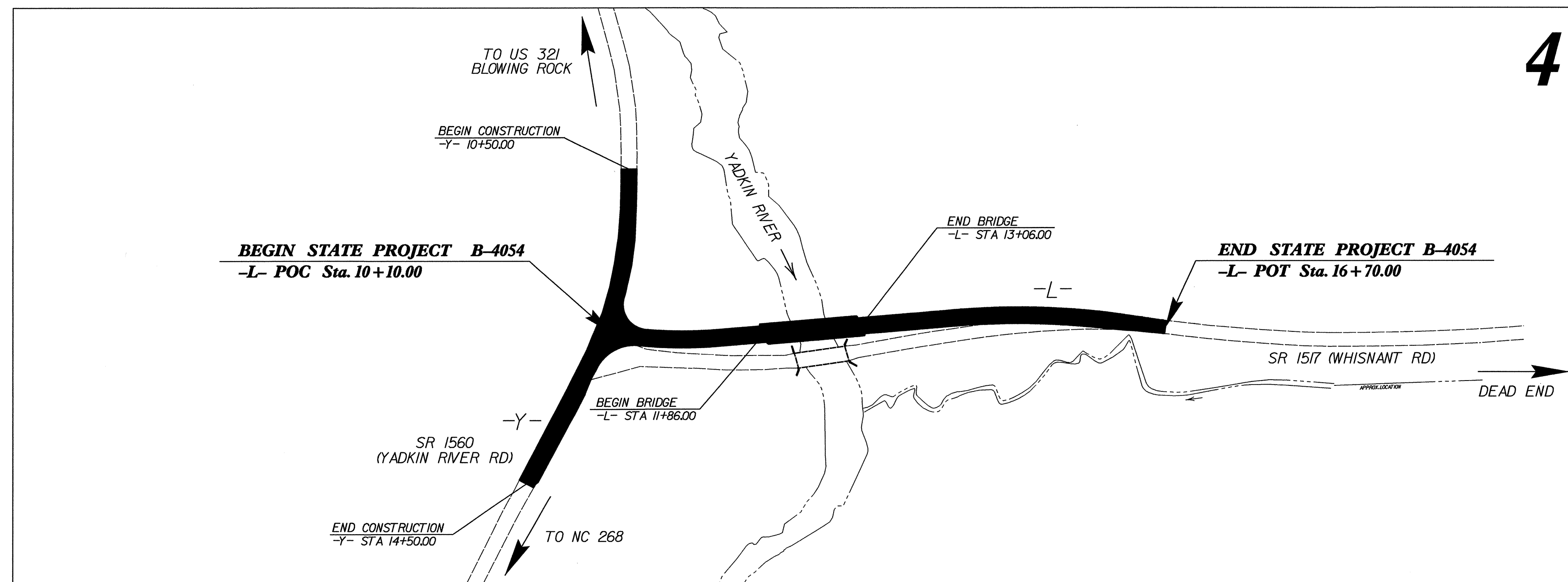
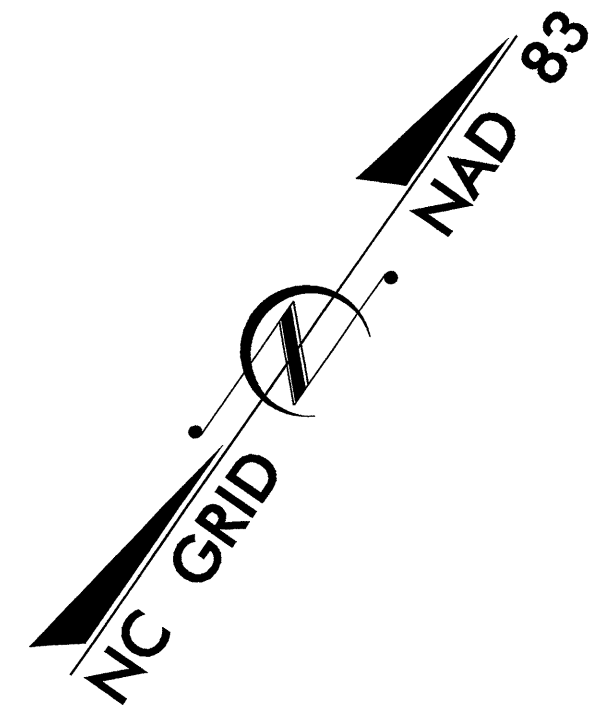
TIP PROJECT: B-4054

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

CALDWELL COUNTY

**LOCATION: BRIDGE NO. 334 OVER YADKIN RIVER
 ON SR 1517 (WHISNANT ROAD)**

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



| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | B-4054 | EC-1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| | | | |
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| | | | |
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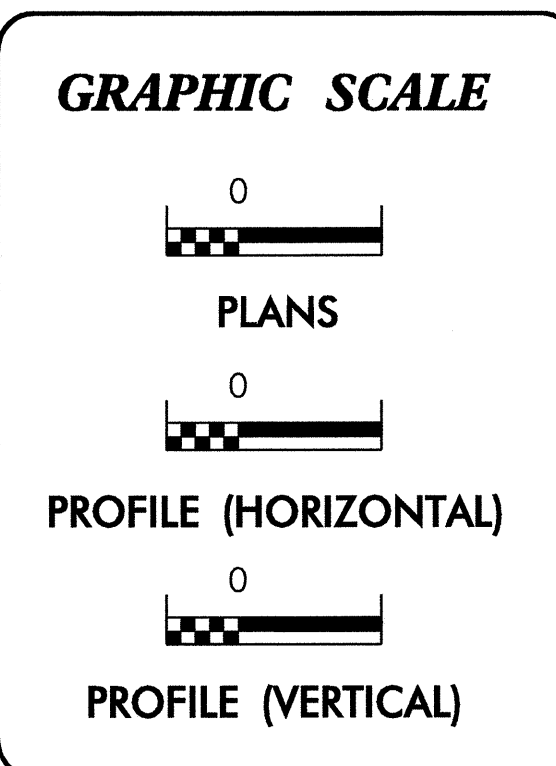
EROSION AND SEDIMENT CONTROL MEASURES

| Std. # | Description | Symbol |
|---------|---|--------|
| | Streambank Reforestation..... | |
| 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..... | |
| 1630.02 | Silt Basin Type B..... | |
| 1633.01 | Temporary Rock Silt Check Type-A..... | |
| | Temporary Rock Silt Check Type-B..... | |
| 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..... | |
| | Rock Inlet Sediment Trap: | |
| 1632.01 | Type A..... | |
| 1632.02 | Type B..... | |
| 1632.03 | Type C..... | |
| | Skimmer Basin..... | |
| | Tiered Skimmer Basin..... | |

**THIS PROJECT CONTAINS
 EROSION CONTROL PLANS
 FOR CLEARING AND
 GRUBBING PHASE OF
 CONSTRUCTION.**

**ENVIRONMENTALLY
 SENSITIVE AREA(S) EXIST
 ON THIS PROJECT**
 Refer To E. C. Special Provisions
 for Special Considerations.

**THIS PROJECT HAS
 BEEN DESIGNED TO
 SENSITIVE WATERSHED
 STANDARDS.**



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

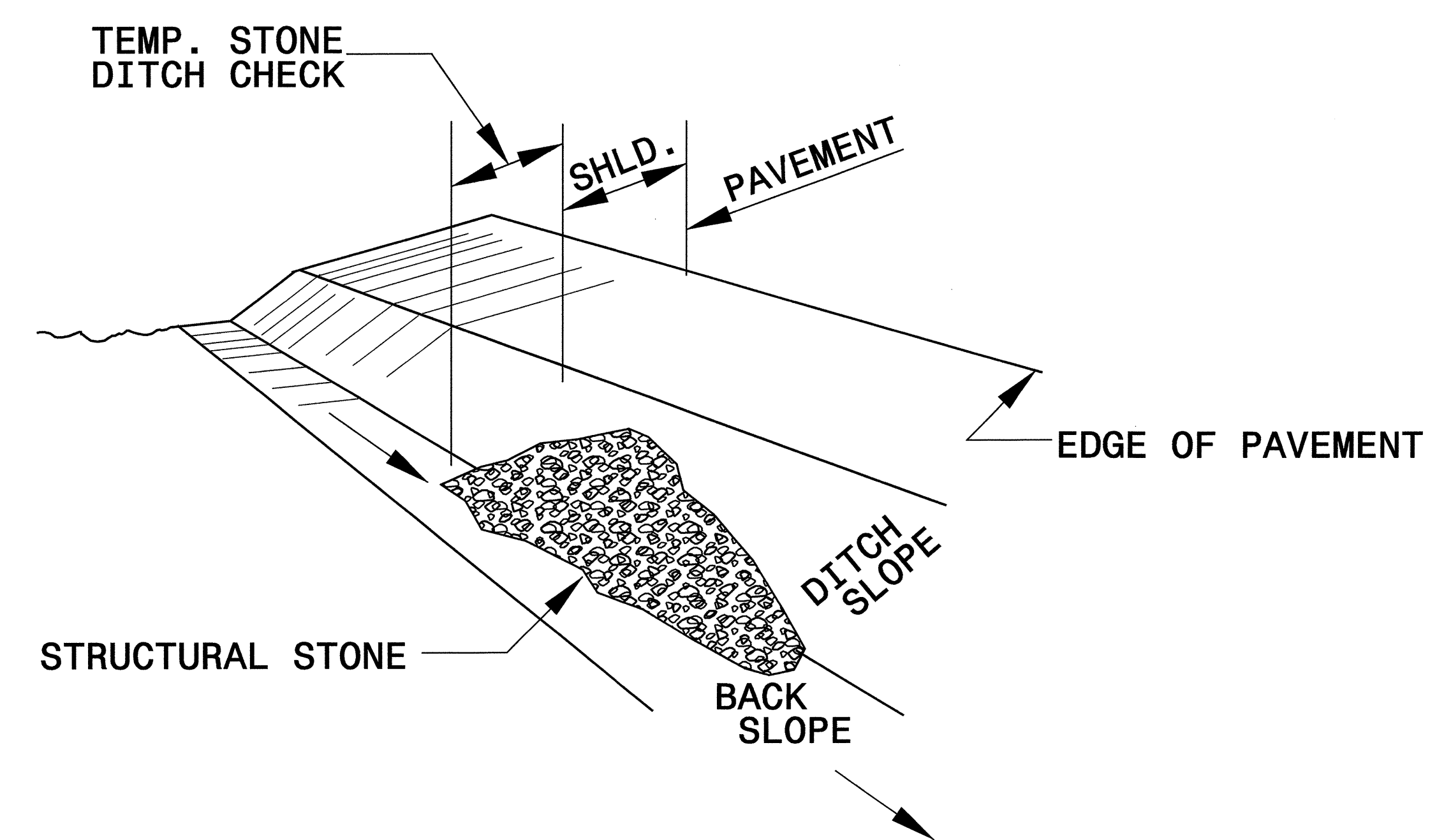
Roadway Standard Drawings

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 | 1632.03 Rock Inlet Sediment Trap Type C |
| 1607.01 Gravel Construction Entrance | 1633.01 Temporary Rock Silt Check Type A |
| 1630.05 Temporary Diversion | 1635.02 Rock Pipe Inlet Sediment Trap Type B |

| | |
|--|--------------------------|
| PROJECT REFERENCE NO. <i>B-4054</i> | SHEET NO. <i>EC-2</i> |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

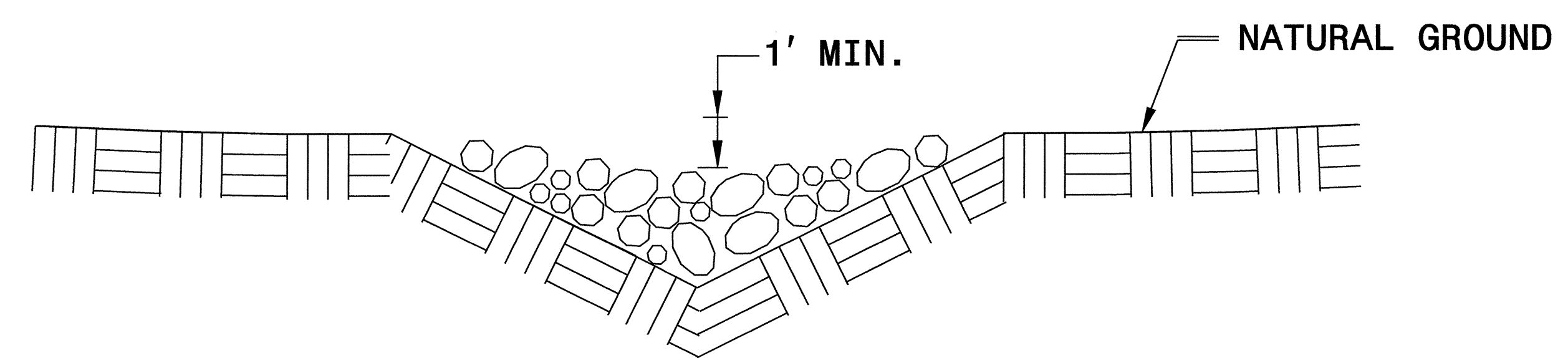


ISOMETRIC VIEW

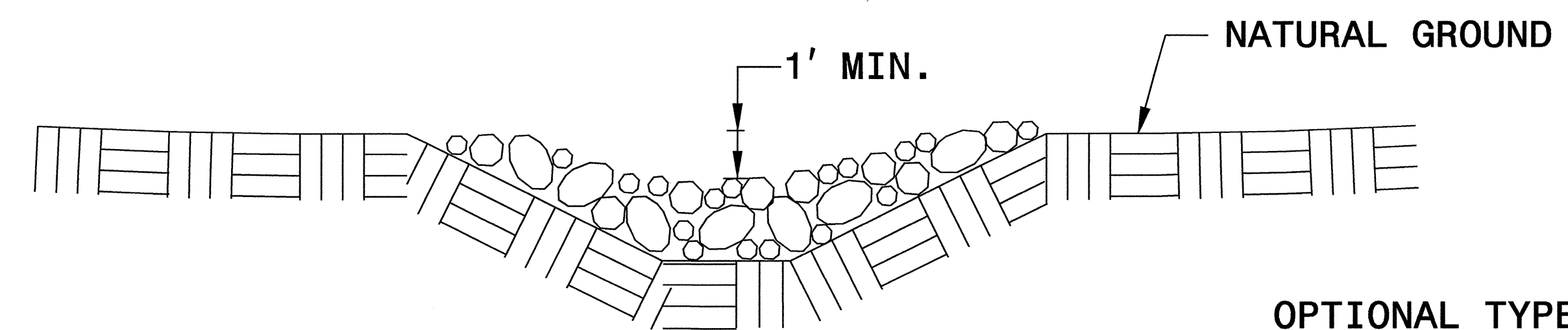
NOTES:

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

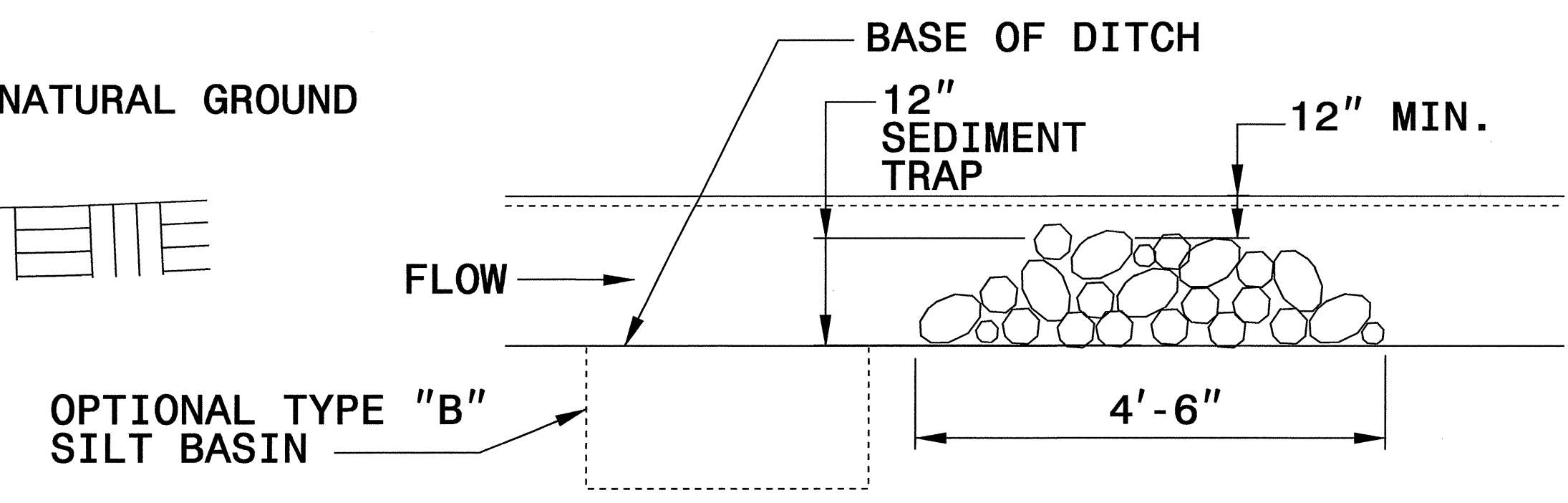
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



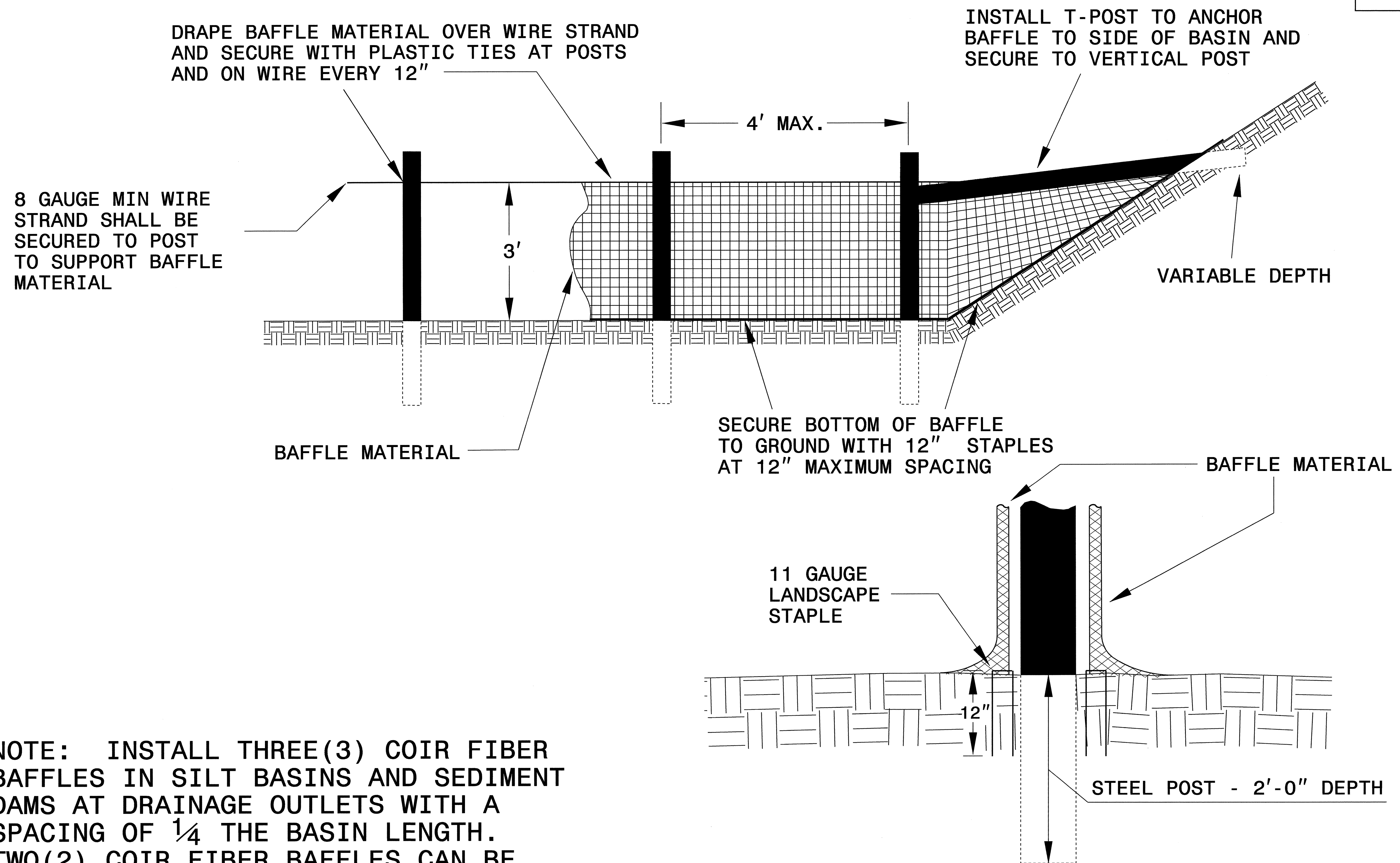
CROSS SECTION TRAPEZOIDAL DITCH



ELEVATION VIEW

| | |
|---------------------------------|------------------------|
| PROJECT REFERENCE NO. B-4054 | SHEET NO. EC-2A |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

COIR FIBER BAFFLE DETAIL

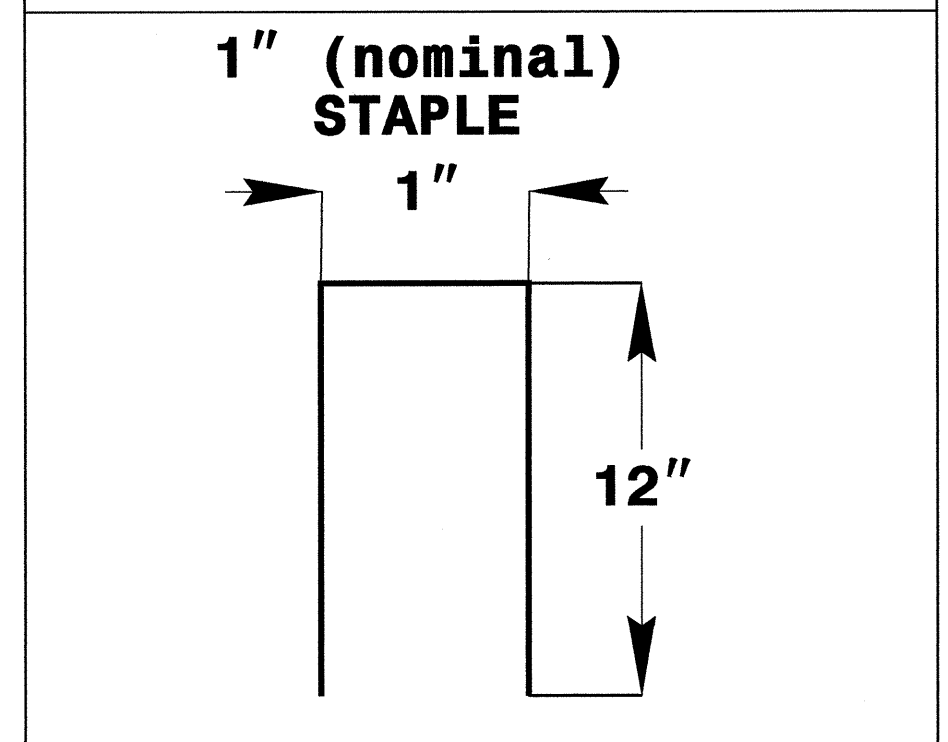
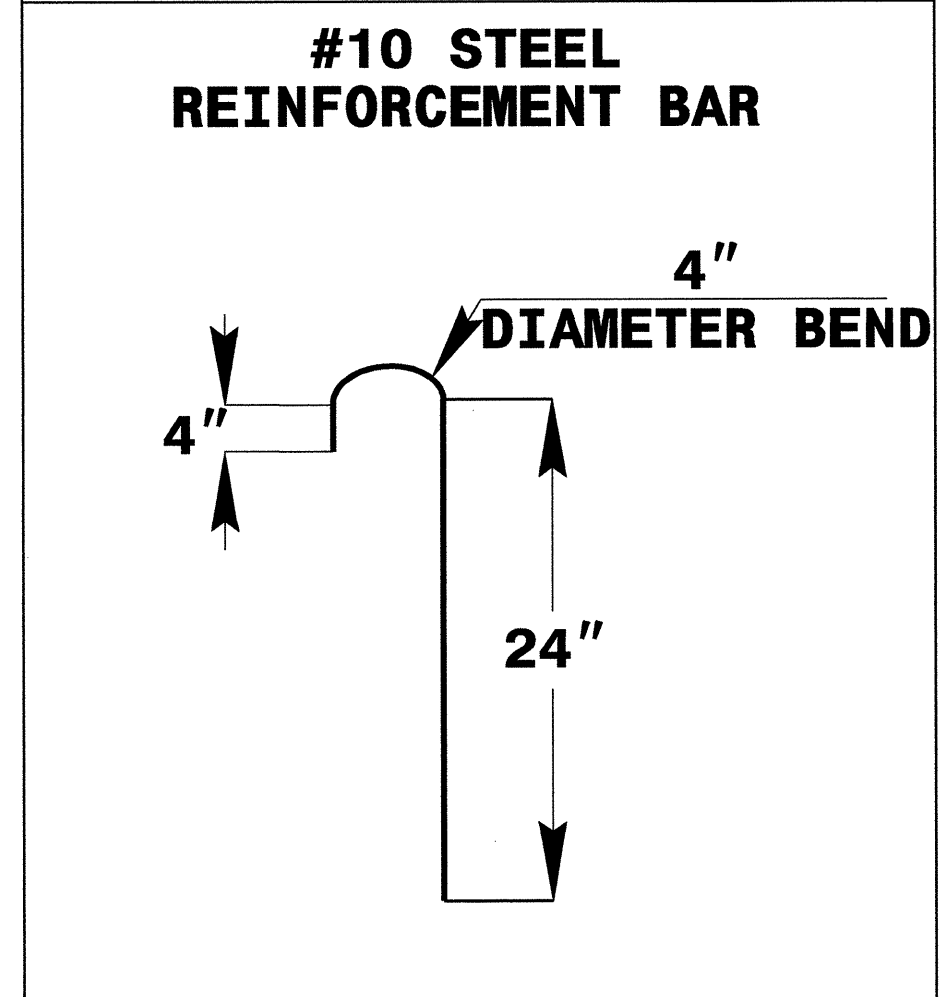
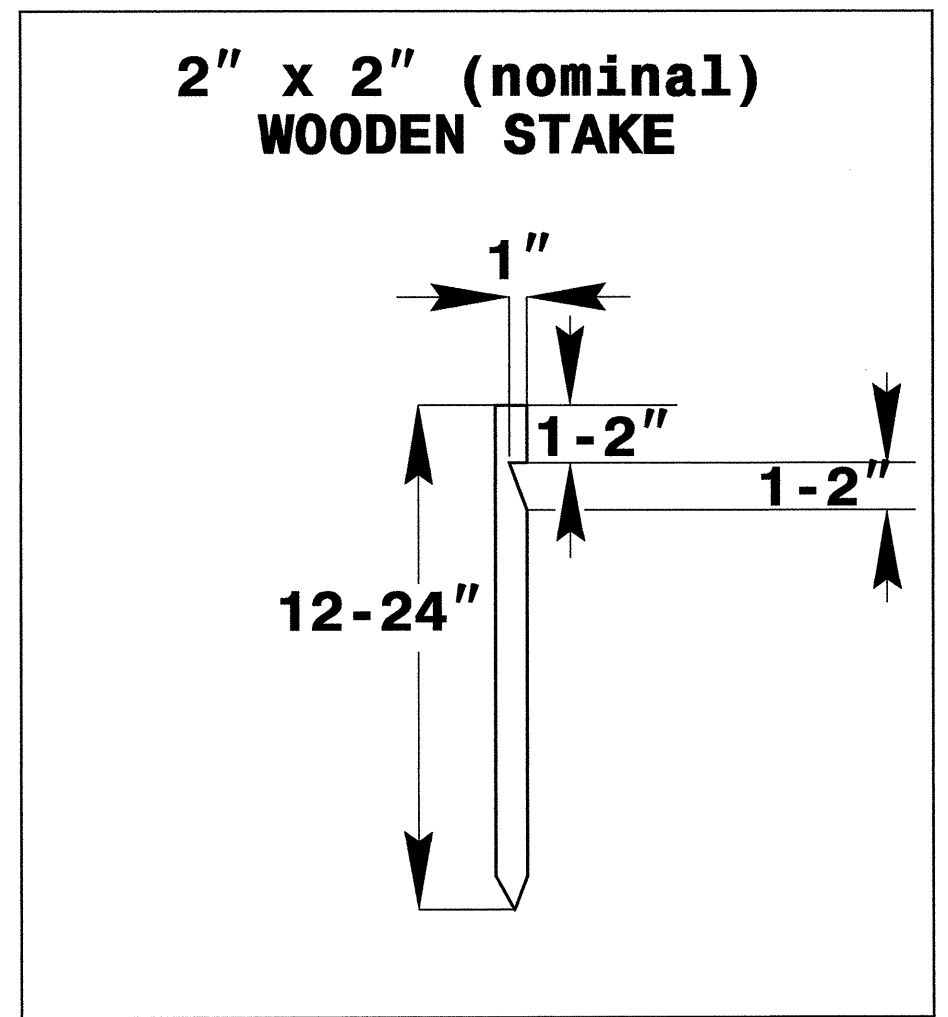
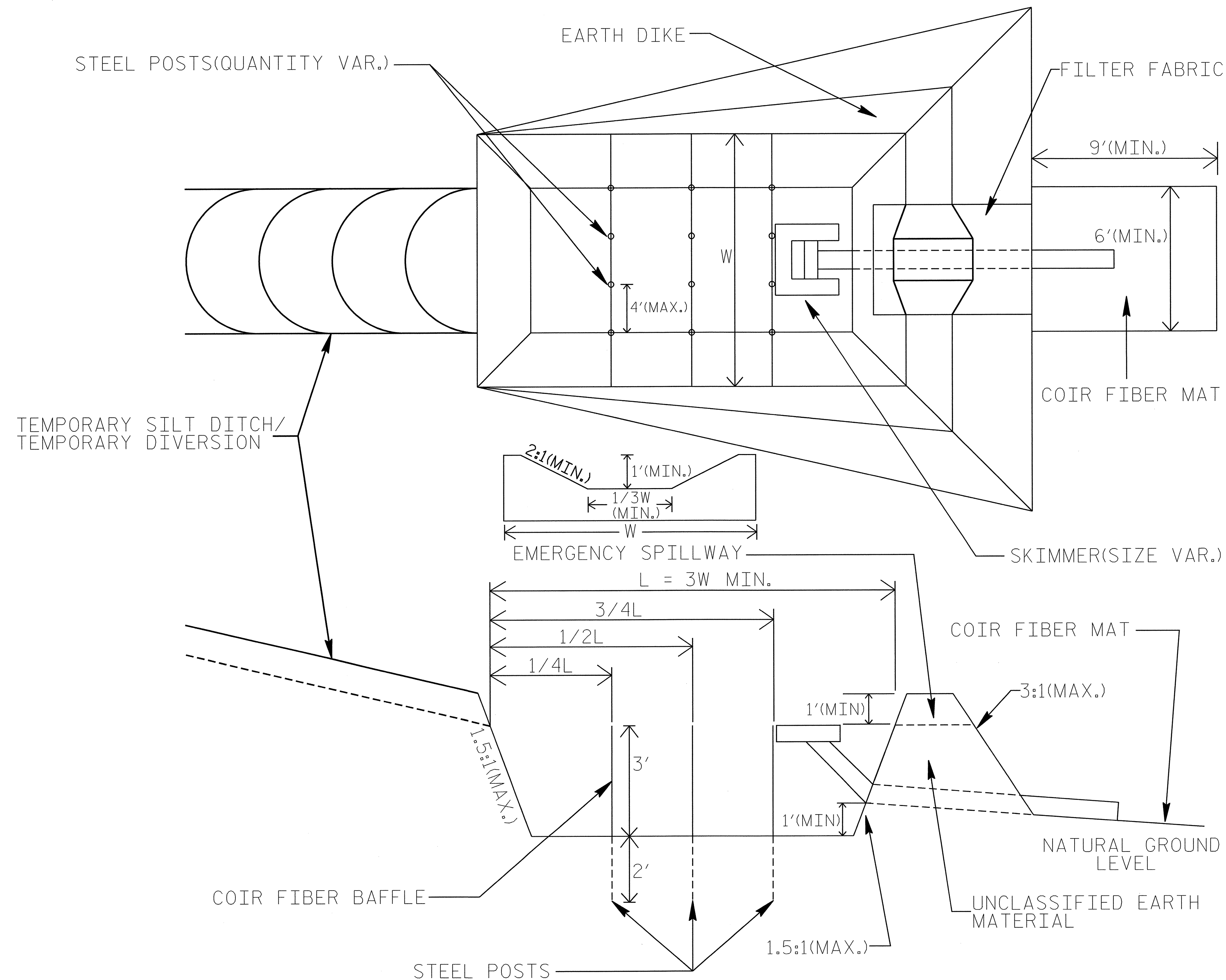


NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.

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

SKIMMER BASIN WITH BAFFLES DETAIL

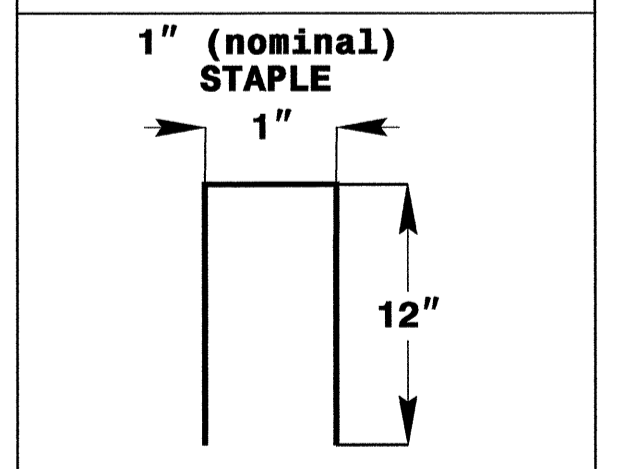
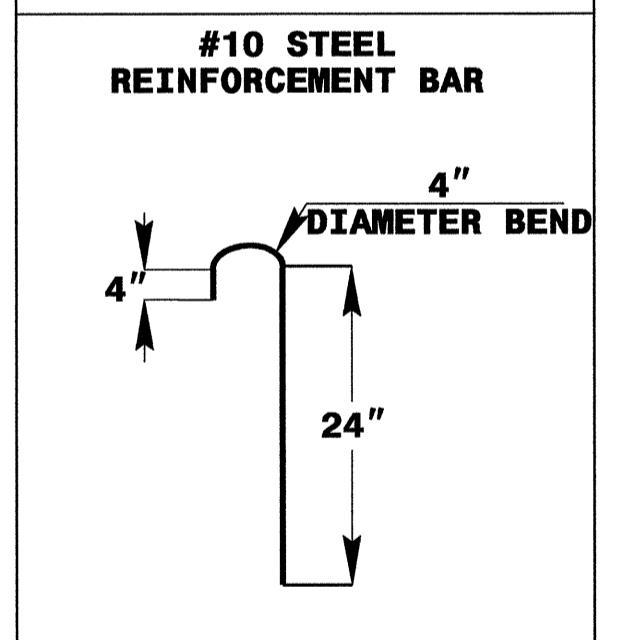
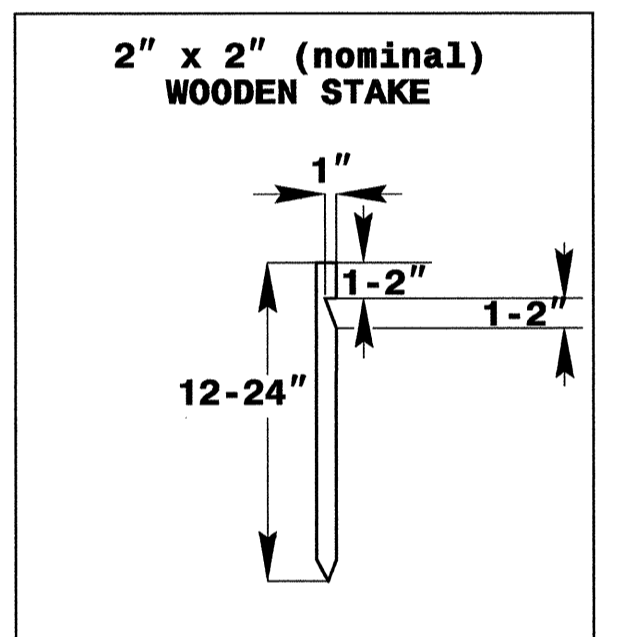
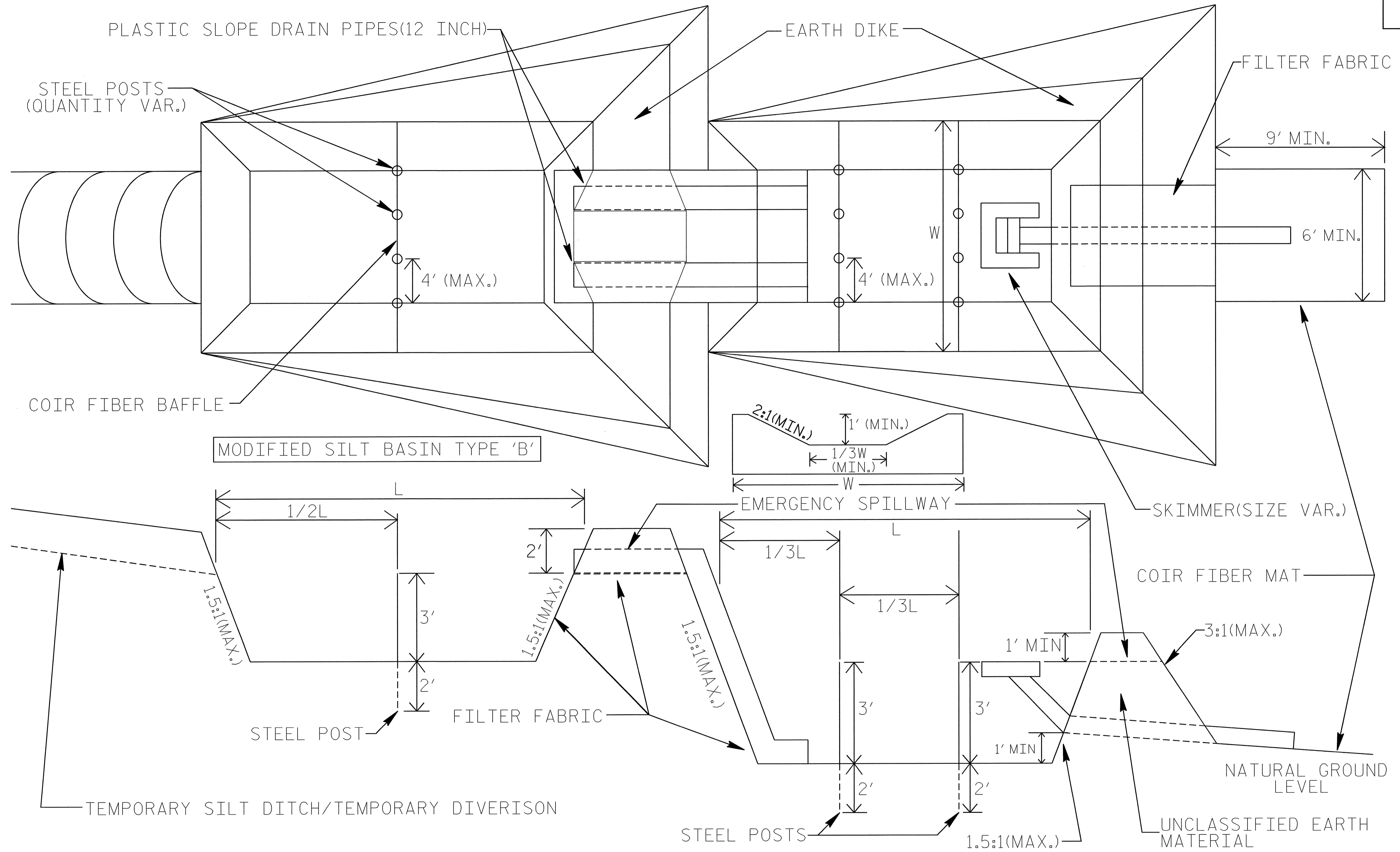
| | |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO. B-4054 | SHEET NO. EC-2B |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |



COIR FIBER MAT ANCHOR OPTIONS

TIERED SKIMMER BASIN DETAIL

| | |
|---------------------------------|---------------------|
| PROJECT REFERENCE NO. B-4054 | SHEET NO. EC-2C |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |



COIR FIBER MAT ANCHOR OPTIONS

NOTE
 ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.

8/17/99

NOTE:
UTILIZE SKIMMER BASIN AND/OR SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.

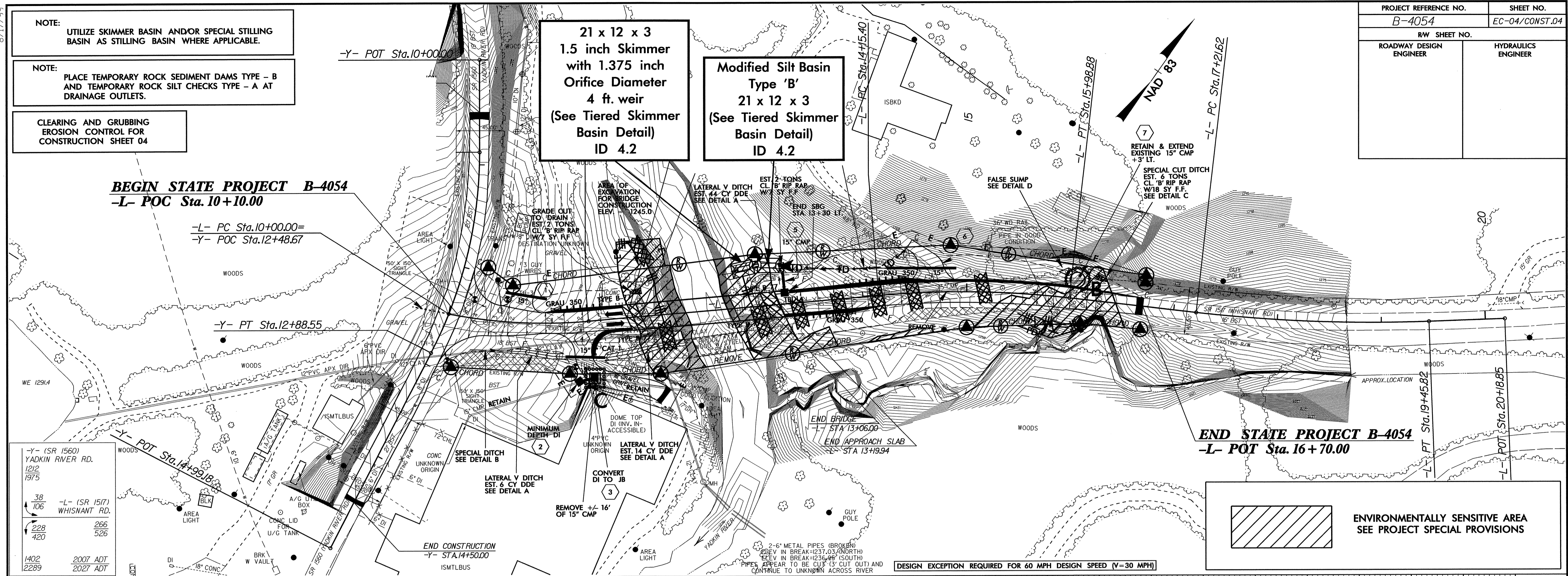
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 04

| | |
|---------------------------------|-----------------------------|
| PROJECT REFERENCE NO. B-4054 | SHEET NO. EC-04/CONST.04 |
| RW SHEET NO. | HYDRAULICS ENGINEER |
| ROADWAY DESIGN ENGINEER | |

BEGIN STATE PROJECT B-4054
-L- POC Sta. 10+10.00

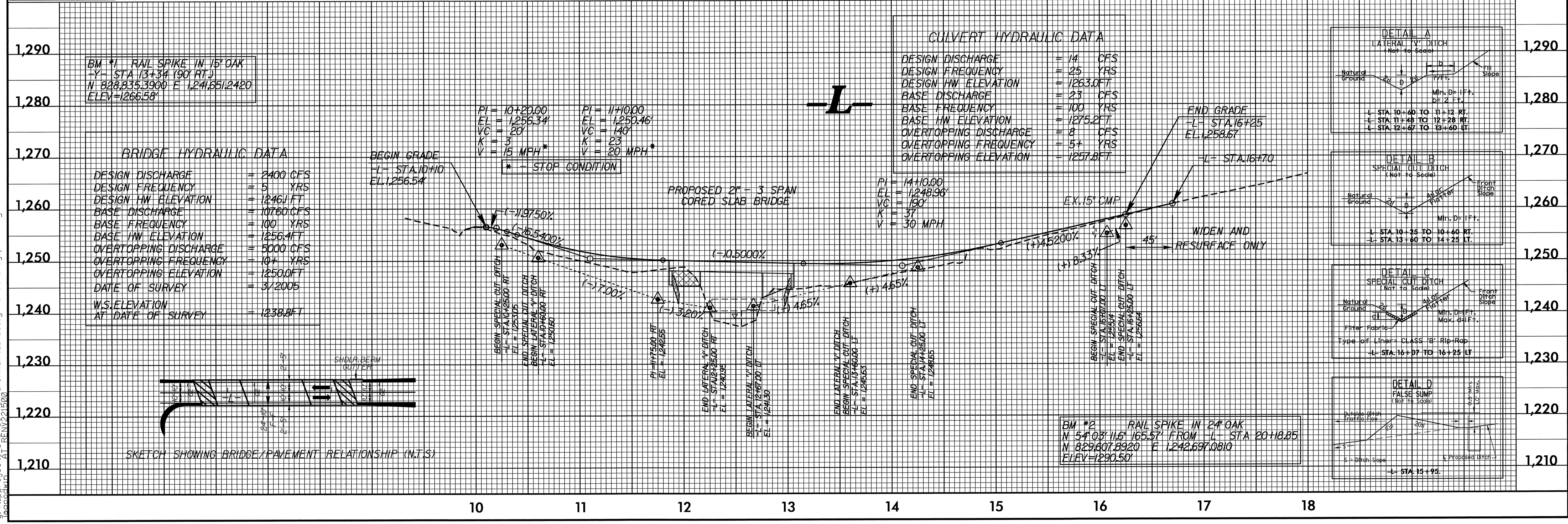
END STATE PROJECT B-4054
-L- POT Sta. 16+70.00



| | |
|---|---|
| -Y- (SR 1560) YADKIN RIVER RD. 1212 1975 | -L- (SR 1517) WHISNANT RD. 268 420 |
| 1402 2289 | 2007 ADT 2027 ADT |

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

DESIGN EXCEPTION REQUIRED FOR 60 MPH DESIGN SPEED (V=30 MPH)



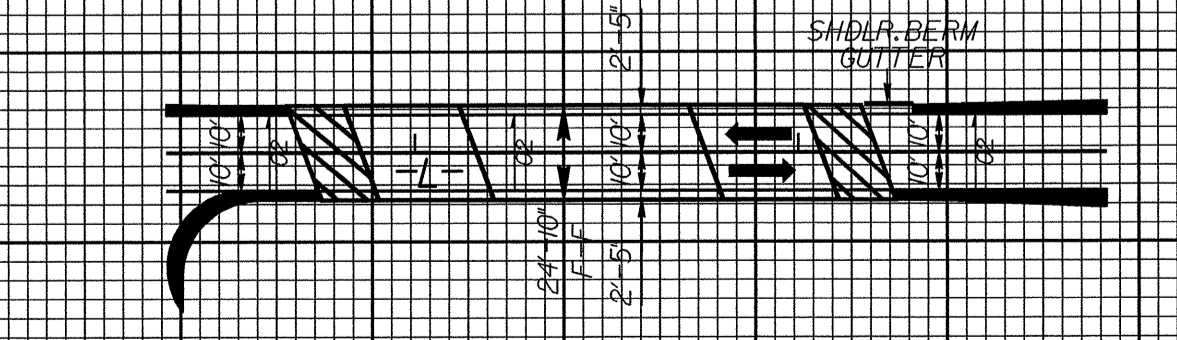
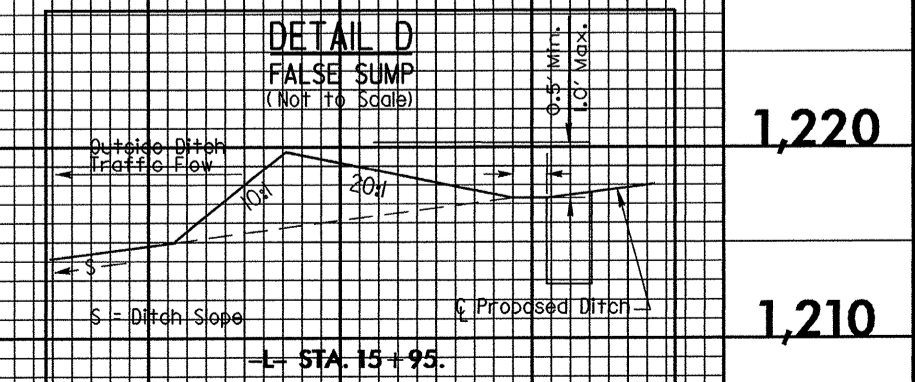
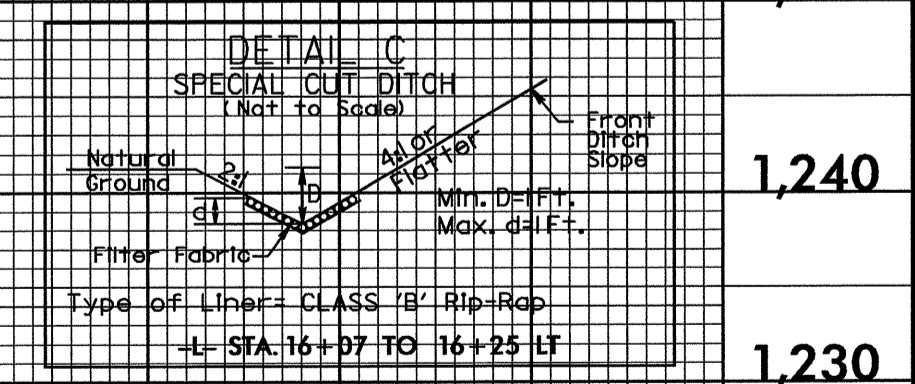
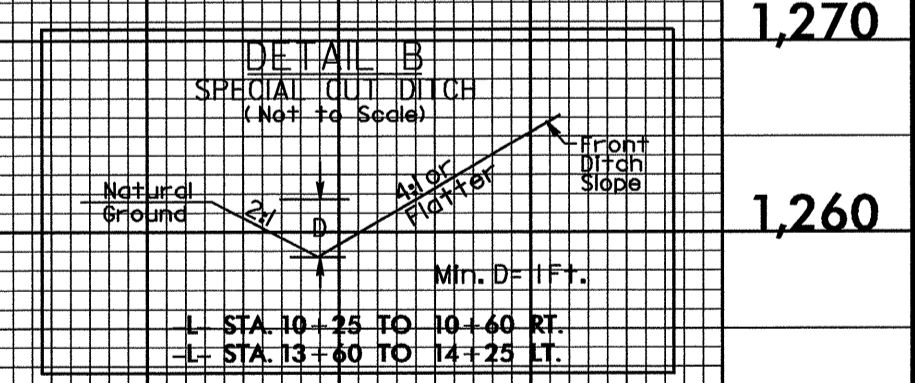
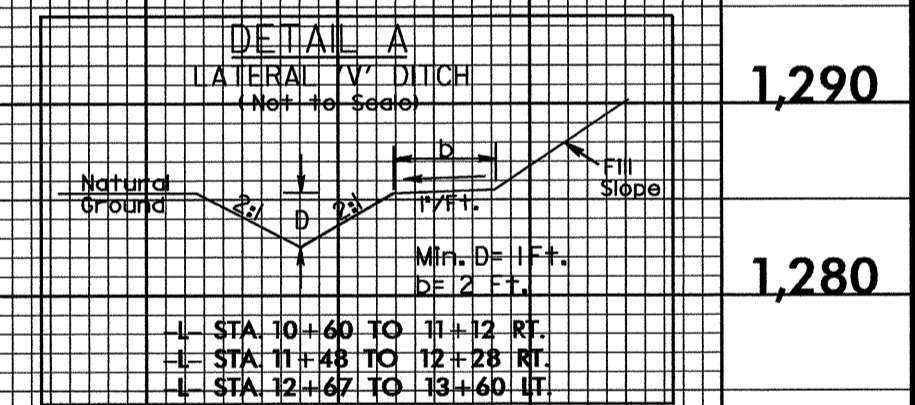
BM #1 RAIL SPIKE IN 15" OAK
-Y- STA 13+34 (90 FT.)
N 829,835.3900 E 1,241,651.2420
ELEV=1266.58'

BRIDGE HYDRAULIC DATA

| | |
|----------------------------------|--------------|
| DESIGN DISCHARGE | = 2400 CFS |
| DESIGN FREQUENCY | = 5 YRS |
| DESIGN HW ELEVATION | = 1246.1 FT |
| BASE DISCHARGE | = 1076.0 CFS |
| BASE FREQUENCY | = 100 YRS |
| BASE HW ELEVATION | = 1256.4 FT |
| OVERTOPPING DISCHARGE | = 5000 CFS |
| OVERTOPPING FREQUENCY | = 10 YRS |
| OVERTOPPING ELEVATION | = 1250.0 FT |
| DATE OF SURVEY | = 3/2005 |
| W.S. ELEVATION AT DATE OF SURVEY | = 1238.8 FT |

CULVERT HYDRAULIC DATA

| | |
|-----------------------|-------------|
| DESIGN DISCHARGE | = 14 CFS |
| DESIGN FREQUENCY | = 25 YRS |
| DESIGN HW ELEVATION | = 1263.0 FT |
| BASE DISCHARGE | = 23 CFS |
| BASE FREQUENCY | = 100 YRS |
| BASE HW ELEVATION | = 1275.2 FT |
| OVERTOPPING DISCHARGE | = 8 CFS |
| OVERTOPPING FREQUENCY | = 5 YRS |
| OVERTOPPING ELEVATION | = 1257.8 FT |



BM #2 RAIL SPIKE IN 24" OAK
N 541,031.1161 E 1,242,697.0810
ELEV=1290.50'

04-SEP-2007 14:19 I:\4054\env\environmental\design\b4054_rdy_psh04.dgn
9:41:00 AM 10/22/07

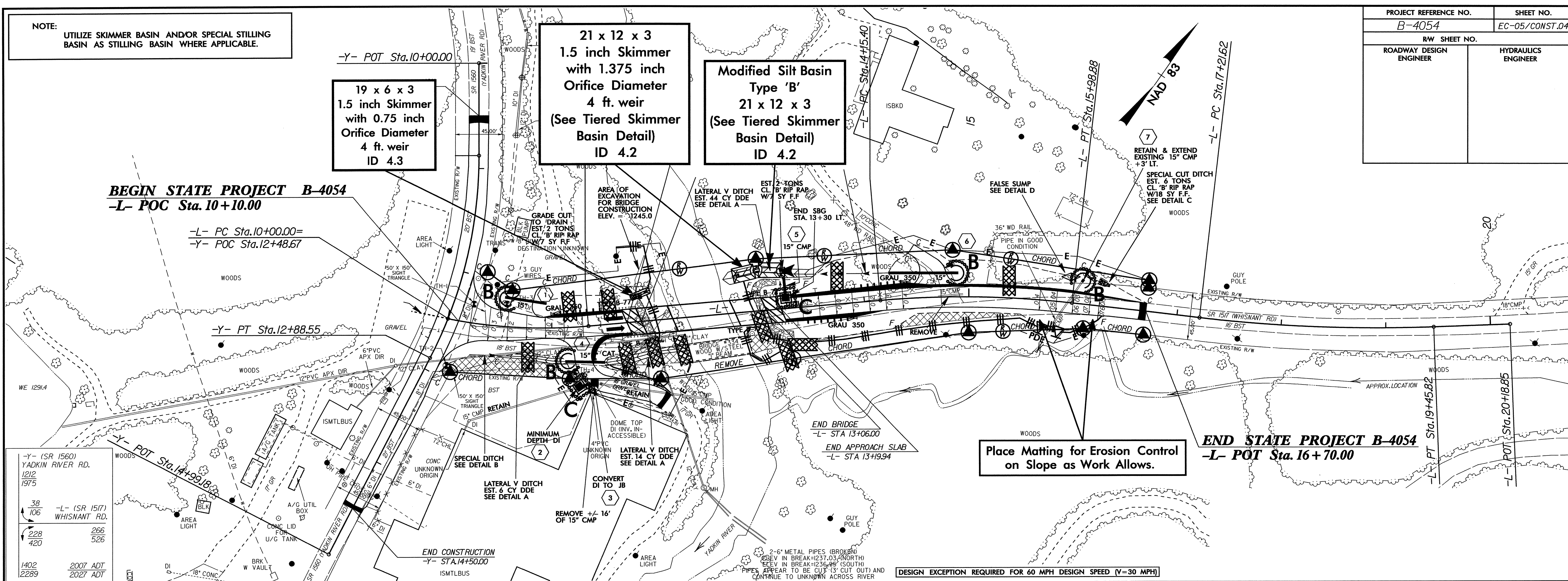
8/17/99

NOTE: UTILIZE SKIMMER BASIN AND/OR SPECIAL STILLING BASIN AS STILLING BASIN WHERE APPLICABLE.

| | |
|---------------------------------|-----------------------------|
| PROJECT REFERENCE NO. B-4054 | SHEET NO. EC-05/CONST.04 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

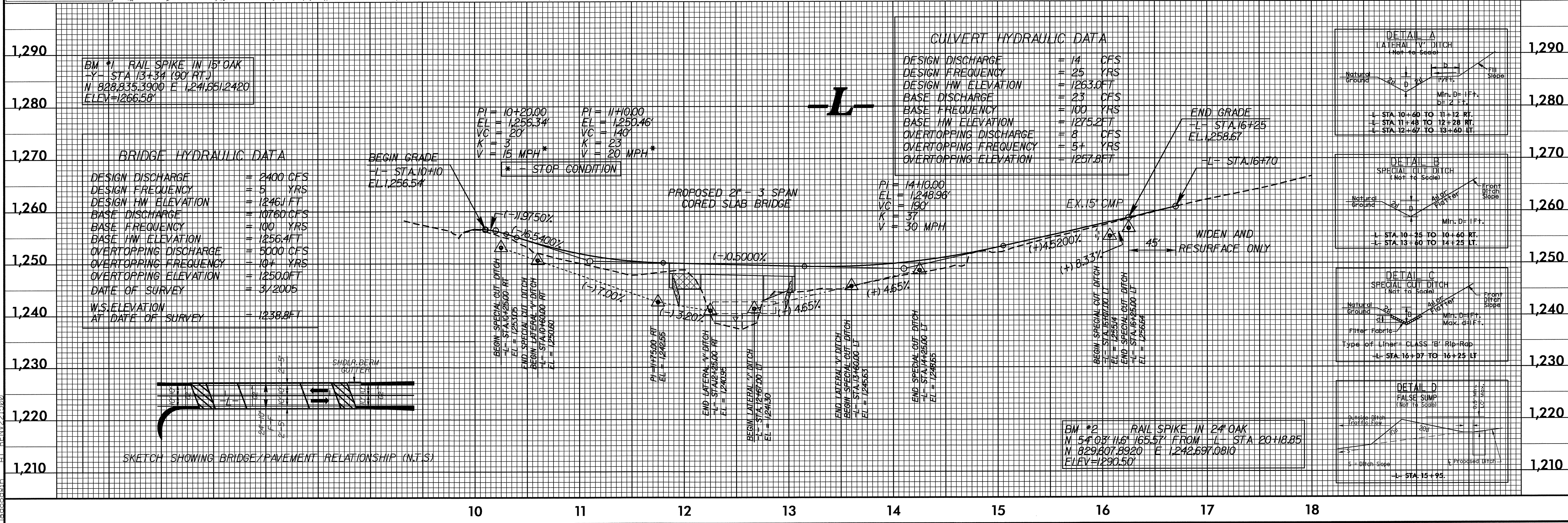
BEGIN STATE PROJECT B-4054
-L- POC Sta. 10+10.00

END STATE PROJECT B-4054
-L- POT Sta. 16+70.00



| | |
|----------------------------|----------------------|
| YADKIN RIVER RD. 1212 1975 | WHISNANT RD. 286 526 |
| 38/106 | 228/420 |
| 1402 2289 | 2007 ADT 2027 ADT |

DESIGN EXCEPTION REQUIRED FOR 60 MPH DESIGN SPEED (V=30 MPH)



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g:\t\p\proj\ec\ts-b\4054\environmental\design\4054_rdy_psh.04.dgn
10/22/2007 15:00
AT BENVY22