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Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NCBELS #: F-0929

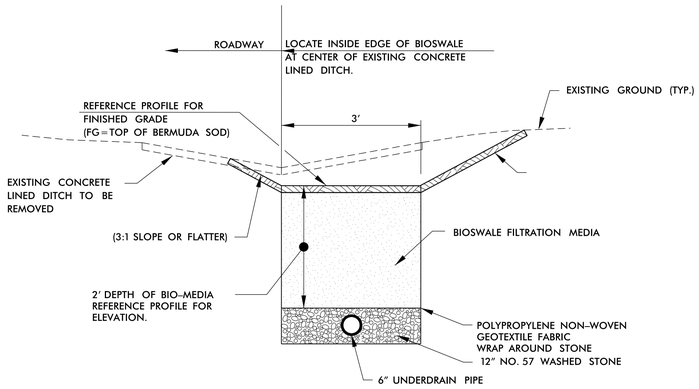
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| R-4436EJ | 2D-1 |
| R/W SHEET NO. | |

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 12786 ENGINEER STEVEN M. BOUDON

DocuSigned by: Steve Boudon 3/21/2017
5FD58296414948 9...

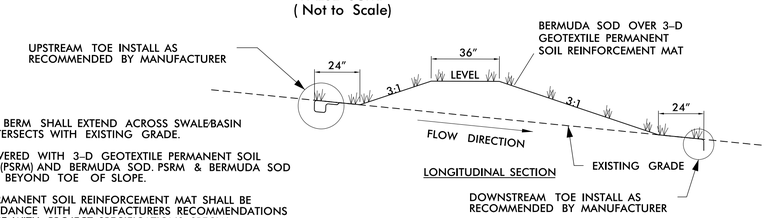
# DETAIL A
## TYPICAL BIOSWALE CROSS SECTION
"NOT TO SCALE"




NOTES:

1. PERFORATED, NON-PERFORATED, AND CLEANOUT PIPE MATERIAL SHALL MEET THE AASHTO SPECIFICATIONS FOR EITHER HDPE (SECT. 1032-7 AASHTO M294 FOR TYPE S OR FOR TYPE D – SECT. 1044-7 AASHTO M252) OR PVC (SECT. 1032-8 AASHTO M304, SECT. 1044-6, ASTM D1785).
2. PERFORATED UNDERDRAIN PIPES SHALL HAVE A MINIMUM OF 4 ROWS OF PERFORATIONS AT 3/8-IN DIAMETER PLACED 6-INCHES ON CENTER WITHIN EACH ROW. WRAP WITH FILTER SOCK.
3. USE ONLY NON-SHRINK GROUT FOR SEALING PIPE CONNECTIONS TO STRUCTURES.

# DETAIL B
## FALSE SUMP
( Not to Scale)



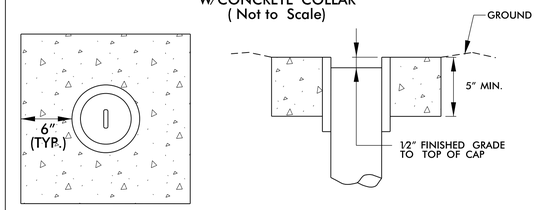

1. TOP ELEVATION OF BERM SHALL EXTEND ACROSS SWALE/BASIN SECTION UNTIL IT INTERSECTS WITH EXISTING GRADE.

2. BERM SHALL BE COVERED WITH 3-D GEOTEXTILE PERMANENT SOIL REINFORCEMENT MAT (PSRM) AND BERMUDA SOD. PSRM & BERMUDA SOD SHALL EXTEND 2 FEET BEYOND TOE OF SLOPE.

3. 3-D GEOTEXTILE PERMANENT SOIL REINFORCEMENT MAT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH PROJECT SPECIFICATIONS, SPECIAL PROVISIONS AND DETAILS.

4. 3-D GEOTEXTILE PERMANENT SOIL REINFORCEMENT MAT MATERIAL, ANCHORING METHOD ANDS INSTALLATION PLAN SHALL BE APPROVED BY NCDOT PRIOR TO INSTALLATION

# DETAIL C
## FLUSH MOUNTED CLEANOUT W/CONCRETE COLLAR
( Not to Scale)

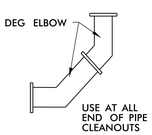



TOP VIEW

SIDE VIEW

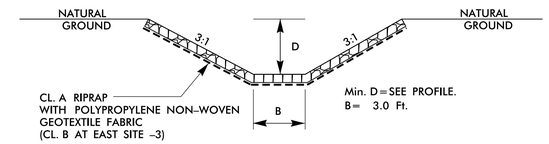
NOTES:

1. CONCRETE SHALL BE FLUSH WITH FINISHED GRADE. TOP OF CONCRETE CAP SHALL BE A MINIMUM OF 1/2" BELOW TOP OF CONCRETE COLLAR AND SHALL BE REMOVABLE, WATER TIGHT, AND CLOSED UNDER NORMAL CONDITIONS
2. CONCRETE SHALL BE 3,000 PSI
3. THIS CONCRETE COLLAR DETAIL SHALL BE APPLIED TO ALL CLEANOUTS ON PROJECT.
4. USE 45 DEG ELBOWS AT ALL BENDS IN PIPE CLEANOUTS

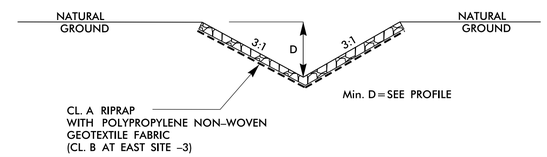



SIDE VIEW

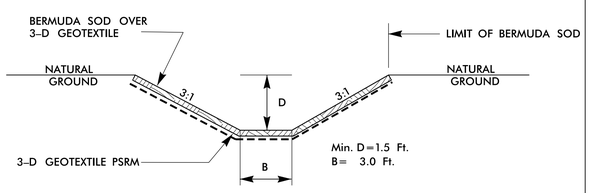
# DETAIL F
## PLUNGE POOL
( Not to Scale)




# DETAIL G
## RIP RAP DITCH
( Not to Scale)

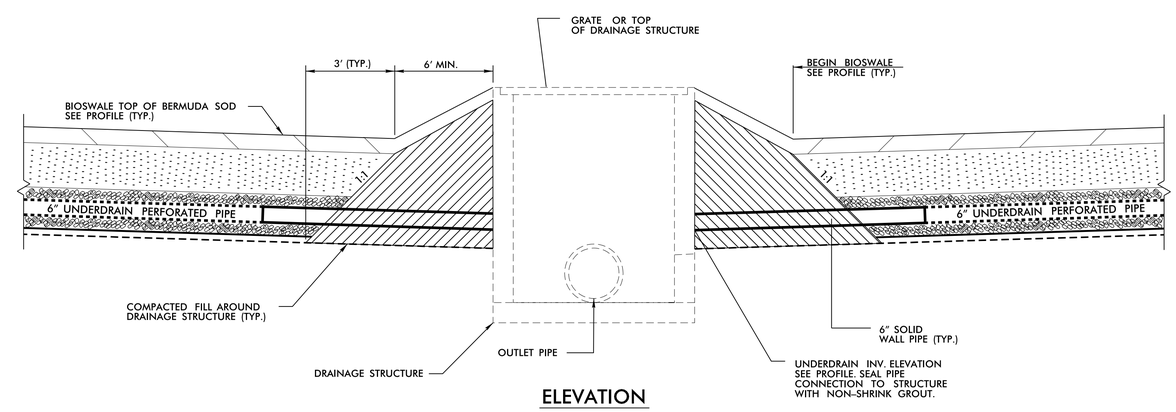



# DETAIL D
## STANDARD BASE DITCH




WEST BIOSWALE STA 12+93 TO END
EAST BIOSWALE – 1 STA 10+62 TO 12+07

# DETAIL E
## BIOSWALE CONNECTION TO DRAINAGE STRUCTURE




ELEVATION

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3/20/2017 11:59:15 AM
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