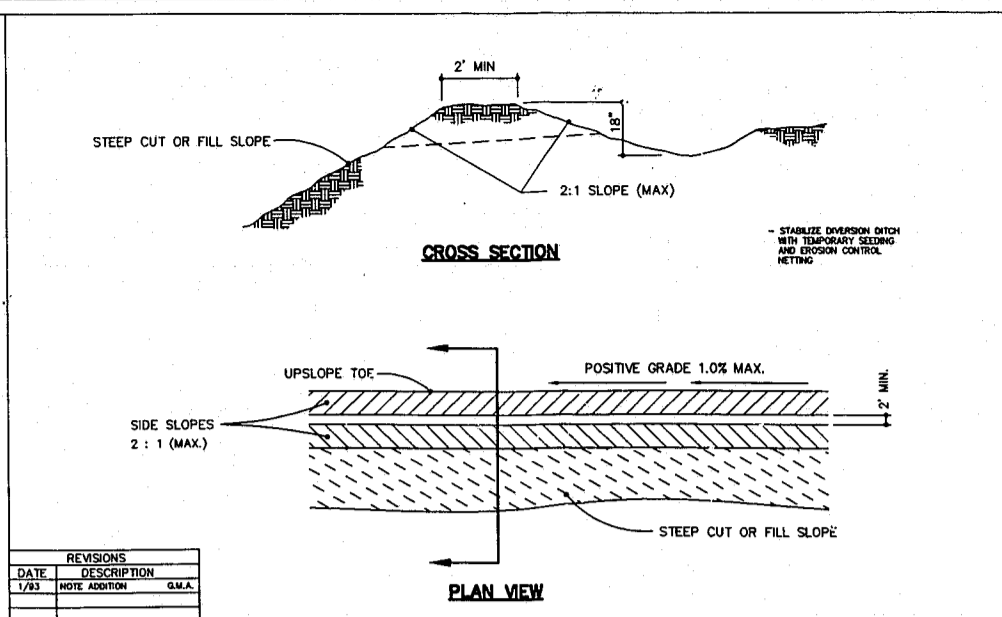
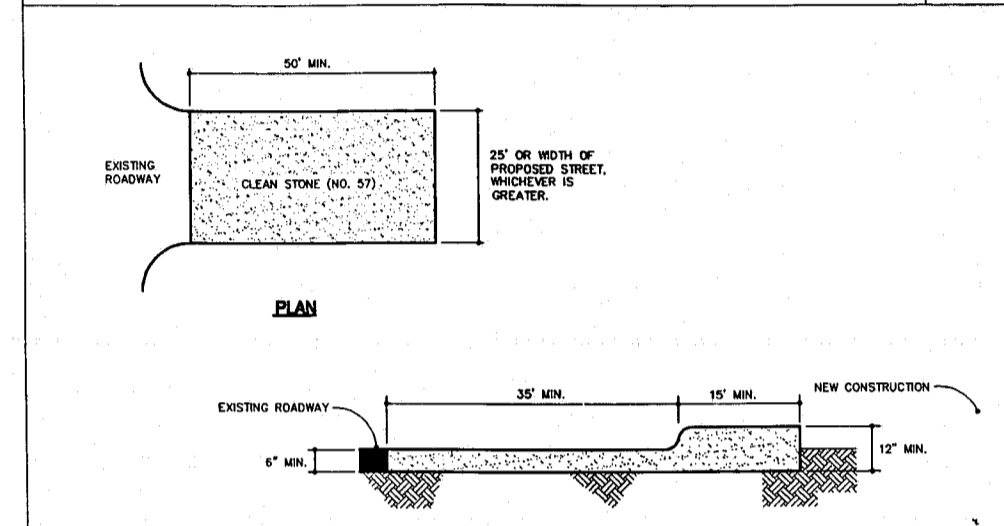


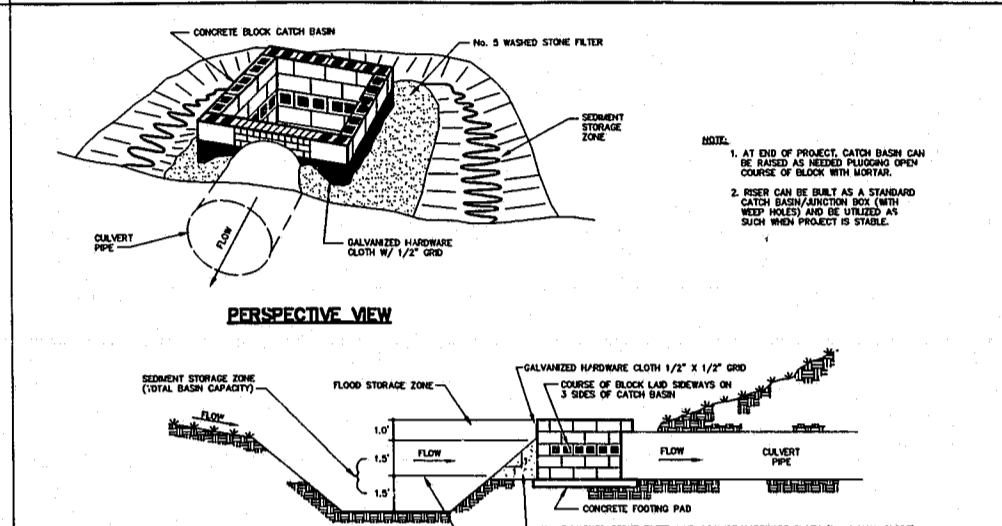
STANDARD TEMPORARY SILT FENCE  
STD. No. 4.01



DIVERSION DITCH  
STD. No. 4.09



CONSTRUCTION ENTRANCE  
STD. No. 4.07



CATCH BASIN RISER/FILTER  
STD. No. 4.05

**SEEDBED PREPARATION**

- Chisel compacted areas and spread topsoil 3 inches deep over adverse soil conditions, if available.
- Rip the entire area to 6 inches depth.
- Remove all loose rock, roots and other obstructions leaving surfaces reasonably smooth and uniform.
- Apply agricultural lime, fertilizer, and superphosphate uniformly and mix with soil (see below).
- Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared 4 to 6 inches deep.
- Seed a freshly prepared seedbed and cover seed lightly with seeding equipment or cutpack after seeding.
- Mulch immediately after seeding and anchor mulch.
- Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be over 60% damaged, reestablish following original lime, fertilizer and seeding rates.
- Consult Conservation Inspector on maintenance treatment and fertilization after permanent cover is established.

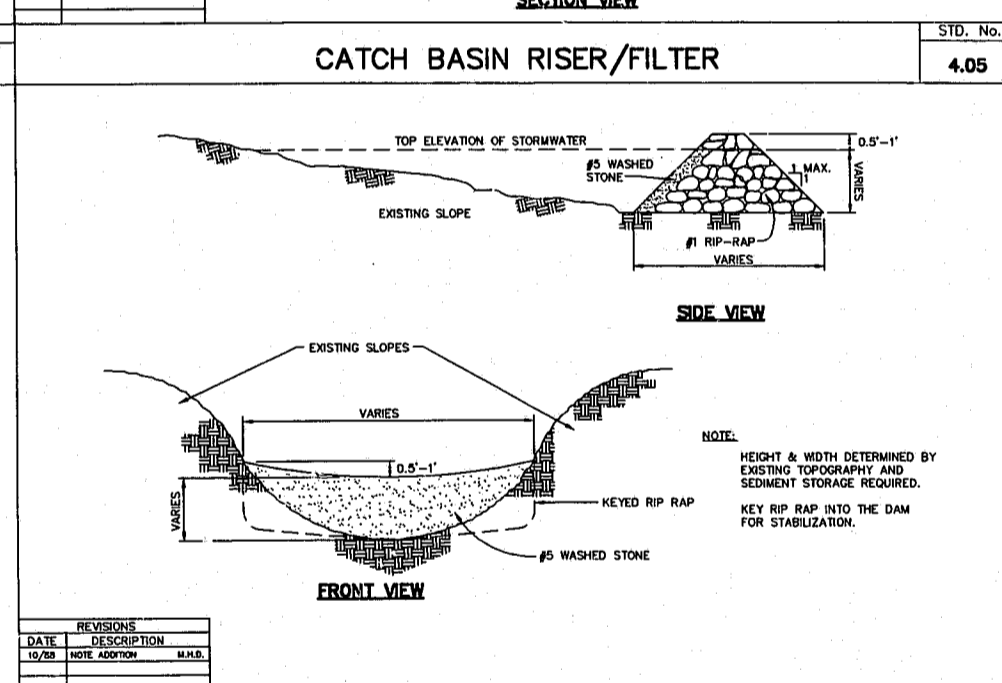
\* Apply: Agricultural Limestone - 2 Tons/Acre (3 Ton per Acre on clay soils)  
Fertilizer - 1,000 lbs./acre - 10-10-10  
Superphosphate - 500 lbs./acre - 20%  
Mulch - 2 Tons/Acre - small grain straw  
Anchor - Asphalt Emulsion @ 300 gal. acre

**SEEDING SCHEDULE**  
SHOULDERS, SIDE DITCHES, SLOPES (max. 3:1)

DATE	TYPE	PLANTING RATE
Aug 15 - Nov 1	Tall Fescue	300 lbs/acre
Nov 1 - Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre
Apr 15 - June 30	Hulled Common Bermudagrass	25 lbs/acre
July 15 - Aug 15	Tall Fescue and *** Brown Top Millet	35 lbs/acre
	*** or Sorghum-Sudan Hybrids	
<b>SLOPES (3:1 to 2:1)</b>		
Mar 1 - June 1	Sericea Lespedeza (scarified) and	50 lbs/acre
Mar 1 - Apr 15	ADD Tall Fescue and	120 lbs/acre
Mar 1 - June 30	ADD Weeping Lovegrass or	10 lbs/acre
Mar 1 - June 30	ADD Hulled Common Bermudagrass	25 lbs/acre
June 1 - Sep 1	*** Tall Fescue and *** Brown Top Millet	120 lbs/acre
	*** or Sorghum-Sudan Hybrids	30 lbs/acre
Sep 1 - Mar 1	Sericea Lespedeza (unhulled-unsscarified) and Tall Fescue	70 lbs/acre
Nov 1 - Mar 1	ADD Abruzzi Rye	120 lbs/acre
		25 lbs/acre

Consult Erosion Control Engineer or Soil Conservation Service for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding rate combinations are possible.

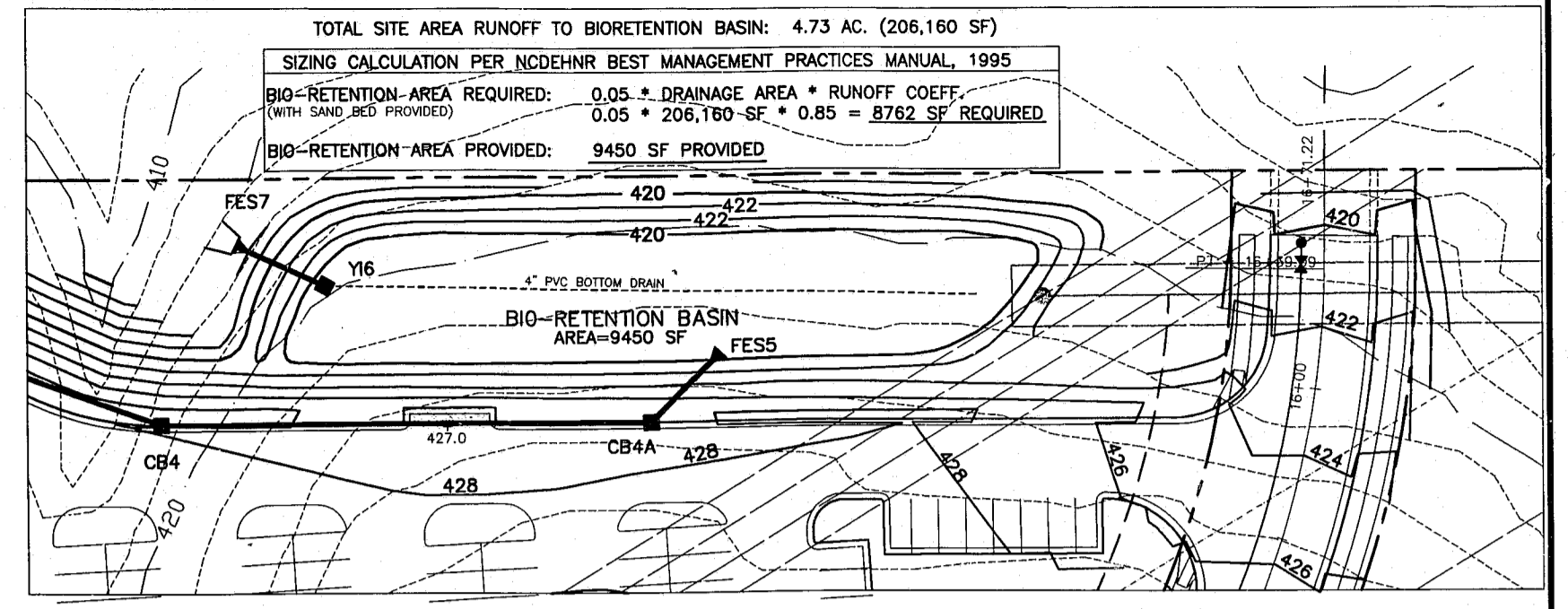
\*\*\* Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12 inches in height before mowing, otherwise fescue may be shaded out.



CHECK DAM  
STD. No. 4.06



STANDARD CATCH BASIN/YARD INLET PROTECTION  
STD. No. 4.14



**BIORETENTION AREA: SOIL SPECIFICATIONS**

A. PLANTING SOIL

THE BIORETENTION AREAS SHALL CONSIST OF A PLANTING SOIL HAVING A COMPOSITION OF AT LEAST 10 TO 25 PERCENT CLAY AND SHALL BE OF A SANDY LOAM OR LOAMY SAND TEXTURE. LOAMY SOILS MAY BE UTILIZED FOR THE PLANTING SOIL BUT MUST CONSIST OF 35% SAND. IN ADDITION, THE FURNISHED PLANTING SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH, BRUSH OR ANY OTHER MATERIAL OR SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH OR A HINDRANCE TO PLANTING OR MAINTENANCE OPERATIONS.

THE PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE OR OTHERS AS SPECIFIED.

IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH.

THE PLANTING SOIL SHALL BE TESTED AND MEET THE FOLLOWING CRITERIA:

PH RANGE	5.5 - 5.6
ORGANIC MATTER	1.5 - 3.0%
MAGNESIUM - MG	35 LBS./ACRE
PHOSPHORUS - P205	100 LBS./ACRE
POTASSIUM - K2O	85 LBS./ACRE
SOLUBLE SALTS	NOT TO EXCEED 500 PPM

THE FOLLOWING TESTING FREQUENCIES SHALL APPLY TO THE ABOVE SOIL CONSTITUENTS:

- PH, ORGANIC MATTER: 1 TEST PER 90 CUBIC YARDS, BUT NO MORE THAN 1 TEST PER BIORETENTION AREA
- MAGNESIUM, PHOSPHORUS, POTASSIUM, SOLUBLE SALTS: 1 TEST PER 500 CUBIC YARDS, BUT NO LESS THAN 1 TEST PER BORROW SOURCE
- ONE GRAIN SIZE ANALYSIS SHALL BE PERFORMED PER 90 CUBIC YARDS OF PLANTING SOIL, BUT NO LESS THAN 1 TEST PER BIORETENTION AREA.

B. MULCH LAYER SPECIFICATIONS

A MULCH LAYER SHALL BE PROVIDED ON TOP OF THE PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR MATERIAL.

OF THE APPROVED MULCH PRODUCTS, ALL MUST BE WELL ACID, UNIFORM IN COLOR AND FREE OF FOREIGN MATERIAL INCLUDING PLANT MATERIAL. WELL-ACID MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCKPILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.

C. SAND SPECIFICATIONS

THE SAND SHALL BE FREE OF DELETERIOUS MATERIAL AND ROCKS GREATER THAN 1 INCH IN DIAMETER.

D. COMPACTION

SOIL SHALL BE PLACED IN LAYERS LESS THAN 18 INCHES AND LIGHTLY COMPACTED (MINIMAL COMPACTIVE EFFORT) BY TAMING WITH A BUCKET FROM A DOZER OR A BACKHOE.

**BIORETENTION AREA: PLANT SPECIFICATIONS**

GENERAL PLANTING SPECIFICATIONS

ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE AND UNTIL PLANTED.

- WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
- THE DIAMETER OF THE PLANTING PIT MUST BE A MINIMUM OF SIX INCHES (6") LARGER THAN THE DIAMETER OF THE BALL OF THE TREE.
- THE PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/4" OF THE BALL TO BE ABOVE THE EXISTING GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.
- THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED AT THE BOTTOM OF THE PIT (SEE BELOW FOR FERTILIZATION RATES).
- THE PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS BALL (NEVER LIFT BY BRANCHES OR TRUNK).
- SET THE PLANT UPRIGHT AND IN THE CENTER OF THE PIT SO THAT THE TOP OF THE BALL IS APPROXIMATELY 1/4" ABOVE THE FINAL GRADE.
- BACKFILL PLANTING PIT WITH EXISTING SOIL.
- MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.
- NEVER COVER THE TOP OF THE BALL WITH SOIL, MOUND SOIL AROUND THE EXPOSED BALL (1/4").
- TREES SHALL BE BRACED BY USING 2" BY 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL UTILIZING HOSE AND WIRE. THE TREE IS BRACED TO THE STAKES.

**FERTILIZATION**

- TREE AND SHRUB FERTILIZER SHALL BE A 21-GM, TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2 YEAR) FERTILIZER TABLET WITH A MINIMUM GUARANTEED ANALYSIS OF 20-10-5:
- TOTAL NITROGEN (N) - 20%
- WATER SOLUBLE ORGANIC NITROGEN - 7%
- WATER INSOLUBLE ORGANIC NITROGEN - 13%
- AVAILABLE PHOSPHORIC ACID (P) - 10%
- SOLUBLE POTASH (K) - 5%

FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIED FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:

1 GAL. CONTAINER	1 EA. 21 GM. TABLET
3 GAL. CONTAINER	2 EA. 21 GM. TABLET
5 GAL. CONTAINER	3 EA. 21 GM. TABLET
7 GAL. CONTAINER	5 EA. 21 GM. TABLET

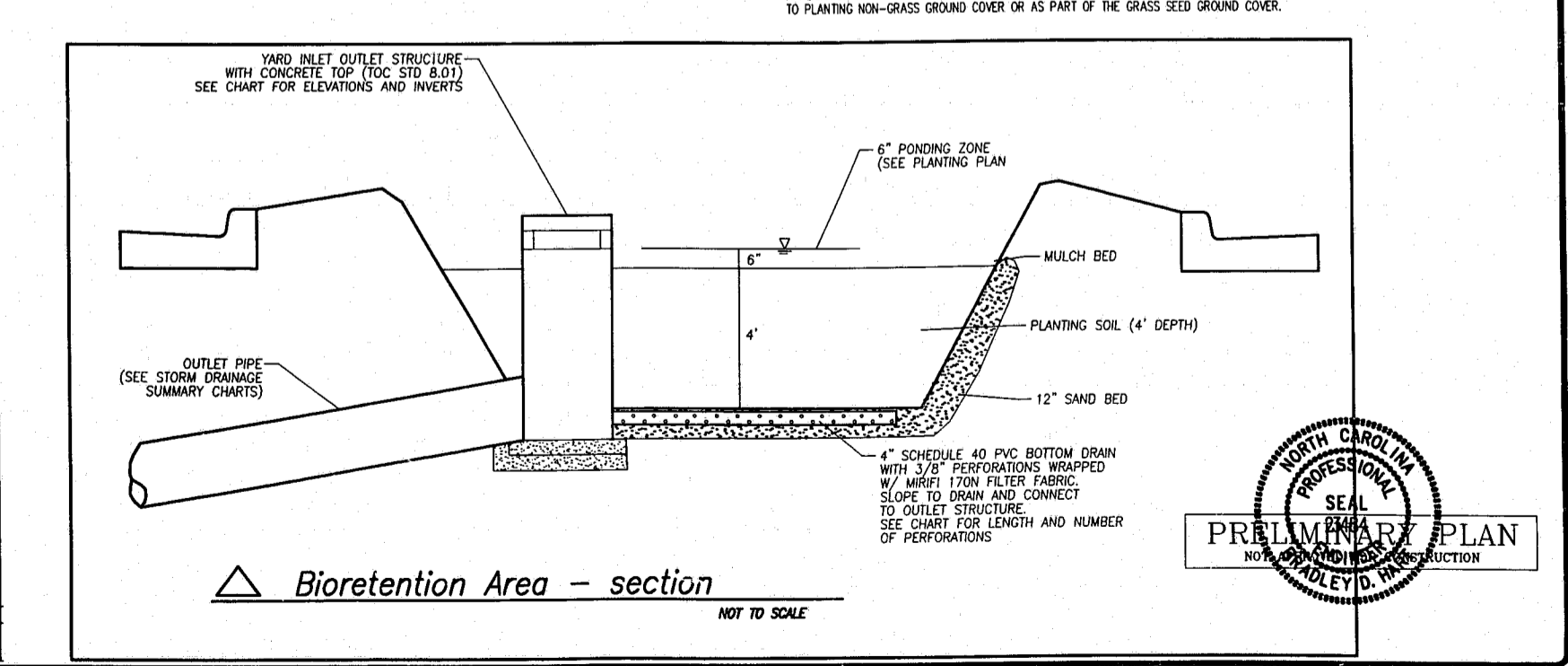
PLANTING NON-GRASS GROUND COVER

- THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TRONEL, SHOVEL, BULB PLANTER OR HOE (THIS DOES NOT APPLY TO GRASSES OR LEGUMES).
- BEFORE PLANTING, BIODEGRADABLE POTS SHALL BE SPLIT, AND NON-BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF ALL POTTED PLANTS SHALL BE SPLIT OR CRUMBLED.
- THE GROUND COVER SHALL BE PLANTED SO THAT THE ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOTS OF BARE ROOT PLANTS SHALL BE COVERED TO THE CROWN.
- BEFORE PLANTING, APPLY A PRE-EMERGENT HERBICIDE TO THE MULCHED AND PLANTED GROUND COVER BED.
- THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

PLANTING GRASS GROUND COVER

GRASSES AND LEGUME SEED SHALL BE TILLED INTO THE SOIL TO A DEPTH OF AT LEAST 2 INCHES BY EITHER HARROWING OR DISCING. FERTILIZER SHALL BE APPLIED AT THE SAME RATE AND UTILIZING THE SAME PROCESS FOR NON-GRASS GROUND COVER. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING TECHNIQUES.

ALL GROUND COVERS SHALL BE FERTILIZED WITH A 10-6-4 ANALYSIS FERTILIZER AS A NET APPLICATION AT THE RATE OF 3 LBS. PER 100 SQUARE FEET OF THE BIORETENTION AREA PRIOR TO PLANTING NON-GRASS GROUND COVER OR AS PART OF THE GRASS SEED GROUND COVER.



Bioretention Area - section  
NOT TO SCALE

**Revisions**

No.	Description	Date	By
1	PER TOC 1st REVIEW	9/12/99	BDH
3	PER TOC 3rd REVIEW	11/22/99	BDH