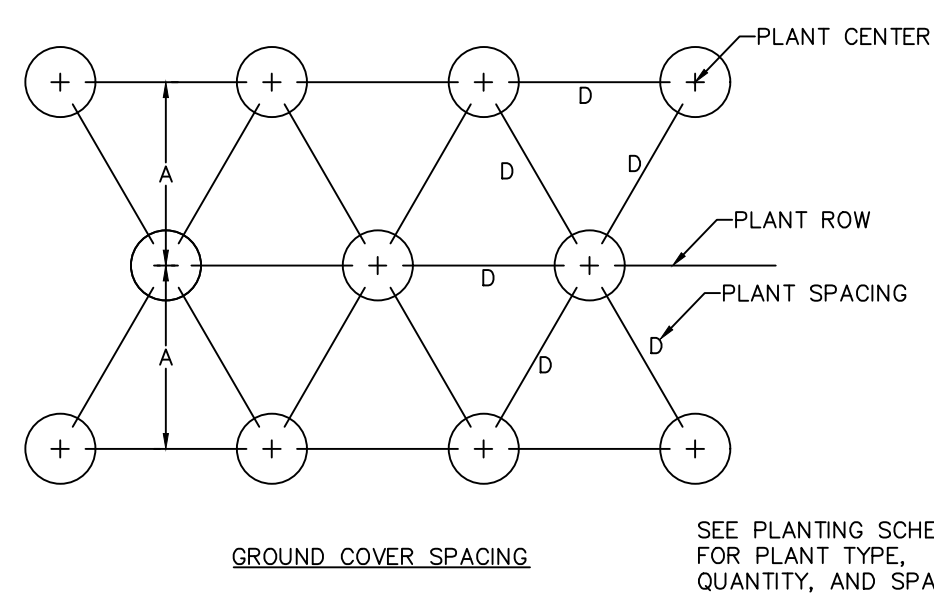
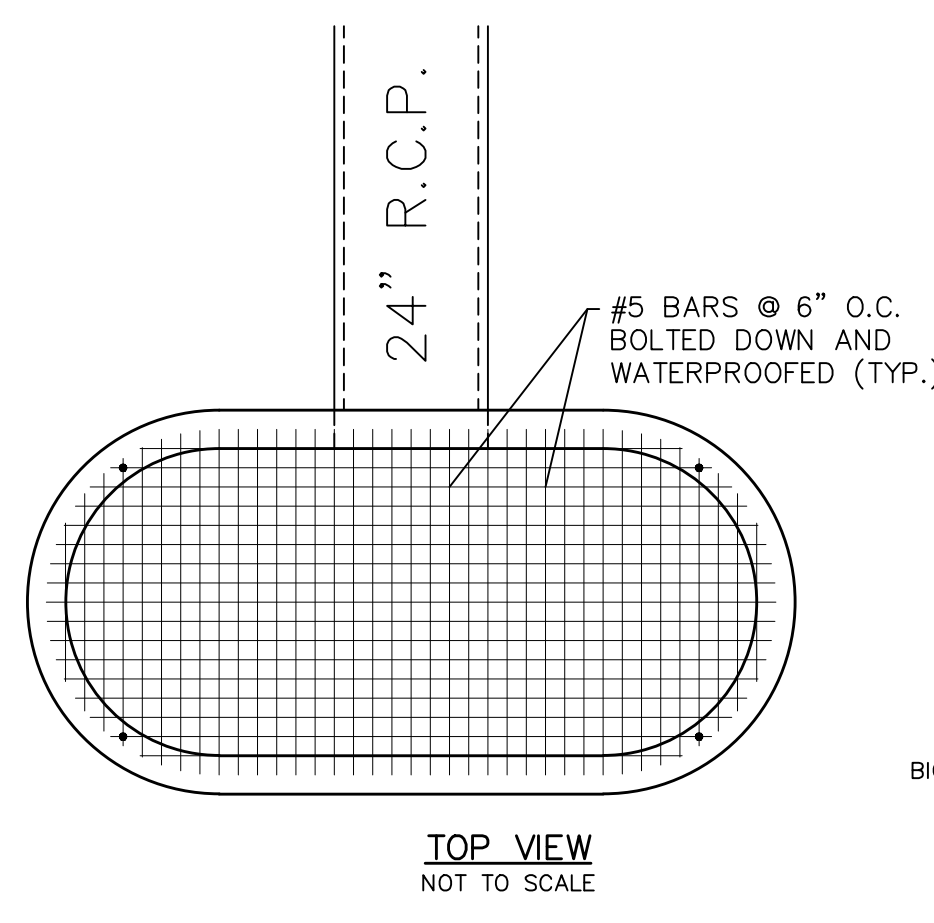
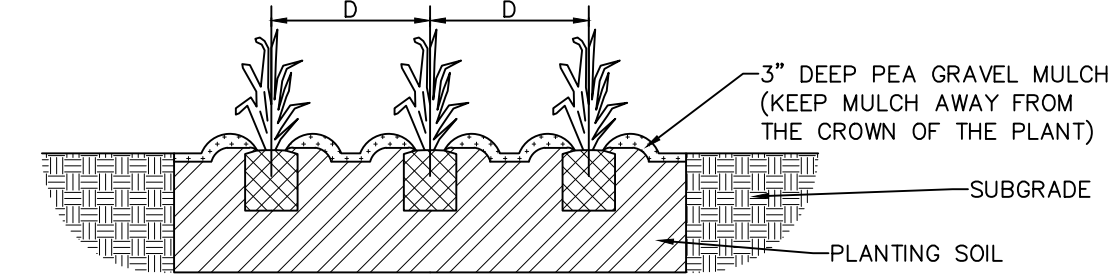


BIORETENTION CROSS-SECTION
NOT TO SCALE

PLANT SPACING 'D'	ROW SPACING 'A'	NUMBER OF PLANTS/SQFT
60"	52.0"	0.045
30"	26.0"	0.160
24"	20.8"	0.25
18"	15.6"	0.45
15"	13.0"	0.64
12"	10.4"	1.00
10"	8.66"	1.44
8"	6.93"	2.25

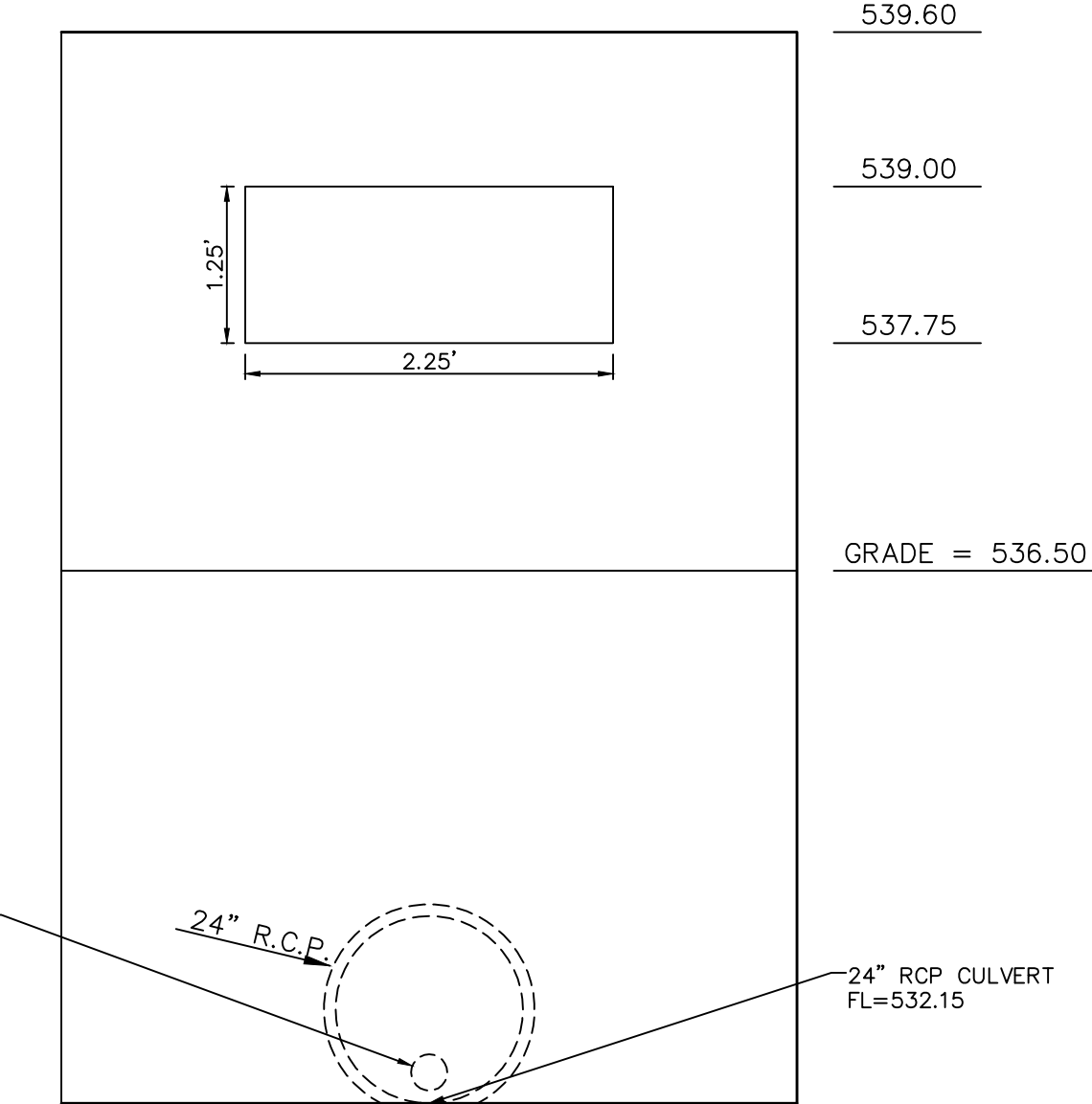


PLANT SPACING GUIDE
NOT TO SCALE

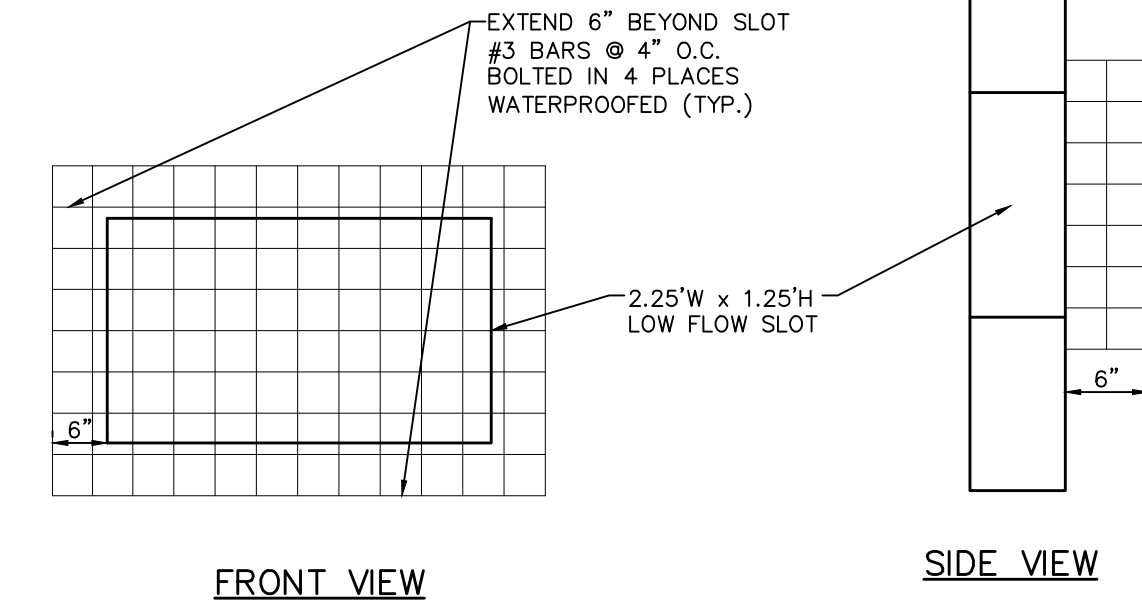


TOP VIEW
NOT TO SCALE

The Overflow Structure is a Standard Double Untrapped Street Inlet Precast Concrete (without top). See M.S.D. Detail 37. The bottom must be constructed to the correct height so that no brick will be used. A rectangular slot with dimensions of 2.25' W x 1.25' H will be implemented. The top of the structure has an elevation of 539.60. (See Detention Calculations)



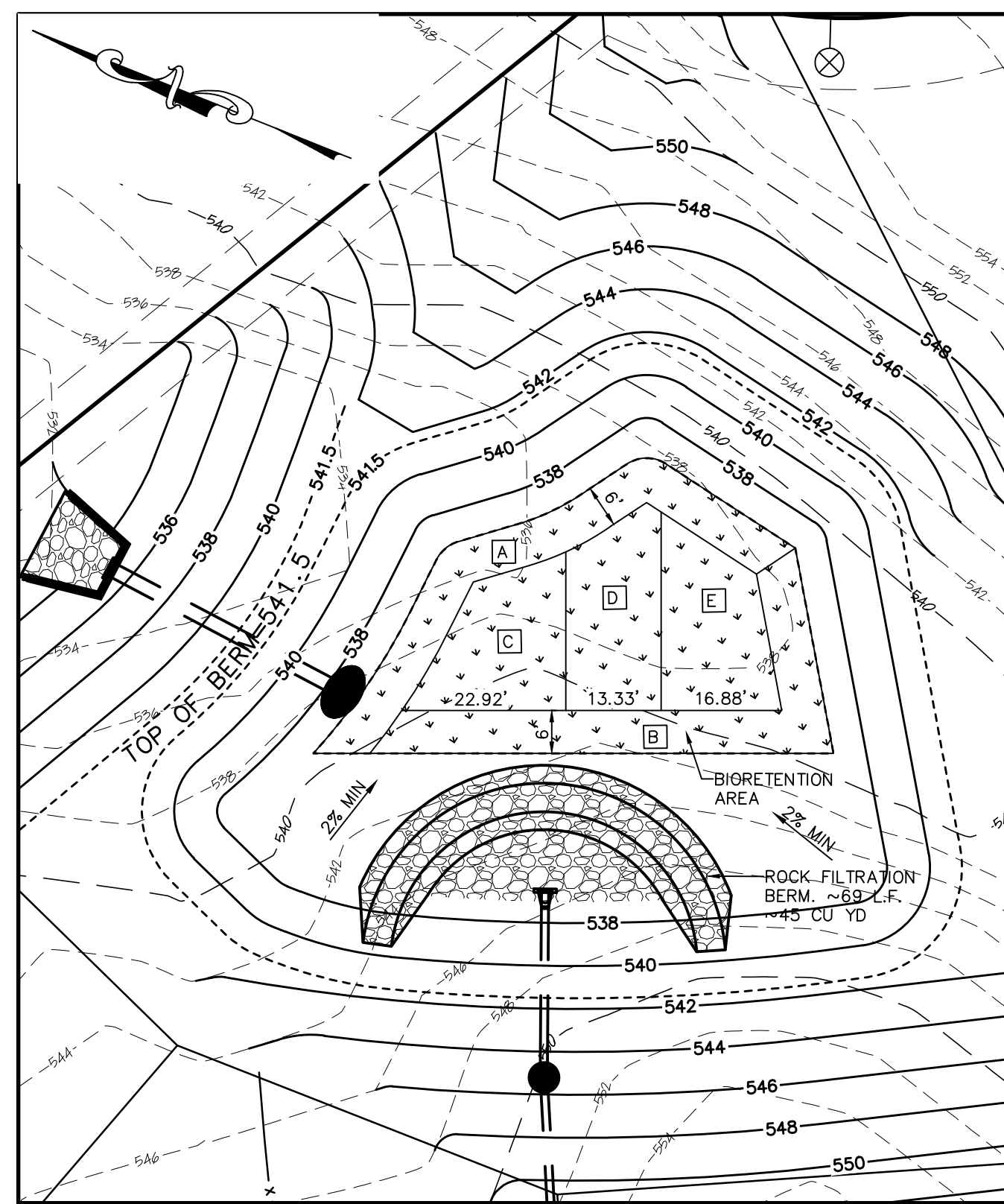
Basin Outfall Structure OS 2
NOT TO SCALE



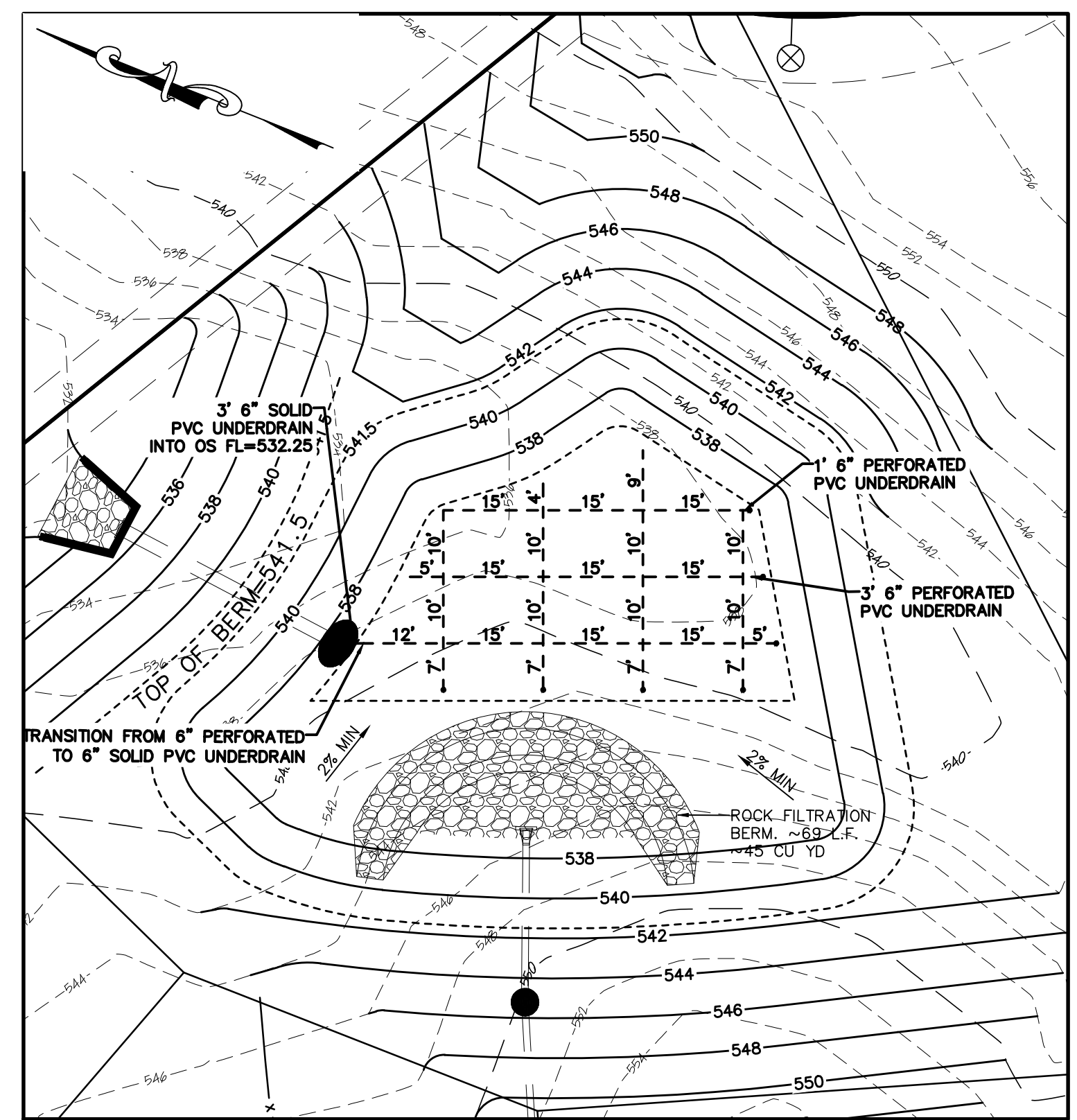
LOW FLOW SLOT DEBRIS GRATE
NOT TO SCALE

ITEM	LATIN NAME	COMMON NAME	TOTAL NUMBER	SPACING
A	Carex grayi	Bur sedge	22	60"
B	Carex vulpinoidea	Fox sedge	22	60"
C	Solidago speciosa	Showy goldenrod	15	60"
D	Echinacea purpurea	Purple coneflower	15	60"
E	Eryngium yuccifolium	Rattlesnake master	15	60"

BIORETENTION PLANTING SCHEDULE



BIORETENTION PLANTING SCHEDULE
SCALE: 1" = 20'



BIORETENTION UNDERDRAIN LAYOUT
SCALE: 1" = 20'

Sand Gradations per ASTM C-33 Sieve Specifications	Percent Passing
9.5-mm (3/8-in.)	100
4.75-mm (No. 4)	95 to 100
2.36-mm (No. 6)	80 to 100
1.18-mm (No. 16)	50 to 85
600-um (No. 30)	25 to 60
300-um (No. 50)	5 to 30
150-um (No. 100)	0 to 10

SAND SPECIFICATIONS:

Washed ASTM C33 Fine Aggregate Concrete Sand is utilized for stormwater management applications. In addition to the ASTM C-33 specification, sand must meet ALL of the following conditions:

- Sand must meet gradation requirements for ASTM C-33 Fine Aggregate Concrete Sand. AASHTO M-6 gradation is also applicable. (Known as Natural washed concrete sand)
- Sand must be siliceous...no limestone based products may be used. If the material is white or gray in color it is probably not acceptable.
- Sand must be clean. Natural, unwashed sand deposits may not be used. Likewise, sand that has been contaminated by improper storage or installation practices will be rejected.
- Manufactured sand or stone dust is not acceptable under any circumstances.

Planting Soil Specifications:

PARAMETER	VALUE
pH Range	5.2 to 8.0
Organic Matter	1.5 to 5.0%
Magnesium	35 lbs. per acre minimum
Phosphorus (P ₂ O ₅)	75 lbs. per acre minimum
Potassium (K ₂ O)	85 lbs. per acre minimum
Soluble Salts	≤ 500 PPM

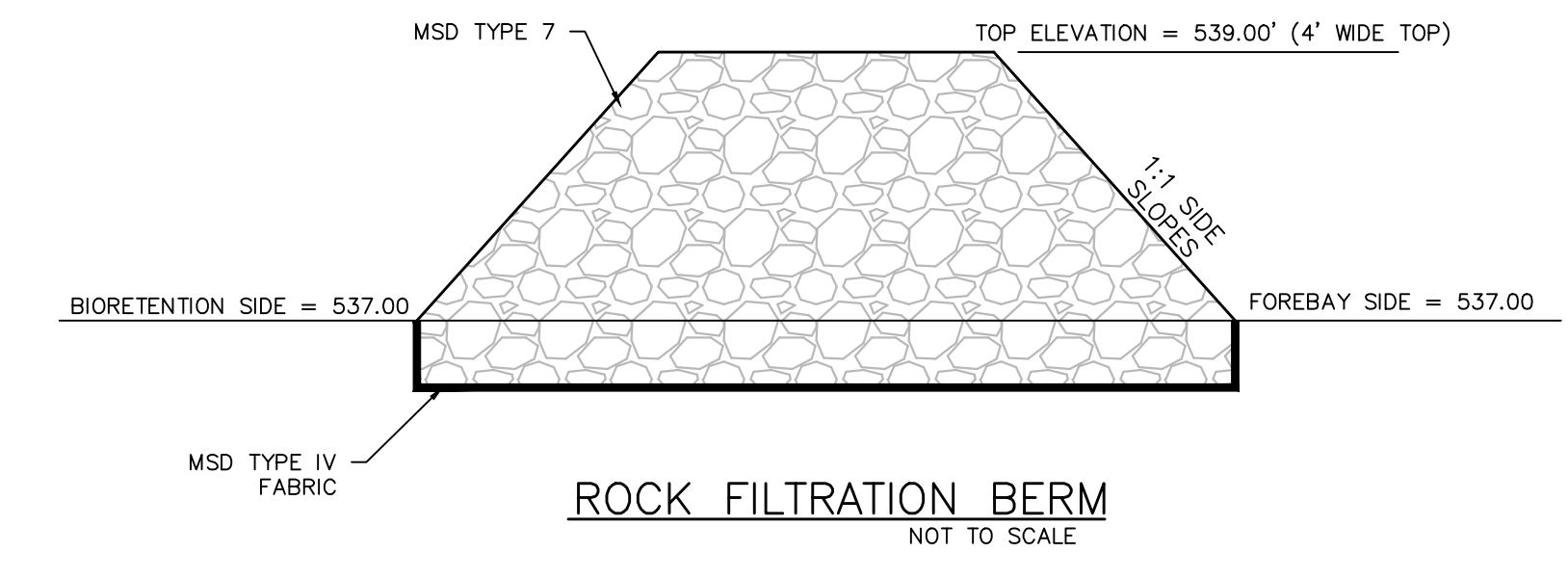
Sandy Loam or Loamy Sand (should contain a minimum of 60 percent sand, by volume). The clay content for these soils should be less than 10 percent by volume. The soils shall be free of stones, stumps, roots, or other woody material over 1 inch in diameter. Brush or seeds from noxious weeds should not be present in the soil. Placement of the planting soil should be in lifts of 12 to 18 inches and be loosely compacted. (Rubber-Wheeled Heavy Equipment and mechanical tamping devices are not recommended for compaction).

MAINTENANCE SCHEDULE:

- THE PROPERTY OWNER WILL MAINTAIN THE BIORETENTION IN GOOD WORKING ORDER AND WILL BE INSPECTED EVERY 6 MONTHS FOR THE FOLLOWING:
 - SAID AREA SHALL BE CLEANED SHORTLY AFTER THE PROJECT IS COMPLETED AND EROSION CONTROL HAS BEEN REMOVED AND VEGETATION HAS BEEN ESTABLISHED.
 - AREA SHALL BE CLEANED OF ANY WEEDS, UNDERBRUSH, WILD GROWTH, DEBRIS OR LITTER.
 - PLANTINGS WILL BE EVALUATED AND ANY DEAD PLANT SHALL BE REPLACED.
 - IF ACCUMULATED SEDIMENT HAS CLOGGED THE SURFACE PORES OF THE BIORETENTION, THEN DRILLING OR PUNCHING SMALL HOLES INTO THE SURFACE LAYER SHALL BE DONE TO RESTORE INFILTRATION CAPACITY OF THE SOIL.

CONTRACTOR INSTALLATION NOTES:

- DURING CONSTRUCTION CONTRACTOR TO PROVIDE ANY TEMPORARY DITCHES OR PIPING IN AN EFFORT TO DIVERT UNWANTED WATERS TO ENTER BIOBASIN DURING THE INSTALLATION. PROVIDE ANY ADDITIONAL SILTATION CONTROL AS REQUIRED BY CITY.
- ONCE BASIN IS DUG OUT, TILL OR "RIP" BOTTOM OF BASIN. INSTALL FILTER FABRIC ON SLOPES OF TRENCH AND TACK IN PLACE.
- BEGIN INSTALLING 6" OF 3/4" CLEAN GRAVEL IN LOOSE LIFT, DO NOT COMPACT.
- LAY PERFORATED DRAINAGE PIPING AND OVERFLOW PIPING.
- BEGIN PLACING 6" OF 3/4" CLEAN GRAVEL IN LOOSE LIFT, DO NOT COMPACT.
- BEGIN PLACING 6" OF 3/8" CLEAN PEA GRAVEL IN LOOSE LIFT, DO NOT COMPACT.
- BEGIN PLACING 6" OF ASTM C-33 SAND IN LOOSE LIFT, DO NOT COMPACT.
- BEGIN PLACING PLANTING SOIL AT THE REQUIRED DEPTHS FOR EACH BASIN IN LIFTS OF 12"-18" LOOSELY, DO NOT COMPACT.
- FINISH GRADE BASIN SIDE SLOPES AND PLACE PLANTINGS.
- BASIN PLANTINGS TO BE WATERED AND MAINTAINED FOR 60 DAYS BY CONTRACTOR.



ROCK FILTRATION BERM
NOT TO SCALE

PROJECT TITLE:
ELLA'S PLACE
EMGE ROAD
CITY OF FALLON
ST. CHARLES COUNTY
MO. 63366
Issue Date: 09/26/2018

ENGINEERING FIRM:
JEFFREY B. SIMMONS
221 Point View Blvd.
St. Charles, MO 63301
636-928-5562
FAX 928-1718

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I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or construction of the project.

STATE OF MISSOURI
JEFFREY B. SIMMONS
NUMBER 2007030831
PROFESSIONAL ENGINEER
Jeffrey B. Simmons
CIVIL ENGINEER
2007030831
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REVISIONS	DATE	DESCRIPTION
11/29/18		CITY COMMENTS
01/09/19		CITY COMMENTS
03/22/21		CLIENT COMMENTS
05/05/21		CITY COMMENTS
05/21/21		CITY COMMENTS

Developer / Owner:
Schneider Custom Homes
429 North Main Street
OFallon, MO 63366
636-240-0930

P+Z No.: #19-007760
Approval Date: 11/05/2020
City No.: #
Page No.: 17 of 18

CONSTRUCTION DETAILS