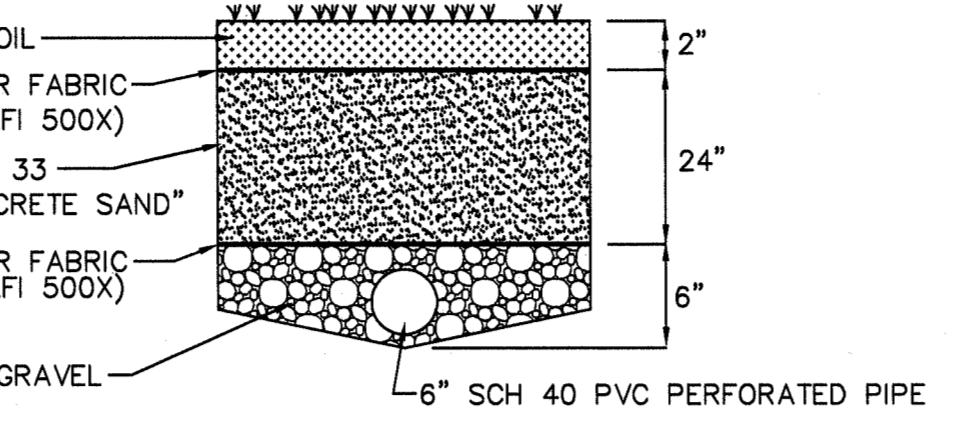
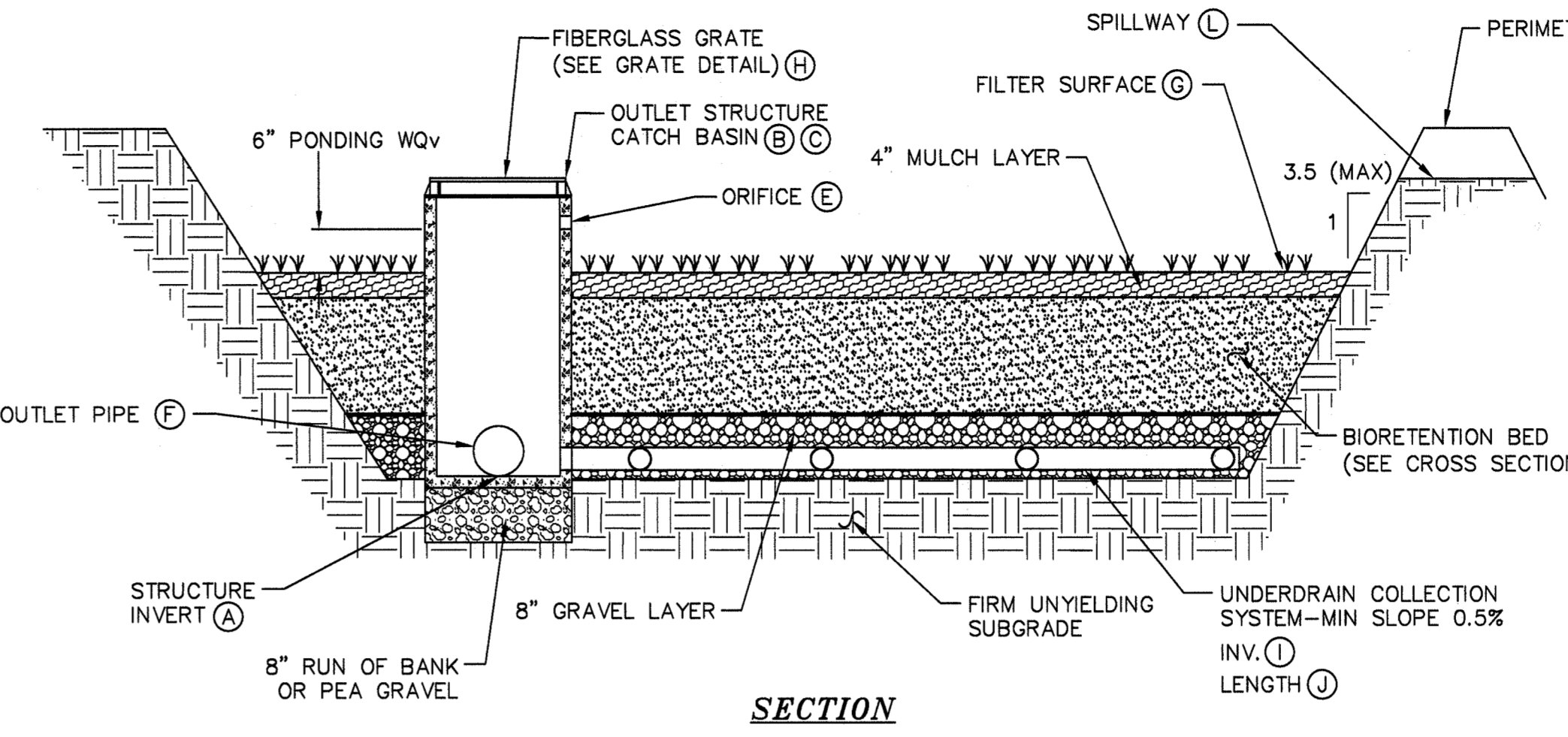


SAND FILTRATION AREA DETAIL
NOT TO SCALE

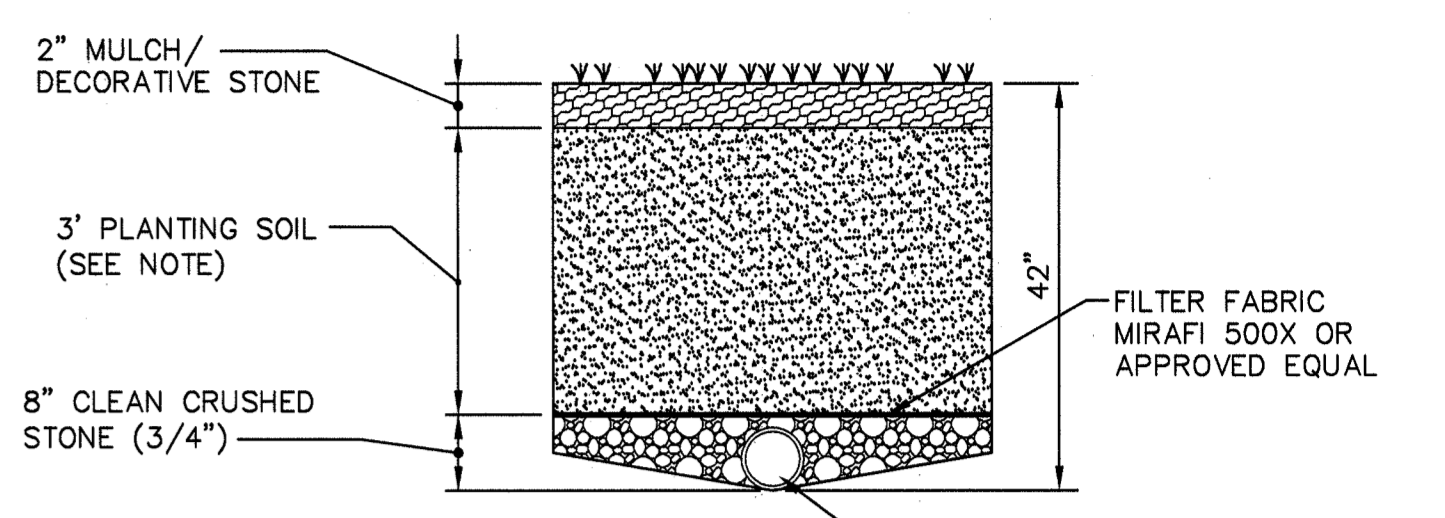


SURFACE SAND FILTER SECTION



SECTION

NOTES:
THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME. SOILS SHOULD FALL WITHIN THE SM, OR CLASSIFICATIONS OF THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS). A PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5" HR) IS REQUIRED (A CONSERVATIVE VALUE OF 0.5 FEET PER DAY IS USED FOR DESIGN). THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. BRUSH OR SEEDS FROM NOXIOUS WEEDS. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12 TO 18", LOOSELY COMPACTED (TAMPED LIGHTLY WITH A DOZER OR BACKHOE BUCKET).



BIORETENTION SECTION

SAND FILTRATION AREA DATA

SAND FILTRATION AREA OUTLET STRUCTURE		A4
A	INVERT OF OUTLET STRUCTURE	507.00
B	OUTLET STRUCTURE DIMENSIONS (OUTSIDE)	48"x30"
C	TOP OF STRUCTURE ELEVATION	513.50
D	BOTTOM OF STRUCTURE ELEVATION	506.33
E	ORIFICE: DIAMETER/INVERT ELEVATION	3" / 511.50
F	CULVERT: DIAMETER/INVERT ELEVATION	12" / 507.33
G	FILTER SURFACE ELEVATION	510.00
H	FIBERGLASS GRATE DIMENSION	42"x24"
I	UNDERDRAIN INVERT ELEVATION	507.33
J	UNDERDRAIN SYSTEM LENGTH	75'
K	TOP OF PERIMETER BERM	514.33
L	EMERGENCY SPILLWAY: ELEVATION	513.83
	LENGTH	10'
	DEPTH	6"

BIO-RETENTION AREA DETAIL
NOT TO SCALE

MAINTENANCE REQUIREMENTS:
INSPECTION SHALL BE MADE WEEKLY BY A LICENSED PROFESSIONAL AND AFTER EVERY 1/2" RAINFALL EVENT BY THE OWNER OR CONTRACTOR DURING CONSTRUCTION. DURING THE FIRST GROWING SEASON INSPECTIONS SHALL BE CONDUCTED MONTHLY AND BI ANNUALLY THEREAFTER. THE FOLLOWING TASKS SHALL BE PERFORMED AS NEEDED:

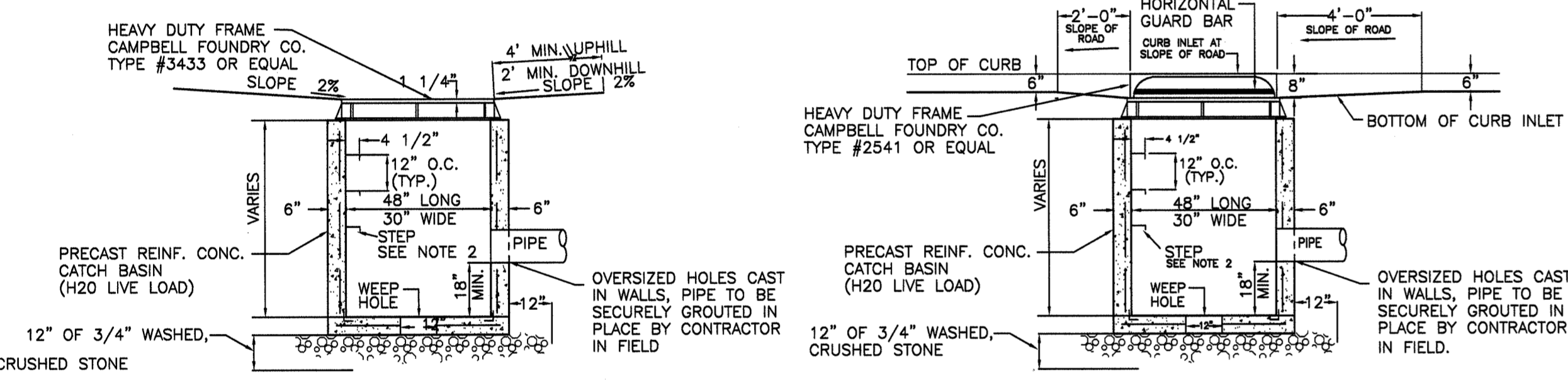
- REMOVAL OF ACCUMULATED SEDIMENT AND CLEANING AND/OR RESTORATION OF THE FILTER BED AREAS WHENEVER ACCUMULATED SEDIMENT REACHES A DEPTH OF 1 INCH.
- RESTORATION OF ANY DISTURBED PLANT MATERIAL AND ANY ERODED EMBANKMENTS. REPLACEMENT OF PROPOSED PLANTS SHALL OCCUR IF MORE THAN 50% OF THE COVERAGE OF THE FACILITY IS NOT ACHIEVED.
- REMOVAL OF ACCUMULATED DEBRIS WITHIN THE FILTER BED AREAS AND AT ALL INLET AND OUTFALL STRUCTURES.
- ANNUAL MOWING OF THE BERM AND SURROUNDING AREA OF THE BASINS. REMOVAL OF ANY FALLEN TREES OR LIMBS. NO MOWING OR TRIMMING IS TO OCCUR WITHIN THE CONSTRUCTED AREA OF THE WETLAND.
- VEGETATION WITHIN THE BIO-RETENTION AREA WILL BE LIMITED TO A HEIGHT OF 18 INCHES.
- WHEN THE FILTERING CAPACITY OF THE FILTER DIMINISHES SUBSTANTIALLY (I.E., WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 48 HOURS), THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH MATERIAL. THE REMOVED SEDIMENTS SHALL BE DISPOSED IN AN ACCEPTABLE MANNER (I.E., LANDFILL).

BIO-RETENTION AREA DATA

BIO-RETENTION AREA OUTLET STRUCTURE			A5	C3
A	INVERT OF OUTLET STRUCTURE	507.66	495.66	
B	OUTLET STRUCTURE DIMENSIONS (OUTSIDE)	48"x30"	48"x30"	
C	TOP OF STRUCTURE ELEVATION	513.40	501.50	
D	BOTTOM OF STRUCTURE ELEVATION	507.00	495.00	
E	ORIFICE: DIAMETER/INVERT ELEVATION	4.5" / 512.50	3.5" / 500.50	
F	CULVERT: DIAMETER/INVERT ELEVATION	15" / 508.00	18" / 496.00	
H	FILTER SURFACE ELEVATION	512.00	500.00	
H	FIBERGLASS GRATE DIMENSION	42"x24"	42"x24"	
I	UNDERDRAIN INVERT ELEVATION	508.00	496.00	
J	UNDERDRAIN SYSTEM LENGTH	860'	440'	
K	TOP OF PERIMETER BERM	514.46	502.31	
L	EMERGENCY SPILLWAY: ELEVATION	513.96	501.81	
	LENGTH	15'	15'	
	DEPTH	6"	6"	

MAINTENANCE REQUIREMENTS:
INSPECTION SHALL BE MADE WEEKLY BY A LICENSED PROFESSIONAL AND AFTER EVERY 1/2" RAINFALL EVENT BY THE OWNER OR CONTRACTOR DURING CONSTRUCTION. DURING THE FIRST GROWING SEASON INSPECTIONS SHALL BE CONDUCTED MONTHLY AND BI ANNUALLY THEREAFTER. THE FOLLOWING TASKS SHALL BE PERFORMED AS NEEDED:

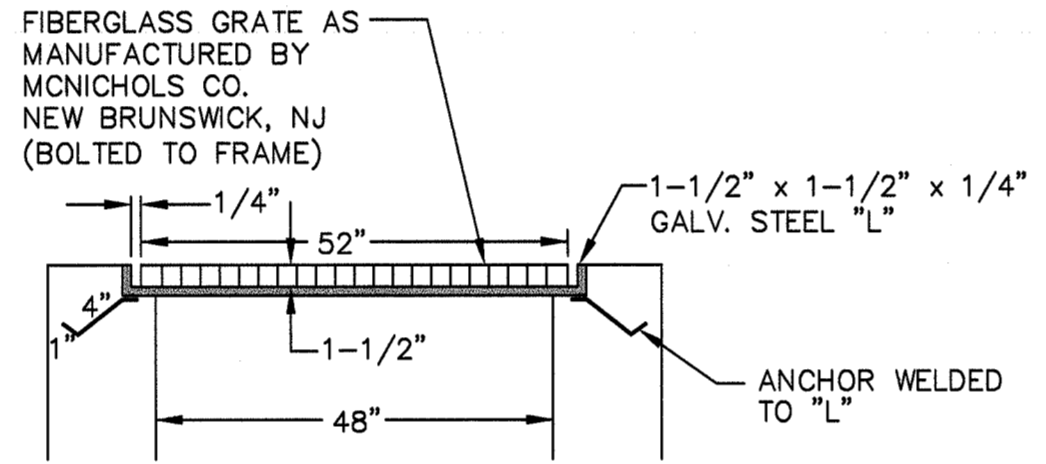
- REMOVAL OF ACCUMULATED SEDIMENT AND CLEANING AND/OR RESTORATION OF THE FILTER BED AREAS WHENEVER ACCUMULATED SEDIMENT REACHES A DEPTH OF 1 INCH.
- RESTORATION OF ANY DISTURBED PLANT MATERIAL AND ANY ERODED EMBANKMENTS. REPLACEMENT OF PROPOSED PLANTS SHALL OCCUR IF MORE THAN 50% OF THE COVERAGE OF THE FACILITY IS NOT ACHIEVED.
- REMOVAL OF ACCUMULATED DEBRIS WITHIN THE FILTER BED AREAS AND AT ALL INLET AND OUTFALL STRUCTURES.
- ANNUAL MOWING OF THE BERM AND SURROUNDING AREA OF THE BASINS. REMOVAL OF ANY FALLEN TREES OR LIMBS. NO MOWING OR TRIMMING IS TO OCCUR WITHIN THE CONSTRUCTED AREA OF THE WETLAND.
- VEGETATION WITHIN THE BED AREA WILL BE LIMITED TO A HEIGHT OF 18 INCHES.
- WHEN THE FILTERING CAPACITY OF THE FILTER DIMINISHES SUBSTANTIALLY (I.E., WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 48 HOURS), THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH MATERIAL. THE REMOVED SEDIMENTS SHALL BE DISPOSED IN AN ACCEPTABLE MANNER (I.E., LANDFILL).



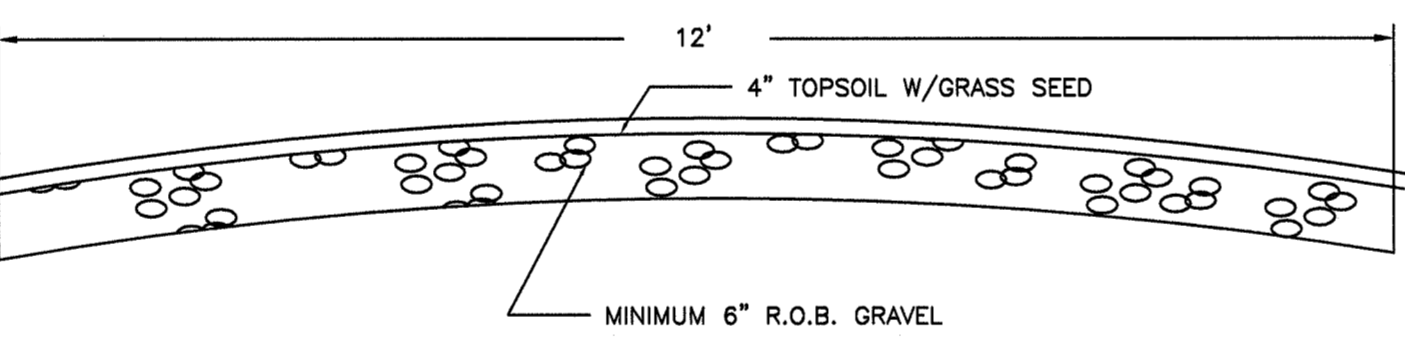
FLAT TOP CATCH BASIN

CURB TOP CATCH BASIN

- NOTES:**
- CONCRETE STRENGTH: 4000 P.S.I. @ 28 DAYS.
 - STEPS TO BE COPOLYMER POLYPROPYLENE PLASTIC WITH 1/2" GRADE 60 STEEL REINFORCEMENT
 - THE ENDS OF ALL PIPES SHALL BE CUT OFF FLUSH WITH THE INSIDE SURFACE OF THE CATCH BASIN.



GRATE DETAIL
NOT TO SCALE



GRAVEL SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

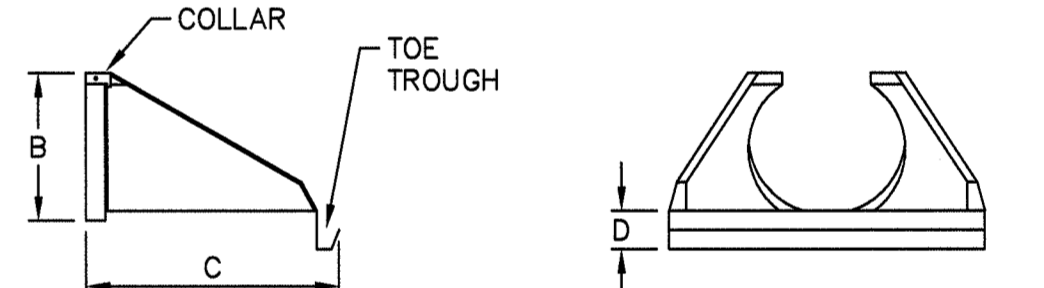
SIEVE SIZE	% PASSING BY WEIGHT
2"	100
1 1/4"	30-65
NO. 200	10-20

MAINTENANCE ACCESS DETAIL
NOT TO SCALE

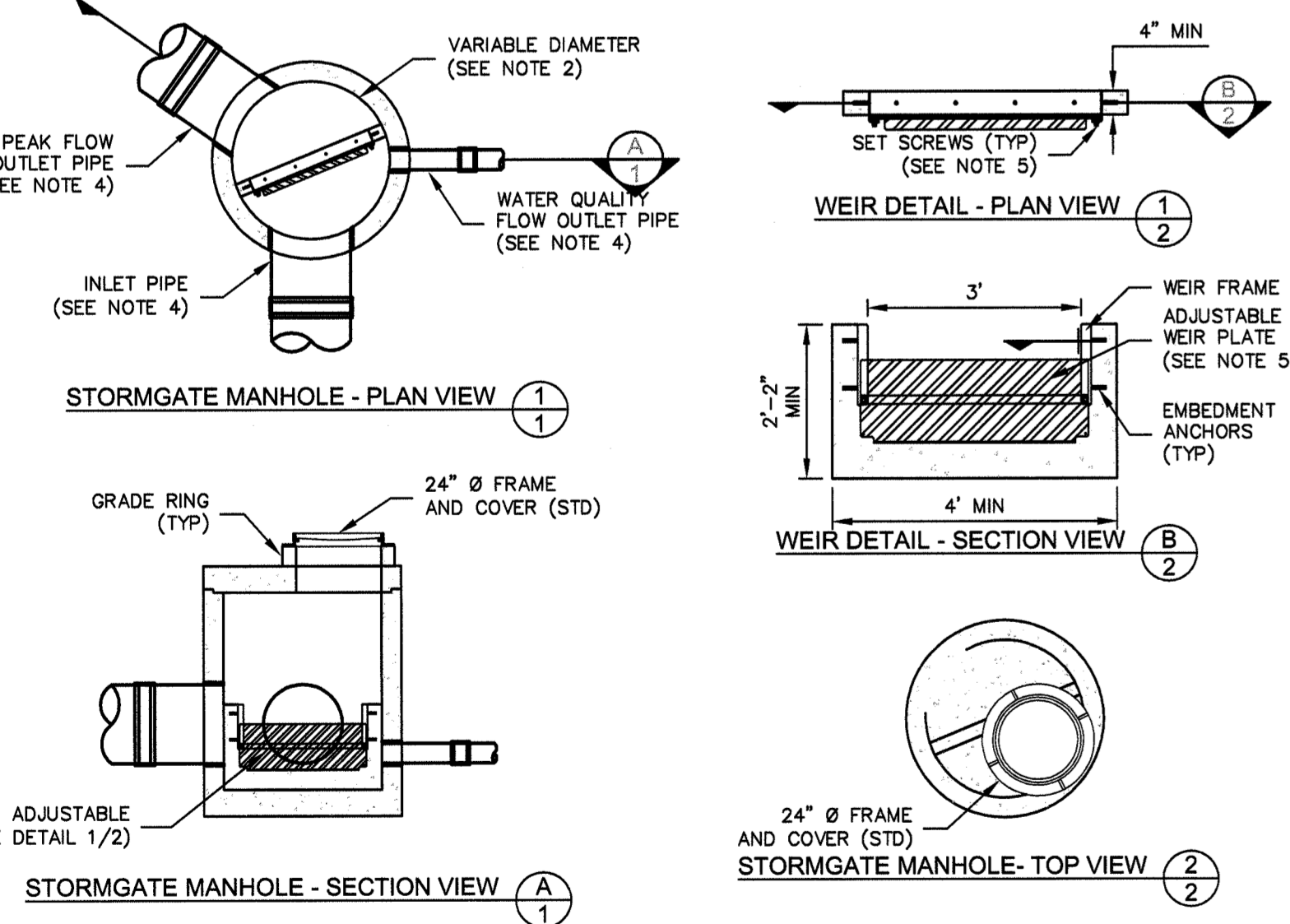
PIPE DIAMETER

DIMENSION	10/12	15	18	24	30	36
A	42	41	49	59.5	68	88
B	14.5	19	22	28	36	43
C	33	34	43	48	63.5	66.5
D	6	6	6	6	6	6

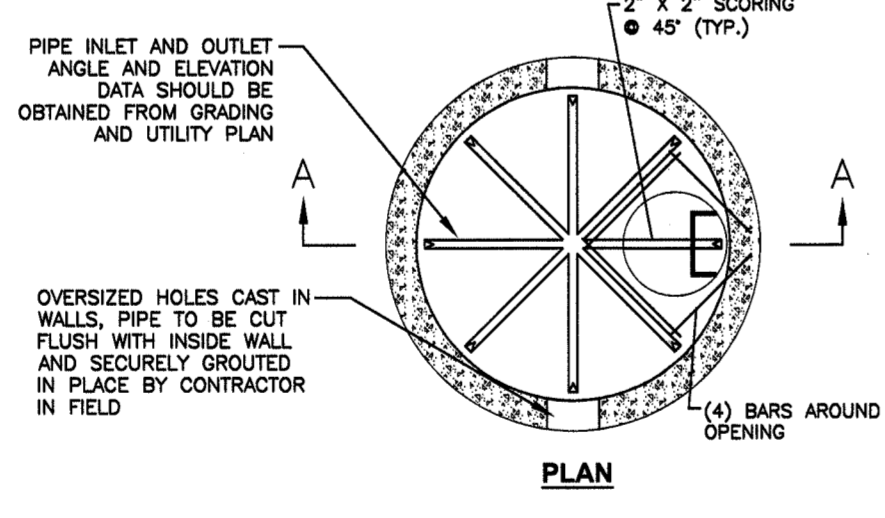
NOTE: ALL MEASUREMENTS IN INCHES



HDPE FLARED END SECTION
NOT TO SCALE

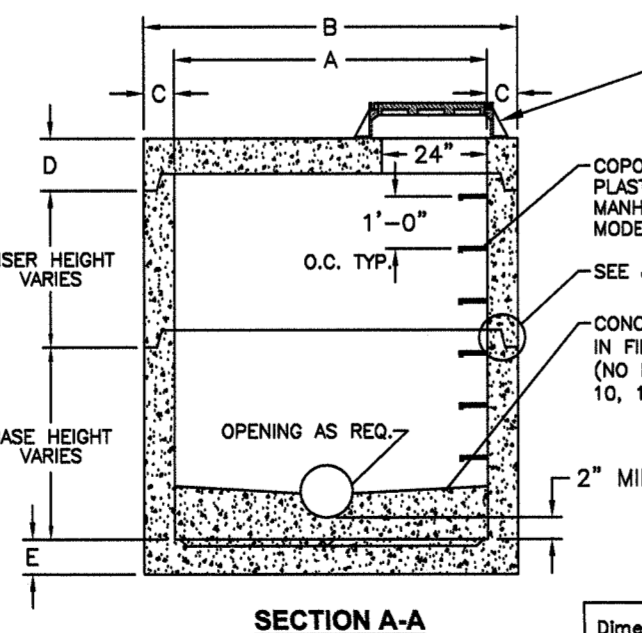


STORMGATE MANHOLE DETAIL
NOT TO SCALE



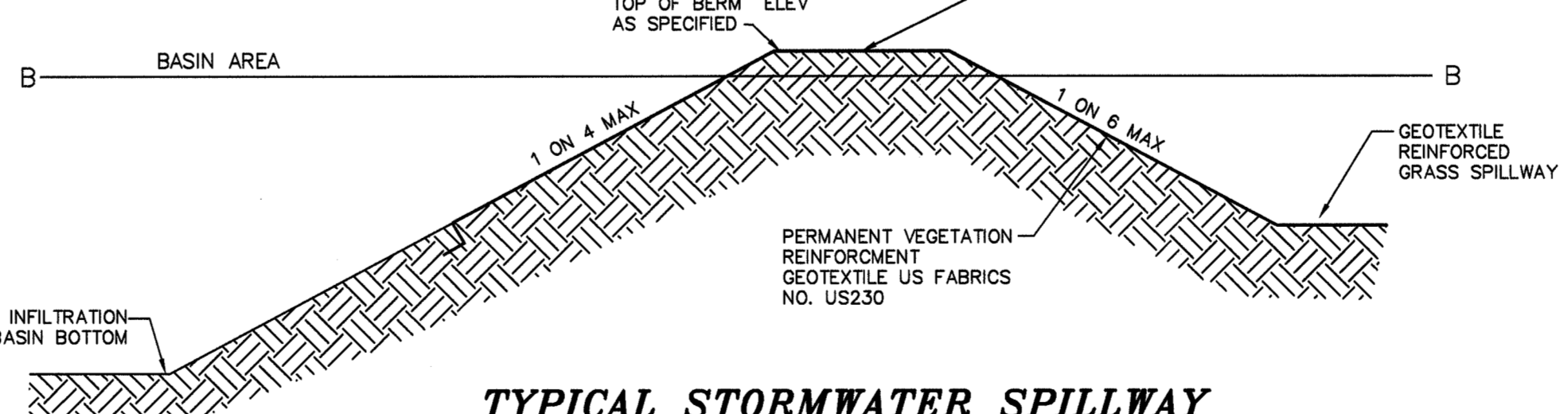
GENERAL NOTES

- STORMGATE BY CONTECH STORMWATER SOLUTIONS; PORTLAND, OR (800) 548-4667; SCARBOROUGH, ME (877) 907-8676; LINTHICUM, MD (866) 740-3316.
- PRECAST MANHOLE TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478. DETAIL DRAWING REFLECTS DESIGN INTENT ONLY. ACTUAL DIMENSIONS AND CONFIGURATION OF STRUCTURE WILL BE SHOWN ON PRODUCTION SHOP DRAWING.
- STRUCTURE AND ACCESS COVERS TO MEET AASHTO H-20 LOAD RATING.
- INLET AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR. PRECAST STORMGATE MANHOLE EQUIPPED WITH EITHER CORED OPENINGS OR KNOCKOUTS AT INLET AND OUTLET LOCATIONS.
- CONTRACTOR TO ADJUST WEIR TO DESIGN ELEVATION SPECIFIED IN DATA TABLE BELOW. DO NOT EXCEED 5.0 FT-LBS TORQUE WHEN TIGHTENING SCREWS ON WEIR FRAME. SEAL WEIR TO FRAME WITH RTV SILICONE SEALANT AFTER FINAL ADJUSTMENT.

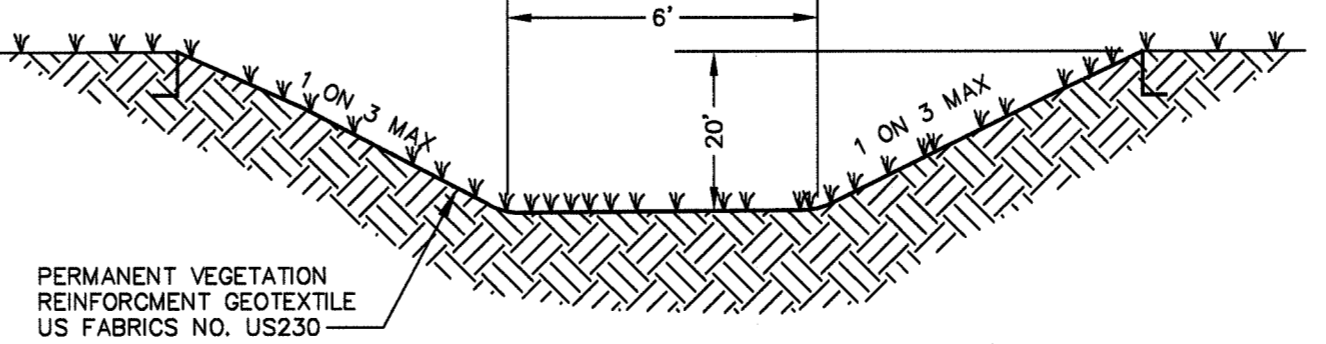


PRE-CAST STORM DRAIN MANHOLE
FOR DIVERSION MANHOLES DMH-4, DMH-10, DMH-11 AND DMH-12 CONSTRUCT MANHOLE WITH 1' SUMP AND A WEEP HOLE.
NOT TO SCALE

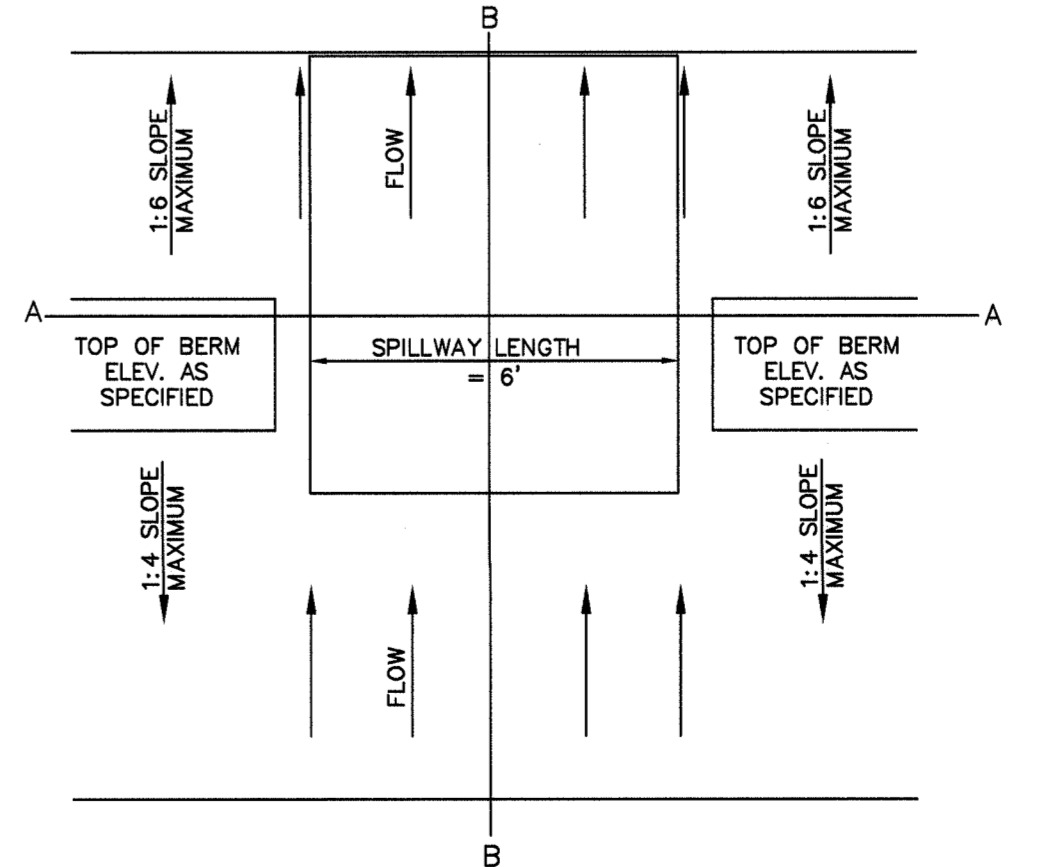
- NOTES:**
- PIPE JOINTS SHALL BE A MINIMUM OF 2' FROM OUTSIDE WALL OF MANHOLE.
 - OPENING FOR PIPE SHALL BE PRE-CAST. CONNECTIONS TO EXISTING MANHOLES SHALL BE MACHINE CORED.
 - MANHOLE COVERS TO BE STAMPED "STORM".
 - PRECAST REINFORCED CONCRETE MANHOLE SHALL BE DESIGNED FOR H20 LIVE LOAD.
 - CONCRETE TO TEST 4000 P.S.I. @ 28 DAYS
 - REINFORCEMENT MEETS A.S.T.M A-615, GRADE 60, A.S.T.M. A-185.
 - MANHOLE MEETS ASTM C-478 SPECIFICATIONS.



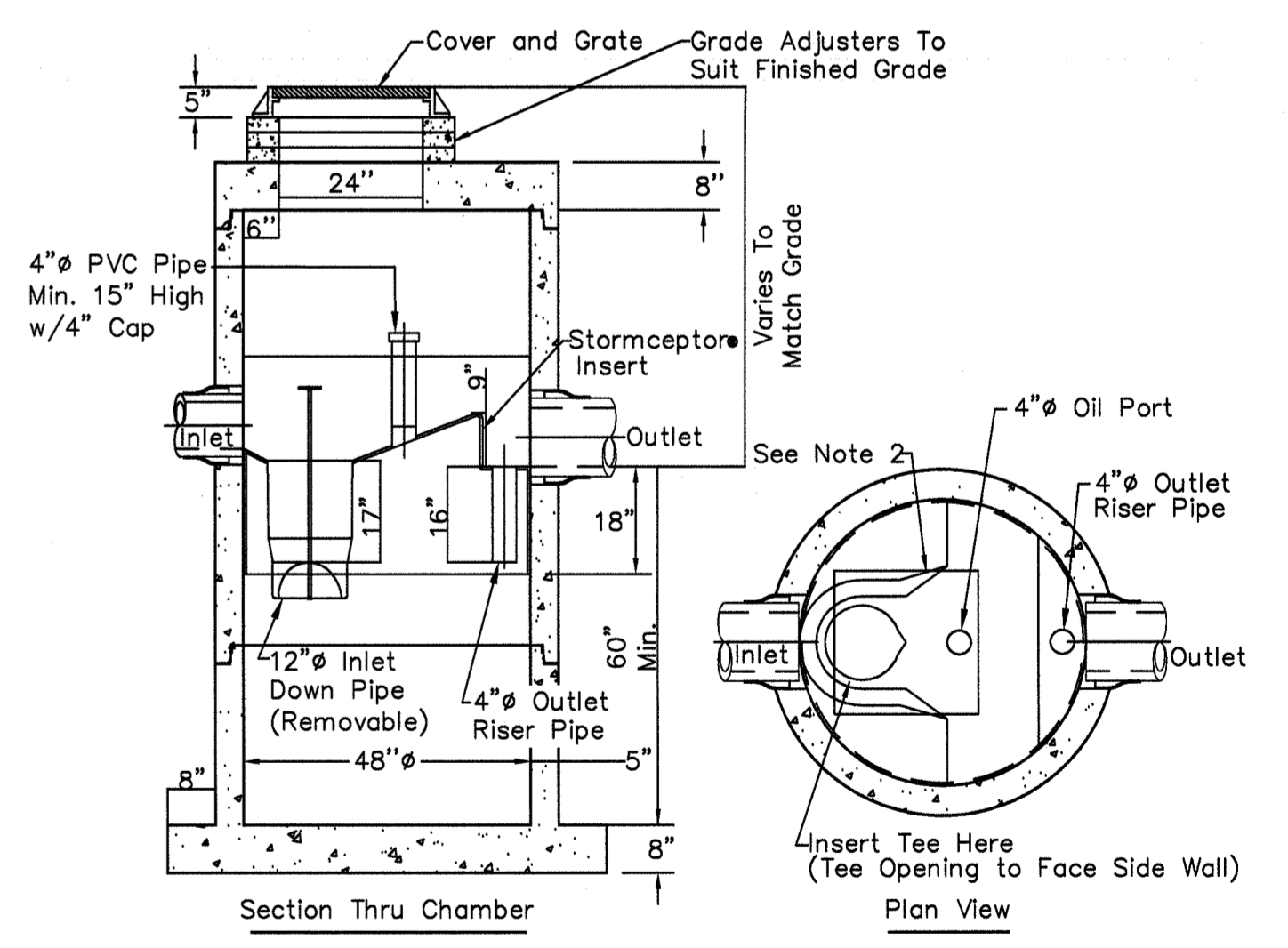
TYPICAL STORMWATER SPILLWAY CROSS-SECTION B-B
NOT TO SCALE



TYPICAL STORMWATER SPILLWAY CROSS-SECTION A-A
NOT TO SCALE



TYPICAL STORMWATER SPILLWAY PLAN VIEW
NOT TO SCALE



- NOTES:**
- The Use Of Flexible Connection is Recommended at the Inlet and Outlet Where Applicable.
 - The Cover Should be Positioned Over the Inlet Drop Pipe and the Oil Port.
 - The Stormceptor System as manufactured by Rinker Materials.

STC 450i PRECAST STORMCEPTOR
NOT TO SCALE

LANC & TULLY
ENGINEERING AND SURVEYING, P.C.
P.O. Box 687, Rt. 207
Goshen, N.Y. 10924
(846) 294-9700

DRAINAGE DETAILS SHEET 1 OF 2
PREPARED FOR
GLENMERE PRESERVE
VILLAGE OF FLORIDA
ORANGE COUNTY, NEW YORK

DATE: OCTOBER 8, 2012
REVISION: NOVEMBER 30, 2012

Drawn By: CDD
Checked By: AS NOTED
Scale: AS NOTED
Tax Map No.: 113-4-2.1.2.2.7.2.16
Drawing No.: A-04-0178-12

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