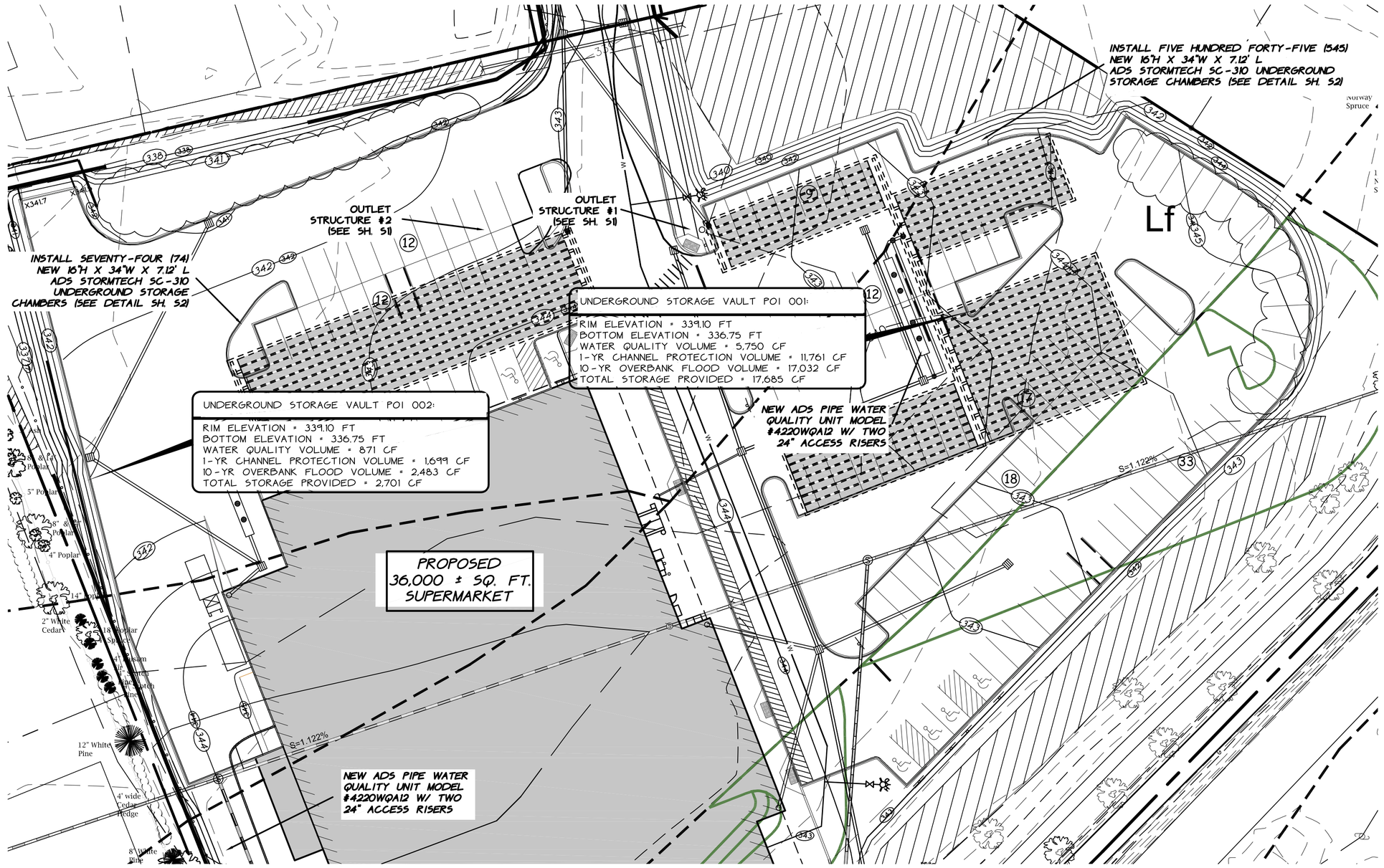
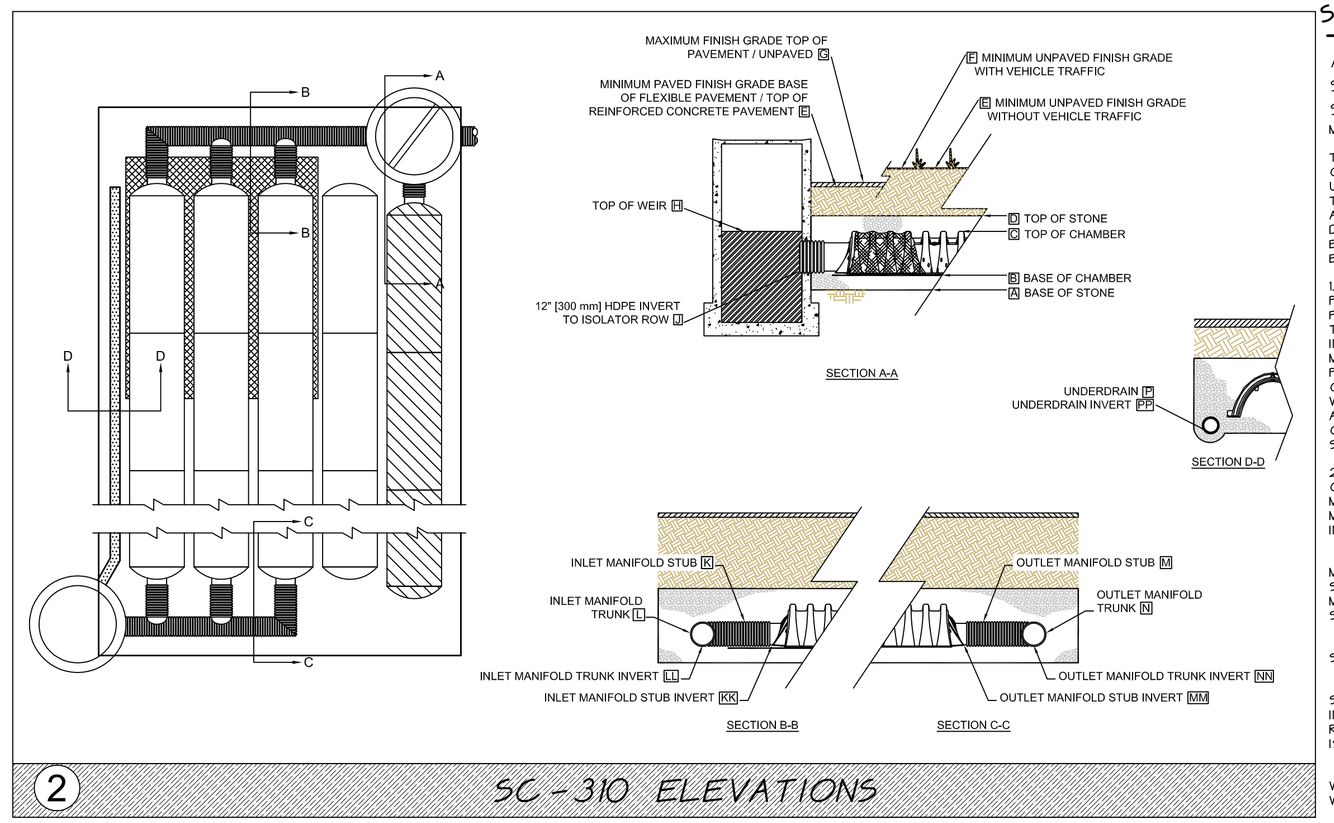



1 PLAN VIEW LAYOUT - 30 SCALE




2 SC-310 ELEVATIONS

## STORM SYSTEM MAINTENANCE

ADS PIPE WATER QUALITY UNIT + STORMTECH UNDERGROUND STORAGE CHAMBERS

MAINTENANCE PLAN

THE PURPOSE OF MAINTAINING A CLEAN AND OBSTRUCTION FREE WATER QUALITY UNIT AND UNDERGROUND STORAGE CHAMBER IS TO ENSURE THE SYSTEM PERFORMS ITS INTENDED FUNCTION. A BUILD UP OF DEBRIS IN EXCESS OF THE DESIGN STORAGE VOLUME COULD REDUCE THE EFFICIENCY OF THE SYSTEM. THE FOLLOWING ELEMENTS FORM THE MINIMUM REQUIREMENTS:

1. THE OWNER (OR REPRESENTATIVE) SHALL PERFORM INSPECTIONS BI-ANNUALLY AND FOLLOWING SIGNIFICANT (LARGE) STORM EVENTS. THE FOLLOWING ITEMS SHALL BE REVIEWED: INSPECT AMOUNT OF FLOATABLE DEBRIS + MEASURE THE SEDIMENT BUILDUP. INSPECT INLET PIPE FOR BLOCKAGE. INSPECT OIL DEPTH IN THE OIL CHAMBER. INSPECT SEDIMENT BUILD UP WITHIN THE ISOLATOR ROW. INSPECT STRUCTURE AND COMPONENTS FOR ANY DAMAGE. ANY OBSERVABLE DEGRADATION OF THE STORM SYSTEM SHALL BE NOTED.

2. THE OWNER (OR REPRESENTATIVE) SHALL COMPLETE REPAIR OF ANY ITEMS, AS REQUIRED TO MAINTAIN OPTIMAL SYSTEM OPERATION. AT A MINIMUM, THE FOLLOWING ITEMS SHALL BE INCLUDED:

A. SEDIMENT ACCUMULATED TO A DEPTH OF MORE THAN 9 INCHES IN THE SEDIMENT CHAMBER SHALL BE REMOVED AND DISPOSED OF IN A MANNER WHICH COMPLIES WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

B. SYSTEM HAS BE CLEANED IN THE EVENT A SPILL OR A FOREIGN SUBSTANCE ENTERS THE UNIT.

C. DURING CLEANING ALL ELEMENTS OF THE SYSTEM SHALL BE INSPECTED FOR DAMAGE INCLUDING THE INLET PIPE, WEIR PLATE, 24" RISERS, SEDIMENT CHAMBER, OIL CHAMBER, + ISOLATOR ROW.

D. FOLLOWING PUMPING AND CLEANING THE WATER QUALITY UNIT SHALL BE REFILLED WITH WATER TO ENSURE IT OPERATES AS DESIGNED.

3. KEEP AND MAINTAIN A SITE MAINTENANCE LOG DETAILING ALL INSPECTIONS, PUMPING + CLEANINGS.

1. ALL DESIGN SPECIFICATIONS FOR STORMTECH SC-310 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL
2. THE INSTALLATION OF STORMTECH SC-310 CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLTION. CALL **1-888-892-2694** OR VISIT **WWW.STORMTECH.COM** TO RECIEVE A COPY OF THE LATEST STORMTECH INSTALLTION INSTRUCTIONS
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

3 SC-310 NOTES

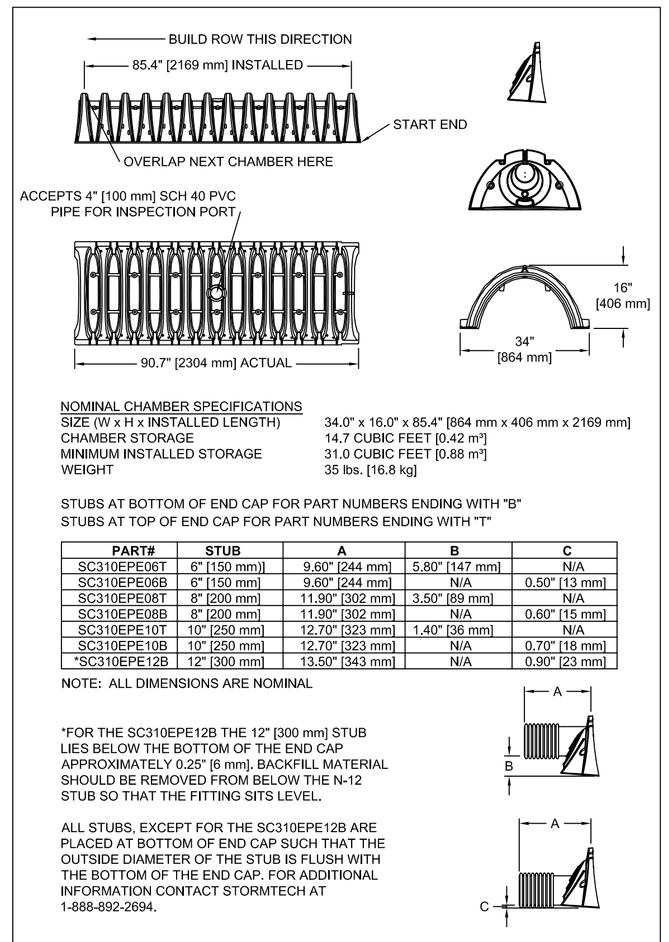
**ACCEPTABLE FILL MATERIALS: SC-310 CHAMBER SYSTEMS**

| MATERIAL LOCATION | DESCRIPTION | AASHTO M43 DESIGNATION[1] | COMPACTION/DENSITY REQUIREMENT |
|---|---|---|---|
| D FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THIS LAYER. | ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. | N/A | PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS. |
| C FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" [457 mm] ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER. | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, < 35% FINES. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER. | 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 | BEGIN COMPACTION AFTER 12" [305 mm] OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" [152 mm] LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs [53 kN]. DYNAMIC FORCE NOT TO EXCEED 20,000 lbs [89 kN]. |
| B EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm] | 3, 357, 4, 467, 5, 56, 57 | NO COMPACTION REQUIRED. |
| A FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm] | 3, 35, 4, 467, 5, 56, 57 | PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY*. |

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".

2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" [229 mm] (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.

4 STORMTECH ACCEPTABLE FILL MATERIALS




NOMINAL CHAMBER SPECIFICATIONS

| | |
|---|---|
| SIZE (W x H x INSTALLED LENGTH) | 34.0" x 16.0" x 85.4" [864 mm x 406 mm x 2169 mm] |
| CHAMBER STORAGE | 14.7 CUBIC FEET [0.42 $m^3$] |
| MINIMUM INSTALLED STORAGE | 31.0 CUBIC FEET [0.88 $m^3$] |
| WEIGHT | 35 lbs. [16.8 kg] |

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

| PART# | STUB | A | B | C |
|---|---|---|---|---|
| SC310EPE06T | 6" [150 mm)] | 9.60" [244 mm] | 5.80" [147 mm] | N/A |
| SC310EPE06B | 6" [150 mm] | 9.60" [244 mm] | N/A | 0.50" [13 mm] |
| SC310EPE08T | 8" [200 mm] | 11.90" [302 mm] | 3.50" [89 mm] | N/A |
| SC310EPE08B | 8" [200 mm] | 11.90" [302 mm] | N/A | 0.60" [15 mm] |
| SC310EPE10T | 10" [250 mm] | 12.70" [323 mm] | 1.40" [36 mm] | N/A |
| SC310EPE10B | 10" [250 mm] | 12.70" [323 mm] | N/A | 0.70" [18 mm] |
| *SC310EPE12B | 12" [300 mm] | 13.50" [343 mm] | N/A | 0.90" [23 mm] |

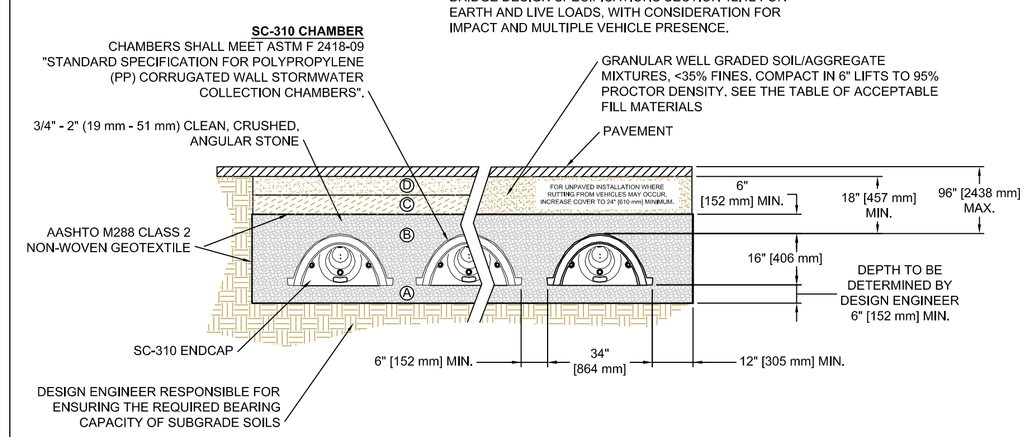
NOTE: ALL DIMENSIONS ARE NOMINAL

*FOR THE SC310EPE12B THE 12" [300 mm] STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" [6 mm]. BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

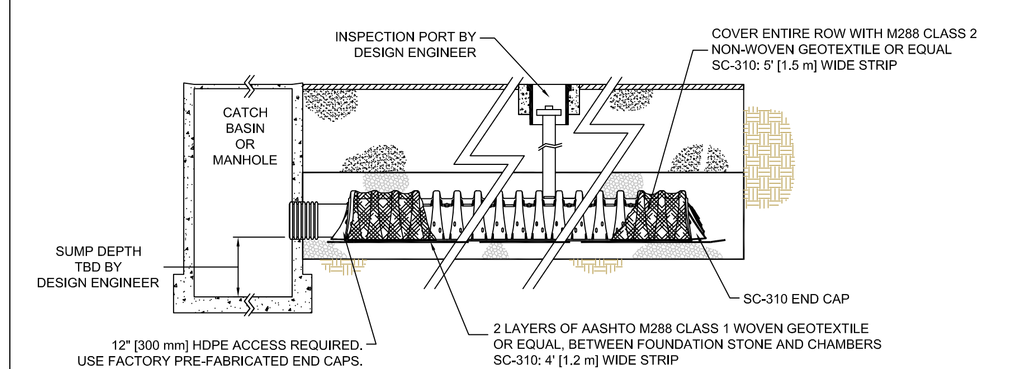
ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

5 SC-310 TECHNICAL SPEC.

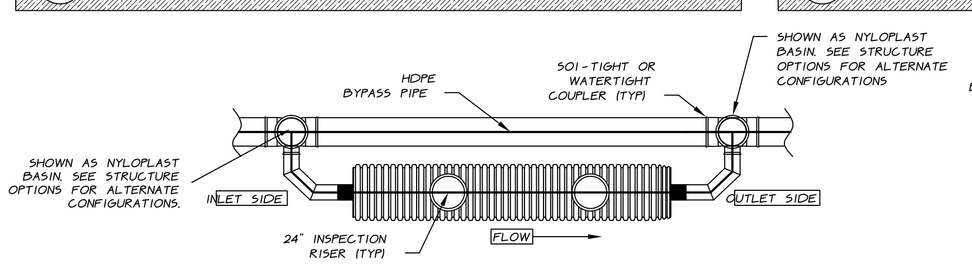
THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS, WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.



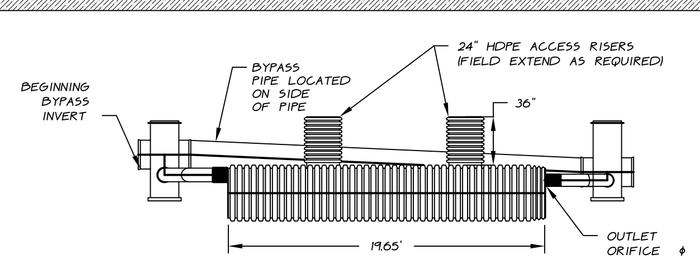

6 SC-310 STANDARD CROSS SECTION




7 SC-310 ISOLATOR ROW DETAIL




PLAN VIEW




PROFILE VIEW

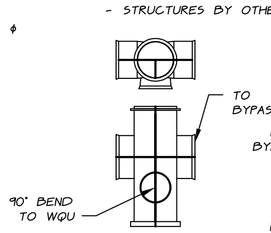
| MODEL # | MAIN PIPE DIA. | SIEVE SIZE | PARTICLE SIZE (CM) | TREATED FLOW RATE (CFS) | INLET ϕ | OUTLET ϕ | OUTLET ORIFICE ϕ | ELEVATION CHANGE* |
|---|---|---|---|---|---|---|---|---|
| 3620WQAXX | 36" | 140 | 0.0106 | 1.5 | 10" | 10" | 7.82" | 11.9" |
| 3620WQBXX | 36" | 200 | 0.0075 | 0.7 | 10" | 10" | 5.35" | 11.9" |

XX DENOTES A BY-PASS SIZE OF 12", 15", 18", 24", 30", 36", 42", 48", OR 60"
XX-00 DENOTES UNITS W/OUT A BY-PASS.
* ELEVATION CHANGE FOR UNITS WITHOUT A BY-PASS IS 2"

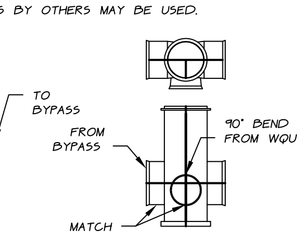
ADS PIPE WATER QUALITY CHAMBER

STRUCTURE OPTIONS

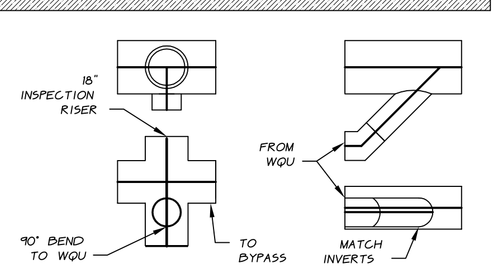
- FITTING DIMENSIONS VARY WITH UNIT DESIGN. DIMENSIONS CAN BE PROVIDED ONCE DESIGN IS EVALUATED.
- COMBINATIONS OF NYLOPLAST BASINS AND FABRICATED FITTINGS ARE AVAILABLE
- STRUCTURES BY OTHERS MAY BE USED.




INLET STRUCTURE NYLOPLAST BASIN




OUTLET STRUCTURE NYLOPLAST BASIN




INLET STRUCTURE FABRICATED SUMP TEE

OUTLET STRUCTURE FABRICATED REDUCING WYE

NOTES:

1. SEE STANDARD DETAILS STD-501 AND STD-502 FOR STORM WATER QUALITY UNIT PRODUCT DETAILS.

2. REFERENCE TECHNICAL NOTE 103 FOR ADDITIONAL DESIGN INFORMATION.

3. ELEVATION CHANGE DENOTES THE ELEVATION DROP FROM INVERT OF BYPASS AT INLET TO INVERT OF BYPASS AT OUTLET.

PAUL J. O'LEARY JR. No. 5477 REGISTERED PROFESSIONAL ENGINEER

| DATE | REVISION | BY |
|---|---|---|
| | | |

SURVEY: OTHERS
DESIGN: DB
DRAWN: BJB
CHECKED: DWB
SCALE: NTS

☐ RECORD DRAWING ■ PRELIMINARY
☐ FINAL ☐ SKETCH/CONCEPT

O'LEARY-BURKE CIVIL ASSOCIATES, PLC
1 CORPORATE DRIVE, SUITE #1
ESSEX JCT., VT
PHONE: 878-9990
FAX: 878-9989
E-MAIL: obca@olearyburke.com

Hannaford Supermarket & Pharmacy
Commerce Street Hinesburg, VT

Stormwater Details

DATE 11-09-10
JOB# 9066
FILE CURRENT
PLAN SHEET # C7