

# STORMTECH PRODUCT SPECIFICATIONS

## 1.0 GENERAL

1.1 STORMTECH CHAMBERS ARE DESIGNED TO CONTROL STORMWATER RUNOFF. AS A SUBSURFACE RETENTION SYSTEM, STORMTECH CHAMBERS RETAIN AND ALLOW EFFECTIVE INFILTRATION OF WATER INTO THE SOIL. AS A SUBSURFACE DETENTION SYSTEM, STORMTECH CHAMBERS DETAIN AND ALLOW FOR THE METERED FLOW OF WATER TO AN OUTFALL.

## 2.0 CHAMBER PARAMETERS

2.1 THE CHAMBER SHALL BE INJECTION MOLDED OF POLYPROPYLENE RESIN TO BE INHERENTLY RESISTANT TO ENVIRONMENTAL STRESS CRACKING (ESCR), AND TO MAINTAIN ADEQUATE STIFFNESS THROUGH HIGHER TEMPERATURES EXPERIENCED DURING INSTALLATION AND SERVICE.

2.2 THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-740 SHALL BE 30.0 INCHES (762 mm) TALL, 51.0 INCHES (1295 mm) WIDE AND 90.7 INCHES (2304 mm) LONG. THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-310 SHALL BE 16.0 INCHES (406 mm) TALL, 34.0 INCHES (864 mm) WIDE AND 90.7 INCHES (2304 mm) LONG. THE INSTALLED LENGTH OF A JOINED CHAMBER SHALL BE 85.4 INCHES (2169 mm).

2.3 THE CHAMBER SHALL HAVE A CONTINUOUSLY CURVED SECTION PROFILE.

2.4 THE CHAMBER SHALL BE OPEN-BOTTOMED.

2.5 THE CHAMBER SHALL INCORPORATE AN OVERLAPPING CORRUGATION JOINT SYSTEM TO ALLOW CHAMBER ROWS OF ALMOST ANY LENGTH TO BE CREATED. THE OVERLAPPING CORRUGATION JOINT SYSTEM SHALL BE EFFECTIVE WHILE ALLOWING A CHAMBER TO BE TRIMMED TO SHORTEN ITS OVERALL LENGTH.

2.6 THE NOMINAL STORAGE VOLUME OF A JOINED STORMTECH SC-740 CHAMBER SHALL BE 74.9 CUBIC FEET (2.1 m<sup>3</sup>) PER CHAMBER WHEN INSTALLED PER STORMTECH'S TYPICAL DETAILS (INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUATES TO 2.2 CUBIC FEET OF STORAGE/SQUARE FOOT (0.7 m<sup>3</sup> OF STORAGE/SQUARE METER) OF BED. THE NOMINAL STORAGE VOLUME OF AN INSTALLED STORMTECH SC-310 CHAMBER SHALL BE 31.0 CUBIC FEET (0.9 m<sup>3</sup>) PER CHAMBER WHEN INSTALLED PER STORMTECH'S TYPICAL DETAILS (INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUATES TO 1.3 CUBIC FEET OF STORAGE/SQUARE FOOT (0.4 m<sup>3</sup> OF STORAGE/SQUARE METER) OF BED.

2.7 THE CHAMBER SHALL HAVE FORTY-EIGHT ORIFICES PENETRATING THE SIDEWALLS TO ALLOW FOR LATERAL CONVEYANCE OF WATER.

2.8 THE CHAMBER SHALL HAVE TWO ORIFICES NEAR ITS TOP TO ALLOW FOR EQUALIZATION OF AIR PRESSURE BETWEEN ITS INTERIOR AND EXTERIOR.

2.9 THE CHAMBER SHALL HAVE BOTH OF ITS ENDS OPEN TO ALLOW FOR UNIMPEDED HYDRAULIC FLOWS AND VISUAL INSPECTIONS DOWN A ROW'S ENTIRE LENGTH.

2.10 THE CHAMBER SHALL HAVE 14 CORRUGATIONS.

2.11 THE CHAMBER SHALL HAVE A CIRCULAR, INDENTED, FLAT SURFACE ON THE TOP OF THE CHAMBER FOR AN OPTIONAL 4-INCH (100 mm) INSPECTION PORT.

2.12 THE CHAMBER SHALL BE ANALYZED AND DESIGNED USING AASHTO METHODS FOR THERMOPLASTIC CULVERTS CONTAINED IN THE LRFD BRIDGE DESIGN SPECIFICATIONS, 2ND EDITION, INCLUDING INTERIM SPECIFICATIONS THROUGH 2001. DESIGN LIVE LOAD SHALL BE THE AASHTO HS20 TRUCK. DESIGN SHALL CONSIDER EARTH AND LIVE LOADS AS APPROPRIATE FOR THE MINIMUM TO MAXIMUM SPECIFIED DEPTH OF FILL.

2.13 THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY.

## 3.0 END CAP PARAMETERS

3.1 END CAPS WITH PREFABRICATED PIPE CONNECTIONS SHALL BE INJECTION MOLDED FROM POLYETHYLENE RESIN.

3.2 THE END CAP SHALL BE DESIGNED TO FIT INTO ANY CORRUGATION OF A CHAMBER, WHICH ALLOWS: CAPPING A CHAMBER THAT HAS ITS LENGTH TRIMMED; SEGMENTING ROWS INTO STORAGE BASINS OF VARIOUS LENGTHS.

3.3 THE END CAP SHALL HAVE SAW GUIDES TO ALLOW EASY CUTTING FOR VARIOUS DIAMETERS OF PIPE THAT MAY BE USED TO INLET THE SYSTEM.

3.4 THE END CAP SHALL HAVE EXCESS STRUCTURAL ADEQUACIES TO ALLOW CUTTING AN ORIFICE OF ANY SIZE AT ANY INVERT ELEVATION.

3.5 THE PRIMARY FACE OF AN END CAP SHALL BE CURVED OUTWARD TO RESIST HORIZONTAL LOADS GENERATED NEAR THE EDGES OF BEDS.

3.6 THE END CAP SHALL BE MANUFACTURED IN AN ISO 9001:2000 CERTIFIED FACILITY.

### STORMTECH STANDARD DETAIL DISCLAIMER

STORMTECH STANDARD DETAILS DEMONSTRATE RECOMMENDATIONS FOR INSTALLATION AND/OR STANDARD DIMENSIONS OF STORMTECH PRODUCTS. STORMTECH DETAILS DO NOT SUPERSEDE ANY STATE OR LOCAL REGULATORY SPECIFICATIONS. IT IS THE RESPONSIBILITY OF THE CONSULTING ENGINEER TO ENSURE COMPLIANCE WITH ALL REGULATORY SPECIFICATIONS. STORMTECH HAS NOT AUTHORIZED, AND IS NOT RESPONSIBLE FOR ANY ALTERATIONS BY OTHERS TO STORMTECH STANDARD DETAILS.



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SCALE: NTS  
DATE: 11-7-08  
DRAWN BY: JLB  
CHECKED:

