STORMKEEPER

1.0 General

1.1 The StormKeeper chambers are designed to control storm water runoff. The StormKeeper chambers function as a subsurface retention and detention structure. As a retention structure the StormKeeper chambers store water allowing infiltration of excess runoff from storm events into the soil. As a detention structure the StormKeeper chambers detain storm water and provide controlled release of the storm water into the receiving waters.

2.0 StormKeeper Chambers

2.1 The StormKeeper chambers shall be injection molded and constructed of polypropylene resin resistant to environmental stress cracking (ESCR) and with ability to maintain adequate stiffness through the construction and service life of the chamber

2.2 The nominal dimensions of the StormKeeper SK75 chamber shall be 29.7 inches tall, 51.0 inches wide, and 87.1 inches long.

2.3 The chamber shall be curved to form an arch and shall be continuously curved.

2.4 The chamber shall be open bottomed.

2.5 Joining of chambers shall be accomplished by overlapping the joining rib of longitudinally adjacent chambers allowing long lengths of chambers.

2.6 The nominal storage volume of a StormKeeper SK75 chamber shall be 46.4 cubic feet per chamber when installed in accordance with the manufacturer's recommendations. Volume including stone at 40% porosity shall be 74.9 cubic feet per chamber. Storage volume per foot including stone at 40% porosity shall be 10.91 cubic feet per foot.

2.7 The chamber shall have vent locations near the top to allow for the escape of air during filling so that the full chamber can be used for the storage of water. Vent locations shall also allow the installation of an inspection port.

2.8 The chamber shall have both ends open to allow for unobstructed flow of water throughout joined chambers. This will also allow visual inspection for the entire length of the chamber row.

2.9 The chamber shall have 14 corrugations.

2.10 The chamber shall have lifting handles to facilitate the unloading, and installation of the chamebers.

2.11 The chamber shall be designed utilizing AASHTO methods for Thermoplastic Culverts in accordance with the LRFD Bridge Design Specifications. Design Live load shall be an AASHTO H 20 tuck. The design shall consider dead and live loads for the minimum to maximum depth of fill specified.

2.12 The chamber shall be manufactured in an ISO 9001 certified facility.

2.13 The chamber shall meet or exceed the requirements of ASTM F2418.

3.0 End Caps

3.1 The end cap shall be injection molded of Polypropylene resin meeting the same requirements as the chamber.

3.2 The end cap shall be designed to fit into any corrugation along the length of the chamber providing the ability to trim a chamber and cap it at any desired length along with segmenting rows into chambers of varying lengths.

3.3 The end cap shall have guides to allow easy cutting of various diameters of pipe that may be used to inlet water into the system. The guides will be integrated as part of the end cap manufacturing process.

3.4 The end cap shall have adequate structural capacity to allow the end cap inlets to be cut at any invert elevation.

3.5 The face of the endcap shall be curved.

3.6 The end cap shall be manufactured at an ISO 9001 certified facility.

3.7 The end cap shall meet or exceed the requirements of ASTM F2418.