48" HP Manhole Structure Specification

GENERAL
This specification describes the 48" HP Manhole for use in underground storm water applications as indicated on the contract drawings and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer.

MATERIALS
The 48" HP manhole bodies shall be made from an impact modified copolymer polypropylene meeting the material requirements of ASTM F2764. The eccentric cone reducer shall be manufactured from polyethylene material meeting ASTM D3350 cell class 213320C. The joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals used for the polyethylene cone and pipe connections to the structure shall conform to ASTM F477.

The covers, grates and frames furnished for all surface drainage inlets shall be ductile iron. Ductile iron castings used shall conform to ASTM A536 grade 70-50-05 for ductile iron and shall be painted black.

INSTALLATION
Excavate HP manhole location to the depth required and provide a stone base. Stone base shall be a minimum of 6", however a thicker base may be required. Set HP Manhole in place and level the structure. Connect storm pipe into HP manhole. Re-check HP Manhole depth, level and position. The specified 48" HP Manhole shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 material as defined in ASTM D2321. Bedding and backfill for the HP Manholes shall be well placed and compacted uniformly in accordance with ASTM D2321. No brick, stone or concrete block will be required to set the grate to final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The frame and grate/cover must be fully supported by the concrete slab. The collar must bear on the surrounding stone and soil backfill and not on the structure. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such a migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.