SECTION 444239 - GRIT CHAMBER TANK

Tthis section covers means for grit removal and grit storage ahead of underground oil/water separators receiving drainage from truck washing facilities. Sshow complete details of the chamber including dimensions and installation on the drawings.

1. GENERAL
   * + 1. RELATED WORK SPECIFIED ELSEWHERE
          1. Earthwork: Section 310000.
          2. Plastic Sewer Pipe: Section 333104.
       2. SUBMITTALS
          1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
          2. Manufacturer’s installation instructions shall be provided along with product data.
          3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
          4. Shop Drawings: Tank dimensions, construction details, and pipe connections.
          5. Product Data: Catalog cuts with dimensions, specifications, and installation instructions.
2. PRODUCTS
   * + 1. GRIT CHAMBER
          1. Type: Heavy duty pre-cast concrete.
          2. Capacity: 1,000 gallons.
          3. Construction: Designed in accordance with “Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures”, ASTM C890, published by the American Society for Testing and Materials.

Concrete: Air content 6 percent by volume, with an allowable tolerance of plus or minus 1.5 percent; minimum compressive strength, 4,000 psi after 28 days.

Steel Reinforcing: ASTM A615 - A497.

Loading: AASHTO H20 with 30 percent impact and 130 lb/cu. ft. equivalent soil pressure.

Access Extensions: 2-foot inside diameter; 5-inch thick wall; 0-ring or butyl joint sealant.

* + - * 1. Pipe Connections: Lockjoint, Kor-N-Seal, Press Wedge II, or Link-Seal flexible connectors.

Minimum 3-inch difference in elevation between the inverts of the inlet and outlet piping.

Ductile or cast iron inlet sanitary tee discharging to the tank 15 inches below the liquid surface.

Outlet pipe drawing from the liquid surface.

* + - 1. ACCESS FRAMES AND COVERS
         1. Units shall meet ASSHTO H20 wheel loading requirements. Manufacture, workmanship and certified proof-load tests shall conform to ASSHTO M306-89, Standard Specification for Drainage Structure Castings.
         2. Material: Cast iron; ASTM A48, Class 30B or 35B.
         3. Frames:

Round, 9 inches high with a 21-inch clear opening.

Minimum 4-3/4-inch wide flange with integral stiffeners.

Minimum 9/16-inch wall thickness above the cover seat.

Minimum weight: 162 lbs.

* + - * 1. Covers:

Round, 1-3/4 inches thick at the perimeter bearing surface.

Minimum 7/8-inch wide perimeter bearing surface.

Minimum plate thickness 1-1/8 inches.

Top surface checkered and provided with suitable lifting notches.

Minimum weight: 125 lbs.

* + - * 1. Acceptable Frames and Covers: Pattern R-1713 with platen cover by Neenah Foundry Company; Pattern 1004P with platen cover by Syracuse Castings Sales Corp.
      1. MISCELLANEOUS MATERIALS
         1. Galvanized Pipe (for vents): Schedule 40.
         2. “Resist-All” sealant by Sealing Systems, Inc., 23230 W. Thomess Blvd., Loretto, MN 55357, (612) 478-2057.

1. EXECUTION
   * + 1. INSTALLATION
          1. Coat interior of tank and interior of access extensions with one heavy coat of sealant.
          2. Install the tank in accordance with “Installation of Underground Precast Concrete Utility Structures”, ASTM C891, and the manufacturer’s printed installation instructions.
          3. Install access frames and covers flush with finish grade. Set frames in full bed of mortar.

END OF SECTION 444239