SECTION 333600

UTILITY SEPTIC TANKS

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***NOTE TO SPECIFIER***

*Use this Specification Section for Mail Processing Facilities.*

***This is a Type 1 Specification with completely editable text; therefore, any portion of the text can be modified by the A/E preparing the Solicitation Package to suit the project.***

*For Design/Build projects, do not delete the Notes to Specifier in this Section so that they may be available to Design/Build entity when preparing the Construction Documents.*

*For the Design/Build entity, this specification is intended as a guide for the Architect/Engineer preparing the Construction Documents.*

*The MPF specifications may also be used for Design/Bid/Build projects. In either case, it is the responsibility of the design professional to edit the Specifications Sections as appropriate for the project.*

*Text shown in brackets must be modified as needed for project specific requirements.* *See the “Using the USPS Guide Specifications” document in Folder C for more information.*

*The last date that USPS revised this standard specification section occurs in two places, at the end of this section and in the Table of Contents. If the date in this section matches the date in the Table of Contents, then you are using the latest version. Do not delete or revise the “last revised” date at the end of the section during the development of the Project Manual.*

*The footer in this section should be edited to replace the text, “USPS MPF SPECIFICATION” with the project name, and the blank date in the center should be replaced with the submission date, for interim design reviews, or the issue date of the completed Project Manual.*

***Use this section where Septic Tank Systems are part of the Work. Before editing this Section, obtain the "Report of Subsurface Investigation" prepared by the Geotechnical Engineer. Read the report and incorporate the recommendations included in the report into this Section.***

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1. GENERAL
   1. SUMMARY
      1. Section Includes:
         1. Septic tank.
         2. Distribution box.
         3. Filter drainage field system.
      2. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other Documents.
   2. SUBMITTALS
      1. Section 013300 - Submittal Procedures: Procedures for submittals.
         1. Product Data: Provide data on tank accessories.
         2. Shop Drawings: Indicate tank size and configuration; plan, location and inverts of filter field; inverts of connecting piping.
         3. Assurance/Control Submittals:
            1. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
            2. Qualification Documentation: Submit documentation of experience indicating compliance with specified qualification requirements.
            3. Manufacturer's Instructions: Indicate special procedures for septic tank installation.
      2. Section 017704 - Closeout Procedures and Training: Procedures for closeout submittals.
         1. Project Record Documents: Accurately record the following:
         2. Actual locations and inverts of buried pipe, components, and connections.
   3. QUALITY ASSURANCE
      1. Qualifications:
         1. Manufacturer: Company specializing in manufacturing Products specified with minimum 5 years documented experience.
         2. Installer: Company specializing in performing the Work of this Section with minimum 5 years documented experience.
2. PRODUCTS
   1. MATERIALS
      1. Septic Tank: Reinforced precast concrete construction, 4,000 psi 28 day minimum strength, concrete partitioned chambers, concrete lid with lift rings, vent, inlet inspection hole, inlet turned down minimum 12 inches below effluent level.
         1. Tank Capacity: Indicated on Drawings.
      2. Distribution Box: Reinforced concrete, single inlet, two outlets, gate, removable cover with lift ring.
   2. CONNECTING PIPE MATERIALS
      1. Vitrified Clay Pipe: ASTM C700 Standard strength, bell and spigot joint with seal; nominal inside diameter indicated on Drawings.
      2. Fittings: Same material as pipe, tee bends, elbows, clean-outs, reducers, ends to suit pipe joint.
      3. Pipe Joint Cover: Geotextile fabric.
   3. FILTER FIELD PIPE MATERIALS
      1. Vitrified Clay Pipe: ASTM C700, Standard strength, plain end joint; nominal inside diameter indicated on Drawings.

* + 1. Use perforated pipe at filter field system; unperforated through sleeves and at junction with distribution box.
  1. BEDDING MATERIALS
     1. Aggregate Bedding Material: Fill as specified in Section 312000.
  2. FILTER AGGREGATE
     1. Filter Aggregate Materials: Fill as specified in Section 312000.
  3. ACCESSORIES
     1. Geotextile Fabric: Non-woven fabric, polypropylene.

1. EXECUTION
   1. PREPARATION
      1. Ream pipe ends and remove burrs.
      2. Remove scale and dirt from components before assembly.
      3. Establish invert elevations for all components in the system.
      4. Hand trim excavation to suit septic tank, distribution box and field tile arrangement. Remove stones, roots or other obstructions.
   2. TANK AND TANK BEDDING
      1. Excavate in accordance with Section 312300 for work of this section. Hand trim excavation for accurate placement of tank to elevations indicated.
      2. Place bedding material level in one continuous layer not exceeding 8 inches compacted depth, compact to 95 percent.
      3. Backfill around sides of tank, tamp in place and compact to 95 percent.
      4. Maintain optimum moisture content of bedding material to attain required compaction density.
      5. Install septic tank and distribution box and related components on bedding in accordance with manufacturer's instructions. Position components to permit access to inspection ports.
   3. CONNECTING PIPING
      1. Install vitrified clay pipe in accordance with ASTM C12.
      2. Connect outlet between building sanitary piping and septic tank, between septic tank and distribution box, between distribution box and filter field header [with Type [\_\_\_\_] pipe and fittings].
      3. Place pipe and fittings on clean excavated subsoil.
      4. Slope piping to each successive component, minimum of [1:50.] [\_\_\_\_\_\_\_\_.]
      5. Cover pipe with aggregate, sides and top. Place geotextile fabric over cover prior to backfilling.
      6. Coordinate the work with connections to building sanitary sewer piping outlet.
   4. INSTALLATION - FILTER FIELD
      1. Install vitrified clay pipe in accordance with ASTM C12.
      2. Place field pipe header [at constant elevation] [sloping down from header inlet], [1:100.] [\_\_\_\_\_\_\_\_.]
      3. Place aggregate bed [18] [\_\_\_\_] inch thick, tamp compact firm. Establish slope of bed to suit established invert elevations.
      4. Place pipe sloping away from header minimum of [1:200] [\_\_\_\_\_\_\_\_] [, with perforations facing down].
      5. Wrap pipe joints with paper, cover with aggregate, sides and top. Place geotextile fabric over cover prior to backfilling.
      6. Cover entire field with aggregate [12] [\_\_\_\_] inch, lightly compact. Level prior to placement of subsoil cover as specified in Section 312000.

END OF SECTION

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