

SECTION 02720 – GRAVITY SEWERS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SECTION INCLUDES:

- A. Work shall consist of furnishing and installing new gravity sewer lines and cleanouts, and all associated work including trenching, backfilling, and compaction.
- B. Make minor field adjustments required due to existing site conditions, obstructions, and other revisions that are a result of project construction and not noted in the plans.
- C. Provide all labor, equipment, materials, and transportation necessary to complete new sewer lines, as indicated on the drawings and as herein specified.
- D. In addition, specific Sections of the “HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE, 2005” and its amendments, hereinafter referred to as the HAWAII STANDARD SPECIFICATIONS, with certain modifications as specified, are hereby incorporated into and made part of these specifications by reference and apply to all work performed under this section. Paragraphs concerning Measurement and Payment in the standards are not applicable to this project. The Contractor shall keep a copy of this standard at the jobsite.

1.03 SUBMITTALS:

- A. As-built drawings: Prepare and submit as-built drawings of the installation as specified in the General Conditions.
- B. Certificates: Before installation, submit to the Architect affidavits from the manufacturers or suppliers of pipe, and pipe fittings proposed to be furnished and installed under this section certifying that such materials delivered to the project conform to the requirements of these specifications.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Materials for gravity sewers shall be in accordance with the below-listed sections of the HAWAII STANDARD SPECIFICATIONS and the "STANDARD DETAILS FOR PUBLIC WORKS" dated September 1984 and its amendments, except as in the plans and/or specifications herewith. (Paragraph concerning Measurements and Payments in the sections are not applicable to this project).
1. Bed Course Material.....Section 703.16
 2. Trench Backfill Material.....Section 703.21
 3. Vitrified Clay Pipe for Sewer System.....Section 706.08
 4. PVC Pipe for Sewer System.....Section 706.09
- B. Warning and Identification Tape: Warning and identification tape shall be polyethylene plastic tape, acid and alkali resistant, approximately 3" wide, minimum 0.003" thick, with a strength of 1500 psi length wise and 1250 psi crosswise, maximum elongation of 350%, green in color for sewer lines with warning and identification of service imprinted in bold black lettering continuously over the entire length of the tape. Warning and identification to read "CAUTION, BURIED SEWER LINE" or similar wording. The tape color and printing shall be permanent and unaffected by any moisture.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Location of Sewer Lines
1. The Contractor shall be responsible for precisely laying out the sewer line shown on the drawing.
 2. Prior to the actual work of installing the sewer line, the Contractor shall tone all areas to be excavated to locate existing utilities as specified in the General Conditions. The Contractor shall excavate and expose all utility facilities which will be crossed by the new sewer line and verify their elevations with respect to the new sewer line grades. Elevations of inverts of new sewer lines to be connected to existing sewer lines shall be verified at their points of connection under this requirement.
 3. Should the elevation of any existing utility show a possible discrepancy which may affect the alignment and grade of the new utility, the Contractor shall immediately notify the Consultant of his findings and shall not proceed with the utility construction until authorized to do so by the Consultant.

4. In performing all work, the contractor shall exercise caution as necessary to avoid damage to, and impairment in the use of any existing utility line. Any damage to existing lines resulting from the Contractor's operations shall be immediately repaired and restored as approved by the Consultant at the Contractor's expense.
- B. Installation: Installation of gravity sewer systems shall be governed by the following sections of the HAWAII STANDARD SPECIFICATIONS and the "STANDARD DETAILS FOR PUBLIC WORKS" dated September 1984 and its amendments, except as shown in the plans and/or specifications herewith. (Paragraph concerning Measurements and Payments in the sections are not applicable to this project).
1. Trench Excavation and Backfill.....Section 206
 2. Sewer Systems.....Section 625
- C. Warning and Identification Tape: Warning and identification tape shall be buried directly above the center line of the sewer line, approximately 12" below finished grade. When the utility line is under pavements and slabs, the tape shall be buried approximately 6" below the top of the subgrade.

3.02 FINAL INSPECTION:

At the time of final inspection of the work performed under this contract, the sewer line covered by this section shall be complete in every respect and operating as designed. All surplus materials of every character resulting from the work of this section shall have been removed. Sewer lines shall be free from sand, silt or other obstructions. Any defects discovered in the sewer line subsequent to this inspection shall be corrected prior to the final inspection.

END OF SECTION