

Section 02508

EXTRA STRENGTH CLAY PIPE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Extra strength vitrified clay pipe for construction of sanitary sewers by direct burial method.
- B. Vitrified clay pipe for construction of sanitary sewers by jacking and micro-tunneling method.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. No separate payment will be made for extra strength vitrified clay pipe under this section. Include cost as specified in following sections:
 - a. Section 02441 - Micro-tunneling and Pipe-jacked Tunnels
 - b. Section 02531 - Gravity Sanitary Sewers.
 - 2. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If Contract is Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASTM C 12 - Standard Practice for Installing Vitrified Clay Pipe Lines.
- B. ASTM C 301 - Standard Test Methods for Vitrified Clay Pipe.
- C. ASTM C 425 - Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings.
- D. ASTM C 700 - Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated.
- E. ASTM C 828 - Standard Test Method for Low-Pressure Air Test of Vitrified Clay Pipe Lines.

- F. ASTM C 1091 - Standard Test Method for Hydrostatic Infiltration and Exfiltration Testing of Vitrified Clay Pipe Lines.
- G. ASTM C 1208 - Standard Specification for Vitrified Clay Pipe and Joints for Use in Micro-tunneling, Sliplining, Pipe Bursting, and Tunnels.
- H. ASTM D 1784 - Standard Specification for Rigid Poly (Vinyl Chloride) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
- I. National Clay Pipe Institute (NCPI) Clay Pipe Engineering Manual.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit complete product data for pipe, fittings, gaskets and couplings for approval. Indicate conformance to appropriate reference standards.
- C. Submit certificates by independent testing laboratory, employed by manufacturer, that clay pipes meet applicable standards when tested in accordance with ASTM C 301.

PART 2 PRODUCTS

2.01 VITRIFIED CLAY PIPE

- A. Vitrified clay pipe for direct burial shall conform to ASTM C 700 requirements for extra strength clay pipe.
- B. For Micro-tunneling, sliplining, pipe bursting, and tunnels, conform to requirements of ASTM C 1208.
- C. Approved manufacturers of vitrified clay pipe are:
 - 1. Mission Clay Products Corporation
 - 2. Dickey Company
 - 3. Denlock
 - 4. Manufacturers of products listed in Section 01630 - Product Options and Substitutions.

2.02 JOINTS

- A. Joints for extra strength vitrified clay shall conform to ASTM C 425.

1. For clay pipe 21 inches in diameter and larger, conform to requirements for compression joints for bell-and-spigot pipe.
2. For clay pipe 18 inches in diameter and smaller, conform to requirements for compression couplings for plain-end pipe.

B. Joints for jacking, sliplining, and micro-tunneling pipe shall conform to ASTM C 1208.

2.03 GASKETS

- A. When no contaminant is identified, furnish rubber or polyurethane elastomer gasket material conforming to standards listed above.
- B. Pipe to be installed in potentially contaminated areas, especially where free product is found near elevation of proposed sewer, shall have following gasket material for noted contaminants:

CONTAMINANT	GASKET MATERIAL REQUIRED
Petroleum (diesel, gasoline)	Nitrile Rubber
Other contaminants	As recommended by pipe manufacturer

2.04 COMPRESSION COUPLINGS

- A. The PVC collar material for compression couplings of plain-end pipe shall conform to requirements of ASTM D 1784, Class 12454-B.
- B. Couplings for micro-tunneling and other pipe jacking methods shall be made with Type 316 stainless steel sleeve couplings that utilize elastomeric sealing gaskets as sole means to maintain joint watertightness. Joints shall have same outside diameter as pipe so when pipes are assembled, joints are flush with pipe outside surface.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Conform to installation requirements of Section 02441 - Micro-tunneling and Pipe Jacked Tunnels and Section 02531 - Gravity Sanitary Sewers.
- B. Install pipe in accordance with ASTM C 12, NCPI Clay Pipe Engineering Manual, and manufacturer's recommendations.

3.02 ACCEPTANCE TESTING

- A. Perform acceptance testing in accordance with Section 02533 - Acceptance Testing for Sanitary Sewer, and ASTM C 1091. Do not use procedures from ASTM C 828 unless authorized by City Engineer.

3.03 FIELD QUALITY ASSURANCE

- A. The City may run tests on field samples following applicable ASTM standards at independent laboratory to verify required physical properties and characteristics of supplied materials. Provide product samples as requested by City Engineer.

END OF SECTION