

SECTION 635 - **BLANK**

**ASBESTOS-CEMENT PIPE**

DESCRIPTION

~~635.01.01 GENERAL: This work shall consist of furnishing and installing asbestos cement pipe for culverts, sewers, storm drains, and conduits shown on the plans or directed by the Engineer in accordance with the provisions specified in these Specifications and the Special Provisions.~~

~~Asbestos cement pipe shall be of the class shown on the plans, as specified in these specifications and as designated in the contract item.~~

MATERIALS

~~635.02.01 GENERAL: Asbestos cement pipe culvert shall conform to the specifications of ASTM Designation C 428, Type II, and these specifications.~~

~~The classes of pipe specified in Section 2a and the minimum crushing strength prescribed in Table II of Section 7 in said C 428 are superseded by the following:~~

- ~~1. Asbestos cement pipe shall be designated as Class II or Class III based on the crushing strength per foot of pipe as listed in the following table:~~

Pipe Class	Crushing D Load In Pounds Per Foot Per Foot	Crushing D Load In Kilonewtons Per Meter
II	1500	21.9
III	2000	29.2

- ~~2. Crushing strength tests shall be performed in accordance with the requirements of AASHTO Designation T 33.~~

~~The tests for soundness and flexural strength specified in Sections 5 and 6 of ASTM Designation C 428, will not be required.~~

~~Each pipe length shall be provided with a sleeve coupling designed to maintain alignment and insure tight flexible joints. At the option of the Contractor the material for the couplings shall be either of the same composition as the pipe or of a plastic material not susceptible to attack by normal atmospheric or soil conditions. Couplings shall be sampled for compliance testing at the same rate of frequency as required for the pipe.~~

~~Couplings of the same composition as the pipe shall meet the same crushing strength requirements as required for the pipe. These couplings shall contain rubber gaskets or sealing rings. These rubber rings shall conform to the requirements of ASTM Designation D 1869.~~

~~If plastic couplings are used, the crushing strength tests shall be performed on an end one foot (30 centimeters) length of pipe, tapered to receive the coupling. This end one foot (30 centimeters) section shall~~

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meet the

~~minimum crushing strength requirement for the class of pipe specified. The crushing strength test shall be performed in accordance with the requirements of AASHTO Designation T 33 except that plaster of paris bedding fillets may be used.~~

~~The material for the plastic coupling shall be polyethylene material complying with the requirements of ASTM Designation D 1248, Type I, Class C, Grade 5, except that samples taken from the finished coupling shall have a minimum tensile strength of 1500 psi (10.34 MPa) and a minimum elongation of 400 percent. The Contractor shall furnish to the Engineer a certification by the manufacturer that the material in the plastic couplings to be furnished conforms to the requirements of the aforesaid specification. The certification shall be supported by a certified copy of the results of tests, performed by the manufacturer upon samples of the material to be used in the couplings. The finished plastic couplings shall conform to the following table of minimum dimensions:~~

<del>Inside Pipe Diameter</del>	<del>Thickness</del>	<del>Length</del>
<del>12" 16" (30.5 40.6 cms)</del>	<del>0.15" (0.38 cms)</del>	<del>6 3/4" (17.15 cms)</del>
<del>18" 21" (45.7 53.3 cms)</del>	<del>0.18" (0.46 cms)</del>	<del>8 1/2" (21.20 cms)</del>
<del>24" 27" (61.0 68.6 cms)</del>	<del>0.21" (0.53 cms)</del>	<del>10 1/4" (26.04 cms)</del>
<del>30" 36" (76.2 91.4 cms)</del>	<del>0.25" (0.64 cms)</del>	<del>12 1/4" (31.12 cms)</del>

~~(Length is measured along the longitudinal axis)~~

### **CONSTRUCTION**

**~~635.03.01 GENERAL:~~** ~~Construction methods shall conform to the applicable requirements of Section 601, "Pipe Culverts—General" and in addition thereto shall meet the following requirements.~~

**~~635.03.02 STRUCTURES:~~** ~~Where shown on the plans, inlet and outlet structures shall be constructed or installed in connection with asbestos cement pipes. Where such structures are constructed or installed the ends of pipes shall be placed flush or cut off with the structure face, unless otherwise directed by the Engineer.~~

**~~635.03.03 LAYING CULVERT PIPE:~~** ~~Asbestos cement pipe used for drainage purposes and dry conduits shall be laid and jointed in accordance with generally accepted practice and the following provisions in order to obtain results for the purpose intended.~~

~~Necessary facilities shall be provided for lowering and properly placing the sections of pipe in the trench.~~

~~The pipe shall be laid to the lines and grades with the sections closely jointed. All pipe shall be laid upgrade, unless otherwise permitted by the Engineer.~~

~~Every precaution shall be taken to prevent flooding the pipe trench before backfilling operations. Free water shall not be allowed to come in contact with the pipeline until Portland cement sealing materials have set at least 24 hours.~~

### **METHOD OF MEASUREMENT**

**~~635.04.01 MEASUREMENT:~~** ~~Method of measurement shall conform to the requirements of Subsection 601.04.01, "Measurement."~~

~~Asbestos cement pipe will be measured by the linear foot (linear meter) of pipe for the different sizes and classes listed in the contract items.~~

~~All measurement will be made in accordance with Subsection 109.01 "Measurement of Quantities."~~

BASIS OF PAYMENT

~~635.05.01 PAYMENT:~~ Payment shall conform to the requirements of Subsection 601.05.01, "Payment," and in addition thereto, the following requirements shall apply.

~~The accepted quantities of asbestos cement pipe measured as specified in Subsection 635.04.01, "Measurement," will be paid for at the contract unit price bid per linear foot (linear meter) for asbestos cement pipe of the size and class specified. These payments shall be full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in installing different sizes and classes of pipe, as shown on the plans, as specified in these specifications and as directed by the Engineer.~~

~~Structure excavation and structure backfill will be paid for as set forth in Section 206 and Section 207.~~

~~All payments will be made in accordance with Subsection 109.02, "Scope of Payment."~~

~~Payment will be made under:~~

<del>PAY ITEM</del>	<del>PAY UNIT</del>
<del>(size) Asbestos cement Pipe Conduit, (class) .....</del>	<del>Linear Foot (Linear Meter)</del>