

SPECIFICATIONS - DETAILED PROVISIONS
Section 15057 - Ductile Iron Water Pipe and Fittings

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SECTION 15057
DUCTILE IRON WATER PIPE AND FITTINGS

PART 1 - GENERAL

1.01 REQUIREMENT

It is required that the contractor shall furnish, unload and string along the trench site, all pipe and material as hereinafter described in these specifications. All fabrication, workmanship, material, and testing of pipe shall conform to the latest revision of the specifications.

1.02 DELIVERY

- A. Transport, deliver, unload, store and handle all materials in a manner to prevent damage to the materials or the work.
- B. All damaged, broken or otherwise defective materials will be rejected.
- C. Store all circular rubber gaskets and special lubricants in packaged materials with the manufacturer's name, brand and all other applicable data plainly marked thereon.

1.03 QUALITY ASSURANCE

- A. American Water Works Association (AWWA).
 - 1. Ductile iron pipe centrifugally cast in metal molds or sand-lined molds for water or other liquids ANSI A21.51 (AWWA C151).
 - 2. Cement mortar lining for ductile iron and gray iron pipe and fittings for water ANSI A21.4 (AWWA C104).
 - 3. Rubber gasket joints for ductile iron and gray iron pressure pipe and fittings (ANSI A21.11 (AWWA C111).
 - 4. Standard for disinfecting water mains ANSI/AWWA C601.
 - 5. Installation of gray and ductile cast iron water mains and appurtenances ANSI/AWWA C600.
 - 6. Thickness design of ductile iron pipe ANSI A21.50 (AWWA C150).

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1.04 MEASUREMENT AND PAYMENT

Payment for pipe shall be made on a unit price basis per lineal foot of pipe.

PART 2 - PRODUCT

2.01 TYPE OF PIPE

Ductile iron pipe shall conform to ANSI A21.51 (AWWA C151) class to thickness designed per ANSI 21.50 (AWWA C150), Tar (Seal) coated and cement mortar lined per ANSI A21.4 (AWWA C104) unless otherwise specified, with bolted mechanical joints or push-on joints as indicated on the plans or special provisions. Delivered pipe to include 5% +/- short joints.

2.02 CLASS OF PIPE

Ductile iron pipe shall be Class 50 unless otherwise noted.

2.03 TYPE OF FITTINGS

Fittings shall be gray or ductile iron and shall conform to ANSI A21.10 (AWWA C110) or A21.53 (AWWA C153), and ANSI A21.11 (AWWA C111). Fittings shall be bolted mechanical joints or push-on joints unless otherwise indicated on the plans, bid items, or the special provisions. Fittings shall be tar (seal) coated and cement mortar lined per ANSI A21.4 (AWWA C104). Above grade fittings shall be flanged and from the list of approved manufacturers.

2.04 SERVICE CONNECTION OUTLETS

Service connection outlets shall be bronze service saddles with CS threads for receiving a bronze corporation stop in accordance with EMWD Standard Drawing B-590, Type B. Service Saddle shall be Mueller, Jones or approved equal, for piping up to 16". Piping 16" and larger shall not be tapped for domestic services.

2.05 POLYETHYLENE ENCASEMENT

All ductile or gray iron pipe and fittings shall be polyethylene encased at the time of installation. Polyethylene encasement and installation shall be in accordance with ANSI/AWWA C105.

2.06 RESTRAINED SYSTEM

Approval by the pipe manufacturer of the restrained system that the contractor intends to use must be included as part of the material submittal to the Engineer.

PART 3 - EXECUTION

3.01 INSTALLATION

Ductile iron pipe shall be installed in accordance with ANSI/AWWA C600 and Section 02718 of EMWD Specifications.

END OF SECTION 15057

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