



City of Columbus
Mayor Michael B. Coleman

Department of Public Utilities

Cheryl Roberto, Director

RULE AND REGULATION 06-03
Division of Power & Water
Department of Public Utilities

June 2006

**SUBJECT: MATERIALS FOR UNDERGROUND WATER SERVICE PIPING
LOCATED DOWNSTREAM FROM THE WATER METER**

Pursuant to the authority granted under Columbus City Codes Section 1101, the Director of the Department of Public Utilities hereby adopts, establishes and publishes this rule and regulation to be effective at the earliest date allowed by law. This rule and regulations supersedes Division of Water rule and regulation entitled: "Private (On-Site) Water Distribution Piping Material", published August 4, 2001, Rule and Regulation 01-03. This rule and regulation is in addition to any established requirements that have not been superseded or rescinded by this or any previous act.

APPLICATION:

This applies to piping connected to the City of Columbus, Division of Power & Water distribution system, including areas receiving water service under a retail contract, but excluding areas receiving water under a wholesale contract.

DEFINITIONS:

Retail Contract Areas: those service areas or municipalities that own the water distribution system but have a water service contract with the City of Columbus, Division of Power & Water to provide water service and to maintain portions of the water distribution system.

Wholesale Contract Areas: those water service areas or municipalities that own and maintain their own water distribution system, but have a contract with the City of Columbus, Division of Power & Water to provide water service through a master meter.

DESCRIPTION:

If the City water meter is in a vault:

This is piping beginning at the outlet of the meter setting, and extending downstream to outside the meter vault and to a point one foot beyond where the piping is first visible as it enters a structure through an exterior wall (for buildings with basements), or the ground floor (for buildings with slabs or crawl spaces). (NOTE: If piping subsequently exits the structure, also see section "If the City water meter is in a building".)

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Electricity Division	3600 Indianola Avenue	Columbus, Ohio 43214	
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If the City water meter is in a building:

This refers to piping that exits one building and extends to subsequent building(s). This piping begins at a point one foot inside where the piping is last visible prior to exiting through an exterior wall (for buildings with basements) or the ground floor (for buildings with slabs or crawl spaces) and extends downstream to a point one foot beyond where the piping is first visible as it enters any subsequent building(s) through an exterior wall (for buildings with basements) or the ground floor (for buildings with slabs or crawl spaces).

MATERIALS:

Piping must be composed of the following permitted materials, which are contingent upon piping size.

I. Two inch and Smaller Piping:

Materials:

All two inches (2") and smaller piping shall be either Type K, soft temper copper tubing conforming in all respects to ASTM B 88 or Federal Specification WW-T-799 or shall be ultra high molecular weight polyethylene tubing PE 3408, ASTM D-2737, SDR-9. The ultra high molecular weight polyethylene tubing shall be manufactured, tested and approved under ASTM D-1238, ASTM D-3350, AWWA C-901 and NSF certified under standards NSF-14 and NSF-61. The polyethylene material from which the tubing is extracted shall have a minimum cell classification of 345444C as per the requirements of ASTM D-3350 and a hydraulic design basis (HDB) of 1,000 psi @ 140 degrees Fahrenheit as certified by the Plastic Pipe Institute (PPI).

The polyethylene tubing must also appear on the current City of Columbus, Division of Power & Water approved manufacturer's list.

Reference:

Approved Service Materials List – ¾" Through 2".

II. Three inch and Larger Piping:

Materials:

All three inches (3") and larger piping shall be PVC C-900 or C-909 pipe, or ductile iron pipe AWWA C150.

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Ductile Iron shall comply with the following: Internal pressure shall be 150 psi (1034 kPa) normal operating pressure; 100 psi (689 kPa) surge pressure (water hammer). Factor of Safety: 2.0 Minimum. Pipe shall be manufactured in accordance with AWWA C151 except as herein modified:

- Hardness: Rockwell B-90 maximum
- Corrosion Allowance: .08 inches (2 mm) minimum
- Wall thickness and Class as follows:

Size	Wall Thickness	Thickness Class
3 Inches (76 mm)	.31 (7.9 mm)	53
4 Inches (102 mm)	.32 (8.1 mm)	53
6 Inches (152 mm)	.34 (8 mm)	53
8 Inches (203 mm)	.36 (9.1 mm)	53
10 Inches (254 mm)	.38 (9.7 mm)	53
12 Inches (305 mm)	.43 (10.9 mm)	54

All ductile iron piping shall have a bituminous-coated cement lining complying with AWWA C104 Specifications and shall have an outside coating of bitumastic enamel or approved equal.

PVC C-900 and C-909 pipe shall comply with the following specifications (or greater):

CLASS 150 DR 18 (C.I.O.D.) PER AWWA STANDARD C900

Nominal Pipe Size, in	t min., in	t tolerance, in	Average O.D., in
4	0.267	+0.032	4.80
6	0.383	+0.046	6.90
8	0.503	+0.060	9.05
10	0.617	+0.074	11.10
12	0.733	+0.088	13.20

CLASS 150 (C.I.O.D.) PER AWWA C909

Nominal Pipe Size, in	t min., in	t tolerance, in	Average O.D., in
4	0.145	+0.019	4.80
6	0.209	+0.028	6.90
8	0.274	+0.037	9.05
10	0.336	+0.045	11.10
12	0.400	+0.054	13.20

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Reference:

Standard Detail Drawings L-6317 A through E; L-9002 A & B and L-8503.

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