

§20-03 **Water Service Pipes.**

(a) *Advance conceptual design approval.*

(1) A Licensed Professional Engineer, Registered Architect or Licensed Master Plumber may obtain advance conceptual design approval for corporation stops (taps), wet connections, service pipes or relays by submitting a conceptual design drawing to the Department and paying the required fee. Information on the related water demand, length of service pipe, proposed size of the corporation stop (tap)/wet connection, service pipe and fire sprinkler heads to be utilized must also be provided.

(2) The advance review and approval of a conceptual design may be the basis for a permit application for a period of two (2) years.

(3) Prior to the expiration of an advance conceptual design approval, the Department may extend the approval for an additional sixty (60) days upon receipt of a written request for an extension.

(b) *Internal water main approval.*

(1) Advance approval for internal water mains shall be obtained from the Department of Buildings by a Licensed Professional Engineer or Registered Architect.

(2) Internal water mains shall have either an approved valve and valve box or an approved meter and meter pit installed in the property within two (2) feet of the property line in addition to meters required by 20 - 05 (a). After installation, such meters will be owned, maintained, repaired and read by the Department.

(c) *Department of buildings approval.*

(1) Evidence of prior Department of Buildings approval of service pipe size will be required before DEP approval of a permit application for:

(i) Any new corporation stop (tap), wet connection and/or service pipe installation which supplies water to a sprinkler, fire or standpipe system.

(ii) Any corporation stop (tap), wet connection and/or service pipe installation for a sprinkler, fire or standpipe system for a major renovation, or for any location where a new certificate of occupancy is required.

(iii) Any corporation stop (tap), wet connection and/or service pipe installation for a domestic water supply system to which fire sprinkler heads are connected.

(iv) Any corporation stop (tap) or wet connection installed in order to supply an internal water main.

(2) For premises that are not under the jurisdiction of the Department of Buildings, or where the owner/developer is exempt from obtaining Department

of Buildings approval, a Licensed Professional Engineer or Registered Architect may submit a letter to the Department that certifies that the corporation stop (tap), wet connection and service pipe are adequately sized, and will provide an adequate degree of fire protection and a sufficient supply of water for domestic purposes. This certification will be accepted by the Department in lieu of Department of Buildings approval for the purposes of processing a permit application.

(d) *Sizing services.*

(1) Minimum acceptable sizes of corporation stops (taps), wet connections and service pipes that provide domestic water supply shall be determined by Department sizing tables. (See Appendix Tables #1, #2 and #3.)

(2) Where the Department sizing tables indicate that a two (2) inch tap and a two and one half (2^{1/2}) inch service line are required, approval will also be granted for a two (2) inch tap and a three (3) inch service line.

(3) Where a Licensed Professional Engineer, Registered Architect, or Licensed Master Plumber proposes sizes of taps, wet connections, service pipes, or internal water mains using methods other than Department sizing tables, all calculations shall be submitted to the Department for review and approval.

(e) *Department of buildings service pipe sizing.*

For service pipes that supply water to both domestic and fire protection systems, the service pipe size shall be the larger of the size determined by the Department of Buildings or the size as determined by the Department sizing tables. (See Appendix Tables #1, #2 and #3.)

(f) *Materials for service pipes and fittings.*

(1) New service pipes two (2) inches in diameter or less shall be brass pipe or copper tubing.

(2) Service pipes larger than two (2) inches in diameter shall either be brass or ductile iron, except that the above-ground portion of the service pipe, up to four (4) inches in diameter, may be Type K or Type L copper.

(3) Only new materials shall be used for service pipes.

(4) Service pipes shall be of uniform diameter and material unless otherwise approved by the Department.

(5) All service pipes shall conform to the most recent revision of the following standards, except that all service pipes, corporation stops, tail pieces, nuts and other fittings shall have a lead content that shall not exceed 0.250%:

(i) Department of Citywide Administrative Services, Division of Municipal Supply Services 32-P-3 Standard for Brass and Copper.

(ii) Department of Citywide Administrative Services, Division of Municipal Supply Services 32-T-1 Standard for Copper Tubing, except that above-ground, indoor service pipe four (4) inches or smaller, including the meter setting and piping for any backflow prevention device, shall be Type K or Type L copper.

(iii) For three (3) inch and four (4) inch diameter pipe: ANSI/AWWA C151/A21.51, Class 52, Standard for Ductile – Iron Pipe, Centrifugally Cast, for Water or Other Liquids.

(iv) For greater than four (4) inch diameter pipe: ANSI/AWWA C151/A21.51, Class 56, Standard for Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids.

(g) *Approved dimensions and weights.*

Pipe dimensions and weights shall be in accordance with Appendix Tables #5, #6 and #7. Ductile iron pipes shall be lined with a cement-mortar lining and coated with an asphaltic coating, in accordance with the latest revision of ANSI/AWWA C104/A21.4.

h) *Joints.*

Ductile iron pipe shall have mechanical or push-on joints with field-lock gaskets. Rodding of fittings, when necessary, shall be in accordance with DDC Specifications.

(i) *Mechanical and flare joints.*

Connections of existing lead service pipes to copper tubing or brass service pipes shall be made using either a compression coupling or an equivalent approved by the Department.

(j) *House control valves.*

House control valves, which shall be made of material similar to the corresponding service pipes, shall be gate type with the exception of those between the sizes of three-quarter ($3/4$) inch and two (2) inches, which may be full port ball valves. The lead content of such valves shall not exceed 0.250%. The house control valve shall be placed in the service pipe inside the building within two (2) feet of the building wall, and shall be located where it is accessible at all times. All valves shall be designed for a 150 psi minimum working pressure. For fire, sprinkler, and standpipe service pipes, and for any service pipe which supplies sprinkler heads, the house control valve shall be an OS&Y Valve or an indicating valve approved by the Department of Buildings. Notwithstanding the preceding sentence, for fire or combined service pipes two (2) inches or smaller, the house control valve may be an OS&Y valve or a UL/FM-approved full-port ball valve approved by the Department of Buildings.

(k) *Curb valves.*

(1) Curb valves shall be full port ball valves or non-rising stem gate valves designed for a minimum of 150 psi of working pressure.

(2) Curb valves shall be required on all domestic water service pipes larger than two (2) inch in size and on any water service pipe that provides for fire protection. All curb valves shall be set in the service pipe in the sidewalk area, and shall be located eighteen (18) inches from the curb or other such locations as may be approved by the Department.

(3) All curb valves shall be provided with a tar coated iron extension box with a cover which is flush with the sidewalk. Each curb valve larger than two (2) inches in diameter shall be equipped with an operating nut at least one and one quarter ($1\frac{1}{4}$) inch square. Curb valves two (2) inches and smaller in diameter may be full port ball valves equipped with a quarter turn shutoff nut.

(4) The property owner shall protect the curb valve/box from any damage and shall promptly report in writing to the Department any circumstances that may adversely affect the operation of the curb valve.

(l) *Straight service pipes.*

Service pipes shall be laid in a straight line at right angles to the street main, and shall extend from the corporation stop (tap) or wet connection to the main house control valve. Where conditions preclude such an installation, a Licensed Master Plumber shall submit a proposed alternate for review and approval.

(m) *Gooseneck and offset swing joints on service pipe connections.*

Each brass or copper tubing service pipe must have at least three (3) feet of copper tubing formed in a gooseneck connection to the corporation stop (tap) and laid to the right hand facing the tap, as shown in Appendix Figure #2. Each brass service pipe with threaded joints shall be installed as shown in Appendix Figure #2. No offset swing joint shall be made for ductile iron connections.

Swing joints and/or goosenecks shall be located at the corporation stop (tap) or wet connection, and may also be placed immediately outside a building laid to the right hand facing the building where the building is constructed on a pile foundation or other unyielding support.

(n) *Service pipe depth.*

All service pipes shall be installed at a depth of at least three and one-half ($3\frac{1}{2}$) feet, no more than six (6) feet below ground, unless a written waiver is obtained from the Department. Where a service pipe is installed with less than three and one-half ($3\frac{1}{2}$) feet of cover, it must be insulated and protected in accordance with the requirements described in §20-03(y). A service pipe shall not be laid within six (6) inches of any

other sub-surface structure, conduit or pipe. A service pipe shall not be laid directly below, and parallel with, any sub-surface structure, conduit or pipe.

(o) *Service in construction trench.*

Service pipes laid in a construction trench shall be supported and protected from settlement.

p) *Service pipe in subway air vent.*

Where service pipes are installed through a subway vent or similar construction, the method of installation shall be as illustrated in Appendix Figure #4.

(q) *Backfill.*

Backfill around and one foot over a service pipe shall be of clean earth, free of stones, and shall be carefully tamped and compacted in accordance with the latest DOT specifications. The remainder of the backfill shall be free of stones larger than three (3) inches in diameter, and shall be satisfactorily compacted either by tamping, flushing or both. Where tunneling has been permitted, the backfilling of the tunnel portion shall be well compacted with clean earth fill free of stones.

(r) *Test of service pipe.*

Each new or repaired service pipe shall be subject to a pressure test performed under street main pressure. This test shall be conducted by the Licensed Master Plumber in the presence of a Department inspector. All service pipes and appurtenances shall remain uncovered for the duration of the test for observance of leakage.

(s) *Service pipe repairs.*

A new service pipe must be installed where more than one-half ($1/2$) of an existing service pipe is in need of a repair or when any repairs are required and the existing service pipe is lead, galvanized steel or galvanized iron. All repairs must conform with the standards described in §20-03 of these Rules.

(t) *Service pipe damaged by electrolysis, galvanic action or other local conditions.*

When a service pipe has been damaged by electrolysis, galvanic action or other local conditions, it shall be repaired and protected against such damage in a manner approved by the Department.

(u) *Thawing.*

Thawing of water service pipes shall be performed under permit only by Licensed Master Plumbers.

(v) *Protection of service pipe and house control valve.*

The property owner is responsible for preventing physical deterioration of the service, curb valve, house control valve or distribution pipe which may damage a meter or prevent its maintenance or replacement. The owner shall be responsible for repairing or replacing equipment, service or distribution piping to allow maintenance, proper operation or replacement of the meter. The property owner, and not the Department, is responsible for the maintenance of the service and distribution pipe and its associated fittings and equipment. The meter setting is the responsibility of the Department.

(w) Replacement of old service pipes upon establishment of new water service.

If a tap or wet connection has been destroyed or shut off due to vacancy of a building, the service pipe must be replaced as part of any new tap or wet connection unless the existing service pipe is less than 40 years old, has a functioning curb valve and is neither lead, galvanized steel or galvanized iron.

(x) Installation of a meter on unmetered properties whenever a domestic service pipe is replaced, repaired or relaid.

Whenever a domestic or combined service pipe for an unmetered property is installed, replaced, repaired or relaid, a water meter shall be installed to cover the entire premises in accordance with §20-05 of these Rules. When the work is not performed under emergency conditions, DEP will indicate on the permit that the property is unmetered. When the service pipe relay, repair or replacement occurs on an emergency basis, the Licensed Master Plumber may install a set of meter inlet and outlet valves and a spool piece of a length similar to the displacement meter for that size service if the Licensed Master Plumber does not have a meter available for installation at the time of the emergency visit. If the property owner will not allow the installation of a water meter as part of the service replacement, installation, repair or relay, the Licensed Master Plumber must return the meter permit completed but include a statement that the owner would not allow the installation of a meter.

(y) Insulation.

Insulation, where required by §20-03(n), shall be cellular glass insulation manufactured in accordance with ATSM C552 "Standard Specification for Cellular Glass Thermal Insulation", where a quality system for manufacturing, inspecting and testing insulation is certified in accordance with the requirements of ISO 9002. The insulation shall be fabricated in half sections wherever possible. For large diameter piping where half sections are not practical, curved sidewall segments are preferred. Wherever possible, the insulation should be factory jacketed with a 70 mil thick self-sealing high polymer asphaltic membrane with an integral glass scrim and aluminized mylar film on the surface. Mastic finish shall be pitcote 300 or an asphalt cutback mastic. Reinforcing fabric shall be an open mesh polymer fabric with 6 x 5.5 mesh per inch configuration. Sealant shall be a nonsetting butyl sealant with a minimum 85%

solids content. The Department shall maintain a list of approved insulation materials. Alternate materials may be submitted for approval by the Department.

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