

## 510 SERVICE MAIN EXTENSIONS

### 510.1 GENERAL

A service main is a privately owned and maintained water service to a single property and must be located within public access way. It is usually of 6" minimum size. Service mains may have multiple service line connections. (See Section 505.9) The location of new service mains and connections/ alterations to existing service mains must be reviewed by the Des Moines Water Works' Engineering Department prior to construction to insure all Des Moines Water Works requirements are met. (See Section 510.3)

### 510.2 TRANSMISSION MAINS

Transmission mains cannot be tapped without permission from the Director of Engineering Services and Director of Water Distribution or their designated representatives.

### 510.3 SUBMITTALS AND PROCEDURES

510.3.1 Following are the procedures for a developer or other individuals who desire to connect into a water main owned by the Des Moines Water Works with a service main:

510.3.1.1 Submit a site plan to the Des Moines Water Works Engineering Department indicating the following minimum information:

a.) Existing Des Moines Water Works owned main with main size and relative location with respect to right-of-way lines and existing curb lines.

b.) Location of the proposed tap, proposed valve location(s), and routing of proposed service main within public right-of-way and on private property. In general, valves located on private property for the individual fire and domestic service(s) must be located in paved, non-parking areas such as driveways, drive areas, and sidewalks. Valves must be located in such a manner as to permit operation by the Des Moines Water Works 24 hours a day. The service mains must be routed accordingly.

c.) Location of proposed or existing building(s) on property to be served by service main.

d.) Legal description of property to be served.

e.) Proposed paved areas for parking lots, driveways, and sidewalks.

f.) North arrow and any dimensions required for clarity.

g.) Show all hydrants, valves, and fittings.

h.) Include statement that all service main work is to be completed according to Des Moines Water Works Standard Specifications.

510.3.1.2 Submit total fire flow requirements and the riser detail (if applicable for the project).

510.3.1.3 Submit a load profile for any domestic or process service which serves a service line 2" or larger in diameter. (See Section 503.2.1.5)

510.3.1.4 Submit the form issued by the City of Des Moines Fire Marshall granting approval for the fire service.

510.3.1.5 Pay required "System Development Fee" (See Schedule of Charges, Section 511).

510.3.1.6 Submit mechanical drawing showing the location and type of backflow prevention device, if required.

510.3.2 Once items 1-6 above are completed to the satisfaction of the Des Moines Water Works, the owner and plumbing contractor need to call Des Moines Water Works' Customer Service Department to have the tap request information entered into the system.

510.3.3 One (1) "as-built record drawing" of the service main is to be submitted to the Des Moines Water Works within 30 days of its construction and before the meter is set, unless otherwise approved by the Director of Engineering Services.

#### 510.4 MATERIAL FOR SERVICE MAINS

All service main materials shall comply with the current City of Des Moines Plumbing Code requirements.

#### 510.5 PRESSURE TESTING

510.5.1 All service mains and appurtenances shall be tested for leakage in compliance with the City of Des Moines Plumbing Code requirements.

510.5.2 The plumbing contractor shall notify the Des Moines Water Works when the service main is installed and ready to be filled for pressure testing and disinfection.

510.5.3 The pressure test, when applied to service mains, may or may not be witnessed by Des Moines Water Works personnel since these services are under the jurisdiction of the City of Des Moines Building Inspection Department. Therefore, a certificate of compliance shall be submitted to the Des Moines Water Works stating the test pressure, duration of test, total leakage, allowable leakage, and that the test met all requirements.

#### 510.6 DISINFECTION

510.6.1 Following satisfactory pressure tests all service mains shall be disinfected, sampled, and tested as follows:

510.6.1.1 The form of chlorine used and the procedures for disinfection shall be as outlined in AWWA Standard C-651. A minimum free residual chlorine concentration of 10 mg/l shall be maintained for the 24-hour disinfection period. The plumbing contractor will supply the chlorine for disinfection purposes, and this is to be considered incidental to the project.

510.6.1.2 After the 24-hour disinfection period, the service main shall be flushed to remove all free chlorine.

510.6.1.3 Twenty-four hours after the service main has been flushed, a sample of water from the service main shall be taken to be tested for compliance with the physical, chemical, and bacteriological standards as prescribed by the National Interim Primary Drinking Water Standards. Testing will be provided by the Des Moines Water Works Laboratory personnel. Test results shall be available 24 hours from the time when the sample was submitted for testing. Water used for flushing and sampling shall be provided by the Des Moines Water Works for up to 2 flushing and sampling procedures, if required, to pass laboratory tests. If the first two samples do not pass laboratory tests, any labor and equipment costs incurred by the Des Moines Water Works for further disinfection, flushing, or sampling shall be billed to the plumbing contractor.