

# RULES AND REGULATIONS



WEST BOYLSTON WATER DISTRICT  
183 WORCESTER STREET  
WEST BOYLSTON, MASSACHUSETTS

ADOPTED - JUNE 4, 2007

Forward

This information has been prepared to establish a better understanding, between the West Boylston Water District and its customers, relating to water use.

These regulations embody a uniform practice governing the Water District for the installation of services, meters, watermains and miscellaneous services rendered. They are intended to define the obligations of the Water District to the consumer and the consumer to the Water District.

Mission Statement

It is the mission of the West Boylston Water District, to manage the water system infrastructure of the Town of West Boylston; to design, construct, operate and maintain the system in a manner that provides maximum benefit to the human and environmental health and safety of the community; to provide water in an efficient manner that is both technologically feasible and cost effective; and to maintain the highest legal and ethical standards in the course of completing its mission.

**BOARD OF WATER COMMISSIONERS:**

\_\_\_\_\_  
John Wilson

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Stanley Szczurko

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Robert Bryngelson

\_\_\_\_\_  
Robert Ash

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James LaMountain

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Date

These Regulations are effective as of June 4, 2007

Amended:

## Table of Contents

<b><u>SECTION</u></b>	<b><u>TITLE</u></b>
Section 1	Definitions
Section 2	General Provisions
Section 3	Services and Fixtures
Section 4	Fire Service
Section 5	Meters
Section 6	Charges
Section 7	Violations
Section 8	Watermain Services

### **Appendices:**

- A. Charges and Rate Schedule
- B. Standard Materials
- C. Standard Details
  - Watermain Trench Detail
  - Gate Valve Detail I
  - Gate Valve Detail II
  - Hydrant Assembly Detail
  - Service Connection Detail
  - Permanent Blow Off Detail
  - Meter Pit Detail
  - Thrust Block Details
- D. Cross Connection Control Program

## **SECTION 1 DEFINITIONS**

### **1.1 COMMISSIONERS**

The “Commissioners” are the elected officers of the West Boylston Water District.

### **1.2 CONNECTION FEE**

The “connection fee” is a fee chargeable to applicants for new services that grants the owner the right to connect to the Water District’s system and only the right to connect. Other charges for connection, not included in the connection fee, such as the user fee, meter fee, cost of labor and materials may also apply.

### **1.3 CROSS CONNECTION**

The term “cross connection” shall mean any actual or potential connection between a potable water system and any waste pipe, soil pipe, sewer, drain or other unapproved source.

### **1.3A DISTRICT ENGINEER**

The term “district engineer” shall mean any engineering firm that has been selected by the commissioners to perform or assist in evaluations or other matters relating to the water system.

### **1.3B MAY**

The word “may” means it is voluntary.

### **1.4 OWNER**

The term “owner” shall mean the individual, firm, or corporation listed as the owner of the property to which water is supplied. The owner is the party responsible for payment for water use and other water-related charges.

### **1.5 PUBLIC versus PRIVATE WATERMANS (EXCLUDING FIRE SERVICES)**

“Public Water Mains” shall be determined as follows:

- a. Water mains located in Town-accepted public roadways are public watermains;
- b. Water mains located in roadways with unrestricted public access that are owned by all landowners directly abutting the roadway are public watermains;
- c. Water mains located in roadways or easements with unrestricted public access that connects to Town watermains in two or more locations (looped) are public watermains.
- d. Water mains located in private ways or property, which are the sole connection to Town owned infrastructure.

“Private Water Mains” shall be determined as follows:

- a. Water mains located on any single privately-owned property;
- b. Water mains located on any property with restricted access.

#### 1.6 REGULATIONS

“Regulations” refers to the document adopted, and as amended to date, by the Commissioners of the West Boylston Water District entitled “Water Regulations”.

#### 1.7 SERVICE

“Service” shall mean pipe, fittings and appurtenances from the curb stop and box at the property line to, and including, all piping on the owner’s property to which Public water is supplied. The meter attached to service piping within the building or in a meter pit is the Water District’s property. All other service materials are the owner’s property and responsibility.

#### 1.7A SHALL

The word “shall” means it is mandatory.

#### 1.8 SUPERINTENDENT

The term “Superintendent” shall mean the Superintendent of the Water District.

#### 1.9 WATER DISTRICT

The term “Water District” shall mean the West Boylston Water District, the water supplier.

#### 1.10 USER

The term “user” shall mean any person, owner or otherwise, who uses water supplied by the Water District through an authorized service.

#### 1.11 WATER MAIN

A “water main” shall mean the supply pipe laid in the street, right-of-way or easement to which service connections are made.

“Fire Service” shall mean the service for fire systems including backflow prevention device, fire service meter, hydrants on private premises and appurtenances. Fire services are the owner’s property and responsibility.

## **SECTION 2 GENERAL PROVISIONS**

### **2.1 APPLICATION FOR DISTRICT WATER**

Application for Public water shall be made on the Water District's standard form available at the District Office, 183 Worcester Street, West Boylston, MA. The applicant shall be the property owner or the owner's authorized agent. The applicant shall state fully the primary use to which water is to be applied. Should water subsequently be required for other purposes, the owner must submit a new application.

All applications for Public water shall be approved by the Superintendent. All Water District permits and applications shall be received and all fees for water use shall be paid before water is supplied.

### **2.2 RESPONSIBILITY FOR CHARGES**

The owner of a water service shall be charged, and held responsible, for all water passing through the service meter until such time as the Water District is notified in writing that Public water is no longer desired. In case of the sale of the property, the owner shall request a final meter reading and the Water District notified of the name of the new owner.

### **2.3 PRIVATE WELLS**

There shall be no interconnection of private water systems with the Public system. All owners using Public water who also have private wells shall register the wells with both the West Boylston Water District and the Board of Health and shall install backflow prevention devices on the Public water service. Owners shall permit periodic Water District inspection of public and private water systems.

Owners shall comply with section 310 of Code of Massachusetts Regulations section 22 as amended to date.

### **2.4 EXTENDED USE**

No water user shall supply water purchased from the Water District to parties not entitled to its use except by written permission of the Commissioners.

### **2.5 UNUSUAL CONSTRUCTION**

Owners of property desiring Public water for any construction, alterations or attachments shall submit plans and specifications for the proposed work to the Superintendent for approval. The Water District shall determine whether Public water for the proposed work is permissible and the terms, charges and conditions under which the proposed use shall be permitted.

## 2.6 RIGHT OF ENTRY

Owners or occupants of commercial, industrial or residential properties served by the Water District shall, upon presentation by Water District personnel of their credentials, authorize entry without a warrant to inspect the water service or to remove, repair, or replace any water meter at any time the Water District deems necessary. Water service apparatus shall be readily accessible. Should access be refused, the water may be shut off and may not be turned on until such access has been allowed and appropriate fees paid.

## 2.7 FIRES

Whenever a fire occurs in areas served by the Water District, it is the duty of users to discontinue all unnecessary use of water.

Fire Department personnel may operate fire hydrants only during a fire and shall notify the Water District of any hydrants used during a fire.

## 2.8 CONDITIONS FOR WATER USE

The Water District shall endeavor to provide constant and uninterrupted supply of water to its users with quality that meets or exceeds the levels set forth by the United States Environmental Protection Agency and the Massachusetts Department of Environmental Protection.

Because conditions within a water system vary, the Water District cannot guarantee volume of water or constant pressure.

## 2.9 LIABILITY FOR LOSS OF SUPPLY

The Water District shall have the right to interrupt water supply as necessary for system maintenance, repair or other cause beyond the Water District's control. No user shall be entitled to damages or to payment refund for any interruption of supply or water quality.

## 2.10 LIABILITY FOR LOSS OF PRESSURE

The Water District reserves the right at any time and without notice to shut off the water in the mains for necessary purposes. Users having appliances dependent on routine pressure for proper operations are CAUTIONED that they should provide, at their own expense, safety features to protect the appliances.

The Water District is not liable for any damage resulting from loss of pressure, whether through accident or necessity.

## 2.11 OUTSIDE WATER USE

The Commissioners reserve the right to regulate or ban outside water use in order to insure adequate volume and pressures for essential use.

The Commissioners may also issue water use restrictions in accordance with Section 7.3 of the Regulations.

## **SECTION 3 SERVICES AND FIXTURES**

### **3.1 SERVICES**

Application for use of Public water must be made to the Water District in writing on the Water District form for new services.

The Water District may furnish and install and shall own materials between watermain and curb stop. The curb stop shall be installed at the property line.

Services beyond the curb stop are furnished, owned and maintained by the property owner. Services include piping, valves and fittings, including meter pit if applicable, on the owners property.

Owners shall properly construct and maintain private watermains, services and fixtures at their own expense.

Buildings occupied by more than one tenant, when the property is divided or separated by a perpendicular division wall, may be required to have a separate water service and meter connection for each tenant.

Buildings that have individually owned units shall have a separate water service and meter connection for each unit.

In no case shall water be supplied to two (2) or more separate properties through a single tap

Existing multi-dwelling services may continue water service but each individual property owner served by the tap must pay all fees due the Water District as if served by individual tap. If a multi-dwelling service line fails, it shall not be repaired in kind or if the property changes ownership. A new tap and new service(s) shall be installed so that each dwelling will have its own service connection. The property owner(s) shall be responsible for all costs associated with new service connection(s).

Upon installation, the owner shall provide the Water District an as-built plan of the service(s).

### **3.2 SERVICES TO BE INSPECTED**

The Water District shall inspect all services before trench backfilling. Materials and installation shall meet Water District requirements.

### **3.3 CONNECTIONS TO SERVICES**

Connections to services shall be brought to the curb stop, at the owner's property line, at the expense of the owner.



### 3.4 REPAIR OF SERVICES

It is the duty of the owner to maintain and repair services on their property. Maintenance and repairs shall be done at the owner's expense. The Water District may turn off any service until such time as the work has been satisfactorily completed and inspected.

Service pipes between the curb stop and meter shall be repaired or replaced, as directed by the Water District, for protection of water supply and prevention of waste. When requested, the Water District may assist in the detection of a service leak, but **will not** repair services beyond the curb stop. The Water District may charge the owner for leak detection assistance.

### 3.5 REPAIR OR LOSS OF METER

Any meter damaged or lost due to any cause shall be repaired or replaced by the Water District at the expense of the owner.

### 3.6 TURNING ON OR SHUTTING OFF SERVICES

Turning on or shutting off services shall be requested a minimum of 48 hours in advance (weekends and holidays excluded), except in case of an emergency. Owners shall be charged in accordance with the rate schedule. Only the Water District shall open or close curb stops.

### 3.7 SEASON FOR SERVICE INSTALLATION

The Water District shall determine the dates when service installations may begin in the spring and when no further service installations may be completed in the fall.

### 3.8 SERVICE PIPE TRENCHES

Service pipes shall not be placed within 10 feet of any other utility, except as specifically approved by the Water District.

### 3.9 CROSS CONNECTION CONTROL

The Water District's Cross Connection Control Program as amended to date can be found in Appendix D to the Water Regulations.

### 3.10 TEMPORARY WATER USE

The Water District will accept application for temporary water use. A surety must be provided to ensure payment of charges as well as restoration of any disturbed areas due to the temporary use.

## **SECTION 4 FIRE SERVICES**

### **4.1 GENERAL**

The Water District may authorize services to private property for private fire protection purposes. All equipment shall be installed entirely at the expense of the owner and with the approval of the Superintendent. The entire installation and upkeep of such equipment shall be at the owner's expense.

The owner of the property or his authorized agent shall make applications. The owner will be subject to all the provisions and charges described herein, as applicable.

The Water District does not guarantee the adequacy of available water supply to meet the needs of the fire service.

### **4.2 APPLICATION**

The owner shall demonstrate the need for a fire service.

The owner shall submit for approval two complete sets of drawings and specifications for the fire service. The drawings shall show the property to be served, together with location of all valves, pipes, hydrants, tanks, sprinkler heads and other appurtenances. The plans will remain the property of the Water District.

Prior to construction, the owner shall conduct a hydrant flow test to determine the available volume and pressure at the location of the fire service. The test shall be conducted by the Water District or approved representative and scheduled in advance with the Water District. The owner shall be responsible for all charges related to the flow test and shall submit a flow test report as part of the application.

The completed service shall pass pressure and bacteriological testing and shall be inspected and approved by the Water District prior to activation.

The owner also agrees to furnish the Water District two sets of record drawings showing piping and appurtenances as constructed, upon completion of the installation and prior to activation of the service.

### **4.3 CONNECTION TO DOMESTIC SERVICE PROHIBITED**

No connection shall be made at any time between the fire system and the domestic service.

#### 4.4 NUMBER OF SERVICES

Only one service will be allowed for any one building, unless evidence prepared by a qualified engineer is presented to the Water District that more than one service is necessary for proper protection. Where two or more services are allowed for one building, they shall be kept separate, unless permission is granted by the Water District to interconnect multiple systems.

#### 4.5 PRIVATE HYDRANTS

Fire hydrants on private property shall be the property of the owner but may be inspected and serviced once every two years by the Water District, for a fee payable by the owner. Any repairs necessary for proper operation of hydrants shall be the responsibility of the owner and shall be completed within thirty days after notice in writing has been given to the owner by the Water District.

Hydrants shall only be operated by the Water District, or persons authorized by the Water District, except in case of fire.

#### 4.6 INSPECTION

The Water District shall subject all fire services to periodic inspection. The owner shall provide service information and reasonable access for inspection. Inspection shall be made for compliance with Water Regulations only.

#### 4.7 BACKFLOW PREVENTER

Every fire service shall be fitted with a backflow preventer. The Water District's Cross Connection Control Program as amended to date can be found in Appendix D to the Water Regulations.

#### 4.8 USE OF SERVICE

No water shall be drawn from fire services except for fire fighting, fire system testing or system maintenance. No water shall be taken or used through fire services for the purpose of testing or maintenance unless the Water District issues written permission. Such testing or maintenance shall be conducted only under the supervision of the Water District.

#### 4.9 ILLEGAL USE

When the owner or any occupant is found to be using water from a fire service for purposes other than fire fighting, testing or maintenance, the water shall be shut off until the owner has given assurance to the Water District that the offense will not be repeated and has paid all fees.

#### 4.10 VIOLATION OF RULES

For any violation of the rules governing fire service or illegal use of water, the Water District has the authority to assess a fine and to discontinue supplying the fire service.

## **SECTION 5 METERS**

### **5.1 METER INSTALLATION**

All water supplied by the Water District shall be metered through a Water District-approved meter. Only one meter will be installed on the owner's property unless otherwise approved by the Superintendent. The meter will be located in an accessible area within the building served except where a meter pit is allowed or required by the Water District.

Every service shall have an approved ball valve immediately upstream and downstream of the meter. Services without these manual shut-off valves shall be required to immediately have them installed at the owner's expense. If the owner requests, the Water District will turn off the service, remove the meter, inspect the service, reinstall the meter and turn on the service, all at the Owner's expense.

All meters shall be fitted with a Water District-approved absolute digital encoder (ADE) programmed to the Water District's standard.

No water service will be activated without proper meter installation or without payment of all charges due.

### **5.2 OWNERSHIP OF METERS**

All 5/8" meters shall be furnished and owned by the Water District and installed at the expense of the owner. All meters over 5/8" in size may be furnished and installed by the Water District at the owner's expense and owned by the Water District.

The installation of all meters shall be done in the presence of the Water District.

### **5.3 DEFECTIVE METERS**

The Water District has the right at any time to remove, test, repair or replace any meter at its expense.

If an owner requests the meter serving his property be tested or replaced, and such meter is found to be defective, the Water District shall pay costs associated with the work. If the meter is found not defective, a fee shall be paid by the owner to cover the cost of testing, labor, materials and reinstallation in accordance with the "Charges and Rate Schedule".

Meters damaged by accident or neglect by the owner or occupant of the property shall be repaired or replaced at the owner's expense.

#### 5.4 METER INSTALLATION

The Water District shall have the right to inspect all meters that have been installed, removed, repaired or replaced.

#### 5.5 METER TAMPERING

Tampering with water meters by any person shall be subject to fine. Necessary repairs or replacement shall be at the owner's expense.

#### 5.6 METER SIZE

The size and type of meter required for any service shall be 5/8-inch unless the owner requests a larger meter in writing. The request shall include proposed use, estimated peak flow and other requirements necessary for a larger meter. The request shall be included with the application for service and will be reviewed by the Water District for approval. The Water District shall determine meter size.

#### 5.7 RIGHT TO CHANGE METERS

If, in the opinion of the Water District, a meter does not fit the conditions of the service installation, the Water District has the right to require such meter to be changed. Such change shall be made in accordance with Water District regulations and paid for by the owner.

#### 5.8 ACCESS TO THE METER

The owner of the premises shall ensure accessibility to meters at all times. Failure to remove any obstruction to meter accessibility within three (3) days after being notified by the Water District may result in the water service being shut off until all obstructions are removed, all regulations complied with and all charges for shutting off and turning on the water are paid.

#### 5.9 METER PITS

Meter pits are required for services longer than 300 feet between curb stop and service entrance to buildings, unless determined otherwise by the Superintendent. Meter pits shall be installed at the property line and shall be the owner's property. Installation and maintenance of meter pits, as required by the Water District, shall be at the owner's expense.

#### 5.10 SEASONAL METERS

The Water District shall remove meters, which are for seasonal use, at the request of the owner and only in the presence of the owner or authorized agent. The owner shall be responsible for all fees for shutting off the service, removing the meter, reinstalling the meter and turning on the service in accordance with the "Fee Schedule".

## **SECTION 6 CHARGES**

### **6.1 GENERAL**

The Water District shall charge owners for water use as stipulated in the Rate and Fee Schedule.

### **6.2 OWNER'S LIABILITY TO PAY**

A minimum charge shall be assessed to the owner for active water services whether or not water is used.

### **6.3 COLLECTION OF CHARGES**

The Water District will send each service owner a water usage bill at intervals determined by the Commissioners.

Additional charges for labor, material, fees or violations billable to an owner shall be billed separately and are subject to the same conditions as bills for water use.

### **6.4 CLAIMS FOR ADJUSTMENT ON BILLS**

To be considered, all claims for adjustments of water bills must be made in writing within thirty (30) days of billing date. Abatements will be considered on a case by case basis by the Board of Water Commissioners.

### **6.5 PAYMENT FOR WATER USE**

Owners must pay for all metered water use.

### **6.6 FAILED METER**

If a meter fails to register correctly, the charge for water use shall be based on average daily use, as shown by records when the meter was in order, for the corresponding period of the preceding year.

Failed meters must be replaced per Section 5.3 of the Regulations.

### **6.7 PAYMENT**

All bills for water use must be paid within thirty (30) days of billing date. Overdue bills will immediately become delinquent. The Water District will impose interest in accordance with the Rate Schedule for the balance owed on all delinquent bills. The Water District shall notify the owner regarding overdue bills and issue a shut-off notice. If payment is not received within fifteen (15) days from the date the shut-off notice is rendered, the Water District

may shut off the service without further notice, in accordance with Massachusetts General Laws Chapter 40 Section 42b. All charges and additional fees associated with the collection of payments, including but not limited to legal fees, shall be paid in full prior to the Water District turning on the service.

The Water District has adopted Chapter 40, Sec. 42A through F of the Massachusetts General Laws Relating to the Imposition of Liens against Delinquent Accounts.

Accounts delinquent over sixty (60) days may be turned over to the Collector of Taxes and placed into Lien.

## **SECTION 7 VIOLATIONS**

### **7.1 VIOLATIONS OF REGULATIONS**

Any violation of the Rules and Regulations may result in shutting off the water service to the violator's property in accordance with the Massachusetts General Laws (M.G.L.) Chapter 40 Section 42b as amended to date. When the water has been shut off for violation, it shall not be turned on until the Water District is satisfied that there shall be no further violation and until all fees and fines have been paid.

### **7.2 ADULTERATION OF SUPPLY**

Intentional introduction of foreign materials that allows adulterated water to enter the Public water system shall be subject to prosecution to the fullest extent of the law.

### **7.3 MANDATORY WATER USE RESTRICTIONS**

The Commissioners have the authority to implement mandatory water use restrictions, when it is deemed by the Commissioners to be in the interest of the District, and to assess fines for water use restriction violations in accordance with the Water District By-Laws as amended to date. The owner of any service found in violation of a mandatory water use restriction shall be fined as follows:

First Offense – written warning

Second Offense – \$50.00 fine

Third Offense – \$100.00 fine

Any Subsequent Offense – \$100.00 fine plus discontinued service

In addition, the Massachusetts Department of Environmental Protection has authority to declare a state of water emergency (M.G.L. Chapter 21G) and assess fines for violations.

### **7.4 UNAUTHORIZED WATER USE**

Any user who intentionally damages a water meter, prevents accurate registration of the quantity of water supplied, or uses or causes water to be used without consent of the Water Division, may be fined \$500.00 for each offense, charged a minimum of 100,000 gallons of usage per billing cycle and required to pay for replacement and installation of a new meter.



## **SECTION 8 WATERMANS AND SERVICES**

### **8.1 GENERAL**

Watermain extensions shall be as approved by the Water District. Prior to initiation of watermain construction, an updated set of three prints of plans showing watermain extensions shall be submitted to the Water District for review. The Applicant shall pay the cost of review.

All plans approved by the Water District shall be valid for one year. At the end of one year, plans for any watermain extension not under construction shall be deemed null and void and new plans submitted for review.

The Applicant shall submit four (4) sets of construction shop drawings to the Water District, detailing the materials to be used during construction and the suppliers of the materials being used. Local contact information for all material suppliers shall be provided in the submittal.

All permits required to perform the work and 24-hour emergency contact shall be received prior to any work being started.

On completion of the watermain extension, AutoCAD or GIS overlay as-built plans (CD, 3 prints) shall be submitted to the Water District. The as-built plans shall include locations of service taps in the main, curb stops, gate valves, tees, caps, reducers, hydrants and blow-offs. Tie sheets shall be provided to the Water District with a minimum of two oblique ties to permanent structures for each curb stop and for each service tap, gate valve, tee, cap, reducer, hydrant and blow-off in the main.

Construction and pressure and disinfection testing of all watermain extensions shall be inspected. Inspections shall be contracted for by the Water District and paid for by the Applicant in full. Inspection of construction and pressure and disinfection testing shall be completed before watermain extensions are activated. The Water District will not accept watermain extensions until all work has been completed, all expenses paid and as-built plans submitted.

All public watermain piping, valves, hydrants, services and appurtenances included with construction of watermain extensions shall become the absolute property of the West Boylston Water District and the Applicant shall have no right, title or interest therein after acceptance. The Water District retains the right of access for maintenance, repair and inspection of watermain extensions.

Watermains shall be a minimum of 8-in., looped to prevent dead-ends wherever possible, with isolation valves at watermain intersections. Stubs left during construction for future use shall have two valves with roadway boxes. One valve shall be installed at the watermain tee and one at the property line.

Liability insurance shall be provided in the minimum amount of \$1,000,000 and the "West Boylston Water District" shall be listed as additionally insured.

## 8.2 WATERMAIN REQUIREMENTS

Inspection and Testing. The Applicant shall supply the Water District with certificates of compliance with watermain specifications and certification that each piece of ductile iron pipe has been tested at the foundry for ductility by test methods approved by the Ductile Iron Pipe Research Association.

Handling and Cutting Pipe. Care shall be taken in handling and laying pipe and fittings to avoid damaging any part of the pipe or fittings.

Any fitting or pipe showing a crack and any fitting or pipe which has received a severe blow that may have caused an incipient fracture, even though no such fracture can be seen, shall be marked as rejected and removed at once from the job site.

Except as otherwise approved, all cutting shall be done with a machine having rolling wheel cutters, or a mechanical saw. All cut ends shall be examined for possible cracks caused by cutting.

Cut ends shall be carefully chamfered to prevent cutting the gasket when the pipe is laid.

Installing Pipe and Fittings. Each pipe and fitting shall be cleared of all debris, dirt, etc., before being laid and shall be kept clean until accepted in the complete work.

The pipe shall be installed with a minimum cover 5'-0" and a maximum of 7'0". The Superintendent may waive this requirement if necessary.

The deflection of alignment at a joint shall not exceed the appropriate permissible deflection as specified in the following tabulation:

### **PIPE DEFLECTION ALLOWANCES** Maximum permissible deflection (inches)\*

<b><u>Size of pipe</u></b>	<b><u>Push-on Joint</u></b>	<b><u>Mechanical Joint</u></b>
4	17	28
6	17	24
8	17	18
10	17	18
12	17	18
14	10	12
16	10	12

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\* Maximum permissible deflection for 18-ft. length; maximum permissible deflections for other lengths shall be in proportion of such lengths to 18 ft.

Temporary Plugs. At all times when pipe laying is not actually in progress, the open ends of pipe shall be closed by temporary watertight plugs to keep the interior of watermains clear of dirt, water, animals and other sources of possible contaminations at all times. If water is in the trench when work is resumed, the plug shall not be removed until all danger of water entering the pipe has been eliminated.

Pressure and Leakage Tests. A test company approved by the Water District shall conduct all acceptance tests in the presence of a Water District representative. Scheduling with the Water District shall be at least 48 hours in advance of all acceptance tests. All pipelines shall be given combined pressure and leakage tests.

The test shall be conducted as soon as possible after completion of each pipeline section, Hydrant laterals shall be included in all pressure tests. The Applicant shall furnish and install suitable temporary testing plugs or caps; blowoffs and all necessary pressure pumps, pipe connections, meters, gages, and other similar equipment; and all labor required. The Water District representative shall inspect all pressure gages prior to tests.

Filling and flushing of new mains from existing mains shall be done only at a time, rate and location approved by the Water District. Operation of existing hydrants and valves shall be by Water District personnel only. Flushing water shall be handled in an approved manner.

The section of pipe to be tested shall be filled with water of approved quality, and all air shall be expelled from the pipe. If hydrants or blowoffs are not available at high points for releasing air, the Applicant shall make the necessary excavations and do the necessary backfilling and make the necessary taps at such points and shall plug said holes after completion of the test, unless otherwise specified on the approved drawings.

The section under test shall be maintained full of water for a period of 24 hours prior to the combined pressure and leakage test being applied.

The pressure and leakage test shall consist of first raising the water pressure to 200 pounds per square inch, or as directed by the Water District. While maintaining this pressure for two hours, the Applicant shall make a leakage test by metering the flow of water into the pipe. If the average leakage during the two-hour period exceeds a rate of 0.833 gallons per inch of diameter per mile, the section shall be considered as having failed the test.

If the section fails to pass the pressure and leakage test, the Applicant shall do everything necessary to locate, uncover, and repair or replace the defective pipe, fitting, hydrant or joint. Additional tests and repairs shall be made until the section passes the specified test.

### 8.3 DISINFECTING AND FLUSHING.

The Applicant shall furnish all equipment and materials necessary to do the work of disinfecting, and shall perform the work in accordance with the procedure outlined in the AWWA Standard for Disinfecting Water Mains, Designation C-651 and C-651a as amended to date. The method used shall be that described in Section 5.2 of the AWWA Standard as amended to date.

The dosage shall be such as to produce not less than 10-ppm concentration of free chlorine after a contact period of not less than 24 hours.

Chlorine shall not be left in the mains for more than 48 hours. After treatment, the main shall be flushed with clean water until the residual chlorine content does not exceed current residuals of the Water District.

During the disinfection period, care shall be exercised to prevent contamination of water in existing mains.

Water used for disinfecting and flushing shall be dechlorinated prior to disposal and shall be disposed in an approved manner.

After final flushing and a 24-hour wait period, two consecutive bacteriological water samples shall be collected, at least 24 hours apart, from the new watermain at each selected point. Spacing of samples shall not exceed 1200 feet. In addition, one sample set shall be collected from the point of water entry into the new main, at the ends of the new main, and at the ends of all branches off the new main. Hoses or hydrants may not be used for the collection of samples. Sample sites and procedures shall be reviewed and approved by the Water District prior to sampling.

Consecutive sampling shall be repeated for any failure until both samples within each set meet the acceptance criteria described below.

A laboratory certified by the State and approved by the Water District shall analyze the samples. A State-approved laboratory must receive samples, properly preserved, no more than 24 hours after they are taken from the main. Test results shall demonstrate that all water sampled from the watermain has a total-coliform count of zero and an increase in heterotrophic plate count of 100 per ml or less above that in point-of-entry water. In no case shall total HPC exceed 500 per ml. If laboratory background test result exceeds 500 per ml, the test shall be considered inconclusive and a retest shall be conducted.

8.4 RESTRAINED JOINTS. A restrained mechanical gland shall be used for all mechanical joints.

#### 8.5 HYDRANT CONNECTIONS.

Hydrant connections shall be 6-in minimum and of the mechanical-joint type with a maximum spacing of 500 feet. Ductile-iron restrained joints and anchor tees shall be provided.

#### 8.6 SERVICE CONNECTIONS.

Service connections shall consist of a corporation stop, curb stop, curb box, service saddle (for services larger than 1-in.), PE tubing and splicing couplings as necessary. Meter pits shall be required for services as prescribed in Section 5.9 of the Regulations

#### 8.7 GENERAL CONSTRUCTION REQUIREMENTS.

The following General Requirements of construction shall apply.

The Applicant shall notify Dig-Safe prior to the start of construction and shall comply with all Federal, State and Local regulations including but not limited to safety.

The Applicant shall handle groundwater in a manner consistent with all federal, state and local laws, regulations and by-laws as amended to date.

The Applicant shall restore areas disturbed by construction to original pre-construction condition.

The Applicant shall verify the location of underground utilities, including services, with utility owners and shall comply with their requirements for protection of utilities.

The Applicant shall immediately repair any damage to existing utilities (Town owned or otherwise) resulting from his work, at no expense to the Water District.

Except where otherwise directed, twelve (12) inch minimum clearance shall be provided between the exterior of water mains and other utilities. Where new mains pass under utilities, they shall cross without use of bends. When new mains cross an existing sewer, it shall be done without the use of bends and/or joints.

All fittings shall be backed with concrete thrust blocks as indicated on the standard details. Thrust block sides shall be formed with plywood and bearing areas shall be not less than indicated in the Appendix.

All trenches shall be rolled and/or mechanically tamped to achieve compaction in excess of 95%.

The following standard details are included in the Appendix:

- Watermain Trench Detail
- Gate Valve Detail I
- Gate Valve Detail II
- Hydrant Assembly Detail
- Service Connection Detail
- Permanent Blow Off Detail
- Meter Pit Detail
- Thrust Block Details



## **APPENDIX**

Charges and Rate Schedule

Watermain Trench Detail  
Gate Valve Detail I  
Gate Valve Detail II  
Hydrant Assembly Detail  
Service Connection Detail  
Permanent Blow Off Detail  
Meter Pit Detail  
Thrust Block Detail

## **STANDARD MATERIAL FOR WATERMAIN CONSTRUCTION**

### **GENERAL**

The standard materials set forth are the current Water District requirements for watermain construction and shall be subject to review and change periodically by the Commissioners

### **WATERMAIN MATERIALS**

All pipe, fittings, and accessories shall conform to the requirements of the latest edition of the following standard specifications as applicable:

### **AMERICAN NATIONAL STANDARDS INSTITUTE STANDARDS**

- A21.4 Cement-Mortar Lining for Cast-Iron and Ductile-Iron Pipe and Fittings for Water
- A21.11 Rubber-Gasket Joints for Cast-Iron and Ductile-Iron Pressure Pipe and Fittings
- A21.51 Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or Other Liquids
- A21.53 Ductile-Iron Compact Fittings, 3-in. through 16-in. for Water and Other Liquids

### **PIPE**

Unless otherwise indicated or specified, ductile-iron pipe shall be at least thickness Class 52 for pipe 12-in. and smaller and at least thickness Class 51 for pipe 14-in. and larger. Pressure class pipe will not be accepted.

Fittings. Fittings shall conform to the requirements of the above-mentioned ANSI A21.53 and shall have a pressure rating of 350 pounds per square inch. Unless otherwise indicated or specified, fittings shall be all-bell fittings.

Joints. Joints for push-on and mechanical-joint pipe shall conform to ANSI A21.11. Ring-type gaskets, suitable for exposure to the liquid within the pipe, shall be used. Bolts for any joint shall be of the high-strength low-alloy steel type, except as otherwise noted. All mechanical-joints shall be formed using a restrained mechanical gland.

Restrained Mechanical Gland. Restrained Mechanical Gland shall be EBAA Iron's Meg-A-Lug ® retainer gland or other non-set-screw type retainer gland that will not void the warrantee of the pipe manufacturer.

Couplings. Couplings shall be of cast iron and shall be Dresser Style 153, Smith-Blair 441, HYMAX, or approved equal products. The couplings shall be provided with high strength, low alloy, corrosion resistant bolts and nuts.



All couplings shall be furnished with the pipe stop removed.

Couplings shall be provided with gaskets of a composition suitable for exposure to the liquid within the pipe.

Lining and Coating. The inside of pipe and fittings shall be given a cement lining and bituminous seal coat in accordance with ANSI A21.4. Particular care shall be used to insure proper bonding of the seal coat. Lining shall be double thickness.

The outside of buried pipe and fittings shall be coated with the standard bituminous coating specified under the appropriate ANSI Standard Specification for the pipe and fittings.

Joint Lubrication. Joint lubrication for gaskets shall be suitable for lubricating the parts of the joint assembly. The lubricant shall be non-toxic, shall not support the growth of bacteria, and shall have no deteriorating effects on the gasket material. It shall not impart taste or odor to water in the pipe. The lubricant containers shall be labeled with the trade name or trademark and the pipe manufacturer's name. The lubrication shall be only that recommended by the pipe and fitting manufacturers. No other lubricant is acceptable.

#### VALVE, HYDRANT AND SERVICE CONNECTIONS

Gate Valves. Gate valves shall be 150-lb. non-rising stem, iron-body, bronze-mounted, resilient-seated wedge type gate valves having mechanical-joint ends, and shall conform to the AWWA Standard for Gate Valves for Water and Other Liquids, Designation C509. Gate valves shall open right (clockwise).

Hydrants. Hydrants shall conform in design and manufacture to the latest issue of AWWA Standard C502 "Dry Barrel Fire Hydrants" and shall include an independent drain rod and rising stem similar to a Clow Eddy Model.

Hydrants shall comply with the following:

- a. Main Valve Opening: 5.25 inches
- b. Outlets: 2 – 2.50 inch hose connections  
1 – 4.50 inch steamer connection
- c. Operating Nut Size: Pentagon 1.50 inches point to flat
- d. Direction of Opening: Clockwise (OPEN RIGHT)
- e. Bury Length: 5.5 feet
- f. Sub-Seat Material: Bronze
- g. Model: Traffic (breakaway design)
- h. Color: Match Service Zone Fire Hydrant Standards

Valve Boxes. Valve boxes shall be of rough, even-grained cast-iron and of the adjustable, slip, heavy-pattern Buffalo 64 type. The boxes shall be adjustable through at least 6-in. vertically without reduction of the lap between sections to less than 4-in. Valve boxes shall be of North American origin.

Service Connections

The corporation stop shall be all bronze construction 1” with a Teflon coated ball and AWWA-type (CC) inlet threads with compression outlet. 200 PSI working pressure

The curb stop without drain shall be all bronze construction 1” with a Teflon coated ball suitable for PE tubing compression connections. 200 PSI working pressure.

The curb box shall be of the telescoping type 1” steel; tar-base enamel-coated inside and out and shall be provided with a 24” operating extension rod. The cover shall be of extra heavy cast-iron construction with center brass pentagon plug for paved areas or two hole cover for unpaved.

Plastic tubing shall be PE Type, rated for 200 PSI working pressure.

The service saddle shall be enamel coated ductile iron or bronze with double stainless or bronze straps. Saddle shall have an NBR gasket for use with potable water.

Meter Pit shall conform to AWWA Standard C800 (ASTM B-62) and shall include a Cast Iron double lid cover with an asphalt black paint conforming to ASTM A48-92, Class 25 as manufactured by the Ford Meter Box Company or an approved equal.