Water Department – Fire District No.1
438 Granby Road
South Hadley, MA 01075

Rules and Regulations of the Department in addition to Housing and Development

Revised January 2011

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APPLICATION FOR WATER IMPACT STUDY

Date_____

Name of Applicant: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Name of Developer if Different: _____

Address: _____

Telephone Number: _____

Fax Number: _____

Project Location Plan

Identification Name or Number:_____

_____

Description of Requested Water Service:_____

_____

_____

Type of Development: Residential: _____ Industrial/Commercial:_____

Municipal: _____ Other (Describe):_____

For Residential Developments:

Type (Choose one):

Condominiums: _____

Rental Units: _____

Owner Occupied: _____

Total Number of Family Units Planned: _____

Total Number of Bedrooms in Development: _____

Total length of Proposed New Roads: _____

Total length of New Water Mains: _____

Number of Proposed Dead End Water Mains and Length of Each:_____

_____

_____

Minimum Ground Elevation of Site (USGS Datum): _____

Maximum Ground Elevation of Site (USGS Datum): _____

For Industrial/Commercial/Municipal and Other Types of Developments:
Type of Establishment: _____

Estimated Average Day Consumption (gpd): _____

Estimated Maximum Day Consumption (gpd): _____

Estimated Peak Hour Consumption (gpd): _____

Fire Flow Needs (gpm): _____

Fire Flow Test Data: Flow Hydrant Location:_____

Residual Hydrant Location:_____

Flow:_____gpm Residual Pressure:_____psi

Fire Flow @ 20 psi residual:_____gpm

Target Date for Start of Project if Approved:_____

Target Date for Project Completion:_____

Pertinent Notes or Comments:_____

_____

Person Making Application:

_____
Print Name

Mailing Address: _____

_____

Telephone Number: _____

Fax Number: _____

E-Mail Address (Optional): _____

_____
Signature

_____
Date

Base Fee for Study: $_____

Water Impact Study Fee Information

The amount of the base fee shall be in accordance with the rate schedule attached. The base fee includes one review of the plans of the development by the District's Superintendent/ Engineer. The costs associated with additional reviews required for resubmissions of the plans by the Developer will be in addition to the base fee and shall be the financial responsibility of the Developer. The Developer may request an estimate of the additional cost prior to resubmission.

Water System Improvement and Connection Fee Information

In addition to the Impact assessment study and associated fee, all approved new and/or modified water service connections are subject to a ***Water System Improvement and Connection*** fee. The fee amount shall be in accordance with the rate schedule attached. Payment to the Water Department shall be made prior to construction of any new service connections or addition of new "units" to an existing service connection. Refer to Section 4 for additional information.

Acceptance of Associated Fees and Terms

The undersigned hereby states that the information provided by the applicant is factual and accurate to the reasonable knowledge of the applicant and further agrees to the Rules and Regulations and associated fees established by the Water Department.

By:_____

Signature of Applicant

_____

Date

WATER IMPACT STUDY RATES

A. 2 to 10 LOT RESIDENTIAL DEVELOPMENT MINIMUM

$650.00 Minimum Charge

B. 11 to 40 LOT RESIDENTIAL DEVELOPMENT

$650.00 + $10.00 per lot or family unit over 10 lots

(Example for a 40 lot or family unit project:
The charge would be $650.00 + 30 x $10.00 for a minimum charge of $950.00.)

C. RESIDENTIAL DEVELOPMENTS OF 41 LOTS AND OVER

$950.00 + $5.00 per lot or family unit over 40 lots

(Example for an 85 lot or family unit project:
The charge would be $950.00 + 45 x $5.00 for a minimum charge of $1,175.00.)

D. A development needing an "in depth" hydraulic review would be figured as above A, B, or C plus $550.00 for field and computer work.

E. Industrial, Commercial, Municipal and/or other Non-Residential requests, the minimum charge shall be $950.00 plus $5.00 per each 10,000 c.f. annual anticipated water use plus "D" as applicable.

WATER SYSTEM IMPROVEMENT AND CONNECTION FEE RATES

A New Residential service connections are $1,200 per "Family Unit" with a "Family Unit" defined as living quarters provided with a kitchen and toilet facility.

B. Modified existing service connections are $1,200 per additional "Family Unit": to be added. The definition of a "Family Unit" is the same as for new residential service connections (A).

C. New non-residential service connections are $1,200 per equivalent "Family Unit." An equivalent "Family Unit" is defined as an annual water usage of 10,000 cubic feet or any portion thereof.

D. Modified non-residential service connections are $1,200 per additional equivalent "Family Unit" to be added. The definition of an equivalent "Family Unit" is the same as for new non-residential service connections (C).

SECTION 1 DEFINITIONS AND GENERAL PROVISIONS

1.1 INTRODUCTION

Any person, group, business, or corporation who is supplied by the public water distribution system shall be required to comply with the following Rules and Regulations established by the Board of Water Commissioners, the governing body created under the Special Acts of the Legislature. The Board of Water Commissioners reserves the right to final interpretation or variance to these Rules and Regulations.

1.2 DEFINITIONS

The definitions presented in this section shall serve as a reference for the terminology utilized in the Rules and Regulations.

Approved – Accepted by the Reviewing Authority as meeting an applicable specification stated or cited in this regulation or as suitable for the proposed use.

Approved Backflow Prevention Device or Devices – A method to prevent backflow approved by the MADEP for use in Massachusetts.

Backflow – The flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable water supply from any source other than the intended source.

Bill – A written statement issued by the Commission to a customer, in which is set forth the actual or estimated amount of water consumed through the period stated on the bill, all charges due for water service during such period, and such additional information as may be required under these Regulations.

Charges – All fees, rates, rent assessments and other charges for water services, facilities, and commodities which are furnished or supplied by the Commission and which it is authorized under the Special Acts of the Legislature to repair, revise, charge, and collect.

Commission – The Water Department – Fire District No.1 Board of Water Commissioners, a body created under the Special Acts of the Legislature, the powers of which are exercised by a board of three members elected in accordance with the Acts, and includes without limitation all its divisions and plants.

Contaminant – Any physical, chemical, biological, or radiological substance or matter in water.

Cross Connection – Any actual or potential connection between a distribution pipe of potable water from a public system and any waste pipe, soil pipe, sewer, drain, or other unapproved source.

Cross Connection Violation Form – A violation form designated by the MADEP, which is sent to the Owner by the water supplier with copies sent to the MADEP, plumbing

inspectors, and Board of Health delineating cross connection violations found on the Owner's premises and a procedure for corrective action.

Customer – The person or entity listed on the records of the Commission as the party responsible for payment of bills for charges for water to a building, whether or not the premises are occupied by the customer or the customer's authorized representative(s).

Customer Service Pipe – All branch connections off of the municipal water system to individual houses, commercial or industrial establishments, piping on private property around residential, commercial or industrial properties, and branch connections intended to provide water service to private property.

Delinquent Account – An account with the Commission that remains unpaid 45 days after the date of issuance.

Delivery – A written communication to be transmitted to a residential tenant, the depositing of the communication

(1) at or under the tenant's door, or

(2) in the event that an employee of the Commission cannot enter the premises despite reasonable and appropriate efforts to do so, at or under the door of a principal entrance to the residential building

Double Check Valve Assembly – A backflow prevention device that incorporates an assembly of check valves, with shut-off valves at each end and appurtenances for testing.

Final Payment Notice – A Demand Notice indicating the scheduling of termination of water service in addition to a water shut-off/turn-on fee, certified mailed by the Commission to all accounts that remain unpaid 75 days after the billing date of the initial bill.

In-Plant Protection – The location of approved backflow prevention devices in a manner that provides simultaneous protection of the public water system and the potable water system within the premises.

Landlord Customer – A customer who is the owner or lessor of a residential building.

Late Payment Notice – A notice indicating delinquency charges mailed by the Commission to all accounts that remain unpaid 30 days after the billing date of the initial bill.

MADEP – The Massachusetts Department of Environmental Protection

Municipal Water System – All main line piping systems which either originally or subsequently are in accepted city streets and/or public ways and considered part of the South Hadley Fire District No.1 distribution system.

Nonexclusivity of Remedies – Nothing shall be construed to limit or infringe upon the right of the Commission to:

(1) Make, without notice, such temporary interruptions in water service as it deems necessary on a routine or emergency basis for restoration, repair or replacement of the water works system as defined in the Special Acts, or

(2) Pursue its remedies for the unauthorized use or diversion of water or for damage to the Commission's property under other regulations promulgated by the Commission, the Special Acts or other applicable laws.

Owner – The person or entity shown on the records of the Town Assessors of the Towns of South Hadley, Ludlow or Granby as the owner of a building, or any unit thereof, to which water service is supplied.

Receipt – A written communication which these Regulations require to be transmitted to a customer or a written communication posted in or on a building or delivered to a dwelling unit, on the date of posting or delivery.

Residential Building – A building containing one or more dwelling units occupied by one or more residential occupants, but excluding condominiums, cooperatives, nursing homes, hotels, and motels.

Residential Tenant – A person or group of persons, other than a customer of the Commission, occupying, as a lessee or a tenant at will or a tenant at sufferance, a dwelling unit in a building for residential purposes and receiving water service pursuant to a rental arrangement, direct or indirect, with the owner of the building.

Reviewing Authority – The MADEP, its Designee, or the local plumbing inspector, authorized by M.G.L. c. 142 and licensed by the Board of State Examiners of Plumbers and Gas Fitters, whichever is responsible for the review and approval of the installation of an approved backflow prevention device.

Water Meter – A device for measuring and recording the water consumption at a building, installed by or at the request of the Commission, and used for billing by the Commission.

Water Service – Facilities and/or commodities furnished or supplied by the Commission pursuant to the Special Acts.

Water Shut-Off/Turn-On Fee – A fee added to any bills or charges for the scheduling of termination of water service for any account remaining unpaid 75 days after the billing date of the initial bill, independent of the actual or physical termination of water service.

1.3 AUTHORITY TO ADOPT RULES AND REGULATIONS

These Regulations are adopted pursuant to the authority granted to the Commission under the Special Acts of the Legislature.

1.4 APPLICATION; NONEXCLUSIVITY OF REMEDIES

These Regulations shall apply to all billing and collections of charges for water service and to termination of service for nonpayment of the same. Nothing in these Regulations shall, however, be construed to limit or infringe upon the right of the Commission to pursue any other remedies available under the Special Acts or under other applicable law for the collection and enforcement of charges for water service.

SECTION 2 WATER SERVICE

2.1 INTRODUCTION

The purpose of this section is to inform developers of the procedures associated with applying to the Water Department – Fire District No.1 for a new water service. This section discusses the application procedures for new water service and outlines general requirements for new service connections and pipeline extensions. More detailed information on material standards and construction standards are presented in Sections 5 and 6, respectively.

2.2 WATER SERVICE APPLICATION

Each application for water service must be made at the Water Department office on forms provided for that purpose. The form must be signed by the owner of the property requesting service or by its authorized representative. The application must state the extent of water service required and must include the date of application, the location of the property, and the purpose for which water is to be used.

All charges for water service and water consumed will be billed directly to the property owner.

The Board of Water Commissioners reserves the right to refuse water service to any real estate or location where, in its opinion, proper and adequate service cannot be provided under the guidelines set forth by the Massachusetts Department of Environmental Protection, or where the extension of such water service would be detrimental to the existing water system.

Application for water service to housing, commercial, or industrial developments shall be submitted to the Water Department – Fire District No.1 along with a plot plan showing property dimensions. Such plans shall be stamped to show Planning Board action. All new subdivisions or developments must be looped. If the land adjoining the development is not already developed or built upon, an easement must be provided and properly recorded along with the pipe constructed in the easement area to the end of the property line of the development as determined by the Board of Water Commissioners.

Application for water service to individual lots facing on existing streets must include an acceptable plot plan or lot plan.

2.3 SERVICE CONNECTIONS

All connections off the main pipe will be classified as service connections, regardless of size. At a minimum, service connections shall conform to the requirements of the Board of Water Commissioners in regards to pipe size, materials, layout, and manner of installation, as described in Sections 5 and 6 of these Rules and Regulations.

The term service connections shall cover branch connections to individual houses; branch connections to commercial and industrial establishments; piping on private property around residential, commercial, and industrial properties; and branch connections (both main pipe and service connections) intended to provide water service to private property being subdivided and/or developed.

The entire cost of all service connections, from the main line to the inside of the cellar wall to the point of termination, as applicable, shall be borne by the property owner applying for water service.

A payment for service connections will be required by the Water Department – Fire District No.1 at the time of application for water service.

A final adjusted billing for service connections will be rendered by the Board of Water Commissioners after completion of the installation work and must be paid before water service is provided.

Contractors of all new developments where the contractor constructs its own system of pipe, hydrants, valves, and service connections to the new houses will be responsible for the main pipe connection charges to the development. If the Water Department – Fire District No.1 is called upon to participate in the work of a private development, the customer will be charged for all work carried out by the Water Department.

2.4 SERVICES GREATER THAN 100 FT. IN LENGTH

If the length of the service piping from the distribution main to the planned building is greater than 100 feet, then the Developer and/or property owner shall install a meter pit and meter reading device in an approved below grade enclosure at the street line near the curb stop. Under this arrangement, the service pipe from the meter enclosure to the building shall be the property owner's responsibility.

2.5 PIPELINE

All main pipe extensions and service extensions shall be installed by the Board of Water Commissioners or its authorized representatives. All such installations shall conform to the standards and requirements of the Board of Water Commissioners in regards to pipe sizes, materials, layout, and manner of installation as described in Sections 5 and 6 of these Rules and Regulations.

Pipelines serving individual buildings, commercial, or industrial establishments will generally be approved for installation at the sizes and arrangements specified by the property owner. In all cases where, in the opinion of the Board of Water Commissioners, the pipeline may ultimately become a part of the Water Department – Fire District No.1 distribution system or where the pipeline can affect a substantial number of people, requirements and standards of the Board of Water Commissioners shall apply.

In cases where the Board of Water Commissioners deem necessary to provide excess pipe capacity to strengthen the existing distribution system, or excess pipe capacity for transmission main service, the increased cost for materials shall be the responsibility of the applicant.

No main pipe extension or service connection will be installed until the street or property through which the pipe will pass has been brought to sub-grade.

2.6 ALTERATIONS IN WATER SERVICE PIPING

No alterations in the water service piping shall be made without written notice to the Board of Water Commissioners and further application made. Water service piping shall include service fittings, meters, piping, service/gate boxes, etc.

The Water Department – Fire District No.1 is not responsible for the actions of any property owner who alters land contours, sidewalks, driveways, or landscaping arrangements which cause the life of the pipe to depreciate due to freezing or lack of pipe depth coverage. Relocation or repair of the water service shall be the responsibility of the property owner.

SECTION 3 CONDITIONS OF SERVICE

3.1 INTRODUCTION

The purpose of this section is to inform developers of the requirements for submitting a preliminary development plan to the Water Department – Fire District No.1 for water service and to provide a description of the possible responses from the Water Department.

3.2 GENERAL REQUIREMENTS

Water Department Fees

The Board of Water Commissioners has established two specific fees which are applicable to all new and/or modified water service connections as follows:

Water Impact Assessment Study

A described in Section 1 of the ***Rules & Regulations Applicable to Housing and Development Construction***, all requested new and/or modified service connections are subject to review by the District and a fee schedule has been established. The fee schedule is attached to the ***Application for Water Impact Assessment Study***. Applicants are responsible to pay the applicable fee to the Water Department at the time of application.

Water System Improvement And Connection Fee

The District has in the past and continues to expend capital improvement funds to provide for and maintain a water supply and distribution system that meets the service area water supply needs, complies with applicable regulatory requirements and is upgraded as the system ages. A water system improvement and connection fee has been established to assist with maintaining adequate revenues for these tasks. The fee schedule is attached to the ***Application for Water Impact Assessment Study***. Applicants are responsible to pay the applicable fee to the Water Department after approval of the service by the Board of Water Commissioners and prior to the Water Department constructing the new service connection(s). Refer to Section 3.9 for details regarding service pipeline construction.

Water Department valves, including curb stops and main gate valves shall be operated by Water Department personnel only, by authority of the Superintendent. Unauthorized operation of any Water Department valve shall result in immediate termination of water service. Water service will not be restored without approval of the Board of Water Commissioners and subject to a fifty dollar ($50.00) service charge.

When the house service pipe is connected to the curb stop by District personnel, the connection must be checked for leaks before the trench is backfilled and before any water is used. Only the Water Department will turn on the water. At that time, a fifty dollar ($50.00) charge for water-on must be paid. The inside shut-off and meter will be installed at that same time. The Contractor must provide suitable enclosure and support for the meter equipment. The Contractor must give two days notice to the Water Department before excavation begins. The Contractor must notify Dig-Safe.

Condominiums and Rental Units Converted to Condominiums

Condominiums, either at time of construction or at the time of conversion, shall have, at owner's expense, a separate water service pipeline for each condominium family unit, from the main pipeline in the street of right-of-way to the condominium family unit including corporation stop, ¾-inch minimum copper tubing, curb stop and box and a standard District approved and installed water meter. The owner of record of each individual condominium family unit shall then be billed for its water used.

Every separate building housing rental family unit, whether jointed or not by a walkway or in physical contact with another, may be serviced by a single pipeline and meter, properly sized for service to the provided. However, a Developer or owner of a building housing rental family units may separately pipe and meter each family unit for water service if said Developer or owner so desires. In any event, the owner of record of the property involved will be billed for water use.

However, a Developer or owner of a building housing rental family units not constructed with a separate water service pipeline for each family unit, shall execute a document prepared by the Water Department stating that if said rental units are converted in the future, to condominium units then, and in that event, each condominium family unit shall then be re-piped with a separate water service pipeline, as described above at no cost to the District. Said document shall then be recorded in the Hampshire County Registry of Deeds.

As-Built Drawings

Upon the completion of the construction of a development water distribution system, whether housing, commercial or industrial, including but not limited to, all piping, hydrants, valves with boxes, service pipelines including corporations to curb boxes, servicing all building lots, said water distribution system shall not be considered for acceptance by the District until the appropriate number of As-Built Drawings (prepared on an acceptable reproducible paper or on mylar on a scale 1 inch = 40 feet) has been filed and accepted by the Board of Water Commissioners.

Said plans shall show dimension ties to valve boxes, curb stops and buried fittings, including corporations, as well as locations where water pipelines, other than service lines, cross other buried utilities such as sewers, drains, power, television, gas, telephone, etc. and any fire service lines shall be shown on said plans. However, As-Built Drawings of Commercial and Industrial Water Distribution Systems need not identify service pipelines to parcels of land not yet sold to a known water user.

3.3 PRELIMINARY DEVELOPMENT PLAN SUBMITTAL

At the time of submission of the preliminary development plan to the Planning Board as provided for under Chapter 41, Paragraph 815 of the General Laws, the developer shall furnish the Water Department – Fire District No.1 with a similar preliminary development plan, which will be used by the Department for determining if the proposed development can be served by the municipal water system.

The preliminary plan submitted to the Water Department – Fire District No.1 shall show (1) the general pattern of proposed streets, (2) adjoining existing streets and the sub-divisions/improvements existing thereon, (3) U.S.G.S. ground elevations for the area. The plan shall be prepared in a professional manner and in sufficient detail to permit engineering analysis and shall be prepared and sealed by a Professional Engineer registered in the Commonwealth of Massachusetts.

In the event that the development or project is at a location or is of such a type as to not require Planning Board review and approval or action under the General Laws - Sub-division Control, then these Holyoke Water Works requirements shall still apply and shall be interpreted as though the development/sub-division was under Planning Board/Sub-division Control Law.

3.4 RESPONSE TO SUBMITTAL

In the event the Water Department – Fire District No.1 determines that the proposed development can be properly served by the municipal water system, then the developer shall submit to the Department a plan of the water piping system that meets the requirements outlined in Section 4, "Conditions of Construction”.

In the event the Water Department – Fire District No.1 determines that the proposed development cannot be served by the municipal water system, then the developer's only alternative will be to utilize individual wells for water supply. Private re-pumping of the municipal water system is prohibited, except in the case of "high rise" buildings.

SECTION 4 CONDITIONS OF CONSTRUCTION

4.1 INTRODUCTION

This section describes the conditions of construction that the developer must meet if the Water Department – Fire District No.1 has determined that the development can be served from the municipal water system and the developer proceeds with its development.

4.2 PLAN SUBMITTALS

At the time of submission of the Definitive Sub-division plan to the Planning Board as provided for under Chapter 41 of the General Laws, the developer shall furnish the Water Department – Fire District No.1 with a similar set of Plans, which shall be used by the Holyoke Water Works for review and/or approval of the water piping system.

4.3 PIPING SYSTEM REQUIREMENTS

The piping system shall meet the following minimum requirements and shall be subject to the approval of the Water Department – Fire District No.1:

a. Pipe shall be Ductile Iron, Class 52, 8-inch minimum.

b. Hydrants shall be spaced at 400 feet maximum.

c. Hydrants along a street shall be located opposite the common property line of two lots.

d. Every hydrant shall be equipped with a 6-inch shut-off valve, bolted or anchored to the hydrant tee.

e. Valves on straight runs of pipe shall be spaced no more than 800 feet apart and as determined by the Water Department.

f. Connections to the existing water system shall be made by a cut-in and shall be valved three ways. Under various circumstances, the Water Dept. – Fire District No.1 may allow the use of a tapping sleeve and valve.

g. Dead ends shall be avoided by looping of all water mains. Acquisition of property or easements and related engineering services necessary for looping shall be the responsibility of the developer. Easement width shall be 30 feet minimum and subject to upward revision depending upon pipe diameter. The easement shall be dedicated for the purpose of supplying water only; all other utilities, i.e. gas, electric, sewer, telephone, etc., shall be prohibited.

i. All water mains and service pipe shall be laid in a trench **separate** from any other utility. The horizontal distance between water mains or service pipe and any other utility shall be a minimum of ten feet. Exception to this rule

shall be at the discretion of the Board of Water Commissioners or its assigned representative.

j. All materials shall be in accordance with Section 5, "Material Standards". All material shall be new and shall be of the type currently used by the Water Department – Fire District No.1.

k. All construction shall be in accordance with Section 6, "Construction Standards". All construction shall be of the best quality, in accordance with the current practice of the Water Department – Fire District No.1.

4.4 TIME FRAME FOR CONNECTIONS

Connections to the existing water distribution system may be made only during the period beginning April 1st and ending December 1st . Connections outside of this period may be made only if the developer assumes full responsibility for maintenance and repair of the excavated area and provides the necessary equipment and manpower to excavate, backfill, and restore the trenched area to the satisfaction of the Department of Public Works. The developer shall be required to obtain the necessary permits to excavate within the public ways and shall be subject to any conditions imposed thereon. Preparation and restoration of any road or sidewalk surface shall be in accordance with the South Hadley Department of Public Works Specifications.

4.5 WD WORKMANSHIP GUARANTEE

All workmanship provided by the Water Department – Fire District No.1 associated with a new connection installation, an existing service repair, or meter replacement to the original pipes will be completed in a satisfactory manner and will be guaranteed by the Water Department – Fire District No.1 for a period of 90 days following the completion of the work. Liability will be limited to the repair or replacement of unsatisfactory work or materials.

4.6 DEVELOPER'S RESPONSIBILITY FOR CONNECTIONS

Connections to the existing water distribution system will be made by Water Department – Fire District No.1 personnel. The developer shall pay the full cost of the labor, materials, and equipment required for the construction of such connection.

4.7 DEVELOPMENT OF SUB-DIVISIONS

Within a sub-division, water main and service pipe construction shall be generally carried out by the Developer. The developer shall pay the full cost of all labor, materials, and equipment required for the construction, as shown on the Definitive Plan approved by the Water Department – Fire District No.1.

At the request of the developer, the Water Department – Fire District No.1 may waive this requirement and allow the developer to construct its water mains and service connections using a contractor that meets the approval of the Department. In this event, the developer must provide satisfactory credentials indicating the capabilities and experience of the contractor. Once approved, no changes in the contractor shall be made.

4.8 PIPING SYSTEMS

All piping systems constructed as service connections and located on private property shall be under the control of the Board of Water Commissioners for the use of the premises where laid and shall be maintained at the expense of the property owner. The piping system, which includes gates, hydrants, fittings, etc., shall be maintained in accordance to the standards of the Water Department Fire District No.1.

All main line piping systems that are either originally or subsequently in accepted streets and/or public ways shall belong to the Board of Water Commissioners. These pipes will be considered a part of the Water Department – Fire District No.1 distribution system.

4.9 INSPECTION OF CONSTRUCTION

All construction by the developer's contractor shall be subject to full-time inspection by either Water Department personnel (when available) or by personnel of its consulting engineer. The cost of such inspection shall be charged to the developer. The developer shall coordinate its construction activity so that this full-time inspection can be provided easily and economically.

Construction by Water Department personnel will not require inspection.

4.10 WATER SYSTEM USAGE

The developer and/or its contractor shall not operate any hydrants, valves, curb stops, or corporations, nor shall they draw any water from the system without the specific approval of the Water Department – Fire District No.1.

No contractor, developer, or other entity shall be allowed to use city water for building, construction, or private purposes without written authorization of the Water Superintendent. Any such temporary water service will be subject to charges for installation and for water usage, as well as a service charge each time the Water Department has to turn it on or off. Water usage will be metered or estimated and will be charged for at the prevailing water rates.

Valves, hydrants, corporations, and curb stops will be operated only by Water Department personnel, after authorization by the Superintendent. Failure to conform to these requirements will result in an assessment and loss of water service.

4.11 CHARGES FOR WATER SERVICE

Any person, group, business, or corporation applying for water service shall be subject to connection charges. The developer shall be subject to and shall pay the following charges:

a. **Rock Excavation -** A charge on a cost reimbursement basis will be made for all rock excavation in connection with a service installation or main pipe extensions on existing streets and shall be paid for before water is turned on. In new developments or services where ledge, hard rock, or severe terrain interferes with construction of the necessary activities of the Water Department Fire District No.1, a private contractor will be hired and its services will be billed to the property owner. In new and old constructions where the Water Department – Fire District No.1 reconstructs piping and conditions are hazardous because of another utility's encroachment, the Water Department reserves the right to relocate water mains or services at the expense of the property owner.

c. **Connection Charge** - A service connection charge is a charge for each connection to the existing water system and/or a service connection off of a private water system for domestic use or for fire protection purposes. The charges are subject to change without notice.

d. **Construction Cost -** The developer shall bear the entire cost of constructing the proposed main piping and service pipe system as shown on the approved Definitive Plan.

e. **Final Acceptance -** When the developer's water system has been completed, has met all requirements of the Water Department – Fire District No.1, and all charges have been paid, a letter of acceptance will be sent to the developer by the Water Superintendent representing the Board of Water Commissioners and the Planning Board.

   Only after the acceptance letter has been received by the developer will the development be provided water service.

SECTION 5 MATERIAL STANDARDS

5.1 INTRODUCTION

This section specifies the material standards with which developers and their contractors shall conform for construction projects for the Water Department Fire District No.1, South Hadley. This section covers specifications for pipe, pipe joints, fittings, tapping sleeves, couplings, gate valves, tapping valves, valve boxes, hydrants, hydrant tees, service piping and connections, and service location.

5.2 PIPE

Distribution system pipe shall be at least 8-inches in diameter, shall be Class 52 ductile iron pipe, double cement lined and seal coated with a bituminous outside coating per AWWA Specifications. All ductile iron pipe for a particular development or replacement project shall be from a single manufacturer and shall be manufactured in the United States. The pipe shall be manufactured by U. S. Pipe & Foundry Company, Griffin Manufacturing or Atlantic States Corp. Private service connections, whether for fire protection or domestic service, shall be determined by the Water Department – Fire District No.1 at the time of preliminary plan review.

If the Water Department – Fire District No.1 determines that a pipe diameter larger than 8-inches will be needed to supply the Development, then the size shall be determined by the Board of Water Commissioners and the pipe will be furnished and installed at the developer's expense.

Pipe used for hydrant branches and sprinkler lines shall be at least 6-inches in diameter and shall meet the above-mentioned specifications.

On all water pipe and fittings, the contractor shall make provisions for the electrical continuity of the pipeline by inserting two bronze wedges into the joint. Wedges shall be placed as close to the 3 o'clock and 9 o'clock positions as possible.

The contractor shall furnish and install a polyethylene encasement over the ductile iron pipe in accordance with AWWA Specifications. Polyethylene shall be manufactured in accordance with the requirements of ASTM Standard Specification D-1248, Polyethylene Plastics Molding and Extrusion Materials and shall be in the form of a tube. Installation of wrap shall be in accordance with method "A" of AWWA Specification C105 and shall encase all pipe, fittings, valves, and all other appurtenances.

5.3 PIPE JOINTS

Tyton pipe joints are recommended on straight runs of pipe. Gaskets shall be standard for pipe used and approved by the Water Department, shall be manufactured in the United States, and shall comply with applicable AWWA Specifications.

The Water Department – Fire District No.1 may require under certain terrain conditions that restrained type joints be used. The method of restraint may either be an interlocking type or mechanical joint with restrainer gland as specified by the Department.

All fittings, bends, valves, sleeves, or other mechanical type joints shall be restrained with the use of retainer glands. Concrete thrust blocks shall also be used at all tees, bends (regardless of the deflection angle or direction), hydrants, caps, and plugs.

Mechanical joint retainer glands shall be installed on all fittings. Retainer glands shall be specifically designed to fit standard mechanical joint bells with corrosion resistant, low-alloy T-head bolts conforming to AWWA Specifications. Retainer glands shall be U.S. Pipe Field Lok kits or equal.

These devices shall have a minimum 350 psi pressure rating with a minimum safety factor of 2:1. Glands shall be listed with Underwriters Laboratories and/or approved by Factory Mutual. Set screws shall be of hardened ductile iron and require the same torque in all sizes. Steel set screws are not permitted.

5.4 FITTINGS

Ductile iron fittings must be used and shall be cement-lined. Fittings are required to be equipped with mechanical joints and retainer glands unless otherwise specified by the Water Department. Mechanical joint fittings in sizes 4-inch through 12-inch shall be ductile iron compact fittings and rated for 350 psi working pressure. All nuts and bolts shall be of a type equal to ductile iron or KOR-10 steel T-bolts and nuts.

5.5 TAPPING SLEEVES

Tapping sleeves shall only be allowed for private service connections as determined by the Water Department – Fire District No.1. The sleeve shall be of a type equal to the Power Seal Style manufactured by the Power Seal Company, Inc. The body shall be **Stainless Steel**. The flange shall be either steel-flat faced, or mechanical end recessed for the tapping valve, AWWA C207 Class D-ANSI 150 Lb. Drilling. Nuts and bolts shall be 18-8 Stainless Steel. The gasket shall be Buna-N (Nitrile) ASTM D2000 BA508, resistant to water, oil and hydrocarbon fluids with a maximum 212 degree F continuous service. The sleeve shall be provided with a 3/4" test plug to ensure proper seal before tapping.

5.6 TAPPING SADDLES

Tapping saddles shall only be allowed for private service connections as determined by the Water Department – Fire District No.1. The saddle shall be of a type equal to the Smith Blair Style 317 Double Stainless Steel Strap Flexi-blue epoxy coated Iron Service saddle with a working pressure equivalent to 300 psi.

5.7 COUPLINGS

Couplings shall only be allowed when connecting standard outside diameter pipe to oversized or pit cast pipe. The coupling shall be of a type equal to TPS Hymax style, Romac Macro Style, or an approved equal. Couplings shall be provided with plain, Grade 27 rubber gaskets and with black, steel, track-head bolts with nuts.

5.8 GATE VALVES/TAPPING VALVES

The resilient wedge gate valves shall comply with all requirements of AWWA Specifications C509, latest revision, and shall be as manufactured in the United States by U.S. Pipe Metroseal, Mueller A-2360 or American Flow Control Series 2500.

All resilient wedge gate vales shall be designed for 250 PSIG working pressure, shall be factory seat tested at 250 PSIG with no leakage past the seat from either side of the disc, and shall be shell tested at 500 PSIG.

All gate valves shall be of the non-rising stem (N.R.S.) design, shall be set vertically, and shall open RIGHT (clockwise). All buried valves shall be furnished with 2 inch square operating nuts.

All gate valves shall have O-Ring sealed stems with one O-Ring located below the thrust collar and with two O-Rings located above the thrust collar. The thrust collar shall be factory lubricated, and the thrust collar and its lubrication shall be isolated by the O-Rings from the water way and from outside contamination, providing permanent lubrication for long term ease of operation.

The resilient-seated disc wedge shall be of the resilient wedge fully supported type. Solid guide lugs shall travel within channels in the body of the valve. These disc and guide lugs shall be fully (100%) encapsulated in SBR (styrene butadiene rubber).

Disc wedges that are not 100% fully encapsulated shall not be acceptable. Guide caps of an acetal copolymer bearing material shall be provided to protect the rubber-encapsulated solid guide lugs from abrasion for long life and ease of operation.

Minimum body and bonnet wall thickness shall be as set forth in Table 2, Section 4.3.1 of AWWA C509. Body and bonnet wall thicknesses less than the minimum thickness as specified in Table 2 shall not be acceptable. Bonnet to body seal shall be effected by a flat neoprene gasket. Bonnet and body flanges shall be fully machined to assure proper sealing of the gasket.

End connections for above ground installations shall be flanged in accordance with ANSI B16.1, Class 125 or AWWA/ANSI C110/A21.10; or threaded with end dimensions complying to ANSI B2.1. For underground installations, end

connections shall be mechanical joint, slip-on (for use with cast iron OD pipe) or radial end compression (for use with ID size PVC pipe) in accordance with ANSI/AWWA C111/A21.11.

Gate valve stems shall be of bronze rolled bar stock and shall have a forged thrust collar. The stem material shall provide 70,000 PSI tensile strength with 15% elongation and a yield strength of 30,000 PSI. Cast stems shall not be acceptable. Stems shall have acme form threads for strength and efficiency. An anti-friction thrust washer shall be provided both above and below the thrust collar for ease of operation.

All internal and external exposed ferrous surfaces of the valve shall be coated with a fusion-bonded, thermosetting powder epoxy coating conforming to AWWA C550 and certified to NSF 61. Coating shall be non-toxic and shall impart no taste to water. Coating thickness shall be nominal 10 mils.

5.9 VALVE BOXES

All Gate Boxes shall be BiBi or Tyler make. Each gate valve shall be accompanied by a valve box of the adjustable type of heavy pattern, constructed of cast iron and provided with a 6 inch cast iron cover.

The upper section of each box shall have a flange on top having sufficient bearing area to prevent settling. The bottom of the lower section shall be belled to enclose the operating nut of the valve. The barrel shall be 5½ inch O.D. minimum. Boxes shall be of lengths consistent with pipe depths. Boxes shall be slide adjustable, with a lap of at least 6 inch when in the most extended position. Covers shall be slotted for easy removal. Covers for valve boxes on water mains shall have the word "WATER" cast in the top. Valve boxes shall be coated with coal-tar pitch enamel or other approved coating. Valve boxes shall be suitable for the size valve on which they are used and shall weigh at least 100 pounds with cover. The upper sections shall be 26 inch and the lower section shall be adequate for trench adjustment, no top or mid-section adapters.

5.10 HYDRANTS

Hydrants shall comply with all requirements off AWWA Specifications and shall be as manufactured in the United States by U.S. Pipe Metropolitan 250, Model 94,or Mueller Super Centurion 200. They shall open LEFT (counterclockwise) and shall have one pumper connection, 4½ inch diameter NST and two 2½ inch diameter NST hose connections. Valve at hydrant base shall be 4-5/8 inch minimum.

The length of the hydrant barrel shall be such that when installed with the proper depth of cover on the branch pipeline, the hydrant will be set with the normal ground

line of the barrel between 3 inch minimum and 6 inch maximum above the finished surface elevation.

The color of the hydrant above ground shall be red.

Connecting pipe and pipe nipples between the main line tee and hydrant shall be 6-inch ductile iron conforming to the requirements for ductile iron pipe hereinbefore. Hydrant tee shall have line bells conforming to the requirements of the main pipe. The hydrant outlet shall be of 6-inch mechanical joint.

Hydrant valve and valve box shall be a standard Fire District No. 1, 6-inch water works gate valve, opening RIGHT (clockwise), one end for the hydrant anchoring tee and mechanical joint opposite end.

5.11 HYDRANT TEES (ANCHORING TEES)

Anchoring tees shall have main run ends as required for the installation. The branch shall have a plain end with an integral gland and rotating mechanical joint gland to provide a restrained connection with the adjacent valve.

5.12 SERVICE PIPING & CONNECTIONS

Service pipe shall be continuous Type "K" copper or CTS plastic tubing, 1-inch minimum from the water main to the curb stop for all new service connections. Existing ¾”service line replacement will be allowed to replace with the same size. Service pipe from the Curb Stop to residential homes shall be 1-inch minimum either Type “K” copper or polyethylene tubing. Service pipe fittings shall be brass and of compression type. All service fittings shall be extra heavy brass, manufactured by either Red Hed Supply or Mueller Water Distribution Products.

Corporations shall be Lead-free ball-style either Red Hed 43821 LF or Mueller Model No. B25008N. All corporations shall have a C.C. thread (reinforced AWWA) inlet and compression connection outlet.

Curb stops shall be Lead Free either Red Hed Figure 41511 or Mueller Model No. B25209N. Compression ends shall be standard on both the inlet and outlet.

Service pipes less than 60 feet in length measured from the curb stop to the meter must be one continuous length of 1-inch Type K copper or CTS plastic tubing.

Each service pipeline shall be provided with a curb stop and a cast iron Erie Telescoping type box with a brass pentagon plug, 36 inch standard rod and stainless steel cotter pin.

No electrical grounds shall be made on water service pipes where a driven ground rod can provide the needed grounding service, as determined by the Water Department.

5.13 METER PITS

Meter pits up to 1”shall be Mueller Thermal coil with the following options when ordering: 330-CS-18-60-L-B-B-S. Meter pits above 1” size shall be Mueller/Hunt EZ-Vault with the following options when ordering: 550-VS-60-F-B-B. All meter pits shall be supplied with insulating pad and side locking pit lids.

5.14 SERVICE LOCATION

The service piping shall be laid at right angle to the distribution main from a point directly in front of the foundation of each planned building and each owner-occupied family unit shall have its own service connection with meter unless otherwise specified by the Water Department – Fire District No.1

SECTION 6 CONSTRUCTION STANDARDS

6.1 INTRODUCTION

This section specifies the construction standards that developers and their contractors shall abide for construction projects for the Water Department – Fire District No. 1. This section covers specifications for excavation, trench preparation, laying of pipe, installation of mechanical joints, setting valves and fittings, setting hydrants, anchorage, backfilling, testing, and disinfection.

6.2 EXCAVATION AND PREPARATION OF TRENCH

6.2.1 General Description

The trench shall be dug so that the pipe can be laid to the alignment and depth required. Regardless of whether one machine is used for both excavation and handling of pipe or whether a separate machine is used for handling of pipe, trench excavation is not to be advanced substantially ahead of pipe-laying operations.

Backfilling as hereinafter specified is to be carried out as close as possible behind the pipe-laying operation.

Upon completion of operations at the end of the work day, or upon the halting of operations for any reason whatsoever, backfilling is to be completed so that only one length of pipe is exposed in the open trench, and the end of that pipe shall be blocked to prevent entry of soil, water, or animals.

Excavation and backfill are to be planned and carried out so that the trench can be adequately supported and drained and so that pipe-laying operations can be carried out efficiently and satisfactorily.

6.2.2 Width of Trench

The width of trench shall be ample to permit the pipe to be laid and jointed and the backfill to be placed and compacted. The trench width shall be sufficient to permit the convenient placing of supports, sheathing, and/or bracing and for the handling of drainage and groundwater where required.

At locations where valves, fittings, or specials are to be installed, additional width of excavation shall be dug as required for the satisfactory installation and jointing of these items.

Since the ability of the pipe to support external loads is related to trench width and is decreased as trench width increases, the trench width must be maintained as narrow as possible, consistent with pipe-laying requirements. The portion of the trench from 1 foot

above the top of the pipe to the bottom limit of excavation should not be wider than the pipe diameter plus 2 feet.

6.2.3 Pipe Clearance in Rocks

Ledge, rock, boulders, and large stones shall be removed to provide a clearance of at least 6-inches below and on each side of all pipe, valves, and fittings.

The specified minimum clearances are the minimum clear distances that will be permitted between any part of the pipe and appurtenances being laid and any part, projection, or point of such rock, boulder, or stone.

6.2.4 Excavation to Grade

The trench shall be excavated to the depth required so as to provide a uniform and continuous bearing and support for the pipe on solid and undisturbed ground at every point between bell holes. The final excavation shall be done using hand tools so that the finished sub-grade of the pipe is accurately prepared and is undisturbed.

Any part of the bottom of the trench excavated below the required sub-grade shall be corrected with approved material and thoroughly compacted as directed by the Water Department – Fire District No.1

6.2.5 Excavation Below Grade

In locations where the trench bottom is composed of ledge, cemented gravel, hard pan, or other materials that cannot be properly prepared to provide uniform and continuous support for the pipe, the contractor will be required to excavate 6-inches below the specified sub-grade for the pipe.

Earth pads are then to be placed in the trench bottom in at least two locations to support the pipe above the trench bottom during the process of installing the pipe, aligning the pipe, and centering the spigot of the newly laid pipe in the bell of the adjacent pipe. Prior to making up the joint, additional earth is to be placed along and under the bell of the pipe and is to be thoroughly tamped so as to provide support for the pipe. The earth used for the supporting pads and for backfill under the barrel of the pipe is to be sand or other granular native material. In the event that satisfactory native material cannot be obtained from the excavation, then suitable material shall be brought in to the job.

6.2.6 Excavation in Poor Soil and Refilling to Grade

Where the bottom of the trench at sub-grade is found to be unstable or to include ashes, cinders, any type of refuse, vegetable, or other organic material, or large pieces or fragments of inorganic material, the contractor shall excavate and remove such unsuitable material to the width and depth ordered by the Water Department – Fire District No.1. Before the pipe

is laid, the sub-grade shall be made by backfilling with an approved material in 3-inch compacted layers. The layers shall be thoroughly tamped so as to provide a uniform and continuous bearing and support for the pipe at every point between bell holes.

6.2.7 Sub-grade in Rock Trenches

Where excavation is made in rock or boulders and the clearance specified in Section 6.2.3 is provided, the sub-grade shall be made by backfilling with an approved material in 3-inch compacted layers. The layers shall be thoroughly tamped so as to provide a uniform and continuous bearing and support for the pipe at every point between bell holes.

6.2.8 Blasting

Blasting for excavation will be permitted only after securing all required state and local permits as well as conducting a pre-blast survey.

The developer and its contractor shall observe all State laws and City Ordinances relating to the transportation, storage, or handling of explosives. Particular care is to be exercised to see that the explosives are stored so that they will not be lost, mishandled, mislaid, or stolen. Blasting caps shall be stored separately from the explosive itself but shall be subject to the same requirements and regulations.

6.2.9 Braced and Sheeted Trenches

The developer and its contractor shall provide such sheathing, bracing, and support for the trench sides as may be required by state law and local ordinances and as may be necessary to adequately protect life, adjacent property, adjacent structures, or the work under construction.

Use approved trench box and bracing as may be necessary for safety of personnel, protection of work, adjacent work, utilities and structures, or as required by various Regulatory Agencies.

6.2.10 Control of Water

The trench shall always be maintained in a dry and satisfactory condition. Care shall be exercised to see that water does not collect in the bell holes at any time in a depth sufficient to wet the bell of pipes waiting to be jointed.

Under all conditions, the developer and its contractor must maintain the trench so that water does not enter the completed pipeline. This applies equally during pipe laying operations and upon completion of pipe laying operations but prior to placing the pipeline into service. At no time is the completed pipeline to be used as a drain for groundwater or drainage water. All open portions of the pipeline that have not been completed such as hydrant branches, branch lines, and the end of the pipeline during periods when pipe laying operations are shut

down, are to be adequately protected so as to prevent the entrance of groundwater and other materials from the trench. The protection is to be watertight and is not to be removed until the trench has been completely dewatered.

6.2.11 Trenching by Hand or Machine

In general, it is expected that the major portion of the excavation will be carried out using machine methods.

The final portion of excavation in the trench bottom is to be carried out using hand methods as described under Section 6.2.4 so as to prevent disturbance to the supporting sub-grade.

In special locations where the use of machinery for excavation may result in damage to adjacent pipelines or structures, the contractor shall use hand methods of excavation. This requirement is especially applicable in the immediate vicinity of conduits, service pipes, and other pipelines where the use of machinery could result in danger.

6.2.12 Interruption of Service

No valve or other control device on the existing water system shall be operated for any purpose whatsoever. No tap or cut-in to the existing water system shall be made by the developer or its contractor without the expressed approval of the Holyoke Water Works and unless an authorized representative of the Holyoke Water Works is present.

6.2.13 Winter Conditions Construction (April 1 to December 1)

1. Developers shall be required to specifically request authorization to perform winter conditions construction in writing to the Board of Water Commissioners. The request must specifically address how each of the requirements of this section will be achieved.

2. Water main installations within proposed new subdivision roadways that are still under construction and final pavement has not been placed will be allowed provided that all other conditions in this section are satisfied.

3. Excavation will <u>not</u> be permitted within public ways or on permanent pavement.

4. Connections to the existing distribution system and/or excavation within 20± feet of an existing in-service water main will <u>not</u> be permitted.

5. Pipe and fittings shall <u>not</u> be installed on frozen soil.

6. The installation of pipe and fittings will <u>not</u> be permitted during weather conditions which put proper, high quality installations in jeopardy. In

general, no work shall occur during snow or rain events or when cold temperatures may jeopardize the proper installation of gaskets, bolts, etc. Final determination of these conditions is at the discretion of the District inspector.

7. Frozen soil shall not be used as trench backfill material from the bottom of the trench to 1 foot over the top of the pipe.

8. Upon completion of construction, new water mains shall not be filled with water until non-freezing, non-winter conditions exist after April 1. In the interim, the water mains shall be capped with a watertight cap or plug-type, mechanical joint fitting. All filling, testing, disinfection, flushing, etc. shall occur only during non-freezing, non-winter conditions after April 1.

9. All pipe, fittings, valves, hydrants and service connection installation work shall be inspected by the District or a District representative prior to backfilling unless otherwise agreed to in advance by the District Superintendent.

10. The operation of valves and hydrants will not be permitted.

11. All work activities, means and methods used by the Contractor shall be such that flooding, icing and/or other nuisance or hazards to adjacent public or private property does not occur.

12. It is the intent of the District that all water main and appurtenances be constructed only during non-freezing and non-winter conditions except by specific approval of the District on an individual case-by-case basis and only under conditions which:

    a. Allow for proper construction,

    b. Are conducive to a high quality finished product,

    c. Do not endanger the existing water distribution system,

    d. Do not excavate within public ways or at permanent pavement,

    e. Do not impose any nuisance or hazards to adjacent public ways, public property or private property.

13. If winter conditions construction is approved by the District, then during the performance of that work, the District Superintendent shall have the authority to order the Contractor to cease construction at anytime that any one or more of the conditions listed in this section becomes apparent.

6.3 LAYING OF PIPE

6.3.1 Handling of Water Main Materials in the Trench

Proper implements, tools, and facilities shall be provided and used for the safe and convenient prosecution of the work. All pipe, fittings, valves, and hydrants shall be carefully lowered into the trench piece by piece by means of power equipment, ropes, or other suitable tools or equipment, in such a manner as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench.

There shall be no chain or forklift scars on the lining. Any damage to pipe lining or coatings will result in the pipe or fitting being rejected and removed from the job.

6.3.2 Inspection

All pipe and fittings shall be carefully inspected for defects prior to placing them in the trench.

If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner.

6.3.3 Cleaning Pipe and Fittings

All lumps, blisters, and excess coal-tar coating shall be removed from the bell and spigot-end of each pipe, and the outside of the spigot or plain end and the inside of the bell shall be wire-brushed and wiped clean, dry, and free from oil and grease before the pipe is laid.

On all pipe using a rubber type joint, the bell of the pipe and the plain end of the adjacent pipe are to be wire-brushed and cleaned of all rust and dirt. The bell of the pipe and the plain end of the adjacent pipe are then to be lubricated with the joint lubricant furnished with the pipe in accordance with the manufacturer's directions.

6.3.4 Laying Pipe

Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line. During laying operations, no debris, tools, clothing, or other materials shall be placed in the pipe.

When laying a rubber-jointed, ductile-iron pipe, the plain end shall be centered in the bell, the pipe forced home, and the joint completely assembled. The pipe is then to be adjusted to correct line and grade and to be secured in place with approved backfill material, properly tamped under and around the pipeline.

At all times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other means. This provision shall apply during the noon hour and overnight, as well as during delays in the pipe laying operations.

After joining the pipe, a metal feeler gauge shall be used to verify that the rubber gasket is correctly positioned. Two bronze wedges per joint shall be inserted to provide electrical continuity.

6.3.5 Cutting Pipe

All cutting of pipe required for inserting valves, fittings, or closure pieces and all cutting of pipe required for nipple pieces shall be done in a neat and workmanlike manner without damage to the pipe or cement lining. The cutting is to be done so as to leave a smooth end at right angles to the axis of the pipe. Cutting shall be done with a power saw and edges shall be beveled and made smooth with hand grinding tools.

Except for very unusual circumstances, field cutting will not be allowed for ductile iron pipe using rubber push-on joints. Where it is necessary to field cut a pipe, a rubber gasket mechanical joint type connection shall be made.

6.3.6 Direction of Laying

Pipe is to be laid with the bell facing in the direction of laying. The only exception is in areas of steep grade where the pipe is to be laid with the bells facing uphill and laying is to proceed in a uphill direction.

6.3.7 Permissible Deflection of Joints

Wherever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, to avoid obstructions, or where long-radius curves are permitted, the amount of deflection allowed shall not exceed that recommended by the pipe manufacturer.

Prior to deflecting the pipeline, the spigot of the pipeline should be marked flush with the bell end to assure that the spigot is not withdrawn as a result of the deflection.

In general, all radius curves called for on the plans or permitted at the time of construction are to be made using full lengths of pipe. The use of short lengths of pipe and extra joints in order to make a smaller radius turn will not be allowed without the written approval of the Water Department – Fire District No.1.

6.3.8 Unsuitable Laying Conditions

No pipe is to be laid in water, in an unsuitable trench, or during unsuitable weather conditions.

6.3.9 Polyethylene Encasement

Polyethylene encasement shall be slipped over the exterior of the pipe and/or fittings prior to placement in the trench. Secure polyethylene to the pipe with compatible polyethylene adhesive tape at several locations along the barrel of the pipe.

At each pipe joint, the wrap shall be overlapped 12-inches minimum, secured with a non-corrosive strap behind the pipe bell, and overlapped with a new section of wrap and secured in place with a second strap on the spigot end.

6.4 MECHANICAL JOINTS

Mechanical joints are to be installed in accordance with the manufacturer's instructions and AWWA Specifications.

The plain end is to be centered in the bell of adjacent pipe or fitting after both the end and the bell have been carefully cleaned, wire-brushed, and lubricated. The gasket is then to be pushed home into the bell and is to be followed by the follower ring.

The bolts are to be tightened using torque measuring or torque indicating wrenches. Under no circumstances shall extension wrenches or an extended handle ratchet wrench be used to gain greater leverage. The normal range of torque to be applied to the joints is as follows:

Joint Size (Inches)	Bolt Size (Inches)	Range of Torque (Ft. lb.)	Length of Wrench
3	5/8"	40-60	8"
4-24	3/4"	60-90	10"
30-36	1"	70-100	12"

When tightening bolts, the gland or follower ring must be brought up toward the pipe flange evenly, maintaining approximately the same distance between the gland and the base of the flange at all points around the socket. This is to be done by partially tightening up opposite bolts, first at the bottom, then at the top, then at either side and finally the intermediate bolts. This cycle is to be repeated until all bolts are within the above range of torque.

Where required by the Water Department – Fire District No.1, retainer glands are to be used.

If effective sealing of the joint is not obtained at the maximum torque indicated, the joint must be disassembled and reassembled after thorough cleaning. Over stressing of the bolts to compensate for poor installation practice is not approved.

6.5 SETTING VALVES AND FITTINGS

Valves, fittings, plugs, and caps shall be set and jointed to pipe in a manner heretofore specified for cleaning, laying, and jointing pipe.

All buried valves shall be set solidly in the line so as to prevent movement under unbalanced head conditions. In the case of main line valves, the pipes on each side of the valve shall be butted solidly against the bottom of the valve joint.

A valve box shall be provided for every valve. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the wrench nut of the valve, with the box cover flush with the surface of the planned finished pavement or ground surface.

6.6 SETTING HYDRANTS

6.6.1 Location

Hydrants shall be located as shown on the plan or as directed at the time of construction by the Water Department – Fire District No.1. Hydrants shall be located in a manner as to provide complete accessibility and also in such a manner that the possibility of damage from vehicles or injury to pedestrians will be minimized.

When placed behind a curb, the hydrant barrel shall be set so that no portion of the pumper or hose nozzle cap will be less than 12-inches from the gutter face of the curb.

When set in a lawn space between the curb and the sidewalk, or between the sidewalk and the property line, no portion of the hydrant or nozzle cap shall be within 6-inches of the sidewalk. When set at the property line, the back of the hydrant shall be at the property line.

Hydrant set-back and depth of bury requirements are as follows:

Setback Dimensions:	
• Concrete or blacktop sidewalk up to curbing with no grass treebelt	Face of hydrant setback 12 inches off face of curbing
• Grass treebelt up to curbing with concrete or blacktop sidewalk usually to 3 feet off curbing	Back of hydrant setback to edge of sidewalk but no more than 3 feet off face of curb or edge of pavement from face of hydrant
• Grass treebelt up to curbing or edge of pavement with no sidewalk	Face of hydrant setback 3 feet off face of curb or edge of pavement
Depth of Bury:	

• In concrete or blacktop way	Bottom of traffic flange between 2 to 6 inches above finished grade
• In grassed areas	Bottom of traffic flange between finished grade and 4 inches above finished grade

All hydrants in place, but not in service shall be covered with burlap or other suitable material. The covering shall be securely fastened to the hydrant and shall remain in place until such time that the new hydrant has been tested and accepted by the Water Department – Fire District No.1 and placed in service.

6.6.2 Position

All hydrants shall stand plumb and shall have their nozzles parallel with or at right angles to the road, with the pumper nozzle facing the road. Hydrants shall be set to the established grade, with the bottom at least 3 -6 inches above the ground.

6.6.3 Connection to the Main

Each hydrant shall be connected to the main with a 6-inch iron branch. The 6-inch branch is to contain a 6-inch gate valve box. Hydrant tee shall be an anchoring tee.

6.6.4 Hydrant Drainage

Wherever a hydrant is set, drainage shall be provided at the base of the hydrant by placing crushed stone around the bottom of the hydrant.

An area approximately 2 feet in every direction from the center of the hydrant is to be excavated to the bottom of the hydrant. This area is to be backfilled to a point approximately 6-inches above the waste opening in the hydrant using washed or crushed stone. This gravel or stone is to be ¼-inch size or pea stone.

6.6.5 Backfill Around Hydrant

Backfill of excavation around the hydrant barrel is to be accomplished with granular native soil. In the event that a granular native soil is not available from materials excavated from the trench, use gravel borrow.

6.7 ANCHORAGE

6.7.1 General

Unless otherwise specified, all anchorage or supports for the various fittings, specials, valves and hydrants installed shall be accomplished using poured concrete thrust blocks in conjunction with retainer glands.

Thrust blocks of machine-mixed, poured-in-place concrete, having a 28-day compressive strength of 3,000 psi and containing an air-entraining admixture, shall be placed at all bends, caps, offsets, hydrants, tees, dead ends, and similar locations.

The thrust blocks shall be carried to undisturbed solid ground at the side of the trench. All poured-in-place thrust blocks shall be formed with wood forms; rough earth forms will not be acceptable. Pipelines shall be protected from direct adherence of the concrete thrust block by wrapping the pipeline in plastic sheeting. The thrust blocks shall not bear directly on pipe joints and shall not interfere with future adjustments or tightening of the joint. All thrust blocks shall bear against undisturbed soil at the side or end of the trench, perpendicular to the direction of the thrust. Care must be taken that this bearing area is cut clean and vertical so that the back of the thrust block will not have a sloping face.

The thrust blocks shall have a minimum horizontal thickness of 2 feet and shall have the following minimum bearing surface measured perpendicular to the direction of thrust:

8-inch or less	6 square feet (2' x 3')
12-inch	12 square feet (3' x 4')

6.7.2 Support for Hydrants

Each hydrant is to be supported by a stone placed under the hydrant and by a pre-poured thrust block or blocks placed behind the hydrant and wedged against unexcavated earth at the edge of the trench. Retainer glands shall be used at hydrant.

Each hydrant shall be set on a block of concrete or a solid flat stone having an area of more than 2 square feet.

6.7.3 Anchorage of Fittings and Specials

All plugs, caps, tees, and bends shall be provided with a concrete thrust block to prevent movement. This thrust block shall be constructed in accordance with the provisions of Section 6.7.1. Retainer glands are required.

6.8 BACKFILLING

6.8.1 General

All backfill material is to be obtained from the material excavated under the provisions of Section 6.2 of these construction standards.

All rock excavated shall be disposed of off the construction site, and no portion of this rock, regardless of its condition, is to be used as backfill material in the trench.

All backfill material shall be free from cinders, ashes, refuse, vegetable or organic material, boulders, rocks or stones, or other material which, in the opinion of the Water Department – Fire District No.1, is unsuitable. However, from 1 foot above the top of the pipe to the sub-grade of the pavement, material containing stones up to 6-inches in their greatest dimension may be used, unless specified otherwise herein.

Frozen material shall not be used as backfill nor should backfill be placed on frozen material.

Clay dams will be required to prevent groundwater migration along the proposed pipeline. Clay dams shall be installed along the proposed water main at 200-foot increments if pipe bending materials utilized are not native materials excavated from the trench line.

6.8.2 Use of Excavated Material for Backfill

In general, use of excavated material for backfilling of the trench will be required. The best, most granular portions of the excavated material shall be used for backfilling purposes with the better material used in the bottom of the trench and around the pipeline.

Where there is insufficient available backfill material due to a rejection of a part of the excavation as unsuitable for backfill, the excavated material shall be disposed of and the developer shall furnish the required amount of sand, gravel, or other approved backfill materials.

6.8.3 Initial Backfilling

All trenches shall be backfilled by hand from the bottom of the trench to a point 1 foot above the top of pipe with the most granular material available from the excavation. This initial backfill is to be placed in layers of approximately 3-inches and thoroughly tamped under the pipe and compacted around the pipe. This initial backfilling shall be deposited in the trench for its full width on each side of the pipe, fittings and appurtenances simultaneously. While this initial backfill is being carried out under and up to the midpoint of the pipeline, one man shall be tamping in the trench for each man shoveling backfill material into the trench. In general, the only time that mechanical backfilling of this portion

of the trench will be approved is when the backfilling material is composed of sand and is entirely free of stone and other hard or solid lumps.

6.8.4 Backfilling to Grade

From a point 1 foot above the pipe to the subgrade of the finished road grade, the trench may be backfilled by approved mechanical methods. No heavy stone or rock shall be dropped into the trench, nor large masses of backfilling material be dropped in the trench in such a manner as to endanger to the pipe. No dimension greater than 12″ shall be placed in the trench and if larger stones than these are found in the material to be used for backfilling, they shall be broken up before being placed in the trench or hauled away from the site of the work. Care is to be taken that stones and lumps shall not become nested and that all voids between stones shall be completely filled with fine material.

Compaction of backfill shall be done by approved mechanical methods in lifts not to exceed 12 inches.

6.8.5 Backfilling in Freezing Weather

Backfilling shall not be done in freezing weather, and frozen material shall not be used for backfilling. No backfill shall be placed in a trench when the material exposed in the trench sides or bottoms is already frozen.

6.9 TESTS & DISINFECTION

6.9.1 Tests Required

On completion of the pipeline, it is to be filled with water and tested. Water used for this purpose is to be drawn from the existing water system by Water Department personnel.

A pressure test and a leakage test shall be run simultaneously in accordance with AWWA Specifications. The pressure for these two tests is to be measured at the lowest part of the line and shall be 50% higher than normal operating pressure but in no case less than 150 psi. The test is to be conducted for a period of 4 hours or until such time as the Water Department – Fire District No.1 indicates acceptance of the pipeline. Test pressure shall not vary by more than ±5 psi (35 MPA or 0.35 bar) for the duration of the test.

All newly installed hydrant and branch connections must be subject to line pressure in an open trench to determine tightness of joints before backfilling, unless they are a part of the overall pipeline pressure and leakage test.

6.9.2 Time for Making Test

No pipeline is to be placed under pressure or subjected to hydrostatic pressure until at least 5 days have elapsed after poured concrete thrust blocks have been installed. If high early

strength concrete is used in the poured concrete thrust blocks, the hydrostatic pressure can be applied to the main after 3 days have elapsed from time of construction of the thrust blocks.

6.9.3 Procedure

Each section of pipeline to be tested shall be slowly filled with water. The operation of connections to the existing system is to be carried out by the Water Department.

After the pipeline has been brought up to normal operating pressure, all air shall be expelled from the pipeline. Hydrants and blow offs are to be used for this purpose to the extent possible. Additional ¾-inch taps at points of beginning and end of job and at highest elevation in the pipeline shall be installed in order to completely remove all air and to apply chlorine solution for disinfection. At the conclusion of the test, the taps shall be removed and plugged or left in place at the discretion of the Water Department.

After the new line has been placed under normal operating pressure and all air has been expelled, the pressure and leakage test shall be started. The pipeline under test shall be raised to the specified pressure. The developer shall furnish a pump, pipe connections, gauges, all necessary apparatus, and connections to the new main.

The contractor shall raise the pressure in the new section of main to the specified test pressure by means of the pump using clean water from the existing water system and will maintain the specified pressure for a period of 4 hours or until the Water Department indicates that the pipeline is satisfactory.

During the test period, an accurate measure of the amount to water required to maintain the test pressure shall be maintained and recorded.

6.9.4 Procedure & Responsibility

The developer shall employ a firm or person experienced in testing and disinfecting water systems, acceptable to the Water Department. The Water Department personnel shall supervise and direct the testing and disinfection and determine if the new piping system passes the test. No piping system will be served with municipal water until it passes the leakage test.

The developer shall pay the testing firm directly for the leakage test and the disinfection.

6.9.5 Leakage Test

The leakage test shall be conducted for 4 hours at the specified test pressure and the leakage test shall be continued until such time as the main and its appurtenances are either rejected as unsatisfactory or accepted as satisfactory within the requirements of these specifications.

Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valved section thereof, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and air expelled.

No pipe installation will be accepted until the leakage is less than the number of gallons per hour as determined by the Holyoke Water Works per the following formula:

$$L = (ND)\ P^{0.5}/3700$$

in which L equals the allowable leakage, in gallon per hour; N is the number of joints in the length of the pipeline tested; D is the nominal diameter of the pipe, in inches; and P is the average test pressure during the leakage test, in pounds per square inch gauge.

6.9.6 Variation from Permissible Leakage

Should any test of pipe laid disclose leakage greater than the specified in Section 6.9.5, the developer shall, at its own expense, locate and repair the defective pipe or joint until the leakage is within the specified allowance.

6.9.7 Disinfection

The completed pipeline shall be disinfected in accordance with AWWA Specifications. Prior to disinfecting the water main, the main shall be completely filled to remove all air pockets and then flushed to remove particulates. The flushing velocity in the main shall not be less than 2.5 ft/s unless the Water Department determines that conditions do not permit the required flow to be discharged to waste. Note that flushing is no substitute to preventative measures during construction.

The completed pipeline shall be disinfected with a chlorine concentration of approximately 50 ppm prior to being placed in service. The introduction of this chlorine solution shall be accomplished by pumping hypochlorite (sodium based) solution into the main at a point not more than 10 feet downstream from the beginning of the new main while flowing in the manner similar to initial filling at the opposite end of each water main segment. The developer shall install taps for chlorination and sampling. The developer shall uncover and backfill the taps as required. Special disinfecting procedure shall be used in connections to existing mains and where the method outlined above is not practical.

The chlorinated water is to remain in the new pipeline for at least 24 hours. After a 24-hour holding period, there should be a free chlorine concentration of not less than 10 mg/L. During this period, proper precautions shall be taken to prevent this chlorinated water flowing back into the existing system. In addition, all valves and hydrants in the treated section shall be operated to ensure disinfection of the appurtenances.

Following the chlorination period, all treated water shall be flushed from the lines at their extremities and replaced with water from the distribution system. The flushed chlorinated water, meeting all local, state, and federal regulations, shall be discharged to the sewer system or disposed of using other approved means provided in AWWA C651. No discharge to any storm sewer or natural water course may be allowed. Bacteriological sampling and analysis of the replacement water may then be made by the contractor in full accordance with AWWA C651 and under the supervision of the Water Department or its Engineer. The contractor will be required to re-chlorinate, if necessary, and the line shall not be placed into service until the bacteriological requirements of AWWA C651 are met. Developer shall pay for coliform tests by a State-approved laboratory.

After all disinfection and testing is completed, the developer will be required to blow out the new water mains under the direction of the Water Department. Blowing out of the main is to be accomplished at as high a velocity as possible consistent with the ability of the existing system to supply water and the ability of the area around the blow-off point to drain the water off. After clean water substantially free of chlorine is obtained at the blow-off, the flow of water at reduced rates is to be continued until tests show normal chlorine residual and no coliform.

After completion of the blowing-off operation, and no coliform is found, the new main is to be placed in service. However, the main is to be checked occasionally to determine if any build-up of chlorine or taste occurs. If any build-up does occur, a blow-off is to be operated at a slow rate for a period sufficient to clear the pipeline.

SECTION 7 CROSS CONNECTION AND BACKFLOW PREVENTION

7.1 INTRODUCTION

The purpose of this section is to describe the Water Department – Fire District No.1s' cross connection and backflow prevention program. A cross connection is an actual or potential connection between a drinking water distribution system pipe and any waste pipe, soil pipe, sewer, drain, or other unapproved source. Backflow is the flow of water or other liquids, mixtures, or substances from any source into the water distribution system.

7.2 PURPOSE

The purpose of the cross connection and backflow prevention program is:

1. To protect the public potable water supply of the Water Department – Fire District No.1 from the possibility of contamination or pollution by isolating within the customer's internal distribution system or the customer's private water system such contaminants or pollutants which could backflow into the public water system;

2. To promote the elimination or control of existing cross-connections, actual or potential, between the customer's in-plant water system and non-potable water systems, plumbing fixtures, and industrial piping systems; and

3. To provide for the maintenance of a continuing Program of Cross-Connection Control which will systematically and effectively prevent the contamination or pollution of all potable water systems from a physical or potential cross-connection.

7.3 DEFINITIONS

Air Gap

A physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system. Physically defined as a distance equal to twice the diameter of the supply side pipe diameter but never less than one (1) inch.

Approved

Accepted by the Superintendent as meeting an applicable specification stated or cited in this regulation, or as suitable for the proposed use.

Auxiliary Water Supply

Any water supply, on or available, to the premises other than the purveyor's approved public potable water supply.

Atmospheric Vacuum Breaker

A device which prevents back siphonage by creating an atmospheric vent when there is either a negative pressure or sub atmospheric pressure in the water system.

Backflow

The flow of water or other liquids, mixtures or substances, under pressure into the distribution system of a potable water supply system from any source other than its intended source.

Backflow Preventer

A device or means designed to prevent backflow or back siphonage. Most commonly categorized as Air Gap, Atmospheric Vacuum Breaker, Double Check Valve Assembly, Reduced Pressure Zone, Pressure Vacuum Breaker, Hose Bib Vacuum Breaker, Residential Dual Check, Double Check w/Intermediate Atmospheric Vent, and Barometric Loop.

Backpressure

A condition in which the owners' system pressure is greater than the supplier's system pressure.

Back-siphonage

The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

Containment

A method of backflow prevention that requires a backflow prevention device at the service connection after the Water meter. (High Hazard applications)

Contaminant

Any physical, chemical, biological or radiological substance or matter in water.

Cross Connection

Any actual or potential connection of a distribution pipe of potable water from a public system and any non-potable supply or unapproved source of supply.

Cross Connection Violation Form

A violation form which is sent or given to the owner by the water supplier with instructions on corrective action for the cross connection. Corrective action to be taken by the owner.

Department

The Board of Water Commissioners or operator of a public water system.

Double Check Valve Assembly

A backflow prevention device, which incorporates an assembly of check valves, with shut-off valves at each end and appurtenances for testing.

Health Hazard

An actual or potential threat of contamination to the potable water in a public water system, which, in the opinion of the Department or Regulatory Agency would endanger health.

In-Plant Protection

The location of approved backflow prevention devices in a manner, which provides simultaneous protection of the public water system and the potable water system within the premises.

Owner

Any person maintaining a cross connection installation or owning or occupying premises on which cross connections can or do exist.

Potable Water

Water from any source that has been approved by the Department for human consumption.

Pressure Vacuum Breaker

An approved backflow prevention device designed to prevent only back siphonage and which is designed for use under static line pressure and which has necessary appurtenances for testing.

Reduced Pressure Backflow Preventer

An approved backflow prevention device incorporating (a) two or more check valves, (b) an automatically operating differential relief valve located between the two checks, (c) two shut-off valves, (d) necessary appurtenances for testing.

Regulatory Agency

The Massachusetts Department of Environmental Protection

Residential Dual Check

An assembly of two spring loaded, independently operating check valves without tightly closing shut-off valves and tests cocks. Generally employed downstream of the water meter to act as a containment device.

Reviewing Authority

The Department, its Designee, or the local plumbing inspector, authorized by M.G.L. c. 142 and licensed by the Board of State Examiners of Plumbers and Gas Fitters, whichever is responsible for the review and approval of the installation of an approved backflow prevention device.

Unapproved Source

The source or distribution system for any water or other liquid or substance that has not been approved by the Department as being of safe and sanitary quality for human consumption.

7.4 AUTHORITY

The Water Department – Fire District No.1 requires that any cross-connection, actual or potential, between a distribution pipe of potable water from the public water system and any waste pipe, soil pipe, sewer, drain, or other unapproved source, be maintained in accordance with the Federal Safe Drinking Water Act of 1974 (Public Law 93-523), the Commonwealth of Massachusetts Drinking Water Regulations (310 CMR 22.22), and Water Department – Fire District No.1 Rules and Regulations, as most recently amended.

The Water Department District No.1 being a Delegated Authority by the Department of Environmental Protection, reserves the right to adopt policy above the minimum requirements set by the DEP in CMR 22.22. (See appendix A for current policies)

7.5 RESPONSIBILITY

The Fire District No.1 Board of Water Commissioners shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or backsiphonage of contaminants or pollutants. If, as a result of a survey of the premises, the Commission determines that an approved backflow prevention device is required at the Districts' water service connection or as in-plant protection, then approved backflow prevention devices shall be installed. The customer shall, within a time frame determined by the Commission, install such approved device or devices at its own

expense, and failure or refusal or inability on the part of the customer to install said device or devices within the specified time frame shall constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

7.6 ADMINISTRATION

The Commission will operate an active cross connection control program, including the keeping of necessary records, which fulfills the requirements of the MADEP's Cross Connection Regulations and is approved by MADEP.

The Owner shall allow its property to be inspected for possible cross connections and shall follow the provisions of the Commission's program and MADEP Regulations.

7.7 COMMISSION

On new installations, the Commission will provide a representative for on-site evaluation and/or inspection of plans in order to determine the type of backflow preventer, if any, that will be required, and notify the Owner of plan approval requirements by the appropriate reviewing authority.

For premises existing prior to the start of this program, the Commission will perform surveys of the premises and reviews of as-built plans and issue a cross connection violation form to the Owner detailing any corrective action required, the method of achieving the correction, and the time allowed for the correction to be made. The time period allowed shall depend on the degree of hazard involved.

The Commission will not allow any cross connection to remain unless it is protected by an approved backflow preventer for which a permit has been issued and which will be regularly tested to ensure satisfactory operation.

If the Commission determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

The Commission shall have on its staff, or shall have a delegated representative, who is a backflow prevention device tester certified by the Commonwealth of Massachusetts.

The Commission will continually conduct premise inspections to determine the nature of existing or potential hazards. The focus will be on high hazard industries and commercial premises.

7.8 OWNER

The Owner shall be responsible for the elimination or protection of all cross connections on its premises.

The Owner shall be responsible for applying for and obtaining all necessary approvals and permits for the maintenance of cross connections and installation of backflow prevention devices, and applying annually for the renewal of each permit.

The Owner shall have any device that fails an inspection or test repaired by a licensed plumber.

The Owner shall inform the Commission of any proposed or modified cross connection and also any existing cross connection of which the Owner is aware but has not been found by the Commission.

The Owner shall not install a bypass around any backflow prevention device unless there is a backflow prevention device of the same type on the bypass. Owners who cannot shut down operation for testing of the device must supply an additional device necessary to allow testing to take place.

The Owner shall install backflow prevention device in a manner approved by the MADEP and the Commission.

The Owner shall install only reduced pressure backflow prevention devices and double check valve assemblies approved by the MADEP.

Any Owner of industrial, commercial, or institutional premises having a private well or other private water source must have a permit if the well or source is cross connected to the Commission's system. Permission to cross-connect may be denied by the Commission. The Owner may be required to install a backflow prevention device at the service entrance if a private water source is maintained even if it is not cross-connected to the Commission's system.

The Owner of any residential premises having a private well or other private water source will not be allowed a physical connection with the public water system.

The Owner shall be responsible for the payment of all fees for permits, device testings, re-testing in the case that the device fails to operate correctly, and second re-inspections for noncompliance with Commission or MADEP requirements.

7.9 DEGREE OF HAZARD

The Commission recognizes the threat to the public water system arising from cross connections. As such, the Commission, whereas it is responsible for the quality of the public water supply, may require a containment device on the water service entrance to any customer who, as a result of unprotected cross connections, could contaminate the public water supply system.

7.10 ENFORCEMENT

The Commission shall not allow a cross connection to exist with the public water supply system unless it is considered necessary and all appropriate approvals and permits have been issued.

If an inspection of a facility or the premises reveals a cross connection does exist, whether physical or potential, the Commission shall issue a "Notice of Non-compliance Cross Connection Violation" detailing the violation(s) and a procedure for corrective action. The Owner shall be required to submit plans and specifications indicating the method of protection to both the Commission and the MADEP within 60 days of receipt of the notice.

If the Owner of the premises does not initiate corrective actions by the prescribed deadline, the Commission shall then issue a follow-up notice or a "Second Notice of Non-compliance Cross Connection Violation" indicating that the Owner remains in violation and under 310 CMR 22.22 Section 2(b) will have water service terminated unless corrective action is initiated within 15 days of receipt of the notice.

If the Owner of the premises fails to initiate corrective action by the prescribed deadline as required in the follow-up notice, a third and final notice or "Notice of Termination of Water Service" shall be issued notifying the Owner that water service will be terminated within 24 hours upon receipt of the notice. In addition, the Owner will be charged a Water Shut-off/Turn-On Fee for the physical termination of water service.

If the Owner of the premises fails to submit payment for testing and/or inspection of cross connection devices, the Commission shall issue a “Notice of Non-Payment” along with an additional copy of the unpaid invoice. The Owner shall be required to submit payment within X days of receipt of the notice.

If, after the required X days of receiving the “Notice of Non-Payment”, the Owner still has not submitted payment for testing and/or inspection of cross connection devices, the Commission shall issue a “Water Shut-Off Notice” to notify the Owner that water service will be shut off within X days upon receipt of the notice. In addition, the Owner will be charged a Water Shut-off/Turn-On Fee for the physical termination of water service.

7.11 EXISTING IN-USE BACKFLOW PREVENTION DEVICES

An existing backflow prevention device shall be allowed by the Commission to continue in service unless the degree of hazard is such as to supersede the effectiveness of the present backflow prevention device or result in an unreasonable risk to the public health. Where the degree of hazard has increased, as in the case of a residential installation converting to a business establishment, an existing backflow prevention device must be upgraded to a reduced pressure backflow prevention device, or a reduced pressure backflow prevention device must be installed in the event that no backflow device was present.

7.12 IRRIGATION SYSTEMS

All new commercial systems shall install a new reduced pressure backflow prevention device for protection. All existing commercial systems will grandfathered until such time that the company changes owners or makes major renovations.

7.13 PERIODIC TESTING

Reduced pressure backflow prevention devices assemblies shall be tested and inspected a minimum of two times per year. Double check valve assemblies shall be tested and inspected a minimum of one time per year.

The Commission’s certified tester shall perform the testing. The Commission also reserves the right to require the Owner to test and inspect their own devices. A licensed certified tester shall perform all Owner device testing. The Commission will provide the Owner with a list of all Commonwealth of Massachusetts licensed certified testers.

The testing shall be conducted during the Commission's regular business hours. Exceptions to this, when at the request of the Owner, may require additional charges to cover the increased costs to the Commission.

Any backflow prevention device that fails during a periodic test must be repaired or replaced by a licensed plumber. When repairs are necessary, upon completion of the repair, the device will be retested at the Owner's expense to ensure proper operation. High hazard situations will not be allowed to continue unprotected if the backflow prevention device fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than fourteen days after the test date will be established. The Owner is responsible for spare parts, repair tools, or a replacement device. Parallel installation of two devices is an effective means of the Owner ensuring that uninterrupted water service remains during testing or repair of devices and is strongly recommended when the Owner desires such continuity.

Backflow prevention devices will be tested more frequently where there is a history of test failures and the Commission feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional tests shall be borne by the Owner.

7.14 INCIDENT RESPONSE

Upon a report of a contamination event, the MADEP's cross connection inspector/tester shall investigate the nature of the contamination and in light of the circumstances found to exist, determine if in fact a backflow incident did or is occurring. Under the Drinking Water Regulations of the Commonwealth of Massachusetts, 310 CMR 22.22, Section 10(b)5, the MADEP shall take appropriate action to eliminate the hazardous conditions. Action may include immediate termination of water service to any premises suspected of contaminating the public water supply.

In any event where backflow is or was either suspected or confirmed, the following agencies will be immediately notified by the Commission:

1. The Massachusetts Department of Environmental Protection, Western Region
2. The South Hadley Board of Health Department

Samples shall be taken by a certified laboratory for analysis to determine the nature of the contamination, if any. The scope of the incident shall be determined and all consumers affected by the contamination shall be notified immediately if there is any threat to public health.

Any remedial action to mitigate the contamination shall be initiated as promptly as possible. Mitigation actions shall include installation of backflow prevention devices, disconnecting systems or equipment, or flushing and chlorinating affected water lines, all on the part of the Owner and under the supervision of the Cross Connection Inspector/Tester. No water in the affected area shall be used for drinking, bathing, or cooking until such time as further sampling and analysis indicates that no threat to the public health exists.

Any and all action taken shall be well-documented and recorded by the Cross Connection Inspector/Tester.

7.15 RECORDS AND REPORTS

The Commission will initiate and maintain the following:

1. Master files on customer cross connection tests and/or inspections
2. Master files on approved cross connection installations
3. Copies of lists and summaries supplied to the MADEP

The Commission will submit the following to the MADEP:

1. Initial listing of high hazard cross connections

2. Initial listing of low hazard cross connections

3. Annual updated lists of items 1 and 2 above

4. Annual summary of cross connection inspections and surveys

7.16 SURVEY PROCEDURE

1. The Commission shall determine if a cross connection survey is required for all commercial, institutional, and industrial establishments.

2. The Commission and/or delegated licensed representative shall notify the Owner that a survey of the premises is required.

3. The Commission shall determine if an actual survey will be conducted by in-house personnel, a delegated licensed representative, or if the Owner will be required to hire a certified cross connection surveyor.

4. The Commission and/or delegated licensed representative will provide an inspection/evaluation report checklist (Appendix C) for both in-house and Owner's surveyor for all survey work. If no cross connections are discovered, the checklist will be completed and no further action is necessary. Completed checklists will be provided to the Owner and kept on file at the Water Department office.

5. If a cross connection is detected at the Owner's facility, the Owner must hire a licensed plumber and/or licensed surveyor who develops plans and data sheets for all associated work.

6. For non-fire service backflow prevention devices, the licensed plumber and/or licensed surveyor must submit plans and a permit application to the Commission for review and approval (meet Commission and CMR requirements). The Commission will notify the City Plumbing Inspector of the location of the devices. For cross connection prevention devices on a fire service, all plans must be submitted directly to the Fire Department for approval and permitting.

7. Once the Owner receives Commission approval, the Owner's licensed plumber and/or licensed surveyor must submit plans and application to the plumbing inspector.

8. Once the plumbing inspector reviews the plan and issues an authorization permit, the work may begin.

9. When the work is completed, the plumber must notify both the plumbing inspector for final inspection and the Commission for initial device testing. The Commission will verify that the approved appropriate device has been installed, installation is

consistent with submitted design plans, the device has passed initial testing, and a spare repair kit is on site. It is the Owner's responsibility to ensure that both inspecting parties sign off on the initial inspection/evaluation report checklist.

10. When both inspecting parties have signed the initial inspection/evaluation report checklist, the Owner shall be considered to be in compliance.

7.17 RESIDENTIAL EDUCATION

The Commission will establish and maintain a residential education program by including the following "points of concern" in the annual Consumer Confidence Report:

1. Vacuum breaker installation on hose bibs
2. Home heating system protection with proper backflow prevention devices
3. Awareness of connection to swimming pools, home spas, etc.

7.18 PRIVATE WELL POLICY

Private Well Policies set by the Department

Rules and Regulations Concerning Cross Connections

for Residential Homes

No actual or potential cross-connection shall be maintained between the public water system of the Water Department, Fire District No.1, South Hadley, MA (the "Department"), the water of which is used for internal domestic purposes, and private water distribution system of any other source, well or otherwise, also used for internal domestic purposes, if said private water source is not approved by the Massachusetts Department of Environmental Protection (DEP) as being of safe and sanitary quality. The use of a private water source not approved by the DEP within an internal domestic plumbing system when that internal domestic plumbing system is also served by the public water source of the Department constitutes a potential cross-connection. If an actual or potential cross-connection exists, the Department requires that one of the sources, either the Department's public supply or the private source, be severed and capped from the common plumbing system. If the private source is not severed and capped by the homeowner then, and in that event, the Department shall sever and cap the public water supply and the Department shall require a $500.00 reinstatement fee for reconnection.

Rules and Regulations for Cross-Connections Concerning

Industrial and Commercial Buildings

No actual cross- connection shall be maintained between the public water system of the Water Department, Fire District No. 1, South Hadley, MA (The "Department") the water of which is used for any internal purpose and a private water distribution system of any other source, well or otherwise, the water of which is used for any internal purpose, if said private water source is not approved by the Massachusetts Department of Environmental Protection ("DEP") as being of safe and sanitary quality. If an actual cross-connection exists, the Department requires that the cross-connection be terminated and the following safety precautions be satisfied.

The Department shall allow an industrial or commercial building to be serviced by both the public water system of the Department and a private water distribution system of any other source, well or otherwise, provided that said two (2) systems are not cross-connected and that all safety precautions required by the Department have been met including, but not limited to, the installation of backflow prevention devices, the color coding of pipes and the building owner provides the Department with annual access for inspection purposes. If both an internal public and private water supply exists, and the Department's safety precautions are not complied with or the Department is not allowed access for inspection purposes then, and in that event the Department shall sever and cap the Department's water supply and shall require a $500.00 reinstatement fee for reconnection.

7.19 FEES AND CHARGES

All fees and/or charges shall be paid prior to or at the time of testing if performed by the Commission's licensed tester. A summary of fees and charges associated with the cross connection and backflow prevention program is located in Appendix B.

SECTION 8 BILLING AND METERING PROCEDURES

8.1 INTRODUCTION

The purpose of this section is to provide customers of the Water Department – Fire District No.1 with a description of its billing and metering procedures. This section includes discussions of meter reading procedures, water usage fees, billing and payment information, and procedures for meter repair and testing.

8.2 ACTUAL METER READINGS

8.2.1 Required Quarterly Readings

Except as otherwise provided in this section, the Commission will take an actual reading of the official Commission water meter for each account once each quarter. However, the Commission will not take readings of privately owned water meters at any time.

8.2.2 When Meter Cannot Be Read; Procedure

The property owner shall provide a reasonable and adequate location for the entry of the water service pipe into the cellar. Space must be provided for a water meter of a suitable size. The property owner shall keep the entrance valves and water meter accessible at all times, free from rubbish and other material that could obstruct access by the Water Department.

In locations where a water meter location satisfactory to the Water Department – Fire District No.1 is not available within the building, the property owner shall be required to bear the extra cost of installing the water meter in a vault approved by the Board of Water Commissioners or its authorized representative.

Any property owner who interferes in any manner or refuses to allow or permit the personnel of the Water Department – Fire District No.1 to install, maintain, read, and inspect annually, a water meter or meters on their own premises shall be subject to a 48-hour shut off notice. Failure of said owner to desist from said interference or its continued refusal to cooperate with the Water Department – Fire District No.1 will result in the shut off of its water supply at the expiration of shut off notice period.

If the water service inspectors are unable to gain access to a water meter for any reason other than willful refusal of permission by the customer, the water service inspector will take appropriate and reasonable measures to assure an actual reading, including but not limited to making an appointment with the customer or scheduling readings for times other than normal business hours.

1. **Notice left at account premises -** In addition to the efforts to be made to gain an actual reading listed in this subsection, the water service inspector

will complete a pre-printed notice form and leave it at the premises' principal entry.

2. **Contents of notice** - The notice shall provide a space for the meter reader to record the date and time of the attempted reading. It shall also include a form on which the customer may record the meter reading. The notice shall state that failure to return mail the notice will result in an estimated bill for the quarter.

8.2.3 Meter Reading Records

The water service inspector who reads meters shall record the number of each account for which he/she could not obtain an actual reading and the reason it was not possible. The Commission's account records shall identify the employee who makes each meter reading. The records referred to in this subsection are hereby declared to be public records subject to the provisions of Massachusetts General Laws Chapter 66.

8.3 ESTIMATED BILLS

In the preparation of bills for water service, the Commission may rely upon an estimate of a customer's water consumption only if:

1. The procedure used for calculating such estimates is based on the average of the previous four quarters independent of the readings being actual or estimated;

2. The bill includes on its face a clear indication that it is based upon estimated water consumption, including the conspicuous use of the word "Estimate" in close proximity to the statement of the amount due thereon.

8.4 ILLEGAL WATER SUPPLY

No water shall be supplied by any water customer to a person not entitled to its use, and full rates for such supply will be charged to any water customer so supplying other parties.

8.5 WATER USAGE FEES

8.5.1 Water Rates

The Board of Water Commissioners - Fire District No.1 establishes the water usage fees, and possesses full authority to change the rates. The current water rates may be obtained by contacting the Board of Water Commissioners.

8.5.2 Family Unit Charge

The Family Unit charge is a base charge assessed to every service connection receiving water service. The Definition of a "Family Unit" is the following:

The Department defines a "family unit" as being a separate and independent living quarter provided with a kitchen and toilet facility. A minimum charge of $5.00 is made for each "family unit".

8.6 BILLING INFORMATION

8.6.1 Face of the Bill

The face of every bill rendered by the Commission to a customer will include, but not be limited to the following information:

1. The beginning and ending dates of the current billing period;
2. The number of days within which payment in full must be made in order to avoid delinquency charges on the account;
3. The amount of all charges remaining unpaid or unadjusted from the previous bill, labeled "Past Due";
4. A conspicuous statement that, in addition to any delinquency charges or other remedies of the Commission, service may be terminated if the past due amount remains unpaid;
5. The amount of the current charges for water;
6. A statement of the current delinquency charges due on past balances;
7. The actual or estimated meter reading;
8. A statement of the rate or rates upon which such charges are based;
9. The total current charges; and
10. The total amount due.

8.6.2 Reverse of the Bill

The reverse of a bill rendered by the Commission will include a statement of the Rules and Regulations the Commission may impose in the following form:

WATER DEPARTMENT – FIRE DISTRICT NO. 1
RULES AND REGULATIONS

The Department defines a "family unit" as being a separate and independent living quarter provided with a kitchen and toilet facility. A minimum charge is made for each "family unit". In addition, a water system improvement fee in the amount of $1,200.00 is assessed for each new "family unit". The Department defines a "commercial unit" as any non "family unit" facility or structure using up to 10,000 cubic feet of water or any portion thereof per year. Each additional use of 10,000 cubic feet of water or any portion thereof by a non "family unit" facility or structure, within any 12 month period, shall be deemed an additional "commercial unit". A minimum charge is made for each "commercial unit". In addition, thereafter a water system improvement fee in the amount of $1,200.00 is assessed for each new "commercial unit" used by a non-family unit facility or structure. It is the responsibility of the property owner to notify this department when a "family unit" or "commercial unit" has been added to the owner's property. Failure to comply with this regulation will be dealt with summarily according to law.

Water bills are rendered quarterly on first of month succeeding quarterly periods charged for, and bills are due when rendered. Water will be shut off for non-payment after 45 days, and may be shut off without further notice. A service charge of $50.00 will be made before water will be turned on.

Failure of owner or consumer to receive a bill does not relieve them from obligation of payment, nor from consequences of its non-payment.

The owner of property supplied will be charged for all water furnished on the premises during his ownership. When ownership changes, the name and address of new owner should be given to water office, at once, so that bills may be properly rendered.

When a meter fails to register the consumption, the quantity shall be estimated and the charge based on its

registration for a corresponding prior quarter or period. All water passing through a meter will be charged for whether used or wasted.

Your receipted bill will be mailed to you. Water bills may also be paid at the Peoples Savings Bank located on Newton Street and at Berkshire Bank on Lamb Street. When a check received as payment is denied or returned by any Bank an additional fee of $20.00 will be charged to the customer.

House Service connections from the street line to the meter are the property of the owner, and must be maintained by the owner. New Water services from the main to the property line will be installed from April 1st through December 1st of each year.

No actual or potential cross-connection shall be maintained between the public water system of the Water Department, Fire District No. 1, South Hadley, MA (the "Department"), the water of which is used for internal domestic purposes, and a private water distribution system of any other source, well or otherwise, also used for internal domestic purposes, if said private water source is not approved by the Massachusetts Department of Environmental Protection (DEP) as being of safe and sanitary quality. The use of a private water source not approved by the DEP within an internal domestic plumbing system when that internal domestic plumbing system is also served by the public water source of the Department constitutes a potential cross-connection. If an actual or potential cross-connection exists, the Department requires that one of the sources, either the Department's public supply or the private source, be severed and capped from the common plumbing system.

The water meter is the property of the Water Department. The property owner must keep meter on his premises easily accessible for reading and servicing at all times. The Water Department reserves the right to read, inspect or service the meter at any time.

Anyone falsifying a meter reading or tampering with meter will be prosecuted. Permission must be obtained for any enclosure of meters and must be to our specifications.

All persons having boilers on their premises not fitted with check valves or other safety devices or not supplied through tanks, are notified that neither the District, nor the Water Commissioners of the Fire District, nor their agents or servants will be responsible for damages resulting from shutting off the water.

The Board of Water Commissioners, their Agents, or the Fire District reserves the right at all times to shut off water temporarily, without notice, for repairs, extensions, alterations, or other necessary work connected with the system; and for non-payment of bills, or for neglect or refusal to comply with the rules and regulations of the Board.

Water is our most precious resource. Therefore, in the interest of conserving water, any and all new home, commercial and industrial construction and the addition of or alteration of any existing plumbing and/or sanitary fixtures to any existing structure must utilize water conserving fixtures, devices, facilities and outlets approved by this Department.

The Board of Water Commissioners may, when it deems appropriate, and must, when directed by its supplier of water or a governmental agency having authority over water usage, restrict water use by all customers or by class or type of user.

BOARD OF WATER COMMISSIONERS

WATER DEPARTMENT–FIRE DISTRICT NO. 1

8.7 BILLING AND PAYMENT

8.7.1 When Due

All charges or bills shall be due and payable upon receipt. Bills will be considered delinquent and subject to delinquency charges under applicable law or these Regulations if not paid within 45 days from the billing date.

8.7.2 Additional Shut-off/Turn-on Fee

A late payment notice will be issued to a delinquent account, 45 days after the billing date of the initial bill, notifying that water service may be terminated if payment is not made in full within 45 days. In addition to this provision, the Water Department – Fire District No.1 may charge a water shut-off/turn-on fee independent of the actual or physical termination of water service.

8.7.3 Payments; Application to Charges

A customer may make payments for water charges or services by mail or in person at the Water Department Office located at 438 Granby Road, South Hadley, Massachusetts. A customer must designate the account or accounts to which a payment will be applied. When a customer with more than one account fails to designate the account to which a payment is to be applied, the Commission shall credit the payment first to the account with the largest past due balance.

8.7.4 Short-check Charge

When a check is not honored by the customer's bank, regardless of the reason, a charge of **$20.00**, shall be made to the customer in addition to the amount of the water bill.

8.7.5 Refunds; Application of Credit Balances

In the event that a customer overpays a bill or has a credit balance on an account, the overpayment or credit balance will be applied to a future bill. If a customer does not otherwise instruct, the Department will apply a credit balance to the next bill for the account and to successive bills until it is used up. Or, if the customer has more than one account, the Department will apply the remainder of the credit balance to the account with the largest past due balance.

8.7.6 Payment to Avoid Termination

In order to forestall termination of service to a delinquent account, payment following the issuance of a Final Payment Notice - Demand Notice, pursuant to Section 9.2.1 (c), shall be made either in cash or by a certified or a bank cashier's check. A person making a payment in person to forestall termination shall be referred to the Water Department – Fire District

No.1 Office manager. Upon receipt of payment, the office manager, in the presence of the person making the payment, will issue a stop termination order.

8.7.7 Payment after Termination

A customer seeking restoration of water service after termination due to the customer's non-payment of charges must pay the arrearages on the account in addition to a water shut-off/turn-on fee. Payment must be in cash or by a certified or bank cashier's check.

8.8 INSTALLATION AND REPLACEMENT OF WATER METERS AND REMOTE READING DEVICES

The Commission will maintain a program for the replacement of broken, worn, stuck, antiquated, or missing water meters. The Commission reserves the right to install remote reading devices on any customer's service pipe for reasons which are in the best interest of the Commission. In addition, the water meter must be accessible at all times.

8.9 METER TESTING

8.9.1 Meter Tests

The Department shall provide meter tests upon request. The Department shall charge a standard fee of $100.00 for this service, and shall require payment at the time of the test. If the meter in question is found to be defective following the test, the fee will be reimbursed.

8.9.2 Replaced Meters

Upon a customer's request, the Department will test any meter that is removed and replaced. When the Department removes a meter other than at a customer's request, the Department shall have the right to test the removed meter. The testing will be done in accordance with the Department's procedures by an outside testing facility.

8.10 REIMBURSEMENT FOR SERVICES

The reimbursement schedule, adopted by the Board of Water Commissioners, is available upon request at the Water Department – Fire District No.1 office, located at 438 Granby Rd.

The property owner is responsible for the cost of any repairs or replacements of its water service from the Curbstop to the meter. This includes cellar floor/foundation wall repairs, road restoration, sidewalk repair, and landscaping.

On completion of work to said real estate property, the Owner is responsible for materials used, interior or exterior of its property, labor, and equipment costs along with the landscaping.

Emergency repairs to control leakage will be undertaken at the earliest convenience of the Water Department – Fire District No.1 and will thereafter be billed to the property owner, even if the Owner has not applied for repair work as hereinafter required.

Routine repairs, cleaning, or replacement of services will be undertaken only after application is made by the property owner and a satisfactory deposit for the work has been made except where service to other properties require immediate repairs be done.

The full cost of all repair or replacement work on the service connection shall be borne by the property owner. Charges for this work shall be due when rendered.

8.11 METERING ENTRANCE PIPES AND BYPASS ARRANGEMENTS

All entrance pipes in new construction and major renovations shall be provided with two valves between which the water meter shall be placed.

All bypass arrangements shall be appropriately valved and metered. Bypass arrangements shall be permitted on water meters 2-inches and above and at the written authorization of the Board of Water Commissioners.

8.12 UNMETERED OUTLETS

All unmetered outlets from fire pipes and sprinkler systems shall be closed and sealed; the sealing of such outlets to be done by the Water Department – Fire District No.1. Said seals shall not be broken, except in case of emergency, in which the Board of Water Commissioners shall be properly notified in writing.

8.13 METER SEALS

All meters, bypass valves, and outlets sealed by the Water Department – Fire District No.1 shall not be tampered with. Any seals broken by unauthorized persons or accident will be replaced and the Owner will be charged a $100.00 fee. Action will be taken against those who willfully or wantonly remove seals, damage meters or steal water, in accordance with Massachusetts General Law, Chapter 165, Section II, which reads as follows:

> "Intentional injury to or interference with meter: penalty. Whoever unlawfully and intentionally injures, or suffers to be injured, a water meter belonging to a city, town, district, or company engaged in supplying water, or prevents such meter from duly registering the quantity of water supplied through it, or hinders or interferes with its proper action or just registration, or attaches a pipe to a main or pipe belonging to a city, town district or company without the consent of the same, unless it passes through a meter set by such city, town, district, or company, shall be punished by a fine of not more than $1000 or by imprisonment for not more than one year, or both."

SECTION 9 TERMINATION OF WATER SERVICE

9.1 INTRODUCTION

This section is intended to provide Water Department Fire Districts' customers with the conditions associated with termination of water service and measures that customers can take to avoid termination of water service due to non-payment of bills or other reasons described in this section.

The Board of Water Commissioners reserves the right at all times to shut off water without notice, for repairs, extensions, alterations, or other necessary work associated with the water system. Nobody shall be entitled to damages, nor to have any portion of their payment refunded, due to the loss of water service and/or discoloration of water.

The Board of Water Commissioners and/or their authorized representative may enter the premises of any water customer, at any reasonable time to examine the pipes, meter and fixtures, the quantity of water used, and the manner of its use. Where the right to so examine is denied, the water will be shut off from said premises and not turned on again until such examination is allowed.

9.2 NONPAYMENT OF BILLS

9.2.1 Conditions to be met Prior to Termination

Except as otherwise provided in these Regulations, the Commission may terminate water service for nonpayment only if:

(a) **Unpaid bill** - The amount shown as due on a bill remains unpaid for more than (60) days from the billing date of the initial bill for such amount, or such longer period as may be permitted by Section 9.2.1;

(b) **"Late Payment Notice"** - The Commission has forwarded a "Late Payment Notice" to the delinquent account, 30 days after the billing date of the initial bill, notifying that water service may be terminated if payment is not made within 45 days from the billing date of the initial bill.

(c) **"Final Payment Notice - Demand Notice"** - The Commission has forwarded a "Final Payment Notice - Demand Notice" to the delinquent account, 75 days after the billing date of the initial bill but not less than 15 days prior to the date for termination. The notice has been postpaid by certified or registered mail, first class to:

(1) The customer at its address as shown on the records of the Commission,

(2) the owner of the premises, addressed to the premises, in addition to the premises being posted, demanding such payment of charges within 15 days of the date upon which such notice and demand was mailed and posted, upon penalty of having the water service to such premises terminated.

(d) **Bill unpaid on termination date** - The bill or charges remain unpaid on the termination date as indicated on the Final Payment Notice - Demand Notice; and

(e) **Final check** - The office manager checks at the close of business on the last business day before the date on which water service is scheduled to be terminated that:

(1) no one has made a payment on the account sufficient to justify halting termination,

(2) the Commission has not received a notice that an appeal has been filed in the courts,

(3) the account is otherwise not subject to termination.

9.2.2 Content of Notices

In addition to the information required by Section 9.2.1 of these Regulations, the special request for payment and the final payment notice - demand notice shall contain the information required under Section 9.3 of these Regulations with respect to termination of service to customers.

9.2.3 Notice of Termination to Occupied Building

When service to a building is terminated for any reason, the Superintendent shall notify the South Hadley Board of Health and shall exercise its best efforts to post a notice in a common area of the building stating the reason for the termination and the conditions under which water service will be resumed. The notice shall also include a telephone number of the Department which a customer or residential tenant may call for an explanation of the situation and the customer's rights.

9.2.4 Termination for Illegal Taking; Emergencies

Nothing in this Section shall be construed to prevent termination for the illegal taking of water or reasons of safety, health, cooperation with civil authorities or any other reason for which the power to terminate service is specifically granted by the Special Acts, Legislative Acts or by the General Laws.

9.2.5 Time When Termination May be Effected

Termination of water service for failure to pay a delinquent account may be effected only between the hours of 8:00 a.m. and 3:30 p.m., Monday through Friday, provided that such day is not a holiday as defined under Section 7 of Chapter 4, of the General Laws, or the day before such a holiday.

9.2.6 Shut-Off

Upon entering any building containing one or more dwelling units to shut off the service thereto, the Commission's employee responsible for termination of service, prior to such termination, shall make his or her best effort to tell the residential tenant(s) of each dwelling unit that service is to be terminated. At the same time, he or she shall present the residential tenant(s) with a serious illness notice. If any residential tenant asserts that there is a serious illness in any dwelling unit, the employee shall not shut off the service for 24 hours in order to allow the person to obtain certification of the illness in accordance with Section 9.3.1. When service is terminated to a building pursuant to this section at a time when any residential tenant is not present, or when entry is not allowed by an occupant, the employee shall make his or her best effort to leave a serious illness notice at or under the door of the said residential tenant's unit.

9.2.7 Rights of Residential Tenant to Continue Service

(a) **Payment of bill** - At any time before or after service is terminated on account of non-payment by the landlord customer, a residential tenant may apply to the Office Manager to have service continued or resumed. The Commission shall not terminate service, or shall resume service previously terminated, if it receives from a residential tenant proof that he or she is a residential tenant in the affected building and cash or certified or bank check sufficient to cover both the delinquent bill or charges and the water shut-off/turn-on fee.

(b) **Tenant representative** - Where more than one residential tenant of a residential building is involved, the tenants shall designate one of their number as their representative to receive communications from and to arrange payment(s) to the Water Department – Fire District No.1. Such a designation shall not be construed to make the tenant representative personally liable for any amount due to the Holyoke Water Works on a bill.

(c) **Termination** - If a residential tenant fails to pay a bill (as required under subsection (a) of this section), the Commission may terminate service upon 15 days written notice in accordance with the provisions of Section 9.4.1.

As used in this Section, the term "residential tenant" shall include groups of tenants.

9.2.8 Termination

Upon entering any building containing one or more dwelling units to terminate the service to any customer therein and before shutting off service, the employee of the Commission responsible for termination of service will make his or her best efforts to give, or leave under the door of, each customer or residential tenant, a copy of the notice.

9.3 REASONS OTHER THAN NON-PAYMENT OF BILL

9.3.1 Conditions/Notice Periods Prior to Termination

This section applies to cases in which the Commission has discovered the existence of any of the following conditions:

(1) **Streamlined pipe** - Customer plumbing which does not permit proper installation of a water meter, whether due to insufficient access, inadequate connecting area or pipes, or otherwise.

(2) **Bad plumbing** - Customer plumbing which lacks a functioning shut-off valve, or which in the judgment of the Commission, has deteriorated to the extent that the installation or repair of a water meter could damage such plumbing.

(3) **Illegal tap** - Any unmetered connection of customer plumbing extending from the municipal water system that is not used for fire protection purposes only.

(4) **Refusal of access** - Any refusal by a customer, owner, or tenant to permit access by the Commission to customer plumbing for the purposes of inspecting a meter connection or for the purpose of reading, inspecting or installing a meter or other Commission equipment related thereto (including any refusal to provide clear access to such connection, meter or other equipment).

(5) **Customer service pipe emergency** - Any leak or malfunction in customer service piping which in the opinion of the Commission requires for reasons of public safety an interruption of service to one or more customers or that which is the owner's responsibility to repair.

Nothing in this Section shall be construed to limit or infringe upon the right of the Commission to:

(1) Make, without notice, such temporary interruptions in water service as it deems necessary on a routine or emergency basis for restoration, repair or replacement of the water works system as defined in the Special Acts, or

(2) Pursue its remedies for the unauthorized use or diversion of water or for damage to the Commission's property under other regulations promulgated by the Commission, the Special Acts or other applicable laws.

The following notice periods shall apply to termination under this chapter:

Reason for Termination	Notice to Cure Condition	Final Notice and Demand
(1) Streamlined Pipe	30 days	48 hours
(2) Bad Plumbing	30 days	48 hours
(3) Illegal Tap	15 days	48 hours
(4) Refusal	15 days	48 hours
(5) Customer Service Pipe Emergency	Such reasonable period as in the judgment of the Commission	None

In the event that a customer pursues his or her rights to appeal the measures required by the Commission, the notice and termination periods prescribed in this section shall control.

9.3.2 Inspection, Notification and Termination

(a) **Initial inspection** - Upon receipt of notification that one of the conditions set forth in Section 9.6.1 exists on a customer's premises, the Commission shall inspect the premises and verify the existence of the conditions.

(b) **Notice to cure condition** - When the Commission determines after an inspection that a condition specified in Section 9.6.1 exists or either is denied access or is unable, after reasonable efforts, to secure access to the premises for the purpose of verifying the condition, the Commission shall forthwith:

(1) Post on the premises,

(2) Mail to the customer at its address as shown on the records of the Commission,

(3) Deliver, when possible, to each unit of a residential building that the Commission has determined may be affected by the proposed termination, and

(4) mail on the same day by certified or registered mail, first class, to the owner of the premises, if other than the customer, at its address as shown on the records of the assessor of the Town of South Hadley, a notice to cure condition as described in Section 9.5.4 (a) stating that service will be terminated if the condition is not corrected within the period of time indicated.

In the case of residential buildings, tenants receiving a notice to cure condition will be identified in accordance with Section 9.4.1 of these Regulations.

(c) **Final notice and demand** - After the expiration of the period specified in the Notice to Cure Condition, a Commission employee will return to the premises in order to determine whether the condition has been corrected. If the condition has not been corrected or if the Commission employee is unable to obtain access to the premises, the Commission shall forthwith:

(1) Post on the premises, and

(2) Deliver, when possible, to each unit of a residential building that the Commission has determined may be affected by the proposed termination, a final notice and demand. The final notice and demand shall state that if the condition is not corrected within twenty-four hours of the date on which it was posted or delivered, the Commission will terminate water service to the premises.

(d) **Termination** - Upon the expiration of the twenty-four hour period specified in subsection (c) of this Section, a Commission employee will return to the premises to determine whether the condition has been corrected. If the condition has not been corrected or if the employee is unable to obtain access to the premises, service will be terminated.

(e) **Customer service pipe emergency notice** - Notwithstanding any other provisions of these regulations, in the event of a customer service pipe emergency, the Commission will be required to give only such notice prior to termination as it deems practicable in the particular circumstances. After termination because of a customer service pipe emergency, the Commission employee will make every effort possible to notify those customers affected by the termination of water service and unaware of it being an emergency situation.

(f) **Post-termination notice** - In the event that the notices called for in subsections (b) and (c) of this Section cannot be given prior to termination, the Commission will, as soon as practicable following termination, notify the persons described in subsection (b) of this Section. This notice will contain all applicable information required to be included in a notice given pursuant to subsection (b) and will be transmitted as specified in that subsection.

9.3.3 Resumption of Service

At any time following termination, upon receiving satisfactory proof that a condition that required termination has been cured, the Superintendent shall order service restored to the account. At that time, a fee of $50.00 will need to be paid prior to restoration of service.

SECTION 10 USE OF FIRE HYDRANTS

10.1 INTRODUCTION

This section is intended to inform customers, developers, and contractors of the procedures of the Water Department – Fire District No.1 with respect to fire hydrant usage.

10.2 FIRE HYDRANT USAGE

No person, except firefighters at fires, or authorized employees or representatives of the Water Department – Fire District No.1 shall open or operate any public or private fire hydrant without written consent of the Board of Water Commissioners. No person whatsoever, without written consent, shall open, operate, or close any water gate or air valve on mains or any sidewalk valve or any corporation valve attached to the water main or service pipes.

10.3 TESTING FIRE EQUIPMENT

Private hydrants, fire pumps, and sprinkler systems, using city water, may be tested only in the presence of a representative of the Water Department – Fire District No.1, after permission to test has been granted by the Board of Water Commissioners or its authorized representative. The Water Department – Fire District No.1 shall specify the time and date in which the test(s) shall take place and shall be reimbursed for all labor costs.

10.4 ILLEGAL USE OF PUBLIC AND PRIVATE FIRE HYDRANTS

No person shall, open, operate, obstruct, remove, draw water from, or in any way tamper with a fire hydrant without first procuring a written permit to do so from the Board of Water Commissioners or its' superintendent. It shall be unlawful for any person to destroy, damage, or vandalize a fire hydrant.

10.5 AUTHORIZED FIRE HYDRANT USE

At the discretion of the Water Dept. Fire Hydrants will be allowed to be used for filling pools, tanker trucks, etc. All costs associated with connection and operation of the hydrant by Water Dept. Personnel will be the responsibility of the person requesting water.