

Town of Burlington

Department of Public Works



Street Opening/Utility Connection Rules & Regulations

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I. PERMITTING AUTHORITY

In order to protect the integrity of all public rights-of-way, assure the protection of all structures within and adjacent to these rights-of-way, and provide optimum safety and convenience for the public; permission in accordance with the rules and regulations herein described must be obtained from the Department of Public Works hereinafter referred to as the “Permitting Authority”, before excavating or in any way disturbing public rights-of-way, or extending/connecting to a Town owned utility.

The Town of Burlington, Board of Selectmen hereby adopts these regulations January 1, 2003 and as revised:

- December 27, 2005
- January 1, 2008 – Renewed water services shall be installed from the dwelling to the water main, connections to “Black Iron” pipe prohibited.
- July 14, 2008 – Standardize Water Quality Inlets as Rinker Matl. Stormceptor
- January 12, 2009 – Trench Permits Required per 520 CMR 14.00.
- September 1, 2009 – Sec III subsec *Water Meters* & Sec XI *Right Size Meters* added.
- September 30, 2009 – Sec VII. Utility Permit Application updated.
- December 14 2009 - Fees, Rates, and Penalties approved
- January 4, 2010 –Sec II Permits only issued to authorized persons.
- March 14, 2012 – Sec V Specifications changed to meet Mass DOT standards.
- September 8, 2014 - Sec IV General Requirements and Restrictions, (3) no paving after Oct.1 & Temp 55 deg+. (4) Revised permit fee for opening Moratorium Roads.
- October 20, 2015 – Sec IV subsection Testing/Water Mains updated.
- April 11, 2016 – Standardize Town owned pumps
- February 31, 2018 – As-built Standards added to Regs.
- October 23, 2018 – Sump pump design criteria added.
- February 31, 2018 - Fees, Rates, and Penalties amended
- September 20, 2019 – Curb Box standard added.
- January 8, 2020 – Horizontal/Vertical text added.
- November 30, 2020 – DPW Water Rules & Regulations incorporated.
- July 6, 2021 – Hydrant flow test charge updated.

I. OBTAINING CONTRACTOR'S LICENSE

Permits to perform work within rights-of-way, open to the public, can be obtained only by licensed contractors. Licenses will be issued to those contractors who, in the opinion of the Permitting Authority, are deemed qualified through experience and have demonstrated by past performance the ability to undertake the scope of work covered by the license. Permits will only be issued to persons authorized as Licensed Utility Contractors to obtain permits.

Requirements

Prior to obtaining a contractor's license, the following information must be provided:

1. A listing of available equipment, previous projects, of similar size and scope, completed within the past three (3) years, and three (3) written letters of reference with contact information (at least one Municipal Reference) that may be contacted about these projects.
2. A street-opening bond of Ten thousand (10,000) dollars shall be obtained from a surety company licensed to do business in the Commonwealth of Massachusetts and approved by the Department of Public Works. The bond shall be valid and in full effect for the term of the license and shall bind the contractor to the faithful performance of the work in accordance with all applicable specifications of the Department of Public Works.
3. Trench Safety Application.(520 CMR 14)
4. A certificate of insurance showing that the contractor has the minimum insurance as follows:

Insurance

General Liability

Includes:	Each Occurrence	\$1,000,000
Comprehensive form	Aggregate	\$2,000,000
Premises/Operations		
Underground Explosion & Collapse		
Hazard		
Products / Completed Operations		
Independent Contractors		
Broad Form Property Damage		
Personal Injury		

Automobile Liability

Includes:	Bodily Injury& Property Damage Combined	\$1,000,000
All Owned Vehicles		
Hired Vehicles		
Non-owned Vehicles		

Workers Compensation & Employers Liability

As Required by State of Massachusetts	Each Accident	\$100,000
	Bodily Injury by Disease (Policy Limit)	\$500,000
	Bodily Injury by Disease (Each Employee)	\$100,000

Additional Insurance / Requirements

The Town of Burlington Shall be named as Additional Insured

Suspension of License

The Permitting Authority reserves the right to suspend or revoke a contractor's license. Three (3) documented incidents of poor quality of work or unwillingness to comply with these regulations shall result in the suspension of license for one (1) year and three (3) years' probation. Once on probation, one (1) documented incident of poor performance shall result in the suspension of license for one (1) year and three (3) years' probation, to be added to (and not served concurrently with) the original probation.

Additionally, the authority may suspend, revoke, or refuse to issue a license if, in the opinion of the authority, the contractor is not adequately skilled or competent to undertake work under this license.

II. UTILITY REQUIREMENTS

Permits and their associated fees are herein established for General Construction, Street Occupancy, and water or sewer service connections.

General Construction

These projects are defined as follows:

- Any excavation within the Town's right-of-way or work on Town owned infrastructure.

Street Occupancy/Driveway Paving & Aprons

This is defined as any work, which does not require excavation, but does require equipment to work or occupy area within the right-of-way (ROW). Examples of this type of work include but are not limited to:

- Driveway paving/widening
- Obstruction of a sidewalk
- Placement of equipment or materials on or adjacent to the road.

Driveway Widening/Modification

For the convenience of residents in Burlington seeking access to parcels of land located entirely in Burlington, the Engineering Division, in consultation with the Police Department, will issue permits for curb cuts in residential neighborhoods and non-heavily traveled roadways. If a permit is denied for public safety reasons by the staff, the resident may petition the Board of Selectmen for a review of the decision rendered by staff. The decision of the Board in this matter shall be considered the final determination on the issuance of the permit. (General Bylaws XIII - 1.3)

Roadways needing Board of Selectmen approval for curb cuts:

Bedford Street	Mill Street	Terrace Hall Avenue
Francis Wyman Road	Peach Orchard Road	Wilmington Road
Lexington Street	Prouty Road	Winn Street
Middlesex Turnpike	Skilton Lane	

Permits to perform work on Cambridge Street (State Highway Rt.3/3A) must be obtained from the Town of Burlington as well as MassDOT.

Sewer Service Connections

Sewer Service Pipe

- Property owner responsible from the structure to the sewer main.
- Cleanout is required 10' from foundation at transition from 4" to 6" pipe.
- Sewer service shall be 6-inch SDR35 PVC.

Other Required Sewer Permits

If required, the following permits and/or designs must be provided to the Permitting Authority prior to issuance of a sewer connection permit.

MWRA Toxic Reduction and Control Permit - Gas/Oil Separators

MWRA Sewer Use Permit - Industrial Waste as defined by 360 CMR 10.000

DEP Sewer System Extensions & Connections Permit

- Discharges from an industrial user that have a Standard Industrial Classification (SIC) Code listed in 314 CMR 7.17 and discharge greater than 25,000 gallons per day.

Grease Traps – 248CMR10

- Provide Design Plan & Sizing calculations
- Grease traps must be installed in establishments that prepare food and may potentially discharge fats, oils, and grease into the sewer system, (restaurants, institutions, commercial kitchens, etc.)
- Outside grease traps must be designed by a registered Professional Mechanical Engineer.

Water Services, Meters, and BackFlows

Backflow: the flow of water, other liquids, or the mixture of water with other liquids from a source that is not potable water into a potable water pipe, prevention of which is by a backflow prevention device.

Backflow prevention device: a backflow prevention device that prevents the backflow of water from the premises into the water distribution system.

Cellar valve: a cellar valve is a water flow control valve located inside the foundation of a building, between the end of the service pipe and the water meter. The cellar valve is the property and maintenance responsibility of the home or business owner.

Corporation stop valve: a water service shutoff valve located at a street water supply main. This valve cannot be accessed or operated from the ground surface. The corporation stop valve for services one inch and smaller is the property of and maintenance responsibility of the Town.

Cross-connection: any actual or potential connection between a distribution pipe of potable water from a public water distribution system to a non- potable water source.

Curb stop: a curb stop is an in-ground structure at the property line, which contains a service valve and is the connecting point between the service line and service pipe.

Customer: any person, partnership, firm, corporation, trust (real estate or other body), politic or organization of any type in which the owner(s) is supplied with water by the water distribution system. The customer is normally the record owner of the realty being supplied with water and responsible for the account.

Final read: prior to demolition or change of ownership of the property the Permitting Authority will perform a final read and inspection of the meter.

Lien: shall mean the statuary lien a municipality may impose pursuant to Massachusetts general laws, chapter 40 Section 42(a).

Meter Interface Unit (MIU): An automatic reading device on the inside or outside of a building in an accessible location to enable routine meter readings without internal access to the premises. The Town shall maintain and replace such devices at its expense.

Potable water: Water which is safe for human consumption.

Service line: a service line is a pipe that connects the water supply main to the curb stop.

Service pipe: a service pipe is a pipe running from the curb stop to a cellar valve.

Town: the Town of Burlington, Massachusetts.

Water Distribution System: network of water supply mains, booster pumps and storage tanks, use to deliver water to the customer.

Water Meter: a device for measuring and recording the flow of water from the municipal supply to the customer.

Water Supply Main: a water supply main is the municipal water main to which a service line is connected to supply water to the customer.

General Provisions

Application For Water Service. All applications for a water connection shall be submitted, by the customer or a duly authorized agent ,to the Department of Public Works, Town Hall Annex, 25 Center Street. Approval of the application creates a contract between the Town and the customer obligating the customer to pay the Town of Burlington its established rates and to comply with these Rules and Regulations.

Responsibility for Charges. Upon the activation of water service, the customer will be charged with and held responsible for all water passing through the service pipe.

- Residential meters will be read biannually and commercial meters read quarterly. The minimum billing charge ceases only when the structure receiving water from the water distribution system is demolished, removed from its site, or is declared legally uninhabitable.
- Bills are payable to the Town and will be sent to the customer at the address provided on the application for water service. Customers should notify the Permitting Authority promptly of any change of address.
- Failure of the customer to receive a bill does not relieve the customer of the obligation of payment, nor from the consequences of non-payment. Any overdue bill may be collected by any legal means, including a lien on the premises, shutting off of water, or an action in contract, pursuant to Massachusetts general laws, chapter 40, sections 42a-42f.
- If the water service is shut off by the Town due to a delinquent account, it will not be turned on until all past due bills, penalties, and a fee for turning on water service are paid.
- The Town shall be notified at transfer of any change of ownership of premises serviced. The new customer must complete an application for water service. Billing changes will become effective at the next regular billing date following the date of notice. The Town will take a reading of the water meter upon the effective date of the transfer. Any outstanding charges, any excess charges, and the prorating of the minimum charge must be adjusted between the buyer and the seller at the passing of papers. Failure of the seller to notify the Town of a change of ownership does not alleviate the buyer of any charges due the Town. All charges are against the premises and lien procedures may be instituted if necessary.

Meter Malfunction: All water passing through a Water Meter must be paid for by the Customer. If a Water Meter malfunctions or fails to Register, the customer will be charged at the average daily consumption as shown by the meter when in order, for the corresponding, preceding two (2) year period (or for whatever the preceding service time is, if less). In the event that a meter fails to register or is out of order, the Town will notify the customer. If, for whatever reason, access to repair or replace the meter is not allowed, the water usage will be estimated based on previous history of water usage and the water service will be subject to termination.

Final Read: The Town will require a minimum forty-eight (48) hours written notice for a final read. The customer shall allow the Permitting Authority to enter the premises to make a final read of the water meter, at which time a physical inspection of the meter will be conducted. Simultaneously, an inspection of the premises for illegal connections to the Town's sanitary sewer system will be conducted. Any illegal connections shall be corrected prior to the sale and transfer of the premises. Any final read required sooner than forty-eight (48) hours will be subject to a fee as specified these rules and regulations.

Bill Adjustment: All claims for adjustment of bills shall be made within sixty (60) days of date of issuance of said bills, in writing to the Department of Public Works.

Unusual construction. Customers desiring any construction, alterations or attachments which are inconsistent with the rules and regulations must submit plans and specifications to the Permitting Authority for review.

Access to the premises. Employees or contractors working on behalf of the Permitting Authority shall be permitted to access all premises supplied with water at reasonable hours to permit inspection of plumbing and fixtures, to read, set, examine, calibrate, repair, test or remove meters and automatic reading devices, to ascertain the amount of water used and manner of use, and to enforce the rules and regulations. After three (3) attempts to contact the customer, a registered notice of the time the water service will be terminated.

Fire Hydrants. Fire hydrants are under control of the Town's fire department for any firefighting situation (fires or necessary practice). In no other case shall anyone be allowed to draw water from, exercise or operate any fire hydrant within the water distribution system without permission from the Permitting Authority. Any person or persons taking water from any hydrant in the Town without permission will be assessed a tampering penalty and held responsible for any related damage and water charges.

Private Hydrant Maintenance. The Town's general bylaws require owners of fire hydrants on private property to provide annual maintenance of the hydrants to ensure properly functioning hydrants in the event of a fire. Property owners may hire a Town-approved private contractor to perform the hydrant maintenance or to use the services of the Permitting Authority, for which property owners will be invoiced. Failure to maintain private fire hydrants can result in fines as defined in the Town's general bylaws.

Constant Pressure Not Guaranteed: The Town does not guarantee constant pressure nor uninterrupted service, nor does it assure the customer either a full volume of water or the required pressure necessary to effectually operate hydraulic elevators, sprinkler systems, or other appliances. However, although the Town will undertake to use all reasonable care and diligence to avoid interruptions and fluctuations in the water service, the Town shall not be liable or responsible to any persons for any loss or damage from any excess or deficiency in the pressure, volume or supply of water.

No liability for interruption of service: No customer will be entitled to damages, or to have any portion of payment refunded, for any interruption of supply occasioned either by accident to any

portion of the water distribution system, or by shutting off for the purpose of additions or repairs to the water distribution system, or by stoppage or shortage of supply due to causes beyond the control of the Permitting Authority, such as excessive drought, excessive use of and waste of water by other customers, or by leaks or defects in the pipes or appliances owned by the customer or other customers.

No Liability For Customers' Pipes: The Town will not assume any liability for conditions in the Customer's plumbing or appliances associated with or following installation, repairs or flushing to any part of the water distribution system and shall not be responsible for damages caused by sediment-laden water resulting from the opening or closing of any gates or screens for repairs or any other reasons, or the breaking of any supply lines.

No Liability For Collapsed Boilers: The Permitting Authority reserves the right at any time, without notice, to shut off the water distribution system for purposes of making repairs, extensions or for other necessary purposes. Persons having boilers or other pressure-dependent appliances on their premises are required to provide, at their own expense, suitable safety appliances to protect themselves against such danger. In any event, it is expressly stipulated that the Town will not be liable for any damage resulting from water having been cut off, either through accident or necessity.

No Liability for Freeze-Ups: It is the responsibility of all customers to ensure that all plumbing, fixtures, meters and appliances in their premises are protected from freezing. The customer shall make any repairs that may be necessary to prevent leaks and damage. The Town will not be held responsible for loss or damage to any plumbing, fixtures, meters or appliances due to freezing.

Service turn on/off: Only Permitting Authority employees will turn off/on water service at the street. Except in the case of emergencies, all water shutoffs and startups shall be scheduled within a minimum of three (3) days prior notice to the Permitting Authority and shall be billed according to the current fee schedule.

Building Demolition: Prior to a structure being demolished, the water service must be shut off, meters removed and service disconnected from the curb stop. Additionally, the sewer service line must be cut and capped at the property line before the commencement of any work. It will be the responsibility of the property owner or developer to notify the Permitting Authority and to excavate for the disconnection, which must be witnessed and inspected by the Permitting Authority.

Discontinuance by the owner: any customer may discontinue water service to a building by notifying the Permitting Authority in writing at least three (3) working days in advance of the date on which water service is to be discontinued. Upon notification that the service is to be discontinued, the Permitting Authority shall discontinue the water service. Whenever water service has remained discontinued for a continuous period of one (1) year or more, the Permitting Authority may, at its sole discretion, require the customer to cut and cap, at the customer's expense, the water service pipe(s) from the water supply main.

Turn On After Discontinuance: if water service has been discontinued for less than one (1) continuous year, the service shall be turned on only by the Permitting Authority at the request of the customer. Where water service has been discontinued for one (1) continuous year or more, the water service will be turned on only after the customer submits an application for water service to the Permitting Authority.

Leaks: The Permitting Authority shall have the right to shut off water to where a leak exists or is believed to exist. Any such leaks must be repaired and must pass inspection by the Permitting Authority before water will be restored. In addition, each customer shall be responsible for the cost of any repairs on all customer-owned water service lines and/or water service pipes.

Water Connection Permit: Prior to installation of the water service, the customer must obtain a Water Connection Permit from the Permitting Authority.

Responsibility for water service pipes:

- Residential service pipe shall be one inch (1") and within the Street Right-Of-Way(ROW), from the curb stop to the water main, shall be owned and maintained by the Permitting Authority. The service pipe from the curb box to the building to the meter including the cellar valve shall be installed, owned and maintained by the customer.
- Commercial properties are responsible for the service pipe from the water main to the building.
- Leaks in the customer water line must be repaired immediately upon discovery as a condition of continued water supply.

Access to curb stop: The curb stop shall contain a service valve which must be accessible to the Permitting Authority should it be necessary to turn off the water supply.

Water Services

- All new water service shall be one (1) inch copper unless replacing or repairing existing service line then three quarter (¾) inch copper is allowed.
- Renewed water services for new dwellings or “tear downs” shall be re-laid from the dwelling to the water main using, at a minimum, one (1) inch copper
 - Existing Direct Tap corporations without any damage may be used for renewed service If upgrading from three quarter (¾) inch copper to one (1) inch copper, a direct tap corporation adaptor (Pack Joint Coupling Ford C16-33 or approved equal) may be used to make the connection.
 - Existing saddle connections must be removed and replaced with Stainless Steel Repair Clamp with stainless steel bolts and nuts, minimum length 1 foot, in which case Contractor is responsible for scheduling water main shut down with DPW/Water Division.
- No pulling of water services will be allowed except under the following conditions with approval of the Permitting Authority:
 - Main streets as classified by the Town

- Streets under paving moratorium.
- Connections to existing piping shall not be allowed without explicit permission from the Permitting Authority, but in any case connections to black iron pipe is prohibited

Water Meters

The Water Meter is the property of the Town and may be repaired, tested, calibrated, improved or replaced by the Town. The customer is responsible for reasonable care and use of the water meter.

- The Town shall furnish, at the customer's expense, meters up to and including one inch (1") in size, along with the necessary bushings and couplings to attach to the plumbing and all automatic reading devices. Future replacement of any such meter shall be at the Town's expense.
- Water meters greater than five eighths (5/8) inch shall be "Right Sized" in accordance with American Water Works Association, Manual of Water Supply Practice M22. (See Section IV.SPECIFICATIONS, DETAILS, AND APPLICATIONS for forms and instructions.)
- Each unit within any multi-family, condominium, or mixed use development shall be metered individually.

Meter Applications

Meter Type	Size	Application
Positive Displacement	5/8" to 2"	Residential units and Small Businesses
Compound or Ultrasonic	size 2" & larger	Apartments, Motels/ Hotels, Hospitals , Schools, Restaurants, Office Buildings Dormitories, Nursing Homes, Department Stores, Shopping Malls, and Other Commercial Establishments. Processing Plants Manufacturing Facilities Lawn Sprinkler Systems Level Controlled Tank Filling Operations

Ownership: All meters, once installed, become the property of the Town, except that the Town may refuse to take ownership of a meter which is improperly installed or which is the wrong type or size for the premises in question. Where a meter is improperly installed or is the wrong type or size, the customer shall be required to install a Town- approved meter prior to the commencement of water service. The Town has the right to change the size of the meter without

charge to the customer. However, all costs and expenses associated with the installation of a meter outside of normal business hours shall be borne by the customer.

Cost of meter repairs: The cost of meter repairs or replacements necessitated by ordinary wear and tear will be borne by the Town. The costs of repairs, maintenance and/or replacement caused by freezing, hot water, or other than ordinary wear and tear, whether internal or external, will be borne by the customer.

Control valves: Requirements established by the Town for customer-owned portions of the water distribution system include but are not limited to the following: a minimum of two (2) additional control valves are required in association with the installation of each service. One valve is to be located near the point of entry of the service pipe through the building or structure wall. A second valve is to be located on the “downstream” or house side of the water meter. These valves should be of equal size to the diameter of the pipe to which they are connected and are the property of the customer.

Materials specification: Specifications, valves and other appurtenances shall conform to Massachusetts plumbing code regulations and department specifications. All installations shall be performed by a licensed plumber in accordance with Massachusetts plumbing code and any other applicable regulations and to the satisfaction of the Permitting Authority. If any defects in workmanship or materials are found or if the customer’s service has not been installed in accordance with proper specifications or the Permitting Authority’s requirements, water service will either not be turned on or will be discontinued if such defects are not remedied within a specific time set by the Permitting Authority. The Permitting Authority will not be held liable for any defects in such workmanship or material.

Maintenance of customer’s plumbing: All customers shall maintain the plumbing and fixtures within their premises in good repair and protected from freezing at their own expense. Customers shall make any repairs that shall be necessary to prevent damage or leaking. All plumbing must conform to Massachusetts plumbing code and any other applicable regulations.

Location: All meters shall be set, as nearly as possible, at the point of entry of the service pipe to the building, and the customer shall provide and maintain a clean, warm accessible place therefore. The remote reader will be set on the exterior of the building, on the driveway side whenever possible, at approximately eye level, and at a location where plantings or shrubs will not inhibit the meter reader’s access.

Outside meter-reading devices or automatic reading devices: The Town may install a device on the inside or outside of a building in a conveniently accessible location to enable routine meter readings without internal access to the owner’s building. The Town shall maintain and replace such devices at its expense.

Access to meters: It shall be the duty of all customers to see that meters on service connections and remote readers shall be readily accessible at all times to the Permitting Authority. Failure to remove any obstruction which prevents access to the meter or the remote meter within three (3)

days after being notified by the department will cause the water to be shut off from the premises and it will not again be turned on until all obstructions are removed.

Meter repairs, relocation, and replacement: The Permitting Authority shall have the right to remove, repair or replace any meter at any time. All meter installations which cannot be shut off shall be equipped with a by-pass at the expense of the customer.

Damage to meters: Customers will be held responsible for damage to the water meter as a result of freezing, hot water, or other external causes. When damage occurs, the Town will furnish and set another meter or repair the damaged one. The cost of such replacement or repairs shall be charged to the customer on the basis of cost to the Town of materials, labor, and current sales tax law.

Tampering: It is illegal to tamper with a water meter. Written authorization must be obtained from the Town to install, alter or remove a meter. Violations are subject to a fine as set forth in article vii of the rules and regulations. All meters will be sealed against tampering or alteration. A broken seal is a violation of the rules and regulations.

Relocating Meters: Once sealed by the Town, meters and remote readers will be moved only by the Permitting Authority. If the relocation is done for the convenience of the customer, the customer will be responsible for the cost of the relocation.

Testing meters by request: The accuracy of the meter on any premises will be tested by the Permitting Authority upon written request of the customer, who shall pay a water meter bench test fee (see article vi of the rules and regulations) to cover the cost of the test. If upon testing the meter is found to register over two percent (2%) more water than actually passes through it, the meter will be repaired and the fee will be refunded and the water bill for the current period will be adjusted in accordance with the result of the test; if, however, it appears that the customer was charged, or has paid for less water than he should have been charged or should have paid for, he shall forthwith be charged with the proper additional amount and shall pay the same, together with the expense of the examination and test, to the Town.

Meter Testing: The Town reserves the right to test meters based on the following schedule:

Size	Test Frequency
6 inch or larger	yearly.
4 inch	every 2 years.
3 inch	every 3 years.
2 inch	every 4 years.
5/8 to 1 inch	every 15 years or change out.

Residential Irrigation Meter/Backflow

- Only residential properties may obtain irrigation meter. The Water/Sewer account must be current; no outstanding bills or charges.
- Only Licensed plumbers may apply for 2nd meter and undertake work.
- Requirement for Residential Cross Connection Application
 - Completed Residential Cross Connection Application Form(see section IV for application)
 - Receipt for plumbing permit application from Tax Collector.
 - Receipt for meter purchase from Tax Collector.
- All in-ground sprinkler systems must have a testable backflow device. Sillcocks that draw-off irrigation system or drain pipes shall have hose bib vacuum breakers with non-testable, dual-check valve installed in-line after meter.
- After initial installation the DPW/Water Division will test the backflow device, if applicable, and inspect the new meter, install the reading device, and seal the meter.
- The initial backflow test and all annual tests on devices will be at the customer's expense.
- The Building Department's Plumbing inspection must be scheduled after the DPW have inspected and tested the Backflow Devices.

Commercial Cross Connection Program/Backflows

The purpose of the cross-connection program is to protect the Town's potable water supply from the possibility of contamination which could backflow or back siphon from the customers water system into the Town's water distribution system in accordance with Public Law No: 93-523 (12/16/1974) Safe Drinking Water Act and Massachusetts drinking water regulations, 310 CMR 22.22. Failure to comply with this program may result in water service termination and fines.

- As a result of a cross connection survey, it is determined that a Backflow prevention device is required at the service connection or as interior protection within the building, the Customer, at their expense, shall install an approved backflow prevention device(s).
- All decisions relating to the determination of Backflow Prevention Devices will be made by the Permitting Authority. Failure to comply with any directive will result in termination of water service.
- All commercial, industrial and institutional users of the public water system, determined to be higher hazard facilities, shall install and maintain an approved backflow prevention device for building containment. This device shall be installed immediately downstream of the water meter.

- Written authorization must be obtained from the Town to install, alter or remove a backflow prevention device. Violations are subject to a fine as set forth in these Rules and Regulations.
- Backflow testing is performed twice a year; higher hazard facilities may be tested more frequently. All backflow prevention devices will be tested by the Permitting Authority or an authorized representative. In the event of a failed device, repair/replacement as well as re-testing must be conducted within ten (10) days of installation or repair.
- All costs for inspections, tests, and other Permitting Authority activities resulting from the implementation and operation of the cross-connection program shall be the responsibility of the customer.
- The Town shall not be responsible for any damage resulting from the shutoff of water or the subsequent let-on of water in conducting required tests and inspections of an Approved Backflow Prevention Device installations.
- All fire protection systems connected to the Town's water supply must be protected with an approved backflow device.

Fees, Rates, and Penalties

Water & Sewer Rates And Fees

Insert 2020 Revised Rates Here

Permit and Connections Fees

Fee schedule effective July 1, 2020.

Water connection fee	\$150*
Back flow test	\$ 50
Emergency final read (within 48 hrs.)	\$200
Water shut off/turn on fee:	\$ 50 - during working hours. Overtime rate other than working hours
Hydrant meter rental:	\$250.00 (non-refundable) + water cost + \$750.00 deposit = \$1,000.00
Water meter bench test:	\$50.00 if test proves meter accurate
Thaw frozen service	Actual cost
New service - 5/8" meter/ MIU	\$275
2 nd Meter - 5/8" meter/ MIU	\$325
New service - MIU only	\$125
Larger meters - provided by customer	\$125 minimum - MIU charge
Private hydrant maintenance fee	\$250
Hydrant flow test	\$200
Street Opening	\$50**
Sewer Connection	NC ***
Drain Connection	NC
Street Occupancy / Driveway Paving	NC
Trench Permit	NC

* Fee for water service inspection only. Plumbing permits fees (Building Inspector) or Water Meter fees (DPW) may also apply.

** Moratorium Streets (paved within 5 years) minimum fee \$1,500 for single utility connection or as determined by Permitting Authority for larger excavations.

*** Sewer Allocation fees may apply.

Penalties

Penalties are hereby established for violations of the rules and regulations. Such violation may result in the shutting off of water to the premises. Water shut off for violation of rules and regulations, nonpayment of charges, or other offense, will not be turned on again until the Permitting Authority is satisfied that the violation has been properly addressed. Any person violating this section shall be liable to the department for any related expense, loss, or damage.

Violation of:	1st Offense	2nd Offense	Subsequent Offense
Water Conservation Restriction	Warning	\$50	\$100
Utility Rules & Regulations	Warning	\$50	\$100
Hydrant Tampering	\$300	\$300	\$300
Backflow Device Tampering	\$300	\$300	\$300
Meter Tampering	\$100	\$100	\$100

Each day that such violation continues shall constitute a separate offense. Any person violating this section shall be liable to the department for any related expense, loss, damage, and cost of water illegally taken

Late payment: Interest equaling one percent (1%) of the balance past due is applied after thirty (30) days. There will also be a fifty cent (.50) demand charge on water and fifty cent (.50) demand charge on sewer that is assessed for each period the bill is past due.

Storm Water Connections

- Storm drains, culverts and related installations, including catch basins, manholes, and curbing shall be installed as necessary to provide adequate collection and treatment of surface water from all streets within the project area. The storm water system shall be designed to the satisfaction of the Permitting Authority.
- Any stormwater structure on a street intended to be accepted as a public way, other than catchbasin or drain manhole, must be located outside of the towns right-of-way on private property and maintained by an individual or homeowner's association. An Operation and Maintenance plan, acceptable to the Permitting Authority, shall be submitted prior to issuance of a connection permit.
- For purposes of standardization, water quality inlet Best Management Practice (BMP) intended to be owned and maintained by the Town shall be Stormceptor Units manufactured by Rinker Materials.

Sump Pump mitigation design criteria:

Drainage system connection

- Cover -
 - Gravity pipe –3’ minimum
 - Pressure pipe – 4’ minimum
- Connect to structure (CB or DMH), inline connections not allowed.
- If installing pipe within the ROW outside the edge of pavement in front of adjacent properties then the applicant must obtain a signed agreement with abutter allowing the installation.

Infiltration systems

- Designed by a Professional Engineer
- Test pit to determine ground water elevation & soils classification.
- Soils evaluation
- Seasonal high groundwater elevation - 1’ min separation to bottom of system.
- Min. design capacity for 1,200 GPD
- Overflow incorporated into design
- Setbacks
 - Building foundation – 10’ min
 - Private well – 100’ min
 - Property line – 10’ min
 - Surface water – 50’ min
 - Title 5 leaching system – 50’ min

III. GENERAL CONDITIONS

Plan/Profile Requirements

Before any permit is issued, a complete plan and profile may be required with the application, showing the following:

1. Location of proposed construction.
2. Exact location of all existing utilities within the proposed construction area that the proposed construction would cross.
3. Elevations of existing underground facilities crossed or connected to by proposed installations.
4. Elevations of proposed construction at all conflict (crossing) points.
5. Inverts at all proposed manholes or cleanouts.
6. Plan shall be at a horizontal scale of 1 inch = 40 feet (1" = 40') or greater.
7. Profile shall be at a vertical scale of 1 inch = 4 feet (1" = 4') or greater.

Horizontal/Vertical Separation

Sewers shall be laid at least 10 feet horizontally from any existing or proposed water line. In cases where it is impractical to maintain a 10 foot horizontal separation, at the discretion of the Permitting Authority, the sewer and water lines may be installed in the same trench with 18 inches of vertical separation.

General Requirements and Restrictions

1. Permits will only be issued to utility contractors licensed with the Town.
2. No street opening permits shall be issued between November 15 and April 1, except in case of emergency, as determined by the Permitting Authority.
3. Street Paving Restrictions:
 - No Street paving after October 1 or before May 1. Trench patching is allowed.
 - Pavement surface or base shall be free of signs of free moisture (film of water).
 - Temperature shall be 55 degrees Fahrenheit & rising.
4. If a street opening permit is requested during the first five years of a newly constructed/paved road, at a minimum, the following items will be required:
 - Temporary trench patch shall match existing Pavement Thickness.
 - Trench shall be allowed to settle one (1) year.
 - Permitting Authority shall undertake permanent patch consisting of trench grind one and one half (1.5) inch and inlay, with one (1) foot cutback.
 - A permit fee determined by the Permitting Authority to be commensurate with the cost of final restoration of the pavement and traffic markings .
5. If the proposed street opening for underground work affects more than fifty (50) feet of roadway area measured longitudinally, the Permitting Authority has the option of

requiring grind and inlay, or a complete curb to curb pavement overlay of the affected area.

6. Except in emergencies, work shall be limited to the hours of 7:00 AM to 5:00 PM. On primary streets work shall be limited to the hours of 9:00 AM to 4:00 PM unless approved by the Permitting Authority.
7. Except in emergencies, no work shall be allowed on Saturdays, Sundays and legal holidays. In addition, no new work shall commence on Fridays.
8. No opening or excavation in any street shall extend beyond the centerline of the street before being backfilled and the surface of the street temporarily restored.
9. No more than 100 feet measured longitudinally shall be opened in any street at any time, except by special permission of the Permitting Authority.
10. If the road patch starts to fail, the contractor must respond and repair the pavement on a primary street within four (4) hours of notification. On all other roadways, the contractor must respond within twenty four (24) hours of notification, unless a safety hazard exists. If a safety hazard exists, the contractor must respond within four (4) hours of notification. If the contractor fails to respond within the required time, the Department of Public Works will repair the trench and bill the contractor for such repair.
11. Should it be determined by the Permitting Authority that work of an emergency nature must be accomplished by the Public Works personnel, the total cost of labor and materials shall be charged to the permit holder.
12. Unless permission is granted by the Permitting Authority, all work must be completed within seven (7) days of commencing the work on primary streets. Once the work is complete, the pavement shall be temporarily patched and the permanent trench patch shall be the following construction season, allowing the trench one year to settle.
13. All existing drainage facilities including, brooks, streams, canals, channels, ditches, culverts, catch basins, and piping, shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas. If the contractor damages or impairs through circumstances beyond his control, any of the aforesaid drainage facilities, he shall repair the same within the same day.
14. No work, other than of an emergency nature shall be authorized during snow and ice storms and subsequent snow removal operations.
15. Access to private driveways and fire hydrants must be maintained during construction operations at all times.
16. The contractor shall be responsible for obtaining all permits required for his equipment, work force, or particular operations (such as blasting) in the performance of the work.
17. In granting any permit, the Permitting Authority may attach such other conditions thereto as may be reasonably necessary to prevent damage to public or private property or to prevent operation from being conducted in a manner hazardous to life or property or in a manner likely to create a nuisance. Such conditions may include but shall not be limited to:
 - limitations on the time of the year in which the work may be performed;
 - restrictions to the size and type of equipment ,which work within the right of way;
 - routes upon which materials and equipment may be transported;
 - location and manner of disposal of excavated materials;

- requirements for dust control, street cleaning, noise prevention, or other activities that may be considered a nuisance; and
- regulation as to the use of streets during the course of the work.

18. Any utility work requiring an inspection from the Engineering Division, must be scheduled twenty four (24) hours. Any inspection conducted after 4:30 P.M. will result with the Contractor paying the minimum of four (4) hour overtime rate as required under the BEMA contract.

Pump sewer connection

In order to obtain a sewer connection permit for a “pumped” sewer connection the applicant must provide a plan, specifications, and supporting calculations, stamped by a Professional Engineer, demonstrating that the system is adequate.

For purposes of standardization, pump stations owned or constructed for the Town of Burlington shall use the following pumps:

- Submersible Pumps: Gould or Flygt
- Dry well Non-Clog Pumps : Smith & Loveless

Abandonment of Utilities

Town utilities and service connections may be abandoned in place upon approval of the Permitting Authority, subject to the following conditions:

- All pipes shall be sealed by installation of cap, bulkhead, or other means.
- Structures shall be filled and castings removed.
- Water services water main corporations on AC pipe shall be removed and pipe repaired with stainless steel repair clamp or other approved means.
- Gate boxes shall be removed.

Testing – Water, Sewer, & Manholes

Water Mains

1. A licensed independent contractor, approved by the Permitting Authority, must pressure test, disinfect, flush, and perform bacteriological sampling and testing of the new water main.
2. Pressure shall be brought to a pressure of 150 psi and required to hold for 2 hours.
3. Following or during the pressure test, the Contractor shall make a leakage test by metering the flow of water into the pipe while maintaining in the section being tested a pressure equal to the pressure rating of the pipe. If the average leakage during a two-hour period exceeds a rate of 10.5 gallons per day per mile per inch of nominal diameter of pipe, the section shall be considered as having failed the leakage test.
4. Pipe disinfection initial chlorine residual shall be at least 100 ppm (100 mg/L). After flushing pipe chlorine residual must be equal to normal distribution system residual.

5. Testing shall be done by a certified laboratory approved by the Permitting Authority, in accordance with Standard Methods,* and shall show the absence of coliform organisms. A standard plate count shall be performed by the certified laboratory. The minimum standards are: Total Coliform Count=Zero, Heterotrophic Plate Count: 500 CFU/ml or less. (CFU: Coliform Forming Units)
6. An officially signed original paper copy of the results of the disinfection, bacteriological sampling, and laboratory test results shall be submitted to the Town Engineer prior to any new pipeline being put into service.
- 7.

*Since 1905, *Standard Methods for the Examination of Water and Wastewater* has represented "the best current practice of American water analysts. *Standard Methods* is a joint publication of the American Public Health Association (APHA), the American Water Works Association (AWWA), and the Water Environment Federation (WEF).

Sewer Mains

1. On completion of a section of sewer, including building connections installed to the property line, the Contractor shall install suitable bulkheads as required, dewater and test the sewer for leakage.
2. Unless otherwise approved, the section shall be tested using low pressure air test procedures. If circumstances permit, the Town Engineer may require testing by infiltration or exfiltration.
3. If either infiltration or exfiltration testing is permitted by the Engineer, the test shall be conducted for at least twenty four (24) hours. The amount of infiltration or exfiltration shall not exceed 100 gallons per inch-diameter per mile of sewer per twenty four (24) hours.
4. A low pressure air test, if conducted, shall be performed as follows:
 - Low pressure air shall be introduced into the sealed line until the internal air pressure reaches 4 psi greater than the maximum pressure exerted by the groundwater that may be above the invert of the pipe at the time of the test.
 - At least two minutes shall be allowed for the air pressure to stabilize in the section under test. After the stabilization period, the low pressure air supply hose shall be quickly disconnected from the control panel. The time allowed in minutes for the pressure in the section under test to decrease from 3.5 to 2.5 psi (greater than the maximum pressure exerted by the groundwater that may be above the invert of the pipe) shall not be less than that shown in the following table:

Pipe Diameter (inches)	Time (minutes)
6	3.0
8	4.0
10	5.0
12	5.5
15	7.5
18	9.0
21	10.0
24	11.5
27	13.0

Sewer Manholes

1. Inspect for visible leakage after backfill with ground water at normal level.
2. Locate visible leakage inside manhole.
3. Repair leaks.
4. Each manhole shall undergo a vacuum test as specified below.
 - Each manhole shall be vacuum tested immediately after assembly and prior to backfilling.
 - All lift holes shall be plugged with an approved non-shrink grout.
 - Stub-outs, manhole boots, and pipe plugs shall be secured to prevent movement while the vacuum is drawn.
 - Installations and operation of vacuum equipment and indicating devices shall be in accordance with manufacturer's recommendations.
 - A vacuum of 10 inches Hg (4.9 psi) shall be drawn and the vacuum pump shut off. **The test shall pass if the vacuum remains at 10 inches of Hg or drops to 9 inches Hg (4.4 psi) in a time greater than one minute.**
 - If the manhole fails the test, necessary repairs shall be made and the vacuum test and repairs shall be repeated until the manhole passes the test.

Maintenance of Traffic

1. Two-way traffic must be maintained at all times. If work is not complete at the end of the day, the travel lane must be reopened to traffic for overnight use either by placement of a temporary patch or a road plate of sufficient size to completely cover the street opening.
2. All open excavations shall comply in accordance with Chapter 82A of the Massachusetts General Laws 520 CMR 14 Excavation & Trench safety regulations.
3. All excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. If the excavation becomes a hazard or if it excessively restricts traffic at any point, then special construction procedures shall be taken, such as limiting the excavation and prohibiting stockpiling material in the street.
4. All street excavations shall be completely closed at the end of each work day. Backfilling or use of steel plates of adequate strength to carry traffic shall be used.
5. If uniformed police officers are required on site by the Police Department, they shall be provided at the contractor's expense.
6. Safety and traffic control methods, types of signs, warnings, lights, and barriers shall be provided by the contractor, and shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices.

Detours

1. All detours must be approved by the Chief of Police and the Permitting Authority. The contractor shall supply a Traffic Management Plan clearly showing the location of work, the detour route, and the location and wording for all traffic signage.
2. Safety and traffic control methods, types of signs, warnings, lights, and barriers shall be provided by the contractor, and shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices.

Cleanup and Property Restoration

1. The contractor shall frequently cleanup all refuse, debris, and other material generated by his operations. The site of the work and the adjacent areas affected thereby shall at all times present a neat, orderly and workmanlike appearance.
2. The contractor must employ at all times during the progress of his work adequate safety precautions to prevent injuries to persons or damage to property. The contractor shall provide adequate material, equipment and labor to correct any and all areas deemed unsafe by the Permitting Authority.
3. Where material or debris has washed or flowed into or has been placed in existing water courses, ditches, gutters, drains, pipes, structures, such materials or debris shall be entirely removed and satisfactorily disposed of during progress of the work and the ditches, channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.
4. The contractor shall restore or replace, when and as directed, any property damaged by his work, equipment or employees to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the contractor shall do, as required, all necessary highway or driveway, walk and landscaping work. Materials,

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equipment, and methods for such restoration shall be as approved by the Permitting Authority.

5. The contractor shall replace loam, grass, and plantings that existed prior to the work. Also, the contractor shall repair any walls, curbing, walks or other structures damaged during his work, back to the original condition.
6. Before the work is deemed to be complete by the permitting authority, the contractor shall perform a final cleanup to bring the construction site to its original condition.

Miscellaneous

The Department of Public Works will not issue a Street Opening Permit for any street within an active subdivision. It is the responsibility of the contractor to obtain permission from the subdivision owner, for any such street openings. An “active subdivision” is one that the Planning Board has not yet certified as fully meeting the conditions and requirements of the approved subdivision plans and/or one with respect to which the Town continues to hold any surety for the performance of the developer’s obligation under such a plan.

IV. SPECIFICATIONS, DETAILS, AND APPLICATIONS

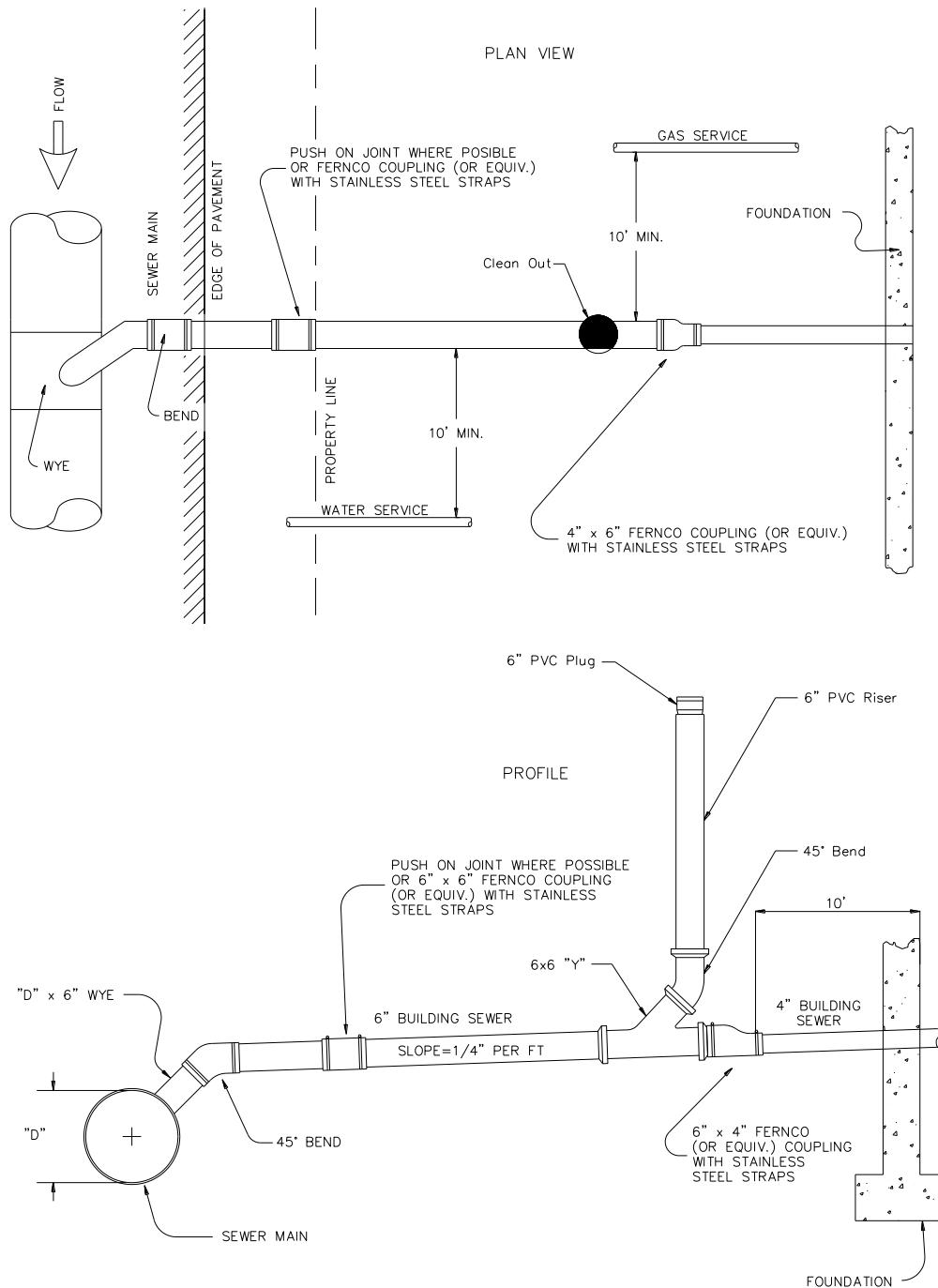
Construction Methods & Materials

All work and material shall comply in all respects to the Massachusetts Highway Department (MHD) "Standard Specifications for Highways and Bridges" 1995 Edition or later. In addition, the following list of materials required by the Town for purposes of standardization:

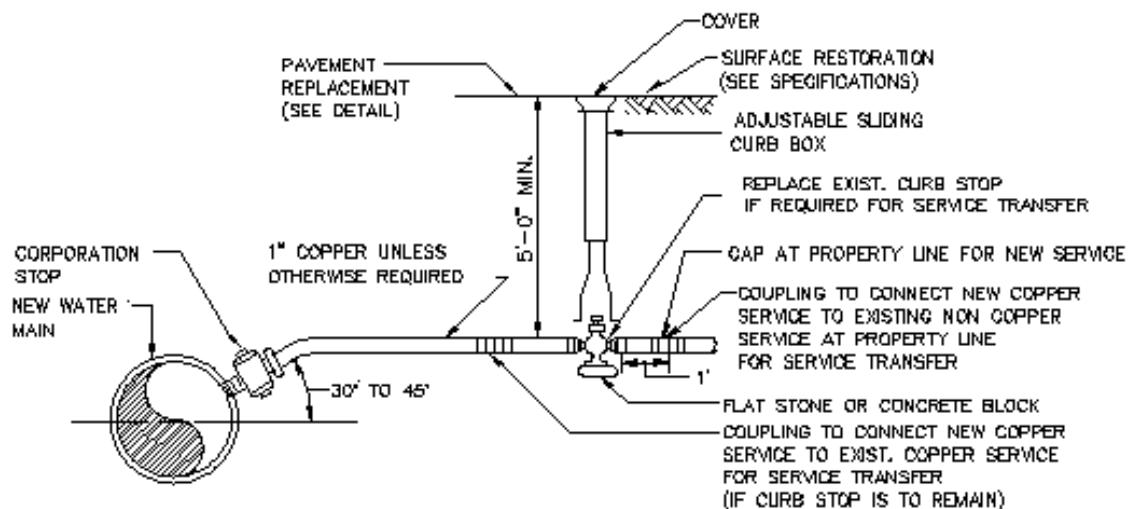
- All gate valves shall be "open-left."
- All hydrants shall be "open-left."
- All hydrants shall be Clow Eddy hydrants with drain, part number F-2640.
- All gate boxes shall be North American made, BB or approved equal.
- All curb boxes shall be 2 1/2" Buffalo, arch style, no rods. - American made
- All water service corporations, curb-stops, and fittings shall be Mueller or approved equal.
- All water mains shall be Cement Lined Ductile Iron (CLDI) class 52.
- All sewer main shall be PVC SDR 35. (6" min. Services, 8" min. Mains.)
- All Water Quality Units (intended to be owned by Town) shall be Rinker Material Stormceptor Units.
- All drain lines shall be Reinforced Concrete Pipe Class IV.
- All catch basin frame and covers shall be Neenah Foundry product number 3589-A or equivalent American made equal.
- All manhole frames and covers shall be Neenah Foundry product number R-1720 or East Jordan Iron Works product number 00211211 (frame) and product number 00211044CO1 (cover) or equivalent American made equal.
- All manhole covers at a minimum shall have the specific utility name, i.e. sewer, drain, water, etc., casted into the cover.
- Town Owned Pump Stations:
 - Submersible Pumps: Gould or Flygt
 - Dry well Non-Clog Pumps : Smith & Loveless

The contractor shall submit one set of copies of shop drawing/specifications for all materials used to the Town Engineer for approval prior the start of work. The contractor shall schedule a pre-construction meeting with the Town Engineer prior to the start of work.

Standard Details



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NOTE: PROVIDE SADDLE FOR ALL AC AND PVC
MAINS AND ALL 2" OR LARGER STOPS

WATER SERVICE DETAIL

N.T.S.

Utility Permit Application



Town of Burlington Engineering Division
25 Center Street
Burlington, MA 01803
Phone 781-270-1640
<http://www.burlington.org/departments/dpw.php>

Type of Permit: Street Opening Trench Permit Water Permit Demo
Sewer Permit Driveway Permit Drain Permit Sketch

Address

Contactor Name and Phone Number:

Purpose of project:

Length/Width of Street Opening:

Digsafe Number:

Approval

Step 1. Demo Permit

Meter Removal	Meter-Toters pulled/water off - DPW	_____ (initial)
Cap Sewer Service	Demo Permit - Engineering	_____ (initial)
Confirm Water Service	1" copper service to main-Engineering	_____ (initial)
Demo Letter	DPW	_____ (initial)

Step 2. Meter Application

Meter Application	Meter right size – DPW	_____ (initial)
Back Flow (if applicable)	DPW	_____ (initial)
Sewer Allocation	Copy of Permit – Engineering	_____ (initial)
W/S Permit (must be signed off)	Inspection-Engineering	_____ (initial)
1" water upgrade	Schedule Shutdown-Notify Residents	_____ (initial)

* Contractor should request copy of completed permit signed by the General Development Inspector

Step 3. Certificate of Occupancy Permit

Meter Sealed	DPW	_____ (initial)
Utility Permit Inspection/Tie Cards	Engineering	_____ (initial)
Backflow Inspected	DPW	_____ (initial)

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Town of Burlington Engineering Division
25 Center Street
Burlington, MA 01803
Phone 781-270-1640
www.Burlington.org

Municipal Stormwater Connection Hold Harmless Agreement

(Date)

To Whom It May Concern::

I _____ of _____ take
(Homeowner's Name) (Address)

all responsibility and will not hold the Town of Burlington responsible for any problems related to my entering into the Town's catch basin/storm drain. I am aware that if a problem should arise with the Town's drainage lines I could get water backup in my house through the sump pump/drainage connection.

(Homeowner's signature)

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Utility Contractor's License Application

APPLICATION FOR UTILITY CONTRACTORS LICENSE

Name _____ New
 Renewal

Address _____

Telephone _____

Emergency Contact:

Name _____

Email _____

Telephone _____

In the table below please list all employees authorized to obtain permits for the company. Anyone who is not included in this table will not be allowed to pull a permit from this department.

Name	Phone Number	Email

OFFICE USE ONLY –

Trench Safety Application

Certificate of Insurance

Street Opening Bond

3 Letters of Reference
(New Applications Only)

Approved By _____ Date _____

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Trench Permit Application



**Town of Burlington Engineering Division
25 Center Street
Burlington, MA 01803
Phone 781-270-1640
<http://www.burlington.org/departments/dpw.php>**

Trench Permit

Pursuant to GL c82A subsect. 1 and 520 CMR 7 et seq. (as amended). This permit must be fully completed prior to consideration.

By signing this form, the applicant/excavator all acknowledge and certify that they are familiar with, or, before commencement of the work, will become familiar with, all laws and regulations applicable to work proposed, including OSHA regulations, G.L. C. 82A, 520 CMR 7.00 et seq., and any applicable municipal ordinances, by-laws and regulations and they covenant and agree that all work done under the permit issued for such work will comply therewith in all respects and with the conditions set forth below.

The undersigned agrees to reimburse the municipality for any and all costs and expenses incurred by the municipality in connection with this permit and the work conducted thereunder. Including but not limited to enforcing the requirements of state law and conditions of this permit, inspections made to assure compliance therewith, and measures taken by the municipality to protect the public where the applicant has failed to comply therewith including police details and other remedial measures deemed necessary by the municipality.

The undersigned applicant, agrees to defend, indemnify, and hold harmless the municipality and all of its agents and employees from any and all liability, causes or action, costs, and expenses resulting from or arising out of any injury, death, loss, or damage to any person or property during the work conducted under this permit.

Name of Applicant _____ New
Address _____ Renewal
Telephone _____

MA Hoisting
License # _____
License Grade _____
Expires _____

Competent Person _____
Name _____
Signature _____ Date _____

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Right Size Meter Application

Right Size Application, instructions, and Water Customer Data Sheet, as a self-calculating Microsoft Excel spreadsheet, is available on DPW's website; at Burlington.org, go to *Public Works Department*, select *Permits & Applications*,

Town of Burlington Water Customer Data Sheet																																																																																																																																																																																			
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Fixture</th> <th style="width: 15%;">Value @ 60 PSI</th> <th style="width: 15%;">Number of Fixtures</th> <th colspan="3">Total Value</th> </tr> </thead> <tbody> <tr><td>Bathtub</td><td>8</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Bedpan Washers</td><td>10</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Bidet</td><td>2</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Dental Unit</td><td>2</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Drinking Fountain - Public</td><td>2</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Kitchen Sink</td><td>2.2</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Lavatory</td><td>1.5</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Showerhead (Shower Only)</td><td>2.5</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Service Sink</td><td>4</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Toilet - Flush Valve</td><td>35</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td> - Tank Type</td><td>4</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Urinal - Pedestal Flush Valve</td><td>35</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td> - Wall Flush Valve</td><td>16</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Wash Sink (Each Set of Faucets)</td><td>4</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Dishwasher</td><td>2</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Washing Machine</td><td>6</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td>Hose (50 ft Wash Down) - 1/2 in.</td><td>5</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td> - 5/8 in.</td><td>9</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr><td> - 3/4 in.</td><td>12</td><td>x</td><td>=</td><td colspan="2"></td></tr> <tr> <td>Combined Fixture Value Total</td> <td></td> <td></td> <td>=</td> <td colspan="2"></td> </tr> <tr> <td colspan="6" style="text-align: center; padding: 5px;"> Pressure Adjustment Factor: <input type="text"/> Water Flow Demand: 0 GPM </td> </tr> <tr> <td colspan="3" style="text-align: center;">Customer Peak Demand</td> <td colspan="3" style="text-align: center;">(Press.Adj.Factor) X (Water Flow Demand) = GPM</td> </tr> <tr> <td colspan="6" style="text-align: center; padding: 5px;"> Add Irrigation <small>Irrigation areas must be divided into zones, with a maximum irrigation demand of 25 GPM. Provide a detailed irrigation plan and calculations with appropriately designed zones.</small> </td> </tr> <tr> <td colspan="3"></td> <td colspan="3" style="text-align: center;">GPM</td> </tr> <tr> <td colspan="6" style="text-align: center; padding: 5px;"> Added Fixed Load <small>Provide detailed description and backup for this demand.</small> </td> </tr> <tr> <td colspan="3"></td> <td colspan="3" style="text-align: center;">GPM</td> </tr> <tr> <td colspan="6" style="text-align: center; padding: 5px;"> TOTAL FIXED DEMAND GPM </td> </tr> <tr> <td colspan="6" style="text-align: center; padding: 5px;"> Select Meter Size/type: <input type="text"/> </td> </tr> </tbody> </table>						Fixture	Value @ 60 PSI	Number of Fixtures	Total Value			Bathtub	8	x	=			Bedpan Washers	10	x	=			Bidet	2	x	=			Dental Unit	2	x	=			Drinking Fountain - Public	2	x	=			Kitchen Sink	2.2	x	=			Lavatory	1.5	x	=			Showerhead (Shower Only)	2.5	x	=			Service Sink	4	x	=			Toilet - Flush Valve	35	x	=			- Tank Type	4	x	=			Urinal - Pedestal Flush Valve	35	x	=			- Wall Flush Valve	16	x	=			Wash Sink (Each Set of Faucets)	4	x	=			Dishwasher	2	x	=			Washing Machine	6	x	=			Hose (50 ft Wash Down) - 1/2 in.	5	x	=			- 5/8 in.	9	x	=			- 3/4 in.	12	x	=			Combined Fixture Value Total			=			Pressure Adjustment Factor: <input type="text"/> Water Flow Demand: 0 GPM						Customer Peak Demand			(Press.Adj.Factor) X (Water Flow Demand) = GPM			Add Irrigation <small>Irrigation areas must be divided into zones, with a maximum irrigation demand of 25 GPM. Provide a detailed irrigation plan and calculations with appropriately designed zones.</small>									GPM			Added Fixed Load <small>Provide detailed description and backup for this demand.</small>									GPM			TOTAL FIXED DEMAND GPM						Select Meter Size/type: <input type="text"/>					
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Bedpan Washers	10	x	=																																																																																																																																																																																
Bidet	2	x	=																																																																																																																																																																																
Dental Unit	2	x	=																																																																																																																																																																																
Drinking Fountain - Public	2	x	=																																																																																																																																																																																
Kitchen Sink	2.2	x	=																																																																																																																																																																																
Lavatory	1.5	x	=																																																																																																																																																																																
Showerhead (Shower Only)	2.5	x	=																																																																																																																																																																																
Service Sink	4	x	=																																																																																																																																																																																
Toilet - Flush Valve	35	x	=																																																																																																																																																																																
- Tank Type	4	x	=																																																																																																																																																																																
Urinal - Pedestal Flush Valve	35	x	=																																																																																																																																																																																
- Wall Flush Valve	16	x	=																																																																																																																																																																																
Wash Sink (Each Set of Faucets)	4	x	=																																																																																																																																																																																
Dishwasher	2	x	=																																																																																																																																																																																
Washing Machine	6	x	=																																																																																																																																																																																
Hose (50 ft Wash Down) - 1/2 in.	5	x	=																																																																																																																																																																																
- 5/8 in.	9	x	=																																																																																																																																																																																
- 3/4 in.	12	x	=																																																																																																																																																																																
Combined Fixture Value Total			=																																																																																																																																																																																
Pressure Adjustment Factor: <input type="text"/> Water Flow Demand: 0 GPM																																																																																																																																																																																			
Customer Peak Demand			(Press.Adj.Factor) X (Water Flow Demand) = GPM																																																																																																																																																																																
Add Irrigation <small>Irrigation areas must be divided into zones, with a maximum irrigation demand of 25 GPM. Provide a detailed irrigation plan and calculations with appropriately designed zones.</small>																																																																																																																																																																																			
			GPM																																																																																																																																																																																
Added Fixed Load <small>Provide detailed description and backup for this demand.</small>																																																																																																																																																																																			
			GPM																																																																																																																																																																																
TOTAL FIXED DEMAND GPM																																																																																																																																																																																			
Select Meter Size/type: <input type="text"/>																																																																																																																																																																																			

Figure 4-5 Water customer data sheet Adapted from AWWA Manual M22

NING/

**UTILITY CONNECTION
RULES & REGULATIONS**
November2020

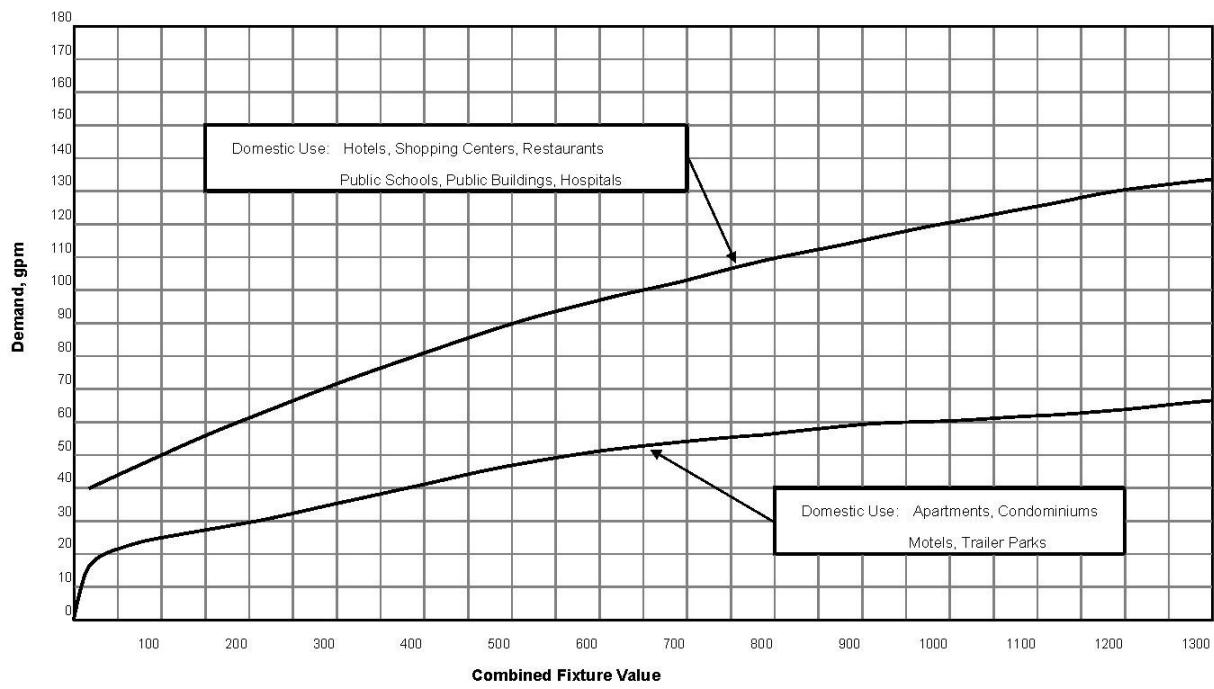


Figure 4-2 Water flow demand per fixture value - low range

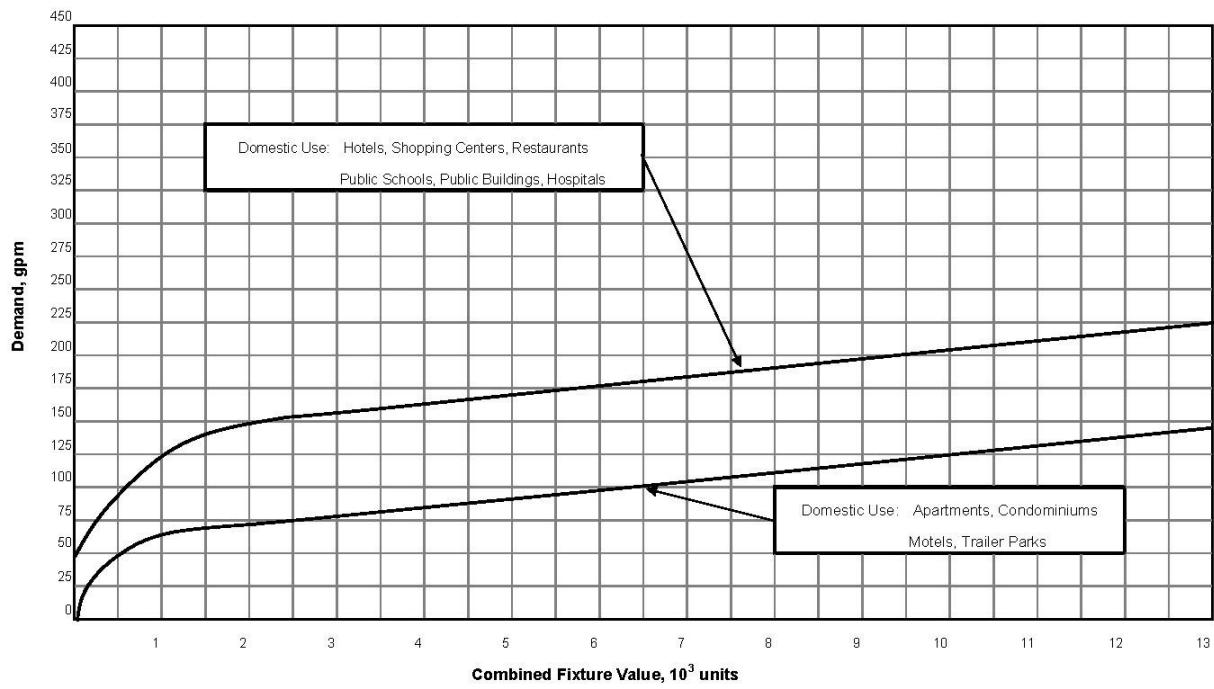


Figure 4-3 Water flow demand per fixture value - High range

Table 4-1 Pressure Adjustment Factors

Working Pressure at Meter Discharge (psi)	Pressure Adjustment Factor
35	0.74
40	0.80
50	0.90
60	1.00
70	1.09
80	1.17
90	1.25
100	1.34

Adapted from AWWA Manual M22 table 4-1

Neptune Water Meter Components

Register	E-Coder absolute encoder
Water Meters	T-10 Positive Displacement TRU/FLO Compound
Meter Interface	R450 (MIU)

Neptune Water Meter Operating Characteristics

Meter Type	Max. Operating Capacity (gpm)	Operating Range (gpm)	Low Flow (gpm)
Positive Displacement			
5/8"	20	1 - 20	1/8
3/4"	30	2 - 30	1/4
1"	50	3 - 50	3/8
1 1/2"	100	5 - 100	3/4
2"	160	8 - 160	1

Residential Irrigation Meter Cross Connection Application



RESIDENTIAL CROSS CONNECTION APPLICATION

Town of Burlington/DPW
Town Hall Annex - 25 Center Street
Burlington, MA 01803
Tel: 781-270-1670
Fax: 781-238-4695

LAWN SPRINKLER - New: Y N

LAWN SPRINKLER - Existing: Y N

SILCOCKS: Y N

NEW SECOND METER: Y N

HOME OWNER INFORMATION

LOCATION OF METER: _____

PROPERTY OWNER: _____ TEL NO: _____

ADDRESS: _____

PLUMBER/CONTRACTOR INFORMATION

COMPANY NAME: _____ TEL NO: _____

ADDRESS: _____

CONTACT PERSON: _____ TEL NO: _____

PLUMBER'S EMAIL: _____

BACKFLOW PREVENTION DEVICE INFORMATION

MANUFACTURER: _____

TYPE: _____ MODEL: _____

CROSS CONNECTION PLAN

ON REVERSE SIDE OF THIS SHEET, PLEASE PROVIDE A SCHEMATIC, USING ACCEPTED SYMBOLS AND NOMENCLATURE, DETAILING YOUR PROPOSED INSTALLATION. IT IS IMPORTANT THAT THE SCHEMATIC SHOW EITHER: (1) PRESSURE VACUUM BREAKER INSTALLATION - MUST HAVE A MINIMUM OF 12 INCHES ABOVE THE HIGHEST POINT OF WATER IN A SPRINKLER SYSTEM, OR (2) REDUCED PRESSURE ZONE BACKFLOW ASSEMBLY - ASSEMBLY MUST BE INSTALLED A MINIMUM OF 12 INCHES ABOVE GROUND LEVEL.

SIGNATURE OF APPLICANT: _____ DATE: _____

OFFICE USE ONLY

APPROVED BACKFLOW DEVICE
NOTIFIED PLUMBER/HOMEOWNER
NOTIFIED PLUMBING INSPECTOR

Date _____ Initials _____
Date _____ Initials _____
Date _____ Initials _____

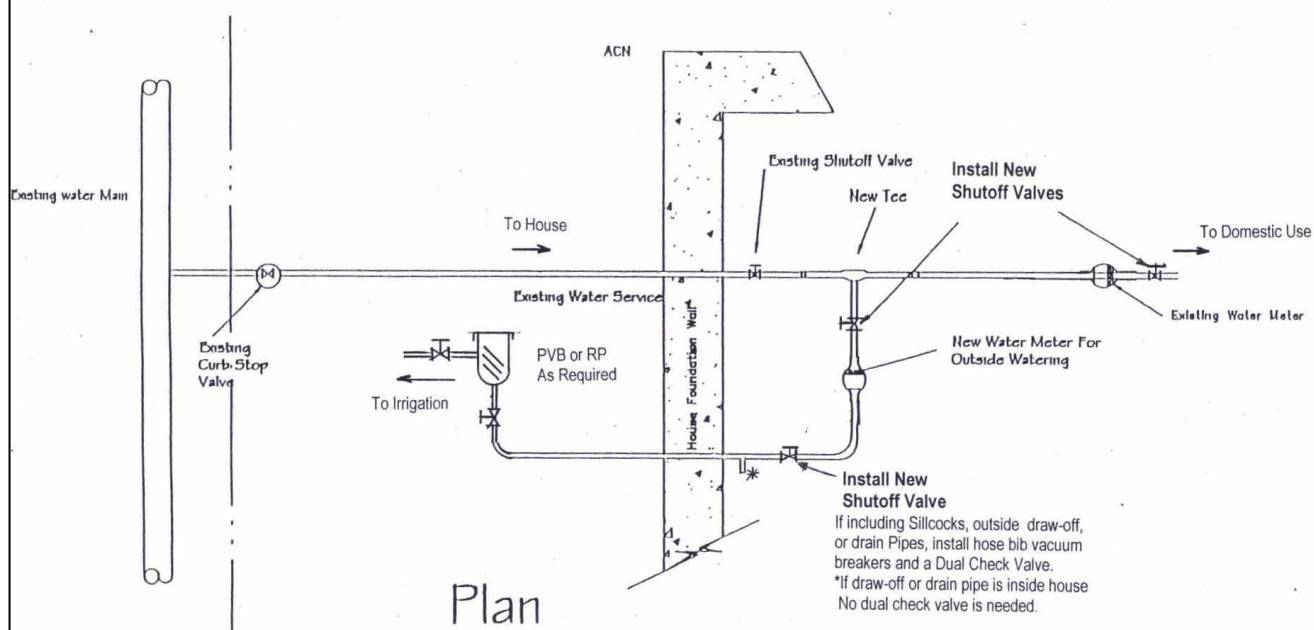
STREET OPENING/
UTILITY CONNECTION
RULES & REGULATIONS
November 2020

Residential ONLY

"Irrigation"

(Second)

Water Meter Detail



Backflow Devices

- PVB - Pressure Vacuum Breaker
- RP – Reduced Pressure zone device

Commercial Backflow/Cross Connection Application

Town of Burlington
Department of Public Works
25 CENTER ST
BURLINGTON, MA 01803
(781) 270-1670
www.burlington.org



Backflow Prevention Device Design Data Sheet

Owner

Name: _____

Address: _____

Facility

Business Name: _____

Address: _____

Contact Person: _____

Phone: _____

Email: _____

Is this Facility: New or Existing

General description of the type of business activities carried out at this facility:

Device Data

Type	Manufacturer	Model #	Size

Unit service for: Hot or Cold water

Location of Device: _____

Bypass arrangement:
(If so please describe) _____

What type of contamination is
water supply protected: _____

How many other RPZ or DCVA
located in this building _____

Type of gate valve* : _____

*All gate valves on fire systems must be UL (Underwriters Laboratory) FM (Factory Mutual) approved

Backflow Prevention
Device Design Data Sheet

1

**STREET OPENING/
UTILITY CONNECTION
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Plumbing Diagram Requirements

Provide fully labeled, detailed, potable and non-potable water piping surrounding the backflow device installation showing:

1. Height above the finish floor.
2. Distance from walls.
3. Type of equipment downstream of backflow preventer (chemical treatment, dialysis machine, etc.)
4. Make, model, size and alignment of the backflow prevention device.
5. Location of upstream and downstream shutoff valves.
6. Any additional information particular to the backflow device installation that should be reviewed.

The plumbing diagram must be at least 8 1/2" x 11" with a complete title block indicating the name of the facility, address of the facility, data preparer and the scale.

Submitted by: _____

Company: _____

Date: _____

Telephone: _____

Signature: _____

Submit application to:

**Town of Burlington
Department of Public Works
25 CENTER ST
BURLINGTON, MA 01803
(781) 270-1670
www.burlington.org**

\storage2\Engineering\ENGFILES\0000ADM\0079\Right Size Meters\BurlingtonMeterPackage-2020\TFH-BackFlowDataSheet-form.docx

*Backflow Prevention
Device Design Data Sheet*

As-Built Standards

The As-built must be a stand-alone document that clearly depicts new infrastructure and any modification of approved project design plans. The drawing will be legible and reproducible without loss of readability. All non-standard or proprietary infrastructure must be labeled manufacturer's make/model, and if necessary includes design details and/or structure cut-sheets. Approved plans & inspection reports should be used to compile the as-built. Applicants are also welcome to use DPW/Engineering Division's inspection field notes & photos.

Format

- Submitted in Portable Document Format (PDF), CAD, and stamped hardcopy.
- D-size sheets, labeled with the text "AS-BUILT"
- Datum: Vertical - NAVD88, Horizontal - NAD83
- Line weight and thickness to emphasize new infrastructure, while subduing preexisting features.

Plan Contents

- Stamped by PE or PLS with certification:

I certify that these plans were prepared under my supervision and all survey measurements, materials, sizes, field conditions and related information are based on a field survey, most recent record drawings, and available inspection reports.

- Contours, invert elevations, and size/material of utilities installed or affected.
- Actual dimensions and details of installed structures per shop drawings.
- Significant changes of infrastructure dimensions, materials, or locations clearly noted.
- Shop drawings, cut sheets, and manufacturers Operation and Maintenance schedules.
- Source Information used to compile drawings clearly noted
- Abandoned infrastructure labeled with type, size, and material.

Additional Information

- Copies of Source information used to compile As-built
- Inspection reports as required by Town Boards/Commissions

V. UTILITY REGULATIONS SUMMARY

Street Opening

- Can be obtained only by **Authorized licensed contractors**.
- Issued between **April 1 thru November 15**, (winter shutdown)
- **Driveway paving** needs permit (no charge)
- Curb cuts require review and approval by the Town Engineer and the Safety Officer.

Curb cuts needing Board of Selectmen approval:

Bedford Street	Mill Street	Terrace Hall Avenue
Francis Wyman Road	Peach Orchard Road	Wilmington Road
Lexington Street	Prouty Road	Winn Street
Middlesex Turnpike	Skilton Lane	

Permits to perform work on **Cambridge Street, Route 3A/3** must be obtained from the Town of Burlington as well as MassDOT.

Water & Sewer Services

Sewer Services

- Property owner responsible from the structure to the sewer main.
- Cleanouts 10' from foundation
- Sewers shall be laid at least 10 feet horizontally from any existing or proposed water line.

Water Services

Residential - The Town is responsible for water service within the ROW (**1" or smaller**).

Commercial - property owner is responsible for work from the building to the water main.

- New services shall be **1" copper**.
- Renewed services may reuse existing corporations using Pack Joint Coupling (Ford C16-33 or equal) to upsize to 1" copper.
- Existing saddle connections must be removed and replaced with stainless steel repair clamp.
- Water service connections to **black iron pipe** are prohibited.
- **Abandoned services** on DI or Cast pipes shall be turned off at the water main. Corporations on AC pipe shall be removed and replaced with a stainless steel repair clamp.

Stormwater /Drainage Connections

- Drain/Sump Pump Connections require permit and homeowner signoff
- Connections only at structures, direct taps to drain line not allowed.

Water & Sewer Main Testing

- Water Mains – 150psi, 2 hours
- Sewer Mains - 4 psi, time varies
- SMH - Vacuum 4.9 psi, 10 minutes

Construction Methods & Materials

- Gate valves & hydrants- “open-left.”
- Hydrants Claw Eddy with Drain F-2640.
- Gate boxes BB or approved equal.
- Curb Box - 2 1/2" Buffalo, arch style, no rods. - American made
- Curb-stops and fittings shall be Mueller or approved equal.
- Water main- Cement Lined Ductile Iron (CLDI) class 52.
- Sewer mains- PVC SDR 35.
- Drain lines - Reinforced Concrete Pipe class IV
- Water Quality Units - Rinker Material Stormceptor Units.
- Catch basin grates – Neenah Foundry 3589-A.
- Manhole covers – Neenah Foundry R-1720 or East Jordan Iron Works 00211211 (frame) and 00211044CO1 (cover).

Obtaining a Permit

Sewer Connection

- Utility/Street Opening Permit – Eng. Div.
- Sketch/Cleanout 10' from Foundation
- Sewer Allocation
- Stone Bedding (6" crushed stone)
- Inspection
- As-built / Permit Signoff / input into permit system

Water Service Connection (1" copper requirement)

- Utility/Street Opening Permit – Eng. Div.
- Sketch
- Inspection Photos to network
- As-built / Permit Signoff / input into permit system

Drain/Sump pump Connection

- Utility/Street Opening Permit – Eng. Div.
- Homeowner signoff
- Sketch
- Inspection - Photos to network
- As-built / Permit Signoff / input into permit system