Farmington Water Department

Farmington, New Hampshire

Water Rules and Regulations

October 2020

Water Rules and Regulations

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Section I

Water System Information

1. Formation and Regulation of the Water Department

The Farmington Water Department was created for the purpose of operating a community supply of water and providing the Town of Farmington with such water for the promotion of the general health and welfare. To carry out this purpose, the Town acquires, controls, and maintains property (lands, structures, reservoirs, mains, hydrants, piping, and other works and apparatus); employs personnel for the management, operation, maintenance, and extension of such works and structures, and the collection of revenues sufficient for its needs. The Farmington Water Department operates under the supervisor of the Farmington Board of Selectmen who is responsible for the overall management and general supervisor of the Department. Pursuant to the NH RSA Title III, Chapter 38, the Board of Selectmen have the authority to adopt such ordinances and rules and regulations as required for the proper operation and maintenance of the water system.

2. Definitions

Unless the context specifically and clearly indicates otherwise, the meaning of the terms and phrases used in these Rules and Regulations shall be as follows:

a. "Department" shall mean the Farmington Water Department.
b. "Selectmen" Shall mean the duly elected Board of Selectmen of the Town of Farmington.
c. "Customer" shall mean any person (s), firm, corporation, association, utility or agency, governmental unit that has applied for and is granted water service or is responsible for payment for the service.
d. "Main" shall mean a water pipe owned, operated and maintained by the Department for the purpose of transmission and distribution of water from the source of supply to a water service pipe or hydrant. A "main" is not a service pipe.
e. "Service Pipe" shall mean the water pipe running from the main to the customer's premises.
f. A "Meter" shall mean a mechanical device that is designed to and is capable of measuring the flow and/or recording the quantity of water passing through a service to an individual consumer of water.
g. A "Public way" shall include only roads and sidewalks that are accepted Town or State ways, are currently being maintained by the Town and State, and are suitable for the free and unobstructed passage of wheeled motor vehicles and pedestrians.

h. “Main Extension” shall mean an addition to the system of mains to serve one or more customers.
i. “Summer Service” shall mean those mains and service pipes, which because of a lack of sufficient ground cover or for other reasons, can supply water to customers for only a portion of the year. Water furnished through summer service pipes and mains will be furnished only from April 15 to October 15, except that the Department may render service before and after these dates if deemed advisable. Requests for exceptions to the turn off of service must be received in writing two weeks prior to the October 15 and approved by the Department.

3. Jurisdiction

The water supplied is the sole property of the Department, therefore the installations to and including the meters are therefore assumed to be under the jurisdiction of the Department. No person except an employee or those authorized in writing by the department shall be allowed to install, repair, or remove any pipe, fixture, or connection on the street side of the curb box or equivalent dividing point. The Department reserves the right to shut off any water supply if deemed a safety hazard to other residents on the water system, or to fix any breaks in the service main, or residential services, or in the event of failure to pay valid bills.

4. Access to Premises

Employees of the Department having proper identification shall have free access to all premises supplied with water, at all reasonable hours to permit the inspection of plumbing and fixtures; to set, remove or read meters; to ascertain the amount of water used and manner of use; to ensure that the plumbing has been installed in such a manner as to prevent the possibility of contamination of the potable water supply; to inspect, repair, and test the backflow devices; and to enforce these rules and regulations. The occupant of the premises has the option to first call the Department offices to verify the identification of the Department employee before allowing him/her inside the premises. If possible, the Department will provide as much advanced notice as practical.

5. Use of Water Supply

No water user shall supply water to a party not entitled to its use, expect by written permit issued by the Department. No customer shall supply water to another, nor shall the customer use it any purposes not mentioned in the Application for Water Service without Department approval. No person shall obtain water from any hydrant or other fixture of the Department without the consent of the Department.

6. Metering of Services

   All services shall be metered. The customer shall apply for a Water Service Connection Permit at the Planning/Code Enforcement Office located at 356 Main Street. The Customer shall be responsible for the payment of the current meter installation fee. (see rate Schedule) Upon payment of the installation fee the appropriately sized meter will be supplied by the Department. The meter will be owned, maintained and installed by the Department. The Department will maintain and test all meters as necessary. It shall be the customer's responsibility to provide a plumbed, meter ready, and suitable place for installation of the meter that is accessible to Department personnel at reasonable times and to protect the meter from freezing.

7. Metering of Water Not Entering the Sanitary Sewer

   Metering of water that will not waste to sanitary sewer system (e.g. sill cocks, lawn sprinkling systems) will be permitted if a second meter is installed in addition to and downstream of the line meter that will record all water entering the premises. The second meter shall solely be used as a record for abatement of the sewer charge on the amount of water that was not wasted to the sewer system. This abatement process will be done annually as part of the October billing.

   The customer will be charged for the second meter at the price set by the Department at the time of purchase. It will be owned, maintained and installed by the customer. Should the meter fail for any reason, or the Department determine that it is being misused, the bill for the water and sewer charges will be determined by the line meter. The Department shall have the right to inspect the plumbing and determine if such meters are installed properly and being used as intended.

8. Ownership and Maintenance of Service Pipe

   The Customer shall be responsible for the installation of the new service pipe from the Main to the meter including the curb stop and meter pit if necessary. Upon acceptance by the Department the portion of the service pipe from the Main to and including the curb stop shall remain the property of the Department and will be maintained by the Department. The portion of the service pipe from the curb stop to the meter or to the building which ever it greater, shall remain the property of the customer and will be maintained by the customer. Any contractor who preforms such work for the customer shall be subject to all Rules and Regulations of the Department, of the State of NH department of Transportation, Dig Safe requirements, and the NH Department of Environmental Services. Only one (1) service connection will be allowed from a single connection to the main, exception for the multifamily units as described in Section III pg.15 4-B. In order to detect losses of water in an extended run of private piping, where

more than 200 feet of privately-owned service pipe exists beyond the curb stop to serve multi-unit (residential, commercial, industrial, or institutional) development, a master meter inside a meter vault may, as determined and approved by the Water Department, be installed by the customers contractor with the cost of the meter, vault and installation borne by the customer. Final inspection of the installation shall be approved before backfilling.

9. Use of Hydrants

   The use of a hydrant, public or private, for any purpose other than the extinguishing of fires or for such purposes as may be agreed to by the Department and the municipality, will not be allowed without a written permit from the Department. In no case shall fire hydrants be opened by a person other than an employee of the Department, Farmington Fire Department personnel, or a duly authorized representative of the municipality. Maintenance and repairs of privately owned hydrants, shall be the responsibility of the owner of the hydrant. Fire Department personnel shall notify the Department when training involving the use of the hydrants is to occur or following the use of any hydrants in the case of a fire during the winter months when freezing may occur.

10. No Liability for Interrupted or Unsatisfactory Service or Water Shutoff

    If by reason of a supply shortage, or for the purpose of making repairs, extensions, connections, failure to pay, or for any reason beyond the control of the Department, it becomes necessary to shut off the water in a main or service pipe in whole or in part, the Department shall not be responsible for any damages resulting from such action by the Department, and no adjustment of rates shall be made. Notice of shut off will be given, if practicable, but nothing in this rule shall be construed as requiring the giving of such notice.

    The Department reserves the right to restrict or restrain water use consistent with any policy adopted by the Department pursuant to applicable Town ordinances and State laws and regulations.

11. Restriction on Use of Water

    The Department reserves the right to limit or curtail use of water as it deems necessary during periods of water shortage or during any other period when it becomes necessary for the common good. During a declared public water shortage; lawn care, car washing, swimming pool filling and other outside water use may be limited or banned. Failure to comply with such restriction after due notice, shall result in termination of water service for the duration of such limitation by the Department. Additional restrictions may be implemented, depending on circumstances.

12. Backflow Devices and Cross Connection

All water services shall be equipped with an approved backflow device in accordance with the Farmington Water Department's Cross Connection Control Program on file with the NHDES Water Division dated 2001, or if more stringent, NHDES Water Division Water Supply Engineering Bureau Backflow Prevention Rules (ENV-Ws 364) dated June 1997 as amended. Devises shall be furnished and installed in accordance with the International Plumbing Code 1995, or most recent version, by a plumber licensed in the State of New Hampshire.

No cross connection between the public water supply system and any other supply will be allowed unless properly protected in accordance with the New Hampshire Department of Environmental Services (NHDES) Water Supply Engineering Bureau rules for Backflow Prevention (ENV-Ws 364)and no new cross connection may be installed without the approval of the NHDES and the Department. In addition, no connection capable of causing backflow between the public water supply system and any plumbing fixture, device or appliance or between any waste outlet or pipe having direct connection to waste drains will be permitted. If the owner of such a connection fails or refuses to break or properly protect the connection within 30 days service may be discontinued without additional notice.

13. Fluctuation of Pressures by Customer's Apparatus

No customer shall install or use water consumption apparatus that will affect the Department's pressure or operating conditions so as to interfere with the service, of another customer. Where a customer has or proposes to install apparatus which requires water in sudden and/or material quantities, impairing the pressure to the detriment, damage, or disadvantage of other customers, the Department reserves the right to require such customer to install devices or apparatus which will confine such fluctuation of demand or reduction of pressure within reasonable limits determined by the Department.

If the customers, after receiving written notices from the Department, fails to present an acceptable remedial plan within a time limit set by the Department, service may be discontinued pursuant to provisions of the applicable disconnection rules.

14. Safeguarding Direct Pressure Water Devices and Systems Supplied by Automatic Feed Valves

All customers having direct pressure water devices, including but not limited to hot water tanks, boilers or secondary systems supplied by automatic feed valves, should have installed and properly maintained in operating condition, appropriate vacuum, temperature, and pressure relief valves or cutouts in the water system and/or their appurtenances should it become necessary to shut off the water main or service or should an abnormal pressure or pressure failure occur for any other reason. Water service supplied to any customer not providing such protective devices will be strictly at

the risk of the customer and the Department will not be liable for damage resulting from the lack of or failure of such protective devices.

15. Maintenance of Plumbing

    To prevent leaks and damages, all customers shall maintain at their own expense the plumbing and fixtures within their own premises and their section of the service line and protect them from freezing.

16. Water Quality

    The Department shall not be responsible for damage caused by discolored or unsatisfactory water service which may be occasioned by cleaning of pipes, reservoirs or standpipes, or the opening or closing of any valves or hydrants, or any abnormal condition. The department shall not be responsible for meeting unusually high-water quality standards for specialized or industrial customers.

17. Protection Against Freezing

    All year-round services must be protected against freezing. If it is necessary to thaw a frozen service, the Department will assume the cost from the main to the curb stop. The customer will assume the cost from the curb box to the building and will secure a contractor other than the Water Department to do this thawing. If it cannot be clearly defined where the service is frozen, the customer will be required to assume one-half of all expenses involved in thawing. At no time will the Department assist in any thawing operation inside any building.

18. Bleeds

    In some cases, older mains may have been installed without sufficient cover to prevent freezing. To prevent this, certain customers may be asked to allow flow continuously through a bleeder outlet during the coldest months. An adjustment will be made on the billing for this period to compensate these customers for this service and for the increased water usage.

    Bleeds to prevent freezing of private service lines will not be compensated for by the Department. The customer will be responsible for making the necessary repairs to the service line to prevent freezing, or for paying for the water used to prevent service line freezing. No adjustment will be made for customers who use bleeders for their own convenience rather than at the request of the Department.

19. Winter Construction

    No new service or extension of mains will be installed in the public way for the convenience of a customer during the winter conditions (November 1 to April 1) which increase the cost of the

work for the Department unless the customer assumes all extra expenses over ordinary construction costs. Such construction will be performed at the Department's discretion.

20. Utility Jobbing

Whenever the Department undertakes to do work for a customer at the customer's expense a written estimate of costs for the proposed work will be given to the customer. A deposit may be required equal to the Department's estimated cost of the work and for which deposit the customer will be given a receipt. At the completion of the work, a final bill will be rendered. Unless the work is done on a flat rate basis, any excess deposit will be returned. Any amount due in excess of deposit will be payable to the Department. In the event of an emergency the customer may waive a written estimate and a verbal agreement may be made between the Department and the customer. If possible, it is recommended that an independent 3rd party should act as a witness to any verbal agreement.

Temporary shutoff and resumption of service outside of normal working hours and for the convenience of the customer will be considered utility jobbing and will be charged to the customer.

21. Water Department Property

There shall be no tampering with Department property. No valve, shutoff, curb stop, hydrant or standpipe, which is the property of the Department, shall be opened or closed or otherwise operated, by other than persons authorized by the Department.

22. Pumping Basements

The Department will not be responsible for the pumping of basements unless the Department caused the water problem.

Section II

Customer Services

1. General

All new water services and main extensions shall be made and located within Rights of Way (R.O.W.) and outside of pavement whenever possible, and in such a manner as to provide for the orderly growth and expansion of the water system. The installation of water service pipes from the building to the Main must be inspected by the Farmington Water Department prior to backfilling. Failure to have inspection prior to backfilling may prevent issuance of "Certificate of Occupancy" or turning on of water.

All buildings requiring a water supply for domestic, commercial, industrial or other use and are located with 400 feet of a water main with an adequate water supply shall connect to the Town water system.

2. Water Service Application

A prospective customer wishing to obtain water service shall submit a written application to the Department on forms provided by the Planning/Code Enforcement Office. Applications shall be made by the customer or his/her agent. A service connection fee will be determined by the Department and shall be due and payable prior to issuance of a Certificate of Occupancy. The application shall include the following:

a. Name and address of applicant
b. Street address, tax map and lot number for the property to be served and owner of property
c. Type of service required
d. Description of establishment to be served
e. Date service is needed
f. Authorization from the property owner for the Department to enter the premises of the owner to inspect the service installation and the install the water meter and related apparatus

3. Water Service Application Review

The Department shall review the application for completeness and shall inform the applicant that service can or cannot be provided or that additional information is needed before a decision to render a service can be reached. The reasons for service denial shall be provided. Additional data that may be required including, but not necessarily limited to the following:

a. Average water demand in gallons per day
b. Peak demand in gallons per day
c. Fire or sprinkler system demand in gallons per minute
d. Minimum service pressure required under the above flow conditions at the point of connection of the service to the Department's main
e. Engineering design and detailed construction plans and specifications prepared by a Registered Professional Engineer in New Hampshire
f. Regulatory approval of proposed development of subdivision

4. Customer-Requested Service Shut-off

Services will be turned on or off at the request of the customer. Disconnect and reconnect charges are listed in the Water and Sewer Schedule of Rates and Charges and will be charged accordingly. A 48 business hour notice is requested for both disconnect and reconnect work. Requests for service outside of normal business hours may be billed at a rate to include any such additional expenses, such as overtime, or any other costs that may be incurred by the town. The customer or his representative MUST be in the building when the water is turned on or off.

When services are turned off the water meter may be removed by the department. The turning on of any water service by anyone other than the Department is forbidden unless prior permission is obtained.

5. Rate of Schedule and Charges

   All charges shall be billed in accordance with the Water and Sewer Schedule of Rates and Charges available at the Town Clerk Office, 356 Main Street, Farmington NH 03835 – telephone number 603-755-3657.

6. Billing Procedures

   a. Metered charges shall be rendered quarterly except that the Department reserves the right to render bills monthly if it so desires. Water bills are computed on the basis of consumption as determined by the meter readings and any minimum quarterly charges.
   b. All bills shall be payable at the Town Clerk Office at 356 Main Street, Farmington NH 03835. Failure of the customer to receive his/her bill does not relieve him/her of the obligation of its payment nor for the consequences of non-payment. Abatement applications must be filed with the Town Clerk to request any adjustment to a water bill. The Board of Selectmen will act upon the abatement request within 30 days of receipt of the proper application form.
   c. All billing for the use of water shall be made to the owner of the property as listed on the Town Tax records. Any property that is serviced by the Department and the customer does not pay the water bill(s) within the specified time period will be tax liened by the Town Clerk according to prevailing laws and regulations concerning such tax liens.
   d. Water meters installed and maintained by the Department are considered to be correct and accurate in their measurements of water usage in the property to which they are affixed. Abatement for water bills that appear to be unusually high, shall only be issued if the customer establishes a reasonable doubt as to the functioning and accuracy of the meter. Reasonable doubt will occur if the meter test results fall outside of accepted tolerance ranges.
   e. When the meter reader is unable to read the meter, he will leave a Notice for the customer telling them the department needs access to the building to read or repair the meter. When no reading is recorded, either by the meter reader or the customer, the customer will be billed at the estimated consumption rate for that particular quarter.
   f. In the event of a malfunction of the water meter, or the meter is removed for the purpose of making repairs an average of the quarterly charges for the past year will be used for billing purposes.
   g. If and when a break occurs within the customer's own pipes, the customer is expected to pay the amount of the bill for the water's passing through the meter. If said customer is also served by the Town Sewer, and has **promptly** notified the Department of the break, consideration may be given by the Board of Selectmen when tabulating the amount of water used to determine the sewer usage charges for that bill.

7. Delinquent Notices and Collection Procedures

All bills are considered delinquent if payment has not been received within thirty (30) days of receipt. All delinquent bills go to tax lien. A notice shall contain the following information:

a. Amount owed
b. When it was due
c. Where and by what deadline the bill must be paid
d. Interest rate
e. Other information required by law

8. Termination of Service

Basis of Termination – Any service may be terminated after proper notification for the following reasons:

a. The customer has failed to abide by the terms of an agreement with the Department or Town
b. An illegal service connection
c. A cross connection to any other water supply
d. Tampering with service connection or meters
e. Unreasonable denial of access to the premises to a member of the Department for the necessary inspection or repair of Department property
f. Non-compliance with Department request to curtail use of water under conditions set forth in the Farmington Water Department Water Rules and Regulations
g. Failure to pay any proper undisputed bill within a reasonable time (a delinquent account)
h. If so, ordered by any State Agency having jurisdiction over the Department (e.g. the State Board of Health)

Section III

Service Line Installation Requirements

1. New Service Pipe Installation

a. Location – Service pipe connection shall be made only from a main located adjacent to the property to be served. No service shall be allowed to cross private ways to private property of another owner unless the Department is provided with a duly notarized copy of an easement agreement between the parties involved and that said easement had been properly filed and recorded with the Strafford County Registry of Deeds and is included in their chain of title.
b. The Customer shall be responsible for the installation of the service pipe from the Main to the building. All materials and workmanship shall be in accordance with these rules and regulations and well-established procedures for pipe burial. The new service pipe shall be left exposed until the pipe fittings and all joints are inspected by the Department.
c. The size of the service pipe shall not be less than ¾ inch inside diameter. All ¾ inch and 1-inch service pipes installed from the Main to the meter shall be Type K Copper or

polyethylene (CTS) pipe. Service pipes larger than 1 inch shall either be Type K Copper tubing or polyethylene (PE 3408) copper tube size (CTS) tubing rated at 200 psi (SDR-9). Any non-metallic service pipes installed shall be laid with a metallic, traceable tape buried 6 inches below finish grade. All service pipe fittings shall be of the type currently in use and approved by the Department. All serve taps in the Mains shall utilize an approved tapping saddle and corporation. A tapping fee may be charged. (See Water and Sewer Schedule of Rates and Charges).

d. The customer shall be responsible for a shut off valve on either side of the meter, a pressure reducing valve if required, any backflow prevention devices deemed necessary by the Department and all other required accessories required by the Department.
e. All services shall be metered and no service shall be turned on until a meter has been installed by the Department.
f. All service pipes including those tapped off from private mains shall have a curb stop installed at the property line. Under no circumstances will the curb stop be operated by any person other than authorized personnel. No person (s) shall obstruct this curb stop in any manner. The customer shall pay all expenses to have any obstruction removed.
g. No person shall connect a new electrical ground wire to any service line or any pipe or fixture that is connected to a service pipe or water main. Existing ground wires may be connected only at the point of entrance of the service pipe and only on the street side of the meter.
h. No new service pipe(s) shall be made above the 'effective service elevation" as defined by HHDES Administrative Rule ENV-Ws 372.26 Distribution System. The Effective service elevation for the water system supplied by Wells #4 and #5 is to be 395 feet above sea level as calculated below. The effective service elevation for the water system supplied by Well #6 is to be 453 feet above sea level as calculated below. The town shall have the final decision as to whether any service pipe(s) shall be connected at any proposed location. Individual service booster pumps shall be prohibited.

Tank overflow elevation	465 ft. above sea level
½ tank volume	-20 ft.
Elevation drop for 20 psi	-46 ft.
Friction losses	-4 ft.
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	395 ft. above sea level

Tank overflow elevation	510 ft. above sea level
½ tank volume	-7 ft.
Elevation drop for 20 psi	-46 ft.

Friction losses	-4 ft.
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	453 ft. above sea level

2. Maintenance of Existing Services

   The service pipe between the main and the curb stop or shutoff in public ways shall be maintained and repaired by the Department without cost to the customer (Except any obstructed shutoffs or shutoffs damaged by homeowner). The remainder of the service pipe between the curb stop and shutoff and the meter or building, whichever is greater shall be repaired and maintained by the customer at the customer's expense.

3. Single Service

   No more than one dwelling or business establishment shall be served by a single service pipe unless:

   a. The Town and Department deem it to be in the best interest of all parties, and
   b. The property cannot be subdivided any further, and
   c. The existing or new service pipe is capable of supplying an adequate rate of flow and pressure.

4. Multi-Unit Service
   a. The Department may require a new separate service pipe from the main to the building for each unit.
   b. At the Department's discretion, it may allow multiple services off a single curb stop in new or renovated multi-family dwellings or other multiple-use buildings which have a water meter and shut off installed for each separate unit and these are accessible to the Department and located in a common utility room with separate outside entrance acceptable to the Department.
   c. All meters shall be paid for by the customer and supplied by and remain the property of the Department (see section I. 6. Metering of Services), and shall be installed by the Department in a plumbed, meter-ready, approved location provided by the customer.
   d. All water bills shall be sent to the owner of the building. No Special readings will be made, except upon change of ownership. The owner is responsible for all unpaid charges.

5. Backflow Devices

   All services shall be equipped with an approved backflow device as outlined in Section I.12

6. Joint Use of Service Pipe Trench

   No service pipe shall be laid in the same trench with a gas pipe, sewer pipe, storm drain, electric cable, or any other facility of a public utility. Installation requirements for a

service pipe are presented in Section V or these rules. A minimum horizontal separation of 10 feet is required.

7. Temporary Services

   Temporary services will be considered by the Department on a case by case basis. The entire cost of installation shall be at the customer's expense if approved.

8. Permit

   Prior to making repairs to or altering the service pipe the owner shall obtain a permit from the Department. IN case of an emergency, the repair work may be done, but the Department shall be notified within 24 hours. A Permit must be obtained before such emergency work is permanently backfilled.

9. Meters

   All water sold by the Department shall be on the basis of meter measurement or as otherwise provided for in the Department's rate schedule whenever deemed expedient by the Department.

   a. Locations – All meters shall be set as close as possible to the point of entrance of the service pipe to the building. The meter shall be in a clean, warm, dry and accessible location acceptable to the Department. All meters will be set horizontally.
   b. Meter Pits – If the premises to be served are located more than 200 feet from the main, the water meter may, as determine by the Department, be placed in a meter pit at the edge of the right-of-way. The size and construction of the meter pit shall be determined by the Department. Meter pits may also be required, as determined by the Department, for large water services serving private mains. Meter pits shall be required for all mobile homes/manufactured housing if a heated basement is not available.
   c. Installation – Meters and outside registers, readers and ERTs shall be installed and removed only by authorized Department personnel. For new installation the piping and valves shall be arranged in a manner acceptable to the Department.
   d. Free Access – The property owner or consumer shall keep such meters accessible for reading and inspection at all times. If there is an obstruction, the Department shall contact the owner in writing to clear the obstruction. If the obstruction is not cleared, estimated usage charges shall be assessed until the obstruction is not cleared and then a retroactive billing adjustment shall be made.
   e. Meter Testing – All meters shall be tested and calibrated before being put into service, The Department shall calibrate all meters up to 1 inch in size. Meters over 1 inch in size shall be calibrated by an outside vendor. All meters in service will be tested by the Department if requested by the customer in accordance with the following schedule:

Size of Meter (Inches)	Maximum Interval Between Tests
5/8	10 Years
3/4	10 Years
1	4 Years
1 1/2	4 Years
2	4 Years
3	2 Years
4	1 Year
6	1 Year

f. Meter Repair and Replacement (Department Owned) – Meter repairs and replacements necessitated by ordinary wear will be paid for by the Department. Damages caused by freezing, hot water, vandalism or by other causes within the control of the customer and occupants of the premise, will be charged to the customer, including the cost of removing and replacing the damaged meter. When necessary, the Department will take steps to prosecute those responsible for tampering with or causing willful damage to meters, wires and meter reading devices.

g. Submetering – If additional or auxiliary meters are desired by the customer for showing subdivision of the supply, the customer shall furnish, install, read and maintain them at their own expense.

h. Tests for Accuracy – Any customer on a metered service shall be entitled to an examination and test of the meter to determine its accuracy. The Customer has the right to have the test conducted in the customers presence or in the presence of the customer's representative during the normal business hours of the Department. A written request shall be to the Department. Should the meter prove accurate within the American Water Works Association (AWWA) standards, the customer will be charged a testing fee. (See water and Sewer Schedule of Rates and Charges) The following standards shall apply.

Nominal Meter Size	Min.	Intermediate	Max
5/8"	0.25 gpm	2.0 gpm	15.0 gpm
3/4"	0.50 gpm	3.0 gpm	25.0 gpm
1"	0.75 gpm	4.0 gpm	40.0 gpm

2”	2.00 gpm	15.0 gpm	120.0 gpm

No meter shall be placed in service if it registers over or under by more than 2% at the intermediate or maximum flows or less than 90% of the minimum flow.

Should the meter prove an over charge to the customer due to over registering by more than 2%, the Department will absolve test charges and will make the necessary adjustment to the past two water and sewer bills only.

Should the meter prove an under charge to the customer, the appropriate percentage under charged may be made to the metered consumption of the past two water and sewer bills only.

For any adjustments due the customer, the customer must make application for the adjustment on an Abatement Form to be obtained at the Department office.

Section IV

Main Extensions

1. General

   All new water main extensions shall be made and located in such a manner as to provide for the orderly growth and expansion of the water system.

   i. Any extension of mains by others shall be done with the permission of the Board of Selectmen only. Final plans showing main placement, depth of burial, main sizes, materials, method of joining, method of joint restraint, and bedding materials shall be submitted to the Department, the Planning Board and to NHDES Water Supply Engineering Division. No construction shall be done until approval by the agencies concerned has been obtained.
   ii. The size of all mains to be installed shall be determined by the Department, Town Engineer, with the approval of the Board of Selectmen. The size of pipe shall be determined in accordance with conditions surrounding the extension, including the possibility of future expansion and fire protection. In general, the minimum-sized main shall be 8-inches. If, in the opinion of the Department, a larger size is necessary to serve future demand beyond the location of the development which is currently applying for a main extension, the Department may require installation of main with a larger diameter than the one proposed. **In this case, the Department will pay the difference in cost between the smaller proposed and the larger required pipe materials.**

iii. All water main extensions shall be owned and maintained by the Department. At its option, construction shall be done by the Department or by a qualified contractor under the supervision of the Department. All work shall be subject to inspection by the Department. No backfilling or covering shall be done until the Department inspector has approved the lay of pipe, alignment, etc. The cost of such inspection shall be billed to the owner or contractor at the current labor rate at the Department.

iv. Main extensions shall normally be located in public ways. These may be located on private property if a properly recorded easement, acceptable to the Department, is provided. All permits to cross highways, roads or streets shall be the responsibility of the owner or his agent. Any rights-of-way over the land of others shall be the responsibility of the owner.

v. All work shall conform to the Department's specifications as hereinafter presented.

vi. If the demand for water expected from the customers to be served by the extension requires existing mains leading to the extension to be replaced or supplemented in order to satisfy demand or to maintain adequate pressure, **the applicant requesting the extension shall pay for a reasonable portion of the cost of the improvements as determined by the Board of Selectmen.**

vii. In arriving at the length of a water extension necessary to render service at any point, the distance from such point to the nearest existing water main shall be traced along the line which, according to established trade standards and utility practice, marks the proper construction of the extension in the street, road or right-of-way on which the building or lot fronts. The point at which the extension ends and the service line commences shall normally be at the intersection of this line and another line, perpendicular thereto, which passes through the center of the building to be served.

viii. The Department shall ensure that any and all facilities, installed or accepted under an agreement, comply with the Department's standards for materials and installation and are adequate and safe for the purpose of the Department. The Department shall not be required to accept a main extension, pipeline or related appurtenances until after they have been inspected and tested and meet the Department's standards. Any inspections or tests shall be at the expense of the person requesting service or acceptance. All permits to cross highways, roads, or streets shall be the responsibility of the owner or his agent. Any rights-of-way over the land of others shall be the responsibility of the owner.

I. Upon the satisfactory completion of all required tests and conditions of these Rules and Regulations, the owner of said new extensions may petition the Board of Selectmen in writing to accept them. Such acceptance may be contingent upon the submission of a complete set of "as built" plans, with swing ties to permanent features, to the Board for future use by the Department, a written statement of

agreement to these Rules and Regulation, and payment in full of and charges incurred to the Department during construction. If accepted by the Board of Selectmen, the Department will from that time on assume responsibility for the operation, maintenance, repair or replacement of said extension. Nothing in this document shall compel the Board of Selectmen to accept an extension or any other agreement, even if all requirements are met.

1. Main Extensions for Individuals

Upon request from a potential customer or customers for a main extension, and receipt of a completed application for water service, the customer shall prepare, at his own expense without charge, a preliminary sketch, general specifications covering such as size and type of pipe, and an estimate of the cost of the proposed water main extension with separate estimates of the costs of service lines to the premises of the customers requesting the main extension. The estimate shall also include costs for inspection, disinfection, and testing and when applicable, the cost of hydrants and appurtenances shall be included in the main extension estimate. If the main extension will result in a requirement for system upgrade, these costs shall also be included. Any cost associated with system upgrade (if required) and for inspection and testing shall also be included in the estimate. A completed application for water service will be required with the submittal of the above-listed requirements.

The main extension estimate shall serve as a basis for the determination of the required customer contribution and the amount to be invested by the Department. Adjustments shall be made by the Department upon receipt of the final bills for the extension.

2. Main Extensions for Developments or Subdivisions

Upon request from a developer for a main extension to serve a real estate development, an industrial development or a subdivision, and after receipt of a completed application for water service, the Department shall decide if the main extension will be constructed by the Department or its agents, or by the developer.

If the Department decides to construct the extension, the Department shall prepare an estimate of the cost of the extension. The costs associated with system upgrade (if necessary), for the inspection and testing, and for engineering design shall be included in the estimate. The estimate shall serve as a basis for the deposit to be made to the Department by the developer. Adjustments and the determination of the final amount due from the developer shall be made by the Department upon receipt of the final bills from the extension. No construction shall begin until the Department and the developer have executed a written agreement.

If the main extension work is to be constructed by the developer, the developer shall submit system design calculations and construction drawings and specifications prepared by a

Registered Professional Engineer in the State of New Hampshire. The Department will inspect all construction work preformed by the developer; the costs of the inspection shall be paid in full by the developer. The developer shall furnish evidence that the project for which the main extension is for has been approved by local and State regulatory agencies, as applicable. No construction shall begin until the Department and the developer have executed a written agreement. Any service pipes between the main and the property line of a lot required after construction of the new main extension shall be paid for by the developer or customer to be served.

Section V

Water Main and Service Specifications

1. General

Water mains, services and appurtenances shall be of the design, type, kind, size and class as shown on the plans and as specified herein. The pipe and appurtenance shall be laid on a firm foundation with tight joints and properly protected in a trench excavated and backfilled in accordance with these specifications and accompanying plans and as may be required by the Department.

2. Design Criteria
   i. Service Pressure – Water System improvements shall be designed to provide a normal working pressure of not less than approximately 40 psi nor more than 120 psi.
   ii. Main Size – The minimum size of all new water mains for providing fire protection and serving fire hydrants shall be 8-inch diameter. Larger size mains will be required if necessary, to allow the withdrawal of the required fire flow or peak demand while maintaining a minimum residual pressure of 20 psi. the minimum size of all hydrant branch mains shall be 6-inch diameter.
   iii. Bury Depth – Pipe shall be laid at a minimum of five (5) feet (60”) and at a depth of six (6) feet (72”) wherever possible.
   iv. Hydrants – Unless otherwise required by the fire department the maximum spacing for fire hydrants intended to supply a fire flow requirement of 500 gallons per minute or less shall be 1000 feet and for fire flow requirements in excess of 500 gpm the maximum spacing shall be 500 feet. Closer spacing may be required in order to locate hydrant at street intersections or other points convenient to the fire department, or as required by the Department. In the case of main extensions in public ways by other, hydrants shall be paid for by the owner and must meet the specifications of the Department. Upon acceptance of the main extension, the

maintenance, repair or replacement of such hydrants shall become the responsibility of the Department.

v. Gate Valves – Gate valves shall be required at all main intersections and along the water main at intervals of 1000 feet. Gate valves are required on each hydrant branch and on all service mains adjacent to the hydrant branch. The Department shall decide on the final number and location of all valves.

vi. Dead Ends – Dead ends shall be minimized by looping all new mains whenever practical as determined by the Department.

vii. Air Relief Valve – Air relief valves shall be installed at all high points of the new main as determined by the Department. The size and design of the valve and piping shall be determined by the Department.

viii. Hydrants shall be installed at the ends of all dead-end lines. At low points in mains blow-offs may be required as determined by the Department or. The size and design of the blow-off valve and piping shall be determined by the Department.

i) Separation of Water Mains and Sewers: Parallel Installation

(a) Normal Conditions – Water mains shall be laid at least 10 feet horizontally from any sanitary sewer, storm sewer or sewer manhole, whenever possible; the distance shall be measured edge-to-edge.

(b) Unusual Conditions – When local conditions (such as ledge, bridges, etc.) prevent a horizontal separation of 10 feet, a water main may be laid closer to a storm or sanitary sewer provided that:

(i) The bottom of the water main is at least 18 inches above the top of the sewer and a minimum of 5 feet edge-to-edge horizontally is provided.

(ii) Where this vertical separation cannot be obtained, the sewer shall be constructed of materials and with joints that are equivalent to water main standards of construction and shall be pressure tested to assure water-tightness prior to backfilling.

(iii) The NHDES agrees that local conditions warrant less then 10 feet horizontal separation and approves the plans and specifications of the work.

3. <u>Crossings</u>

a. Normal Conditions – Water mains crossing house sewers, storm sewer or sanitary sewers shall be laid to provide a separation of at least 18 inches between the bottom of the water main and the top of the sewer, whenever possible.

b. Unusual Conditions – When local conditions prevent a vertical separation as described in 2.a. the following construction shall be used:

i. Sewers passing over or under water mains should be constructed of the materials described with joints that are equivalent to the water main standards of construction and shall be pressure tested to assure water-tightness prior to backfilling.

ii. Water mains passing under sewer shall, in addition, be protected by providing a vertical separation of at least 18 inches between the bottom of the sewer and the top of the water main; adequate structural support for the sewers to prevent excessive deflection of joints and settling on and breaking the water mains; and that one full length of water pipe be centered at the point of crossing so that the joints will be adequate and as far as possible from the sewer.

c. Services – No more than one customer shall be served from a service pipe under the control of a single curb stop or shut-off, with the exception of certain multi-unit premises. A separate meter shall be provided for each customer. Where the length of the service pipe is greater than 200 feet between the Department's main and the premises to be serviced, the water meter may be placed in a meter pit at the edge of the right-of-way. The Department shall establish the size and type of construction of the meter pit (see attachment C). The Department shall determine the size of the service pipe based upon the information provided by the customer. No water services shall be installed in a common trench with other underground utilities; separation from sewers shall be as outlined in paragraph i, above.

d. Backflow Devices: All water services shall be equipped with an approved backflow device in accordance with the Department's cross connection program. The backflow device shall be installed at the meter location unless otherwise approved by the department.

i. Fire Services: A separate service shall be provided to serve a building sprinkler system and/or private firs protection system unless otherwise approved by the department.

4. <u>Materials</u>

a. Ductile Iron Pipe – Ductile iron pipe shall conform to the latest edition of AWWA C151 (American Water Works Association standard). Pipe shall be double cement lined with seal coat. The minimum thickness shall be class 52, unless otherwise agreed to by the Department. Factory applied bituminous coating shall be furnished on all underground piping. The cement lining shall conform to the latest revision of AWWA C104.

Unless otherwise required for joint restraint, pipe joints shall be "push-on" type and shall meet the requirements of AWW C111, or the latest revision thereof.

b. Fittings – Fittings for ductile iron water pipe shall be ductile iron and shall meet the requirements of AWWA C110. Fittings shall be cement lined in accordance with AWW C104. The minimum pressure rating for all fittings shall be 250 psi unless a higher-pressure class is required for the specific installation. Unless other required for joint restraint, joints on fittings shall be mechanical joint in accordance with AWWA C111.

c. Thrust Restraint – Thrust restraint shall be appropriate for the soil type, size and length of pipe and shall consist of concrete thrust blocks and "Grip Ring" type mechanical restraint device. Thrust blocks shall be cast -in-place concrete with a minimum compressive strength of 3,000 psi at 28 days.

d. Valves
    i. Gate Valves – Gate valves shall be ductile iron body, turn right to close, resilient seat, epoxy coated inside and outside, mechanical joint, for underground use, wrench operated, non-rising stem, "O-ring" seal and shall meet or exceed the minimum requirements of AWWA C500. The valve design shall permit packing the valve while in service without undue leaking. Valves 12 inches and smaller shall be designed for a minimum water working pressure of 200 pounds per square inch and valves 16 inches and larger shall have a minimum working pressure of 150 psi. Gate valves shall have a 2-inch nut for wrench operation and the operating nut shall have an arrow cast in the metal indicating the direction of opening. Valves shall "OPEN LEFT." Valves shall have maker's initial, pressure rating and a year of manufacture cast on the body. Buried valves shall be provided with 5 ¼ inch valve boxes and extension rods to bring the operating nut to within Five (5) feet of the finished grade.
    ii. Butterfly Valves – Butterfly valves shall have a ductile iron body with bronze, ductile iron, or Ni-resist disc with a rubber or elastomer seat and shall meet or exceed the requirements of AWWA C504. Valves shall be class 150B unless specified otherwise. Operators shall be suitable for direct burial, hermetically sealed and permanently lubricated. The valve shall have mechanical joint ends and shall "OPEN LEFT." The 2-inch square operating nut shall have an arrow cast in the metal indicating the direction of opening. Butterfly valves shall not be used in mains 12 inches and smaller.
e. Valve Boxes – Valve boxes shall be heavy pattern cast or ductile iron, cast in tow or three telescoping sections of sliding construction and of such lengths as will provide, without full extension, the required cover. The lower section shall be 5 ¼ inch minimum inside diameter and shall be belled or domed at the bottom to fit over the valve nut. The upper section shall fit over the lower section. Covers shall be a least 6 inches in diameter, shall fit flush with the top, shall have the word "WATER" cast thereon in raised letters, and shall be slotted for easy removal. Valve boxes shall be of good quality cast or ductile iron, North American made and free from all defects in material and workmanship, and 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.
f. Curb Boxes – curb boxes shall conform to the specifications for valve boxes except that for curb boxes for curb stops 2 inches and smaller shall have a one-piece cast or ductile iron arch base, a steel pipe extension upper section, cast iron lid and

thread bronze plug with pentagon nut (rope thread). A stationary 5/8-inch minimum diameter by 30 inches minimum long rod shall be installed in each curb box.

g. Service Pipe – Water service pipe shall be Type K, annealed seamless copper water tube or CTS meeting the requirements of ASTM B88. Joints shall be packed or compression type as required by the corporation stop and curb stop. Minimum allowable size for service pipe shall be ¾-inch. Where service pipes larger than 1-inch are required, copper tube size (CTS) polyethylene pipe may be used.
h. Backflow Prevention Devices – Backflow prevention devices for domestic residential service shall be a Watts No. 7 dual check valve, or equivalent approved by the Department.
i. Corporation Stops – Corporation stops 2- inches and smaller shall be constructed of virgin water works brass (85-5-5-5), shall have compression type outlet and CC type threaded inlet, and shall be Mueller 110, Catalog Nos. H-15008 or H-15013, or equivalent. Mains shall not be direct tapped. A service saddle shall be used as all times.
j. Curb stops – Curb stops or shut offs 2-inches and smaller shall be constructed of virgin water works brass (85-5-5-5), shall have inlet and outlet Mueller 110 compression connection, or equivalent. Stop and waste valves shall not be used.
k. Service Saddles – Service saddles shall be double strap type with ductile iron body (ASTM A536) epoxy coated; Buna-N gasket and stainless-steel straps, nuts and washer. Inlet thread shall be compatible with the corporation stop.
l. Tapping Sleeves and Valves – Tapping valves shall be flanged by mechanical joint meeting the requirements of Gate Valves. The tapping sleeve shall be made of stainless steel.
m. Hydrants – Hydrants shall be breakaway type meeting or exceeding AWWA C502. Hydrants shall have 6-inch mechanical joint inlet, a 5 ¼-inch minimum valve opening and shall open by turning counter clockwise (OPEN LEFT). Hydrants shall have two 2 ½-inch and one 4-inch hose outlets with National Standard Fire Hose Threads. Minimum depth of bury shall be 5-feet. Hydrants shall be shop [painted as per AWWA C502 and field painted after installation with two coats of alkyd enamel paint as per color requirements of the Department. Hydrant drains shall be closed with brass plug. Hydrants shall be Clow Eddy, American Darling.
n. Coupling and Connectors – For joining new pipe to new pipe, coupling shall be solid sleeve type, ductile iron with mechanical joints conforming to AWWA C110. For Joining new pipe to old pipe, couplings shall have a ductile iron middle ring, two ductile iron follower rings sized for each pipe, high strength low alloy steel nuts and bolts and virgin compounded rubber gaskets.
o. Backfill –
    i. Common Fill – Mineral soil substantially free from organic materials, loam, wood, trash, and other objectionable materials which may be compressible or

which cannot be properly compacted. Common fill shall have properties such that it can be readily spread and compacted. Snow, ice and frozen material shall not be permitted.

ii. Pipe is to be bedded in gravel and then sand at least 15inches above the pipe. Then the appropriate screened gravel mentioned below in section iii

iii. Screened Gravel – Screened gravel shall be well graded in size from ¼-inch to ¾-inch and shall consist of clean, hard, and durable particles or fragments. It shall be free from dirt, vegetable, or other objectionable matter, and excess of soft, thin elongated, laminated or disintegrated pieces. The grading shall conform to the following requirements;

Sieve Designation	% Passing by Weight Square Opening
1”	100
¾”	96-100
3/8”	20-55
No. 4	0-10
No. 8	0-5

iv. Granular Fill – Granular fill shall consist of hard, durable stone and coarse sand, free from frost, frozen lumps, loam and clay, well graded, and containing no stone having any dimension greater than 1-inch. The grading of sizes and material shall be such that the gravel may be thoroughly consolidated. The grading shall conform to the following requirements:

Sieve Designation	% Passing by Weight Square Opening
¾ inch	95-100
No. 4	50-95
No. 40	5-50
No. 400	0-10

p. Pavement – Provide all materials in accordance with the applicable sections of the latest edition of the Standard Specification for the Highways and Bridges of the New Hampshire Department of Transportation (D.O.T).

i. Aggregate Subbase and Base – Division 700 – Material Details, Section 703-Aggregates, Subsection 703.06 – type A and type B for Aggregate Base.

ii. Bituminous Tack Coat – Provided AE-90 Asphalt Emulsion Material, Division 700 – Material Details, Section 702 Bituminous Material, Subsection 702.04 – Emulsified Asphalts.

iii. Bituminous Concrete Binder and Surface courses – Division 700 Materials Details, Section 702 – Bituminous Material and Section 703 – Aggregates Subsection 703.09, Grading B and Grading C for roadways; Grading C and D for sidewalks, islands and drives.
iv. Sidewalk (When Applicable): Division 700 – Material Details and (when applicable) Section 608 – sidewalks
v. Pavement Markings – Section 708.03 – Pavement Marking Paint.

5. Construction Methods:
   a. General – In unloading, storing, stacking and handling of pipe, fittings, valves or appurtenances, the contractor shall take special care to ensure that his methods are consistent with methods employed by the manufacturer in the manufacture and shipping of the product. Insofar as possible, all heavy materials shall be carefully handled by the use of hoists or skidways to avoid shock or damage. Pipe handled on skidways shall not be skidded or rolled against pipe already on the ground. It shall be the contractor's responsibility to inspect all shipments, and to replace or repair at his own expense any materials that have been damaged through his own negligence. Whenever possible, pipe shall be strung along the routes with the bell ends facing in the direction in which the work is to proceed.
   b. Trench Excavation – The contractor shall excavate the trench to the lines and grades as shown on the plans and as required by the Department. Special care shall be taken to protect the existing underground utilities and support the sides of the trench to prevent movement, to include the use of sheeting, shoring and bracing. The contractor shall also be required to do all dewatering of the trench that may be necessary to ensure that the trench bottom is firm and dry. If, in the opinion of the Department, unsatisfactory soil conditions exist at the required trench grade, the contractor may be required to excavate below normal trench grade until suitable foundation material is encountered. The excavation shall then be backfilled with 15 inches of sand on top of pipe then screened gravel ever 6-inch layers. Each layer shall be properly tamped and compacted until normal trench grade is obtained. The contractor shall make such additional excavations as may be necessary to provide for proper placement of concrete thrust blocks, valves, hydrants, services and other appurtenances as shown on the plans as required by the Department.
   c. Cover – All water main trenches shall be such that a minimum cover of 5 feet is provided over the pipe, except at gate valves where a minimum of 3 feet of caver shall be provided at the top of the valve bonnet. The maximum depth of cover shall be 7 feet unless approved otherwise by the Department.
   d. Bedding the Pipe and Fittings – All pipe and fittings shall be placed on a layer of bedding material consisting of compacted screened gravel or granular fill. The depth of the bedding shall be 6-inches minimum or equal to one-half the diameter of the pipe, whichever is greater. Any voids under the pipe shall be filled and thoroughly tamped.
   e. Laying the Pipe and Fittings – The pipe shall be placed in the trench in accordance with the manufacturer's recommendations or by an approved method in such a manner as to ensure that the pipe is not damaged. All pipe shall be thoroughly sound, dry and clean, before laying and the utmost of care shall be taken to ensure that its condition is not

altered when it is placed on the bed. A water tight plug shall be installed once the pipe is in place to keep out ground water and dirt. All work associated with laying the pipe shall conform to AWWA Standard Specification C600 wherever applicable and not in conflict with the provisions contained in these specifications. When the pipe is in place, screened sand 15 inches above the pipe shall be applied then screened gravel or granular fill, whichever is applicable, shall be placed in the trench and thoroughly compacted in 6-inch lifts to 12-inches above the top of the pipe.

i. Valves – The contractor shall install all valves and tapping sleeves and valves together with valve boxes, at the locations shown on the plans or as directed by the Department. In general, valves shall be installed as close as possible to plumb and in accordance with the applicable subsections 4© and 4 (d) of this article, and in accordance with the manufacturer's recommendations. Valve boxes shall be installed at every valve location and shall be adjusted to the proper finish grade and set plumb and centered over the operating nut of the valve. The contractor shall exercise special care that the valve box is free of obstructions and that the base does not rest on the valve bonnet. An earth cushion shall be provided between the bonnet and the base. After installation is completed, all valves shall be operated and then left in the closed position.

ii. Tapping Sleeves and Valves – Tapping sleeves and valves shall be installed with the outlet flange set vertically and the sleeve squarely centered on the main. Concrete or granite blocking shall be placed beneath the sleeve and valve to provide support. Concrete thrust blocking shall be placed behind and under the sleeve and valve after the tap is completed. The valve shall be flushed after completing the taps to ensure the valve seat is clean.

iii. Hydrants – The hydrant shall be set plumb and at the proper elevation with respect to final finished grade. The break away flange shall be set 2-inches above finish grade. The hydrant base shall be set on fine material. The hydrant branch valve, and hydrant tee shall be adequately anchored together by mechanical means (anchor tee) and by concrete thrust blocks. Hydrant locations shall be such that no part of the hydrant is withing one foot of the curb line and no less than twenty feet from an intersecting street. Prior to any hydrant being tested under pressure, all hydrant laterals and mains shall be flushed to remove dirt, rocks, and foreign matter. Each nozzle and pumper outlet shall be at least eighteen (18") inches above grade on the installed hydrant. Steamer connection shall face the traveled way. Each hydrant shall be provided with an approved gate valve at an easily accessible location, located of the traveled way.

f. Thrust Restraint - Concrete thrust blocks and restrained joints shall be installed at all bends, fittings, dead ends and hydrants, as shown on the plans or as directed by the Department. The bearing area of the thrust blocks shall be determined for each installation based on should type and system design pressure. The thrust block shall be formed in such a way that as much of the undisturbed earth on the trench wall and bottom will be incorporated into the forming as is possible. In making both the forms and the pour, special care shall be taken to ensure that concrete is not poured in and around the joints of the pipes and fittings. In the event that other utilities or local conditions prohibit the use of thrust blocks,

the contactor shall furnish and install mechanical thrust resisting devices, upon the approval of such devices by the Department.

g. Service Connections – Services shall be constructed in accordance with the most recent revision of the BOCA, CABO and International Plumbing Codes.
    i. Corporation Stops – The Contractor shall furnish and install all corporation stops at the locations as shown on the plans or as directed by the Department. A tapping machine shall be sealed which will permit tapping of water mains under pressure. The tapping machine shall be rigidly fastened to the pipe and the tap shall be made in the upper one-half of the pipe. The length of travel of the tap shall be so established that when the stop is inserted and tightened with a fourteen-inch wrench, not more than one to three threads will be exposed on the outside. When a wet tap is made, the corporation shall be inserted with the machine still in place.
    ii. Copper Tubing – The contractor shall furnish and install copper tubing at the locations as shown on the plans or as directed by the Department. Excavation for services shall be to a minimum depth of 5 feet and the contractor shall exercise special care to ensure that the bottom is free from sharp rocks or ledge outcroppings. In placing the service in the trench, the contractor shall be careful that the copper tubing has no kinks or sharp bends and that screened sand is placed to a depth of 15-inches over and around the services.
    iii. Curb Stops and Boxes – Curb stops and boxes shall be furnished and installed by the contractor where noted on the plans or as directed by the Department. The contractor shall place compacted gravel around and below the curb stop. The curb box shall be set flush with the finish grade and at or near the property line.

h. Pressure and Leakage Testing – The contractor shall furnish the necessary equipment and labor for carting out a pressure test and leakage test, as specified in AWWA C600, on the completed pipes. The pressure and leakage test shall be conducted concurrently. The hydrostatic pressure shall be maintained for at least 2 hours. Test pressure shall be 1-1/2 times working pressure or 150 psi, whichever is greater.

    Prior to conducting the test, mains shall be flushed to remove all materials that may have entered the mains during construction. Flushing velocities shall be equal to or great then 2 ½ feet per second.

i. Chlorination of Pipelines –
    i. Before being placed in service, all new water pipelines shall be chlorinated in accordance with AWWA C601
    ii. Before any disinfecting procedures are initiated, the Department shall be advised of the contractor's intended methods and no work shall be done until such methods are approved by the Department. The contractor shall provide all necessary tools, material and labor for disinfecting the mains. The tablet method of chlorination shall not be employed.
    iii. The location of the chlorination and sampling points shall be installed by the contractor. The contractor shall uncover and backfill the taps as required.
    iv. The general procedure for chlorination shall be first to flush all dirty or discolored water from the lines, and then to introduce chlorine in approved dosages through a tap at one end, while water is being withdrawn at the other end of the line. The chlorine

solution shall remain in the pipeline for 24 hours and the chlorine residual after 24 hours shall be at least 50 mg/l, unless the slug method of chlorination is used.

v. Following the chlorination period, all treated water shall be flushed from the lines at their extremities, and replaced with water from the distribution system. Bacteriological sampling and analysis of the replacement water shall be made by a laboratory certified by the State of New Hampshire. The number of samples and the test locations shall be determined by the Department. The contractor shall be required to re chlorinate, if necessary, and the line shall not be placed in service until satisfactorily disinfected.

vi. Special disinfecting procedures shall be used in connections to existing mains, and where the method outlined above is not practical.

j. Backfilling the Trench – Upon installation of the pipe the trench shall be backfilled and final restoration of the surface made. Screened sand fill shall be placed 15 inches over the top of the pipe, then screened gravel shall be placed every six-inch layers and thoroughly compacted until finished grade is completed. Special care shall be taken to ensure that backfill around the pipe is adequately tamped. The remainder of the backfill between the pipe and the pavement base gravel shall be common fill or granular fill and shall be placed in twelve-inch layers and thoroughly compacted.

   Compaction for that portion of the trench 18 inches above the top of the pipe shall be 95% of maximum density, as determined in accordance with method D of ASTM specification D1557. The use of jetting or flooding to obtain a necessary compaction for bedding of the pipe will not be permitted.

   Whenever a loam or gravel surface exists prior to cross-country excavations, it shall be removed, conserved, and replaced to the full original depth. In some areas, it may be necessary to remove excess material during the cleanup process, so that the ground may be restored to its original level and condition. If the contractor prefers not to store loam or topsoil, he shall replace it with loam or topsoil of equal quality and in equal quantity.

   In freezing weather, a layer of fill shall not be left in an uncompacted state at the close of a day's operations. Fill shall not be placed on snow, ice or frozen uncompacted soil, nor shall snow, ice or frozen soil be incorporated in any fill. At the close of each day's operations, the surface of the compacted fill shall be rolled or otherwise smoothed to eliminate any ridges or mounds.

k. Compaction Control –

   i. The contractor will make compaction tests as directed by the Department on accordance with ASTM D1556 as the work processes to determine the degree of compaction being attained. Corrections for oversize stones larger than ¾-inch in size shall be made in accordance with ASTM "Procedure for Testing Soils: suggested method for correcting maximum density and optimum moisture content od compacted soils for oversize particles."

   ii. Any corrective work required as a result of such tests, such as additional compaction or a decrease in the thickness of layers, shall be preformed by the contractor.

   iii. Compaction control tests will be made at no expense to the Department, and by a testing laboratory approved by the Department.

l. Restoring Trench Surfaces –
   i. Where the trench occurs adjacent to paved streets, in shoulders, sidewalks, or in cross-country areas, the contractor shall immediately deposit additional fill to restore the level of the ground. IN and adjacent to streets and highways, if the top 24-inch layer is unsuitable for use as subgrade or shoulder material, the contractor shall remove this layer and provide granular fill for the subgrade.
   ii. The surface of any driveway or any other area that is disturbed by the trench excavation and which is not a part of the paved highway shall be restored by the contractor to a condition at least equal to that existing before work began.
   iii. In sections where the water main passes through grasses areas, the contractor shall, at his own expense, remove and replace the soil, or shall satisfactorily loam and seed the surface. The depth of the loam replaced shall be at least equal to that re-moved by the contractor in his trenching operations, but in no event shall it be placed less than 6-inches in depth.

m. Pavement Replacement –
   i. The contractor shall furnish all labor, material, equipment and incidentals necessary to replace all paved areas damaged by his operation.
   ii. The contractor shall, after pipe laying and backfilling operations are completed, and after 12-inch gravel subbase is shaped and compacted, place the pavement.
   iii. The contractor shall be required to clean all road surfaces after backfilling and before surfacing.
   iv. The contractor shall maintain pavement during the guarantee period of one year and shall promptly refill and repave areas which have settled or are otherwise unsatisfactory for traffic.
   v. The contractor shall furnish and spread calcium chloride on disturbed surfaces to allay dust conditions. Calcium chloride shall conform to AASHO M-144.
   vi. No permanent pavement shall be placed within 90 days after completion of backfilling, unless permitted to do so in writing by the authority having jurisdiction. Repaving may be delayed for a longer time if the said authority so directs.
   vii. Temporary pavement shall be 1 ½-inch thick bituminous concrete. Temporary pavement shall be maintained until replaced by permanent pavement.
   viii. If points of settlement or holes appear in the temporary pavement, the contractor shall repair the same within three (3) days of notification by the Department or authority having jurisdiction.
   ix. Permanent pavement to be placed over width of the trench shall be 3-inches of bituminous concrete, laid in two courses, a 2-inch binder course, and a 1-inch wearing course. Temporary pavement shall be removed and the subbase shall be prepared by thoroughly compacting and shaping the subbase to the required grade and cross section, and the edge of the old pavement shall be trimmed to a smooth straight line and tack coated.

   Immediately prior to laying the binder course, the trimmed edges shall be stable and unyielding, free of loose or broken pieces, and all edges shall be thoroughly broomed and coated with an approved asphalt tack coat. Prior to placing wearing course, the binder course shall be broomed and tack coated.

If directed by the authority having jurisdiction, permanent pavement of a thickness greater than 3-inches shall be placed. Material and placement shall conform to the above specifications, and thickness shall be as specified by the authority.

x. Prior to construction the contractor shall obtain the necessary road opening permits from authority having jurisdiction and call Dig Safe to provide proper notice and to get permit.

6. Miscellaneous:
   a. Notification – The Water Department shall be notified by the contractor or customer at least two working days prior to commencement of work on new service or main extensions.
   b. Cross Connections – No cross connection shall be installed by a water customer until after an application for a cross connection permit and a permit to install such cross connections has been approved for issuance by the NHDES.
   c. As-built Information – During construction the contractor shall maintain detailed records of the main and appurtenances installation. Locations of all fittings, valves, coupling, corporation stops, curb valves, dead ends, etc. Shall be recorded with accurate swing ties. The Department shall approve the method of taking the ties. In addition, all underground utilities and ledge area encountered during construction shall be located (horizontal and depth) and shown on the plans. One set of completed As-builts shall be delivered to the Department prior to issuance of Occupancy Permits by Code Enforcement.

Section VI

Penalties and Fines

1. Any person found to be violating any provision of this ordinance shall be served by the Town with a written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction therefore. The offender shall within the period of time stated in such notice permanently ceases all violations. If the offender does not cease all violations and depending on the severity of the violation(s) the Department may discontinue water service with proper notice, take the offender to court, or both.
2. Any person who shall continue any violation(s) beyond the time limit provided and the severity of such violation(s) shall constitute a hazard or potential hazard to public health and or safety shall be subject to a civil penalty not to exceed $10,000.00 per day of such violation(s). (RSA Title III, Chapter 38:26) Each day in which any such violation continues shall be deemed a separate violation.
3. Any person violating any of the provisions of these Rules and Regulations shall become liable to the Town for any expenses, loss, or damage occasioned by reason of such violation.
4. A fine of $25.00 will be charged to any person breaking a water meter seal without written authorization from the Department.

Section VII

Validity

1. All ordinances or parts of ordinances or rules and regulations in conflict herewith are hereby repealed.
2. The invalidity of any section, clause, sentence, or provision of these Rules and Regulations shall not affect the validity of any other part of their Rules and Regulations which can be given effect without such invalid part or parts.
3. The Town reserves the right to adopt or amend from time to time, additional Rules and Regulations as it shall deem necessary and proper relating to the connection of water services, mainline extensions, cross connection control, and the protection of our water resources, which additional Rules and Regulations to the extent appropriate shall be part of these Regulations.

These Rules and Regulations shall become effective upon the acceptance and adoption of this Ordinance by the Board of Selectmen of the Town of Farmington.

This Ordinance adopted this _____ day of _____ of _____

By:

_____

Paula Proulx Chairman

_____

Neil Johnson Vice Chairman

_____

Dave Connolly

_____

TJ Place

_____

Gerry Vachon