



Hamilton

**WATER WORKS
BY-LAW RESOURCE
MANUAL**

Table of Contents

| | | | |
|---|-----------|--|-----------|
| Introduction | 5 | Water Meters | 25 |
| Definitions | 6 | Water Meter Bypass Valve Assembly | 26 |
| Order of Precedence | 10 | Water Meter Chambers | 27 |
| Applicable Legislation | 10 | Maintenance of Water Meter Chambers | 28 |
| City of Hamilton By-laws | 11 | Submeters | 28 |
| Applicable Standards | 12 | Upsizing or Downsizing a Water Meter | 28 |
| Drinking Water Quality Management System | 12 | Large Water Meters | 29 |
| Safe Drinking Water Act | 12 | Relocating a Water Meter | 29 |
| Construction and Material Specification Manual | 13 | Water Meter Testing | 29 |
| General Conditions | 13 | Water Billing | 30 |
| Standard Conditions | 13 | Water Rates | 30 |
| Linear Design Guidelines | 13 | Billing Policies | 30 |
| Approved Products | 13 | Backflow Prevention | 30 |
| Standard Drawings | 14 | Fire Hydrants | 31 |
| Water Permits | 15 | Public Fire Hydrants | 31 |
| Water Permit Process and Design Requirements | 15 | Public Fire Hydrant Relocation Requests | 31 |
| Water Service Connections and Service Lines | 18 | Private Fire Hydrants | 32 |
| Sizing of Water Service Pipe | 18 | Public Fire Hydrant Road Adapter Rental Agreement | 33 |
| Installation of Service Lines | 18 | Public Water Fill Stations and User Fees | 33 |
| Private Fire Protection Systems | 20 | | |
| Substandard Water Service Line Replacement Program | 21 | | |
| Water Service Line Replacements | 21 | | |
| Abandonments and Disconnection of Services | 23 | | |
| Disconnection of Shared Services | 24 | | |

WATER WORKS BY-LAW RESOURCE MANUAL

CONTACTS

For questions/comments related to this Manual,
call the City of Hamilton's Customer Contact Centre at
905-546-CITY (2489) or email Hamilton Water at ww_csr@hamilton.ca

Introduction

Welcome to the Water Works By-law Resource Manual. The purpose of the resource manual is to provide easy reference to the City of Hamilton's drawings, processes, policies and permits for residents, contractors and consultants. This document is designed to be a resource supplement to the Water Works By-law 23-235 with direct links to important web pages containing more information, drawings and forms. The procedures and instructions outlined in this document are in accordance with all applicable legislation, City of Hamilton By-laws, applicable standards and the Drinking Water Quality Management System.

All pertinent website links are located in Appendix "A".

Introduction

Definitions

The following is a list of defined terms used throughout Water Works By-law 23-235 and this manual:

“Adapter” means an Adapter owned by the City and rented to a water user in accordance with section 4.15 and 4.16 of the Water Works By-law, which is used to make a temporary connection to the Water Distribution System and includes a hydrant Adapter which provides a link to a fire hydrant and a Road Adapter which provides a link to the Watermain;

“Adapter Rental Agreement” means the rental agreement prescribed by the General Manager from time to time as the agreement that must be signed by any Person who rents an Adapter from the City, which agreement shall contain terms and conditions specified by the General Manager;

“Applicable Law” means any statute, law, treaty, rule, code, ordinance, by-law, regulation, Permit, interpretation, certificate or order, whether now or hereafter existing, of any governmental authority, including, without limitation, the City or any judgment, decision, decree, injunction, writ, order or like action of any court, arbitrator or other governmental authority, including, without limitation, the City whether now or hereafter existing. Without limiting the generality of the foregoing, Applicable Law shall include the following non-comprehensive examples of Applicable Law:

- (1) O. Reg. 170/03;
- (2) The Watermain Disinfection Procedure;
- (3) The Water Works By-law Resource Manual;
- (4) O. Reg. 388/97;
- (5) the National Fire Protection Association Standards
- (6) the Building Code Act and O. Reg. 332/12; and,
- (7) AWWA Standards.

“Arrears Policy” means the City of Hamilton Water and Wastewater/Storm Arrears Policy No. PP-0004 approved by Council from time to time;

“Auxiliary Water Supply” means any well, cistern, tank, or supply of water that is not part of the Water Distribution System;

“AWWA Standards” means the standards adopted by the American Water Works Association, as they may be amended from time to time;

“Backflow Prevention By-law” means the City’s By-law 10-103;

“By-Pass Valve Assembly” means an arrangement of shut off valves and water piping that redirect the flow of water around the Water Meter during testing, repair or meter replacement so that work can progress without interrupting the flow of water to premises;

“City” means the municipality of the City of Hamilton or the geographic area of the City of Hamilton, as the context requires;

“Council” means the municipal council for the City of Hamilton;

“Emergency” means a situation or an impending situation that constitutes a danger that could result in harm or damage to Persons, Property, or the environment including the loss of an essential service or damage to other infrastructure/equipment;

“Emergency Work” means work that is required to reduce or eliminate an Emergency;

“Fees and Charges” means the fees and charges prescribed by the Water and Wastewater/Storm Fees and Charges By-law for the City;

“General Manager” means the General Manager of Public Works, the General Manager of Planning and Economic Development, or the Chief Building Official, as the context requires, and includes their designates or successors. All Hamilton Building Department, Planning and Economic Development staff, and Water Department staff shall be deemed to be acting as the General Manager’s designate in carrying out their duties under this By-law;

“MECP” means the Ontario Ministry of Environment, Conservation and Parks (previously the “MOE”) or any successor Ministry substantially fulfilling the same role;

“Occupier” means any Person who has use, possession or control of any Property or Premises or their authorized agent, servant or employee of such occupier;

“Municipal Law Enforcement Officer” means any Person appointed by the City’s Council or by the General Manager to administer or enforce this By-law and includes a Person employed by the City whose duties are to enforce this By-law, and also includes, for the purposes of exercising any power of entry under this By-law, a police officer;

“Owner” means the registered owner or owners of a Property or their authorized agent(s), but does not include a mortgagee unless the mortgagee is in possession of the Property;

“Permit” is a noun that means any one or more of the following Permits issued under this By-law:

- (1) a Water Service Permit;
- (2) a Water Service Line Repair Permit;
- (3) Disconnection of Services Permit; and
- (4) a Relocation of a Private Hydrant Permit.

“permit” is a verb that means, in connection with a Person who has care and maintenance of a Property or otherwise is legally capable of preventing or terminating the occurrence of an event, allowing that event to occur or failing to terminate its continuation;

“Permit Holder” means a Person to whom a Permit has been issued, and includes another Person performing work on behalf of such Person;

“Person” includes an individual, association, partnership, corporation, municipality, regional municipality, provincial or federal agency, or an agent or employee of any of those entities;

“Premises” means a building or structure or either of them located on a Property;

“Private Fire Hydrant” means an above grade accessible valve assembly and hydrant secondary valve that is connected to an underground privately owned Watermain for the purposes of fire suppression and Watermain flushing;

“Private Fire Protection System” means any private booster pumps, sprinkler systems, Private Fire Hydrants or other private system supplementing or in addition to, but excluding, the public fire protection system (Public Fire Hydrants and supporting infrastructure), with the designated purpose of such private fire protection system being fire protection and fire suppression;

“Private Service Line” means a privately-owned Service Line connected to the Service Connection at the street line, Property line or the easement limit to Premises or Property and includes Water Meter Chambers;

“Public Fire Hydrant” means an above grade valve assembly, including any secondary valve, that is connected to an underground municipal Watermain for the purposes of fire suppression and Watermain flushing;

“Public Service Line” means a publicly owned Service Line connected to the Watermain, designed to carry water from the Water Distribution System to the Service Connection at the street line, Property line or easement limit;

“Property” means a parcel of land described in a deed or other document legally capable of conveying title to or a fee simple interest in land; and

- (1) **“Mixed-use Property”** means a Property containing both Residential and Non-Residential Uses;
- (2) **“Multi-Residential Property”** means a Residential Property on which there are multiple residential units;
- (3) **“Non-Residential Property”** means a Property that is neither a Residential Property nor a Mixed-use Property; and
- (4) **“Residential Property”** means a Property on which the primary land uses are residential.

“Property Line” means the real or imaginary line that represents the legal division between a Property and the abutting Road;

“Road” means a public highway pursuant to the Municipal Act, 2001;

“Service Connection” means the connection that joins a Service Line to the Watermain;

“Service Line” means the line connecting a Watermain to a Premises or Property consisting of a Private Service Line and Public Service Line;

“Substandard” is an adjective that refers to a situation, matter, or thing that does not comply with Applicable Law;

“Substandard Service” means a water service line that does not meet the requirements of Applicable Law;

“Water Meter” means a device or mechanism which is owned by the City and used for the purpose of measuring the flow or quantity, or both, of water for billing revenue and, in circumstances where multiple units’ locations or units on a Property are serviced from a single Service Line; and

- (1) **“Primary Meter”** means the Water Meter that measures the total consumption on a Service Line; and
- (2) **“Submeter”** means any Water Meter that is subsidiary to the Primary Meter, but does not mean a private water quantity measuring device pursuant to subsection 5.6;

“Water Meter Chamber” means a below grade vault constructed to house a Water Meter;

“Watermain” means a pipe for the conveyance of potable water to water storage facilities and serviced Properties;

“Watermain Disinfection Procedure” means the Watermain Disinfection Procedure issued by the MOE. Currently, the Watermain Disinfection Procedure, also applies to a Service Line that has a diameter equal to or greater than four inches;

“Water Distribution System” means facilities of the City, including buildings, structures, plant, machinery, equipment, Water Meters, Public Fire Hydrants, appurtenances, devices, conduits, intakes, outlets, Watermains, and other works designed for the collection, production, treatment, transmission, storage, supply or distribution of water, or any part of the foregoing , and includes lands occupied for such purposes and uses;

“Water Works By-law Resource Manual” means the Water Works By-law Resource Manual approved by the General Manager from time to time.

Order of Precedence

In the event of any inconsistency or conflict in the contents of the following documents, such documents shall take precedence and govern in the following order:

1. Applicable Legislation: Acts and Regulations
2. City of Hamilton By-laws
3. Applicable Standards
4. Drinking Water Quality Management System
5. Safe Drinking Water Act and Ontario Regulation 170/03 – Licensed Water Operator and Operator-in-Charge

1. Applicable Legislation: Acts and Regulations

The City requires that all work performed in relation to the Water Distribution System be performed in accordance with all applicable legislation including but not limited to the Safe Drinking Water Act, 2002, S.O. 2002, c. 32, the Occupational Health and Safety Act, R.S.O. 1990, c. O.1 and all MECP requirements including but not limited to guidelines and standards.

Acts and Regulations:

- [Safe Drinking Water Act](#)
- [Building Code Act, 1992, and Ontario Regulation 332/12](#)
- [Municipal Act, 2001](#)
- [Municipal Freedom of Information and Protection of Privacy Act](#)
- [Occupational Health and Safety Act, R.S.O. 1990, c. O.1](#)
- [Ontario Fire Code Regulation, Ontario Regulation 388/97](#)
- [Ontario Regulation 170/03 under the Safe Drinking Water Act, 2002, S.O. 2002, c. 32](#)
- [Planning Act, R.S.O. 1990, c. P.13](#)

Applicable Law, as defined in the Water Works By-law, shall include but limited to the following:

- [Ontario Regulation 170/03: Drinking Water Systems](#)
- [The Watermain Disinfection Procedure](#)
- [Ontario Regulation 388/97: Fire Code](#)
- [National Fire Protection Association Standards](#)
- [Building Code Act, 1992, and Ontario Regulation 332/12](#)
- [AWWA Standards](#)

2. City of Hamilton By-laws

The full list of City By-laws can be found on the City website:

[City of Hamilton By-laws](#)

The following is a list of by-laws either listed within the Water Works By-law or applicable to it, as amended from time to time:

- **Backflow Prevention By-law No. 10-103**
Every Owner of a Property to which this By-law applies, shall ensure that a backflow prevention device is installed in respect of Premise isolation in every building or structure supplied by the Water Distribution System.
- **Hamilton Building By-law No. 15-058**
A by-law under the Building Code Act, 1992 respecting permits and related matters.
- **City's Procurement Policy By-law No. 20-20**
To ensure that the procurement function meets the current and future needs of the corporation, provides an economical and efficient service and is considered a value-added partner in the securing of goods and/or services for the corporation.
- **Property Standards By-law No. 10-221**
A by-law to prescribe standards for the maintenance and occupancy of Property.

- **Water and Wastewater/Storm Fees and Charges for Services, Activities and Use of Property Provided by the City of Hamilton By-law No. 20-255**
A by-law to establish the annual water and wastewater/storm Fees and Charges for services, activities and use of Property provided by the City.
- **Tariff of Planning and Growth Management Fees By-law No. 19-108**
A by-law that authorizes municipalities to prescribe a tariff of fees for the processing of applications made in respect of planning matters.

3. Applicable Standards

Standards that are listed within Water Works By-law or applicable to it can be found on the websites of the following organizations:

- [American Water Works Association](#)
- [Ministry of Environment, Conservation and Parks \(MECP\)](#)
- [National Fire Protection Association](#)

4. Drinking Water Quality Management System

The City has implemented the Drinking Water Quality Management System (DWQMS) which requires all personnel who may impact the quality of drinking water, be aware of the Quality Management System requirements.

Anyone working on the Water Distribution System is required to have awareness of the City's DWQMS under the Safe Drinking Water Act and to act accordingly in all their actions regarding the Drinking Water System. More information on the DWQMS can be found on the City's website:

[Drinking Water Quality Management System](#)

5. Safe Drinking Water Act and Ontario Regulation 170/03 – Licensed Water Operator and Operator-in-Charge

The purpose of the Safe Drinking Water Act is to provide for the protection of human health and the prevention of drinking water health hazards through the control and regulation of drinking water systems and drinking water testing.

Section 12 (1) of the Safe Drinking Water Act states:

“No person shall operate a municipal drinking water system or a regulated non- municipal drinking water system unless the person holds a valid operator's certificate issued in accordance with the regulations.”

The full version of the Safe Drinking Water Act can be found on the Province of Ontario's website:

[Safe Drinking Water Act](#)

Construction and Material Specifications Manual

The Construction and Material Specifications Manual contains standards for the construction of roads, sewers and watermains in the City. This document was created and is maintained by the Engineering Services Division, Contracts and Standards Section. It is used as a reference by City staff, contractors, consultants, and suppliers. These specifications can be found on the City's website:

[Construction and Material Specifications Manual](#)

The Construction and Material Specifications Manual contains the following:

General Conditions

- Form 200 - General Conditions
- Form 300 - General Construction Requirements

Standard Conditions

- Form 400 - Specification for the Installation of Watermains
- Form 500 - Specification for Sewer Pipe and CCTV Inspection
- Form 600 - Granular Fill Materials
- Form 700 - Specifications for Portland Cement Concrete
- Form 800 - Specifications for Hot-Mix Asphalt
- Form 900 - Specifications for Standard Compaction Requirements
- Form 1000 - Amendments to O.P.S.S. and O.P.S.D.

Linear Design Guidelines

- This guideline is currently under development by the Engineering Services Division, Design Section and is not currently available.

Approved Products

- The Standards and Approved Products Listing and Guidelines provides a list of approved materials and products to be used for Watermain construction.
- The list of approved products along with the Product Approval Application for new products can be found on the City's website:

[Standards and Approved Products Listing and Guidelines](#)

Standard Drawings

- Standard Road and Watermain drawings can be found on the City's website:

Construction and Material Specifications

| Drawing Number | Description |
|-----------------------|--|
| WM-200.01 | Bedding & Backfill for Concrete & PVC Watermains and Water Services |
| WM-200-.02 | Bedding & Backfill for Ductile Iron Watermains and Water Services |
| WM-207.01 | Piping Arrangement for 19-25mm Diameter Water Service Connection and Yard Service |
| WM-207.02 | Piping Arrangement for 19-25mm Diameter Water Service Connections in a Common Trench |
| WM-207.03 | Insulation Details for Water Services at Gooseneck |
| WM-207.04 | Piping for 100mm to 300mm Diameter Water Service Connection & Yard Service to Meter with Cut in Tee & Sleeve |
| WM-207.05 | Piping for 100mm to 300mm Diameter Water Service Connection & Yard Service to Meter using Tapping Sleeve & Valve |
| WM-207.06 | Piping Arrangement for 50mm Diameter Water Service Connection and Yard Service |

Water Permits

Permits are issued by the General Manager to allow an applicant to perform work related to the Water Distribution System or its appurtenances. A Permit will be required when an applicant's proposed work includes:

- The disconnection, installation, upgrade, repair or replacement of a Private or Public Service Line;
- The installation of a Water Meter (under the Building Permit); and/or
- Private Fire Hydrant Re-location.

Work is subject to inspection when completed as outlined in the Permit. It is the responsibility of the Permit Holder to contact the City to schedule the required inspection(s). If work is completed and the Permit Holder has not called for inspection as required, the work may need to be exposed or excavated to ensure that it meets the City standard. Work must be completed to the satisfaction of the City and is subject to the Water Works By-law.

Water Permit Process and Design Requirements

The City's Growth Management Division, Development Engineering Approvals Section has created a Sewer and Water Permit Process. The purpose is to assist applicants in preparing drawings for approval and convey the City's preferences and expectations for system design drawings. This process can be found on the City's website:

Sewer and Water Permit Process and Design Requirements

In order to obtain Permits for a Non-Residential Property or a Multi-Residential Property, the applicant must provide an appropriate drawing to the Growth Management Division, Development Engineering Approvals Section for review and approval by emailing DevEngApprovals@hamilton.ca.

Information that may be required on a Permit application includes:

- the name, municipal address, telephone number, and email address of the applicant and the Person responsible for the work;
- payment of the prescribed application fees in a manner as required by the General Manager;
- if required by the General Manager, zoning verification confirming that the proposed use is permitted under the City's Zoning By-laws;
- if required, a signed indemnity satisfactory to the General Manager;
- if required, evidence of insurance coverage satisfactory to the General Manager;

- if required, security as required by the General Manager;
- any proposed Road closure;
- any other Permits or Permit applications issued by the City related to the work;
- the requirement for any proposed relocation of a Public Fire Hydrant, removal or bagging of a parking meter, prohibition of curb parking, relocation of a bus stop or street-light pole, change to pavement markings or change to a traffic control device or signage including a temporary adjustment to traffic control signal timing or interference with a traffic signal loop;
- revised or additional information to determine if the Permit should be issued as required by the General Manager; and
- a signed acknowledgment that it is the responsibility of a Permit Holder to inform any purchaser of their Premises or Property that the Permit is not transferable, and that the purchaser must apply for a new Permit under the Water Works By-law unless otherwise approved by the City's Building By-law 15-058 or approved by the General Manager.

For Service Connections including installation, maintenance, repair and inspection, abandonment, and replacement of Service Lines:

- where the Service Line to be installed, maintained or repaired is 50mm (2") or larger, detailed engineering drawings stamped by a professional engineer licensed to practice in the Province of Ontario are required; and

For Public Fire Hydrant or Road Adapter rentals, the following information may be required:

- type of Adapter required;
- the proposed location of the Adapter installation/source Public Fire Hydrant location;
- the proposed rental term;
- description of work requiring the Adapter;
- prescribed usage deposit and damage deposit; and
- if applicable, the City contract number/City contact name.

For relocation of existing Public or Private Fire Hydrant where connection or disconnection from the City Watermain is required:

- detailed engineering drawings showing the proposed new location of the Public or Private Fire Hydrant stamped by a professional engineer licensed to practice in the Province of Ontario are required.

A Permit may be refused if:

- the Premises or Property does not lie along a Watermain;
- there is insufficient supply of water for the Premises or Property;
- the Service Connection would contravene an official plan under the Planning Act R.S.O. 1990, c. P.13, as may be amended;
- for a Private Fire Hydrant Relocation Permit, if the proposed location is not sufficiently accessible to the Fire Department; and
- the prescribed application fees have not been paid.

Water Service Connections and Service Lines

Sizing of Water Service Pipe

Size and capacity of potable water system pipes shall be designed in accordance with 7.6.3.1, of Division B, of the Ontario Building Code. The Ontario Building Code can be found on the Province of Ontario's website and more information on pipe sizing can be found on the Sizing of Water Service Pipe Form on the City's website:

- [Ontario Building Code](#)
- [Sizing of Water Service Pipe Form: One Dwelling Unit](#)
- [Sizing of Water Service Pipe Form: More than One Dwelling Unit](#)

Installation of Service Lines

- Standard drawings can be found on the City's website:
[Construction and Material Specifications](#)
(Form 400 - Specification for the Installation of Watermains)
- Connection where land not directly serviced requires the creation of a Special Water Service Agreement and/or Joint Water Service Agreement that is supported by a legally enforceable reciprocal easement registered against every Property. To initiate this process for development applications, email: DevEngApprovals@hamilton.ca.
- The Sewer and Water Permit Process and Design Requirements can be found on the City's website:
[Sewer and Water Permit Process and Design Requirements](#)
- Where there is a looped service, a check valve and a thermal expansion device must be installed in the plumbing system per the Standard Drawing for Piping and Chamber for Residential Looped Services – WM-209.04. The update to this drawing is currently under review and once completed, will be available on the City's website:
[Construction and Material Specifications Manual](#)
- All Auxiliary Water Supplies must be disconnected prior to connecting to the Water Distribution System. The exception may be properties to which the provisions of the Backflow Prevention By-law apply and the Property is in compliance with the By-law.
- All Service Line installations shall be done in compliance with:
 - Ontario Regulation 170/03 – Drinking Water Systems;
 - the Watermain Disinfection Procedure; and
 - all other Applicable Laws.

| Permit Name | Applicable To | Where to Apply | Issued By |
|----------------------------------|---|---|---|
| Water Service Permit (R9 Permit) | Residential Property: private side new line upsizing or renovation/ demolition/ rebuild | https://www.hamilton.ca/home-property-and-development/building-renovating/eplans-online-building-permit-application-process | Building Division, City Hall, 71 Main St W, 3rd floor |

Permit Requirements:

- The Building Division and Growth Management will not issue Permits until an Excavation Permit is issued for required work completed within the roadway;
- If the Service Line required is greater than 25mm (1”) the applicant is required to replace both the public and private sides (from the Water Meter to the Watermain); and
- If the Service Line is being split on the private side (after the Water Meter) the applicant must follow the Hamilton Water Primary/Sub Metering Process.

| Permit Name | Applicable To | Where to Apply | Issued By |
|---|--|---|---|
| Water Service Permit (R9 Permit): interior plumbing | Residential Property (single family): private side new line or replacement (excludes Substandard Services) | https://www.hamilton.ca/home-property-and-development/building-renovating/eplans-online-building-permit-application-process | Building Division, City Hall, 71 Main St W, 3rd floor |
| Water Service Permit (Water Connection: Water and Sewer Permit) Water Service from building to Property Line. | | | |

Permit Requirements:

- Installation of 25mm (1”) or greater copper is required. The Service Line size is based on Ontario Building Code requirements (It could be less than 25mm (1”) based on the number of fixture units it serves).

| Permit Name | Applicable To | Where to Apply | Issued By |
|---|--|---|--|
| Water Service Permit (Water and Sewer Permit) | Non-Residential / Multi-Residential Property: new or replacement (private and public side) | In person at service counter (bonded contractor applies for Water and Sewer Permit and Excavation Permit) | Growth Management Division, City Hall, 71 Main St W, 6th Floor |

Permit Requirements:

- For connection to the Watermain, engineering drawings must be approved, engineering review fees paid, Sewer / Water Permit approved and issued by the General Manager.
- An Excavation Permit for excavations within the Road allowance.

Private Fire Protection Systems

Private fire lines are to be used only for the purpose of fire protection. Water used for domestic purposes must come from a dedicated domestic Service Connection connected directly to the municipal Watermain, not a stand-alone fire service line. However, it is acceptable to have a Private Service Line (generally 100mm to 200mm) from the Watermain with the domestic service (usually 25mm or 50mm, 1" or 2") branching off that main line at the Property Line. The main line then continues, with a check valve in chamber at the Property Line, into the building as the fire service.

Building Permits are required for Private Fire Protection Systems within buildings, including any required backflow devices.

A swing check valve must be installed on the dedicated fire line or on the fire line portion of a combined Service Line at the Property Line per the standard drawing. The standard drawing is currently under review by the Standards and Approved Products Committee and will be available once it has been finalized on the City's website:

[Construction and Material Specifications Manual](#)

Substandard Water Service Line Replacement Program (based on material type or Service Line sizing)

General information related to residential Substandard Service replacement of the private and public side can be found on the City's website:

Water Service Line

| Permit Name | Applicable To | Where to Apply | Issued By |
|----------------------|--|---|-------------------------------------|
| Water Service Permit | Residential (Substandard Service, replacement or repair) private and public side | Available at Hamilton Water storefront or by e-mailing waterstorefront@hamilton.ca | Hamilton Water, 330 Wentworth St. N |

Permit Requirements:

- A size and type approval may be required and an inspection; and
- < 20mm (3/4") Service Line and/or substandard material (eg: lead).
- An Excavation Permit for excavations within the Road allowance.

Water Service Line Replacements

Standard drawings can be found on the City's website:

Construction and Material Specifications Manual

(Form 400 - Specification for the Installation of Watermains)

| Permit Name | Applicable To | Where to Apply | Issued By |
|---------------------------|---------------|---|---|
| Water Service Permit (R9) | Residential | https://www.hamilton.ca/home-property-and-development/building-renovating/eplans-online-building-permit-application-process | Building Division, City Hall, 71 Main St W, 3rd floor |

Permit Requirements:

- The Building Division does not issue an R9 Permit for the private side until a Road Excavation Permit is issued;
- An Excavation Permit for excavations within the Road allowance;

- If the Service Line required is greater than 25mm (1”) the applicant is required to replace both the public and private sides (from the Water Meter to the Watermain); and
- The Service Line must be properly disconnected (stubbed) at the Property Line or at the Watermain per the Disconnection of Services Process.

| Permit Name | Applicable To | Where to Apply | Issued By |
|--|---|---|---|
| Water Service Permit (R9 Permit): interior plumbing • WC (Water and Sewer) Permit: Water Service Line from building to Property Line. | Residential Property: private side new line / replacement (excludes Substandard Services) | https://www.hamilton.ca/home-property-and-development/building-renovating/eplans-online-building-permit-application-process | Building Division, City Hall, 71 Main St W, 3rd floor |

Permit Requirements:

- Installation of 25mm (1”) or greater copper pipe is required. Service size is based on Ontario Building Code requirements (could be less than 25mm (1”) based on fixture units it serves).

| Permit Name | Applicable To | Where to Apply | Issued By |
|----------------------|--|--|------------------------------------|
| Water Service Permit | Residential Property: private and public side Substandard Service, replacement or repair | Available at Hamilton Water storefront | Hamilton Water, 330 Wentworth St N |

Permit Requirements:

- A size and type approval and inspection;
- An Excavation Permit for any excavation within the road allowance; and
- < 20mm (3/4”) Service Line and/or substandard material (e.g. lead)

| Permit Name | Applicable To | Where to Apply | Issued By |
|----------------------|--|---|--|
| Water Service Permit | Non-Residential / Multi-Residential Property: new or replacement private and public side | In person at the service counter (bonded contractor applies for Water/Sewer Permit and Excavation Permit) | Growth Management Division, City Hall, 71 Main St W, 6th Floor |

Permit Requirements:

- For connections to the Watermain, engineering drawings must be approved, engineering review fees paid, Sewer/Water permit approved and issued by the General Manager; and
- An Excavation Permit for excavations within the Road allowance.

Abandonments and Disconnection of Services

- Information on approved methods of abandonment and disconnection of services can be found on the [Disconnection of Services Form](#).
- When a building is being demolished, the Service Line shall be abandoned and disconnected at the Watermain prior to the Demolition Permit being issued unless the City has approved the Service Line for reuse.
- All chambers within the roadway must be removed.
- For services smaller than 50mm (2"):
 - the main stop is to be turned off, the Service Line is to be cut as close to the main stop as possible to allow for the service piping material to be crimped over; or
 - if the main stop is found to be leaking, arrangements to be made with Hamilton Water in order to schedule a Watermain shutdown to allow, at the discretion of the on-site City Inspector, for the installation of either a threaded plug or clamp to be installed in place of the main stop.
- For services 50mm (2"):
 - Arrangements to be made with Hamilton Water to schedule a Watermain shutdown for the contractor to remove the saddle and corporation stop from the Watermain. Either a full seal clamp can be installed (preferred) or the section of Watermain removed only if the pipe is found to be in a compromised state.
- For services greater than 50mm (2"):
 - arrangements to be made with Hamilton Water in order to schedule a Watermain shutdown for the contractor to remove the tee/section of pipe to allow for installation of a "like for like" material section of Watermain and accompanying couplings approved by the City.

Disconnection of Shared Services

Where a shared service is being replaced and the Service Line is on a neighbour's Property the following steps shall be followed when disconnecting:

1. Remove the Y connection on the Service Line; or if not practical,
2. Cap the Service Line at or near Property Line; or if not practical,
3. Cap outside the foundation wall; or if not practical,
4. Cap below floor level with permanent cover with concrete placed over top.
This option is not ideal for dirt floor basements as the Service Line could be easily disturbed during any future renovations.

Water Meters

Water Meters are required for all water services in the City. Permits are required for Water Meters. More information can be found on the City's website:

[Sewer and Water Permit Process and Design Requirements](#)

Note: The sizing of Water Meters is done in accordance with [AWWA M22 – Sizing Water Service Lines and Meters](#).

Standard drawings related to Water Meters can be found on the City's website:

[Construction and Material Specifications Manual](#)

| Drawing Number | Description |
|-----------------------|--|
| WM-210.01 | Piping for Multi-Unit Residential (3 Storeys and above) or ICI Moderate Hazard 16mm to 50mm Diameter Meter for Internal Installation |
| WM-210.02 | Piping for Multi-Unit Residential (3 Stores and above) or ICI Moderate Hazard 100mm to 250mm Diameter Meters for Internal Installation |
| WM-210.03 | Piping for ICI, High Hazard 16mm to 50mm Diameter Meter for Internal Installation |
| WM-210.04 | Piping for ICI, High Hazard 10mm to 250mm Diameter Meter for Internal Installation |
| WM-211.01 | Standard Remote Installation for 16-25mm Diameter Meters |
| WM-211.02 | Alterations of Existing 16-25mm Diameter Piping Prior to Meter Installation |
| WM-211.03 | Piping for Residential 16mm to 50mm Diameter Meter for Internal Installation |
| WM-211.04 | Meter Pipe Spacer Installation |
| WM-211.05 | Satellite Water Meter Installation for 16mm to 25mm Diameter Services |

New Home Residential Meters

This type of Water Meter is included as part of the Building Department Permit Process.

New Non-Residential and Multi-Residential Meters

| Permit Name | Applicable To | Where to Apply | Issued By |
|---------------------------------|---|------------------------------|--|
| Water Meter Permit (L17 Permit) | Non-Residential Property / Multi-Residential Property: new or replacement issued at the same time as the Water Permit | In person at service counter | Growth Management Division, City Hall, 71 Main St W, 6th Floor |

Permit Requirements:

- Noted on the Site Servicing Plan that is reviewed by the Development Approvals section.

Water Meter By-Pass Valve Assembly

For Service Lines 50mm (2") and over, Non-Residential and Multi-Residential Properties with buildings over three stories require a Water Meter By-Pass Valve Assembly to be installed. The specifications for the installation of the Water Meter By-Pass Assembly can be found in the drawings on the City's website:

Construction and Material Specifications Manual

| Drawing Number | Description |
|----------------|--|
| WM-210.01 | Piping for Multi-Unit Residential (3 Storeys and above) or ICI Moderate Hazard 16mm to 50mm Diameter Meter for Internal Installation |
| WM-210.02 | Piping for Multi-Unit Residential (3 Stores and above) or ICI Moderate Hazard 100mm to 250mm Diameter Meters for Internal Installation |
| WM-210.03 | Piping for ICI, High Hazard 16mm to 50mm Diameter Meter for Internal Installation |
| WM-210.04 | Piping for ICI, High Hazard 10mm to 250mm Diameter Meter for Internal Installation |

| | |
|-----------|--|
| WM-234.01 | Piping and Chamber for Multi-Unit Residential 100mm to 250mm Diameter Meter Installation (1800mm X 2400mm/3000mm/3500mm Precast Meter Chambers) *(Size 24" x 36") |
| WM-234.02 | Piping and Chamber for Multi-Unit Residential (3 Storeys and Above) or ICI Moderate Hazard 100mm to 250mm Diameter Meter Installation (1800 X 2400mm and 1800mm X 3000mm Precast Meter Chambers) *(Size 24" x 36") |
| WM-234.03 | Piping and Chamber for ICI, High Hazard 100mm to 250mm Diameter Meter Installation (1800mm X 2400mm and 1800mm X 3000mm Precast Meter Chambers) *(Size 24" x 36") |

Water Meter Chambers

Standard drawings related to Water Meter Chambers can be found on the City's website:

Construction and Material Specifications Manual

| Drawing Number | Description |
|----------------|--|
| WM-208 | Remote Receptacle Installation for Meter Chambers |
| WM-209.01 | Piping and Chamber for Residential 16mm to 50mm Diameter Meter Installation |
| WM-209.02 | Piping and Chamber for Multi-Unit Residential (3 Storeys and Above) or ICI Moderate Hazard 16mm to 50mm Diameter Meter Installation |
| WM-209.03 | Piping and Chamber for ICI High Hazard 16mm to 50mm Diameter Meter Installation |
| WM-234.01 | Piping and Chamber for Multi-Unit Residential 100mm to 250mm Diameter Meter Installation (1800mm X 2400mm/3000mm/3500mm Precast Meter Chambers) |
| WM-234.02 | Piping and Chamber for Multi-Unit Residential (3 Storeys and Above) or ICI Moderate Hazard 100mm to 250mm Diameter Meter Installation (1800 X 2400mm and 1800mm X 3000mm Precast Meter Chambers) |

WM-234.03

Piping and Chamber for ICI, High Hazard 100mm to 250mm Diameter Meter Installation (1800mm X 2400mm and 1800mm X 3000mm Precast Meter Chambers)

Maintenance of Water Meter Chambers

Water Meter Chambers must be maintained in good condition with the frame and cover in good working order. The condition of the concrete must be sound. The Water Meter Chamber must be clear of any debris, mud or water and the access ladder must be in working order.

Submeters

Submeter requests can be submitted to meteroperations@hamilton.ca using the Submeter Application Form. Requests will be reviewed by Customer Service and Community Outreach, Meter Operations staff.

Note: A Building Permit is required for plumbing work inside buildings. The Building Permit Process can be found on the City's website:

Building Permit Process

A Submeter General Information Sheet is currently under development by the Hamilton Water, Customer Service and Community Outreach Section and will be available once complete.

Standard drawings related to the installation of Submeters can be found on the City's website:

Construction and Material Specifications Manual

| Drawing Number | Description |
|----------------|--|
| WM-211.05 | Submeter Installation for 16mm to 25mm Diameter Services |

Upsizing or Downsizing a Water Meter

Requests to upsize or downsize a Water Meter can be submitted to meteroperations@hamilton.ca using the Upsizing or Downsizing a Water Meter Request Form. Requests will be reviewed by Customer Service and Community Outreach, Meter Operations staff.

Note: A Building Permit is required for plumbing work inside of buildings. The Building Permit Process can be found on the City's website:

Building Permit Process

Large Water Meters

A Large Water Meter Responsibility and Maintenance Information document is currently under development by the Hamilton Water, Customer Service and Community Outreach Section and will be available once complete.

Relocating a Water Meter

Requests to relocate a Water Meter can be submitted to meteroperations@hamilton.ca using the Moving a Water Meter Request Form. Requests will be reviewed by Hamilton Water staff.

Note: A building permit is required for plumbing work inside of buildings. The Building Permit Process can be found on the City's website:

Building Permit Process

| Permit Name | Applicable To | Where to Apply | Issued By |
|----------------------------------|----------------------|---|---|
| Water Service Permit (R9 Permit) | Residential Property | https://www.hamilton.ca/home-property-and-development/building-renovating/eplans-online-building-permit-application-process | Building Division, City Hall, 71 Main St W, 3rd floor |

Water Meter Testing

You may request for a Water Meter accuracy test be performed on your Water Meter. There is an applicable service fee for this test which varies with the size of the Water Meter. If the Water Meter is found to be registering more than 2% in error, the Property Owner is responsible for the cost of the test and the replacement cost of the Water Meter; otherwise the cost is covered by the City. The fee includes the removal of the existing Water Meter and installation of the replacement. The accuracy of a Water Meter shall be measured in accordance with AWWA Standards. Information regarding testing for Water Meter accuracy can be found on the City's website:

Water Meters

Water Billing

Water Rates

City water rates can be found on Alectra Utilities' website:

[Alectra Utilities](#)

Billing Policies

The City's billing policies can be found on Alectra Utilities' website:

[Alectra Utilities](#)

These policies include:

| Policy Number | Policy Name |
|---------------|---|
| PP-0004 | City of Hamilton Water and Wastewater/Storm Arrears Policy |
| PP-0005 | City of Hamilton Water Leak Adjustment Policy |
| PP-0011 | City of Hamilton Water and Wastewater/Storm Extraordinary Circumstance Bill Adjustment Policy |
| PP-0015 | Water and Wastewater / Storm Back-billing Policy |
| PP-0012 | City of Hamilton Water and Wastewater/Storm Billing Payment Arrangement Policy |

Backflow Prevention

Backflow prevention is required on all Non-Residential and Multi-Residential Properties over three stories in accordance with the Backflow Prevention By-law and Ontario Building Code. For more information respecting the Backflow Prevention Program, survey requirements and selection of devices, please refer to the City's website:

[Hamilton Backflow Prevention](#)

Fire Hydrants

Public Fire Hydrants

Standard drawings related to Public Fire Hydrants are available on the City's website:

Construction and Material Specifications Manual

| Drawing Number | Description |
|----------------|---------------------------------------|
| WM-203.01 | Hydrant Installation |
| WM-203.02 | Hydrant Installation using Anchor Tee |
| WM-203.03 | Relocation of Ditches at Hydrants |

Public Fire Hydrant Relocation Requests

Requests to relocate a Public Fire Hydrant can be made by filling out the Public Fire Hydrant Relocation Request Form. Requests are reviewed by City staff on a case by case basis to determine operational feasibility. For questions or to start the application process please contact the City's Customer Contact Centre at 905-546-CITY (2489).

Relocation of a Public Fire Hydrant is at the sole discretion of Hamilton Water and all costs associated with the move plus 33% (see the Water and Wastewater/ Storm User Fees and Charges By-law for the current year) will be billed to the requestor. This fee includes:

- a precondition survey of the trenching conditions (soil, rock, etc.);
- excavation and removal of the existing Public Fire Hydrant;
- cost to supply and install the new Public Fire Hydrant and appurtenances;
- temporary and permanent restoration; and
- all Permits, service charges and administrative fees.

Private Fire Hydrants

- Any modification to or relocation of a Private Fire Hydrant requires a Sewer/Water Permit issued by Growth Management.

| Permit Name | Applicable To | Where to Apply | Issued By |
|--------------------------------|--|--|--|
| Water/Sewer Permit (L6 Permit) | Non-Residential / Multi-Residential Property: new or replacement private and public side | In person at service counter (bonded contractor applies for Water/Sewer Permit and Road Excavation Permit) | Growth Management Division, City Hall, 71 Main St W, 6th Floor |

Permit Requirements:

- Engineering drawings must be approved;
- Engineering review fees paid; and
- Sewer/Water Permit approved and issued by General Manager.

Public Fire Hydrant Road Adapter Rental Agreement

Water use for short-term construction projects, movie/filming, etc. will primarily use an Adapter to provide temporary water usage at a specific location. Only an authorized City Water Distribution Operator or Inspector may connect and disconnect the Fire Hydrant Adapter/Road Adapter. Public Fire Hydrant/Road Adapter rental requests will be reviewed by the City. To initiate the process please contact hydrantadaptors@hamilton.ca to fill out an Adapter Rental Application Form.

A heated enclosure (hot box) shall be used and constructed in such a manner as to protect the Public Fire Hydrant and Adapters from freezing. Approval of the construction and use of the hot box is at the discretion of the Overall Responsible Operator (ORO) or designate. Consultation with Water Distribution and Wastewater Collection staff may be requested to aid with questions related to hot box construction.

The Adapter remains the property of the City. The City reserves the right to take possession of the Adapter at any time for any reason.

Public Water Fill Stations and User Fees

The City has two Bulk Water Filling Stations. They are located at 1422 Cormorant Road, Ancaster and 70 Dartnall Road, Hamilton. These stations are open 24 hours a day, 7 days a week unless otherwise posted. Typically, these stations are utilized by water hauler companies, farmers and those who require bulk water and have the proper equipment to access and store water. For more information on how to obtain a permit and to register for an account, please visit the City's website:

[Bulk Water Filling](#)



Hamilton

**APPENDIX A
TO WATER WORKS
BY-LAW RESOURCE
MANUAL**

-

RESOURCE LINKS

Resource Links

The following is a list of website addresses linked throughout the Water Works By-law Resource Manual. Links are in order as they first appear in the Manual:

| Link in Manual | Referenced Website Address |
|---|---|
| Safe Drinking Water Act | https://www.ontario.ca/laws/statute/02s32 |
| Building Code Act, 1992, Ontario Regulation 332/12 | https://www.ontario.ca/laws/statute/92b23 |
| Municipal Act, 2001 | https://www.ontario.ca/laws/statute/01m25 |
| Municipal Freedom of Information and Protection of Privacy Act | https://www.ontario.ca/laws/statute/90m56 |
| Occupational Health and Safety Act, R.S.O. 1990, c.O.1 | https://www.ontario.ca/laws/statute/90o01 |
| Ontario Fire Code Regulation, Ontario Regulation 388/97 | https://www.ontario.ca/laws/regulation/970388 |
| Ontario Regulation 170/03 under the Safe Drinking Water Act, 2002, S.O. 2002, c. 32 | https://www.ontario.ca/laws/regulation/030170 |
| Planning Act, R.S.O. 1990, c. P.13 | https://www.ontario.ca/laws/statute/90p13 |
| The Watermain Disinfection Procedure | https://www.ontario.ca/page/water-main-disinfection-procedure |
| National Fire Protection Association Standards | https://www.nfpa.org/Codes-and-Standards/All-Codes-and-Standards/List-of-Codes-and-Standards |

| Link in Manual | Referenced Website Address |
|--|---|
| Building Code Act and Ontario Regulation 322/12 | https://www.ontario.ca/laws/regulation/120332 |
| AWWA Standards | https://www.awwa.org/Publications/Standards |
| City of Hamilton By-laws | https://www.hamilton.ca/city-council/by-laws-enforcement/search-by-laws |
| American Water Works Association | https://www.awwa.org/ |
| Ministry of Environment, Conservation and Parks | https://www.ontario.ca/page/ministry-environment-conservation-parks |
| Drinking Water Quality Management System | https://www.hamilton.ca/home-neighbourhood/water-wastewater-stormwater/water-treatment-distribution/drinking-water-quality |
| Safe Drinking Water Act | https://www.ontario.ca/laws/regulation/030170 |
| Construction and Material Specifications Manual | https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/construction-and-material |
| Standards and Approved Products Listing and Guidelines | https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/standards-and-approved-products |
| Construction and Material Specifications | https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/construction-and-material |
| Disconnection of Services Form | https://www.hamilton.ca/sites/default/files/2023-02/buildingpermit-disconnection-services-form-2023.pdf |
| Sewer and Water Permit Process and Design Requirements | https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/sewer-and-water-permit-process |
| Ontario Building Code | https://www.ontario.ca/laws/regulation/120332 |
| Sizing of Water Service Pipe Form: One Dwelling Unit | https://www.hamilton.ca/sites/default/files/2022-11/buildingpermit-eplans-sizing-water-pipe-one-dwelling-fillable.pdf |

| Link in Manual | Referenced Website Address |
|--|---|
| Sizing of Water Service Pipe Form: More than One Dwelling Unit | https://www.hamilton.ca/sites/default/files/2022-11/buildingpermit-eplans-sizing-water-pipe-more-than-one-dwelling-fillable.pdf |
| Water Service Line | https://www.hamilton.ca/home-neighbourhood/house-home/home-water-services/water-service-line-replacement |
| AWWA M22 – Sizing Water Service Lines and Meters | https://engage.awwa.org/PersonifyEbusiness/Bookstore/Product-Details/productId/44766350 |
| Building Permit Process | https://www.hamilton.ca/build-invest-grow/construction-renovation/residential-building-renovation/apply-building-permit |
| Water Meters | https://www.hamilton.ca/home-neighbourhood/house-home/home-water-services/water-meters |
| Alectra Utilities | https://alectrautilities.com/hamilton-water-and-wastewaterstormwater-rates-2023 |
| Hamilton Backflow Prevention | https://www.hamilton.ca/build-invest-grow/operating-business/commercial-water-sewer/backflow-prevention-program |
| Bulk Water Filling | https://www.hamilton.ca/build-invest-grow/operating-business/commercial-water-sewer/water-hauler |