

## Water Connection Permitting Procedure

This document outlines the process for obtaining a water connection permit for buildings that are not one or two-family dwellings or laneway houses. A different permitting process exists for a one or two-family dwelling, or a laneway house (visit <https://vancouver.ca/home-property-development/one-and-two-family-dwellings-and-laneway-housing.aspx> for more information).

### ***Before you apply for a Water Connection Permit. . .***

1. Apply for a development permit at the Development and Building Services Centre (Ground floor, 515 West 10<sup>th</sup> Avenue, Vancouver BC). As part of your development permit review, you will receive initial site-specific feedback for servicing your lot (visit <https://vancouver.ca/home-property-development/building-permit.aspx> for more information).
2. Engage a mechanical engineer to design your water connection and water meter station. Generally, the Waterworks Design Branch Project Coordinator will engage directly with your mechanical engineer. Provide your mechanical engineer with this information package and the above-noted development permit response letter that has site-specific feedback for your lot.

*Note: Finalized submittals must be signed and sealed by an engineer registered with Engineers and Geoscientists British Columbia (EGBC).*

### **General Water Servicing Requirements:**

1. Each legal lot shall have one water service and one water meter installed. Water may not be conveyed across property lines without the written permission from the City Engineer.
2. All strata and air space titles, or infill type developments are not permitted to have a separate water service, but private metering is permitted downstream of the City water meter.
3. Large developments may require an additional service if the City Engineer deems it necessary to properly serve the development.
4. All existing servicing will be discontinued and disconnected when the new water services are installed. If construction water is required, you must inform your Water Design Branch Project Coordinator at the time of application as special servicing arrangements are required.
5. The domestic water service and water meter locations must conform to current City of Vancouver Waterworks Standards. It is the responsibility of the applicant to request a service size that will be adequate for the private domestic and fire protection systems.
6. Service pipe invert and depth of cover is dependent upon the depth of the City's water main and existing utilities in the area. At the point of connection between the "private service pipe" and the "City service pipe", the depth of cover is typically between 0.8 and 1.5 m. It is the responsibility of the customer to connect to the City's service pipe regardless of the depth of the service.

7. For meters sited within a mechanical room, the meter should be located on ground level or the first level of underground parking. 24-hour direct access to the water meter is required. If keys are required for City staff to access the meter in a mechanical room, building occupancy will not be granted until it is confirmed that the meter is installed, and keys are received by Meter Shop staff.
8. Refer to the [Water Works Bylaw 4848](#) or contact 3-1-1 for more detailed information and the latest fee schedules.

## ***Applying for a Water Connection Permit***

### **Step 1 - Permit Initiation and Site Plan Submission:**

To initiate a Water Connection Permit, apply online at: [www.vancouver.ca/permits/apply](http://www.vancouver.ca/permits/apply)

1. A preliminary site servicing plan ("Site Plan") will be required when submitting the application
2. Mechanical Drawing for the water meter will be optional when submitting the application
3. For development sites subject to a rezoning application: Required Fire Flow Calculations specific to your development in accordance with the latest version of the Fire Underwriter's Survey Publication *Water Supply for Public Fire Protection* ("FUS Calculations") will be required when submitting. **FUS Calculations must be signed and sealed by an engineer registered with EGBC.**

#### *Site Plan Requirements:*

The Site Plan is an engineering drawing that indicates the desired location(s) of the water service(s) for your development. Requirements for the Site Plan are shown in the sample site plan in this package (Appendix A). Ensure all the required information is detailed before submitting the drawing. The Site Plan will be reviewed to determine whether the proposed location is acceptable. Continual dialogue with the developer's engineer to revise the site plan may be required. When requested, the **final** version of this drawing must be signed and sealed by an engineer registered with EGBC.

When proposing a location for your water service, note that services shall not be placed:

1. Within proposed driveways,
2. In line with proposed building entryways,
3. In conflict with other existing or proposed utilities,
4. In conflict with existing or proposed lamp standards or utility poles,
5. Within 2.0m of the dripline of any existing (that will remain) or proposed trees.

#### *FUS Calculations:*

The FUS Calculations for the development's required fire flow must be signed and sealed by a qualified engineer registered with EGBC. The submission should indicate all inputs and assumptions and show each step in the calculation.

### **Step 2 - Submitting Servicing Configuration and Meter Siting Drawing**

Once the overall location and configuration of water services is confirmed with the Water Design Branch Project Coordinator, the developer's engineer will submit a drawing showing the site-specific water service configuration and water meter details.

Typical servicing configurations and meter siting arrangements are shown in Appendix B. The drawing submitted to the City should be appropriate for, and specific to, your site.

Note the following when designing your service configuration and meter placement:

1. Ensure all required dimensions (including chamber dimensions and distances between valves) and pipe sizing are shown,
2. Show details of the meter installation if the meter is sited on private property, whether in a chamber or in the mechanical room,
3. Refer to Waterworks Bylaw 4848 for costs of placing the meter on City property vs private property
4. Determine whether a flow-through sprinkler system is being implemented. Indicate this on the drawing,
5. Determine whether a double check valve assembly is required,
6. A meter bypass is required for meters larger than 50mm, and is recommended for all meter installations,
7. Show the peak domestic demand in USGPM on the drawing to inform meter sizing. Meters are sized by the Waterworks Design Branch Connection Coordinator,
8. Strainers are not permitted upstream or downstream of the water meter.

Once all Waterworks Design Branch comments for the Site Plan and Service Configuration Drawing are addressed, the developer's engineer will submit final signed and sealed copies of both drawings.

### Step 3 - Pay Fees and Obtain Your Permit

Once all submittals are accepted by the Waterworks Branch, you will receive an email indicating your permit is ready to be issued. Pay the fees either online by credit card [www.vancouver.ca/permits/apply](http://www.vancouver.ca/permits/apply) or in person by credit card, certified cheque or money order at Engineering Client Services (5<sup>th</sup> Floor, 507 West Broadway) and your permit will be issued and available to download.

***Note: Information on how to coordinate the installation of your water service is detailed on your Water Connection Permit.***

## **Appendix A – Sample Site Plan**

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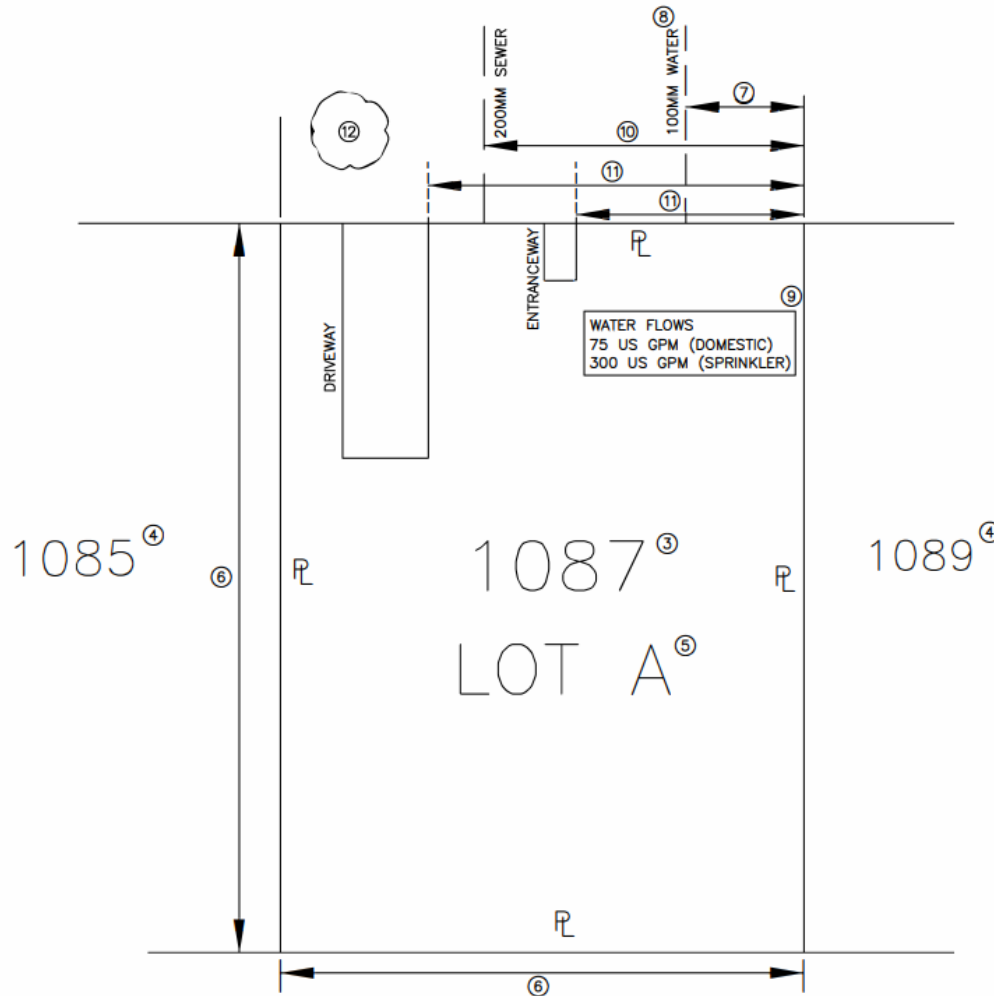


PLEASE LABEL THE FOLLOWING ON THE DRAWING:

- ① ALL STREET NAMES, CLEARLY
- ② NORTH ARROW
- ③ SITE ADDRESS
- ④ PROPERTY ADDRESSES OF ADJACENT LOTS
- ⑤ SITE LOT NUMBER
- ⑥ LOT DIMENSIONS (M)
- ⑦ LOCATION OF PROPOSED WATER SERVICE(S) WITH OFFSET MEASUREMENT\*
- ⑧ SIZE (MM) OF PROPOSED WATER SERVICE
- ⑨ PEAK DOMESTIC WATER DEMAND AND NFPA SPRINKLER DEMAND (USGPM)
- ⑩ LOCATION OF EXISTING AND PROPOSED SEWER SERVICES, WITH OFFSET MEASUREMENT(S)\*
- ⑪ LOCATION OF EXISTING OR PROPOSED DRIVEWAYS AND ENTRANCEWAYS, WITH OFFSET MEASUREMENT(S)\*
- ⑫ EXISTING (TO BE RETAINED) AND PROPOSED TREES

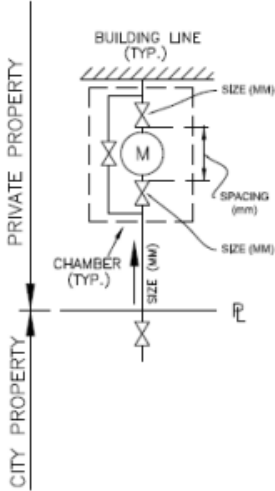
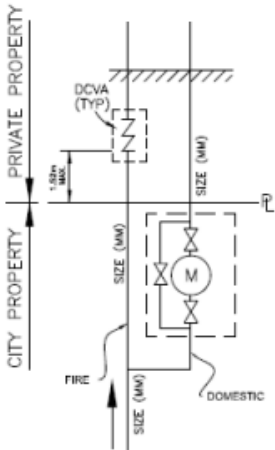
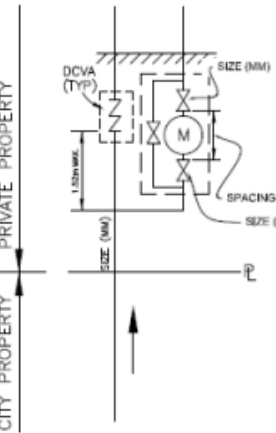
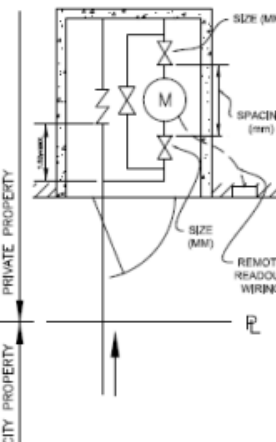
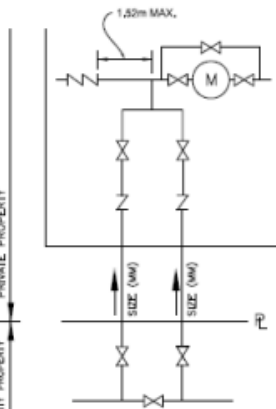
\*ALL OFFSET DIMENSIONS SHOULD BE TAKEN FROM THE SAME PL

NOTE: THE FINAL DESIGN MUST BE SIGNED AND SEALED BY AN ENGINEER REGISTERED WITH ENGINEERS AND GEOSCIENTISTS BC



Sample Water Connection Application Site Plan

## **Appendix B – Typical Servicing Configurations and Meter Siting Arrangements**

Type	Metered Service	Tapped on City Side	Dual Service - Outside Meter	Dual Service - Inside Meter	Interconnected Services
<p><b>Example</b></p>			<p>(Meter in Chamber on Private Side)</p> 		
<p><b>Description</b></p>	<ul style="list-style-type: none"> <li>No fire suppression required.</li> <li>Meter can be: <ul style="list-style-type: none"> <li>In a chamber on City property</li> <li>In a chamber on private property (shown above)</li> <li>In a mechanical room inside building. (This requires keys be provided to the City for 24/7 access)</li> </ul> </li> <li>Meter bypass is required for meters larger than 2in. (or 50mm) and recommended for all meter installations.</li> </ul>	<ul style="list-style-type: none"> <li>Meter on city side of property line.</li> <li>DCVA maximum 1.52m from property line.</li> <li>If fire suppression is to be treated as NFPA-13D, check Plumbing Code requirements for back flow prevention.</li> </ul>	<ul style="list-style-type: none"> <li>Meter on private side of property line.</li> <li>DCVA maximum 1.52m from the tee for the domestic line.</li> <li>Meter bypass is required for meters larger than 2in. (or 50mm) and recommended for all meter installations.</li> <li>If fire suppression is to be treated as NFPA-13D, check Plumbing Code requirements for back flow prevention.</li> </ul>	<ul style="list-style-type: none"> <li>Meter in mechanical room on private side of property line.</li> <li>DCVA maximum 1.52m from the tee for the domestic line.</li> <li>Meter bypass is required for meters larger than 2in. (or 50mm) and recommended for all meter installations.</li> <li>If fire suppression is to be treated as NFPA-13D, check Plumbing Code requirements for back flow prevention.</li> <li>Please note there are minimum space requirements for mechanical rooms.</li> <li>Remote readout wiring (18 gauge - 6 wire run in conduit) to address face of building (run length not to exceed 100 ft) installed by contractor.</li> </ul>	<ul style="list-style-type: none"> <li>For developments that have floor areas greater than 40,000 sqft or more than 30 dwelling units.</li> <li>Two equally sized services.</li> <li>Meter on private property (typically inside the mechanical room).</li> <li>DCVA maximum 1.52m from the tee for the domestic line.</li> </ul>