

# Water and Sewer Connections Guidelines

**July 2021**

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## 1. Purpose of the Service Guidelines

The objective of the Water and Sewer Connections Guidelines is to provide assistance to building owners, developers, engineering consultants, architects, plumbing contractors and building contractors with the standards and requirements related to new water and sewer service connections.

## 2. New Service Connections

It is strongly recommended that EPCOR construct the public portion of the water and sewer services first to avoid delays and additional costs.

All water and sewer service connections must comply with:

Section 19.3 & 19.4 of City of Edmonton [Design and Construction Standards](https://www.edmonton.ca/city_government/documents/Volume_3_Drainage_.pdf), Volume 3, Drainage.  
[https://www.edmonton.ca/city\\_government/documents/Volume\\_3\\_Drainage\\_.pdf](https://www.edmonton.ca/city_government/documents/Volume_3_Drainage_.pdf)

For service connections involving new water services in a common trench with a sewer line, refer to Section 02514 of the City of Edmonton [Design and Construction Standards](https://www.edmonton.ca/city_government/documents/Design_and_Construction_Standards_Volume_4_Water.pdf), Volume 4, Water.  
[https://www.edmonton.ca/city\\_government/documents/Design\\_and\\_Construction\\_Standards\\_Volume\\_4\\_Water.pdf](https://www.edmonton.ca/city_government/documents/Design_and_Construction_Standards_Volume_4_Water.pdf)

Private water and sewer service lines must comply with the requirements of the Alberta Safety Codes Act and the National Plumbing Code of Canada. It is the applicant's responsibility to ensure that the service pipe sizes are sufficient for their intended purpose.

### A. Application for Service Connection:

You may apply for a new water and sewer service or connection to an existing service by contacting EPCOR at:

EPCOR Infill Water and  
Sewer Servicing (IWASS)

Phone: 780-496-5444

Email: [wass.drainage@epcor.com](mailto:wass.drainage@epcor.com)

For more information, check the EPCOR website at:

[Service Connections For New Developments](https://www.epcor.com/products-services/drainage/service-for-new-developments/Documents/sewer-connections-guidelines.pdf)

<https://www.epcor.com/products-services/drainage/service-for-new-developments/Documents/sewer-connections-guidelines.pdf>

Construction scheduling of a new EPCOR service connection will not begin until application and payment for the service is completed and until EPCOR is satisfied that the customer has complied with all the conditions outlined in both the Service Standards and the Terms and Conditions.

## **B. Single Family and Semi-Detached Servicing Procedures:**

**It is strongly recommended that EPCOR construct the public portion of the water and sewer services first to avoid delays and additional costs.**

The applicant must provide the size, location, and sewer service invert elevation and depth (at property line) for the service connections required for the site with the address and legal description of the property, on a servicing plan where applicable, directly to EPCOR's Infill Water and Sewer Servicing section at [wass.drainage@epcor.com](mailto:wass.drainage@epcor.com).

It is the owner's/developer's responsibility to obtain the proposed or existing sewer service invert elevations at the property line prior to commencing building construction to ensure that the bottom of the building foundations are above the available street sewer. This will allow the private sewer line to drain into EPCOR's sewer service by gravity.

Contact the EPCOR's Infill Water and Sewer Servicing (IWASS) section at 780-496-5444 or [wass.drainage@epcor.com](mailto:wass.drainage@epcor.com) to verify the existing water, sanitary, storm, and foundation servicing for your development.

If new water and/or sewer services are required for your development, you must provide IWASS with a servicing plan and a copy of a utility locate sheet from Alberta One Call identifying existing utilities in the area at the time of application. In addition to the location of existing utilities within City property, the servicing plan must also include (but is not limited to) the following:

- The location of all proposed water and/or sewer services required for your development, along with the distance to the nearest property line of the lot being serviced
- The required depth (3.0m being the standard depth if mainline depth allows) or invert elevation at property line, supplied by the developer / owner in geodetic datum, for all

proposed sewer services

- Ground elevations in geodetic datum at the point of service at property line
- The servicing plan must demonstrate acceptable lateral separation between all proposed water and/or sewer services and the other existing utilities which may be affected, including power poles, street lights, pedestals and gas lines
- The location of all City owned trees adjacent to your development

Note: if any of the above information has not been received, service payment cannot be accepted and construction scheduling will not proceed.

New services proposed within 5m of a city tree will require approval from the City of Edmonton Building and Parks Operations Branch. Provide documentation that approval has been granted

For more information, contact [citytrees@edmonton.ca](mailto:citytrees@edmonton.ca) or visit:

[https://www.edmonton.ca/residential\\_neighbourhoods/gardens\\_lawns\\_trees/trees-construction.aspx](https://www.edmonton.ca/residential_neighbourhoods/gardens_lawns_trees/trees-construction.aspx).

EPCOR IWASS will:

- Review the availability of service to the sewer mains in abutting streets or lanes
- Review the availability of service to the water mains in abutting streets or lanes if the water service is in the same trench as the sewer service
- Review conflicts with other utilities (including trees) in relation to the property line locations and elevations
- Calculate or estimate a construction charge (if required)

## C. Commercial, Industrial, Institutional and Multi-Family Servicing Procedures

**It is strongly recommended that EPCOR construct the public portion of the water and sewer services first to avoid delays and additional costs**

The applicant must provide: a site mechanical and a lot grading plan in PDF format directly to EPCOR, as well as the other details listed in the EPCOR IWASS Plan Submission checklist (see below). These plans of the on-site private drainage system shall include (but are not limited to):

- Signature and seal of a professional engineer of Alberta;

- Address and legal description of the parcel(s) of land to be serviced;
- Size, location, and invert elevation for each of the new sewer services at the property line;
- Indication of existing sewer services to be reused or to be abandoned;
- Design and calculations for Storm Water Management (SWM), if applicable.

The completed EPCOR IWASS Plan Submission checklist shall be included with the plan.

[EPCOR IWASS Plan Submission Checklist:](https://www.epcor.com/products-services/drainage/service-for-new-developments/Documents/drainage-plan-submissin%20checklist.pdf)

<https://www.epcor.com/products-services/drainage/service-for-new-developments/Documents/drainage-plan-submissin%20checklist.pdf>

EPCOR IWASS will:

- Review the plans submitted
- Request revision and resubmission of the plans as required until all requirements are met
- Send an acceptance notification outlining specific costs and servicing conditions along with an accepted site plan.

#### **D. General Requirements for Service Connections**

- It is the owner's/ developer's responsibility to make a request to EPCOR Drainage Services to install new sewer services or modify existing services, at the owner's expense
- It is the applicant's responsibility to determine the appropriate sewer service size for the proposed development
- Construction charges for all water and sewer service connections will be determined by EPCOR Infill Water and Sewer Servicing (IWASS).
- In order to avoid additional servicing costs and/or delays, EPCOR shall construct the public portion of the services first. The private portion of the services shall be connected to the service stubs left at the property line by EPCOR. If an applicant does not adhere to this requirement, EPCOR may refuse to make the final connection(s) at property line or may with permission agree to connect based on the following conditions:
  - Private service stub(s) must be extended to property line and clearly marked with 2x4 stake(s)
  - The private service line must be installed in the horizontally of the alignments agreed to at the time of application to a maximum of 0.5m deviation
  - Sewer services will be constructed to a maximum depth of 3.0m at the property line if the mainline in the public road right of way or URW will allow
  - All sewer inverts and / or depths at the property line of the lot being serviced must

not vary from the accepted elevations / depths at the time of application

- The private drainage system must not have any standing water at the time of EPCOR construction. Prior to EPCOR mobilization, the applicant will be responsible for pumping the private system including all costs and resulting delays.
  - Work area must be clear of any hoarding, trailers, refuse containers/bins, fencing. EPCOR construction crews will not mobilize until work area is clear.
- 
- Only EPCOR crews and their authorized contractors may install EPCOR water and sewer service lines within public property/utility right-of-way.
  - The EPCOR water and sewer service line will be constructed to the property line at the location agreed to during the application process
  - The applicant shall be responsible for all costs of connecting the private service to EPCOR's service line. This will include all costs which may arise as a result of the actual location of the service being different from the approved location of the service
  - If an applicant requests a new water and/or sewer service to a property which does not abut an existing main, EPCOR may refuse to construct the new service or may approve the service application with conditions. Without limitation, the conditions may include:
    - The applicant shall pay all costs to extend the existing main;
    - The applicant shall pay all costs of construction, repair, and maintenance of the service line, notwithstanding anything contrary in the Terms and Conditions;
    - The Service shall meet specifications determined by EPCOR;
  - Construction charges will be determined by EPCOR IWASS
  - Each self-contained unit of a semi-detached development must have a separate EPCOR water and sewer service connection directly off an EPCOR main
  - A water and/or sewer service within private property cannot be used to service another separately titled property, regardless of who owns the properties
  - On the City right-of-way, services must adhere to the City of Edmonton Design and Construction Standards, including minimum clearances to other utilities
  - Minimum of 2% slope for sanitary service and 1% slope for storm service from the property line to the crown of the public sewer mains with at least 2.4m in depth (cover) at the property line.
  - Any party proposing construction involving ground disturbance to a depth exceeding 2.0m within 5.0m of the boundary of lands or Right-of-Way (ROW) containing EWSI facilities, is required to enter into a Facility Proximity Agreement with EWSI, prior to performing the ground disturbance. Crossing and Proximity Agreements can be requested through the EPCOR Water Land Admin group:

780-412-3514/780-969-8781

Waterlandadmin@epcor.com

- If the private service lines are installed in a common trench, the maximum width of common trench is to be no greater than 1m at the property line of the lot being serviced.
- Where an excavation by the applicant's contractor creates disturbed ground at or near the connection to EPCOR Drainage's service at the property line, the applicant shall make adequate provision to prevent damage to the EPCOR sewer service line due to settlement of the surrounding soil or private structure.
- Services identified by EPCOR's IWASS section as being abandoned may not be used for a development.
- Any existing sewer service not being used for a development shall be cut and capped by the applicant at the property line and shall be considered abandoned by EPCOR and will not be utilized for future use. The applicant may contact EPCOR's IWASS section at 780-496-5444 or wass.drainage@epcor.com for more information.

## E. Payment for Service Connection

Please note that GST is not applicable to new service connections. Construction charges and any other specific agreement or offsite charges are **subject to revision in 30 days** and must be paid by Electronic Funds Transfer (EFT) or **cheque only** prior to scheduling and construction. In the event that 30 days has expired, contact our office at 780 496-5444 prior to sending payment, in order to confirm any cost changes which may apply. Cheque payments sent in the mail should be addressed to EPCOR Infill Water and Sewer Servicing, 26th floor MNP Tower, 10235 – 101 Street, Edmonton AB, T5J 3G1.

## 3. Water and Sewer Service to an Unserviced Building on a Serviced Lot

A customer may, at the customer's expense, provide water and/or sewer services to a new or previously unserviced building (e.g. garage, workshop) on a serviced lot in one of two ways: a new service connection or the extension of the existing private service line.

### A. New Service Connection

The customer may apply for a new service connection to an existing EPCOR main as described in Section 2 New Service Connections.



## B. Extension of Existing Service

The customer may extend an existing private service line to provide service to a new building. Private service lines must comply with the Alberta Safety Codes Act and the National Plumbing Code of Canada.

## 4. Private Service Repairs

The customer is responsible to maintain and repair the private service lines

## 5. Mainline Extensions / Modifications

Extension or modification to EWSI's existing drainage infrastructure can be reviewed by EPCOR or through a Servicing Agreement with the City of Edmonton. At no time is any contractor allowed to cut, connect, or change EPCOR Drainage infrastructure without signed EPCOR approved drawings and permission.

## 6. Water and Sewer Guidelines – Additional Information

### A. Single Family & Semi-Detached Developments

**It is strongly recommended that EPCOR construct the public portion of the water and sewer services first to avoid delays and additional costs**

1. If private is first to install, they need to install a 2x4 or 2x6 in front of the location of the service protruding out of the ground and visible at ground level
2. No dirt pile within 1m of any proposed excavation or location of proposed service
3. No material or bin directly behind location of service connection.
4. Any bins or material in street at least 2m away from location of service connection
5. A plug on any private service installed in the ground
6. The proposed service to be min 1.8M away from any gas service line
7. If a service is moved after initial plans to contact and ensure EPCOR is aware of new location.
8. No digging on city property, private service must be installed to property line only
9. Ensure no garage pad is installed as per application agreement

### B. Foundation and Storm Services

As of 2006, new single family and semi-detached developments are required to provide a storm or foundation service (third pipe in addition to water and sanitary services) to the property line at the

owner's/developer's expense.

The foundation service is used for collecting weeping tile (via sump pump or direct connection) discharge of sub-surface drainage around the foundation of the home.

The storm service, in addition to conveying the subsurface drainage, also collects roof water so that it does not spill on grade. This method of servicing has reduced problems associated with icing and related safety hazards through the winter months.

There are typically two methods of weeping tile servicing for newly developed residential properties in mature (in-fill) areas.

1. Install a third pipe on private property at the owner's expense and connect to an existing storm or foundation service at the property line.
2. Install a third pipe on private property at the owner's expense and connect to a new storm or foundation service that is constructed from the property line to an EPCOR main by EPCOR Drainage Construction crews also at the owner's expense.

There are also alternatives for resolution of this problem considering all of the financial, technical, and legal factors. The City proposes one solution which will eliminate potential problems with discharges from the sump pump during the winter months.

The City of Edmonton Development and Zoning Services is prepared to allow discharge of the foundation drainage into the private sanitary system during winter months only, in accordance with Section 9(2) of the City of Edmonton Drainage Bylaw No. 18093.

To obtain this permit or information on this permit, contact:

City of Edmonton Lot Grading Section, Development and Zoning Services

Phone: 780-496-5576

Email: [lot.grading@edmonton.ca](mailto:lot.grading@edmonton.ca)

<https://www.epcor.com/products-services/drainage/service-connections-new-developments/Pages/sewer-design-standards-guidelines.aspx>

### C. Minimum Requirements

- Minimum of 2% slope for sanitary service and 1% slope for storm service from the property line to the crown of the public sewer mains with at least 2.4m in depth (cover) at the property line.
- Water Services must be between 2.6m and 2.75m below finished grade at the property line.
- Private on-site water and sewer systems must not cross from one separately titled property to another separately titled property regardless of who owns the properties.
- Private storm sewer systems are required by all commercial, industrial, institutional, and multi-family developments (3-plex and larger).

- All developments with outdoor loading docks, wash areas, or trash compactor areas must drain to the sanitary sewer system. Developments are restricted to draining a maximum of 250m<sup>2</sup> of the outdoor area to the sanitary system.
- Each new or existing storm and/or sanitary service being utilized for any commercial, retail, or industrial development, must have a suitable sampling manhole/flow monitoring point located on private property and within 3m of the property line. Exemptions are residential only properties, premises of religious assembly, community leagues, and elementary schools.
- Services entering the proposed property from the utility right-of-way must have minimum lateral separation of 3m from any power / telephone poles, vaults, transformers, and switching cubicles located on the utility right-of-way. A clearance of 2m is required from street catch basins, gas services lines, and other utilities.
- Any private water and / or sewer system, building, or structure which encroaches or crosses through an EPCOR easement, requires the approval of EPCOR.

#### D. General Notes

- If the services are installed in a common trench, the maximum width of the common trench is not greater than 1m at the property line of the lot being serviced
- The owner/contractor must dig and locate any existing water and sewer services at the property line in order to verify the location and determine the suitability as to the elevation and condition of pipe
- EPCOR Drainage Services must be notified of any conflicting information found in the field. Contact [wass.drainage@epcor.com](mailto:wass.drainage@epcor.com) or phone (780) 496-5444
- EPCOR cannot guarantee the locations, depths, or conditions of the water and sewer infrastructure, including services, within the utility right-of-way
- If the services are installed on private property prior to the EPCOR connections at the property line, the services must be installed within 0.5m horizontally of the alignments accepted at the time of application
- Failure to comply with the above conditions will result in extra construction charges being assessed for any changes required or EPCOR's services will be constructed at the property line to the exact locations and elevation accepted at the time of application
- It is the applicant's responsibility to notify EPCOR Drainage Services if there are any changes to the private site service alignments or elevations at property line. To determine if changes may be accommodated and/or additional charges apply, contact EPCOR Drainage Services prior to the start of construction for the EPCOR portion of the services

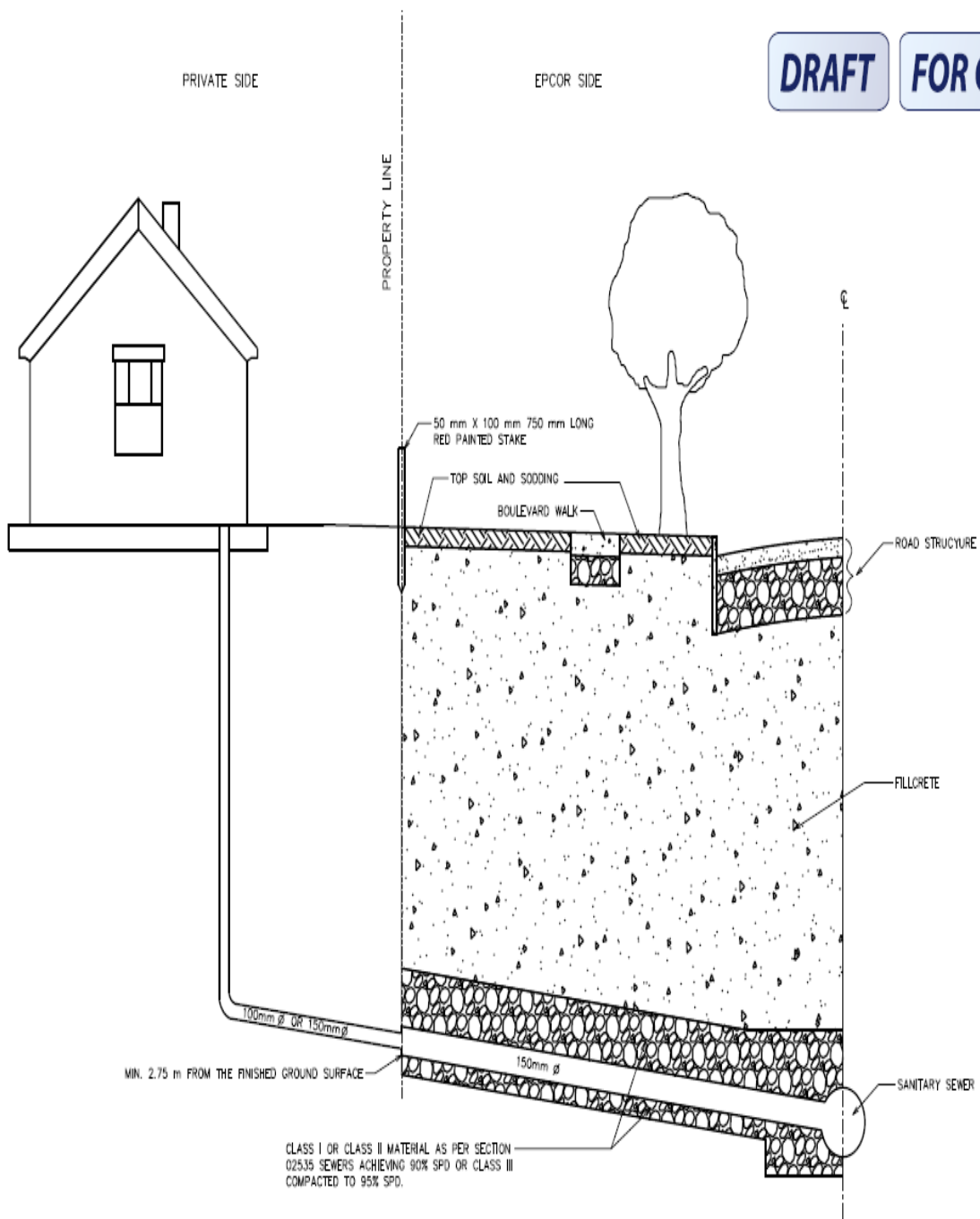
- Any unused sewer service(s) must be cut and capped at the property line by the owner/developer in order to prevent infiltration and soil from entering the public sewer system. The public portion of these services will be considered abandoned and not suitable for future use
- Lots zoned for semi-detached or multi-family residential land use, where construction of side by side units are anticipated, one sanitary sewer service shall be provided for each unit directly off EPCOR sewer mains
- Any existing lead (Pb) water service pipe to the property line does not meet current standards and cannot be re-used for new developments. Any existing lead water service must be abandoned back to the main by EPCOR Water. Contact our office at (780) 496-5444 for more information regarding the abandonment process

#### **E. If Private Portion is In First**

- Do not spool the Kitec (or any other water pipe) underground,
- Do not attach the Kitec to the board indicating where the service is
- The Storm/Sanitary “Wye” must be a minimum 1 meter inside private property and the service pipes at property line
- Bevel the private pipe stub out for easy connection
- Install a plug in the dwelling to not allow pipe to fill up with water at connection point
- Install water valve inside house to allow for testing of water service install
- Sewer services MUST NOT be deeper than 3.0m at property line
- Advise if black ABS water pipe used, AND/OR 1 meter of copper pipe MUST be installed prior to property line

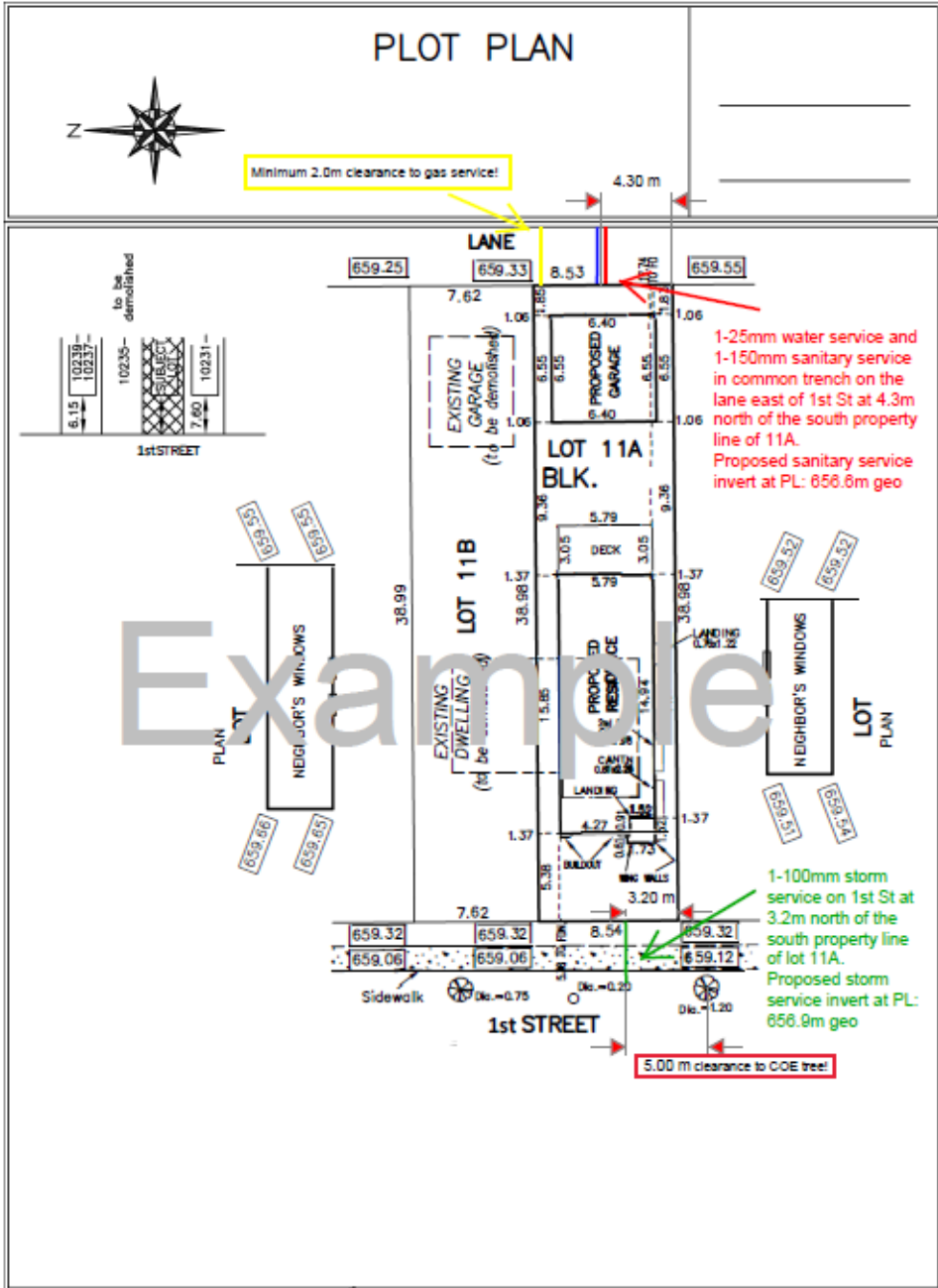
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**FOR COMMENT**



**TYPICAL BACKFILL FOR SANITARY SERVICE CONNECTION**

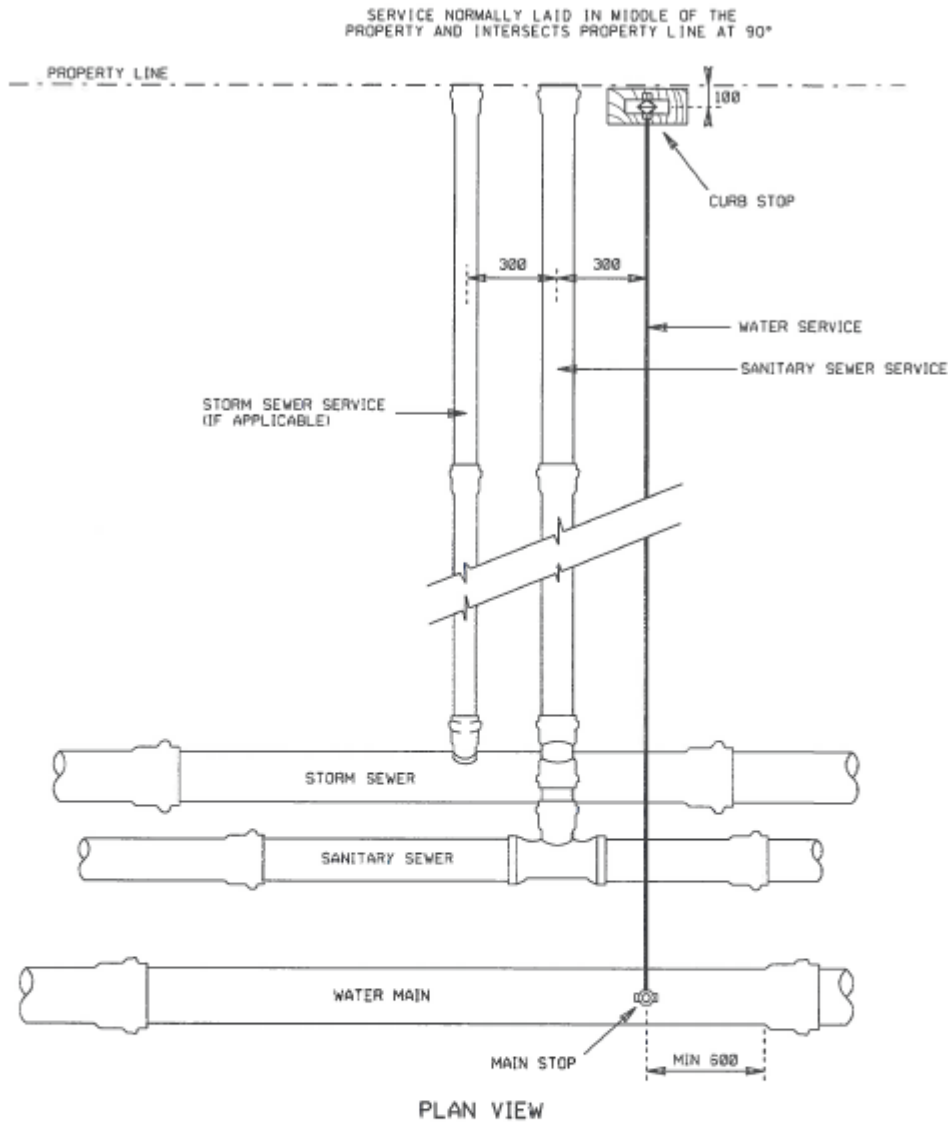
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LOT	BLK.	PLAN	SUBDIVISION	BUILDER OR OWNER
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			ADDRESS	EDMONTON
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<p>SANITARY SEWER INVERT (to be verified before finishing AT PROPERTY LINE = excavation for gravity drainage.)</p> <p>FINISHED FLOOR ELEVATION = 660.55</p> <p>FINISHED GRADE FRONT OF HOUSE = 659.60</p> <p>FINISHED GRADE BACK OF HOUSE = 660.05</p> <p>GARAGE FLOOR ELEVATION AT OVERHEAD DOOR = N/A</p> <p>BOTTOM OF FOOTINGS = 657.30</p> <p>HOUSE MODEL: TWO STOREY SEMI-DETACHED DWELLINGS</p> <p>NOTE: ALL DISTANCES &amp; GRADES ARE IN METRES AND DECIMALS THEREOF. THIS PLAN IS SUBJECT TO APPROVAL OF LOCAL APPROVING AUTHORITY. Builder/owner will be responsible for any errors on this plan should construction begin prior to the plan being approved by the local governing authority.</p>	<p>POWER POLE ●</p> <p>HYDRANT ⊕</p> <p>SERVICE PEDESTAL △</p> <p>STREET LIGHT ○</p> <p>EXISTING ELEVATION 665.00</p> <p>TREE ⊗</p>	<table border="1"> <thead> <tr> <th>DATE</th> <th>REVISIONS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	DATE	REVISIONS								
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**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. SERVICES MAY BE EXTENDED INTO PRIVATE PROPERTY BEYOND GAS EASEMENT (SEE DWG 2514-09 FOR DETAILS).
3. SANITARY AND STORM SERVICES MUST HAVE A BELL AT PROPERTY LINE.
4. TAPPED MAINSTOPS ARE TO BE STAGGERED FROM CROWN TO 30° OF PIPE WITH 1-3 THREADS SHOWING.

**SINGLE SERVICE**

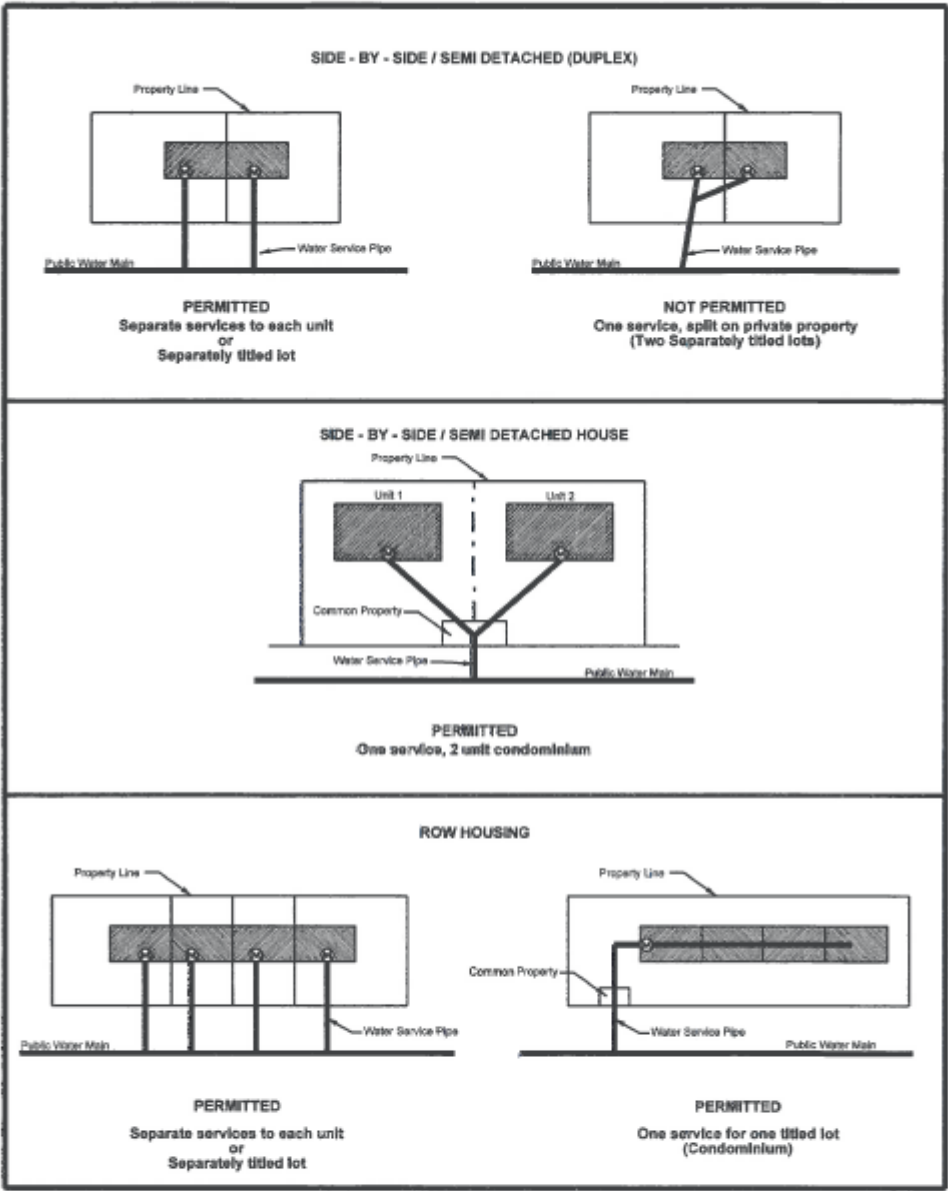


APPROVED  
MARCH 2017  
SCALE  
N T S

DRAWN BY  
Dale Vandenberg  
CHECKED BY  
David M.

APPROVED  
*Susan Ol*  
DIRECTOR, WATER DISTRIBUTION AND TRANSMISSION

DRAWING NUMBER  
**2514-05**  
REVISION 0



**NOTES:**

1. SEPARATE WATER AND SEWER SERVICES SHALL BE PROVIDED TO EACH SEPARATELY TITLED LAND PARCEL.
2. SINGLE WATER AND SEWER SERVICES SHALL NORMALLY BE AT THE CENTRE OF THE LOT AND SHALL CROSS THE PROPERTY LINE AT A RIGHT ANGLE (STRAIGHT OUT).
3. REFER TO SECTION 02514 CLAUSE 3.2.7 FOR THE MINIMUM WATER SERVICE SIZE REQUIREMENTS.



**WATER SERVICING REQUIREMENTS**

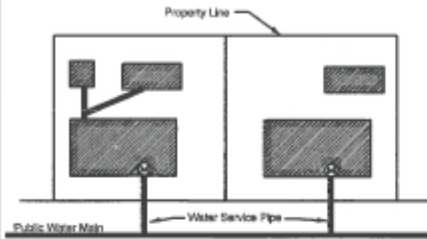
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DV/CW  
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Amanda K.  
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*Suzanne Orl*  
DIRECTOR, WATER DISTRIBUTION AND TRANSMISSION

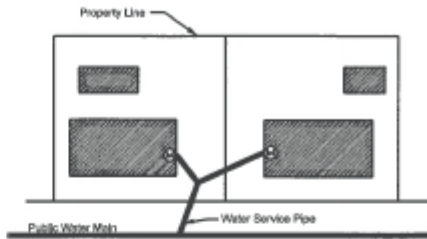
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**SINGLE FAMILY RESIDENCE**

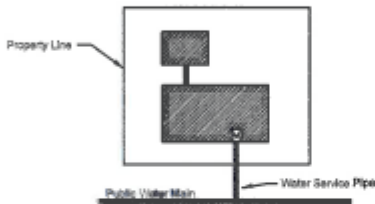


**PERMITTED**  
Separate services to separately titled lots

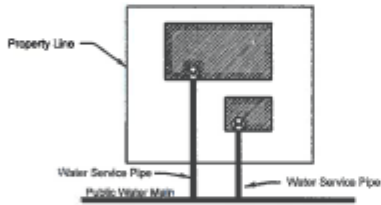


**NOT PERMITTED**  
One separately titled lot serviced from another lot

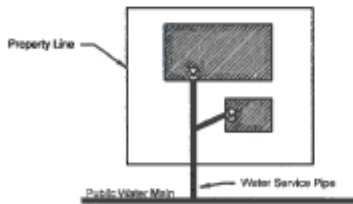
**GARAGE SUITES - PERMITTED**



- \* 1 Service
- \* 1 Meter (Can be in house or garage)
- \* Secondary service to other building, after the meter



- \* 2 Services
- \* 2 Meters



- \* 1 Service
- \* 2 Meters

**NOTES:**

1. SEPARATE WATER AND SEWER SERVICES SHALL BE PROVIDED TO EACH SEPARATELY TITLED LAND PARCEL.
2. SINGLE WATER AND SEWER SERVICES SHALL NORMALLY BE AT THE CENTRE OF THE LOT AND SHALL CROSS THE PROPERTY LINE AT A RIGHT ANGLE (STRAIGHT OUT).
3. REFER TO SECTION 02514 CLAUSE 3.2.7 FOR THE MINIMUM WATER SERVICE SIZE REQUIREMENTS.



**WATER SERVICING REQUIREMENTS**

APPROVED  
MARCH 2017

DRAWN BY  
DV/CW

APPROVED

*Amanda K.*  
DIRECTOR, WATER DISTRIBUTION AND TRANSMISSION

DRAWING NUMBER

**2514-12b**

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Amanda K.

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