

Project Information

Building no., street name		Unit no.	Lot/con.
Municipality Pickering	Postal Code	Plan no./ other description	

Fixture Information Table

Fixture or Device	Water Supply Fixture Units	Building (house) with 1 or 2 dwelling units				Stand-Alone Additional Dwelling Unit (ADU)	Totals
		Bsmt	1st Flr	2nd Flr	3rd Flr		
Powder room with lavatory & toilet	2.9						
Bathroom group	3.6						
Bathroom group with additional lavatory	4.3						
Bathroom group with separate bathtub & shower	5.0						
Bathroom group with additional lavatory, & separate bathtub & shower	5.7						
Bathroom group with additional lavatory, separate bathtub & shower, & bidet	7.7						
Bathtub with or without shower head	1.4						
Bidet	2.0						
Clothes washer, 3.5kg	1.4						
Dishwasher, domestic	1.4						
Hose bibb (½ inch supply)	2.5						
Hose bibb (¾ inch supply)	3.0						
Lavatory, 8.3 L/min or less	0.7						
Lavatory, > 8.3 L/min	1.0						
Shower head, 9.5 L/min or less per head	1.4						
Shower head, > 9.5 L/min per head	2.0						
Shower, spray, multi-head, FU per head	1.4						
Sink, bar	1.0						
Sink, kitchen, domestic, 8.3 L/min or less	1.4						
Sink, kitchen, domestic, > 8.3 L/min	2.0						
Sink, laundry (1 or 2 compartments)	1.4						
Water closet, 6 LPF or less with flush tank	2.2						
Water closet, > 6 LPF with flush tank	3.0						
Water closet with direct flush valve (5)							
Other:							

Notes for Fixture Information Table:

- 1 Fixture Units are from Table 7.6.3.2.-A of Division B of the OBC.
- 2 Bathroom group means a group of plumbing fixtures installed in the same room, consisting of one water closet, one lavatory and either one bathtub or one one-headed shower. Additional fixtures within the bathroom to be counted separately.
- 3 Bathroom groups are based on toilets with 6 liter per flush (LPF) or less, and a shower/tub with 1/2 NPS (inch) supply. Additional fixture flow will apply for other selections.
- 4 Base fixture groups assume a single shower head. Additional body sprays or showerheads must be added to the calculation.
- 5 For fixture unit values for fixtures with direct flush values, see sentence 7.6.3.2.(4), and Table 7.6.3.2.-B and 7.6.3.2.-C, Div. B OBC.

Total Hydraulic Load (fixture units):	
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Water Service Pipe Sizing Method

Select the appropriate OBC design method. The water service pipe is sized based on:



Option 1 (Single Dwelling Unit)

- 7.6.3.4.(6) Where both hot and cold water is supplied to fixtures in a house containing only one dwelling unit, the water service pipe is permitted to be a minimum of NPS ¾ in provided,
- (a) a minimum NPS ¾ water supply piping located in the basement or lower level is extended to the base of every hot and cold riser that serves a maximum of one bathroom group and to the last water supply branch serving any basement bathroom group, fixture supply or hose bibb, and
 - (b) the total hydraulic load is not more than 26 fixture units as calculated on the previous page.



Option 2 (One or more Dwelling Units)

- 7.6.3.4.(5) Where both hot and cold water is supplied to fixtures in residential buildings containing one or two dwelling units or row houses with separate water service pipes, the water system may be sized in accordance with the Table below, where,
- (a) the total hydraulic load is the value calculated on the previous page,
 - (b) the minimum water pressure at the entry to the building is 200 kPa, and
 - (c) the total maximum length of the water system is 90 m.

Table: Water Pipe Sizing for Buildings Containing One or Two Dwelling Units or Row Houses with Separate Water Service Pipes

Nominal Pipe Size of Water Pipe, NPS (inch)	Water Velocity, m/s	
	Water Service Pipe Material	
	3.0 PEX	2.4 Copper
	Hydraulic Load, fixture units	
3/4	21	16
1	43	31
1-1/4	83	57



Option 3 (OBC Appendix Tables)

- 7.6.3.1.(1)- The water pipe size can be determined based on the number of fixtures served using Appendix Table A-7.6.3.1. A pressure test is required if the system is sized based on pressures over 413 kPa. The maximum allowable length is measured from the property line or private water supply system to the most remote water outlet. Specify the following:

Pressure Range (kPa):	
Maximum Allowable Length (m):	
Water Distribution Size, NPS (inches):	



Option 4 (Detailed Engineering Method)

- 7.6.3.1.(1)- Where the design does not meet the requirements of the other options,
- (3) this option may be used. This option requires that the potable water system be designed, fabricated, and installed in accordance with good engineering practice, such as that described in the ASHRAE Handbooks and ASPE Plumbing Engineering Design Handbooks. It also requires the submission of plumbing calculations and a stamped design completed by a qualified designer (e.g., a professional engineer).

Existing incoming Water Service Pipe Water Service Pipe Material, if applicable	Copper		
	PEX		
	Other:		
Existing incoming Water Service Pipe Size, NPS (inches), if applicable	3/4	1	1-1/4

Proposed or Required Water Service Pipe Material	Copper		
	PEX		
	Other:		
Proposed or Required Water Service Pipe Size, NPS (inches)	3/4	1	1-1/4

I take responsibility for the design activities related to plumbing for this project.

Name	BCIN	Date	Signature
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Municipal Water Main and Private Wells

The Region of Durham operates and maintains the water and sewage infrastructure in the City of Pickering. The Region oversees municipal sanitary sewage systems and supports the connection of existing or future buildings to the sanitary sewer system or the municipal water supply. If there are concerns with water supply, please contact the Region at 1-800-372-1102.

Many rural residents in Durham rely on private water wells and septic systems. The Durham Region Health Department is responsible for approving the design and construction of private sewage systems. Building permits for new systems or modifications to existing septic systems can be applied for at www.durham.ca or by calling 1-800-841-2729. For information on private water wells or to locate records of existing wells, visit: <https://www.ontario.ca/page/wells-your-property>.