



THE CORPORATION OF THE TOWN OF AJAX
65 Harwood Avenue South
Ajax, Ontario L1S 2H9
Building Inquiries Line: (905) 619-2529, extension 3652

Sizing of Water Service Pipe

Size and capacity of potable water system pipe shall be designed in accordance with OBC, Division B, 7.6.3.1..

Where both hot and cold water is supplied to fixtures in residential buildings containing one or two dwelling units, the water system may be sized with tables in Part 1 and Part 2 of this form, provided, the minimum water pressure at the entry to the building is not 200 kPa, the total maximum length of the water system is 90 m, and the hydraulic loads for maximum separate demands on water distribution system piping are not less than 100% of the total hydraulic load of the fixture units given in OBC, Division B, Tables 7.6.3.2.A., 7.6.3.2.B., 7.6.3.2.C., and 7.6.3.2.D. for private use.

Builder Name:	Model Identifier:	Date: / / dd/mm/yyyy
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Part 1 - Hydraulic Load, Fixture Unit Calculation

(modification of OBC, Table 7.6.3.2.A.)

Item	Fixture or Device	Minimum Size of Supply Pipe, inches	Private Use Hydraulic Load, fixture units	Quantity	Total Hydraulic Load, fixture units
1.	Bathroom group* with 6 LPF flush tank	N/A			
2.	Bathroom group* with greater than 6 LPF flush	N/A			
4.	Bathtub with or without shower head	1/2			
5.	Bathtub with ¾ in. spout	3/4			
6.	Bidet	3/8			
7.	Clothes washer, 3.5 kg	1/2			
8.	Dishwasher, domestic	3/8			
9.	Hose bibb	1/2			
10.	Hose bibb	3/4			
11.	Hose bibb, combination hot and cold	1/2			
12.	Lavatory, 8.3 L/min or less	3/8			
13.	Lavatory, greater than 8.3 L/min	3/8			
14.	Shower head, 9.5 L/min or less per head	1/2			
15.	Shower head, greater than 9.5 L/min per head	1/2			
16.	Shower, spray, multi-head, fixture unit per head	**			
17.	Sink, bar	3/8			
18.	Sink, kitchen, domestic, 8.3 L/min or less	3/8			
19.	Sink, kitchen, domestic, greater than 8.3 L/min	3/8			
20.	Sink, laundry (1 or 2 compartments)	3/8			
21.	Water closet, 6 LPF or less with flush tank	3/8			
22.	Water closet, greater than 6 LPF with flush tank	3/8			
23.	Other				
Total Fixture Units					=

* Bathroom group means a group of plumbing fixtures installed in the same room, consisting of one domestic-type lavatory, one water closet and either one ½ inch size bathtub, with or without a shower, or one ½ inch size one-headed shower. For additional fixtures in the same room add the additional fixture to the appropriate fixture count.

** Refer to manufacturer's recommendations.

Part 2 - Sizing of Water Service Pipe

(modification of OBC, Table 7.6.3.4.)

Item	Size of Water Pipe, inches	Water Velocity, m/s	
		2.4 (copper piping, cold water)	Other*, specify: Pipe material
		Hydraulic Load, fixture units	
1.	3/4"	7.1 - 16	
2.	1"	16.1 - 31	
3.	1-1/4"	31.1 - 57	

* If a water velocity of other than 2.4 m/s is proposed (i.e. other than copper piping), provide documentation showing maximum permitted water velocity with maximum hydraulic loads for each water pipe size as recommended by the pipe and fitting manufacturer.

Part 3 – Design of Water Service Pipe

Pipe material		
Pipe manufacturer (optional)		
Velocity (metres per second)	=	
Hydraulic Load (fixture units)	=	
Water Service Pipe Diameter (inches)	=	
Designer (name and BCIN, if applicable, of person providing information herein, to substantiate that design meets applicable requirements)		
Name	BCIN	Signature