

Sizing of Water Service Pipe

Size and capacity of potable water system pipe shall be designed in accordance with 7.6.3.1. of Division B, of the Ontario Building Code (OBC). 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.

Address: **Springvalley Crescent** **Unit (112)** Date: **2021-09-27**

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 x Quantity)
1	Bathroom group* with 6 LPF flush tank	N/A	3.6	III	10.8
2	Bathroom group* with greater than 6 LPF flush	N/A	6		
3	Bathtub with or without shower head	1/2	1.4		
4	Clothes washer	1/2	1.4	I	1.4
5	Dishwasher, domestic	3/8	1.4	I	1.4
6	Hose bibb (1/2")	1/2	2.5	II	5
7	Lavatory	3/8	0.7	II	1.4
8	Shower head	1/2	1.4		
9	Shower, spray, multi-head, fixture unit per head	**	1.4		
10	Sink, bar	3/8	1		
11	Sink, kitchen, domestic	3/8	1.4	I	1.4
12	Sink, laundry (1 or 2 compartments)	3/8	1.4	I	1.4
13	Water closet, 6 LPF or less with flush tank	3/8	2.2	I	2.2
14	Other:				

Total Hydraulic Load: **25**

* 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 1/2 inch size bathtub, with or without a shower, or one 1/2 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	Water Velocity, m/s	
		2.4 (copper piping, cold water)	Other Pipe Material*, specify:
		Hydraulic Load, (Fixture Units)	
1	1/2"	Up to 7	
2	3/4"	7.1 - 16	
3	1"	16.1 - 31	
4	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

Total Hydraulic Load (fixture units): **25**

Water Service Pipe size (inches): **1"**

Water Meter Size

3/4 Water Service Pipe = 5/8" (16 mm) Water Meter
 1" Water Service Pipe = 3/4" (20 mm) Water Meter
 1-1/4" Water Service Pipe = 1" (25 mm) Water Meter

Designer Information

Name: **Virtual Creations Inc** BCIN: **28844** Signature: 

Sizing of Water Service Pipe

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Address: **Springvalley Crescent** **Unit (114)** Date: **2021-09-27**

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 x Quantity)
1	Bathroom group* with 6 LPF flush tank	N/A	3.6	III	10.8
2	Bathroom group* with greater than 6 LPF flush	N/A	6		
3	Bathtub with or without shower head	1/2	1.4		
4	Clothes washer	1/2	1.4	I	1.4
5	Dishwasher, domestic	3/8	1.4	I	1.4
6	Hose bibb (1/2")	1/2	2.5	II	5
7	Lavatory	3/8	0.7	II	1.4
8	Shower head	1/2	1.4		
9	Shower, spray, multi-head, fixture unit per head	**	1.4		
10	Sink, bar	3/8	1		
11	Sink, kitchen, domestic	3/8	1.4	I	1.4
12	Sink, laundry (1 or 2 compartments)	3/8	1.4	I	1.4
13	Water closet, 6 LPF or less with flush tank	3/8	2.2	I	2.2
14	Other:				

Total Hydraulic Load: **25**

* 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 1/2 inch size bathtub, with or without a shower, or one 1/2 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	Water Velocity, m/s	
		2.4 (copper piping, cold water)	Other Pipe Material*, specify:
		Hydraulic Load, (Fixture Units)	
1	1/2"	Up to 7	
2	3/4"	7.1 - 16	
3	1"	16.1 - 31	
4	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

Total Hydraulic Load (fixture units): **25**

Water Service Pipe size (inches): **1"**

Water Meter Size

3/4 Water Service Pipe = 5/8" (16 mm) Water Meter
 1" Water Service Pipe = 3/4" (20 mm) Water Meter
 1-1/4" Water Service Pipe = 1" (25 mm) Water Meter

Designer Information

Name: **Virtual Creations Inc** BCIN: **28844** Signature: 

Sizing of Water Service Pipe

Size and capacity of potable water system pipe shall be designed in accordance with 7.6.3.1. of Division B, of the Ontario Building Code (OBC). 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.

Address: **Springvalley Crescent** **Unit (116)** Date: **2021-09-27**

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 x Quantity)
1	Bathroom group* with 6 LPF flush tank	N/A	3.6	III	10.8
2	Bathroom group* with greater than 6 LPF flush	N/A	6		
3	Bathtub with or without shower head	1/2	1.4		
4	Clothes washer	1/2	1.4	I	1.4
5	Dishwasher, domestic	3/8	1.4	I	1.4
6	Hose bibb (1/2")	1/2	2.5	II	5
7	Lavatory	3/8	0.7	II	1.4
8	Shower head	1/2	1.4		
9	Shower, spray, multi-head, fixture unit per head	**	1.4		
10	Sink, bar	3/8	1		
11	Sink, kitchen, domestic	3/8	1.4	I	1.4
12	Sink, laundry (1 or 2 compartments)	3/8	1.4	I	1.4
13	Water closet, 6 LPF or less with flush tank	3/8	2.2	I	2.2
14	Other:				

Total Hydraulic Load: **25**

* 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 1/2 inch size bathtub, with or without a shower, or one 1/2 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	Water Velocity, m/s	
		2.4 (copper piping, cold water)	Other Pipe Material*, specify:
		Hydraulic Load, (Fixture Units)	
1	1/2"	Up to 7	
2	3/4"	7.1 - 16	
3	<u>1"</u>	<u>16.1 - 31</u>	
4	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

Total Hydraulic Load (fixture units): **25**

Water Service Pipe size (inches): **1"**

Water Meter Size
 3/4 Water Service Pipe = 5/8" (16 mm) Water Meter
 1" Water Service Pipe = 3/4" (20 mm) Water Meter
 1-1/4" Water Service Pipe = 1" (25 mm) Water Meter

Designer Information
 Name: **Virtual Creations Inc** BCIN: **28844** Signature: *[Signature]*

Sizing of Water Service Pipe

Size and capacity of potable water system pipe shall be designed in accordance with 7.6.3.1. of Division B, of the Ontario Building Code (OBC). 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.

Address: **Springvalley Crescent** **Unit (118)** Date: **2021-09-27**

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 x Quantity)
1	Bathroom group* with 6 LPF flush tank	N/A	3.6	III	10.8
2	Bathroom group* with greater than 6 LPF flush	N/A	6		
3	Bathtub with or without shower head	1/2	1.4		
4	Clothes washer	1/2	1.4	I	1.4
5	Dishwasher, domestic	3/8	1.4	I	1.4
6	Hose bibb (1/2")	1/2	2.5	II	5
7	Lavatory	3/8	0.7	II	1.4
8	Shower head	1/2	1.4		
9	Shower, spray, multi-head, fixture unit per head	**	1.4		
10	Sink, bar	3/8	1		
11	Sink, kitchen, domestic	3/8	1.4	I	1.4
12	Sink, laundry (1 or 2 compartments)	3/8	1.4	I	1.4
13	Water closet, 6 LPF or less with flush tank	3/8	2.2	I	2.2
14	Other:				

Total Hydraulic Load: **25**

* 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 1/2 inch size bathtub, with or without a shower, or one 1/2 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	Water Velocity, m/s	
		2.4 (copper piping, cold water)	Other Pipe Material*, specify:
		Hydraulic Load, (Fixture Units)	
1	1/2"	Up to 7	
2	3/4"	7.1 - 16	
3	<u>1"</u>	<u>16.1 - 31</u>	
4	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

Total Hydraulic Load (fixture units): **25**

Water Service Pipe size (inches): **1"**

Water Meter Size

3/4 Water Service Pipe = 5/8" (16 mm) Water Meter
 1" Water Service Pipe = 3/4" (20 mm) Water Meter
 1-1/4" Water Service Pipe = 1" (25 mm) Water Meter

Designer Information

Name: **Virtual Creations Inc** BCIN: **28844** Signature: 