Bulletin

SIZE AND CAPACITY OF PLUMBING WATER SYSTEMS FOR MULTIPLE DWELLING UNITS - Housing

The new home industry has seen an increase in the use of non-metallic water supply piping and fittings. Non-metallic has replaced copper piping and fittings in a dramatic fashion. However, there is a difference, the inside diameter of the non-metallic piping and fittings is less than metal or copper piping and fittings. The reduction of the inside pipe diameter may prohibit the water distribution system from satisfying the peak demand flow as required by the Building Code.

The following Building Code provision pertains to the flow of water systems;

7.6.3.1.(1) Except as permitted in Sentences (2) and (3), the size *of every pipe in a* water distribution system *that supplies water to a* fixture *or device and the flow pressures at the supply openings shall be designed to provide peak demand flow in conformance to Table 7.6.3.1.*

The purpose of this bulletin is to offer owners and builders two options when considering compliance with the above Building Code provision.

Option 1 – Install a minimum of ¾ in. size water pipe to the bottom of every riser in a dwelling unit and install a minimum of ¾ in. size water pipe riser when supplying water to plumbing fixtures located in more than a single bathroom,

or

Option 2 – Submit a test report prior to occupancy or use of the plumbing fixture that demonstrates that the flow of water will meet the minimum requirement as stated in Table 7.6.3.1 (refer to the reverse side of this bulletin for a copy of the Table) and the manufactures specifications or recommendations.

Depending on the static water pressure, height and area of the building, both options may require modifications to ensure adequate supply of water to the plumbing fixtures. It is the owner and builders responsibility to comply with the Building Code.

Owners and builders of <u>single</u> dwelling units should consider the information contained in this Bulletin in terms of compliance with Sentence 7.6.3.1.(1), *"Every pipe that supplies a fixture shall have a capacity that will produce a flow in the fixture that will flush the fixture and keep it in a sanitary condition".*

Plumbing fixtures that do not have an adequate volume of water, as expected by the homeowner, are subject to the following Building Code provision, *"All materials, appliances, systems and equipment installed to meet the requirements of the Code shall possess the necessary characteristics to perform their intended functions when installed in a building".*

This Bulletin was issued on May 1, 2007 and revised on May 1, 2008 to include multiple dwelling unit buildings. Builders of new homes (multiple and single units) are responsible for ensuring their sub-trades are made aware of this Bulletin.

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Table 7.6.3.1.

Pipe Sizing for Water Supply to Fixture/Device

Forming Part of Sentences 7.6.3.1.(1) and (3)

Column 1	Column 2	Column 3	Column 4	Column 5
Fixture or Device	Minimum *Size* of Supply Pipe, in.	Minimum Flow Pressure[(1)] kPa (gauge)	Hydraulic Load, *fixture units*	
			Private Use	*Public Use*
Bathroom group				
(a) with flush tank	NA	NA	6	-
(b) with direct flush valve	NA	NA	8	-
Bath tub (with or without shower)	½	50	2	4
Clothes washer	½	100	3	-
Cup Sink	½	50	-	4
Dishwasher, domestic	½	100	3	-
Drinking fountain	3/8	100	-	1
Hose bib or wall hydrant	½	100	[(2)]	[(2)]
Laundry tray: 1, 2 or 3 compartments	½	100	2	4
Lavatory	3/8	50	1	2
Shower, single head	½	50	2	4
Sink				
(a) kitchen, domestic	½	50	2	-
(b) kitchen, commercial	½	50	-	4
(c) service, slop	½	50	-	3
(d) service with direct flush valve	¾	100	-	5
Urinal				
(a) with flush tank	½	50	-	3
(b) with direct flush valve	¾	100	-	5
(c) with self closing metering valve	½	-	-	-
Water closet				
(a) with flush tank	3/8	50	3	5
(b) with direct flush valve	1	100	6	10

Notes to Table 7.6.3.1.:

[(1)] Measured immediately upstream of faucet or supply valve.

[(2)] A continuous load of 0.38 L/s.