

2014 VBBL Book II - Consolidated Changes & Errata: By-laws #10994 to 12104

Revision: August 13, 2018
Effective: January 01, 2018

Legend:

Greybar text is Unique to Vancouver

Red text are #11687 changes effective May 1, 2017.

Blue text are errata to By-laws #11180 & #11687 .

Green text are #11748 effective March 1, 2018 & #11776 effective January 1, 2018.

Orange text are 11996 effective January 1, 2018.

~~Struckout text~~ is not to be read as part of the by-law, but is provided as an administrative convenience to show where a change has occurred.

Instructions: Insert pages between successive pages as numbered (i.e. page 4a or 4b is inserted between pages 3 & 4). Specifics instructions may also be included after the header in [brackets].

[This page intentionally blank]

Consolidated Set – Page ii

[This page intentionally blank]

Div. A, 1.4.1.2.(1) Defined Terms

[Add the following new definition in alphabetical order]

Acceptable equivalency means:

- (a) that the person proposing to use a *plumbing fixture* that does not conform with the specifications in this By-law must, at their expense, ensure that
 - (i) an independent qualified third party tests the *plumbing fixture* and documents that the *plumbing fixture* meets or exceeds the specifications of this By-law,
 - (ii) the test procedures and documented results are reviewed and verified by an independent qualified *registered professional*,
 - (iii) copies of all test procedures, documented results and verification reports are provided to the *Chief Building Official*, and
- (b) the test procedures, documented results and verification are *acceptable*.

Set 2 - Page 6b

Div. A, 1.4.1.2.(1) Defined Terms

[Add the following new definition in alphabetical order]

Pre-rinse spray valve means a handheld device for use with commercial dishwashing and ware washing equipment that sprays water on dishes, flatware, and other food service items for the purpose of removing food residue before cleaning and sanitizing the items.

Div. A, 1.4.1.2.(1) Defined Terms

[Add the following new definition in alphabetical order]

Shower head means any fitting that transmits water for the purposes of showering and includes rain heads, rain tiles, rain systems, waterfalls, body sprays and jets. A hand-held shower shall be considered a shower head.

Set 2 - Page 14b

Div. B, Table T-1.3.1.2.
 [Replace Table 1.3.1.2 as follows]

Table 1.3.1.2.			
Documents Referenced in Book II (Plumbing Systems) of the By-law			
Forming part of Sentence 1.3.1.2.(1)			
Issuing Agency	Document Number⁽¹⁾	Title of Document⁽²⁾	By-law Reference
ANSI/AWWA	C288-08	Stainless-Steel Pipe Flanges for Water Service — Sizes 2 In. Through 72 In. (50 mm Through 1,800 mm)	2.2.6.12.(1)
ANSI/CSA	ANSI Z21.22-1999/ CSA 4.4-M99 (including Addenda 1 and 2)	Relief Valves for Hot Water Supply Systems	2.2.10.11.(1)
ASME/CSA	ASME A112.18.1-2012/ CAN/CSA-B125.1-12	Plumbing Supply Fittings	2.2.10.6.(1) 2.2.10.7.(1)
ASME/CSA	ASME A112.18.2-2011/ CAN/CSA-B125.2-11	Plumbing Waste Fittings	2.2.3.3.(1) 2.2.10.6.(2)
ASME/CSA	ASME A112.19.1-08/ CSA B45.2-08	Enamelled Cast Iron and Enamelled Steel Plumbing Fixtures	2.2.2.2.(3) 2.2.2.2.(4)
ASME/CSA	ASME A112.19.2-08/ CSA B45.1-08	Ceramic Plumbing Fixtures	2.2.2.2.(2)
ASME/CSA	ASME A112.19.3-08/ CSA B45.4-08	Stainless Steel Plumbing Fixtures	2.2.2.2.(5)
ASME/CSA	ASME A112.19.7-2012/ CSA B45.10-12	Hydromassage Bathtub Systems	2.2.2.2.(7)
ASME	B16.3-2011	Malleable Iron Threaded Fittings, Classes 150 and 300	2.2.6.6.(1)
ASME	B16.4-2011	Gray Iron Threaded Fittings, Classes 125 and 250	2.2.6.5.(1)
ASME	B16.5-2009	Pipe Flanges and Flanged Fittings: NPS ½ Through NPS 24 Metric/Inch Standard	2.2.6.12.(1)
ASME	B16.9-2007	Factory-Made Wrought Buttwelding Fittings	2.2.6.11.(1) 2.2.6.14.(1)
ASME	B16.12-2009	Cast Iron Threaded Drainage Fittings	2.2.6.3.(1)
ASME	B16.15-2011	Cast Copper Alloy Threaded Fittings, Classes 125 and 250	2.2.7.3.(1)
ASME	B16.18-2012	Cast Copper Alloy Solder-Joint Pressure Fittings	2.2.7.6.(1) 2.2.7.6.(2)
ASME	B16.22-2001	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings	2.2.7.6.(1)
ASME	B16.23-2011	Cast Copper Alloy Solder Joint Drainage Fittings: DWV	2.2.7.5.(1)
ASME	B16.24-2011	Cast Copper Alloy Pipe Flanges and Flanged Fittings: Classes 150, 300, 600, 900, 1500, and 2500	2.2.7.2.(1)
ASME	B16.26-2011	Cast Copper Alloy Fittings for Flared Copper Tubes	2.2.7.7.(1) 2.2.7.7.(2)
ASME	B16.29-2007	Wrought Copper and Wrought Copper Alloy Solder-Joint Drainage Fittings – DWV	2.2.7.5.(1)
ASME	B31.9-2008	Building Services Piping	2.3.2.8.(1)
ASME	B36.19M-2004	Stainless Steel Pipe	2.2.6.10.(1)
ASSE	ANSI/ASSE 1010-2004	Water Hammer Arresters	2.2.10.15.(1)
ASSE	1051-2009G	Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems	2.2.10.16.(1)
ASTM	A 53/A 53M-10	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless	2.2.6.7.(4)
ASTM	A 182/A 182M-06	Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service	2.2.6.12.(1) 2.2.6.13.(1)

ASTM	A 269-10	Seamless and Welded Austenitic Stainless Steel Tubing for General Service	2.2.6.14.(1)
ASTM	A 312/A 312M-11	Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes	2.2.6.10.(1)
ASTM	A 351/A 351M-10	Castings, Austenitic, for Pressure-Containing Parts	2.2.6.13.(1)
ASTM	A 403/A 403M-11	Wrought Austenitic Stainless Steel Piping Fittings	2.2.6.11.(1)
ASTM	A 518/A 518M-99	Corrosion-Resistant High-Silicon Iron Castings	2.2.8.1.(1)
ASTM	B 32-08	Solder Metal	2.2.9.2.(1)
ASTM	B 42-10	Seamless Copper Pipe, Standard Sizes	2.2.7.1.(1)
ASTM	B 43-09	Seamless Red Brass Pipe, Standard Sizes	2.2.7.1.(2)
ASTM	B 88-09	Seamless Copper Water Tube	2.2.7.4.(1)
ASTM	B 306-09	Copper Drainage Tube (DWV)	2.2.7.4.(1)
ASTM	B 813-10	Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube	2.2.9.2.(3)
ASTM	B 828-02	Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings	2.3.2.4.(1)
ASTM	C 1053-00	Borosilicate Glass Pipe and Fittings for Drain, Waste, and Vent (DWV) Applications	2.2.8.1.(1)
ASTM	D 2466-06	Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40	2.2.5.8.(2)
ASTM	D 2467-06	Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80	2.2.5.8.(2)
ASTM	D 3261-10a	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing	2.2.5.5.(3)
ASTM	F 628-08	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core	2.2.5.10.(1) 2.2.5.12.(1)
ASTM	F 714-10	Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter	2.2.5.6.(1)
AWS	ANSI/AWS A5.8/A5.8M:2011	Specification for Filler Metals for Brazing and Braze Welding	2.2.9.2.(4)
AWWA	ANSI/AWWA C104/A21.4-08	Cement-Mortar Lining for Ductile-Iron Pipe and Fittings	2.2.6.4.(2)
AWWA	ANSI/AWWA C110/A21.10-12	Ductile-Iron and Gray-Iron Fittings	2.2.6.4.(3)
AWWA	C111/A21.11-2007	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings	2.2.6.4.(4)
AWWA	ANSI/AWWA C151/A21.51-09	Ductile-Iron Pipe, Centrifugally Cast, for Water	2.2.6.4.(1)
City		Book I (General) of the Building By-law	1.1.1.1.(1) ⁽³⁾ 1.1.1.1.(3) ⁽³⁾ 1.4.1.2.(1) ⁽³⁾ 2.1.3.1.(1) 2.2.3.1.(1) ⁽⁴⁾ 2.2.5.12.(2) 2.2.5.12.(3) 2.2.6.7.(3) 2.4.3.1.(1) 2.4.10.4.(1)
City		Fire By-law	2.5.5.2.
BC	R.S.B.C. 1996, c. 323	Local Government Act	2.2.1.1.(1) ⁽⁴⁾
BC	R.S.B.C. 1996, c. 293	Mines Act	1.4.1.2.(1) ⁽³⁾
CGSB	CAN/CGSB-34.1-94	Asbestos-Cement Pressure Pipe	2.2.5.2.(1)

CGSB	CAN/CGSB-34.9-94	Asbestos-Cement Sewer Pipe	2.2.5.1.(2)
CGSB	CAN/CGSB-34.22-94	Asbestos-Cement Drain Pipe	2.2.5.1.(1)
CGSB	CAN/CGSB-34.23-94	Asbestos-Cement House Connection Sewer Pipe	2.2.5.1.(2)
CSA	A60.1-M1976	Vitrified Clay Pipe	2.2.5.4.(1)
CSA	A60.3-M1976	Vitrified Clay Pipe Joints	2.2.5.4.(2)
CSA	CAN/CSA-A257.1-09	Non-Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe, and Fittings	2.2.5.3.(1)
CSA	CAN/CSA-A257.2-09	Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe, and Fittings	2.2.5.3.(1)
CSA	CAN/CSA-A257.3-09	Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections, and Fittings Using Rubber Gaskets	2.2.5.3.(2)
CSA	CAN/CSA-A257.4-09	Precast Reinforced Circular Concrete Manhole Sections, Catch Basins, and Fittings	2.2.5.3.(5)
CSA	CAN/CSA-B45 Series-02	Plumbing Fixtures	2.2.2.2.(1)
CSA	CSA-B45.5-11/IAPMO Z124-2011	Plastic Plumbing Fixtures	2.2.2.2.(6)
CSA	CAN/CSA-B45.9-02	Macerating Systems and Related Components	2.2.2.2.(8)
CSA	B64.0-11	Definitions, General Requirements, and Test Methods for Vacuum Breakers and Backflow Preventers	2.2.10.10.(1)
CSA	CAN/CSA-B64.1.1-11	Atmospheric Vacuum Breakers (AVB)	2.2.10.10.(1)
CSA	CAN/CSA-B64.1.2-11	Pressure Vacuum Breakers (PVB)	2.2.10.10.(1)
CSA	B64.2-11	Hose Connection Vacuum Breakers (HCVB)	2.2.10.10.(1)
CSA	B64.2.1-11	Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature	2.2.10.10.(1)
CSA	B64.2.2-11	Hose Connection Vacuum Breakers (HCVB) with Automatic Draining Feature	2.2.10.10.(1)
CSA	B64.3-11	Dual Check Valve Backflow Preventers with Atmospheric Port (DCAP)	2.2.10.10.(1)
CSA	B64.4-11	Reduced Pressure Principle Backflow Preventers (RP)	2.2.10.10.(1)
CSA	B64.4.1-11	Reduced Pressure Principle Backflow Preventers for Fire Protection Systems (RPF)	2.6.2.4.(2) 2.6.2.4.(4)
CSA	B64.5-11	Double Check Valve Backflow Preventers (DCVA)	2.2.10.10.(1)
CSA	B64.5.1-11	Double Check Valve Backflow Preventers for Fire Protection Systems (DCVAF)	2.6.2.4.(2)
CSA	B64.6-11	Dual Check Valve Backflow Preventers (DuC)	2.2.10.10.(1)
CSA	B64.6.1-11	Dual Check Valve Backflow Preventers for Fire Protection Systems (DuCF)	2.6.2.4.(2)
CSA	B64.7-11	Laboratory Faucet Vacuum Breakers (LFVB)	2.2.10.10.(1)
CSA	B64.8-11	Dual Check Valve Backflow Preventers with Intermediate Vent (DuCV)	2.2.10.10.(1)
CSA	B64.9-11	Single Check Valve Backflow Preventers for Fire Protection Systems (SCVAF)	2.6.2.4.(2)
CSA	B64.10-11	Selection and Installation of Backflow Preventers	2.6.2.1.(3)
CSA	B70-12	Cast Iron Soil Pipe, Fittings, and Means of Joining	2.2.6.1.(1) 2.4.6.4.(2)
CSA	B125.3-12	Plumbing Fittings	2.2.10.6.(1) 2.2.10.6.(3) 2.2.10.7.(2) 2.2.10.10.(2)
CSA	CAN/CSA-B127.1-99	Asbestos Cement Drain, Waste and Vent Pipe and Pipe Fittings	2.2.5.1.(1) 2.2.6.2.(1)
CSA	B127.2-M1977	Components for Use in Asbestos Cement Building Sewer Systems	2.2.5.1.(2)

			2.2.6.2.(1)
CSA	CAN/CSA-B128.1-06	Design and Installation of Non-Potable Water Systems	2.7.4.1.(1)
CSA	CAN/CSA-B137.1-09	Polyethylene (PE) Pipe, Tubing, and Fittings for Cold-Water Pressure Services	2.2.5.5.(1)
CSA	CAN/CSA-B137.2-09	Polyvinylchloride (PVC) Injection-Moulded Gasketed Fittings for Pressure Applications	2.2.5.8.(3)
CSA	CAN/CSA-B137.3-09	Rigid Polyvinylchloride (PVC) Pipe and Fittings for Pressure Applications	2.2.5.8.(1)
CSA	CAN/CSA-B137.5-09	Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications	2.2.5.7.(1)
CSA	CAN/CSA-B137.6-09	Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing, and Fittings for Hot- and Cold-Water Distribution Systems	2.2.5.9.(1)
CSA	CAN/CSA-B137.9-09	Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems	2.2.5.13.(1)
CSA	CAN/CSA-B137.10-09	Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems	2.2.5.13.(4) 2.2.5.14.(1)
CSA	CAN/CSA-B137.11-09	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications	2.2.5.15.(1)
CSA	B158.1-1976	Cast Brass Solder Joint Drainage, Waste and Vent Fittings	2.2.10.1.(1)
CSA	CAN/CSA-B181.1-11	Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings	2.2.5.10.(1) 2.2.5.11.(1) 2.2.5.12.(1) 2.4.6.4.(2)
CSA	CAN/CSA-B181.2-11	Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings	2.2.5.10.(1) 2.2.5.11.(1) 2.2.5.12.(1) 2.4.6.4.(2)
CSA	CAN/CSA-B181.3-11	Polyolefin and Polyvinylidene Fluoride (PVDF) Laboratory Drainage Systems	2.2.8.1.(1)
CSA	CAN/CSA-B182.1-11	Plastic Drain and Sewer Pipe and Pipe Fittings	2.2.5.10.(1) 2.4.6.4.(2)
CSA	CAN/CSA-B182.2-11	PSM Type Polyvinylchloride (PVC) Sewer Pipe and Fittings	2.2.5.10.(1)
CSA	CAN/CSA-B182.4-11	Profile Polyvinylchloride (PVC) Sewer Pipe and Fittings	2.2.5.10.(1)
CSA	CAN/CSA-B182.6-11	Profile Polyethylene (PE) Sewer Pipe and Fittings For Leak-Proof Sewer Applications	2.2.5.10.(1)
CSA	B242-05	Groove- and Shoulder-Type Mechanical Pipe Couplings	2.2.10.4.(1)
CSA	B272-93	Prefabricated Self-Sealing Roof Vent Flashings	2.2.10.14.(2)
CSA	CAN/CSA-B356-10	Water Pressure Reducing Valves for Domestic Water Supply Systems	2.2.10.12.(1)
CSA	CAN/CSA-B602-10	Mechanical Couplings for Drain, Waste, and Vent Pipe and Sewer Pipe	2.2.10.4.(2)
CSA	CAN/CSA-F379.1 Series-09 (excluding CAN/CSA-F379S1-11)	Packaged Solar Domestic Hot Water Systems (Liquid to Liquid Heat Transfer)	2.2.10.13.(1)
CSA	CAN/CSA-F383-08	Installation Code for Solar Domestic Hot Water Systems	2.6.1.8.(1)
CSA	CAN/CSA-G401-071	Corrugated Steel Pipe Products	2.2.6.8.(1)
NFPA	13D-2010	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes	2.6.3.1.(3)
NSF/ANSI	61 – 2016	Drinking Water System Components – Health Effects	2.2.6.10.
NSF/ANSI	372 - 2016	Drinking Water System Components – Lead Content	2.2.6.11., 2.2.6.12., 2.2.6.13.
ULC	CAN/ULC-S114-05	Test for Determination of Non-Combustibility in Building Materials	1.4.1.2.(1) ⁽³⁾

Notes to Table 1.3.1.2.:

- (1) Some documents may have been reaffirmed or reapproved. Check with the applicable issuing agency for up-to-date information.
- (2) Some titles have been abridged to omit superfluous wording.
- (3) By-law reference is in Division A.
- (4) By-law reference is in Division C.

Div. B, Table T-1.3.1.2.
[Replace Table 1.3.1.2 - see page over]

Set 3 - Page 48f

Div. B, 2.2.2.2.(6) & (7) Conformance to Standards

6) Every plastic *fixture* shall conform to **CSA B45.5/IAPMO Z124**, “Plastic Plumbing Fixtures.”

7) Every hydromassage bathtub shall conform to **ASME A112.19.7/CSA B45.10**, “Hydromassage Bathtub Systems.”

Div. B, 2.2.2.6. Low Consumption Water Closets

1) Every water closet installed in a *building* shall have a maximum flush cycle in compliance with Book I Division B Article 10.3.1.3.

Consolidated Set - Page 58a

Div. B, 2.2.2.7. Low Consumption Urinals

- 1) Every urinal installed in a *building* shall have a maximum flush cycle in compliance with Book I Division B Article 10.3.1.3.
-

2.2.2.8. & 2.2.2.9. Lavatory Faucets & Pre-Rinse Spray Valves

[Add new Articles as follows]

2.2.2.8. Lavatory Faucets

[Reserved.]

2.2.2.9. Pre-Rinse Spray Valves

- 1) Every *pre-rinse spray valve* shall be certified to the performance criteria of the WaterSense Specification for Pre-Rinse Spray Valves version 1.0, or be of *acceptable equivalency*.
 - 2) Every *pre-rinse spray valve* shall be equipped with an automatic shut-off.
-

Div. B, 2.2.3.3.(1) Tabular Traps

- 1) Tubular metal or plastic *traps* conforming to **ASME A112.18.2/CSA B125.2**, “Plumbing Waste Fittings,” shall be used only in accessible locations.
-

Consolidated Set - Page 58b

Div. B, 2.2.4.3.(2) 90° Elbows

- 2) For *sanitary drainage systems* of 4 inch size or less, 90° elbows described in Sentence (1) shall only be permitted
- a) to change the direction of piping from horizontal to vertical, in the direction of flow,
 - b) where a *trap arm* enters a wall, or
 - c) to connect *trap arms* as permitted by Sentence 2.5.6.3.(2).
-

Div. B, 2.2.5.1. Asbestos-Cement Drainage Pipe and Fittings

- 3) Asbestos-cement pipe shall not be used in new construction.
-

Set 1 - Page 60a

[This page intentionally blank]

Set 1 -Page 60b

Div. B, 2.2.6. Ferrous Pipes and Fittings

[Add new Articles as follows]

2.2.6.10. Stainless Steel Pipe

- 1) Stainless steel pipe shall conform to
 - a) ASTM A 312/A 312M, "Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes,"
 - b) ASME B36.19M, "Stainless Steel Pipe," and
 - c) NSF/ANSI 61 "Drinking Water System Components – Health Effects."
- 2) Only grade 304/304L or 316/316L stainless steel pipe shall be used.

2.2.6.11. Stainless Steel Butt Weld Pipe Fittings

- 1) Stainless steel butt weld pipe fittings shall conform to
 - a) ASTM A 403/A 403M, "Wrought Austenitic Stainless Steel Piping Fittings,"
 - b) ASME B16.9 "Factory-Made Wrought Buttwelding Fittings," and
 - c) NSF/ANSI 372 "Drinking Water System Components – Led Content."
- 2) Stainless steel butt weld pipe fittings shall be made of a material that matches the grade of the pipe material used.

2.2.6.12. Stainless Steel Pipe Flanges

- 1) Stainless steel pipe flanges shall conform to
 - a) ASME B16.5, "Pipe Flanges and Flanged Fittings: NPS ½ Through NPS 24 Metric/Inch Standard,"
 - b) NSF/ANSI 372 "Drinking Water System Components – Led Content," and
 - c) shall conform with
 - i) ASTM A 182/A 182M, "Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service," or
 - ii) ANSI/AWWA C228, "Stainless-Steel Pipe Flanges for Water Service — Sizes 2 In. Through 72 In. (50 mm Through 1,800 mm)."
- 2) Stainless steel pipe flanges shall be made of a material that matches the grade of the pipe material used.

[continued on next page]

Set 3 - Page 64a

Div. B, 2.2.6. Ferrous Pipes and Fittings

[Add new Articles as follows]

2.2.6.13. Stainless Steel Threaded Fittings

1) Stainless steel threaded fittings shall be schedule 40s or greater conforming to NSF/ANSI 372 “Drinking Water System Components – Lead Content,” and

- a) ASTM A 182/A 182M, “Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service,” or
- b) ASTM A 351/A 351M, “Castings, Austenitic, for Pressure-Containing Parts.”

2) Stainless steel threaded fittings shall be made of a material that matches the grade of the pipe material used.

2.2.6.14. Stainless Steel Tube

- 1) Stainless steel tube shall conform to
 - a) ASTM A 269, “Seamless and Welded Austenitic Stainless Steel Tubing for General Service,” and
 - b) ASME B16.9, “Factory-Made Wrought Buttwelding Fittings.”

2) Only grade 304/304L or 316/316L stainless steel tube shall be used.

2.2.6.15. Stainless Steel Pipe and Tube

1) The use of stainless steel pipe and tube shall conform to Table 2.2.6.15.

Table 2.2.6.15.							
Permitted Uses of Stainless Steel Tube and Pipe							
Forming part of Sentence 2.2.6.15.(1)							
Stainless Steel Tube or Pipe	Plumbing Purposes						
	Water Distribution System		Building Sewer	Drainage System		Venting System	
	Under- ground	Above- ground		Under- ground	Above- ground	Under- ground	Above- ground
Stainless steel pipe	P	P	P	P	P	P	P
Stainless steel tube	P	P	N	N	N	N	N

P = Permitted N = Not Permitted

Div. B, 2.2.9.2. Solders and Fluxes

4) Brazing alloys shall conform to ANSI/AWS A5.8, “Specification for Filler Metals for Brazing and Braze Welding,” BCuP range.

Div. B, 2.2.10.6. Supply and Waste Fittings

- 1) Supply fittings shall conform to
 - a) ASME A112.18.1/CSA B125.1, "Plumbing Supply Fittings," or
 - b) CSA B125.3, "Plumbing Fittings."
 - 2) Waste fittings shall conform to ASME A112.18.2/CSA B125.2, "Plumbing Waste Fittings."
 - 3) Supply fittings complying with Sentence (1) shall have a maximum flow rate in compliance with Book I Division B Article 10.3.1.2.
-

Div. B, 2.2.10.7. Water Temperature Control

- 1) Except as provided in Sentence (2), all valves supplying fixed-location shower heads shall be individual pressure-balanced or thermostatic-mixing valves conforming to ASME A112.18.1/CSA B125.1, "Plumbing Supply Fittings."
 - 2) Individual pressure-balanced or thermostatic-mixing valves shall not be required for showers having a single tempered water supply that is controlled by a master thermostatic-mixing valve conforming to CSA B125.3, "Plumbing Fittings."
 - 3) All mixing valves supplying shower heads shall be of the pressure-balanced, thermostatic, or combination pressure-balanced/thermostatic type capable of
 - a) maintaining a water outlet temperature that does not exceed 49°C, and
 - b) limiting thermal shock.
 - 4) The temperature of water discharging into a bathtub shall not exceed 49°C.
-

Div. B, 2.2.10.10. Back-Siphonage Preventers and Backflow Preventers

[see next page]

Div. B, 2.2.10.10. Back-Siphonage Preventers and Backflow Preventers

1) Except as provided in Sentence (2), *back-siphonage preventers* and *backflow preventers* shall conform to

- a) CSA B64.0, "Definitions, General Requirements, and Test Methods for Vacuum Breakers and Backflow Preventers,"
- b) CSA B64.1.1, "Atmospheric Vacuum Breakers (AVB),"
- c) CSA B64.1.2, "Pressure Vacuum Breakers (PVB),"
- d) CSA B64.2, "Hose Connection Vacuum Breakers (HCVB),"
- e) CSA B64.2.1, "Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature,"
- f) CSA B64.2.2, "Hose Connection Vacuum Breakers (HCVB) with Automatic Draining Feature,"
- g) CSA B64.3, "Dual Check Valve Backflow Preventers with Atmospheric Port (DCAP),"
- h) CSA B64.4, "Reduced Pressure Principle Backflow Preventers (RP),"
- i) CSA B64.5, "Double Check Valve (DCVA) Backflow Preventers,"
- j) CSA B64.6, "Dual Check Valve (DuC) Backflow Preventers,"
- k) CSA B64.7, "Laboratory Faucet Vacuum Breakers (LFVB)," or
- l) CSA B64.8, "Dual Check Valve Backflow Preventers with Intermediate Vent (DuCV)."

2) *Back-siphonage preventers* for tank-type water closets (anti-siphon fill valves) shall conform to CSA B125.3, "Plumbing Fittings."

Div. B, 2.2.10.13. Solar Domestic Hot Water

1) Equipment for solar heating of *potable* water shall conform to CAN/CSA-F379 Series, "Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer)," excluding CAN/CSA-F379S1.

Div. B, 2.2.10.16. Air Admittance Valves

1) *Air admittance valves* shall conform to ASSE 1051, "Individual and Branch Type Air Admittance Valves (AAVs) for Sanitary Drainage Systems." (See Appendix A.)

Div. B, 2.3.2. Construction and Use of Joints
[Add new Article as follows]

2.3.2.8. Stainless Steel Welded Joints

- 1) Welding shall conform to ASME B31.9, "Building Services Piping," and accord with good engineering practice.
- 2) Butt weld pipe fittings shall have an equal or thicker section than the pipe wall specified.

[This page intentionally blank]

Set 1 - Page 68b

Div. B, 2.3.4.3. Insulation of Support
[Add new Sentence]

2) Where a hanger or support for stainless steel pipe or tube is of a material other than stainless steel, it shall be suitably separated and electrically insulated from the pipe or tube.

Div. B, T-2.3.4.5.(2)
[Substitute Table 2.3.4.5.(2) see next page]

Set 1- Page 70a

Div. B, T-2.3.4.5.(2)
 [Substitute Table 2.3.4.5.(2) with the following]

Table 2.3.4.5. Support for Nominally Horizontal Piping Forming part of Sentence 2.3.4.5.(2)		
Piping Material	Maximum Horizontal Spacing of Supports, m	Additional Support Conditions
Galvanized iron or steel pipe		
• diameter ≥ 6 inches	3.75	
• diameter < 6 inches	2.5	
Stainless steel pipe		
• diameter ≥ 1 inches	3	
• diameter < 1 inches	2.5	
Stainless steel tube		
• diameter ≥ 1 inches	3	
• diameter < 1 inches	2.5	
Lead pipe	Throughout length of pipe	
Cast-iron pipe	3	At or adjacent to each hub or joint
Cast-iron pipe with mechanical joints that is ≤ 300 mm long between adjacent fittings	1	
Asbestos-cement pipe	2 ⁽¹⁾	
Asbestos-cement pipe that is ≤ 300 mm long between adjacent fittings	1	
ABS or PVC plastic pipe	1.2	At the end of <i>branches</i> or <i>fixture drains</i> and at changes in direction and elevation
ABS or PVC plastic <i>trap arm</i> or <i>fixture drain</i> pipe > 1 m long	n/a	As close as possible to the <i>trap</i>
CPVC pipe	1	
Copper tube or copper and brass pipe, hard temper, diameter > 1 inch	3	
Copper tube or copper and brass pipe, hard temper, diameter ≤ 1 inch	2.5	
Copper tube, soft temper	2.5	
PE/AL/PE composite pipe	1	
PEX/AL/PEX composite pipe	1	
PEX plastic pipe	0.8	
PP-R plastic pipe	1	At the end of <i>branches</i> and at changes in direction and elevation

Notes to Table 2.3.4.5.:

⁽¹⁾ As an alternative, asbestos-cement pipe, which is typically manufactured in 4 m lengths, may have 2 supports per length of pipe.

[This page intentionally blank]

Div. B, 2.4.6.3. Sumps or Tanks

6) The discharge pipe from every pumped *sump* shall be equipped with a union, a *backwater valve* and a shut-off valve installed in that sequence in the direction of discharge.

Set 1 - Page 76b

Div. B, 2.5.5.2 Venting of Oil Interceptors

5) Every *vent pipe* that serves an oil ~~or-grease~~ *interceptor* and is located outside a *building* shall be not less than 3 inches in *size* in areas where it may be subject to frost closure.

[This page intentionally blank]

Set 1 - Page 90b

Div. B, 2.5.8.4. Vent Stacks or Stack Vents

5) Every *sanitary building drain* shall be provided with at least one vent that is not less than 3 inches in *size*.

[This page intentionally blank]

Set 1 -Page 94b

Div. B, 2.5.9.3. Installation Conditions

5) Every *drainage system* shall have **at least** one vent that terminates to the outdoors in conformance with Sentence 2.5.6.5.(1).

[This page intentionally blank]

Set 1 - Page 96b

Div. B, 2.6.1.8. Solar Domestic Hot Water Systems

- 1) Systems for solar heating of *potable* water shall be installed in conformance with CAN/CSA-F383 "Installation of Packaged Solar Domestic Hot Water Systems."
-

Div. B, 2.6.2.1.(3) Connection of Systems

[Replace Sentences (3) & (4) with the following]

3) *Backflow preventers* shall be selected, installed, maintained and field tested in conformance with the Water Works By-law.

~~4) Backflow preventers shall be maintained and field tested in conformance with the Water Works By-law.~~

[This page intentionally blank]

Set 3 - Page 98b

Div. B, Table 2.8.1.1.

[Adds new rows in numerical sequence as follows]

2.2.6.10. Stainless Steel Welded Joints	
(1)	[F71,F80-OH2.1,OH2.3] Applies to drainage systems and venting systems. [F46-OH2.2] Applies to water systems. [F80-OP5]
(2)	[F71,F80-OH2.1,OH2.3] Applies to drainage systems and venting systems. [F46-OH2.2] Applies to water systems. [F80-OP5]
2.2.6.11. Stainless Steel Butt Weld Pipe Fittings	
(1)	[F71,F80-OH2.1,OH2.3] Applies to drainage systems and venting systems. [F46-OH2.2] Applies to water systems. [F80-OP5]
(2)	[F71,F80-OH2.1,OH2.3] Applies to drainage systems and venting systems. [F46-OH2.2] Applies to water systems. [F80-OP5]
2.2.6.12. Stainless Steel Pipe Flanges	
(1)	[F71,F80-OH2.1,OH2.3] Applies to drainage systems and venting systems. [F46-OH2.2] Applies to water systems. [F80-OP5]
(2)	[F71,F80-OH2.1,OH2.3] Applies to drainage systems and venting systems. [F46-OH2.2] Applies to water systems. [F80-OP5]
2.2.6.13. Stainless Steel Threaded Fittings	
(1)	[F20-OP5]
(2)	[F20-OP5]
2.2.6.14. Stainless Steel Pipe and Tube	
(1)	[F46-OH2.2]
(2)	[F46-OH2.2]
2.2.6.15. Stainless Steel Welded Joints	
(1)	[F80-OH2.1,OH2.2, OH2.3]

[This page intentionally blank]

Set 1 - Page 110b

[This page intentionally blank]

Div. B, Table 2.8.1.1.

[Adds new rows in numerical sequence as follows]

2.3.2.8. Stainless Steel Welded Joints	
(1)	[F20,81–OH2.1,OH2.2,OH2.3]
(2)	[F20,81–OH2.1,OH2.2,OH2.3]

Set 1 - Page 112b

[This page intentionally blank]

Div. B, Table 2.8.1.1.

[Replace the rows associated with 2.3.4.3. as follows]

2.3.4.3. Insulation of Support	
(1)	[F80-OH2.1,OH2.3]
	[F80-OP5]
	[F80-OS3.1]
(2)	[F80-OH2.1,OH2.3]
	[F80-OP5]
	[F80-OS3.1]

Set 1 - Page 114b

Div. B, Table 2.8.1.1.

[Replace the rows associated with 2.6.3.1. as follows]

2.6.3.1. Design, Fabrication and Installation	
(1)	[F71,F72-OH2.1,OH2.3]
(2)	[F72-OH2.1][F70-OH2.2][F71-OH2.3]
(3)	[F70,F71-OH2.1,OH2.3]
	[F81-OP5]
	[F81-OS1.4]

Div. B, Table 2.8.1.1.

[Replace the rows associated with 2.6.3.1. - see page over]

Set 1 - Page 126b

Appendix A of Div. B, Appendix Note A-1.3.1.2.(1)
[Replace Table A-1.3.1.2.(1) as follows]

Table A-1.3.1.2.(1)			
Documents Referenced in the Appendices of Book II (Plumbing Systems) of the By-law			
Issuing Agency	Document Number⁽¹⁾	Title of Document⁽²⁾	By-law Reference
ASHRAE	2009	ASHRAE Handbook of Fundamentals	Appendix Note A-2.6.3.1.(2)
ASHRAE	2011	ASHRAE Handbook - HVAC Applications	Appendix Note A-2.6.3.1.(2)
ASME	B16.3-2011	Malleable-Iron Threaded Fittings, Classes 150 and 300	Table A-2.2.5., 2.2.6. and 2.2.7.
ASME	B16.4-2011	Gray Iron Threaded Fittings, Classes 125 and 250	Table A-2.2.5., 2.2.6. and 2.2.7.
ASME	B16.15-2011	Cast Copper Alloy Threaded Fittings, Classes 125 and 250	Table A-2.2.5., 2.2.6. and 2.2.7.
ASME	B16.18-2012	Cast Copper Alloy Solder-Joint Pressure Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
ASME	B16.22-2001	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
ASME	B16.23-2011	Cast Copper Alloy Solder Joint Drainage Fittings: DWV	Table A-2.2.5., 2.2.6. and 2.2.7.
ASME	B16.29-2007	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings – DWV	Table A-2.2.5., 2.2.6. and 2.2.7.
ASPE	2010	ASPE Plumbing Engineering Design Handbook	Appendix Note A-2.6.3.1.(2)
ASPE	2008	Data Book – Volume 4, Chapter 8, Grease Interceptors	A-2.4.4.3.(1)
ASTM	A 269-10	Seamless and Welded Austenitic Stainless Steel Tubing for General Service	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	A 312-11	Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	A 53/A 53M-10	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	B 42-10	Seamless Copper Pipe, Standard Sizes	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	B 43-09	Seamless Red Brass Pipe, Standard Sizes	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	B 88-09	Seamless Copper Water Tube	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	B 306-09	Copper Drainage Tube (DWV)	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	D 2466-06	Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	D 2467-06	Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	D 3138-04	Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Non-Pressure Piping Components	A-2.2.5.10. to 2.2.5.12.
ASTM	F 628-08	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core	Table A-2.2.5., 2.2.6. and 2.2.7.
ASTM	F 714-10	Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter	Table A-2.2.5., 2.2.6. and 2.2.7.
AWWA	M14-2004	Recommended Practice for Backflow Prevention and Cross-Connection Control	Table A-2.6.2.4.(2)

AWWA	ANSI/AWWA C151/A21.51-2009	Ductile-Iron Pipe, Centrifugally Cast, for Water	Table A-2.2.5., 2.2.6. and 2.2.7.
BC	S.B.C. 2003, c. 53	Environmental Management Act	A-2.7.4.1.
CCBFC	NRCC 35951	Guidelines for Application of Part 3 of the National Building Code of Canada to Existing Buildings	A-1.1.1.1.(1)
CCBFC	NRCC 40383	User's Guide – NBC 1995, Fire Protection, Occupant Safety and Accessibility (Part 3)	A-1.1.1.1.(1)
CCBFC	NRCC 43963	User's Guide – NBC 1995, Application of Part 9 to Existing Buildings	A-1.1.1.1.(1)
CCBFC	NRCC 53301	National Building Code of Canada 2010	Table A-2.2.5., 2.2.6. and 2.2.7. A-2.4.10. A-2.4.10.4.(1)
CCBFC	NRCC 53543	User's Guide – NBC 2010, Structural Commentaries (Part 4 of Division B)	A-1.1.1.1.(1)
CGSB	CAN/CGSB-34.1-94	Asbestos-Cement Pressure Pipe	Table A-2.2.5., 2.2.6. and 2.2.7.
CGSB	CAN/CGSB-34.9-94	Asbestos-Cement Sewer Pipe	Table A-2.2.5., 2.2.6. and 2.2.7.
CGSB	CAN/CGSB-34.22-94	Asbestos-Cement Drain Pipe	Table A-2.2.5., 2.2.6. and 2.2.7.
CGSB	CAN/CGSB-34.23-94	Asbestos-Cement House Connection Sewer Pipe	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	A60.1-M1976	Vitrified Clay Pipe	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-A257.1-09	Non-Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe, and Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-A257.2-09	Reinforced Circular Concrete Culvert, Storm Drain, Sewer Pipe, and Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	B64.4.1-11	Reduced Pressure Principle Backflow Preventers for Fire Protection Systems (RPF)	Table A-2.6.2.4.(2)
CSA	B64.5.1-11	Double Check Valve Backflow Preventers for Fire Protection Systems (DCVAF)	Table A-2.6.2.4.(2)
CSA	B64.6.1-11	Dual Check Valve Backflow Preventers for Fire Protection Systems (DuCF)	Table A-2.6.2.4.(2)
CSA	B64.9-11	Single Check Valve Backflow Preventers for Fire Protection Systems (SCVAF)	Table A-2.6.2.4.(2)
CSA	B64.10.1-11	Maintenance and Field Testing of Backflow Preventers	A-2.6.2.1.(3)
CSA	B70-12	Cast Iron Soil Pipe, Fittings, and Means of Joining	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	B125.3-12	Plumbing Fittings	A-2.6.1.11.(1)
CSA	CAN/CSA-B127.1-99	Asbestos Cement Drain, Waste and Vent Pipe and Pipe Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	B127.2-M1977	Components for Use in Asbestos Cement Building Sewer Systems	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B137.1-09	Polyethylene (PE) Pipe, Tubing, and Fittings for Cold-Water Pressure Services	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B137.2-09	Polyvinylchloride (PVC) Injection-Moulded Gasketed Fittings for Pressure Applications	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B137.3-09	Rigid Polyvinylchloride (PVC) Pipe and Fittings for Pressure Applications	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B137.5-09	Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications	Table A-2.2.5., 2.2.6. and 2.2.7.

			A-2.2.5.7.(1)
CSA	CAN/CSA-B137.6-09	Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing, and Fittings for Hot- and Cold-Water Distribution Systems	Table A-2.2.5., 2.2.6. and 2.2.7. A-2.2.5.10. to 2.2.5.12.
CSA	CAN/CSA-B137.9-09	Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe Systems	Table A-2.2.5., 2.2.6. and 2.2.7. A-2.2.5.13.(1)
CSA	CAN/CSA-B137.10-09	Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems	Table A-2.2.5., 2.2.6. and 2.2.7. A-2.2.5.14.(1)
CSA	CAN/CSA-B137.11-09	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications	Table A-2.2.5., 2.2.6. and 2.2.7. A-2.2.5.15.(1)
CSA	CAN/CSA-B181.1-11	Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings	Table A-2.2.5., 2.2.6. and 2.2.7. A-2.2.5.10. to 2.2.5.12.
CSA	CAN/CSA-B181.2-11	Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings	Table A-2.2.5., 2.2.6. and 2.2.7. A-2.2.5.10. to 2.2.5.12.
CSA	CAN/CSA-B181.3-11	Polyolefin and Polyvinylidene Fluoride (PVDF) Laboratory Drainage Systems	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B182.1-11	Plastic Drain and Sewer Pipe and Pipe Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B182.2-11	PSM Type Polyvinylchloride (PVC) Sewer Pipe and Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B182.4-11	Profile Polyvinylchloride (PVC) Sewer Pipe and Fittings	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-B182.6-11	Profile Polyethylene (PE) Sewer Pipe and Fittings For Leak-Proof Sewer Applications	Table A-2.2.5., 2.2.6. and 2.2.7.
CSA	CAN/CSA-G401-07	Corrugated Steel Pipe Products	Table A-2.2.5., 2.2.6. and 2.2.7.
McGraw-Hill	2006	International Plumbing Codes Handbook	A-2.6.3.
NIST	Building Materials and Structures Report BMS-79, 1941	Water-Distributing Systems for Buildings	A-2.6.3.

Notes to Table A-1.3.1.2.(1):

- (1) Some documents may have been reaffirmed or reapproved. Check with the applicable issuing agency for up-to-date information.
- (2) Some titles have been abridged to omit superfluous wording.

Appendix A of Div. B, Appendix Note A-1.3.1.2.(1)
[Replace Table A-1.3.1.2.(1) - see page over]

Set 1- Page 128d

Appendix A of Div. B, Appendix Note A-2.2.5., 2.2.6. and 2.2.7.

[In Table A-2.2.5., 2.2.6. and 2.2.7. add the following before the row headed “Welded and seamless steel galvanized pipe” (above 3rd row from bottom of page 138)]

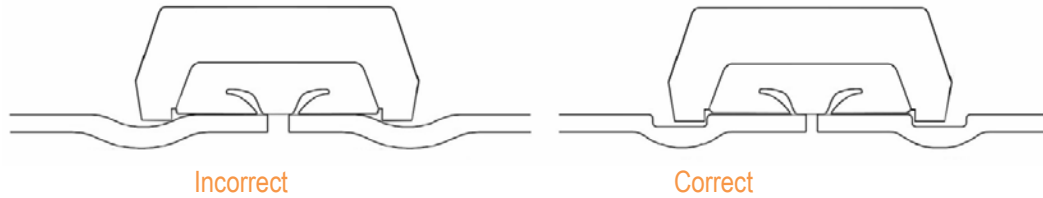
Stainless steel pipe	ASTM A 312	2.2.6.10.	P	P	P	P	P	P	P	P	P
Stainless steel tube	ASTM A 269	2.2.6.14.	N	N	N	N	N	P	P	P	P

[This page intentionally blank]

Set 1 - Page 138b

Appendix A of Div. B, Appendix Note A-2.2.10.4.(1)
[insert the following new note before A-2.2.10.5.(1)]

A-2.2.10.4.(1) Fittings in Pressure Piping Applications Piping used in pressure applications are to be grooved and constructed using tools specifically designed for that piping material. It is important that all groove profiles are to meet the fitting manufacturer's guidelines and conform to CSA-B242 "Groove and Shoulder-Type Mechanical Pipe Couplings." Overly shallow roll grooved or cut connections may result in reduced working pressures at the joint or the failure of the connection due to insufficient engagement of the coupling or from slippage at the joint. Conversely, grooves or cuts that are overly deep may result in failures of the pipe stemming from corrosion or stress concentrations at the joints.



Note: Image is exaggerated for clarity

Figure A-2.2.10.4.(1)
Insufficient Key Engagement of Fitting in Roll Grooved Connection

[This page intentionally blank]

Set 3 - Page 140b

Appendix A of Div. B, 2.6.3.1.(2) Potable Water Systems
 [Replace Table A-2.6.2.4.(2) as follows]

Table A-2.6.2.4.(2)					
Selection Guide for Backflow Prevention Devices on Fire Sprinkler and Standpipe Systems					
Forming part of Sentence 2.6.2.4.(2)					
CSA Standard Number	Type of Device ⁽¹⁾	Systems Made with Potable Water System Materials		Systems Not Made with Potable Water System Materials	
		Minor Hazard — Residential Partial Flow-Through System	Minor Hazard — Class 1 System	Moderate Hazard — Class 1, 2, 3 and 6 Systems	Severe Hazard — Any Class of System in which Antifreeze or Other Additives Are Used
CSA B64.6.1	DuCF	P	NP	NP	NP
CSA B64.9	SCVAF	P	P	NP	NP
CSA B64.5.1	DCVAF	P	P	P	NP
CSA B64.4.1	RPF	P	P	P	P
NP = Not permitted P = Permitted					

Notes to Table A-2.6.2.4.(2):

⁽¹⁾ The “F” indicates that the product is only recommended for use on fire sprinkler and standpipe systems.

[This page intentionally blank]

Set 1- Page 188b

Appendix A of Div. B, A-2.6.3.1.(2) Potable Water Systems

[Replace the 1st paragraph of note A-2.6.3.1.(2) as follows]

A-2.6.3.1.(2) Potable Water Systems The design procedures contained in the following documents are considered good engineering practice in the field of potable water systems:

- (a) ASHRAE 2011, “ASHRAE Handbook - HVAC Applications,” chapter on Service Water Heating,
- (b) ASHRAE 2009, “ASHRAE Handbook of Fundamentals,” chapter on Pipe Sizing,
- (c) ASPE 2005, “ASPE Plumbing Engineering Design Handbook,” chapter on Cold Water Systems, and
- (d) ASPE 2005, “ASPE Plumbing Engineering Design Handbook,” chapter on Domestic Water Heating Systems.

[This page intentionally blank]

Set 1- Page 190b

Div. C, Part 2 Schedule B

[Replace Schedule B – Page 1 with the following]

SCHEDULE B

Forming Part of Subsection 2.2.7, Div. C of the Building By-law

Building Permit No.
(for Building Official's use)

ASSURANCE OF PROFESSIONAL DESIGN AND COMMITMENT FOR FIELD REVIEW

- Notes: (i) This letter must be submitted prior to the commencement of *construction* activities of the components identified below.
A separate letter must be submitted by each *registered professional of record*.
(ii) This letter is endorsed by: Architectural Institute of B.C., Association of Professional Engineers and Geoscientists of B.C.
(iii) In this letter the words in italics have the same meaning as in the Building By-law.

To: *The Chief Building Official*

Re: _____
Name of Project (Print)

Address of Project (Print)

The undersigned hereby gives assurance that the design of the (Initial those of the items listed below that apply to this *registered professional of record*. All the disciplines will not necessarily be employed on every project.)

- _____ ARCHITECTURAL
- _____ STRUCTURAL
- _____ MECHANICAL
- _____ PLUMBING
- _____ FIRE SUPPRESSION SYSTEMS
- _____ ELECTRICAL
- _____ GEOTECHNICAL — temporary
- _____ GEOTECHNICAL — permanent

(Professional's Seal and Signature)

Date

components of the plans and supporting documents prepared by this *registered professional* in support of the application for the *building permit* as outlined below substantially comply with the Building By-law and other applicable enactments respecting safety except for *construction* safety aspects.

The undersigned hereby undertakes to be responsible for *field reviews* of the above referenced components during *construction*, as indicated on the "SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS" below.

CRP's Initials

Div. C, Part 2 Schedule B

[Replace Schedule B – Page 2 with the following]

BUILDING BY-LAW 2014 – CITY OF VANCOUVER

Schedule B - *Continued*

Building Permit No.
(for Building Official's Use)

Project Address

Discipline

The undersigned also undertakes to notify the *Chief Building Official* in writing as soon as possible if the undersigned's contract for *field review* is terminated at any time during *construction*.

I certify that I am a *registered professional* as defined in the Building By-law.

Registered Professional's Name (Print)

Address (Print)

Phone No.

(Professional's Seal and Signature)

Date

(If the *Registered Professional of Record* is a member of a firm, complete the following.)

I am a member of the firm _____
and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a *registered professional of record*, who is a *registered professional*. The Building By-law defines a *registered professional* to mean

- (a) a person who is registered or licensed to practise as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

CRP's Initials

Div. C, Part 2 Schedule B

[Replace Schedule B – Page 3 with the following]

BUILDING BY-LAW 2014 – CITY OF VANCOUVER	
Schedule B - <i>Continued</i>	_____ Building Permit No. <small>(for Building Official's use)</small>
	_____ Project Address
	_____ Discipline
SUMMARY OF DESIGN AND FIELD REVIEW REQUIREMENTS <small>(Initial applicable discipline below and cross out and initial only those items not applicable to the project.)</small>	
ARCHITECTURAL	
1.1 Fire resisting assemblies	
1.2 <i>Fire separations</i> and their continuity	
1.3 <i>Closures</i> , including tightness and operation	
1.4 Egress systems, including <i>access to exit</i> within <i>suites</i> and <i>floor areas</i>	
1.5 Performance and physical safety features (guardrails, handrails, etc.)	
1.6 Structural capacity of architectural components, including anchorage and seismic restraint	
1.7 Sound control	
1.8 Landscaping, screening and site grading	
1.9 Provisions for firefighting access	
1.10 Access requirements for <i>persons with disabilities</i>	
1.11 Elevating devices	
1.12 Functional testing of architecturally related fire emergency systems and devices	
1.13 Development Permit and conditions therein	
1.14 Interior signage, including acceptable materials, dimensions and locations	
1.15 Review of all applicable shop drawings	
1.16 Interior and exterior finishes	
1.17 Dampproofing and/or waterproofing of walls and slabs below <i>grade</i>	
1.18 Roofing and flashings	
1.19 Wall cladding systems	
1.20 Condensation control and cavity ventilation	
1.21 Exterior glazing	
1.22 Integration of building envelope components	
1.23 Environmental separation requirements (Part 5)	
1.24 Building envelope, Part 10 requirements - ASHRAE 90.1 or NECB requirements	
1.25 Building envelope, testing, confirmation or both as per Part 10 requirements	
_____ (Professional's Seal and Signature)	
_____ Date	
STRUCTURAL	
2.1 Structural capacity of structural components of the <i>building</i> , including anchorage and seismic restraint	
2.2 Structural aspects of <i>deep foundations</i>	
2.3 Review of all applicable shop drawings	
2.4 Structural aspects of unbonded post-tensioned concrete design and construction	
MECHANICAL	
3.1 HVAC systems and devices, including high <i>building</i> requirements where applicable	
3.2 <i>Fire dampers</i> at required <i>fire separations</i>	
3.3 Continuity of <i>fire separations</i> at HVAC penetrations	
3.4 Functional testing of mechanically related fire emergency systems and devices	
3.5 Maintenance manuals for mechanical systems	
3.6 Structural capacity of mechanical components, including anchorage and seismic restraint	
3.7 Review of all applicable shop drawings	
3.8 Mechanical systems, Part 10 - ASHRAE 90.1 or NECB requirements	
3.9 Mechanical systems, testing, confirmation or both as per Part 10 requirements	
_____ CRP's Initials	
3 of 4	
Rev. 2018-Jan-01	

Div. C, Part 2 Schedule B

[Replace Schedule B – Page 4 with the following]

BUILDING BY-LAW 2014 – CITY OF VANCOUVER	
Schedule B - <i>Continued</i>	_____ Building Permit No. <small>(for Building Official's use)</small>
	_____ Project Address
	_____ Discipline
<p>PLUMBING</p> <ul style="list-style-type: none"> 4.1 Roof drainage systems 4.2 Site and foundation drainage systems 4.3 Plumbing systems and devices 4.4 Continuity of fire separations at plumbing penetrations 4.5 Functional testing of plumbing related fire emergency systems and devices 4.6 Maintenance manuals for plumbing systems 4.7 Structural capacity of plumbing components, including anchorage and seismic restraint 4.8 Review of all applicable shop drawings 4.9 Plumbing systems, Part 10 - ASHRAE 90.1 or NECB requirements 4.10 Plumbing systems, testing, confirmation, or both as per Part 10 requirements <p>FIRE SUPPRESSION SYSTEMS</p> <ul style="list-style-type: none"> 5.1 Suppression system classification for type of occupancy 5.2 Design coverage, including concealed or special areas 5.3 Compatibility and location of electrical supervision, ancillary alarm and control devices 5.4 Evaluation of the capacity of city (municipal) water supply versus system demands and domestic demand, including pumping devices where necessary 5.5 Qualification of welder, quality of welds and material 5.6 Review of all applicable shop drawings 5.7 Acceptance testing for "Contractor's Material and Test Certificate" as per NFPA Standards 5.8 Maintenance program and manual for suppression systems 5.9 Structural capacity of sprinkler components, including anchorage and seismic restraint 5.10 For partial systems — confirm sprinklers are installed in all areas where required 5.11 Fire Department connections and hydrant locations 5.12 Fire hose standpipes 5.13 Freeze protection measures for fire suppression systems 5.14 Functional testing of fire suppression systems and devices <p>ELECTRICAL</p> <ul style="list-style-type: none"> 6.1 Electrical systems and devices, including high building requirements where applicable 6.2 Continuity of fire separations at electrical penetrations 6.3 Functional testing of electrical related fire emergency systems and devices 6.4 Electrical systems and devices maintenance manuals 6.5 Structural capacity of electrical components, including anchorage and seismic restraint 6.6 Clearances from buildings of all electrical utility equipment 6.7 Fire protection of wiring for emergency systems 6.8 Review of all applicable shop drawings 6.9 Electrical systems, Part 10- ASHRAE 90.1 or NECB requirements 6.10 Electrical systems, testing, confirmation, or both as per Part 10 requirements <p>GEOTECHNICAL — Temporary</p> <ul style="list-style-type: none"> 7.1 Excavation 7.2 Shoring 7.3 Underpinning 7.4 Temporary construction dewatering <p>GEOTECHNICAL — Permanent</p> <ul style="list-style-type: none"> 8.1 Bearing capacity of the soil 8.2 Geotechnical aspects of deep foundations 8.3 Compaction of engineered fill 8.4 Structural considerations of soil, including slope stability and seismic loading 8.5 Backfill 8.6 Permanent dewatering 8.7 Permanent underpinning 	
	<div style="border: 1px dashed black; width: 150px; height: 100px; margin: 0 auto;"></div> <p>(Professional's Seal and Signature)</p>
	_____ Date
	_____ CRP's Initials
Rev. 2018-Jan-01	4 of 4

Div. C, Part 2 Schedule C-A
[Replace Schedule C-A with the following]

BUILDING BY-LAW 2014 – CITY OF VANCOUVER

SCHEDULE C-A

Forming Part of Subsection 2.2.7, Division C of the
Building By-law

Building Permit No. _____

**ASSURANCE OF COORDINATION OF
PROFESSIONAL FIELD REVIEW**

- Notes:
- (i) This letter must be submitted after completion of the project but before the *occupancy permit* is issued, or a final inspection is made, by the *Chief Building Official*.
 - (ii) This letter is endorsed by: Architectural Institute of B.C., Association of Professional Engineers and Geoscientists of B.C.
 - (iii) In this letter the words in italics have the same meaning as in the Building By-law.

To: *The Chief Building Official*

Re: _____
Name of Project (Print)

Address of Project (Print)

Legal Description of Project (Print)

(The *coordinating registered professional* shall complete the following:)

Name (Print)

Address (Print)

(Professional's Seal and Signature)

Date

Phone No.

I hereby give assurance that

- (a) I have fulfilled my obligations for coordination of *field review* of the *registered professionals* required for the project as outlined in Subsection 2.2.7, Division C of the Building By-law and in the previously submitted Schedule A, "CONFIRMATION OF COMMITMENT BY OWNER AND BY COORDINATING REGISTERED PROFESSIONAL,"
- (b) I have coordinated the functional testing of the fire protection and life safety systems to ascertain that they substantially comply in all material respects with
 - (i) the applicable requirements of the Building By-law and other applicable enactments respecting safety, not including construction safety aspects, and
 - (ii) the plans and supporting documents submitted in support of the application for the *building permit*,
- (c) I have coordinated the field reviews to ascertain that the project substantially complies in all material respects with
 - (i) the applicable requirements of Part 10, and
 - (ii) the plans and supporting documents submitted in support of the application for the building permit,
- (d) I am a *registered professional* as defined in the Building By-law.

(If the *registered professional* is a member of a firm, complete the following:)

I am a member of the firm _____
and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a *coordinating registered professional*, who is also a *registered professional*. The Building By-law defines a *registered professional* to mean

- (a) a person who is registered or licensed to practise as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

1 of 1

Rev. 2018-Jan-01

[This page intentionally left blank]

Set 3 - Page 254b