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Ontario

April 29, 2022

NOTICE TO BUILDING CODE USERS

The enclosed replacement pages to the 2012 Building Code Compendium Edition[1] reflect recent amendments to the Building Code (O. Reg. 332/12) and *Building Code Act, 1992* (BCA) which are currently in effect. In particular, the 2012 Building Code Compendium is amended by:

- BCA changes that replace reference to "Ontario New Home Warranties Plan Act" with "New Home Construction Licensing Act, 2017" regarding definitions of builder and vendor effective February 1, 2021 that were made by SO 2017, c 33, Sched 1, s 88(1) and (2).

- O. Reg. 867/21 to incorporate the following changes effective January 1, 2022:
  - new Subsection addressing construction of tiny homes and two-permit systems where construction occurs in one municipality and building is located in another municipality;
  - permit building inspectors discretion to undertake remote inspections;
  - update outdated references to other statutes in the list of applicable law to account for changes made in 2021 by the new Ontario Land Tribunal Act, 2021, as well as changes to the Ontario Heritage Act.

- O. Reg. 217/22 to incorporate the following changes effective July 1, 2022:
  - new Article requiring truss and lightweight construction information be provided to fire chief or municipal clerk within 45 days of permit being issued.

- O. Reg. 434/22 to incorporate the following changes effective April 26, 2022:
  - new Subsection to include measures related to the Building Code to transition provisions from the Temporary Health or Residential Facilities Emergency Order that exempt temporary shelters and health facilities created to respond to the COVID-19 pandemic from having to obtain a building permit or a change of use permit and exempts these buildings from complying with the technical requirements of the Building Code.

[1] The Compendium is not an official copy of the Act and Code. Official copies of the legislation can be accessed from www.e-laws.gov.on.ca.

- O. Reg. 451/22 to incorporate the following changes:
    - new Article exempting storage sheds of up to 15 m^2 in area from Building Code requirements effective April 29, 2022;
    - new Subsection allowing encapsulated mass timber buildings to be constructed up to 12 storeys high effective July 1, 2022;
    - removing barriers to multi-residential premanufactured modular construction projects effective July 1, 2022;
    - supporting local building official internship programs effective July 1, 2022;
    - new Article addressing provisions to allow for the early and partial occupancy for super tall buildings (i.e., those that are 65 storeys or more) effective November 1, 2022.

Changes to the Compendium are identified on the amendment pages by a unique symbol and a corresponding effective date. These pages should be inserted in your Code now with the exception of pages identified with a date bar at the bottom indicating an effective date of November 1, 2022. These pages should be kept after the tab "Pending Amendments" in Volume 1 until they come into effect.

ServiceOntario Publications is the official publisher and vendor of the 2012 Building Code Compendium and the amendment pages. You may contact ServiceOntario Publications by phone at 416-326-5300, 1-800-668-9938 (toll-free), TTY 1-800-268-7095 or www.serviceontario.ca/publications.

For further information, please visit the Building Code website at www.ontario.ca/buildingcode.

2012 Building Code Compendium

Volume 1

April 29, 2022 update
(Containing O. Regs. 867/21, 217/22; 434/22 and 451/22)

COMMENCEMENT

Ontario Regulation 332/12 comes into force on the 1st day of January, 2014.

r1 Amending Ontario Regulation 151/13 comes into force on the 1st day of January, 2014.
r2 Amending Ontario Regulation 360/13 comes into force on the 1st day of January, 2014.
r2.1 Amending Ontario Regulation 360/13 comes into force on the 1st day of January, 2015.
r3 Amending Ontario Regulation 361/13 comes into force on the 1st day of January, 2014.
r3.1 Amending Ontario Regulation 361/13 comes into force on the 1st day of January, 2015.
r4 Amending Ontario Regulation 368/13 comes into force on the 1st day of January, 2015.
r5 Amending Ontario Regulation 191/14 comes into force on the 1st day of January, 2015.
r6 Amending Ontario Regulation 139/17 comes into force on the 1st day of July, 2017.
r6.1 Amending Ontario Regulation 139/17 comes into force on the 1st day of January, 2018.
r7 Amending Ontario Regulation 462/17 comes into force on the 1st day of January, 2018.
r8 Amending Ontario Regulation 563/17 comes into force on the 1st day of January, 2018.
r9 Amending Ontario Regulation 79/18 comes into force on the 3rd day of April, 2018.
r10 Amending Ontario Regulation 388/18 comes into force on the 20th day of July, 2018.
r11 Amending Ontario Regulation 88/19 comes into force on the 2nd day of May, 2019.
r11.1 Amending Ontario Regulation 88/19 comes into force on the 1st day of January, 2020.
r11.2 Amending Ontario Regulation 88/19 comes into force on the 1st day of January, 2022.
r12 Amending Ontario Regulation 87/19 comes into force on the 1st day of July, 2019.
r13 Amending Ontario Regulation 209/20 comes into force on the 11th day of May, 2020.
r14 Amending Ontario Regulation 511/20 comes into force on the 18th day of September, 2020.
r15 Amending Ontario Regulation 762/20 comes into force on the 16th day of December, 2020.
r16 Amending Ontario Regulation 867/21 comes into force on the 1st day of January, 2022.
r17 Amending Ontario Regulation 217/22 comes into force on the 1st day of July, 2022.
r18 Amending Ontario Regulation 434/22 comes into force on the 27th day of April, 2022.
r19 Amending Ontario Regulation 451/22 comes into force on the 29th day of April, 2022.
r19.1 Amending Ontario Regulation 451/22 comes into force on the 1st day of July, 2022.
r19.2 Amending Ontario Regulation 451/22 comes into force on the 1st day of November 2022.

m1 Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-13-S-24 comes into force on the 1st day of January 2014.

m2 Ruling of the Minister of Municipal Affairs (Minister's Ruling) MR-16-S-25 comes into force on the 7th day of July 2016.

m3 Ruling of the Minister of Municipal Affairs (Minister's Ruling) MR-16-S-26 comes into force on the 7th day of July 2016.

m4 Ruling of the Minister of Municipal Affairs (Minister's Ruling) MR-16-S-27 comes into force on the 1st day of January 2017.

m5 Ruling of the Minister of Municipal Affairs (Minister's Ruling) MR-17-S-28 comes into force on the 1st day of January 2018.

EDITORIAL

e1 Editorial correction issued for January 1st, 2014.
e2 Editorial correction issued for January 1st, 2014.
e2.1 Editorial correction issued for January 1st, 2015.
e3 Editorial correction issued for January 1st, 2015.
e4 Editorial correction issued for July 7th, 2016.
e5 Editorial correction issued for January 1st, 2017.
e6 Editorial correction issued for July 1st, 2017.
e6.1 Editorial correction issued for January 1st, 2018.
e7 Editorial correction issued for January 1st, 2018.
e8 Editorial correction issued for January 1st, 2020.
e8.1 Editorial correction issued for January 1st, 2022.
e9 Editorial correction issued for July 1st, 2019.
e10 Editorial correction issued for December 16th, 2020.
e11 Editorial correction issued for July 1, 2022.
e12 Editorial correction issued for November 1, 2022.

COVER PHOTO CREDITS

1	2	3	4
5	6	7	8

1. Stephen Hawking Centre at the Perimeter Institute of Theoretical Physics; Teeple Architects Inc.; Scott Norsworthy Photography
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Code Amendment History

The first Ontario Building Code was issued in 1975. The 1975 and subsequent editions of the Building Code have been issued as follows:

Building Code Edition	Date Filed	Effective Date
O. Reg. 925/75 (1975 Building Code)	November 24, 1975	December 31, 1975
O. Reg. 583/83 (1983 Building Code)	September 15, 1983	November 30, 1983
O. Reg. 419/86 (1986 Building Code)	July 18, 1986	October 20, 1986
O. Reg. 413/90 (1990 Building Code)	July 30, 1990	October 1, 1990
O. Reg. 403/97 (1997 Building Code)	November 3, 1997	April 6, 1998
O. Reg. 350/06 (2006 Building Code)	June 28, 2006	December 31, 2006
O. Reg. 332/12 (2012 Building Code)	November 2, 2012	January 1, 2014

The following Table lists the amendments to the 2012 Building Code made since the filing of O. Reg. 332/12.

Regulatory Amendments to the 2012 Building Code – Ontario Regulation 332/12			
Amendment	Date Filed	Effective Date	Nature of Amendment
O. Reg. 151/13	May 9, 2013	January 1, 2014	Sprinklering of retirement homes
O. Reg. 360/13	December 20, 2013	January 1, 2014	Fees
		January 1, 2015	
O. Reg. 361/13	December 20, 2013	January 1, 2014	Housekeeping changes, fireplace emission limits Revise Supplementary Standard SA-1
		January 1, 2015	EIFS
O. Reg. 368/13	December 27, 2013	January 1, 2015	Accessibility
O. Reg. 191/14	September 23, 2014	January 1, 2015	Midrise wood construction, accessibility, housekeeping changes Revise Supplementary Standards SA-1, SB-1, SB-2, SB-3, SB-12
O. Reg. 139/17	May 17, 2017	July 1, 2017	Retirement homes, 2 unit houses Revise Supplementary Standard SA-1
		January 1, 2018	Electric vehicle charging, pipe sizing, sewage systems Revise Supplementary Standard SA-1
O. Reg. 462/17	December 7, 2017	January 1, 2018	Applicable law
O. Reg. 563/17	December 19, 2017	January 1, 2018	Electric vehicle charging

Regulatory Amendments to the 2012 Building Code – Ontario Regulation 332/12 (Cont'd)			
Amendment	Date Filed	Effective Date	Nature of Amendment
O. Reg. 79/88	March 6, 2018	April 3, 2018	Applicable law
O. Reg. 388/18	July 20, 2018	July 20, 2018	Occupancy requirements - Lower Don Area
O. Reg. 87/19	May 2, 2019	July 1, 2019	Cannabis extraction operation
O. Reg. 88/19	May 2, 2019	May 2, 2019	Electric vehicle charging, leaching chambers
		January 1, 2020	Harmonization with 2015 mNBC and 2015 mNPC changes
		January 1, 2022	Stairs, ramps, handrails and guards
O. Reg. 209/20	May 11, 2020	May 11, 2020	Delivery of building code services, construction restrictions
O. Reg. 511/20	September 18, 2020	September 18, 2020	Applicable law - community benefits charges
O. Reg. 762/20	December 16, 2020	December 16, 2020	Applicable law, housekeeping changes
O. Reg. 867/21	December 20, 2021	January 1, 2022	Applicable law, tiny homes, remote inspections
O. Reg. 217/22	March 16, 2022	July 1, 2022	Truss and lightweight construction information
O. Reg. 434/22	April 26, 2022	April 26, 2022	Temporary health or residential facilities measures
O. Reg. 451/22	April 29, 2022	April 29, 2022	Sheds
		July 1, 2022	Encapsulated mass timber construction, factory-built buildings, qualifications for intern inspectors
		November 1, 2022	Occupancy permit for super tall buildings

The following Table lists Minister's Rulings that have been made to adopt amendments to codes, formulae, standards, guidelines or procedures referenced in the 2012 Building Code.

Minister's Rulings to adopt amendments to codes, formulae, standards, guidelines or procedures referenced in the 2012 Building Code			
Ruling Number	Date of Ruling	Effective Date	Nature of Amendment
MR-13-S-24	September 1, 2013	January 1, 2014	Revise Table 1.3.1.2. of Division B Revise Supplementary Standards SA-1, SB-5 and SB-12
MR-16-S-25	July 7, 2016	July 7, 2016	Revise Table 1.3.1.2. of Division B Revise Supplementary Standard SB-5
MR-16-S-26	July 7, 2016	July 7, 2016	Revise Table 1.3.1.2. of Division B Revise Supplementary Standard SB-12
MR-16-S-27	December 22, 2016	January 1, 2017	Revise Table 1.3.1.2. of Division B Revise Supplementary Standard SB-10
MR-17-S-28	December 29, 2017	January 1, 2018	Revise Table 1.3.1.2. of Division B Revise Supplementary Standard SA-1

Building Code Act, 1992

S.O. 1992, Chapter 23

as amended by:	S.O. 1997	c. 24, s. 224 except s. 224(17) in force June 17, 1998
	S.O. 1997	c. 30, Schedule B, s. 1-20 in force April 6, 1998
	S.O. 1999	c. 12, Schedule M, s. 1-11 in force December 22, 1999
	S.O. 2000	c. 5, s. 7 in force January 1, 2001
	S.O. 2000	c. 26, Schedule K, s. 1 in force December 6, 2000
	S.O. 2002	c. 9, s. 5, 6(1), (2), 16, 24, 25, 27, 31(1), 34, 40(1), 41(1), 43, 51(6), (9), (11)-(15), 53(3), 54, 55 in force September 1, 2003
	S.O. 2002	c. 9, s. 1-4, 6(3), 7-15, 17-19, 20(1), (2), 21-23, 26, 28-30, 31(2), 32, 33, 35-39, 40(2), (3), 41(2), 42, 44-50, 51(1), (2), (4), (5), (7), (8), (10), 52, 53(1), (2) in force July 1, 2005
	S.O. 2002	c. 17, Schedule C, s. 1-6 in force July 1, 2005
	S.O. 2002	c. 17, Schedule F, Table in force January 1, 2003
	S.O. 2005	c. 33, s. 1 in force December 15, 2005
	S.O. 2006	c. 19, Schedule O, s. 1 in force June 22, 2006
	S.O. 2006	c. 21, Schedule F, s. 104, 136(1) in force July 25, 2007
	S.O. 2006	c. 22, s. 112 in force July 3, 2007
	S.O. 2006	c. 32, Schedule C, s. 3 in force January 1, 2007
	S.O. 2006	c. 33, Schedule Z.3, s. 4 in force January 1, 2009
	S.O. 2006	c. 35, Schedule C, s. 8 in force August 20, 2007
	S.O. 2009	c. 12, Schedule J in force May 14, 2009
	S.O. 2009	c. 33, Schedule 6, s. 43 in force June 1, 2011
	S.O. 2009	c. 33, Schedule 21, s. 2(1) in force December 15, 2009
	S.O. 2009	c. 33, Schedule 21, s. 2(4), (7), (8) and (9) in force July 1, 2010
	S.O. 2009	c. 33, Schedule 21, s. 2(2), (3), (5) and (6) in force January 1, 2011
	S.O. 2010	c. 19, Schedule 2, s. 1, s. 2(1), (2) in force April 1, 2011
	S.O. 2014	c. 7, Schedule 3, s. 1 in force July 23, 2014
	S.O. 2015	c. 28, Schedule 1, s. 147 in force January 1, 2018
	S.O. 2017	c. 10, Schedule 4, s. 1 in force May 30, 2017
	S.O. 2017	c. 33, Sched 1, s. 88(1) and (2) in force February 1, 2021
	S.O. 2017	c. 34, Sched. 2, s. 1, 2(1)-(3), 3, 4(1), (2), 5, 6(1), (2), 7, 8(1), (2), 9, 10, 11, 12(1)-(3), 13(1)-(3), 14, 15, 16(1), (2), 17(1), (2), 18 (1), 20, 21(1)-(3), 22, 24(1), (5), (6), 25(1), (2) in force December 14, 2017
	S.O. 2019	c. 14, Sched. 14, s. 1-3 in force December 10, 2019
	S.O. 2020	c. 16, Sched. 1 TBD
	S.O. 2020	c. 18, Sched. 1, s. 1-3 in force July 21, 2020

(i) requiring the person to whom a permit is issued to erect and maintain fences to enclose the site of the construction or demolition within such areas of the municipality as may be prescribed;

(j) prescribing the height and description of the fences required under clause (i). 1992, c. 23, s. 7; 1997, c. 30, Sched. B, s. 6; 1999, c. 12, Sched. M, s. 3; 2002, c. 9, s. 11(1); 2002, c. 17, Sched. F, Table; 2006, c. 19, Sched. O, s. 1(5); 2006, c. 22, s. 112(3-5); 2017, c. 34, Sched. 2, s. 4(1); 2020, c. 18, Sched. 1, s. 2.

Fees

(2) The total amount of the fees authorized under clause (1)(c) must not exceed the anticipated reasonable costs of the principal authority to administer and enforce this Act in its area of jurisdiction. 2002, c. 9, s. 11(2).

Reduction in Fees

(3) A regulation, by-law or resolution establishing fees under subclause (1)(c)(i) must provide for reduced fees to be payable in respect of the construction of a building for which a registered code agency is appointed under section 4.2. 2002, c. 9, s. 11(2); 2017, c. 34, Sched. 2, s. 4(2).

Report on Fees

(4) Every 12 months, each principal authority shall prepare a report that contains such information as may be prescribed about any fees authorized under clause (1)(c) and costs of the principal authority to administer and enforce this Act in its area of jurisdiction. 2002, c. 9, s. 11(2).

Same

(5) The principal authority shall make its report available to the public in the manner required by regulation. 2002, c. 9, s. 11(2).

Change in Fees

(6) If a principal authority proposes to change any fee imposed under clause (1)(c), the principal authority shall,

(a) give notice of the proposed changes in fees to such persons as may be prescribed; and

(b) hold a public meeting concerning the proposed changes. 2002, c. 9, s. 11(2); 2006, c. 22, s. 112(6).

Same, Notice

(7) The notice of proposed changes in fees must contain the prescribed information, including information about the public meeting, and must be given in the prescribed manner. 2002, c. 9, s. 11(2).

Same, Public Meeting

(8) The public meeting concerning proposed changes in fees must be held within the period specified by regulation before the regulation, by-law or resolution to implement the proposed changes is made. 2002, c. 9, s. 11(2).

Fees May be Added to Tax Roll

(8.1) Section 398 of the *Municipal Act, 2001* or section 264 of the *City of Toronto Act, 2006*, as the case may be, applies, with necessary modifications, to fees established by a municipality or local board under clause (1)(c) and, with the approval of the treasurer of a local municipality, to fees established under clause (1)(c) by a conservation authority whose area of jurisdiction includes any part of the local municipality. 2006, c. 22, s. 112(7).

Forms

(9) The power to prescribe forms under clause (1)(f) does not include the power to prescribe a form for a particular purpose where there is a form for that purpose prescribed in the building code or approved by the Minister. 2002, c. 9, s. 11(2); 2006, c. 21, Sched. F, s. 104(4).

Code of Conduct

7.1(1) A principal authority shall establish and enforce a code of conduct for the chief building official and inspectors. 2002, c. 9, s. 12.

Purposes

(2) The following are the purposes of a code of conduct:

1. To promote appropriate standards of behaviour and enforcement actions by the chief building official and inspectors in the exercise of a power or the performance of a duty under this Act or the building code.
2. To prevent practices which may constitute an abuse of power, including unethical or illegal practices, by the chief building official and inspectors in the exercise of a power or the performance of a duty under this Act or the building code.
3. To promote appropriate standards of honesty and integrity in the exercise of a power or the performance of a duty under this Act or the building code by the chief building official and inspectors. 2002, c. 9, s. 12.

Contents

(3) A code of conduct must provide for its enforcement and include policies or guidelines to be used when responding to allegations that the code has been breached and disciplinary actions that may be taken if the code is breached. 2002, c. 9, s. 12.

Public Notice

(4) The principal authority shall ensure that the code of conduct is brought to the attention of the public. 2002, c. 9, s. 12.

Construction and Demolition

Building Permits

8(1) No person shall construct or demolish a building or cause a building to be constructed or demolished unless a permit has been issued therefor by the chief building official. 1992, c. 23, s. 8(1); 1997, c. 30, Sched. B, s. 7(1).

Application for Permit

(1.1) An application for a permit to construct or demolish a building may be made by a person specified by regulation and the prescribed form or the form approved by the Minister must be used and be accompanied by the documents and information specified by regulation. 2002, c. 9, s. 14(1); 2006, c. 21, Sched. F, s. 104(5).

Issuance of Permits

(2) The chief building official shall issue a permit referred to in subsection (1) unless,

(a) the proposed building, construction or demolition will contravene this Act, the building code or any other applicable law;

(b) the applicant is a builder or vendor as defined in subsection 1(1) of the *New Home Construction Licensing Act, 2017* and is not licensed under that Act;

(b.1) the *Architects Act* or the *Professional Engineers Act* requires that the proposed construction of the building be designed by an architect or a professional engineer or a combination of both and the proposed construction is not so designed;

(c) a person who prepared drawings, plans, specifications or other documents or gave an opinion concerning the compliance of the proposed building or construction with the building code does not have the applicable qualifications, if any, set out in the building code or does not have the insurance, if any, required by the building code;

(d) the plans review certificate, if any, required for the application does not contain the prescribed information;

(e) the application for the permit is not complete; or

(f) any fees due have not been paid. 2002, c. 9, s. 14(2); 2014, c. 7, Sched. 3, s. 1; 2015, c. 28, Sched. 1, s. 147; 2017, c. 33, Sched. 1, s. 88(1).

Restriction

(2.1) If the application includes a plans review certificate that contains the prescribed information, the chief building official is not entitled to refuse to issue the permit on the grounds that the proposed construction of the building to which the certificate relates does not comply with the building code. 2002, c. 9, s. 14(2).

Decision

(2.2) If an application for a permit meets the requirements prescribed by regulation, the chief building official shall, unless the circumstances prescribed by regulation apply, decide within the period prescribed by regulation whether to issue the permit or to refuse to issue it. 2009, c. 33, Sched. 21, s. 2(2).

Same, Reasons for Refusal

(2.3) If the chief building official refuses to issue the permit, he or she shall inform the applicant of all of the reasons for the refusal of the permit and shall do so within the period prescribed by regulation. 2002, c. 9, s. 14(2).

Conditional Permit

(3) Even though all requirements have not been met to obtain a permit under subsection (2), the chief building official may issue a conditional permit for any stage of construction if,

(a) compliance with by-laws passed under sections 34 and 38 of the *Planning Act* and with such other applicable law as may be set out in the building code has been achieved in respect of the proposed building or construction;

(b) the chief building official is of the opinion that unreasonable delays in the construction would occur if a conditional permit is not granted; and

(c) the applicant and such other person as the chief building official determines agree in writing with the municipality, upper-tier municipality, board of health, planning board, conservation authority or the Crown in right of Ontario to,

(i) assume all risk in commencing the construction,

(ii) obtain all necessary approvals in the time set out in the agreement or, if none, as soon as practicable,

(iii) file plans and specifications of the complete building in the time set out in the agreement,

(iv) at the applicant's own expense, remove the building and restore the site in the manner specified in the agreement if approvals are not obtained or plans filed in the time set out in the agreement, and

Contents
(3) A complaints policy shall include the prescribed provisions and provisions respecting the prescribed matters. 2017, c. 34, Sched. 2, s. 15.

Public Notice
(4) The principal authority shall bring the complaints policy to the attention of the public by,

(a) posting a copy of the policy on the website of the principal authority; or

(b) allowing members of the public, during normal business hours, to inspect and copy the policy at their own expense. 2017, c. 34, Sched. 2, s. 15.

Record of Complaints re Program
15.10.6(1) A principal authority shall, in accordance with this Act and the building code, maintain a record of,

(a) complaints described in clause 15.10.5(1)(a) that are submitted to the principal authority; and

(b) any enforcement action taken in response to the complaint or, if no enforcement action is taken, the reasons for not taking action. 2017, c. 34, Sched. 2, s. 15.

Information About Complaints
(2) The principal authority shall provide prescribed information about complaints and enforcement described in subsection (1) in the circumstances and in the manner prescribed. 2017, c. 34, Sched. 2, s. 15.

Qualifications

Qualifications for Various Positions
15.11(1) A person is not eligible to be appointed as a chief building official unless he or she has the qualifications set out in the building code for the position. 2002, c. 9, s. 27.

Same
(2) Subsection (1) also applies to every inspector who has the same powers and duties as a chief building official in relation to sewage systems or to plumbing, to the extent of those powers and duties. 2002, c. 9, s. 27.

Qualifications for Inspectors
(3) A person is not eligible to be appointed as an inspector under this Act unless he or she has the qualifications set out in the building code for the position. 2002, c. 9, s. 27.

Qualifications for Registered Code Agencies
(4) A person is not eligible to be appointed as a registered code agency under this Act unless the person has the qualifications and meets the requirements set out in the building code. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(7).

Qualifications for Designers
(5) A person is not eligible to engage in any of the following activities unless he, she or it has the qualifications and meets the requirements set out in the building code to be a designer:

1. Prepare a design or give other information or opinion concerning whether a building or part of a building complies with the building code, if the design, information or opinion is to be submitted to a chief building official in connection with,
   i. an application for a permit,
   ii. a request for the authorization referred to in subsection 8(12) or (13), or
   iii. a report described in paragraph 2.
2. If a general review of the construction of a building or part of a building is required by the building code, prepare a written report based on the general review. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(7).

Same
(6) In subsection (5),

"design" includes a plan, specification, sketch, drawing or graphic representation respecting the construction of a building. 2002, c. 9, s. 27.

Persons Conducting Building Condition Evaluations
(6.1) A person is not eligible to conduct a building condition evaluation under this Act unless the person has the qualifications and meets the requirements set out in the building code. 2017, c. 34, Sched. 2, s. 16(1).

Prohibition
(7) No person shall represent, directly or indirectly, that he, she or it has the qualifications or meets the requirements established under this section if the person does not have those qualifications or does not meet those requirements. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(7).

Non Application

(8) Subsections (5) and (6.1) do not apply to a holder of any licence or certificate issued under the *Architects Act* or the *Professional Engineers Act*. 2014, c. 7, Sched. 3, s. 2; 2017, c. 34, Sched. 2, s. 16(2).

Qualifications re Sewage Systems

15.12(1) No person shall engage in the business of constructing on site, installing, repairing, servicing, cleaning or emptying sewage systems unless the person has the qualifications set out in the building code and is registered in accordance with the building code. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(8); 2017, c. 34, Sched. 2, s. 17(1).

Prohibition

(2) No person shall represent, directly or indirectly, that the person has the qualifications or is registered as specified in this section if the person does not have those qualifications or is not registered as specified. 2017, c. 34, Sched. 2, s. 17(2).

Duty to Notify the Chief Building Official

(3) If any part of the construction of a building will be undertaken by a person described in subsection (1) (a "specified person"), no person shall begin or continue the construction of a sewage system, or cause it to begin or continue, unless the person has given the chief building official the prescribed information about the specified person. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(8).

Duty to Have Insurance

15.13(1) Every registered code agency, every person referred to in subsections 15.11 (5) and (6.1) and such other persons as may be specified in the building code who construct buildings are required to have the insurance coverage specified by the building code. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(9); 2017, c. 34, Sched. 2, s. 18(1).

Exception

(2) Subsection (1) does not apply to a person who is a builder or vendor as defined in subsection 1(1) of the *New Home Construction Licensing Act, 2017* in respect of the construction of a building. 2017, c. 33, Sched. 1, s. 88(2).

Prohibition

(3) No person shall represent, directly or indirectly, that he, she or it has the insurance coverage required by subsection (1) if the person does not have that insurance coverage. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(10).

Qualification or Requirement

(4) If the building code so provides, the insurance coverage constitutes a qualification or requirement for the purposes of a position referred to in section 15.11. 2002, c. 9, s. 27.

Duty to Notify the Chief Building Official

(5) If any part of the construction of a building will be undertaken by a person who is required by subsection (1) to have insurance (a "specified person"), no person shall begin or continue the construction, or cause it to begin or continue, unless the person has given the chief building official the prescribed information about the specified person and the insurance coverage of the specified person. 2002, c. 9, s. 27; 2006, c. 19, Sched. O, s. 1(10).

Powers and Duties of Registered Code Agencies

Notice to Chief Building Official

15.14(1) Every registered code agency shall give the chief building official such information as may be prescribed by regulation. 2002, c. 9, s. 28.

Notice to the Director

(2) Every registered code agency shall give the director such information as may be prescribed by regulation. 2002, c. 9, s. 28.

Functions of Registered Code Agencies

15.15 The following are the functions that a registered code agency may be appointed to perform in respect of the construction of a building:

1. Review designs and other materials to determine whether the proposed construction of a building complies with the building code.
2. Issue plans review certificates.
3. Issue change certificates.
4. Inspect the construction of a building for which a permit has been issued under this Act.
5. Issue final certificates.
6. Perform such other functions as may be authorized under this Act or in the building code. 2002, c. 9, s. 28.

Scope of Agency's Powers

15.16(1) A registered code agency may exercise the powers and perform the duties specified in this Act and the building code in respect only of the functions and the building specified in a particular appointment. 2002, c. 9, s. 28.

Closed container means a container so sealed by means of a lid or other device that neither liquid nor vapour will escape from it at ordinary temperatures.

r11.1 *Closure* means a device or assembly for closing an opening through a *fire separation* or an exterior wall, such as a door, a shutter, a damper, wired glass and glass block, and includes all components such as hardware, closing devices, frames and anchors.

Combustible means that a material fails to meet the acceptance criteria of CAN/ULC-S114, "Test for Determination of Non-Combustibility in Building Materials".

r19.1 *Combustible construction* means that type of construction that does not meet the requirements for *noncombustible construction* or *encapsulated mass timber construction.*

Combustible fibres means finely divided combustible vegetable or animal fibres and thin sheets or flakes of such materials which, in a loose, unbaled condition, present a flash fire hazard, and includes cotton, wool, hemp, sisal, jute, kapok, paper and cloth.

Combustible liquid means any liquid having a *flash point* at or above 37.8°C and below 93.3°C.

Compliance alternative means a substitute for a requirement in another Part of Division B that is listed in Part 10 or 11 of Division B, and "*C.A.*" has a corresponding meaning.

Compressed gas means,

(a) any contained mixture or material having a vapour pressure exceeding one or both of the following,
  (i) 275.8 kPa (absolute) at 21°C, or
  (ii) 717 kPa (absolute) at 54°C, or
(b) any liquid having a vapour pressure exceeding 275.8 kPa (absolute) at 37.8°C.

Computer room means a room,

(a) that contains electronic computer or data processing equipment such as main frame type,
(b) that is separated from the remainder of the *building* for the purpose of controlling the air quality in the room by a self-contained climate control system, and
(c) that has an *occupant load* of not more than one person for each 40 m² of the room.

Conditioned space means space within a *building* in which the temperature is controlled to limit variation in response to the exterior ambient temperature or interior differential temperatures by the provision, either directly or indirectly, of heating or cooling over substantial portions of the year.

Construction index means a level on a scale of 1 to 8 determined in accordance with Table 11.2.1.1.A. of Division B designating the expected *performance level* of the *building* structure with respect to the type of *construction* and fire protection of an existing *building*, and "*C.I.*" has a corresponding meaning.

Contained use area means a supervised area containing one or more rooms in which occupant movement is restricted to a single room by security measures not under the control of the occupant.

r5 *Continuous vent* means a *vent pipe* that is an extension of a vertical section of a *branch* or *fixture drain*.

Cooktop means a cooking surface having one or more burners or heating elements.

Critical level means the level of submergence at which a *back-siphonage preventer* ceases to prevent *back-siphonage*.

r11.1 *Dangerous goods* means those products or substances that are,

(a) regulated by the *Transportation of Dangerous Goods Regulations* made under the *Transportation of Dangerous Goods Act, 1992* (Canada), or
(b) classified as controlled products under the *Hazardous Products Regulations* made under the *Hazardous Products Act* (Canada).

Day camp means a camp or resort that admits persons for a continuous period not exceeding 24 hours.

Dead end means a pipe that terminates with a closed fitting.

Dead load means the weight of all permanent structural and nonstructural components of a *building*.

Deep foundation means a *foundation unit* that provides support for a *building* by transferring loads either by end-bearing to a *soil* or *rock* at considerable depth below the *building* or by adhesion or friction, or both, in the *soil* or *rock* in which it is placed. *Piles* are the most common type of *deep foundation*.

Design activities means the activities described in subsection 15.11(5) of the Act.

Design bearing pressure means the pressure applied by a *foundation unit* to *soil* or *rock*, which pressure is not greater than the *allowable bearing pressure*.

Design capacity means, in the definition of *sewage system*, the total daily design *sanitary sewage* flow determined in accordance with Article 8.2.1.3. of Division B.

Designer means the person responsible for the design.

Design load means the load applied to a *foundation unit*, which load is not greater than the *allowable load*.

Detention occupancy (Group B, Division 1) means an *occupancy* in which persons are under restraint or are incapable of self preservation because of security measures not under their control.

Developed length means, when applied to a pipe and fittings, the length along the centre line of the pipe and fittings.

Directly connected means physically connected in such a way that neither water nor gas can escape from the connection.

Distilled beverage alcohol means a beverage that is produced by fermentation and contains more than 20% by volume of water-miscible alcohol.

Distillery means a *process plant* where *distilled beverage alcohols* are produced, concentrated or otherwise processed, and includes facilities on the same site where the concentrated products may be blended, mixed, stored or packaged.

Distributing pipe means a pipe or piping in a *water distribution system*.

r6.1 *Distribution box* means a device for ensuring that *effluent* from a *treatment unit* is distributed in equal amounts to each line of *distribution pipe* or *leaching chamber* in a *leaching bed*.

Distribution pipe means a line or lines of perforated or open jointed pipe or tile installed in a *leaching bed* for the purpose of distributing *effluent* from a *treatment unit* to the *soil*, as defined in Part 8 of Division B, or *leaching bed fill* in the *leaching bed*.

Diving board means a flexible board.

Diving platform means a rigid platform that is not a *starting platform*.

Drainage system means an assembly of pipes, fittings, *fixtures* and appurtenances on a property that is used to convey *sewage* and *clear water waste* to a main sewer or a *private sewage disposal system*, and includes a *private sewer*, but does not include *subsoil drainage piping*.

Drinking water system has the same meaning as in subsection 2(1) of the *Safe Drinking Water Act, 2002*.

Drum trap means a *trap* whose inlet and outlet are in the sides of the cylindrical body of the *trap*.

Dual vent means a *vent pipe* that serves two *fixtures* and connects at the junction of the *trap arms*.

Dwelling unit means a *suite* operated as a housekeeping unit, used or intended to be used by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities.

Earth pit privy means a latrine consisting of an excavation in the ground surmounted by a superstructure.

Effluent means *sanitary sewage* that has passed through a *treatment unit*.

Electric space heating means an electric energy source that provides more than 10 per cent of the heating capacity provided for a *building* and includes,

(a) electric resistance unitary baseboard heating,
(b) electric resistance unitary cabinet heating,
(c) electric resistance ceiling cable or floor cable heating,
(d) electric resistance central furnace heating,
(e) electric hot water space heating, and
(f) air source heat pumps in combination with electric resistance backup heating.

r19.1 *Encapsulated mass timber construction* means that type of construction in which a degree of fire safety is attained by the use of encapsulated mass timber elements with an *encapsulation rating* and minimum dimensions for structural members and other *building* assemblies.

r19.1 *Encapsulation rating* means the time in minutes that a material or assembly of materials will delay the ignition and combustion of encapsulated mass timber elements when it is exposed to fire under specified conditions of test and performance criteria, or as otherwise prescribed by this Code.

Excavation means the space created by the removal of *soil*, *rock* or *fill* for the purposes of construction.

Exhaust duct means a duct through which air is conveyed from a room or space to the outdoors

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1.4.1.3. Definition of Applicable Law (See Appendix A.)

(1) For the purposes of clause 8(2)(a) of the Act, *applicable law* means,

(a) the statutory requirements in the following provisions with respect to the following matters:

r15 (0.0.i) section 3 of the *Building Transit Faster Act, 2020* with respect to the issuance of a permit under that section;

r6 (0.i) section 14 of Ontario Regulation 137/15 (General) made under the *Child Care and Early Years Act, 2014* with respect to the approval of plans for a new *building* to be erected or an existing *building* to be used, altered or renovated for use as a *child care centre* or for alterations or renovations to be made to premises used by a *child care centre*,

r16 (i) section 114 of the *City of Toronto Act, 2006* with respect to the approval by the City of Toronto or the Ontario Land Tribunal of plans and drawings,

(ii) section 59 of the *Clean Water Act, 2006* with respect to the issuance of a notice by the risk management official for the *construction* of a *building*,

r6 (iii) reserved,

(iv) section 194 of the *Education Act* with respect to the approval of the Minister for the *demolition* of a *building*,

r11 (v) reserved,

r16 (vi) section 5 of the *Environmental Assessment Act* with respect to the approval of the Minister or the Ontario Land Tribunal to proceed with an undertaking,

(vii) section 46 of the *Environmental Protection Act* with respect to the approval of the Minister to use land or land covered by water that has been used for the disposal of waste,

(viii) section 47.3 of the *Environmental Protection Act* with respect to the issuance of a renewable energy approval,

(ix) section 168.3.1 of the *Environmental Protection Act* with respect to the *construction* of a *building* to be used in connection with a change of use of a property,

(x) paragraph 2 of subsection 168.6(1) of the *Environmental Protection Act* if a certificate of property use has been issued in respect of the property under subsection 168.6(1) of that Act,

(xi) section 14 of the *Milk Act* with respect to the permit from the Director for the *construction* or alteration of any *building* intended for use as a plant,

(xii) section 11.1 of Ontario Regulation 267/03 (General), made under the *Nutrient Management Act, 2002*, with respect to a proposed *building* or structure to house farm animals or store nutrients if that Regulation requires the preparation and approval of a nutrient management strategy before *construction* of the proposed *building* or structure,

(xiii) subsection 30(2) of the *Ontario Heritage Act* with respect to a consent of the council of a *municipality* to the alteration or *demolition* of a *building* where the council of the *municipality* has given a notice of intent to designate the *building* under subsection 29(3) of that Act,

(xiv) section 33 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the alteration of property,

(xv) section 34 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the *demolition* of a *building*,

(xvi) section 34.5 of the *Ontario Heritage Act* with respect to the consent of the Minister to the alteration or *demolition* of a designated *building*,

(xvii) subsection 34.7(2) of the *Ontario Heritage Act* with respect to a consent of the Minister to the alteration or *demolition* of a *building* where the Minister has given a notice of intent to designate the *building* under section 34.6 of that Act,

(xviii) section 42 of the *Ontario Heritage Act* with respect to the permit given by the council of a *municipality* for the erection, alteration or *demolition* of a *building*,

r7 (xviii.1) section 17.4 of the *Ontario New Home Warranties Plan Act* with respect to the provision of a confirmation by the Registrar for the *construction* of a residential condominium conversion project,

(xix) section 14 of the *Ontario Planning and Development Act, 1994* with respect to any conflict between a development plan made under that Act and a zoning by-law that affects the proposed *building* or structure,

r14 (xix.1) section 37 of the *Planning Act*,

(A) with respect to the payment of money or making arrangements satisfactory to the council of a municipality for the payment of money, where the payment is required by a community benefits charge by-law passed under subsection 37(2) of the *Planning Act*, and

(B) with respect to the provision of facilities, services or matters in accordance with subsection 37(6) of the *Planning Act* or making arrangements satisfactory to the council of a municipality for their provision,

r16 (xx) section 41 of the *Planning Act* with respect to the approval by the council of the *municipality* or the Ontario Land Tribunal of plans and drawings,

(xxi) section 42 of the *Planning Act* with respect to the payment of money or making arrangements satisfactory to the council of a *municipality* for the payment of money, where the payment is required under subsection 42(6) of that Act,

r3 (xxii) section 2 of Ontario Regulation 239/13 (Activities on Public Lands and Shore Lands — Work Permits and Exemptions), made under the *Public Lands Act*, with respect to the work permit authorizing the *construction* or placement of a *building* on public land,

r3 (xxii.1) section 5 of Ontario Regulation 239/13 with respect to the exemption from the requirement to obtain a work permit authorizing the *construction* or placement of a *building* within an unpatented mining claim,

(xxiii) section 34 or 38 of the *Public Transportation and Highway Improvement Act* with respect to the permit from the Minister for the placement, erection or alteration of any *building* or other structure or the use of land,

(b) the following provisions of Acts and regulations:

(i) subsection 102(3) of the *City of Toronto Act, 2006*,

(ii) sections 28 and 53 of the *Development Charges Act, 1997*,

(iii) sections 257.83 and 257.93 of the *Education Act*,

(iv) subsection 5(4) of the *Environmental Assessment Act*,

(v) subsection 133(4) of the *Municipal Act, 2001*,

(vi) subsection 24(3) of the *Niagara Escarpment Planning and Development Act*,

r16 (vii) subsection 27(9) of the *Ontario Heritage Act*,

(viii) section 33 of the *Planning Act* except where, in the case of the *demolition* of a residential property, a permit to *demolish* the property is obtained under that section,

(ix) section 46 of the *Planning Act*,

r6 (b.1) by-laws made by a *municipality* under an agreement entered into under section 5.81 of the *Aeronautics Act* (Canada),

(c) regulations made by a conservation authority under clause 28(1)(c) of the *Conservation Authorities Act* with respect to permission of the authority for the *construction* of a *building* or structure if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development,

(d) by-laws made under section 108 of the *City of Toronto Act, 2006*, but only with respect to the issuance of a permit for the *construction* of a green roof if the *construction* of the roof is prohibited unless a permit is obtained,

(e) by-laws made under section 40.1 of the *Ontario Heritage Act*,

(f) by-laws made under section 34 or 38 of the *Planning Act*,

r6 (g) subject to Clause (h), by-laws made under Ontario Regulation 173/16 (Community Planning Permits) made under the *Planning Act*,

(h) by-laws referred to in Clause (g) in relation to the development of land, but only with respect to the issuance of a development permit if the development of land is prohibited unless a development permit is obtained,

r6 (i) by-laws made under Ontario Regulation 246/01 (Development Permits) made under the *Planning Act* which continue in force despite the revocation of that Regulation by reason of section 19 of Ontario Regulation 173/16 (Community Planning Permits) made under that Act,

(j) orders made by the Minister under section 47 of the *Planning Act* or subsection 17(1) of the *Ontario Planning and Development Act, 1994*, and

(k) by-laws made under any private Act that prohibit the proposed *construction* or *demolition* of the *building* unless the by-law is complied with.

(2) For the purposes of clause 10(2)(a) of the Act, *applicable law* means any general or special Act, and all regulations and by-laws enacted under them that prohibit the proposed use of the *building* unless the Act, regulation or by-law is complied with.

1.4.1.4. Other Definitions for the Purposes of the Act

(1) For the purposes of the Act, *architect*, *as constructed plans* and *professional engineer* have the same meaning as that set out in Clause 1.4.1.2.(1)(c).

Part 1

General

Section 1.1. General

1.1.1. Application

1.1.1.1. Application

(1) This Part applies to all *buildings* covered in this Code.

1.1.2. Climatic Data

1.1.2.1. Climatic and Seismic Design Values

(1) The climatic and seismic values required for the design of *buildings* under this Code shall be in conformance with the climatic and seismic values provided in MMAH Supplementary Standard SB-1, "Climatic and Seismic Data".

(2) The outside winter design temperatures determined from MMAH Supplementary Standard SB-1, "Climatic and Seismic Data", shall be those listed for the January 2.5% values. (See Appendix A.)

1.1.2.2. Depth of Frost Penetration

(1) Depth of frost penetration shall be established on the basis of local experience.

Section 1.2. Reserved

Section 1.3. Referenced Documents and Organizations

1.3.1. Referenced Documents

1.3.1.1. Effective Date

r11.1 **(1)** Unless otherwise specified in this Code, the documents referenced in this Code shall include all amendments, revisions and supplements effective to June 30, 2017.

1.3.1.2. Applicable Editions

(1) Where documents are referenced in this Code, they shall be in the editions designated in Column 2 of Table 1.3.1.2.

r11.1

Table 1.3.1.2.
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
ACGIH	2013, 28th Edition	Industrial Ventilation Manual	6.2.1.1.(1)
AISI	S201-12	North American Standard for Cold Formed Steel Framing – Product Data	9.24.1.2.(1)
ANSI	A208.1-2009	Particleboard	9.23.14.2.(3) 9.29.9.1.(1) 9.30.2.2.(1)
r19.1 ANSI/APA	PRG 320-2018	Standard for Performance-Rated Cross-Laminated Timber	3.1.6.3.(3)
ANSI/ASHRAE	62.1-2010	Ventilation for Acceptable Indoor Air Quality	6.2.2.1.(2) 6.2.3.8.(15) 6.2.3.21A.(1)
ANSI/ASHRAE/ IESNA	90.1-2013	Energy Standard for Buildings Except Low-Rise Residential Buildings	6.2.1.1.(1)
ANSI/CSA	ANSI Z21.22-2015 / CSA 4.4-2015	Relief Valves for Hot Water Supply Systems	7.2.10.11.(1)
APHA/AWWA/ WEF	2012, 22nd Edition	Standard Methods for the Examination of Water and Wastewater	8.9.2.4.(1)
ASCE	ASCE/SEI 49-12	Wind Tunnel Testing for Buildings and Other Structures	4.1.7.12.(1)
ASHRAE	2017	Fundamentals	5.2.1.3.(1) 6.2.1.1.(1)
ASHRAE	2015	HVAC Applications	6.2.1.1.(1)
ASHRAE	2016	HVAC Systems and Equipment	6.2.1.1.(1)
ASHRAE	2018	Refrigeration	6.2.1.1.(1)
ASHRAE	Guideline 12-2000	Minimizing the Risk of Legionellosis Associated with Building Water Systems	6.2.3.14.(3) 6.2.3.14A.(3)
ASME	A112.19.8-2007	Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs	3.12.4.1.(9)
ASME	B16.3-2016	Malleable Iron Threaded Fittings: Classes 150 and 300	7.2.6.6.(1)
ASME	B16.4-2011	Gray Iron Threaded Fittings: Classes 125 and 250	7.2.6.5.(1) Table 7.2.11.2.
ASME	B16.5-2017	Pipe Flanges and Flanged Fittings: NPS ½ through NPS 24 Metric/Inch Standard	7.2.6.12.(1)
ASME	B16.9-2012	Factory-Made Wrought Buttwelding Fittings	7.2.6.11.(1) 7.2.6.14.(1)
ASME	B16.12-2009	Cast Iron Threaded Drainage Fittings	7.2.6.3.(1)
ASME	B16.15-2013	Cast Copper Alloy Threaded Fittings: Classes 125 and 250	7.2.7.3.(1)
ASME	B16.18-2012	Cast Copper Alloy Solder Joint Pressure Fittings	7.2.7.6.(1) 7.2.7.6.(2) Table 7.2.11.2.
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
ASTM	C412M-11	Concrete Drain Tile (Metric)	Table 5.10.1.1. 9.14.3.1.(1)
ASTM	C444M-03	Perforated Concrete Pipe (Metric)	Table 5.10.1.1. 9.14.3.1.(1)
ASTM	C494 / C494M-13	Chemical Admixtures for Concrete	9.3.1.8.(1)
ASTM	C553-13	Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications	Table 5.10.1.1.
ASTM	C612-14	Mineral Fiber Block and Board Thermal Insulation	Table 5.10.1.1.
ASTM	C700-13	Vitrified Clay Pipe, Extra Strength, Standard Strength and Perforated	Table 5.10.1.1. 9.14.3.1.(1)
ASTM	C726-12	Mineral Wool Roof Insulation Board	Table 5.10.1.1. 9.25.2.2.(1)
ASTM	C834-10	Latex Sealants	Table 5.10.1.1. 9.27.4.2.(2)
r19.1 ASTM	C840-18b	Application and Finishing of Gypsum Board	3.1.6.6.(2); Table 5.10.1.1.
ASTM	C920-14	Elastomeric Joint Sealants	Table 5.10.1.1. 9.27.4.2.(2)
ASTM	C954-11	Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness	9.24.1.4.(1)
ASTM	C991-08e1	Flexible Fibrous Glass Insulation for Metal Buildings	Table 5.10.1.1.
ASTM	C1002-07	Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs	Table 5.10.1.1. 9.24.1.4.(1) 9.29.5.7.(1)
ASTM	C1053-00	Borosilicate Glass Pipe and Fittings for Drain, Waste and Vent (DWV) Applications	7.2.8.1.(1)
ASTM	C1177 / C1177M-13	Glass Mat Gypsum Substrate for Use as Sheathing	3.1.5.12.(6) 3.1.5.12A.(4) Table 5.10.1.1. Table 9.23.16.2.A.
ASTM	C1178 / C1178M-13	Coated Glass Mat Water-Resistant Gypsum Backing Panel	3.1.5.12.(6) 3.1.5.12A.(4) Table 5.10.1.1. 9.29.5.2.(1)
ASTM	C1184-13	Structural Silicone Sealants	Table 5.10.1.1. 9.27.4.2.(2)
ASTM	C1311-10	Solvent Release Sealants	Table 5.10.1.1. 9.27.4.2.(2)
ASTM	C1330-02	Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants	Table 5.10.1.1. 9.27.4.2.(3)
r19.1 ASTM	C1396 / C1396M-17	Gypsum Board	3.1.5.12.(6) 3.1.5.12A.(4) 3.1.6.6.(2) 3.1.6.15.(1) Table 5.10.1.1. Table 9.23.16.2.A. 9.29.5.2.(1) Table 9.29.5.3.
Column 1	2	3	4

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Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
ASTM	C1658 / C1658M-13	Glass Mat Gypsum Panels	3.1.5.12.(6) Table 5.10.1.1.
ASTM	D323-08	Vapor Pressure of Petroleum Products (Reid Method)	1.4.1.2.(1) of Division A
ASTM	D374-99	Thickness of Solid Electrical Insulation	3.15.4.1.(1)
ASTM	D568-77	Rate of Burning and/or Extent and Time of Burning of Flexible Plastics in a Vertical Position	3.15.4.1.(1)
ASTM	D635-06	Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position	3.15.4.1.(1)
ASTM	D1227-95	Emulsified Asphalt Used as a Protective Coating for Roofing	Table 5.10.1.1. 9.13.2.2.(2) 9.13.3.2.(2)
ASTM	D2178 / D2178M-13a	Asphalt Glass Felt Used in Roofing and Waterproofing	Table 5.10.1.1.
r19.1 ASTM	D2898-10	Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing	3.1.5.5.(3) 3.1.5.25.(1) 3.1.6.9.(6) 3.2.3.7.(5) 3.2.3.7.(7)
ASTM	D3019-08	Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos-Fibered, and Non-Asbestos-Fibered	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
ASTM	D3261-16	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing	7.2.5.5.(3)
ASTM	D4479 / D4479M-07e1	Asphalt Roof Coatings - Asbestos-Free	Table 5.10.1.1. 9.13.2.2.(2) 9.13.3.2.(2) Table 9.26.2.1.B.
ASTM	D4637 / D4637M-12	EPDM Sheet Used In Single-Ply Roof Membrane	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
ASTM	D4811 / D4811M-06	Nonvulcanized (Uncured) Rubber Sheet Used as Roof Flashing	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
ASTM	D5456-10a	Evaluation of Structural Composite Lumber Products	3.1.11.7.(4)
ASTM	D6878 / D6878M-11a	Thermoplastic Polyolefin Based Sheet Roofing	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
ASTM	E90-09	Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements	5.8.1.2.(1) 5.8.1.4.(2) 9.11.1.2.(1)
ASTM	E96 / E96M-13	Water Vapor Transmission of Materials	5.5.1.2.(3) 9.13.2.2.(2) 9.25.4.2.(1) 9.25.5.1.(1)
ASTM	E283-04	Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen	5.10.4.4.(2)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
CGSB	CAN/CGSB-12.5-M86	Mirrors, Silvered	9.6.1.2.(3)
CGSB	CAN/CGSB-12.8-97	Insulating Glass Units	Table 5.10.1.1. 9.6.1.2.(1)
CGSB	CAN/CGSB-12.10-M76	Glass, Light and Heat Reflecting	Table 5.10.1.1. 9.6.1.2.(1)
CGSB	CAN/CGSB-12.11-M90	Wired Safety Glass	3.3.1.18.(2) 3.4.6.15.(1) 3.4.6.15.(3) Table 5.10.1.1. 9.6.1.2.(1) 9.6.1.4.(1) 9.8.8.7.(1)
CGSB	CAN/CGSB-12.20-M89	Structural Design of Glass for Buildings	4.3.6.1.(1)
CGSB	CAN/CGSB-19.22-M89	Mildew Resistant Sealing Compound for Tubs and Tile	9.29.10.5.(1)
CGSB	37-GP-9Ma-1983	Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.A.
CGSB	CAN/CGSB-37.50-M89	Hot-Applied, Rubberized Asphalt for Roofing and Waterproofing	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
CGSB	CAN/CGSB-37.51-M90	Application for Hot-Applied Rubberized Asphalt for Roofing and Waterproofing	9.26.15.1.(1)
CGSB	CAN/CGSB-37.54-95	Polyvinyl Chloride Roofing and Waterproofing Membrane	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
CGSB	37-GP-55M-1979	Application of Sheet Applied Flexible Polyvinyl Chloride Roofing Membrane	9.26.16.1.(1)
CGSB	37-GP-56M-1985	Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
CGSB	CAN/CGSB-37.58-M86	Membrane, Elastomeric, Cold-Applied Liquid, for Non-Exposed Use in Roofing and Waterproofing	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
CGSB	CAN/CGSB-41.24-95	Rigid Vinyl Siding, Soffits and Fascia	Table 5.10.1.1. 9.27.12.1.(1)
CGSB	CAN/CGSB-51.25-M87	Thermal Insulation, Phenolic, Faced	Table 9.23.16.2.A. 9.25.2.2.(1)
CGSB	51-GP-27M-1979	Thermal Insulation, Polystyrene, Loose Fill	9.25.2.2.(1)
CGSB	CAN/CGSB-51.32-M77	Sheathing, Membrane, Breather Type	Table 5.10.1.1. 9.20.13.9.(1) 9.26.2.1.(1) 9.27.3.2.(1) Table 9.26.2.1.A.
CGSB	CAN/CGSB-51.33-M89	Vapour Barrier, Sheet, Excluding Polyethylene, for Use in Building Construction	Table 5.10.1.1. 9.25.4.2.(4)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
CGSB	CAN/CGSB-51.34-M86	Vapour Barrier, Polyethylene Sheet for Use in Building Construction	Table 5.10.1.1. 9.13.2.2.(1) 9.13.4.3.(1) 9.18.6.2.(1) 9.25.3.2.(2) 9.25.4.2.(3)
CGSB	CAN/CGSB-82.6-M86	Doors, Mirrored Glass, Sliding or Folding, Wardrobe	9.6.1.2.(2)
CGSB	CAN/CGSB-93.1-M85	Sheet, Aluminum Alloy, Prefinished Residential	Table 5.10.1.1. 9.27.11.1.(4)
CGSB	CAN/CGSB-93.2-M91	Prefinished Aluminum Siding, Soffits and Facsia for Residential Use	3.2.3.6.(4) Table 5.10.1.1. 9.27.11.1.(3)
CGSB	CAN/CGSB-93.3-M91	Prefinished Galvanized and Aluminum-Zinc Alloy Steel Sheet for Residential Use	Table 5.10.1.1. 9.27.11.1.(2)
CGSB	CAN/CGSB-93.4-92	Galvanized Steel and Aluminum-Zinc Alloy Coated Steel Siding, Soffits and Fascia, Prefinished, Residential	Table 5.10.1.1. 9.27.11.1.(1)
CSA	CAN/CSA-6.19-01	Residential Carbon Monoxide Alarming Devices	6.2.12.3.(1) 9.33.4.3.(1)
CSA	A23.1-14	Concrete Materials and Methods of Concrete Construction	4.2.3.6.(1) 4.2.3.9.(1) Table 5.10.1.1. 9.3.1.1.(1) 9.3.1.1.(4) 9.3.1.3.(1) 9.3.1.4.(1) 9.39.1.4.(1)
CSA	A23.3-14	Design of Concrete Structures	Table 4.1.8.9. 4.3.3.1.(1)
CSA	A60.1-M1976	Vitrified Clay Pipe	7.2.5.4.(1)
CSA	A60.3-M1976	Vitrified Clay Pipe Joints	7.2.5.4.(2)
CSA	CAN/CSA-A82-14	Fire Masonry Brick Made from Clay or Shale	Table 5.10.1.1. 9.20.2.1.(1)
r19.1 CSA	CAN/CSA-A82.27-M91	Gypsum Board	3.1.5.12.(6) 3.1.5.12A.(4) 3.1.6.6.(2) 3.1.6.15.(1) 9.29.5.2.(1)
CSA	A82.30-M1980	Interior Furring, Lathing and Gypsum Plastering	9.29.4.1.(1)
CSA	A82.31-M1980	Gypsum Board Application	3.2.3.6.(4) 3.2.3.16.(1) 9.10.12.4.(3) 9.29.5.1.(2)
CSA	CAN3-A93-M82	Natural Airflow Ventilators for Buildings	Table 5.10.1.1. 9.19.1.2.(5)
CSA	A123.1-05 / A123.5-05	Asphalt Shingles Made from Organic Felt and Surfaced with Mineral Granules / Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules	Table 5.10.1.1. Table 9.26.2.1.B.
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
CSA	CAN/CSA-A123.2-03	Asphalt Coated Roofing Sheets	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B
CSA	A123.3-05	Asphalt Saturated Organic Roofing Felt	Table 5.10.1.1. Table 9.26.2.1.B.
CSA	CAN/CSA-A123.4-04	Asphalt for Constructing Built-Up Roof Coverings and Waterproofing Systems	Table 5.10.1.1. 9.13.2.2.(2) 9.13.3.2.(2) Table 9.26.2.1.B.
CSA	A123.17-05	Asphalt Glass Felt Used in Roofing and Waterproofing	Table 5.10.1.1. 9.13.3.2.(2) Table 9.26.2.1.B.
CSA	A123.21-10	Dynamic Wind Uplift Resistance of Membrane-Roofing Systems	5.2.2.2.(4)
CSA	A123.22-08	Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection	Table 9.26.2.1.B.
CSA	CAN3-A123.51-M85	Asphalt Shingle Application on Roof Slopes 1:3 and Steeper	Table 5.10.1.1. 9.26.1.2.(1)
CSA	CAN3-A123.52-M85	Asphalt Shingle Application on Roof Slopes 1:6 to Less than 1:3	Table 5.10.1.1. 9.26.1.2.(1)
CSA	A165.1-14	Concrete Block Masonry Units	Table 5.10.1.1. 9.15.2.2.(1) 9.17.5.1.(1) 9.20.2.1.(1) 9.20.2.6.(1)
CSA	A165.2-14	Concrete Brick Masonry Units	Table 5.10.1.1. 9.20.2.1.(1)
CSA	A165.3-14	Prefaced Concrete Masonry Units	Table 5.10.1.1. 9.20.2.1.(1)
CSA	A179-14	Mortar and Grout for Unit Masonry	Table 5.10.1.1. 9.15.2.2.(3) 9.20.3.1.(1)
CSA	CAN/CSA-A220 Series-06	Concrete Roof Tiles	Table 5.10.1.1. Table 9.26.2.1.B.
CSA	CAN/CSA-A220.1-06	Installation of Concrete Roof Tiles	9.26.17.1.(1)
CSA	A257 Series-14	Standards for Concrete Pipe and Manhole Sections	7.2.5.3.(1)
CSA	A257.4-14	Precast Reinforced Circular Concrete Manhole Sections, Catch Basins, and Fittings	7.2.5.3.(5)
r19.1 CSA	A277-16	Procedure for Certification of Prefabricated Buildings, Modules, and Panels	9.1.1.9.(1) 1.12.1.1.(1) of Division C 3.1.1.1.(2) of Division C 3.2.4.1.(3) of Division C
CSA	CAN/CSA-A324-M88	Clay Flue Liners	9.21.3.3.(1)
CSA	A371-14	Masonry Construction for Buildings	Table 5.10.1.1. 9.15.2.2.(3) 9.20.3.2.(7) 9.20.15.2.(1)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
CSA	CAN/CSA-A405-M87	Design and Construction of Masonry Chimneys and Fireplaces	9.21.3.5.(1) 9.22.1.4.(7) 9.22.5.2.(2)
CSA	AAMA/WDMA/CSA 101/I.S.2/A440-11	NAFS – North American Fenestration Standard/Specification for Windows, Doors, and Skylights	5.10.2.2.(1) Table 9.7.3.3. 9.7.4.1.(1) 9.7.4.2.(1) 9.7.4.3.(2) 9.7.5.1.(1) 9.7.5.3.(1)
CSA	A440S1-17	Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights	5.10.2.2.(1) 5.10.4.5.(3) 9.7.4.2.(1) 9.7.4.3.(1)
CSA	A440.2-14	Fenestration Energy Performance	12.3.1.2.(1)
CSA	A440.2-14 / A440.3-14	Fenestration Energy Performance / User Guide to CSA A440.2-14, Fenestration Energy Performance	Table 9.7.3.3.
CSA	CAN/CSA-A440.4-07	Window, Door, and Skylight Installation	9.7.6.1.(1)
CSA	A660-10	Certification of Manufacturers of Steel Building Systems	4.3.4.3.(1)
CSA	A3001-13	Cementitious Materials for Use in Concrete	Table 5.10.1.1. 9.3.1.2.(1) 9.28.2.1.(1)
CSA	CAN/CSA-B45.0-02	General Requirements for Plumbing Fixtures	7.6.4.2.(1)
CSA	B52-13	Mechanical Refrigeration Code	6.2.2.4.(4)
CSA	B64.0-11	Definitions, General Requirements, and Test Methods for Vacuum Breakers and Backflow Preventers	7.2.10.10.(1)
CSA	B64.1.1-11	Atmospheric Vacuum Breakers (AVB)	7.2.10.10.(1)
CSA	B64.1.2-11	Pressure Vacuum Breakers (PVB)	7.2.10.10.(1)
CSA	B64.1.3-11	Spill-Resistant Pressure Vacuum Breakers (SRPVB)	7.2.10.10.(1)
CSA	B64.1.4-11	Vacuum Breaker, Air Space Type (ASVB)	7.2.10.10.(1)
CSA	B64.2-11	Hose Connection Vacuum Breakers (HCVB)	7.2.10.10.(1)
CSA	B64.2.1-11	Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature	7.2.10.10.(1)
CSA	B64.2.1.1-11	Hose Connection Dual Check Vacuum Breakers (HCDVB)	7.2.10.10.(1)
CSA	B64.2.2-11	Hose Connection Vacuum Breakers (HCVB) with Automatic Draining Feature	7.2.10.10.(1)
CSA	B64.3-11	Dual Check Valve Backflow Preventers with Atmospheric Port (DCAP)	7.2.10.10.(1) 7.6.2.5.(4)
CSA	B64.3.1-11	Dual Check Valve Backflow Preventers with Atmospheric Port for Carbonators (DCAPC)	7.2.10.10.(1)
CSA	B64.4-11	Reduced Pressure Principle (RP) Backflow Preventers	7.2.10.10.(1)
CSA	B64.4.1-11	Reduced Pressure Principle Backflow Preventers for Fire Protection Systems (RPF)	7.6.2.4.(2) Table 7.6.2.4. 7.6.2.4.(4)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
DBR	Technical Paper No. 207, October 1965	Fire Endurance of Unit Masonry Walls	Table 11.5.1.1.A. Table 11.5.1.1.B. Table 11.5.1.1.C. Table 11.5.1.1.D/E. Table 11.5.1.1.F.
DBR	Technical Paper No. 222, June 1966	Fire Endurance of Light-Framed and Miscellaneous Assemblies	Table 11.5.1.1.A. Table 11.5.1.1.B. Table 11.5.1.1.C. Table 11.5.1.1.D/E. Table 11.5.1.1.F.
EPA	625/R-92/016 (1994)	Radon Prevention in the Design and Construction of Schools and Other Large Buildings	6.2.1.1.(1)
FINA	2009	Rules and Regulations - FINA Facilities Rules 2009-2013 - FR5 Diving Facilities	3.11.4.1.(17)
HI	2005	Hydronics Institute Manuals	6.2.1.1.(1)
HPVA	ANSI/HPVA HP-1-2009	Hardwood and Decorative Plywood	Table 5.10.1.1. 9.27.8.1.(1) 9.30.2.2.(1)
HRAI	2005	Digest	6.2.1.1.(1) 6.2.3.5.(1) 6.2.4.3.(13)
HUD	Rehabilitation Guidelines 2000	Guideline on Fire Ratings of Archaic Materials and Assemblies	Table 11.5.1.1.A. Table 11.5.1.1.B. Table 11.5.1.1.C. Table 11.5.1.1.D/E. Table 11.5.1.1.F.
HVI	HVI 915-2013	Loudness Testing and Rating Procedure	9.32.3.9.(2) Table 9.32.3.9.
HVI	HVI 916-2013	Airflow Test Procedure	9.32.3.9.(1)
IAPMO	PS 63-2014	Plastic Leaching Chambers	8.7.2.3.(3)
ISO	3864-1: 2011	Graphical Symbols – Safety Colours and Safety Signs – Part 1: Design Principles for Safety Signs and Safety Markings	3.4.5.1.(2) 9.9.11.3.(2)
ISO	7010: 2011	Graphical Symbols - Safety Colours and Safety Signs - Registered Safety Signs	3.4.5.1.(2) 9.9.11.3.(2)
ISO	8201: 1987(E)	Acoustics - Audible Emergency Evacuation Signal	3.2.4.20.(2)
ISO	10848:2006	Acoustics - Laboratory Measurement of the Flanking Transmission of Airborne and Impact Sound Between Adjoining Rooms	5.8.1.4.(3) 5.8.1.4.(4) 5.8.1.5.(3) 5.8.1.5.(4)
ISO	15712-1:2005	Building Acoustics - Estimation of Acoustic Performance of Buildings From the Performance of Elements - Part 1: Airborne Sound Insulation Between Rooms	5.8.1.4.(2) 5.8.1.4.(3) 5.8.1.4.(5) 5.8.1.4.(6) 5.8.1.4.(7) 5.8.1.5.(2) 5.8.1.5.(3) 5.8.1.4.(6) 5.8.1.4.(7)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
ISO	23599: 2012	Assistive Products for Blind and Vision-Impaired Persons – Tactile Walking Surface Indicators	3.8.3.18.(1)
MMAH	Supplementary Standard SA-1, January 15, 2019	Objectives and Functional Statements Attributed to the Acceptable Solutions	1.2.1.1.(1) of Division A 1.2.1.1.(2) of Division A
MMAH	Supplementary Standard SB-1, January 15, 2019	Climatic and Seismic Data	1.1.2.1.(1) 1.1.2.1.(2) 3.2.6.2.(2) 3.3.1.7.(1) 5.2.1.1.(1) 5.2.1.1.(2) 6.2.1.1.(1) 6.2.1.7.(1) 7.4.10.4.(1) 9.4.1.1.(3) 9.4.2.2.(1) Tables 9.6.1.3.A. to 9.6.1.3.G. Table 9.25.5.2. Table 9.32.3.10.A. 9.33.3.2.(1)
r19.1 MMAH	Supplementary Standard SB-2, March 31, 2022	Fire Performance Ratings	3.1.5.23.(1) 3.1.6.9.(4) 3.1.6.10.(2) 3.1.7.1.(2) 3.1.8.14.(2) 3.1.9.5.(1) 3.1.12.1.(3) 3.2.3.12.(1) 3.2.3.13.(4) 3.13.2.1.(8) 3.13.3.5.(1) 3.13.3.6.(2) 3.13.4.2.(7) 9.10.3.1.(1) 9.10.3.2.(1) 9.10.5.1.(4) 9.10.9.9.(1)
MMAH	Supplementary Standard SB-3, January 15, 2019	Fire and Sound Resistance of Building Assemblies	5.8.1.3.(1) 5.8.1.3.(2) 9.10.3.1.(1) 9.10.5.1.(4) 9.11.1.3.(1) 9.11.1.3.(2) Table 9.11.1.4. 9.29.5.9.(5)
MMAH	Supplementary Standard SB-4, January 15, 2019	Measures for Fire Safety in High Buildings	3.2.6.2.(1) 3.2.6.2.(6) 3.2.6.5.(3) 3.2.6.9.(1) Table 11.5.1.1.C. Table 11.5.1.1.D/E. Table 11.5.1.1.F.
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
NRCan	January 2005, including all amendments, revisions and supplements effective to May 31, 2006	EnerGuide for New Houses: Administrative and Technical Procedures	12.2.1.1.(3)
NSF	NSF/ANSI 46-2010	Evaluation of Components and Devices Used in Wastewater Treatment Systems	8.6.2.1.(2)
NSF	NSF/ANSI 61-2013	Drinking Water System Components - Health Effects	7.2.10.7.(1)
SMACNA	ANSI/SMACNA 006-2006	HVAC Duct Construction Standards - Metal and Flexible	6.2.4.2.(3) 6.2.4.3.(11) 6.2.4.3.(12)
SPRI	ANSI/GRHC/SPRI VR-1-2011	Procedure for Investigating Resistance to Root Penetration on Vegetative Roofs	5.6.1.2.(4)
TPIC	2014	Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses	9.23.13.11.(6)
UL	ANSI/UL 300-2005	Fire Extinguishing Systems for Protection of Commercial Cooking Equipment	6.2.2.6.(2)
UL	ANSI/UL-1784-04	Air Leakage Tests of Door Assemblies and Other Opening Protectives	3.1.8.4.(4)
UL	UL 2034-2008	Single and Multiple Station Carbon Monoxide Alarms	6.2.12.3.(1) 9.33.4.3.(1)
ULC	CAN/ULC-S101-14	Fire Endurance Tests of Building Construction and Materials	3.1.5.5A.(2) 3.1.5.12.(5) 3.1.5.12.(6) 3.1.5.12A.(3) 3.1.5.12A.(4) 3.1.7.1.(1) 3.1.11.7.(1) 3.2.3.8.(1) 3.2.6.5.(6) 9.10.16.3.(1)
ULC	CAN/ULC-S102-10	Test for Surface Burning Characteristics of Building Materials and Assemblies	3.1.5.25.(1) 3.1.12.1.(1) Table 5.10.1.1. Table 9.23.16.2.A.
ULC	CAN/ULC-S102.2-10	Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies	3.1.12.1.(2) 3.1.13.4.(1)
ULC	CAN/ULC-S102.3-07	Fire Test of Light Diffusers and Lenses	3.1.13.4.(1)
ULC	CAN/ULC-S102.4-10	Test for Fire and Smoke Characteristics of Electrical Wiring, Cables and Non-Metallic Raceways	3.6.4.3.(1)
ULC	CAN/ULC-S104-15	Fire Tests of Door Assemblies	3.1.8.4.(1) 3.2.6.5.(3)
ULC	CAN/ULC-S105-16	Fire Door Frames Meeting the Performance Required by CAN/ULC-S104	9.10.13.6.(1)
ULC	CAN/ULC-S106-15	Fire Tests of Window and Glass Block Assemblies	3.1.8.4.(1)
ULC	CAN/ULC-S107-10	Fire Tests of Roof Coverings	3.1.15.1.(1)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
ULC	CAN/ULC-S109-14	Flame Tests of Flame-Resistant Fabrics and Films	3.1.16.1.(1) 3.14.1.6.(1) 3.14.2.5.(1) 6.2.3.16.(1) 6.2.3.17.(1) 6.2.4.9.(1)
ULC	CAN/ULC-S110-13	Test for Air Ducts	6.2.3.2.(2) 6.2.3.2.(4)
ULC	CAN/ULC-S111-13	Fire Tests for Air Filter Units	6.2.3.13.(1) 6.2.4.14.(1)
ULC	CAN/ULC-S112-10	Fire Test of Fire-Damper Assemblies	3.1.8.4.(1)
ULC	CAN/ULC-S112.1-10	Leakage Rated Dampers for Use in Smoke Control Systems	3.1.8.4.(3) 6.2.3.9.(3)
ULC	CAN/ULC-S112.2-07	Fire Test of Ceiling Firestop Flap Assemblies	3.1.9.5.(2) 3.6.4.3.(2) 9.10.13.14.(1)
ULC	CAN/ULC-S113-16	Wood Core Doors Meeting the Performance Required by CAN/ULC-S104 for Twenty Minute Fire Rated Closure Assemblies	9.10.13.2.(1)
ULC	CAN/ULC-S114-05	Test for Determination of Non-Combustibility in Building Materials	1.4.1.2.(1) of Division A
ULC	CAN/ULC-S115-11	Fire Tests of Firestop Systems	3.1.5.16.(3) 3.1.9.1.(1) 3.1.9.1.(2) 3.1.9.1.(3) 3.1.9.3A.(1) 3.1.9.4.(3) 3.1.9.4.(7) 9.10.9.6.(2) 9.10.9.7.(3)
ULC	CAN/ULC-S124-06	Test for the Evaluation of Protective Coverings for Foamed Plastic	3.1.5.12A.(2)
ULC	CAN/ULC-S126-14	Test for Fire Spread Under Roof-Deck Assemblies	3.1.14.1.(1) 3.1.14.2.(1)
ULC	CAN/ULC-S134-13	Fire Test of Exterior Wall Assemblies	3.1.5.5.(1) 3.2.3.7.(3) 3.2.3.7.(6)
ULC	S135-04	Test Method for the Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter (Cone Calorimeter)	3.1.5.1.(2)
ULC	CAN/ULC-S138-06	Test for Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration	3.1.5.5A.(1) 3.1.5.5A.(3)
ULC	CAN/ULC-S139-12	Fire Test for Evaluation of Integrity of Electrical Power, Data and Optical Fibre Cables	3.2.7.10.(2) 3.2.7.10.(3)
ULC	CAN/ULC-S143-14	Fire Tests for Non-Metallic Electrical and Optical Fibre Cable Raceway Systems	3.1.5.20.(1)
ULC	CAN/ULC-S144-12	Fire Resistance Test - Grease Duct Assemblies	3.6.3.5.(2)
r19.1 ULC	CAN/ULC-S146-19	Test for the Evaluation of Encapsulation Materials and Assemblies of Materials for the Protection of Structural Timber Elements	3.1.6.5.(1)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
ULC	S505-1974	Fusible Links for Fire Protection Service	3.1.8.9.(1)
ULC	S513-1978	Threaded Couplings for 38 mm and 65 mm Fire Hose	3.2.9.2.(7)
ULC	CAN/ULC-S524-14	Installation of Fire Alarm Systems	3.1.8.9A.(3) 3.1.8.12.(3) 3.2.4.5.(1) 3.2.4.22.(6) 3.2.4.22.(11) 9.10.19.4.(3) 9.10.19.6.(2)
ULC	CAN/ULC-S531-14	Smoke Alarms	3.2.4.22.(1) 9.10.19.1.(1)
ULC	CAN/ULC-S537-13	Verification of Fire Alarm Systems	3.2.4.5.(2) 3.2.4.22.(6)
ULC	CAN/ULC-S540-13	Residential Fire and Life Safety Warning Systems: Installation, Inspection, Testing and Maintenance	3.2.4.22A.(1) 9.10.19.8.(1)
ULC	CAN/ULC-S543-09	Internal Lug Quick Connect Couplings for Fire Hose	3.2.9.2.(7)
ULC	CAN/ULC-S553-14	Installation of Smoke Alarms	3.2.4.22.(9) 9.10.19.3.(3)
ULC	CAN/ULC-S561-13	Installation and Services for Fire Signal Receiving Centres and Systems	3.2.4.8.(4) 3.13.5.4.(1)
ULC	CAN/ULC-S572-17	Photoluminescent and Self-Luminous Exit Signs and Path Marking Systems	3.4.5.1.(5) 9.9.11.3.(3)
ULC	CAN/ULC-S610-M87	Factory-Built Fireplaces	9.22.8.1.(1)
ULC	S628-93	Fireplace Inserts	9.22.10.1.(1)
ULC	CAN/ULC-S629-16	650ºC Factory-Built Chimneys	9.21.1.2.(1)
ULC	CAN/ULC-S639-M87	Steel Liner Assemblies for Solid Fuel-Burning Masonry Fireplaces	9.22.2.3.(1)
ULC	CAN/ULC-S701.1-17	Thermal Insulation, Polystyrene Boards	Table 5.10.1.1. 9.15.4.1.(1) Table 9.23.16.2.A. 9.25.2.2.(1) 9.25.2.2.(4)
ULC	CAN/ULC-S702-14	Mineral Fibre Thermal Insulation for Buildings	Table 5.10.1.1. Table 9.23.16.2.A. 9.25.2.2.(1)
r19.1 ULC	CAN/ULC-S702.1-14	Standard for Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification	3.1.6.3.(4)
ULC	CAN/ULC-S703-09	Cellulose Fibre Insulation for Buildings	Table 5.10.1.1. 9.25.2.2.(1)
ULC	CAN/ULC-S704-11	Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced	Table 5.10.1.1. Table 9.23.16.2.A. 9.25.2.2.(1)
ULC	CAN/ULC-S705.1-15	Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density - Material – Specification	Table 5.10.1.1. 9.25.2.2.(1)
ULC	CAN/ULC-S705.2-05	Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Application	Table 5.10.1.1. 9.25.2.5.(1)
Column 1	2	3	4

r11.1

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document(1)	Code Reference
ULC	CAN/ULC-S706.1-16	Wood Fibre Insulating Boards for Buildings	Table 5.10.1.1. 9.23.15.7.(3) Table 9.23.16.2.A. 9.25.2.2.(1) 9.29.8.1.(1)
ULC	CAN/ULC-S710.1-11	Thermal Insulation – Bead-Applied One Component Polyurethane Air Sealant Foam, Part 1: Material Specification	Table 5.10.1.1.
ULC	CAN/ULC-S711.1-11	Thermal Insulation – Bead-Applied Two Component Polyurethane Air Sealant Foam, Part 1: Material Specification	Table 5.10.1.1.
ULC	CAN/ULC-S716.1-12	Exterior Insulation and Finish Systems (EIFS) – Materials and Systems	5.10.3.1.(1) 9.27.13.1.(1) 9.27.13.2.(1)
ULC	CAN/ULC-S716.2-12	Exterior Insulation and Finish Systems (EIFS) – Installation of EIFS Components and Water Resistive Barrier	9.27.13.3.(2)
ULC	CAN/ULC-S716.3-12	Exterior Insulation and Finish Systems (EIFS) – Design Application	9.27.13.3.(1)
ULC	CAN/ULC-S741-08	Air Barrier Materials – Specification	5.4.1.2.(1)
ULC	CAN/ULC-S1001-11	Integrated Systems Testing of Fire Protection and Life Safety Systems	3.2.10.1.(1) 9.10.18.10.(1)
ULC	ULC/ORD-C199P-2002	Combustible Piping for Sprinkler Systems	3.2.5.14.(2) 3.2.5.14.(5)
ULC	ULC/ORD-C263.1-99	Sprinkler-Protected Window Systems	3.1.8.18.(1)
ULC	ULC/ORD-C1254.6-1995	Fire Testing of Restaurant Cooking Area Fire Extinguishing System Units	6.2.2.6.(2)
USDA	October 1993	Soil Survey Manual	8.2.1.2.(2)
WT	October 20, 2016	Port Lands Flood Protection and Enabling Infrastructure Due Diligence Report	1.3.3.6.(4) of Division C
Column 1	2	3	4

Notes to Table 1.3.1.2.:
(1) Some titles have been abridged to omit superfluous wording.

1.3.2. Abbreviations

1.3.2.1. Abbreviations of Proper Names (See Appendix A.)

(1) In this Code, an abbreviation of proper names listed in Column 1 of Table 1.3.2.1. has the meaning assigned opposite it in Column 2.

Table 1.3.2.1.
Abbreviations of Proper Names
Forming Part of Sentence 1.3.2.1.(1)

	Abbreviation	Meaning
	ACGIH	American Conference of Governmental Industrial Hygienists
	AISI	American Iron and Steel Institute
	ANSI	American National Standards Institute
r19.1	APA	The Engineered Wood Association
	APHA	American Public Health Association
r15	ASCE	American Society of Civil Engineers
	ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
	ASME	The American Society of Mechanical Engineers
	ASPE	American Society of Plumbing Engineers
	ASSE	American Society of Sanitary Engineering
	ASTM	American Society for Testing and Materials
	AWS	American Welding Society
	AWWA	American Water Works Association
	BCMOH	British Columbia Ministry of Health
	BNQ	Bureau de Normalisation du Québec
	CAN	National Standard of Canada designation The number or name following the CAN designation represents the agency under whose auspices the standard is issued. CAN1 designates CGA, CAN2 designates CGSB, CAN3 designates CSA, and CAN4 designates ULC.
	CCBFC	Canadian Commission on Building and Fire Codes
	CGSB	Canadian General Standards Board
	CSA	Canadian Standards Association
	CWC	Canadian Wood Council
	DBR	Division of Building Research, known as the Institute for Research in Construction since 1985
	EPA	Environmental Protection Agency
	FINA	Fédération Internationale de Natation
r15	GRHC	Green Roofs for Healthy Cities
	HI	Hydronics Institute
r15	HPVA	Hardwood Plywood & Veneer Association
	Column 1	2

Table 1.3.2.1. (Cont'd)
Abbreviations of Proper Names
Forming Part of Sentence 1.3.2.1.(1)

	Abbreviation	Meaning
	HRAI	Heating, Refrigerating and Air-Conditioning Institute of Canada
	HUD	U.S. Department of Housing and Urban Development
	HVI	Home Ventilating Institute
r5	IAPMO	International Association of Plumbing and Mechanical Officials
	IESNA	Illuminating Engineering Society of North America
	ISO	International Organization for Standardization
r6	MMA	Ontario Ministry of Municipal Affairs
	MMAH	Ontario Ministry of Municipal Affairs and Housing
	MOE	Ontario Ministry of the Environment
	NFPA	National Fire Protection Association
	NLGA	National Lumber Grades Authority
	NRCan	Natural Resources Canada
	NSF	NSF International, formerly called National Sanitation Federation
r15	SEI	Structural Engineering Institute
	SMACNA	Sheet Metal and Air Conditioning Contractors National Association Inc.
r15	SPRI	Single Ply Roofing Industry
	TC	Transport Canada
	TPIC	Truss Plate Institute of Canada
	UL	Underwriters Laboratories Inc.
	ULC	Underwriters' Laboratories of Canada
	USDA	United States Department of Agriculture
	WEF	World Environment Federation
r10	WT	Waterfront Toronto
	Column 1	2

Part 3

Fire Protection, Occupant Safety and Accessibility

3.1.2.6. Restaurants

(1) A restaurant is permitted to be classified as a Group E *major occupancy* provided the restaurant is designed to accommodate not more than 30 persons consuming food or drink.

3.1.2.7. Storage of Combustible Fibres

(1) *Buildings* or parts of them used for the storage of baled *combustible fibres* shall be classified as *medium hazard industrial occupancies.*

3.1.3. Multiple Occupancy Requirements

3.1.3.1. Separation of Major Occupancies

r5 **(1)** Except as provided by Sentences (2) to (5), *major occupancies* shall be separated from adjoining *major occupancies* by *fire separations* having *fire-resistance ratings* conforming to Table 3.1.3.1.

(2) In a *building* not more than 3 *storeys* in *building height*, if not more than two *dwelling units* are contained together with a Group E *major occupancy*, the *fire-resistance rating* of the *fire separation* between the two *major occupancies* need not be more than 1 h.

r19.1 **(3)** In a *building* within the scope of Article 3.2.2.42A. or Article 3.2.2.43A., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group C and Group A, Division 2 *major occupancies*.

r5 Table 3.1.3.1.
Major Occupancy Fire Separations(1)
Forming Part of Sentence 3.1.3.1.(1)

Major Occupancy	Minimum *Fire-Resistance Rating* of *Fire Separation*, h(1)												
	Adjoining *Major Occupancy*												
	A-1	A-2	A-3	A-4	B-1	B-2	B-3	C	D	E	F-1	F-2	F-3
A-1	N/A	1	1	1	2	2	2	1	1	2	N/A	2	1
A-2	1	N/A	1	1	2	2	2	1(2)	1(3)	2	N/A	2	1
A-3	1	1	N/A	1	2	2	2	1	1	2	N/A	2	1
A-4	1	1	1	N/A	2	2	2	1	1	2	N/A	2	1
B-1	2	2	2	2	N/A	2	2	2	2	2	N/A	2	2
B-2	2	2	2	2	2	N/A	1	2	2	2	N/A	2	2
B-3	2	2	2	2	2	1	N/A	2	2	2	N/A	2	2
C	1	1(2)	1	1	2	2	2	N/A	1	2(4)	N/A	2	1
D	1	1(3)	1	1	2	2	2	1	N/A	N/A	3	N/A	N/A
E	2	2	2	2	2	2	2	2(4)	N/A	N/A	3	N/A	N/A
F-1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	3	N/A	2	2
F-2	2	2	2	2	2	2	2	2	N/A	N/A	2	N/A	N/A
F-3	1	1	1	1	2	2	2	1	N/A	N/A	2	N/A	N/A
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14

Notes to Table 3.1.3.1.:

(1) Section 3.3. contains requirements for the separation of *occupancies* and tenancies that are in addition to the requirements for the separation of *major occupancies*.
(2) See Sentence 3.1.3.1.(3).
(3) See Sentence 3.1.3.1.(4).
(4) See Sentence 3.1.3.1.(2).

r19.1 **(4)** In a *building* within the scope of Article 3.2.2.49A. or Article 3.2.2.50A., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group D and Group A, Division 2 *major occupancies*.

r19.1 **(4.1)** In a *building* within the scope of Article 3.2.2.42A., a *fire separation* with a 2 h *fire-resistance rating* is required between the Group C *major occupancy* and *storage garage.*

r19.1 **(4.2)** In a *building* within the scope of Article 3.2.2.49A., a *fire separation* with a 1 h *fire-resistance rating* is required between the Group D and Group E or Group F, Division 2 or 3 *major occupancies.*

r5 **(5)** The *fire separations* required between *major occupancies* in Sentence (1) are permitted to be penetrated by floor openings protected in conformance with Subsection 3.2.8., except for *fire separations* for Group F, Division 1 *major occupancies* and for *mezzanines* described in Sentence 3.2.8.2.(1).

3.1.3.2. Prohibition of Occupancy Combinations

(1) No *major occupancy* of Group F, Division 1 shall be contained within a *building* with any *occupancy* classified as Group A, B or C.

(2) Except as provided in Sentence (4) and Sentence 3.10.2.4.(9), not more than one *suite* of *residential occupancy* shall be contained within a *building* classified as a Group F, Division 2 *major occupancy*.

(3) A sleeping room or sleeping area shall not open directly into a room or area where food is intended to be stored, prepared, processed, distributed, served, sold or offered for sale. (See Appendix A.)

(4) A Group F, Division 2 *major occupancy* is permitted in a *building* containing only *live/work units* if the *occupancy* is for the exclusive use of the occupants of the *live/work units*.

r5 **(5)** A *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A. shall not contain,
(a) a Group A, Division 1 or 3, Group B, or Group F, Division 1 or 2 *major occupancy*,
(b) a Group A, Division 2 or a Group E *major occupancy* above the second *storey*,
r6 (b.1) a *retirement home*, or
(c) except as permitted by Sentence (6), a Group F, Division 3 *major occupancy*.

r5 **(6)** A *storage garage* below the third *storey* is permitted in a *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A.

3.1.4. Combustible Construction

3.1.4.1. Combustible Materials Permitted

r5 **(1)** Except as required by this Part, a *building* permitted to be of *combustible construction* is permitted to be constructed of combustible materials, with or without noncombustible components. (See Appendix A.)

3.1.4.2. Protection of Foamed Plastics (See Appendix A.)

r11.1 **(1)** Except as permitted in Sentence (3), foamed plastics that form part of a wall or ceiling assembly in *combustible construction* shall be protected from adjacent spaces in the *building*, other than adjacent concealed spaces within *attic or roof spaces*, crawl spaces, and wall and ceiling assemblies, by any of the following:
(a) one of the interior finishes described in Subsections 9.29.4. to 9.29.9.,
(b) provided the *building* does not contain a Group A, Group B or Group C *major occupancy*, sheet metal that,
(i) is mechanically fastened to the supporting assembly independent of the insulation,
(ii) is not less than 0.38 mm thick, and
(iii) has a melting point not less than 650°C, or
(c) any thermal barrier that meets the requirements of Sentence 3.1.5.12A.(2). (See Appendix A.)
(See Appendix A.)

3.1.5.25. Wood Decorative Cladding

(1) Wood decorative cladding is permitted to be used on exterior *marquee* fascias, of a *storey* having direct access to a *street* or access route, of a *building* required to be of *noncombustible construction*, provided the cladding is *fire-retardant treated wood* that, before testing to CAN/ULC-S102, "Test for Surface Burning Characteristics of Building Materials and Assemblies", has been conditioned in conformance with ASTM D2898, "Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing".

3.1.5.26. Combustible Solar Collector Systems

(1) A *combustible* solar collector system is permitted to be installed above the roof of a *building* required to be of *noncombustible construction*.

r19.1 3.1.6. Encapsulated Mass Timber Construction (See Appendix A.)

3.1.6.1. Application

(1) *Encapsulated mass timber construction* permitted in this Part shall conform to this Subsection.

3.1.6.2. Noncombustible Construction

(1) Except as otherwise provided in this Part and Sentence 6.2.8.1.(1), materials used in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* shall conform to Subsection 3.1.5.

3.1.6.3. Structural Mass Timber Elements (See Appendix A.)

(1) Except as otherwise provided in this Subsection and Articles 3.2.2.16. and 3.2.3.19., a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* is permitted to include structural mass timber elements, including beams, columns, arches and wall, floor and roof assemblies, provided they comply with Sentences (2) and (3).

(2) Structural mass timber elements referred to in Sentence (1) shall,
(a) except as provided in Sentence (4), be arranged in heavy solid masses containing no concealed spaces,
(b) have essentially smooth flat surfaces with no thin sections or sharp projections, and
(c) except as provided in Sentence 3.1.6.17.(1), conform to the minimum dimensions stated in Table 3.1.6.3.

(3) Adhesives used in structural mass timber elements referred to in Sentence (1) that are constructed of cross-laminated timber shall conform to the elevated temperature performance requirements in ANSI/APA PRG 320, "Standard for Performance-Rated Cross-Laminated Timber".

(4) Concealed spaces are permitted within structural mass timber elements referred to in Sentence (2) and need not conform to Sentence 3.1.6.4.(1) provided the concealed spaces are,
(a) *sprinklered* and divided into compartments by *fire blocks* in conformance with Subsection 3.1.11.,
(b) completely filled with rock or slag fibre insulation conforming to CAN/ULC-S702.1 "Standard for Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification" and having a density not less than 32 kg/m^3,
(c) if horizontal, lined with not less than a single layer of 12.7 mm thick Type X gypsum board or *noncombustible* material providing an *encapsulation rating* of not less than 25 min, or
(d) if vertical, lined with not less than a single layer of 12.7 mm thick Type X gypsum board or *noncombustible* material providing an *encapsulation rating* of not less than 25 min and vertically divided into compartments by *fire blocks* in conformance with Subsection 3.1.11.

Table 3.1.6.3.
Minimum Dimensions of Structural Mass Timber Elements in Encapsulated Mass Timber Construction
Forming Part of Sentences 3.1.6.3.(2), 3.1.6.8.(1) and 3.1.6.17.(1)

Structural Wood Elements	Minimum Thickness, mm	Minimum Width x Depth, mm x mm
Walls that are not *fire separations* or exterior walls (1-sided fire exposure)	96	N/A
Walls that require a *fire-resistance rating*, but are not *fire separations* (2-sided fire exposure)	192	N/A
Floors and roofs (1-sided fire exposure)	96	N/A
Beams, columns and arches (2- or 3-sided fire exposure)	N/A	192 x 192
Beams, columns and arches (4-sided fire exposure)	N/A	224 x 224
Column 1	2	3

3.1.6.4. Encapsulation of Mass Timber Elements (See Appendix Note A-3.1.6.3.)

(1) Except as provided in Sentences (3) to (6), Sentence 3.1.6.3.(4), Articles 3.1.6.7. and 3.1.6.12. and Sentences 3.1.6.16.(2) and 3.1.6.17.(2), the exposed surfaces of structural mass timber elements conforming to Article 3.1.6.3. shall be protected from adjacent spaces in the *building*, including adjacent concealed spaces within wall, floor and roof assemblies, by a material or assembly of materials conforming to Sentence (2) that provides an *encapsulation rating* of not less than 50 min. (See Appendix A.)

(2) Except as provided in Sentence 3.1.6.11.(1), the material or assembly of materials referred to Sentence (1) shall consist of,
(a) gypsum board,
(b) gypsum concrete,
(c) *noncombustible* materials,
(d) materials that conform to Sentences 3.1.5.1.(2) to (4), or
(e) any combination of materials listed in Clauses (a) to (d).

(3) Except as provided in Sentence (5), the exposed surfaces of mass timber beams, columns and arches within a *suite* or *fire compartment* need not be protected in accordance with Sentence (1), provided,
(a) the aggregate surface area does not exceed 10% of the total wall area of the perimeter of the *suite* or *fire compartment* in which they are located, and
(b) the *flame-spread rating* on any exposed surface is not more than 150.
(See Appendix A.)

(4) Except as provided in Sentences (5) and (6), the exposed surfaces of mass timber walls within a *suite* need not be protected in accordance with Sentence (1), provided,
(a) each exposed surface faces the same direction, and
(b) the *flame-spread rating* on any exposed surface is not more than 150.
(See Appendix A.)

(5) The aggregate exposed surface area of mass timber elements within a *suite* permitted in Sentences (3) and (4) shall not exceed 35% of the total wall area of the perimeter of the *suite*. (See Appendix A.)

(6) The exposed surfaces of mass timber ceilings within a *suite* need not be protected in accordance with Sentence (1), provided the aggregate area of the exposed surfaces does not exceed,
(a) 10% of the total ceiling area of the *suite*, where the exposed surfaces have a *flame-spread rating* not more than 150, or

(b) 25% of the total ceiling area of the *suite*, where,
  (i) the *suite* contains no mass timber walls with exposed surfaces, and
  (ii) the exposed surfaces of the mass timber ceiling have a *flame-spread rating* not more than 75.

(See Appendix A.)

3.1.6.5. Determination of Encapsulation Ratings

(1) Except as provided in Article 3.1.6.6., the rating of a material or assembly of materials that is required to have an *encapsulation rating* shall be determined on the basis of the results of the tests conducted in conformance with CAN/ULC-S146, "Test for the Evaluation of Encapsulation Materials and Assemblies of Materials for the Protection of Structural Timber Elements".

3.1.6.6. Encapsulation Materials (See Appendix A.)

(1) Gypsum-concrete topping and concrete not less than 38 mm thick are deemed to have an *encapsulation rating* of 50 min when installed on the upper side of a mass timber floor or roof assembly.

(2) Two layers of Type X gypsum board each not less than 12.7 mm thick are deemed to have an *encapsulation rating* of 50 min when installed on a mass timber element, provided they,

(a) are fastened with a minimum of two rows of screws in each layer,
  (i) directly to the mass timber element with screws of sufficient length to penetrate not less than 20 mm into the mass timber element that are spaced not more than 400 mm o.c. and 20 mm to 38 mm from the boards' edges, or
  (ii) to wood furring or resilient metal or steel furring channels not more than 25 mm thick spaced not more than 400 mm o.c. on the mass timber element,
(b) are installed with the joints in each layer staggered from those in the adjacent layer,
(c) are installed in conformance with ASTM C840, "Standard Specification for Application and Finishing of Gypsum Board", except that their joints need not be taped and finished, and
(d) conform to,
  (i) ASTM C1396/C1396M, "Gypsum Board", or
  (ii) CAN/CSA A82.27-M, "Gypsum Board".

(See Appendix A.)

3.1.6.7. Combustible Roofing Materials

(1) Wood roof sheathing and roof sheathing supports that do not conform to Articles 3.1.6.3. and 3.1.6.4. are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided they are installed,

(a) above a concrete deck in accordance with Clauses 3.1.5.3.(2)(a) to (f), or
(b) above a deck of *encapsulated mass timber construction*, where,
  (i) the deck is permitted to be encapsulated between the roof sheathing supports by a material or assembly of materials conforming to Sentence 3.1.6.4.(2) that provides an *encapsulation rating* of not less than 50 min,
  (ii) the height of the roof space is not more than 1 m,
  (iii) the roof space is divided into compartments by *fire blocks* in conformance with Article 3.1.11.5.,
  (iv) openings through the deck other than for *noncombustible* roof drains and plumbing piping are protected by shafts constructed as *fire separations* having a *fire-resistance rating* not less than 1 h that extend from the deck to not less than 150 mm above the adjacent sheathing, and
  (v) except as permitted by Subclause (iv), the roof space does not contain any *building* services.

(2) *Combustible* cant strips, roof curbs, nailing strips and similar components used in the installation of roofing are permitted on a *building* or part of a *building* permitted to be of *encapsulated mass timber construction.*

(3) Wood nailer facings to parapets that are not more than 610 mm high are permitted on a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided the facings and any roof membranes covering the facings are protected by sheet metal.

3.1.6.8. Combustible Window Sashes and Frames

(1) *Combustible* window sashes and frames are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided,

(a) each window in an exterior wall face is an individual unit separated from every other opening in the wall by *noncombustible* wall construction or mass timber wall construction conforming to the dimensions stated in Table 3.1.6.3.,

(b) windows in exterior walls in contiguous *storeys* are separated by not less than 1 m of *noncombustible* wall construction or mass timber wall construction conforming to the dimensions stated in Table 3.1.6.3., and

(c) the aggregate area of openings in an exterior wall face of a *fire compartment* is not more than 40% of the area of the wall face.

3.1.6.9. Exterior Cladding

(1) Except as provided in Sentences (2), (3) and (6), cladding on an exterior wall assembly of a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* shall be *noncombustible.* (See Appendix A.)

(2) Except as provided in Sentences (3) to (5), cladding on an exterior wall assembly of a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* is permitted to consist of,

(a) *combustible* cladding that,
  (i) is not contiguous over more than 4 *storeys*,
  (ii) represents not more than 10% of the cladding on each exterior wall of each *storey*,
  (iii) is not more than 1.2 m in width,
  (iv) has a *flame-spread rating* not more than 75 on any exposed surface, or any surface that would by exposed by cutting through the material in any direction,
  (v) is separated from other portions of *combustible* cladding on adjacent *storeys* by a horizontal distance of not less than 2.4 m, and
  (vi) is separated from other portions of *combustible* cladding by a horizontal distance of not less than 1.2 m,

(b) *combustible* cladding that,
  (i) is not contiguous across adjacent *storeys*,
  (ii) represents not more than 10% of the cladding on each exterior wall of each *storey*,
  (iii) has a *flame-spread rating* not more than 75 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, and
  (iv) is separated from other portions of *combustible* cladding on adjacent *storeys* by a horizontal distance of not less than 2.4 m,

(c) *combustible* cladding representing up to 100% of the cladding on exterior walls of the *first storey*, provided all portions of the cladding can be directly accessed and are located not more than 15 m from a *street* or access route conforming to Article 3.2.5.6., measured horizontally from the face of the *building*,

(d) except as provided in Sentence (4), a wall assembly that satisfies the criteria described in Clause 3.1.5.5.(1)(b), or

(e) a combination of *noncombustible* cladding and the cladding described in Clauses (a) to (d).

(See Appendix A.)

(3) The permitted area of *combustible* cladding referred to in Clause (2)(a) or (b) shall not exceed 5% of the cladding on each exterior wall of each *storey* where firefighting facilities cannot reach the *building* within 10 min of the alarm being received.

(4) An exterior wall assembly constructed in conformance with Section 6 of MMAH Supplementary Standard SB-2, "Fire Performance Ratings" is deemed to satisfy the criteria of Clause (2)(d).

(5) Except as provided in Article 3.2.3.10., where the *limiting distance* in Table 3.2.3.1.D. or Table 3.2.3.1.E. permits an area of *unprotected openings* of not more than 10% of the *exposing building face*, the construction requirements of Table 3.2.3.7. shall be met.

(6) A wall assembly conforming to Clause (2)(d) that includes *combustible* cladding made of *fire-retardant-treated wood* shall be tested for fire exposure after the cladding has been subjected to the accelerated weathering test specified in ASTM D2898, "Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing".

(7) Where *combustible* cladding conforming to Clause (2)(a) or (b) on an exterior wall of a *fire compartment* is exposed to *combustible* cladding conforming to Clause (2)(a) or (b) on an exterior wall of the same *fire compartment* or of another *fire compartment*, and the planes of the two walls are parallel or at an angle less than 135° measured from the exterior of the *building*, the different portions of *combustible* cladding shall,
(a) be separated by a horizontal distance of not less than 3 m, and
(b) not be contiguous over more than 2 *storeys*.

3.1.6.10. Combustible Components in Exterior Walls

(1) Except as provided in Sentence (2), *combustible* components, other than those permitted by Article 3.1.6.9., are permitted to be used in an exterior wall assembly of a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* provided the wall assembly meets the requirements of Clause 3.1.6.9.(2)(d).

(2) An exterior wall assembly constructed in conformance with Section 6 in MMAH Supplementary Standard SB-2, "Fire Performance Ratings" is deemed to satisfy the criteria of Sentence (1).

(3) Non-*loadbearing* wood elements permitted in Article 3.1.5.5. need not conform to Article 3.1.6.3. in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*.

3.1.6.11. Nailing Elements

(1) Wood nailing elements are permitted to be used for the attachment of a material or assembly of materials to provide an *encapsulation rating* in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided the concealed space created by the wood nailing elements is not more than 25 mm deep.

(2) Except as permitted by Sentence 3.1.6.16.(2) and Article 3.1.6.6., wood nailing elements are permitted to be used for the attachment of interior finishes in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided the concealed space created by the wood nailing elements is not more than 50 mm deep and,
(a) exposed surfaces in the concealed space have a *flame-spread rating* not more than 25, or
(b) the concealed space is filled with *noncombustible* insulation.

3.1.6.12. Combustible Flooring Elements

(1) Wood members that are more than 50 mm but not more than 300 mm high are permitted to be used for the construction of a raised platform in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, and they need not conform to Articles 3.1.6.3. and 3.1.6.4., provided,
(a) the concealed spaces created by the wood members are divided into compartments by *fire blocks* in conformance with Sentence 3.1.11.3.(4), and
(b) the wood members are,
  (i) applied directly to or set into a *noncombustible* floor slab, or
  (ii) applied directly to a mass timber floor assembly that conforms to the requirements of Article 3.1.6.3.

(2) The upper surface of the mass timber floor assembly referred to in Subclause (1)(b)(ii) is permitted to be encapsulated only between the wood members by a material or assembly of materials conforming to Sentences 3.1.6.4.(1) and (2).

(3) The floor system for the raised platform referred to in Sentence (1) is permitted to include a *combustible* subfloor and *combustible* finished flooring.

3.1.6.13. Combustible Stairs

(1) Wood stairs and landings conforming to the requirements for floor assemblies in Article 3.1.6.3. and Sentences 3.1.6.4.(1) and (2) are permitted in an *exit* stairwell in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*.

(2) Wood stairs in a *suite* in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* need not conform to Articles 3.1.6.3. and 3.1.6.4.

3.1.6.14. Combustible Interior Finishes

(1) Except as provided in Sentences (2) and (3), *combustible* interior wall and ceiling finishes referred to in Clause 3.1.13.1.(1)(b) that are not more than 1 mm thick are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*.

(2) Except as provided in Sentences 3.1.6.4.(3) and (4), *combustible* interior wall finishes, other than foamed plastics, that are not more than 25 mm thick are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided they have a *flame-spread rating* not more than 150 on any exposed surface or any surface that would be exposed by cutting through the material in any direction.

(3) Except as provided in Sentences (4) and 3.1.6.4.(3) and (6), *combustible* interior ceiling finishes, other than foamed plastics, are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided that,

(a) they have a *flame-spread rating* not more than 25 on any exposed surface or any surface that would be exposed by cutting through the material in any direction, and
(b) not more than 10% of the ceiling area within each *fire compartment* is permitted to have a *flame-spread rating* not more than 150.

(4) *Combustible* interior ceiling finishes made of *fire-retardant-treated wood* are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided they are not more than 25 mm thick or are exposed *fire-retardant-treated wood* battens.

3.1.6.15. Combustible Elements in Partitions

(1) Solid lumber *partitions* not less than 38 mm thick and *partitions* containing wood framing that do not conform to Article 3.1.6.3. are permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, provided the *partitions* are,

(a) protected on each face with not less than,
    (i) a single layer of 12.7 mm thick Type X gypsum board, with all joints either backed or taped and filled, conforming to ASTM C1396/C1396M, "Standard Specification for Gypsum Board", or CAN/CSA-A82.27-M, "Gypsum Board",
    (ii) a single layer of 19 mm thick *fire-retardant-treated wood*, on solid lumber *partitions*, or
    (iii) a single layer of 19mm thick *fire-retardant-treated wood*, on *partitions* containing wood framing, with wood stud cavities filled with *noncombustible* insulation, and
(b) not installed as enclosures for *exits* or *vertical service spaces*.

3.1.6.16. Exposed Construction Materials and Components in Concealed Spaces

(1) Except as provided in Sentence (2) and Article 3.1.11.7., and except as otherwise provided in this Subsection, only construction materials and components permitted in *noncombustible construction* shall be permitted to have exposed surfaces in concealed spaces within floor, roof and wall assemblies permitted in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*.

(2) Exposed surfaces are permitted in a concealed space created by the attachment of a material or assembly of materials conforming to Sentence 3.1.6.4.(1), provided the concealed space is not more than 25 mm deep.

3.1.6.17. Penetration by Outlet Boxes

(1) The minimum dimensions stated in Table 3.1.6.3. need not apply at cutouts in vertical or horizontal structural mass timber elements where outlet boxes are installed in accordance with Article 3.1.9.3A.

(2) The exposed surfaces of the cutouts described in Sentence (1) need not be protected in accordance with Sentence 3.1.6.4.(1).

(3) Outlet boxes on opposite sides of a structural mass timber element having a *fire-resistances rating* shall be separated by a distance of not less than 600 mm.

3.1.7. Fire-Resistance Ratings

3.1.7.1. Determination of Ratings

r11.1 **(1)** Except as permitted by Sentence (2) and Articles 3.1.7.2. and 3.6.3.5., the rating of a material, assembly of materials or a structural member that is required to have a *fire-resistance rating*, shall be determined on the basis of the results of tests conducted in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials".

(2) A material, assembly of materials or a structural member is permitted to be assigned a *fire-resistance rating* on the basis of MMAH Supplementary Standard SB-2, "Fire Performance Ratings".

3.1.7.2. Exception for Exterior Walls

(1) The limit on the rise of temperature on the unexposed surface of an assembly as required by the tests referred to in Sentence 3.1.7.1.(1) shall not apply to an exterior wall that has a *limiting distance* of 1.2 m or more, provided correction is made for radiation from the unexposed surface in accordance with Sentence 3.2.3.1.(9).

3.1.7.3. Exposure Conditions for Rating

(1) Floor, roof and ceiling assemblies shall be rated for exposure to fire on the underside.

(2) *Firewalls* and interior vertical *fire separations* shall be rated for exposure to fire on each side.

(3) Exterior walls shall be rated for exposure to fire from inside the *building*.

3.1.7.4. Minimum Fire-Resistance Rating

(1) The use of materials or assemblies having a greater *fire-resistance rating* than required shall impose no obligation to exceed in whole or in part the minimum *fire-resistance ratings* required by this Part.

3.1.7.5. Rating of Supporting Construction

(1) Except as permitted by Sentence (2) and by Articles 3.2.2.20. to 3.2.2.83. for mixed types of construction, all *loadbearing* walls, columns and arches in the *storey* immediately below a floor or roof assembly required to have a *fire-resistance rating* shall have a *fire-resistance rating* not less than that required for the supported floor or roof assembly.

(2) *Loadbearing* walls, columns and arches supporting a *service room* or *service space* need not conform to Sentence (1).

r19.1 **(3)** Except as provided in Sentence (4) and for *noncombustible* roof assemblies required by Subclauses 3.2.2.43A.(2)(c)(i) and 3.2.2.50A.(2)(c)(i), if an assembly is required to be of *noncombustible construction* and have a *fire-resistance rating*, it shall be supported by *noncombustible construction*.

r19.1 **(4)** Except for parts of a *building* constructed in accordance with Article 3.2.2.7. that are required to be of *noncombustible construction*, assemblies of *noncombustible construction* in *buildings* or parts of *buildings* permitted to be of *encapsulated mass timber construction* are permitted to be supported by *encapsulated mass timber construction.*

3.1.8. Fire Separations and Closures

3.1.8.1. General Requirements

(1) Any wall, *partition* or floor assembly required to be a *fire separation* shall,
(a) except as permitted by Sentence (2), be constructed as a continuous element, and
(b) as required in this Part, have a *fire-resistance rating* as specified. (See Appendix A.)

(2) Openings in a *fire separation* shall be protected with *closures*, shafts or other means in conformance with Articles 3.1.8.4. to 3.1.8.18. and Subsections 3.1.9. and 3.2.8. (See Appendix A.)

3.1.8.2. Combustible Construction Support

(1) *Combustible construction* that abuts on or is supported by a *noncombustible fire separation* shall be constructed so that its collapse under fire conditions will not cause the collapse of the *fire separation*.

3.1.8.3. Continuity of Fire Separations

(1) Except as permitted by Sentence 3.6.4.2.(2), a *horizontal service space* or other concealed space located above a required vertical *fire separation*, including the walls of a vertical shaft, shall be divided at the *fire separation* by an equivalent *fire separation* within the *service space*.

(2) The *fire separation* required by Sentence (1) shall terminate so that smoke-tight joints are provided where it abuts on or intersects,
(a) a floor,
(b) a roof slab, or
(c) a roof deck.

(3) Except as required by Subsection 3.6.3. for a shaft penetrating a roof assembly, a shaft, including an *exit* enclosure, that penetrates a *fire separation*, shall,
(a) extend through any *horizontal service space* or any other concealed space, and
(b) terminate so that smoke-tight joints are provided where the shaft abuts on or intersects,
  (i) a floor,
  (ii) a roof slab, or
  (iii) a roof deck.

(4) The continuity of a *fire separation* shall be maintained where it abuts another *fire separation*, a floor, a ceiling, or an exterior wall assembly. (See Appendix A.)

r11.1 3.1.8.4. Determination of Ratings

(1) Except as permitted by Sentences (2) and 3.1.8.14.(1), the *fire-protection rating* for a *closure* shall be determined in accordance with,
(a) CAN/ULC-S104, “Fire Tests of Door Assemblies”,
(b) CAN/ULC-S106, “Fire Tests of Window and Glass Block Assemblies”, or
(c) CAN/ULC-S112, “Fire Test of Fire Damper Assemblies”.

(3) Except as permitted by Sentence (4), the required *fire-resistance rating* of a *firewall*, except for *closures*, shall be provided by masonry or concrete.

(4) A *firewall* permitted to have a *fire-resistance rating* not more than 2 h need not be constructed of masonry or concrete provided,

(a) the assembly providing the *fire-resistance rating* is protected against damage that would compromise the integrity of the assembly,

(b) the design conforms to Article 4.1.5.17.,

(c) the level of performance of the *firewall* is not less than of masonry or concrete in the areas of,

(i) performance during fire conditions,

(ii) mechanical damage during the normal use of the *building*, and

(iii) resistance to damage from moisture,

(d) the *firewall* separates *buildings* or *buildings* with *floor areas* that do not contain,

(i) a Group B, Division 1 *major occupancy*, or

(ii) a Group B, Division 2 *major occupancy*, and

r5 (e) the *firewall* does not separate a *building* regulated by the provisions of Subsection 3.2.6. or a *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A. from another *building* unless the *buildings* on both sides of the *firewall* are *sprinklered*.

(See Appendix A.)

3.1.10.3. Continuity of Firewalls

(1) A *firewall* shall extend from the ground continuously through, or adjacent to, all *storeys* of a *building* or *buildings* so separated, except that a *firewall* located above a *basement storage garage* conforming to Article 3.2.1.2. is permitted to commence at the floor assembly immediately above the *storage garage*.

(2) A *firewall* is permitted to terminate on the underside of a reinforced concrete roof slab provided,

(a) the roof slab on both sides of the *firewall* has a *fire-resistance rating* not less than,

(i) 1 h if the *firewall* is required to have a *fire-resistance rating* not less than 2 h, or

(ii) 2 h if the *firewall* is required to have a *fire-resistance rating* not less than 4 h, and

(b) there are no concealed spaces within the roof slab in that portion immediately above the *firewall*.

3.1.10.4. Parapets

(1) Except as permitted by Sentences (2) and 3.1.10.3.(2), a *firewall* shall extend above the roof surface to form a parapet not less than,

(a) 150 mm high for a *firewall* required to have a *fire-resistance rating* not less than 2 h, and

(b) 900 mm high for a *firewall* required to have a *fire-resistance rating* not less than 4 h.

(2) A *firewall* that separates two *buildings* with roofs at different elevations need not extend above the upper roof surface to form a parapet, provided the difference in elevation between the roofs is more than 3 m.

3.1.10.5. Maximum Openings

(1) Openings in a *firewall* shall conform to the size limits described in Article 3.1.8.6. and the aggregate width of openings shall be not more than 25% of the entire length of the *firewall*.

3.1.10.6. Exposure Protection for Adjacent Walls

(1) The requirements of Article 3.2.3.14. shall apply to the external walls of two *buildings* that meet at a *firewall* at an angle less than 135°.

3.1.10.7. Combustible Projections

(1) *Combustible* material shall not extend across the end of a *firewall* but is permitted to extend across a roof above a *firewall* that is terminated in conformance with Sentence 3.1.10.3.(2).

(2) If *buildings* are separated by a *firewall*, *combustible* projections on the exterior of one *building*, including balconies, platforms, *canopies*, eave projections and stairs, that extend outward beyond the end of the *firewall*, shall not be permitted within 2.4 m of *combustible* projections and window or door openings of the adjacent *building*.

3.1.11. Fire Blocks in Concealed Spaces

3.1.11.1. Separation of Concealed Spaces

(1) Concealed spaces in interior wall, ceiling and crawl spaces shall be separated from concealed spaces in exterior walls and *attic or roof spaces* by *fire blocks* conforming to Article 3.1.11.7.

3.1.11.2. Fire Blocks in Wall Assemblies

(1) Except as permitted by Sentence (2), *fire blocks* conforming to Article 3.1.11.7. shall be provided to block off concealed spaces within a wall assembly,
(a) at every floor level,
(b) at every ceiling level where the ceiling forms part of an assembly required to have a *fire-resistance rating*, and
(c) so that the maximum horizontal dimension is not more than 20 m and the maximum vertical dimension is not more than 3 m.

(2) *Fire blocks* conforming to Sentence (1) are not required provided,
(a) the wall space is filled with insulation,
(b) the exposed construction materials and any insulation within the wall space are *noncombustible*,
(c) the exposed materials within the wall space, including insulation but not including wiring, piping or similar services, have a *flame-spread rating* not more than 25 on any exposed surface, or on any surface that would be exposed by cutting through the material in any direction, and *fire blocks* are installed so that the vertical distance between them is not more than 10 m, or
(d) the insulated wall assembly contains not more than one concealed air space and the horizontal thickness of that air space is not more than 25 mm.

3.1.11.3. Fire Blocks Between Nailing and Supporting Elements

(1) In a *building* required to be of *noncombustible construction*, a concealed space in which there is an exposed ceiling finish with a *flame-spread rating* more than 25, shall be provided with *fire blocks* conforming to Article 3.1.11.7. between wood nailing elements, so that the maximum area of the concealed space is not more than 2 m^2.

(2) In a *building* required to be of *noncombustible construction*, *fire blocks* conforming to Article 3.1.11.7. shall be provided in the concealed spaces created by the wood members permitted by Sentence 3.1.5.8.(2), so that the maximum area of a concealed space is not more than 10 m^2.

r19.1 **(3)** In a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, a concealed space in which there is an exposed ceiling finish with a *flame-spread rating* more than 25 shall be provided with *fire blocks* conforming to Article 3.1.11.7. between wood nailing elements so that the maximum area of the concealed space is not more than 2 m^2. (See Appendix A.)

r19.1 **(4)** In a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, *fire blocks* conforming to Article 3.1.11.7. shall be provided in the concealed spaces created by the wood members permitted by Sentence 3.1.6.12.(1) so that the maximum area of a concealed space is not more than 10 m^2.

3.1.11.4. Fire Blocks Between Vertical and Horizontal Spaces

(1) *Fire blocks* conforming to Article 3.1.11.7. shall be provided,
(a) at all interconnections between concealed vertical and horizontal spaces in interior coved ceilings, drop ceilings and soffits in which the exposed construction materials within the space have a *flame-spread rating* more than 25, and
(b) at the end of each run and at each floor level in concealed spaces between stair stringers in which the exposed construction materials within the space have a *flame-spread rating* more than 25.

3.1.11.5. Fire Blocks in Horizontal Concealed Spaces

(1) Except for a crawl space conforming to Sentence 3.1.11.6.(1), a horizontal concealed space within a floor assembly or roof assembly of *combustible construction*, in which sprinklers are not installed, shall be separated by construction conforming to Article 3.1.11.7. into compartments not more than,
(a) 600 m^2 in area with no dimension more than 60 m, if the exposed construction materials within the space have a *flame-spread rating* not more than 25, and
(b) 300 m^2 in area with no dimension more than 20 m, if the exposed construction materials within the space have a *flame-spread rating* more than 25.
(See Appendix A.)

(2) A concealed space in an exterior cornice, a mansard style roof, a balcony or a *canopy* in which exposed construction materials within the space have a *flame-spread rating* more than 25, shall be separated by construction conforming to Article 3.1.11.7.,
(a) at locations where the concealed space extends across the ends of required vertical *fire separations*, and
(b) so that the maximum dimension in the concealed space is not more than 20 m.

r5 **(3)** Except as provided by Sentence (4), a horizontal concealed space within a floor assembly or roof assembly of *combustible construction* in a *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A. shall be separated by construction conforming to Article 3.1.11.7. into compartments not more than,
(a) 600 m^2 in area with no dimension more than 60 m, if the exposed construction materials within the space have a *flame-spread rating* not more than 25, and
(b) 300 m^2 in area with no dimension more than 20 m, if the exposed construction materials within the space have a *flame-spread rating* more than 25.
(See Appendix A.)

r19.1 **(3.1)** Except for crawl spaces conforming to Sentence 3.1.11.6.(1) and except as provided in Sentence (4), in *buildings* or parts of *buildings* conforming to Article 3.2.2.42A. or 3.2.2.49A., horizontal concealed spaces within a floor assembly or roof assembly of *encapsulated mass timber construction* shall be separated by construction conforming to Article 3.1.11.7. into compartments that are not more than,
(a) 600 m^2 in area with no dimension more than 60 m, if the exposed construction materials within the space have a *flame-spread rating* not more than 25, and
(b) 300 m^2 in area with no dimension more than 20 m, if the exposed construction materials within the space have a *flame-spread rating* more than 25.
(See Appendix A.)

r19.1 **(4)** Sentences (3) and (3.1) do not apply if the horizontal concealed space within the floor assembly or roof assembly is entirely filled with *noncombustible* insulation such that any air gap between the top of the insulation and the underside of the floor or roof deck does not exceed 50 mm.

3.1.11.6. Fire Blocks in Crawl Spaces

(1) A crawl space that is not considered as a *basement* by Article 3.2.2.9. and in which sprinklers are not installed, shall be separated by construction conforming to Article 3.1.11.7. into compartments not more than 600 m^2 in area with no dimension more than 30 m.

3.1.11.7. Fire Block Materials

r11.1 e10 **(1)** Except as permitted by Sentences (2) to (4) and (7), *fire blocks* shall remain in place and prevent the passage of flames for not less than 15 min when subjected to the standard fire exposure in CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials".

(2) Gypsum board not less than 12.7 mm thick and sheet steel not less than 0.38 mm thick need not be tested in conformance with Sentence (1) provided all joints have continuous support.

(3) In a *building* required to be of *noncombustible construction*, wood nailing elements described in Article 3.1.5.6. need not be tested in conformance with Sentence (1).

r19.1 **(3.1)** In a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, wood nailing elements referred to in Article 3.1.6.11. need not be tested in conformance with Sentence (1).

r19.1 **(4)** In a *building* permitted to be of *combustible construction*, in a *combustible* roof system permitted by Sentences 3.1.5.3.(2) and 3.1.6.7.(1), and in a raised platform permitted by Sentence 3.1.5.8.(2) or 3.1.6.12.(1), *fire blocks* are permitted to be,

(a) solid lumber or a structural composite lumber product conforming to ASTM D5456, "Evaluation of Structural Composite Lumber Products", not less than 38 mm thick,
(b) phenolic bonded plywood, OSB or waferboard not less than 12.5 mm thick with joints supported, or
(c) two thicknesses of lumber or a structural composite lumber product conforming to ASTM D5456, "Evaluation of Structural Composite Lumber Products", each not less than 19 mm thick with joints staggered, where the width or height of the concealed space requires more than one piece of lumber or structural composite lumber product not less than 38 mm thick to block off the space.

r11.1 **(5)** Openings through *fire blocks* shall be protected to maintain the integrity of the construction.

r11.1 **(6)** Where *fire blocks* are penetrated by construction elements or by service equipment, a *fire stop* shall be used to seal the penetration. (See Appendix A.)

(7) In a *building* permitted to be of *combustible construction*, semi-rigid fibre insulation board, produced from glass, rock or slag, is permitted to be used to block the vertical space in a double wythe wall assembly formed at the intersection of the floor assembly and the walls, provided the insulation board,

(a) has a density not less than 45 kg/m^3,
(b) is securely fastened to one set of studs,
(c) extends from below the bottom of the top plates in the lower *storey* to above the top of the bottom plate in the upper *storey*, and
(d) completely fills the portion of the vertical space between the headers and between the wall plates

3.1.12. Flame-Spread Rating and Smoke Developed Classification

3.1.12.1. Determination of Ratings

(1) Except as required by Sentence (2) and as permitted by Sentence (3), the *flame-spread rating* and smoke developed classification of a material, assembly, or structural member shall be determined on the basis of no fewer than three tests conducted in conformance with CAN/ULC-S102, "Test for Surface Burning Characteristics of Building Materials and Assemblies".

(2) The *flame-spread rating* and smoke developed classification of a material or assembly shall be determined on the basis of no fewer than three tests conducted in conformance with CAN/ULC-S102.2, "Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies", if the material or assembly,

(a) is designed for use in a relatively horizontal position with only its top surface exposed to air,

(b) cannot be tested in conformance with Sentence (1) without the use of supporting material that is not representative of the intended installation, or

(c) is thermoplastic.

(3) A material, assembly, or structural member is permitted to be assigned a *flame-spread rating* and smoke developed classification on the basis of MMAH Supplementary Standard SB-2, "Fire Performance Ratings".

3.1.13. Interior Finish

3.1.13.1. Interior Finish Description

(1) Interior finish material shall include any material that forms part of the interior surface of a floor, wall, *partition* or ceiling, including,

(a) interior cladding of plaster, wood or tile,

(b) surfacing of fabric, paint, plastic, veneer or wallpaper,

(c) doors, windows and trim,

(d) lighting elements, such as light diffusers and lenses forming part of the finished surface of the ceiling, and

(e) carpet material that overlies a floor that is not intended as the finished floor.

3.1.13.2. Flame-Spread Rating

(1) Except as otherwise required or permitted by this Subsection, the *flame-spread rating* of interior wall and ceiling finishes, including glazing and skylights, shall be not more than 150 and shall conform to Table 3.1.13.2.

Table 3.1.13.2.
Flame-Spread Ratings
Forming Part of Sentence 3.1.13.2.(1)

Occupancy, Location or Element	Maximum *Flame-Spread Rating* for Walls and Ceilings	
	Sprinklered	Not *Sprinklered*
Group A, Division 1 *occupancies*, including doors, skylights, glazing and light diffusers and lenses	150	75
Group B *occupancies*	150	75(2)
Exits(1)	25	25
Lobbies described in Sentence 3.4.4.2.(2)	25	25
Covered vehicular passageways, except for roof assemblies of *heavy timber construction* in such passageways	25	25
Vertical service spaces	25	25
Column 1	2	3

Notes to Table 3.1.13.2.:

(1) See Articles 3.1.13.8. and 3.1.13.10.

(2) Group B *occupancies* are required to be *sprinklered*. See Part 11 for renovations of existing non-*sprinklered* Group B *occupancies*.

(2) Except as permitted by Sentence (3), doors, other than those in Group A, Division 1 *occupancies*, need not conform to Sentence (1) provided they have a *flame-spread rating* not more than 200. (See Appendix A.)

(3) Doors within a *dwelling unit* need not conform to Sentences (1) and (2).

(4) Up to 10% of the total wall area and 10% of the total ceiling area of a wall or ceiling finish that is required by Sentence (1) to have a *flame-spread rating* less than 150 is permitted to have a *flame-spread rating* not more than 150, except that up to 25% of the total wall area of lobbies described in Sentence 3.4.4.2.(2) is permitted to have a *flame-spread rating* not more than 150.

(5) Except in the case of Group A, Division 1 *occupancies*, *combustible* doors, skylights, glazing and light diffusers and lenses shall not be considered in the calculation of wall and ceiling areas described in Sentence (4).

3.1.13.3. Plumbing Fixtures and Bathrooms Finishes

(1) The *flame-spread rating* of interior wall and ceiling finishes for a bathroom in a *suite* of *residential occupancy* shall be not more than 200.

(2) *Plumbing fixtures* shall have a *flame-spread rating* not more than 200.

3.1.13.4. Light Diffusers and Lenses

(1) The *flame-spread rating* of *combustible* light diffusers and lenses in all *occupancies* other than Group A, Division 1 is permitted to be more than the *flame-spread rating* limits required elsewhere in this Subsection, provided the light diffusers and lenses,

(a) have a *flame-spread rating* not more than 250 and a smoke developed classification not more than 600 when tested in conformance with CAN/ULC-S102.2, "Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies",

(b) fall to the bottom of the test apparatus before igniting when tested in conformance with ULC-S102.3, "Fire Test of Light Diffusers and Lenses",

(c) are not prevented from falling from the ceiling by construction located beneath the elements, and

(d) are not used in a corridor that is required to be separated from the remainder of the *building* by a *fire separation* or in an *exit* shaft unless individual diffusers or lenses are not more than 1 m^2 in area and are not less than 1.2 m apart.

3.1.13.5. Skylights

(1) Individual *combustible* skylights in a corridor that is required to be separated from the remainder of the *storey* by a *fire separation* shall be not more than 1 m^2 in area and not less than 1.2 m apart.

3.1.13.6. Corridors

(1) Except as permitted by Sentences (2) and (3), the *flame-spread rating* shall be not more than 75 for the interior wall finish of,

(a) a *public corridor*,

(b) a corridor used by the public in,

(i) an *assembly occupancy*, or

r1 (ii) a *care*, *care and treatment* or *detention occupancy*,

(c) a corridor serving classrooms, or

r1 (d) a corridor serving sleeping rooms in a *care*, *care and treatment* or *detention occupancy*.

(2) The *flame-spread rating* limit specified in Sentence (1) does not apply to corridors referred to in Sentence (1) provided the *flame-spread rating* is not more than,

(a) 25 on the upper half of the wall, and

(b) 150 on the lower half of the wall.

(3) The *flame-spread rating* limits specified in Sentences (1) and (2) for corridors referred to in Sentence (1) do not apply to a corridor in which the *flame-spread rating* is not more than 150 provided the *floor area* is *sprinklered*.

(4) The *flame-spread rating* limits specified in Sentences (1) to (3) apply to *occupancies* in the corridor as well as to the corridor itself.

(5) Except in a *floor area* that is *sprinklered* and as permitted in Sentence (6), the interior ceiling finish of corridors and *occupancies* referred to in Sentences (1) and (4) shall have a *flame-spread rating* not more than 25.

(6) The *flame-spread rating* limits specified in Sentence (5) do not apply to a corridor in which the *flame-spread rating* is not more than 150 provided the *floor area* is *sprinklered*.

3.1.13.7. High Buildings

(1) Except as permitted by Sentences (2) and (3), the interior wall, ceiling and floor finishes in a *building* regulated by the provisions of Subsection 3.2.6. shall conform to the *flame-spread rating* requirements in Articles 3.1.13.2. to 3.1.13.6. and to the *flame-spread rating* and smoke developed classification values in Table 3.1.13.7.

(2) Except for a *building* of Group B *major occupancy* and elevator cars, the *flame-spread rating* and smoke developed classification of interior wall, floor and ceiling finishes need not conform to the values in Table 3.1.13.7., provided the *building* is *sprinklered* and the sprinkler system is electrically supervised in conformance with Sentences 3.2.4.10.(3) and 3.2.4.17.(1).

Table 3.1.13.7.
Flame-Spread Rating and Smoke Developed Classification in a High Building
Forming Part of Sentences 3.1.13.7.(1) and (2)

Location or Element	Maximum *Flame-Spread Rating*			Maximum Smoke Developed Classification		
	Wall Surface	Ceiling Surface(1)	Floor Surface	Wall Surface	Ceiling Surface(1)	Floor Surface
Exit stairways, vestibules to *exit* stairs and lobbies described in Sentence 3.4.4.2.(2)	25	25	25	50	50	50
Corridors not within *suites*	(2)	(2)	300	100	50	500
Elevator cars	75	75	300	450	450	450
Elevator vestibules	25	25	300	100	100	300
Service spaces and *service rooms*	25	25	25	50	50	50
Other locations and elements	(2)	(2)	No limit	300	50	No limit
Column 1	2	3	4	5	6	7

Notes to Table 3.1.13.7.:
(1) See Sentence 3.1.13.4.(1) for lighting elements.
(2) Other requirements of this Part apply.

(3) Trim, millwork and doors in an *exit* stairway, a vestibule to an *exit* stairway, a lobby described in Sentence 3.4.4.2.(2), or a corridor not within a *suite* need not conform to the *flame-spread rating* and smoke developed classification requirements of Sentence (1), provided they have,
(a) a *flame-spread rating* not more than 150,
(b) a smoke developed classification not more than 300, and
(c) an aggregate area not more than 10% of the area of the wall or ceiling on which they occur.

(4) Except as permitted in Sentences (5) to (7), *plumbing fixtures* in a *building* regulated by the provisions of Subsection 3.2.6. shall have a smoke developed classification not more than 300.

(5) A *plumbing fixture* that is not located in a Group B *occupancy* need not comply with Sentence (4) if the *building* is *sprinklered*.

(6) A *plumbing fixture* may have a smoke developed classification more than 300 but not more than 500 if,
(a) it is in a room where the wall surfaces have a smoke developed classification not more than 200, and
(b) it is located in,
  (i) a Group C *occupancy*, or
  (ii) a Group B *occupancy* and the *building* is *sprinklered*.

(7) A therapeutic bathing system in a Group B *occupancy* need not comply with Sentence (4) if the room in which it is located,
(a) does not open directly into patients' or residents' sleeping rooms, and
(b) is *sprinklered*.

3.1.13.8. Noncombustible Construction

(1) In a *building* required to be of *noncombustible construction*,
(a) the *flame-spread ratings* required by Subsection 3.1.5. shall apply in addition to the requirements in this Subsection, and
(b) the *flame-spread ratings* for *exits* in this Subsection shall also apply to any surface in the *exit* that would be exposed by cutting through the material in any direction, except that this requirement does not apply to doors, *heavy timber construction* in a *sprinklered building* and *fire-retardant treated wood*.

3.1.13.9. Underground Walkways

r5 **(1)** Except for paint, the interior wall and ceiling finishes of an underground *walkway* shall be of *noncombustible* materials.

3.1.13.10. Exterior Exit Passageway

(1) The wall and ceiling finishes of an exterior *exit* passageway that provides the only *means of egress* from the rooms or *suites* it serves, including the soffit beneath and the *guard* on the passageway, shall have a *flame-spread rating* not more than 25, except that a *flame-spread rating* not more than 150 is permitted for up to 10% of the total wall area and for up to 10% of the total ceiling area.

3.1.13.11. Elevator Cars

(1) The wall and ceiling surfaces of elevator cars shall have a *flame-spread rating* not more than 75.

(2) The wall, ceiling and floor surfaces of elevator cars shall have a smoke developed classification not more than 450.

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r19.1 ### 3.1.13.12. Encapsulated Mass Timber Construction

(1) In a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*,
(a) the *flame-spread ratings* required by Subsection 3.1.6. shall apply in addition to the requirements in this Subsection, and
(b) the *flame-spread ratings* for *exits* required by this Subsection shall also apply to any surface in the *exit* that would be exposed by cutting through the material in any direction, except that this requirement does not apply to doors, structural mass timber elements conforming to Sentence 3.1.6.4.(3), *heavy timber construction* and *fire-retardant-treated wood*.

3.1.14. Roof Assemblies

3.1.14.1. Fire-Retardant Treated Wood Roof Systems

(1) If a *fire-retardant treated wood* roof system is used to comply with the requirements of Subsection 3.2.2., the roof deck assembly shall meet the conditions of acceptance of CAN/ULC-S126, "Test for Fire Spread Under Roof-Deck Assemblies".

(2) Supports for the roof deck assembly referred to in Sentence (1) shall consist of,
(a) *fire-retardant treated wood*,
(b) *heavy timber construction*,
(c) *noncombustible construction*, or
(d) a combination of the items described in Clauses (a) to (c).

3.1.14.2. Metal Roof Deck Assemblies

(1) Except as permitted by Sentence (2), a metal roof deck assembly shall meet the conditions of acceptance of CAN/ULC-S126, "Test for Fire Spread Under Roof-Deck Assemblies", if,
(a) it supports a *combustible* material above the deck that could propagate a fire beneath the roof deck assembly, and
(b) the deck is used to comply with the requirements of Sentences 3.2.2.25.(2), 3.2.2.32.(2), 3.2.2.53.(2), 3.2.2.59.(2), 3.2.2.70.(2) and 3.2.2.76.(2) for *noncombustible construction*

(2) The requirements of Sentence (1) are waived provided,
(a) the *combustible* material above the roof deck is protected,
  (i) by not less than 12.7 mm thick gypsum board, mechanically fastened to a supporting assembly if located beneath the roof deck, or
r11.1 (ii) by a thermal barrier conforming to Clause 3.1.5.12.(4)(c) or (d) that is located on the underside of the *combustible* material or beneath the roof deck,
(b) the *building* is *sprinklered*, or
(c) the roof assembly has a *fire-resistance rating* not less than 45 min.

3.1.15. Roof Covering

3.1.15.1. Roof Covering Classification

(1) A roof covering classification shall be determined in conformance with CAN/ULC-S107, "Fire Tests of Roof Coverings". (See Appendix A.)

3.1.15.2. Roof Coverings

r19.1 **(1)** Except as provided by Sentences (2) to (4), every roof covering shall have a Class A, B or C classification as determined in accordance with Article 3.1.15.1.

r11.1 **(2)** A roof covering is not required to have a Class A, B or C classification for,
(a) a tent,
(b) an *air-supported structure*,
(c) a *building* of Group A, Division 2 *occupancy* not more than 2 *storeys* in *building height* and not more than 1 000 m^2 in *building area*, provided the roof covering is underlaid with *noncombustible* material, or
(d) a steel *building* system described in Article 4.3.4.3., provided the roof covering consists of metal sheets, metal shingles or other *noncombustible* roofing materials.

r5 **(3)** *Combustible* roof coverings on *buildings* within the scope of Article 3.2.2.43A. or 3.2.2.50A. shall have a Class A classification.

r19.1 **(4)** Roof coverings in *buildings* or parts of *buildings* permitted to be of *encapsulated mass timber construction* shall have a Class A classification.

3.1.16. Fabrics

3.1.16.1. Fabric Awnings, Canopies and Marquees

(1) Fabrics used as part of an awning, *canopy* or *marquee* that is located within or attached to a *building* of any type of construction shall conform to CAN/ULC-S109, "Flame Tests of Flame-Resistant Fabrics and Films".

3.1.17. Occupant Load

3.1.17.1. Occupant Load Determination

(1) The *occupant load* of a *floor area* or part of a *floor area*, or of a *building* or part of a *building* not having a *floor area*, shall be based on,
(a) the number of seats in an *assembly occupancy* having fixed seats,
(b) two persons per sleeping room or sleeping area in a *dwelling unit* or *suite*, or
(c) the number of persons,
  (i) for which the area is designed, or
  (ii) determined from Table 3.1.17.1. for *occupancies* other than those described in Clauses (a) and (b).

(2) If a *floor area* or part of it has been designed for an *occupant load* other than that determined from Table 3.1.17.1., a permanent sign indicating that *occupant load* shall be posted in a conspicuous location.

(3) For the purposes of this Article, *mezzanines*, tiers and balconies shall be regarded as part of the *floor area*.

(4) If a room or group of rooms is intended for different *occupancies* at different times, the value to be used from Table 3.1.17.1. shall be the value that gives the greatest number of persons for the *occupancies* concerned.

(5) Except as provided by Sentence (6) or (7), in dining, alcoholic beverage and cafeteria spaces the *occupant load* shall be determined from Table 3.1.17.1.

(6) The *occupant load* in Sentence (5) is permitted to be the number of persons for which the space is designed.

(7) The *occupant load* in Sentence (6) shall be not more than that determined by using an area of 0.6 m^2 per person.

(4) Sentences (1) to (3) do not apply to a *building* containing electrical equipment and electrical installations used exclusively in the generation, transformation or transmission of electrical power or energy intended for sale or distribution to the public.

3.1.20. Glass in Guards

3.1.20.1. Glass

(1) Except as provided in Sentence 3.3.4.7.(1), glass in *guards* shall conform to MMAH Supplementary Standard SB-13, "Glass in Guards".

r11 ### 3.1.21. Reserved

Section 3.2. Building Fire Safety

3.2.1. General

3.2.1.1. Exceptions in Determining Building Height

e3 **(1)** A rooftop enclosure provided for elevator machinery, a stairway or a *service room* used for no purpose other than for service to the *building*, shall not be considered as a *storey* in calculating the *building height*.

(2) Space under tiers of seats in a *building* of the arena type shall not be considered as adding to the *building height* provided the space is used only for dressing rooms, concession stands and similar purposes incidental to the *major occupancy* of the *building*.

(3) Except as required by Sentence (5), the space above a *mezzanine* need not be considered as a *storey* in calculating *building height* provided,

(a) the aggregate area of *mezzanines* that are not superimposed does not exceed 40% of the open area of the room in which they are located, and (See Appendix A.)

(b) except as permitted in Sentence (8) and Sentence 3.3.2.11.(3) the space above the *mezzanine* is used as an open area without *partitions* or subdividing walls higher than 1 070 mm above the *mezzanine* floor.

(4) Except as required by Sentence (5), the space above a *mezzanine* need not be considered as a *storey* in calculating the *building height* provided,

e3 (a) the aggregate area of *mezzanines* that are not superimposed and do not meet the conditions of Sentence (3) does not exceed 10% of the *floor area* in which they are located, and

(b) the area of *mezzanine* in a *suite* does not exceed 10% of the area of that *suite*.

(5) Except as permitted by Sentences (6) and (7), each level of *mezzanine* that is partly or wholly superimposed above the first level of *mezzanine* shall be considered as a *storey* in calculating the *building height*.

(6) Platforms intended solely for periodic inspection and elevated catwalks need not be considered as floor assemblies or *mezzanines* for the purpose of determining *building height* provided,

(a) they are not used for storage,

(b) they are constructed with *noncombustible* materials unless the *building* is permitted to be of *combustible construction*, and

(c) where they are intended to be occupied, they have an *occupant load* of not more than four persons.

(7) *Mezzanines*, elevated walkways and platforms that are intended to be occupied in Group F, Division 2 or 3 *major occupancies* need not be considered as *storeys* in calculating *building height* provided,
(a) the *building* is of *noncombustible construction*, and
(b) the *occupant load* is not more than four persons.

(8) The space above a *mezzanine* conforming to Sentence (3) is permitted to include an enclosed space whose area does not exceed 10% of the open area of the room in which the *mezzanine* is located, provided the enclosed space does not obstruct visual communication between the open space above the *mezzanine* and the room in which it is located.

(9) A *service space* in which facilities are included to permit a person to enter and to undertake maintenance and other operations pertaining to *building* services from within the *service space* need not be considered a *storey* if it conforms to Articles 3.2.5.15. and 3.3.1.23. and Sentences 3.2.4.20.(12), 3.2.7.3.(2), 3.3.1.3.(7), 3.4.2.4.(3) and 3.4.4.4.(9). (See Appendix A.)

3.2.1.2. Storage Garage Considered as a Separate Building

r11.1 **(1)** A *basement* used primarily as a *storage garage* is permitted to be considered as a separate *building* for the purposes of Subsection 3.2.2. and Sentences 3.2.5.13.(2) and (3), provided the floor and roof assemblies above the *basement* and, except as permitted by Sentence (2), the exterior walls of the *basement* above the adjoining ground level are constructed as *fire separations* of,
(a) masonry or concrete having a *fire-resistance rating* not less than 2 h, or
(b) *noncombustible construction* having a *fire-resistance rating* of not less than 2 h, where the *building* conforms to Clauses 3.1.10.2.(4)(a) and (c) to (e).

(2) The exterior wall of a *basement* that is required to be a *fire separation* with a *fire-resistance rating* in accordance with Sentence (1) is permitted to be penetrated by openings that are not protected by *closures* provided,
(a) the *storage garage* is *sprinklered*,
(b) every opening in the exterior wall is separated from *storeys* above the opening by a projection of the floor or roof assembly above the *basement*, extending not less than,
  (i) 1 m beyond the exterior face of the *storage garage* if the upper *storeys* are required to be of *noncombustible construction*, or
r19.1 (ii) 2 m beyond the exterior face of the *storage garage* if the upper *storeys* are permitted to be of *combustible construction* or *encapsulated mass timber construction*, or
(c) the exterior walls of any *storeys* located above the floor or roof assembly referred to in Sentence (1) are recessed behind the outer edge of the assembly by not less than,
  (i) 1 m if the upper *storeys* are required to be of *noncombustible construction*, or
r19.1 (ii) 2 m if the upper *storeys* are permitted to be of *combustible construction* or *encapsulated mass timber construction*.

(3) The floor or roof assembly projection referred to in Clause (2)(b) shall have a *fire-resistance rating* not less than 2 h and shall have no openings within the projection

3.2.1.3. Roof Considered as a Wall

r3 **(1)** For the purposes of this Section any part of a roof that is pitched at an angle of 60° or more to the horizontal and is adjacent to a space intended for occupancy within a *building* shall be considered as part of an exterior wall of the *building*.

3.2.1.4. Floor Assembly Over Basement

(1) Except as permitted by Sentence 3.2.2.42.(3), 3.2.2.43.(3), 3.2.2.44.(3), 3.2.2.45.(3), 3.2.2.46.(3), 3.2.2.47.(3) or 3.2.2.48.(3), a floor assembly immediately above a *basement* shall be constructed as a *fire separation* having a *fire-resistance rating* conforming to the requirements of Articles 3.2.2.20. to 3.2.2.83. for a floor assembly, but not less than 45 min.

(2) All *loadbearing* walls, columns and arches supporting a floor assembly immediately above a *basement* shall have a *fire-resistance rating* not less than that required by Sentence (1) for the floor assembly.

3.2.1.5. Fire Containment in Basements

(1) Except as permitted by Sentences (2) and 3.2.2.15.(3), in a *building* in which an automatic sprinkler system is not required to be installed by Articles 3.2.2.20. to 3.2.2.83., every *basement* shall,
(a) be *sprinklered*, or
(b) be subdivided into *fire compartments* not more than 600 m^2 in area by a *fire separation* having a *fire-resistance rating* not less than that required for the floor assembly immediately above the *basement*.

(2) An *open-air storey* need not conform to Sentence (1).

3.2.1.6. Mezzanines

(1) The floor assembly of a *mezzanine* that is required to be considered as a *storey* in calculating *building height* shall be constructed in conformance with the *fire separation* requirements for floor assemblies in Articles 3.2.2.20. to 3.2.2.83.

3.2.2. Building Size and Construction Relative to Occupancy

3.2.2.1. Application

(1) Except as permitted by Article 3.2.2.3., a *building* shall be constructed in conformance with this Subsection to prevent fire spread and collapse caused by the effects of fire.

3.2.2.2. Special and Unusual Structures

(1) A structure that cannot be identified with the characteristics of a *building* in Articles 3.2.2.20. to 3.2.2.83. shall be protected against fire spread and collapse in conformance with good fire protection engineering practice. (See Appendix A.)

3.2.2.3. Exceptions to Structural Fire Protection

(1) Fire protection is not required for,
(a) steel lintels above openings not more than 2 m wide in *loadbearing* walls and not more than 3 m wide in non-*loadbearing* walls,
(b) steel lintels above openings more than 2 m wide in *loadbearing* walls and more than 3 m wide in non-*loadbearing* walls, provided the lintels are supported at intervals of not more than 2 m by structural members with the required *fire-resistance rating*,
(c) the bottom flanges of shelf angles and plates that are not a part of the structural frame,
(d) steel members for framework around elevator hoistway doorways, steel for the support of elevator and dumbwaiter guides, counterweights and other similar equipment, that are entirely enclosed in a hoistway and are not a part of the structural frame of the *building*,
(e) steel members of stairways and escalators that are not a part of the structural frame of a *building*,
(f) steel members of porches, exterior balconies, exterior stairways, fire escapes, cornices, *marquees* and other similar appurtenances, provided they are outside an exterior wall of a *building*, and
(g) *loadbearing* steel or concrete members wholly or partly outside a *building* face in a *building* not more than 4 *storeys* in *building height* and classified as Group A, B, C, D or F, Division 3 *major occupancy* provided the members are,
  (i) not less than 1 m away from any *unprotected opening* in an exterior wall, or
  (ii) shielded from heat radiation in the event of a fire within the *building* by construction that will provide the same degree of protection that would be necessary if the member was located inside the *building*, with the protection extending on either side of the member a distance equal to the projection of the member from the face of the wall.

3.2.2.4. Buildings with Multiple Major Occupancies

(1) The requirements restricting fire spread and collapse for a *building* of a single *major occupancy* classification are provided in this Subsection according to its *building height* and *building area*.

(2) If a *building* contains more than one *major occupancy*, classified in more than one Group or Division, the requirements of this Subsection concerning *building* size and construction relative to *major occupancy* shall apply according to Articles 3.2.2.5. to 3.2.2.8.

r6 **(3)** For the purposes of Sentences (1) and (2), a *retirement home* is deemed to be a separate *major occupancy*.

3.2.2.5. Applicable Building Height and Area

(1) In determining the fire safety requirements of a *building* in relation to each of the *major occupancies* contained in it, the *building height* and *building area* of the entire *building* shall be used.

r6 **(2)** For the purposes of Sentence (1), a *retirement home* is deemed to be a separate *major occupancy*.

3.2.2.6. Multiple Major Occupancies

r19.1 **(1)** Except as permitted by Articles 3.2.2.7. and 3.2.2.8. and Sentences 3.2.2.42A.(4), 3.2.2.43A.(5), 3.2.2.49A.(3) and 3.2.2.50A.(4), in a *building* containing more than one *major occupancy*, the requirements of this Subsection for the most restricted *major occupancy* contained shall apply to the whole *building*.

r6 **(2)** For the purposes of Sentence (1), a *retirement home* is deemed to be a separate *major occupancy*.

3.2.2.7. Superimposed Major Occupancies

r19.1 **(1)** Except as permitted by Article 3.2.2.8. and Sentences 3.2.2.42A.(4), 3.2.2.43A.(5), 3.2.2.49A.(3) and 3.2.2.50A.(4), in a *building* in which one *major occupancy* is located entirely above another *major occupancy*, the requirements in this Subsection for each portion of the *building* containing a *major occupancy* shall apply to that portion as if the entire *building* was of that *major occupancy*.

(2) If one *major occupancy* is located above another *major occupancy*, the *fire-resistance rating* of the floor assembly between the *major occupancies* shall be determined on the basis of the requirements of this Subsection for the lower *major occupancy*.

r6 **(3)** For the purposes of Sentences (1) and (2), a *retirement home* is deemed to be a separate *major occupancy*.

3.2.2.8. Exceptions for Major Occupancies

(1) In a *building* in which the aggregate area of all *major occupancies* in a particular Group or Division is not more than 10% of the *floor area* of the *storey* in which they are located, these *major occupancies* need not be considered as *major occupancies* for the purposes of this Subsection, provided they are not classified as Group F, Division 1 or 2 *occupancies*.

r6 **(1.1)** For the purposes of Sentence (1), a *retirement home* is deemed to be a separate *major occupancy*.

(2) A helicopter landing area on the roof of a *building* need not be considered a *major occupancy* for purposes of Subsection 3.2.2. where such landing area is not more than 10% of the area of the roof.

3.2.2.9. Crawl Spaces

(1) For the purposes of Articles 3.2.1.4. and 3.2.1.5., a crawl space shall be considered as a *basement* if it is,
(a) more than 1 800 mm high between the lowest part of the floor assembly and the ground or other surface below,
(b) used for any *occupancy*,
(c) used for the passage of *flue pipes*, or
(d) used as a *plenum* in *combustible construction*.

(2) A floor assembly immediately above a crawl space is not required to be constructed as a *fire separation* and is not required to have a *fire-resistance rating* provided the crawl space is not required to be considered as a *basement* by Sentence (1).

3.2.2.10. Streets

(1) Every *building* shall face a *street* located in conformance with the requirements of Articles 3.2.5.4 and 3.2.5.5 for access routes.

(2) For the purposes of Subsections 3.2.2. and 3.2.5. an access route conforming to Subsection 3.2.5. is permitted to be considered as a *street*.

r5 **(3)** A *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A. is considered to face one *street* provided not less than 10% of the *building* perimeter is located within 15 m of a *street* or *streets*.

r5 **(4)** A *building* is considered to face two *streets* provided not less than 50% of the *building* perimeter is located within 15 m of a *street* or *streets*.

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r5 **(5)** A *building* is considered to face three *streets* provided not less than 75% of the *building* perimeter is located within 15 m of a *street* or *streets*.

r5 **(6)** Enclosed spaces, tunnels, bridges and similar structures, even though used for vehicular or pedestrian traffic, are not considered as *streets* for the purpose of this Part.

3.2.2.11. Exterior Balconies

r19.1 **(1)** Except as provided in Sentence (2), an exterior balcony shall be constructed in accordance with the type of construction required by Articles 3.2.2.20. to 3.2.2.83., as applicable to the *occupancy* classification of the *building*.

r19.1 **(2)** The floor assembly of an exterior balcony in a *building* or part of a *building* conforming to Article 3.2.2.42A. or 3.2.2.49A. shall,
(a) be of *noncombustible construction*, or
(b) be constructed in accordance with Article 3.1.6.3., but need not comply with Sentence 3.1.6.4.(1).

3.2.2.12. Exterior Passageways

(1) An elevated exterior passageway used as part of a *means of egress* shall conform to the requirements of Articles 3.2.2.20. to 3.2.2.83. for *mezzanines*.

3.2.2.13. Occupancy on Roof

(1) A portion of a roof that supports an *occupancy* shall be constructed in conformance with the *fire separation* requirements of Articles 3.2.2.20. to 3.2.2.83. for floor assemblies.

e3 3.2.2.14. Rooftop Enclosures

(1) A rooftop enclosure for elevator machinery or for a *service room* shall be constructed in accordance with the type of construction required by Articles 3.2.2.20. to 3.2.2.83.

(2) A rooftop enclosure for elevator machinery or for a *service room*, not more than 1 *storey* high, is not required to have a *fire-resistance rating*.

(3) A rooftop enclosure for a stairway shall be constructed in accordance with the type of construction required by Articles 3.2.2.20. to 3.2.2.83.

(4) A rooftop enclosure for a stairway need not have a *fire-resistance rating* nor be constructed as a *fire separation*.

3.2.2.15. Storeys Below Ground

(1) If a *building* is erected entirely below the adjoining finished ground level and does not extend more than 1 *storey* below that ground level, the minimum precautions against fire spread and collapse shall be the same as are required for *basements* under a *building* of 1 *storey* in *building height* having the same *occupancy* and *building area*.

(2) If any portion of a *building* is erected entirely below the adjoining finished ground level and extends more than 1 *storey* below that ground level, the following minimum precautions against fire spread and collapse shall be taken:
(a) except as permitted by Sentence (3), the *basements* shall be *sprinklered*,
(b) a floor assembly below the ground level shall be constructed as a *fire separation* with a *fire-resistance rating* not less than,
  (i) 3 h if the *basements* are intended for use as Group E or Group F, Division 1 or 2 *occupancies*, or
  (ii) 2 h if the *basements* are not intended for use as Group E or Group F, Division 1 or 2 *occupancies*, and

(c) all *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the construction that they support.

(3) If the *first storey* of a *building* is not required to be *sprinklered*, sprinklers are not required in the *storey* immediately below the *first storey*, provided the *storey* below,
(a) contains only *residential occupancies*, and
(b) has at least one unobstructed access opening conforming to Sentence 3.2.5.1.(2) installed on that *storey* for each 15 m of wall length in at least one wall required by this Subsection to face a *street*.

3.2.2.16. Heavy Timber Roof Permitted

(1) Unless otherwise permitted by Articles 3.2.2.20. to 3.2.2.83., a roof assembly in a *building* up to 2 *storeys* in *building height* is permitted to be of *heavy timber construction* regardless of *building area* or type of construction required, provided the *building* is *sprinklered*.

(2) If Sentence (1) permits a roof assembly to be of *heavy timber construction*, structural members in the *storey* immediately below the roof assembly are permitted to be of *heavy timber construction*.

3.2.2.17. Sprinklers in Lieu of Roof Rating

r5 **(1)** Except as provided by Sentence (2), the requirements in Articles 3.2.2.20. to 3.2.2.83. for roof assemblies to have a *fire-resistance rating* are permitted to be waived provided,
(a) the *building* is *sprinklered*,
(b) the sprinkler system in Clause (a) is electrically supervised in conformance with Sentence 3.2.4.10.(3), and
(c) the operation of the sprinkler system in Clause (a) will cause a signal to be transmitted to the fire department in conformance with Sentence 3.2.4.8.(4).

r5 **(2)** The *fire-resistance rating* of roof assemblies required by Clause 3.2.2.43A.(2)(b) or 3.2.2.50A.(2)(b) is not permitted to be waived.

3.2.2.18. Automatic Sprinkler System Required

(1) If an automatic sprinkler system is required by Articles 3.2.2.20. to 3.2.2.83., the system shall conform to the requirements of Articles 3.2.4.8. to 3.2.4.10. and 3.2.5.13. (See Appendix A.)

3.2.2.19. Buildings Containing Impeded Egress Zones

(1) A *building* containing an *impeded egress zone* and conforming to the appropriate requirements of Articles 3.2.2.20. to 3.2.2.83. is not required to conform to the requirements of Articles 3.2.2.36. and 3.2.2.37. for a Group B, Division 1 *major occupancy* provided,
(a) the *building* is *sprinklered*,
(b) it is not more than 1 *storey* in *building height*,
(c) it does not include,
  (i) a *contained use area*,
  (ii) sleeping accommodation,
  (iii) a *high hazard industrial occupancy*, or
  (iv) a *mercantile occupancy*,
(d) the *building area* is not more than 6 400 m^2 if the *building* includes a *medium hazard industrial occupancy*,
(e) the *impeded egress zone* does not extend beyond the boundaries of the *fire compartment* in which it is located, and
(f) the *occupant load* of the *impeded egress zone* is not more than 100.

(2) Except as permitted by Article 3.2.2.16., the *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* shall be *sprinklered*,
(b) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 2 h,
(c) *mezzanines* shall have a *fire-resistance rating* not less 1 h, and
(d) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

3.2.2.39. Group B, Division 2 or Division 3, up to 3 Storeys, Sprinklered

(1) A *building* classified as Group B, Division 2 or Division 3 is permitted to conform to Sentence (2) provided,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* is *sprinklered*,
(b) it is not more than 3 *storeys* in *building height*, and
(c) it has a *building area*,
  (i) that is not limited if the *building* is not more than 1 *storey* in *building height*,
  (ii) not more than 12 000 m^2 if 2 *storeys* in *building height*, or
  (iii) not more than 8 000 m^2 if 3 *storeys* in *building height*.

(2) Except as permitted by Article 3.2.2.16., the *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,
(a) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 1 h,
(b) *mezzanines* shall have a *fire-resistance rating* not less than 1 h, and
(c) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

3.2.2.40. Group B, Division 2 or Division 3, up to 2 Storeys, Sprinklered

(1) A *building* classified as Group B, Division 2 or Division 3 is permitted to conform to Sentence (2) provided,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* is *sprinklered*,
(b) it is not more than 2 *storeys* in *building height*, and
(c) it has a *building area* not more than,
  (i) 2 400 m^2 if 1 *storey* in *building height*, or
  (ii) 1 600 m^2 if 2 *storeys* in *building height*.

(2) The *building* referred to in Sentence (1) is permitted to be of *combustible construction* or *noncombustible construction* used singly or in combination, and,
(a) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 45 min,
(b) *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, and
(c) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

3.2.2.41. Group B, Division 2 or Division 3, 1 Storey, Sprinklered

(1) A *building* classified as Group B, Division 2 or Division 3 is permitted to be of *combustible construction* or *noncombustible construction* used singly or in combination, provided,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* is *sprinklered*,
(b) it is not more than 1 *storey* in *building height*, and
(c) it has a *building area* not more than 500 m^2.

3.2.2.42. Group C, Any Height, Any Area, Sprinklered

r6 **(1)** Except as permitted by Articles 3.2.2.43. to 3.2.2.48., a *building* classified as Group C other than a *retirement home* shall conform to Sentence (2).

(2) Except as permitted by Article 3.2.2.16., the *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* shall be *sprinklered*,
(b) except as permitted by Sentence (3), floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 2 h,
(c) *mezzanines* shall have a *fire-resistance rating* not less than 1 h, and
(d) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

(3) In a *building* that contains *dwelling units* that have more than 1 *storey*, subject to the requirements of Sentence 3.3.4.2.(3), the floor assemblies, including floors over *basements*, which are entirely contained within these *dwelling units*, shall have a *fire-resistance rating* not less than 1 h but need not be constructed as *fire separations*.

r19.1 3.2.2.42A. Group C, up to 12 Storeys, Sprinklered, Encapsulated Mass Timber Construction

(1) A *building* classified as Group C is permitted to conform to Sentence (2), provided,
(a) it is *sprinklered*,
(b) it is not more than 12 *storeys* in *building height*,
(c) it has a height of not more than 42 m measured between the floor of the *first storey* and the uppermost floor level that does not serve as a rooftop enclosure for elevator machinery, a stairway or a *service room* used for no purpose other than for service to the *building*, and
(d) it has a *building area* not more than 6 000 m^2.

(2) Except as provided in Article 3.2.2.16., the *building* referred to in Sentence (1) is permitted to be of *encapsulated mass timber construction* or *noncombustible construction*, used singly or in combination, and,
(a) except as provided in Sentence (3), floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 2 h,
(b) *mezzanines* shall have a *fire-resistance rating* not less than 1 h, and
(c) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

(3) In a *building* that contains *dwelling units* that have more than 1 *storey*, subject to the requirements of Sentence 3.3.4.2.(3), the floor assemblies, including floors over *basements*, that are entirely contained within these *dwelling units* shall have a *fire-resistance rating* not less than 1 h but need not be constructed as *fire separations*.

(4) Group A, Division 2 *major occupancies*, Group E *major occupancies* and *storage garages* located in a *building* or part of a *building* within the scope of this Article are permitted to be constructed in accordance with this Article, provided,
(a) the Group A, Division 2 *major occupancy* is located below the fourth *storey*,
(b) the Group E *major occupancy* is located below the third *storey*, and
(c) the *storage garage* is located below the fifth *storey*.
(See Appendix A.)

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r5 3.2.2.43. Group C, up to 6 Storeys, Sprinklered, Noncombustible Construction

r6 **(1)** A *building* classified as Group C other than a *retirement home* is permitted to conform to Sentence (2) provided,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* is *sprinklered*,
(b) it is not more than 6 *storeys* in *building height*, and
(c) it has a *building area*,
(i) that is not limited if the *building* is not more than 2 *storeys* in *building height*,
(ii) not more than 12 000 m^2 if 3 *storeys* in *building height*,
(iii) not more than 9 000 m^2 if 4 *storeys* in *building height*,
(iv) not more than 7 200 m^2 if 5 *storeys* in *building height*, or
(v) not more than 6 000 m^2 if 6 *storeys* in *building height*.

(2) Except as permitted by Article 3.2.2.16., the *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,
(a) except as permitted by Sentence (3), floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 1 h,
(b) *mezzanines* shall have a *fire-resistance rating* not less than 1 h, and
(c) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

(3) In a *building* that contains *dwelling units* that have more than 1 *storey*, subject to the requirements of Sentence 3.3.4.2.(3), the floor assemblies, including floors over *basements*, which are entirely contained within these *dwelling units*, shall have a *fire-resistance rating* not less than 1 h but need not be constructed as *fire separations*.

r5 3.2.2.43A. Group C, up to 6 Storeys, Sprinklered, Combustible Construction

r6 **(1)** A *building* classified as Group C other than a *retirement home* is permitted to conform to Sentence (2) provided,
(a) it is *sprinklered*,
(b) it is not more than 6 *storeys* in *building height*,
(c) it has a height of not more than 18 m, measured between the floor level of the *first storey* and the floor level of the uppermost *storey* or *mezzanine* that is not a rooftop enclosure, provided for elevator machinery, a stairway or a *service room* used for no purpose other than for service to the *building*, and
(d) it has a *building area* of not more than,
(i) 9 000 m^2 if 1 *storey* in *building height*,
(ii) 4 500 m^2 if 2 *storeys* in *building height*,
(iii) 3 000 m^2 if 3 *storeys* in *building height*,
(iv) 2 250 m^2 if 4 *storeys* in *building height*,
(v) 1 800 m^2 if 5 *storeys* in *building height*, or
(vi) 1 500 m^2 if 6 *storeys* in *building height*.

(2) The *building* referred to in Sentence (1) is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, and,
(a) except as permitted by Sentence (3), floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 1 h,
(b) roof assemblies shall have a *fire-resistance rating* not less than 1 h,
(c) except as provided by Sentence (4), where the roof assembly has a height greater than 25 m measured from the floor level of the *first storey* to the highest point of the roof assembly, the roof assembly shall,
(i) be of *noncombustible construction*, or
(ii) be constructed of *fire-retardant treated wood* conforming to Article 3.1.4.5.,
(d) *mezzanines* shall have a *fire-resistance rating* not less than 1 h,
(e) the *fire separation* of *exits* described in Sentence 3.4.4.1.(3) shall be of *noncombustible construction*, and
(f) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

(3) In a *building* that contains *dwelling units* that have more than 1 *storey*, subject to the requirements of Sentence 3.3.4.2.(3), the floor assemblies, including floors over *basements*, which are entirely contained within these *dwelling units*, shall have a *fire-resistance rating* not less than 1 h but need not be constructed as *fire separations*.

(4) The construction of non-contiguous roof assemblies at different elevations is permitted to be evaluated separately to determine which roof assemblies are required to be constructed in accordance with Clause (2)(c). (See Appendix A.)

(5) Group A, Division 2 *major occupancies*, Group E *major occupancies* and *storage garages* located in a *building* within the scope of this Article are permitted to be constructed in accordance with this Article provided they are located below the third *storey* of the *building*. (See Appendix A.)

3.2.2.44. Group C, up to 4 Storeys, Noncombustible Construction

r6 **(1)** A *building* classified as Group C other than a *retirement home* is permitted to conform to Sentence (2) provided,

(a) it is not more than,
  (i) 3 *storeys* in *building height*, or
  (ii) 4 *storeys* in *building height* provided there is not more than one *dwelling unit* above another *dwelling unit*, and vertical *fire separations* of adjacent *dwelling units* conform to Sentence (4), and

(b) it has a *building area* not more than the value in Table 3.2.2.44.

(2) The *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,

(a) except as permitted by Sentence (3), floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 1 h,

(b) *mezzanines* shall have a *fire-resistance rating* not less than 1 h,

(c) roof assemblies shall have a *fire-resistance rating* not less than 1 h, and

(d) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

r6 3.2.2.48E. Group C, Retirement Home, up to 3 Storeys, Sprinklered, Combustible Construction

(1) A *retirement home* is permitted to conform to Sentence (2) provided,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* is *sprinklered*,
(b) it is not more than 3 *storeys* in *building height*, and
(c) it has a *building area* not more than,
  (i) 4 800 m^2 if 1 *storey* in *building height*,
  (ii) 2 400 m^2 if 2 *storeys* in *building height*, or
  (iii) 1 600 m^2 if 3 *storeys* in *building height*.

(2) The *building* referred to in Sentence (1) is permitted to be of *combustible construction* or *noncombustible construction* used singly or in combination, and,
(a) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 45 min,
(b) *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, and
(c) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

3.2.2.49. Group D, Any Height, Any Area

(1) Except as permitted by Articles 3.2.2.50. to 3.2.2.56., a *building* classified as Group D shall conform to Sentence (2).

(2) Except as permitted by Article 3.2.2.16., the *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* shall be *sprinklered* if it is regulated by Subsection 3.2.6.,
(b) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 2 h,
(c) *mezzanines* shall have a *fire-resistance rating* not less 1 h,
(d) if the *building* is not *sprinklered*, roof assemblies shall have a *fire-resistance rating* not less than 1 h, except that in a *building* not more than 1 *storey* in *building height* this requirement is waived, and
(e) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

r19.1 3.2.2.49A. Group D, up to 12 Storeys, Sprinklered, Encapsulated Mass Timber Construction

(1) A *building* classified as Group D is permitted to conform to Sentence (2), provided,
(a) it is *sprinklered*,
(b) it is not more than 12 *storeys* in *building height*,
(c) it has a height of not more than 42 m measured between the floor of the *first storey* and the uppermost floor level that does not serve as a rooftop enclosure for elevator machinery, a stairway or a *service room* used for no purpose other than for service to the *building*, and
(d) it has a *building area* not more than 7 200 m^2.

(2) Except as provided in Article 3.2.2.16., the *building* referred to in Sentence (1) is permitted to be of *encapsulated mass timber construction* or *noncombustible construction*, used singly or in combination, and,
(a) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 2 h,
(b) *mezzanines* shall have a *fire-resistance rating* not less than 1 h, and
(c) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

(3) Group A, Division 2 *major occupancies*, Group E *major occupancies*, Group F, Division 2 and 3 *major occupancies* and *storage garages* located in a *building* or part of a *building* within the scope of this Article are permitted to be constructed in accordance with this Article, provided,
(a) the Group A, Division 2 *major occupancy* is located below the fourth *storey*,
(b) the Group E major occupancy and Group F, Division 2 or 3 *major occupancy* are located below the third *storey*, and
(c) the *storage garage* is located below the fifth *storey*.
(See Appendix Note A-3.2.2.42A.(4))

3.2.2.50. Group D, up to 6 Storeys

(1) A *building* classified as Group D is permitted to conform to Sentence (2) provided,
(a) it is not more than 6 *storeys* in *building height*, and
(b) it has a *building area* not more than the value in Table 3.2.2.50.

Table 3.2.2.50.
Maximum Building Area, Group D, up to 6 Storeys
Forming Part of Sentence 3.2.2.50.(1)

No. of *Storeys*	Maximum Area, m^2		
	Facing 1 *Street*	Facing 2 *Streets*	Facing 3 *Streets*
1	not limited	not limited	not limited
2	7 200	not limited	not limited
3	4 800	6 000	7 200
4	3 600	4 500	5 400
5	2 800	3 600	4 320
6	2 400	3 000	3 600
Column 1	2	3	4

(2) The *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,
(a) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 1 h,
(b) *mezzanines* shall have a *fire-resistance rating* not less than 1 h,
(c) roof assemblies shall have a *fire-resistance rating* not less than 1 h, except that in a *building* not more than 1 *storey* in *building height* this requirement is waived, and
(d) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

r5 3.2.2.50A. Group D, up to 6 Storeys, Sprinklered, Combustible Construction

(1) A *building* classified as Group D is permitted to conform to Sentence (2) provided,
(a) it is *sprinklered*,
(b) it is not more than 6 *storeys* in *building height*,
(c) it has a height of not more than 18 m, measured between the floor level of the *first storey* and the floor level of the uppermost *storey* or *mezzanine* that is not a rooftop enclosure, provided for elevator machinery, a stairway or a *service room* used for no purpose other than for service to the *building*, and
(d) it has a *building area* of not more than,
(i) 18 000 m^2 if 1 *storey* in *building height*,
(ii) 9 000 m^2 if 2 *storeys* in *building height*,
(iii) 6 000 m^2 if 3 *storeys* in *building height*,
(iv) 4 500 m^2 if 4 *storeys* in *building height*,
(v) 3 600 m^2 if 5 *storeys* in *building height*, or
(vi) 3 000 m^2 if 6 *storeys* in *building height*.

(2) The *building* referred to in Sentence (1) is permitted to be of *combustible construction* or *noncombustible construction* used singly or in combination, and,
(a) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 1 h,
(b) roof assemblies shall have a *fire-resistance rating* not less than 1 h,
(c) except as provided by Sentence (3), where the roof assembly has a height greater than 25 m measured from the floor level of the *first storey* to the highest point of the roof assembly, the roof assembly shall,
(i) be of *noncombustible construction*, or
(ii) be constructed of *fire-retardant treated wood* conforming to Article 3.1.4.5.,
(d) *mezzanines* shall have a *fire-resistance rating* not less than 1 h,
(e) the *fire separation* of *exits* described in Sentence 3.4.4.1.(3) shall be of *noncombustible construction*, and
(f) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

e11 **(3)** The construction of non-contiguous roof assemblies at different elevations is permitted to be evaluated separately to determine which roof assemblies are required to be constructed in accordance with Clause (2)(c). (See Appendix Note A-3.2.2.43A.(4))

e11 **(4)** Group A, Division 2 *major occupancies*, Group E *major occupancies* and *storage garages* located in a *building* within the scope of this Article are permitted to be constructed in accordance with this Article provided they are located below the third *storey* of the *building*. (See Appendix Note A-3.2.2.43A.(5))

r5 3.2.2.51. Group D, up to 6 Storeys, Sprinklered, Noncombustible Construction

(1) A *building* classified as Group D is permitted to conform to Sentence (2) provided,
(a) except as permitted by Sentence 3.2.2.7.(1), the *building* is *sprinklered*,
(b) it is not more than 6 *storeys* in *building height*, and
(c) it has a *building area*,
(i) that is not limited if the *building* is not more than 2 *storeys* in *building height*,
(ii) not more than 14 400 m^2 if 3 *storeys* in *building height*,
(iii) not more than 10 800 m^2 if 4 *storeys* in *building height*,
(iv) not more than 8 640 m^2 if 5 *storeys* in *building height*, or
(v) not more than 7 200 m^2 if 6 *storeys* in *building height*.

(2) Except as permitted by Article 3.2.2.16., the *building* referred to in Sentence (1) shall be of *noncombustible construction*, and,
(a) floor assemblies shall be *fire separations* with a *fire-resistance rating* not less than 1 h,
(b) *mezzanines* shall have a *fire-resistance rating* not less than 1 h, and
(c) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly.

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(iv) not less than 11 mm thick plywood,
(v) not less than 12.5 mm thick OSB or waferboard, or
(vi) not less than 11 mm thick lumber.

(5) For *buildings* of *combustible construction*, materials installed to provide the required protection of soffits may be covered with a *combustible* or *noncombustible* finish material.

3.2.3.7. Construction of Exposing Building Face

r5 **(1)** Except as provided by Sentences (3) to (6) and Articles 3.2.3.10. and 3.2.3.11, the *fire-resistance rating*, construction and cladding for *exposing building faces* of *buildings* or *fire compartments* shall comply with Table 3.2.3.7.

(2) Reserved

r19.1 **(3)** Except as provided by Sentences (4) to (6) and Articles 3.1.6.9., 3.2.3.10. and 3.2.3.11., cladding for *buildings* or *fire compartments* where the maximum permitted area of *unprotected openings* is more than 10% of the *exposing building face* need not be *noncombustible* where the wall assembly complies with the requirements of Sentence 3.1.5.5.(1) when tested in conformance with CAN/ULC-S134, "Fire Test of Exterior Wall Assemblies".

r5 **(4)** Except as provided by Sentence (6), cladding for *buildings* or *fire compartments* where the maximum permitted area of *unprotected openings* is more than 10% but not more than 25% of the *exposing building face* need not be *noncombustible* where the wall assembly complies with Article 3.1.5.5.

r5 **(5)** Except as provided by Sentence (6), cladding for *buildings* or *fire compartments* where the maximum permitted area of *unprotected openings* is more than 25% but not more than 50% of the *exposing building face* need not be *noncombustible* where,
(a) the *limiting distance* is greater than 5 m,
(b) the *building* or *fire compartment* and all *combustible attic or roof spaces* are *sprinklered*,
(c) the cladding,
  (i) conforms to Subsection 9.27.6., 9.27.7., 9.27.8., 9.27.9. or 9.27.10.,
  (ii) is installed without furring members, or on furring not more than 25 mm thick, over gypsum sheathing at least 12.7 mm thick or over masonry, and
  (iii) after conditioning in conformance with ASTM D2898, "Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing", has a *flame-spread rating* not greater than 25 on the exterior face when tested in accordance with Sentence 3.1.12.1.(1),
(d) the cladding,
  (i) conforms to Subsection 9.27.12.,
  (ii) is installed with or without furring members over gypsum sheathing at least 12.7 mm thick or over masonry,
  (iii) has a *flame-spread rating* not greater than 25 when tested in accordance with Sentence 3.1.12.1.(2), and
  (iv) does not exceed 2 mm in thickness exclusive of fasteners, joints and local reinforcements, or
(e) the wall assembly complies with Article 3.1.5.5.

r11.1 **(6)** Subject to Sentence (7), cladding for *buildings* within the scope of Article 3.2.2.43A. or 3.2.2.50A. that exceed 4 *storeys* in *building height* or for *fire compartments* in such *buildings* where the maximum permitted area of *unprotected openings* is more than 10% of the *exposing building face* need not be *noncombustible* where the wall assembly complies with the requirements of Subclauses 3.1.5.5.(1)(b)(i) and (ii) when tested in accordance with CAN/ULC-S134, "Fire Test of Exterior Wall Assemblies".

r5 **(7)** A wall assembly described in Sentence (6) that includes *combustible* cladding of *fire-retardant treated wood* shall be tested for fire exposure after the cladding has been conditioned in conformance with ASTM D2898, "Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing".

r5 **(8)** The construction requirements for the *exposing building face* that are listed in Table 3.2.3.7. shall be satisfied before the area of *unprotected openings* may be increased as permitted by Sentence 3.2.3.12.(1).

r19.1

Table 3.2.3.7.
Minimum Construction Requirements for Exposing Building Faces
Forming Part of Sentences 3.2.3.7.(1) and (8)

Occupancy Classification of *Building* or *Fire Compartment*	Maximum Area of *Unprotected Openings* Permitted, % of *Exposing Building Face* Area	Minimum Required *Fire-Resistance Rating*	Type of Construction Required	Type of Cladding Required
Group A, B, C, D, or Group F, Division 3	0 to 10	1 h	*Noncombustible*	*Noncombustible*
	> 10 to 25	1 h	*Combustible, Encapsulated Mass Timber Construction, or Noncombustible*	*Noncombustible*
	> 25 to 50	45 min	*Combustible, Encapsulated Mass Timber Construction, or Noncombustible*	*Noncombustible*
	> 50 to < 100	45 min	*Combustible, Encapsulated Mass Timber Construction, or Noncombustible*	*Combustible* or *Noncombustible*(1)(2)
Group E, or Group F, Division 1 or 2	0 to 10	2 h	*Noncombustible*	*Noncombustible*
	> 10 to 25	2 h	*Combustible, Encapsulated Mass Timber Construction, or Noncombustible*	*Noncombustible*
	> 25 to 50	1 h	*Combustible, Encapsulated Mass Timber Construction, or Noncombustible*	*Noncombustible*
	> 50 to < 100	1 h	*Combustible, Encapsulated Mass Timber Construction, or Noncombustible*	*Combustible* or *Noncombustible*(1)(2)
Column 1	2	3	4	5

Notes to Table 3.2.3.7.:

(1) Cladding for *buildings* over 4 *storeys* in *building height* within the scope of Article 3.2.2.43A. or 3.2.2.50A. or for *fire compartments* in such *buildings* is required to be *noncombustible*.

(2) The cladding on Group C *buildings* or parts thereof conforming to Article 3.2.2.42A. and on Group D *buildings* or parts thereof conforming to Article 3.2.2.49A. shall conform to Sentence 3.1.6.9.(2) or be *noncombustible.*

3.2.3.8. Protection of Exterior Building Face

(1) Except as permitted by Sentence (3) and in addition to the requirements of Sentence 3.2.3.7.(1) and where the maximum permitted area of *unprotected openings* is greater than 10% of the *exposing building face*, foamed plastic insulation used in an exterior wall of a *building* more than 3 *storeys* in *building height* shall be protected on its exterior surface by,

(a) concrete or masonry not less than 25 mm thick, or

(b) *noncombustible* material that complies with the criteria for testing and conditions of acceptance of Sentence (2) when tested in conformance with CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials".

(2) The criteria for testing and the conditions of acceptance for a wall assembly to satisfy the requirements of Clause (1)(b) are that,

(a) the fire exposed area of the wall assembly shall be not less than 9.3 m^2 and have no dimension less than 2.75 m,

(b) the exposed surface will include typical vertical and horizontal joints,

(c) the test shall be continued for not less than 15 min and the standard time/temperature curve of the referenced standard shall be followed,

(d) the *noncombustible* protective material will remain in place and no through openings will develop that are visible when viewed normal to the face of the material, and

(e) the *noncombustible* protective material will not disintegrate in a manner that would permit fire to propagate along the surface of the test assembly.

(3) The requirements of Sentence (1) are waived for wall assemblies that comply with the requirements of Article 3.1.5.5.

occupancy or more than two patients' or residents' sleeping rooms in a Group B, Division 2 or 3 occupancy, the requirements in Sentence (1) do not apply.

(3) If an eave overhang is completely separated from the remainder of the *attic or roof space* by *fire blocks*, the requirements of Sentence (1) do not apply.

(4) The protection required by Sentence (1) for projections is permitted to be omitted if,
(a) the *fire compartments* behind the window and door openings are *sprinklered* in accordance with Article 3.2.5.13., and
(b) all rooms, including closets and bathrooms, having openings in the wall beneath the soffit are *sprinklered*, notwithstanding exceptions permitted in the standards referenced in Article 3.2.5.13. for the installation of automatic sprinkler systems.

3.2.3.17. Canopy Protection for Vertically Separated Openings

(1) Except as permitted by Sentences (2) and (3), if a *storey* classified as a Group E or Group F, Division 1 or 2 *major occupancy* is required to be separated from the *storey* above by a *fire separation*,
(a) every opening in the exterior wall of the lower *storey* that is located vertically below an opening in the *storey* above shall be separated from the *storey* above by a *canopy* projecting not less than 1 m from the face of the *building* at the intervening floor level, and
(b) the *canopy* required by Clause (a) shall have a *fire-resistance rating* not less than that required for the floor assembly but need not be more than 1 h, except as required elsewhere in this Subsection.

(2) Except as permitted by Sentence (3), the *canopy* required by Sentence (1) is permitted to be omitted if the exterior wall of the upper *storey* is recessed not less than 1 m behind the exterior wall containing the opening in the lower *storey*.

(3) The requirements of Sentences (1) and (2) are permitted to be waived if sprinklers are installed in,
(a) the lower *storey* referred to in Clause (1)(a), and
(b) the *storey* immediately above the lower *storey*.

3.2.3.18. Covered Vehicular Passageway

(1) A covered vehicular passageway designed as a receiving or shipping area shall be separated from every *building* or part of a *building* adjoining it by a *fire separation* having a *fire-resistance rating* not less than 1.5 h.

(2) A covered vehicular passageway constructed below *grade* shall be of *noncombustible construction*.

3.2.3.19. Walkway Between Buildings

(1) Except as required by Sentence 3.2.3.20.(2), if *buildings* are connected by a *walkway*, each *building* shall be separated from the *walkway* by a *fire separation* with a *fire-resistance rating* not less than 45 min.

(2) Except as permitted by Sentence (3), a *walkway* connected to a *building* required to be of *noncombustible construction* shall also be of *noncombustible construction*.

r19.1 **(2.1)** Except as provided in Sentence (3), a *walkway* connected to a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* shall be of *noncombustible construction* or *encapsulated mass timber construction*.

r19.1 **(3)** A *walkway* connected to a *building* required to be of *noncombustible construction* or to a *building* or part of a *building* permitted to be of *encapsulated mass timber construction* is permitted to be of *heavy timber construction* provided,
(a) not less than 50% of the area of any enclosing perimeter walls is open to the outdoors, and
(b) the *walkway* is at ground level.

(4) A *walkway* of *noncombustible construction* used only as a pedestrian thoroughfare need not conform to the requirements of Articles 3.2.3.14. and 3.2.3.15.

(5) A *walkway* between *buildings* shall be not more than 9 m wide

3.2.3.20. Underground Walkway

(1) An underground *walkway* shall not be designed or used for any purpose other than pedestrian travel unless,
(a) the purpose is permitted, and
(b) sprinklers are installed in any space in the *walkway* containing an *occupancy*.

(2) *Buildings* connected by an underground *walkway* shall be separated from the *walkway* by a *fire separation* with a *fire-resistance rating* not less than 1 h.

(3) An underground *walkway* shall be of *noncombustible construction* suitable for an underground location.

(4) In an underground *walkway*,
(a) smoke barrier doors shall be installed at intervals of not more than 100 m, or
(b) the travel distance from the door of an adjacent room or space to the nearest *exit* shall be not more than one and a half times the least allowable travel distance to an *exit* for any of the adjacent *occupancies* as permitted by Sentence 3.4.2.5.(1).

(5) An underground *walkway* between *buildings* shall be not more than 9 m wide.

r5 3.2.3.21. Service Lines Under Buildings

r11.1 **(1)** A *building* shall not be constructed over an existing buried flammable gas main unless the gas main is encased in a gas-tight conduit in conformance with CAN/CSA-Z662, “Oil and Gas Pipeline Systems”.

3.2.4. Fire Alarm and Detection Systems (See Appendix A.)

3.2.4.1. Determination of Requirement for a Fire Alarm System

(1) Reserved

(2) Except as permitted by Sentences (3) to (5) and Sentence 3.2.4.2.(4), a fire alarm system shall be installed in a *building* that contains,
(a) a *contained use area*,
(b) an *impeded egress zone*,
(c) more than 3 *storeys*, including *storeys* below the *first storey*,
(d) a total *occupant load* more than 300, other than in open air seating areas,
(e) an *occupant load* more than 150 above or below the *first storey*, other than in open air seating areas,
(f) a school, college or child care facility, with an *occupant load* more than 40,
(g) a licensed beverage establishment or a restaurant, with an *occupant load* more than 150,
r11.1 (h) a *low hazard industrial occupancy* with an *occupant load* more than 75 above or below the *first storey*,
r11.1 (h.1) a *medium hazard industrial occupancy* with an *occupant load* more than 75 above or below the *first storey*,
(i) a *residential occupancy* with sleeping accommodation for more than 10 persons,
(j) a *high hazard industrial occupancy* with an *occupant load* more than 25,
(k) an *occupant load* more than 300 below an open air seating area,
(l) an *interconnected floor space* required to conform to Articles 3.2.8.3. to 3.2.8.11,
(m) a *care and treatment occupancy* for more than 10 persons receiving care or treatment, or
(n) a *care occupancy* for more than 10 persons receiving care.

(3) If each dwelling unit has direct access to an exterior exit facility leading to ground level, a fire alarm system is not required in an apartment *building*,
(a) in which not more than four *dwelling units* share a common *means of egress*, or
(b) that is not more than 3 *storeys* in *building height*.

(4) A fire alarm system is not required in a *hotel* 3 *storeys* or less in *building height* provided each *suite* has direct access to an exterior *exit* facility leading to ground level.

(5) A fire alarm system is not required in a *storage garage* conforming to Article 3.2.2.83. provided there are no other *occupancies* in the *building*.

3.2.4.2. Continuity of Fire Alarm System

(1) Except as permitted by Sentence (6), if there are openings through a *firewall*, other than those for piping, tubing, wiring and totally enclosed *noncombustible* raceways, the requirements in this Subsection shall apply to the *floor areas* on both sides of the *firewall* as if they were in the same *building*.

(2) Except as permitted by Sentence (4), if a *building* contains more than one *major occupancy* and a fire alarm system is required, a single system shall serve all *occupancies*.

(3) Except as permitted by Sentence (4), if a fire alarm system is required in any portion of a *building*, it shall be installed throughout the *building*.

(4) Except as required by Sentence (5), the requirements in this Subsection are permitted to be applied to each portion of a *building* not more than 3 *storeys* in *building height*, in which a vertical *fire separation* having a *fire-resistance rating* not less than 1 h separates the portion from the remainder of the *building* as if it were a separate *building*, provided there are no openings through the *fire separation*, other than those for piping, tubing, wiring and totally enclosed *noncombustible* raceways.

(5) The permission in Sentence (4) to consider separated portions of a *building* as separate *buildings* does not apply to *service rooms* and storage rooms.

(6) *Buildings* interconnected by *walkways* permitted in Articles 3.2.3.19. and 3.2.3.20. or by vestibules provided in conformance with Article 3.2.6.3. shall be treated as separate *buildings* for the purpose of fire alarm installation required by this Subsection.

3.2.4.3. Types of Fire Alarm Systems

(1) A fire alarm system shall be,
(a) a single stage system in a Group F, Division 1 *occupancy*,
(b) a two stage system in a Group B *occupancy* other than those described in Clause (c),
(c) a single or two stage system in a *building* 3 *storeys* or less in *building height* that contains a Group B, Division 3 *occupancy*,
(d) a single stage system in elementary and secondary schools, except for a special needs facility, and
(e) a single or two stage system in all other cases.

3.2.4.4. Description of Fire Alarm Systems

(1) A single stage fire alarm system shall, upon the operation of any manual pull station or *fire detector*, cause an *alarm signal* to sound on all audible signal devices in the system. (See Appendix A.)

(2) A two stage fire alarm system shall,
(a) cause an *alert signal* to sound upon the operation of any manual pull station or *fire detector*,

(b) except for a Group B, Division 2 *occupancy*, automatically cause an *alarm signal* to sound if the *alert signal* is not acknowledged within 5 min of its initiation,
(c) have each manual pull station equipped so that the use of a key or other similar device causes an *alarm signal* to sound and continue to sound upon the removal of the key or similar device from the manual pull station, and (See Appendix A.)
(d) in a *building* containing a *hotel*,
  (i) cause an *alarm signal* to sound in the initiating fire zone in the *hotel*, and
  (ii) cause an *alert signal* to sound throughout the *hotel* and such parts of the *building* as is necessary to alert *hotel* staff.

(See Appendix A.)

(3) A two stage fire alarm system is permitted to be zone coded so that, upon the operation of any manual pull station or *fire detector*,
(a) a coded *alert signal* is sounded indicating the zone of alarm initiation,
(b) the coded *alert signal* is repeated in its entirety no fewer than four times, and
(c) a continuous *alert signal* is sounded upon completion of the coded signals referred to in Clause (b) and Sentence (4).

(4) If a second manual pull station or *fire detector* is operated in a fire alarm system with zone coding as permitted by Sentence (3), in a zone other than that for which the first *alert signal* was sounded, the coded *alert signal* for the first zone shall be completed before the coded *alert signal* for the second zone is repeated no fewer than four times.

3.2.4.5. Installation and Verification of Fire Alarm Systems

(1) Fire alarm systems, including those with voice communication capability, shall be installed in conformance with CAN/ULC-S524, "Installation of Fire Alarm Systems".

(2) A fire alarm system shall be verified in conformance with CAN/ULC-S537, "Verification of Fire Alarm Systems", to ensure satisfactory operation.

r11.1 3.2.4.6. Reserved

3.2.4.7. Silencing of Alarm Signals

(1) Except as permitted by Sentence (3), a fire alarm system shall be designed so that when an *alarm signal* is actuated it cannot be silenced automatically before a period of time has elapsed that is not less than,
(a) 5 min for a *building* not required to be equipped with an annunciator, and
(b) 20 min for any other *building*.

r11.1 **(2)** Except as permitted by Sentences 3.2.4.20.(9) and 3.2.4.23.(2) and (3), a fire alarm system shall not incorporate manual silencing switches other than those installed inside the fire alarm control unit. (See Appendix A.)

r11.1 **(3)** Except as provided by Clause 3.2.4.23.(3)(a), in a *care and treatment occupancy* an *alert signal* is permitted to be silenced automatically after 1 min.

3.2.4.8. Signals to Fire Department

r1 **(1)** If a fire alarm system is required to be installed and a single stage system is provided, the system shall be designed to notify the fire department in conformance with Sentence (4) that an *alarm signal* has been initiated in,
(a) a Group A *occupancy* having an *occupant load* more than 300,
(b) a Group B *occupancy*,
(c) a Group F, Division 1 *occupancy*,
(d) a *building* regulated by the provisions of Subsection 3.2.6.,
(e) a *building* containing *interconnected floor space* required to conform to Articles 3.2.8.3. to 3.2.8.11., or
r6 (f) a *retirement home*.

(4) If a portion of a *building* is completely cut off from the remainder of the *building* so that there is no access to the remainder of the *building*, the access routes required by Sentence (2) shall be located so that the unobstructed path of travel from the vehicle to one entrance of each portion of the *building* is not more than 45 m.

3.2.5.6. Access Route Design

(1) A portion of a roadway or yard provided as a required access route for fire department use shall,
(a) have a clear width not less than 6 m, unless it can be shown that lesser widths are satisfactory,
(b) have a centreline radius not less than 12 m,
(c) have an overhead clearance not less than 5 m,
(d) have a change of gradient not more than 1 in 12.5 over a minimum distance of 15 m,
(e) be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions,
(f) have turnaround facilities for any dead-end portion of the access route more than 90 m long, and
(g) be connected with a public thoroughfare.
(See Appendix A.)

r5 **(2)** A *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A. shall have no portion of the required access route more than 20 m below the floor level of the uppermost *storey* or *mezzanine* that is not a rooftop enclosure, provided for elevator machinery, a stairway or a *service room* used for no purpose other than for service to the *building*.

3.2.5.7. Water Supply (See Appendix A.)

(1) An adequate water supply for firefighting shall be provided for every *building*.

(2) Hydrants shall be located within 90 m horizontally of any portion of a *building* perimeter that is required to face a *street* in Subsection 3.2.2.

e6 3.2.5.8. to 3.2.5.12. Reserved

3.2.5.13. Automatic Sprinkler Systems

r1 **(1)** Except as provided by Sentences (2) to (4), an automatic sprinkler system shall be designed, constructed, installed and tested in conformance with NFPA 13, "Installation of Sprinkler Systems". (See Appendix A.)

r11.1 **(2)** NFPA 13R, "Installation of Sprinkler Systems in Low-Rise Residential Occupancies", is permitted to be used for the design, construction, installation and testing of an automatic sprinkler system installed in a *building*,
r6 (a) of *residential occupancy* that does not contain a *retirement home* and that is not more than 4 *storeys* in *building height*,
(b) of Group B, Division 3 *occupancy* that contains sleeping accommodation for not more than 10 persons and not more than six occupants require assistance in evacuation in case of an emergency,
r6 (c) that contains a *retirement home* constructed in accordance with Article 3.2.2.48D., or
r6 (d) that contains a *retirement home* constructed in accordance with Article 3.2.2.48E., where the *fire separation* required by Sentence 3.3.4.11.(2) on the *storey* immediately below the roof assembly is continuous to the underside of the roof deck.
(See Appendix A.)

r5 **(3)** Except as required by Sentence (9), NFPA 13D, "Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes", is permitted to be used for the design, construction, installation and testing of an automatic sprinkler system installed in a *building* of *residential occupancy* that contains not more than two *dwelling units*.

(4) If a *building* contains fewer than nine sprinklers, the water supply for these sprinklers is permitted to be supplied from the domestic water system for the *building* provided the required flow for the sprinklers can be met by the domestic system.

(5) If a water supply serves both an automatic sprinkler system and a system serving other equipment, control valves shall be provided so that either system can be shut off independently.

r5 **(6)** Despite the requirements of the standards referenced in Sentences (1) and (2) for the installation of automatic sprinkler systems, sprinklers shall not be omitted in any room or closet in the *storey* immediately below a roof assembly if the *fire-resistance rating* of the roof assembly is waived as permitted by Article 3.2.2.17. (See Appendix A.)

r19.1 **(7)** Despite the requirements of the standards referenced in Sentences (1) and (2) for the installation of automatic sprinkler systems, sprinklers shall be provided for all balconies and decks forming part of a *building* within the scope of Article 3.2.2.42A., 3.2.2.43A., 3.2.2.49A. or 3.2.2.50A., other than,

e4 (a) balconies or decks that are not more than 610 mm in depth measured perpendicular to the exterior wall of the *building*, or

(b) decks on the uppermost roof of the *building*.

(See Appendix A.)

r5 **(8)** Sprinklers in elevator machine rooms shall have a temperature rating not less than that required for an intermediate temperature classification and shall be protected against physical damage. (See Appendix A.)

r6 **(9)** The sprinkler system described in Sentence (3) shall be provided with a minimum 20 min water supply when installed in a *retirement home*.

3.2.5.14. Combustible Sprinkler Piping

r11.1 **(1)** *Combustible* sprinkler piping shall be used only for sprinkler systems in *residential occupancies* and other light hazard *occupancies*. (See Appendix A.)

(2) *Combustible* sprinkler piping shall meet the requirements of ULC/ORD-C199P, "Combustible Piping for Sprinkler Systems".

(3) Except as permitted by Sentence (5), *combustible* sprinkler piping shall be separated from the area served by the sprinkler system, and from any other *fire compartment*, by ceilings, walls, or soffits consisting of, as a minimum,

(a) lath and plaster,

(b) gypsum board not less than 9.5 mm thick,

(c) plywood not less than 13 mm thick, or

(d) a suspended membrane ceiling with,

  (i) steel suspension grids, and

  (ii) lay-in panels or tiles having a mass not less than 1.7 kg/m^2.

(4) Except as permitted by Sentence (5), *combustible* sprinkler piping may be located above a ceiling, provided that the distance between the edge of any ceiling opening that is not protected in conformance with Sentence (3) and the nearest sprinkler is not more than 300 mm.

(5) The protection required by Sentences (3) and (4) is permitted to be waived where *combustible* sprinkler piping has been tested in conformance with ULC/ORD-C199P, "Combustible Piping for Sprinkler Systems", and has been shown to meet the requirements in that document without additional protection.

3.2.5.15. Sprinklered Service Space

(1) An automatic sprinkler system shall be installed in a *service space* referred to in Sentence 3.2.1.1.(9) if flooring for access within the *service space* is other than catwalks.

(2) The sprinkler system required by Sentence (1) shall be equipped with waterflow detecting devices, with each device serving not more than 1 *storey*.

(2) The fire department connection for an automatic sprinkler system shall be located so that the distance from the fire department connection to a hydrant is not more than 45 m and is unobstructed.

(3) The fire department connections required in Sentences (1) and (2) shall be,
(a) located on the outside of a *building* adjacent to a *street* or an access route, not less than 300 mm and not more than 900 mm above ground level, and
(b) provided with two 65 mm hose connections with female swivel hose couplings.

3.2.5.17. Portable Fire Extinguishers

(1) Portable fire extinguishers shall be installed in all *buildings*, except within *dwelling units*, in conformance with the provisions of Part 6 of Division B of the Fire Code made under the *Fire Protection and Prevention Act, 1997*.

(2) In a Group B, Division 1 *major occupancy*, portable fire extinguishers are permitted to be located in secure areas, or in lockable cabinets provided,
(a) identical keys for all cabinets are located at all supervisory or security stations, or
(b) electrical remote release devices are provided and are connected to an emergency power supply.

3.2.5.18. Protection from Freezing

(1) Equipment forming part of a fire protection system shall be protected from freezing if,
(a) it could be adversely affected by freezing temperatures, and
(b) it is located in an unheated area.

3.2.5.19. Fire Pumps

(1) A fire pump having a rated net head pressure greater than 280 kPa shall be installed in accordance with the requirements of NFPA 20, "Installation of Stationary Pumps for Fire Protection". (See Appendix A.)

3.2.6. Additional Requirements for High Buildings (See Appendix A.)

3.2.6.1. Application

r19.1 **(1)** Except as provided in Sentence (2), this Subsection applies to a *building*,
(a) of Group A, D, E or F *major occupancy* classification that is more than,
  (i) 36 m high, measured between *grade* and the floor level of the top *storey*, or
  (ii) 18 m high, measured between *grade* and the floor level of the top *storey*, and in which the cumulative or total *occupant load* on or above any *storey* above *grade*, other than the *first storey*, divided by 1.8 times the width in metres of all *exit* stairs at that *storey*, exceeds 300,
(b) containing a Group B *major occupancy* in which the floor level of the highest *storey* of that *major occupancy* is more than 18 m above *grade*,
(c) containing a *floor area* or part of a *floor area* located above the third *storey* designed or intended as a Group B, Division 2 or 3 *occupancy*,
r6 (d) containing a Group C *major occupancy* in which the floor level of the highest *storey* of that *major occupancy* is more than 18 m above *grade*, or
r6 (e) containing a *retirement home*, where the floor level of the highest *storey* of the *retirement home* is more than 18 m above *grade*.

r19.1 **(2)** This Subsection applies to a *building* or part of a *building* constructed in conformance with Article 3.2.2.49A. in which the floor level of the highest *storey* is more than 18 m above *grade*.

3.2.6.2. Limits to Smoke Movement

r11.1 **(1)** A *sprinklered building* shall be designed in accordance with Sentences (2) to (5.1) and MMAH Supplementary Standard SB-4, "Measures for Fire Safety in High Buildings", to limit the danger to occupants and firefighters from exposure to smoke in a *building* fire.

(2) A *building* referred to in Sentence (1), shall be designed so that, during a period of 2 h after the start of a fire, each *exit* stair serving *storeys* below the lowest *exit level* will not contain more than 1% by volume of contaminated air from the fire floor, assuming an outdoor temperature equal to the January design temperature on a 2.5% basis determined in conformance with MMAH Supplementary Standard SB-1, "Climatic and Seismic Data".

(3) Each stairway that serves *storeys* above the lowest *exit level* shall have a vent to the outdoors, at or near the bottom of the stair shaft, that,

(a) has an openable area of 0.05 m^2 for every door between the stair shaft and a *floor area*, but not less than 1.8 m^2,
(b) opens directly to the outdoors or into a vestibule that has a similar opening to the outdoors, and
(c) has a door or *closure* that,
  (i) is openable manually, and
  (ii) can remain in the open position during a fire emergency.

(4) Measures shall be taken to limit movement of smoke from a fire in a *floor area* below the lowest *exit storey* into upper *storeys*.

(5) Except for exhaust fans in kitchens, washrooms and bathrooms in *dwelling units*, and except for fans used for smoke venting as required by Article 3.2.6.6., air moving fans in a system that serves more than 2 *storeys* shall be designed and installed so that in the event of a fire these fans can be stopped by means of a manually operated switch at the central alarm and control facility.

r11.1 **(5.1)** Except as provided in Article 3.2.4.13. or as otherwise provided in this Part, air handling systems used to provide make-up air to *public corridors* serving *suites* in a Group C *major occupancy* shall not shut down automatically upon actuation of the fire alarm so as to maintain corridor pressurization.

(6) A *building* that is not *sprinklered* shall be designed in accordance with MMAH Supplementary Standard SB-4, "Measures for Fire Safety in High Buildings", to limit the danger to occupants and firefighters from exposure to smoke in a *building* fire.

3.2.6.3. Connected Buildings

(1) If a *building* described in Article 3.2.6.1. is connected to any other *building*, measures shall be taken to limit movement of contaminated air from one *building* into another during a fire.

3.2.6.4. Emergency Operation of Elevators

(1) Manual emergency recall shall be provided for all elevators serving *storeys* above the *first storey*.

(2) Key-operated switches for emergency recall described by Sentence (1) shall be provided in a conspicuous location at,

(a) each elevator lobby on the recall level, and
(b) the central alarm and control facility required in Article 3.2.6.7.

(3) In-car emergency service switches shall be provided in all elevator cars.

(4) Keys to operate the switches required by Sentences (2) and (3) shall be,
(a) provided in a suitably identified box conspicuously located on the outside of an elevator hoistway near the central alarm and control facility required by Article 3.2.6.7., and
(b) kept at the central alarm and control facility.

(5) In a *building* that is not *sprinklered*, automatic emergency recall operation shall be provided for all elevators serving *storeys* above the *first storey*.

(6) The automatic emergency recall feature in Sentence (5) shall be actuated by,
(a) *smoke detectors* installed in each elevator lobby on each *storey*, or (See Appendix A.)
(b) the *building* fire alarm system.

(7) *Smoke detectors* in Sentence (6) shall be designed as part of the *building* fire alarm system.

3.2.6.5. Elevator for Use by Firefighters

(1) At least one elevator shall be provided for use by firefighters in conformance with Sentences (2) to (6).

(2) The elevator referred to in Sentence (1) shall have a useable platform area not less than 2.2 m^2 and shall be capable of carrying a load of 900 kg to the top floor that it serves from a landing on the *storey* containing the entrance for firefighter access referred to in Articles 3.2.5.4. and 3.2.5.5. within 1 min.

(3) Except where Measure K of MMAH Supplementary Standard SB-4, "Measures for Fire Safety in High Buildings", is used, each elevator for use by firefighters shall,
r5 (a) be provided with a *closure* at each shaft opening so that the interlock mechanism remains mechanically engaged and electrical continuity is maintained in the interlock circuits and associated wiring for a period of not less than 1 h when the assembly is subjected to the standard fire exposure described in CAN/ULC-S104, "Fire Tests of Door Assemblies",
(b) be protected with a vestibule containing no *occupancy* and separated from the remainder of the *floor area* by a *fire separation* having a *fire-resistance rating* not less than 45 min, or
(c) be protected with a corridor containing no *occupancy* and separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* not less than 1 h.

(4) Except as permitted in Sentence (5), an elevator referred to in Sentence (1) shall be capable of providing transportation from the *storey* containing the entrance for firefighter access referred to in Articles 3.2.5.4. and 3.2.5.5. to every floor that is above *grade* in the *building* and that is normally served by the elevator system.

(5) If it is necessary to change elevators to reach any floor referred to in Sentence (4), the system shall be designed so that not more than one change of elevator is required when travelling to any floor in the *building* from the *storey* containing the entrance for firefighter access referred to in Articles 3.2.5.4. and 3.2.5.5.

(6) Electrical conductors for the operation of the elevator referred to in Sentence (1) shall be,
(a) installed in *service spaces* conforming to Section 3.6. that do not contain other *combustible* material, or
(b) protected against exposure to fire from the service entrance of the emergency power supply, or the normal service entrance of the normal power supply, to the equipment served, to ensure operation for a period of 1 h when subjected to the standard fire exposure described in CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials".

3.2.6.6. Venting to Aid Firefighting

(1) Means of venting each *floor area* to the outdoors shall be provided by windows, wall panels, smoke shafts or, except as provided by Sentence (5), the *building* exhaust system.

(2) Fixed glass windows shall not be used for the venting required by Sentence (1) if the breaking of the windows could endanger pedestrians below.

(3) Openable windows used for the venting required by Sentence (1) shall be permanently marked so that they are easily identifiable.

(4) Elevator hoistways shall not be designed for the venting required by Sentence (1).

(5) In a *building* that is not *sprinklered*, venting of *floor areas* required in Sentence (1) shall not be provided by the *building* exhaust system.

3.2.6.7. Central Alarm and Control Facility

(1) A central alarm and control facility shall be provided on the *storey* containing the entrance for firefighter access referred to in Articles 3.2.5.4. and 3.2.5.5. in a location that,
(a) is readily accessible to firefighters entering the *building*, and
(b) takes into account the effect of background noise likely to occur under fire emergency conditions, so that the facility can properly perform its required function under such conditions.

(2) The central alarm and control facility required in Sentence (1) shall include,
(a) means to control the voice communication system required by Article 3.2.6.8., so that messages can be sent to,
  (i) all loudspeakers simultaneously,
  (ii) individual *floor areas*, and
  (iii) *exit* stairwells,
(b) means to indicate audibly and visually *alert signals* and *alarm signals* and a switch to,
  (i) silence the audible portion of these signals, and
  (ii) indicate visually that the audible portion has been silenced,
(c) means to indicate visually that elevators are on emergency recall,
(d) an annunciator conforming to Article 3.2.4.9.,
(e) means to transmit *alert signals* and *alarm signals* to the fire department in conformance with Article 3.2.4.8.,
(f) means to release hold-open devices on doors to vestibules,
(g) means to manually actuate *alarm signals* in the *building* selectively to any zone or zones,
r11.1 (h) means to silence the *alarm signals* referred to in Clause (g) in conformance with Sentences 3.2.4.23.(2) and (3),
(i) means, as appropriate to the measure for fire safety provided in the *building*, to,
r11.1 (i) actuate auxiliary equipment identified in Articles 3.2.6.2., 3.2.6.3. and 3.2.6.6., or
  (ii) communicate with a continually staffed auxiliary equipment control centre,
(j) means for two-way communications with every elevator car,
(k) means to indicate visually, individual sprinkler system waterflow signals,
(l) means to indicate audibly and visually, sprinkler and standpipe system supervisory signals and trouble signals,
(m) a switch to silence the audible portion of a supervisory signal or a trouble signal, and
(n) visual indication that the audible portion of a supervisory signal or a trouble signal has been silenced.

3.2.6.8. Voice Communication System

r1 **(1)** A voice communication system conforming to Article 3.2.4.23. shall be provided in a *building* if,
(a) the floor of the top *storey* is more than 36 m above *grade*,
(b) a *floor area* or part of a *floor area* located above the third *storey* is designed or intended for use as a Group B, Division 2 or 3 *occupancy*, or
(c) a *floor area* or part of a *floor area* located more than 18 m above *grade* is designed or intended for use as a retirement home regulated under the *Retirement Homes Act, 2010* that is a Group C *occupancy*.

3.2.6.9. Testing

(1) The systems for control of smoke movement and mechanical venting required by Articles 3.2.6.2. and 3.2.6.6. shall be tested to ensure satisfactory operation in accordance with the procedures described in MMAH Supplementary Standard SB-4, “Measures for Fire Safety in High Buildings”.

3.6.4.2. Fire Separations for Horizontal Service Spaces

r11.1 **(1)** Except as provided in Article 3.6.3.5., a *horizontal service space* that penetrates a required vertical *fire separation* shall be separated from the remainder of the *building* it serves in conformance with Sentence (2).

(2) If a *horizontal service space* or other concealed space is located above a required vertical *fire separation* other than a vertical shaft, this space need not be divided at the *fire separation* as required by Article 3.1.8.3. provided the construction between this space and the space below is a *fire separation* with a *fire-resistance rating* equivalent to that required for the vertical *fire separation*, except that the *fire-resistance rating* is permitted to be not less than 30 min if the vertical *fire separation* is not required to have a *fire-resistance rating* more than 45 min. (See Appendix A.)

3.6.4.3. Plenum Requirements

(1) A concealed space used as a *plenum* within a floor assembly or within a roof assembly need not conform to Sentence 3.1.5.15.(1) and Article 6.2.3.2. provided,

(a) all materials within the concealed space have a *flame-spread rating* not more than 25 and a smoke developed classification not more than 50, except for,

(i) tubing for pneumatic controls,

(ii) optical fibre cables and electrical wires and cables that exhibit a flame spread not more than 1.5 m, a smoke density not more than 0.5 at peak optical density and a smoke density not more than 0.15 at average optical density when tested in conformance with the Flame and Smoke Test in the Appendix to CSA C22.2 No. 0.3, "Test Methods for Electrical Wires and Cables", (FT6 Rating),

(iii) optical fibre cables and electrical wires and cables that are located in totally enclosed *noncombustible* raceways,

r11.1 (iv) totally enclosed nonmetallic raceways that exhibit a horizontal flame distance of not more than 1.5 m, an average optical smoke density of not more than 0.15 and a peak optical smoke density of not more than 0.5 when tested in conformance with CAN/ULC-S102.4, "Fire and Smoke Characteristics of Electrical Wiring, Cables and Non-Metallic Raceways", (FT6 Rating),

r19.1 (iv.1) totally enclosed nonmetallic raceways with an FT6 rating, when tested in accordance with Clause 3.1.5.20.(1)(a), in *buildings* required to be of *noncombustible construction* or in *buildings* or parts of *buildings* permitted to be of *encapsulated mass timber construction*, and

(v) single conductor electrical wires and cables that exhibit a vertical char of not more than 1.5 m when tested in conformance with the Vertical Flame Test —Cables in Cabletrough in Clause 4.11.4. of CSA C22.2 No. 0.3, "Test Methods for Electrical Wires and Cables", (FT4 Rating), and

(b) the supports for the ceiling membrane are of *noncombustible* material having a melting point not below 760°C.

(2) If a concealed space referred to in Sentence (1) is used as a return-air *plenum* and incorporates a ceiling membrane that forms part of the required *fire-resistance rating* of the assembly, every opening through the membrane shall be protected by a *fire stop flap* that shall,

(a) stop the flow of air into the concealed space in the event of a fire,

(b) be supported in a manner that will maintain the integrity of the ceiling membrane for the duration of time required to provide the required *fire-resistance rating*,

(c) conform to CAN/ULC-S112.2, "Fire Test of Ceiling Firestop Flap Assemblies", *and*

r11.1 (d) activate at a temperature approximately 30°C above the normal maximum temperature that occurs in the return-air *plenum*, whether the air duct system is operating or shut down.

r11.1 **(3)** Reserved.

3.6.4.4. Attic or Roof Space Access

(1) An *attic or roof space* more than 600 mm high shall be provided with access from the floor immediately below by a hatchway not less than 550 mm by 900 mm or by a stairway.

3.6.4.5. Horizontal Service Space Access

(1) A *horizontal service space*, consisting of ceiling and duct spaces, that is more than 1 200 mm high and 600 mm wide shall have inspection doors not less than 300 mm in both horizontal and vertical dimensions placed so that the entire interior of the duct or space can be viewed.

3.6.4.6. Crawl Space Access

(1) A crawl space shall have at least one access opening not less than 550 mm by 900 mm.

Section 3.7. Health Requirements

3.7.1. Height and Area of Rooms

3.7.1.1. Room and Space Height

(1) The height of every room and space shall be sufficient so that the ceiling or ceiling fixtures do not obstruct movement or activities below.

(2) The unobstructed height in *dwelling units* and sleeping rooms in Group C *occupancies* shall conform to Subsection 9.5.3.

3.7.1.2. Residential Room Dimensions

(1) The areas of rooms in *dwelling units*, dormitories, boarding houses and rooming houses shall conform to Part 9.

3.7.1.3. Sleeping Areas in Group B and Child Care Facilities

(1) Except as provided in Sentence (2), a sleeping area in a Group B *occupancy* shall provide not less than 4.7 m^2 per person in a room having,
(a) an area not less than 7 m^2,
(b) a horizontal dimension not less than 2 000 mm, and
(c) a ceiling height not less than 2 300 mm.

(2) Sleeping rooms for residents in long-term care homes shall have, exclusive of space provided for washrooms and for built-in or portable clothes closets, a floor space not less than,
(a) 10.22 m^2 in a single-bed unit,
(b) 16.72 m^2 in a two-bed unit,
(c) 25.08 m^2 in a three-bed unit, and
(d) 29.73 m^2 in a four-bed unit.

(3) A child care facility shall provide sleeping accommodation having not less than 0.93 m^2 of floor surface area for each child with not less than 2 300 mm ceiling height over the entire room area.

3.7.1.4. Sleeping Areas in Camps

(1) *Recreational camps* shall have an area in the sleeping quarters of not less than 3.72 m^2 per camper or, if double or triple tier bunk units are used, 2.79 m^2 per camper.

Table 4.1.8.9. (Cont'd)
SFRS Ductility-Related Force Modification Factors, R_d,
Overstrength-Related Force Modification Factors, R_o, and General Restrictions(1)
Forming Part of Sentence 4.1.8 9.(1)

Type of SFRS	R_d	R_o	Restrictions(2)				
			Cases Where $I_E F_a S_a(0.2)$				Cases Where $I_E F_v S_a(1.0)$
			< 0.2	≥ 0.2 to < 0.35	≥ 0.35 to ≤ 0.75	> 0.75	> 0.3
r19.1 Timber Structures Designed and Detailed According to CSA O86							
Shear walls							
Nailed shear walls: wood-based panel	3.0	1.7	NL	NL	30	20	20
Shear walls: wood-based and gypsum panels in combination	2.0	1.7	NL	NL	20	20	20
Moderately ductile cross-laminated timber shear walls: platform-type construction	2.0	1.5	30	30	30	20	20
Limited ductility cross-laminated timber shear walls: platform-type construction	1.0	1.3	30	30	30	20	20
Braced or moment-resisting frames with ductile connections							
Moderately ductile	2.0	1.5	NL	NL	20	20	20
Limited ductility	1.5	1.5	NL	NL	15	15	15
Other wood- or gypsum-based SFRS(s) not listed above	1.0	1.0	15	15	NP	NP	NP
Masonry Structures Designed and Detailed According to CSA S304							
Moderately ductile shear walls	2.0	1.5	NL	NL	60	40	40
Ductile shear walls	3.0	1.5	NL	NL	60	40	40
Conventional construction							
Shear walls	1.5	1.5	NL	60	30	15	15
Moment-resisting frames	1.5	1.5	NL	30	NP	NP	NP
Unreinforced masonry	1.0	1.0	30	15	NP	NP	NP
Other masonry SFRS(s) not listed above	1.0	1.0	15	NP	NP	NP	NP
Cold-Formed Steel Structures Designed and Detailed According to CSA S136							
Shear walls							
Screw-connected shear walls - wood-based panel	2.5	1.7	20	20	20	20	20
Screw-connected shear walls - wood-based and gypsum panels in combination	1.5	1.7	20	20	20	20	20
Diagonal strap concentrically braced walls							
Limited ductility	1.9	1.3	20	20	20	20	20
Conventional construction	1.2	1.3	15	15	NP	NP	NP
Other cold-formed SFRS(s) not listed above	1.0	1.0	15	15	NP	NP	NP
Column 1	2	3	4	5	6	7	8

Notes to Table 4.1.8.9.:
(1) See Article 4.1.8.10.
(2) NP = system is not permitted.
NL = system is permitted and not limited in height as an SFRS; height may be limited in other Parts of the Code.
Numbers in Columns 4 to 8 are maximum height limits above grade in m.
The most stringent requirement governs.
(3) Higher design force levels are prescribed in CSA S16 for some heights of *buildings*.
(4) Frames limited to a maximum of 2 *storeys*.
(5) Frames limited to a maximum of 3 *storeys*.
(6) See Appendix A.

4.1.8.10. Additional System Restrictions

(1) Except as required by Clause (2)(b), structures with a Type 6 irregularity, Discontinuity in Capacity – Weak Storey, as described in Table 4.1.8.6., are not permitted unless $I_E F_a S_a(0.2)$ is less than 0.2 and the forces used for design of the SFRS are multiplied by $R_d R_o$.

(2) *Post-disaster buildings* shall,

r15 (a) not have any irregularities conforming to Types 1, 3, 4, 5, 7 and 9 as described in Table 4.1.8.6., in cases where $I_E F_a S_a(0.2)$ is equal to or greater than 0.35,

(b) not have a Type 6 irregularity as described in Table 4.1.8.6.,

(c) have an SFRS with an R_d of 2.0 or greater, and

(d) have no *storey* with a lateral stiffness that is less than that of the *storey* above it.

(3) For *buildings* having fundamental lateral periods, T_a, of 1.0 s or greater and where $I_E F_v S_a(1.0)$ is greater than 0.25, shear walls that are other than wood-based and form part of the SFRS shall be continuous from their top to the *foundation* and shall not have irregularities of Type 4 or 5 as described in Table 4.1.8.6.

(4) For *buildings* constructed with more than 4 *storeys* of continuous wood construction and where $I_E F_a S_a(0.2)$ is equal to or greater than 0.35, timber SFRS of shear walls with wood-based panels, braced frames or moment-resisting frames as defined in Table 4.1.8.9. within the continuous wood construction shall not have irregularities of Type 4 or 5 as described in Table 4.1.8.6. (See Appendix A.)

r19.1 **(4.1)** For *buildings* where $I_E F_a S_a(0.2)$ is equal to or greater than 0.35 or $I_E F_v S_a(1.0)$ is equal to or greater than 0.2 that are constructed with more than 4 *storeys* of continuous wood construction, timber SFRSs consisting of moderately ductile or limited ductility cross-laminated timber shear walls, platform-type construction, as defined in Table 4.1.8.9., within the continuous wood construction shall not have Type 4, 5, 6, 8, or 9 irregularities as described in Table 4.1.8.6.

e10 **(5)** The ratio, α, for Type 9 irregularity as described in Table 4.1.8.6. shall be determined independently for each orthogonal direction using the following equation:

$$\alpha = Q_G / Q_y$$

where,

Q_G = gravity-induced lateral demand on the SFRS at the critical level of the yielding system, and

Q_y = the resistance of the yielding mechanism required to resist the minimum earthquake loads, which need not be taken less than R_o multiplied by the minimum lateral earthquake force as determined in Article 4.1.8.11. or 4.1.8.12, as appropriate.

(See Appendix A.)

(6) For *buildings* with a Type 9 irregularity as described in Table 4.1.8.6. and where $I_E F_a S_a(0.2)$ is equal to or greater than 0.5, deflections determined in accordance with Article 4.1.8.13. shall be multiplied by 1.2.

(7) Structures where the value of α, as determined in accordance with Sentence (5), exceeds twice the limits in Table 4.1.8.6. for a Type 9 irregularity, and where $I_E F_a S_a(0.2)$ is equal to or greater than 0.5 are not permitted unless determined to be acceptable based on non-linear dynamic analysis studies. (See Appendix A.)

4.1.8.11. Equivalent Static Force Procedure for Structures Satisfying the Conditions of Article 4.1.8.7.

(1) The static loading due to earthquake motion shall be determined according to the procedures given in this Article.

(2) Except as provided in Sentence (12), the minimum lateral earthquake force, V, shall be calculated using the following formula:

$$V = S(T_a) M_v I_E W / (R_d R_o)$$

except,

(a) for walls, coupled walls and wall-frame systems, V shall not be less than,

$$S\,(4.0)\,M_v\,I_E W/\,(R_d R_o)$$

(b) for moment-resisting frames, braced frames and other systems, V shall not be less than,

$$S\,(2.0)\,M_v\,I_E W/\,(R_d R_o)$$

(c) for *buildings* located on a site other than Class F and having an SFRS with an R_d equal to or greater than 1.5, V need not be greater than the larger of,

$$^2/_3\,S\,(0.2)\,I_E W\,/\,(R_d R_o)$$

and

$$S\,(0.5)\,I_E W/\,(R_d R_o)$$

(3) Except as provided in Sentence (4), the fundamental lateral period, T_a, in the direction under consideration in Sentence (2) shall be determined as,

(a) for moment-resisting frames that resist 100% of the required lateral forces and where the frame is not enclosed by or adjoined by more rigid elements that would tend to prevent the frame from resisting lateral forces, and where h_n is in metres,
  (i) $0.085\,(h_n)^{3/4}$ for steel moment frames,
  (ii) $0.075\,(h_n)^{3/4}$ for concrete moment frames, or
  (iii) 0.1 N for other moment frames,
(b) $0.025\,h_n$ for braced frames where h_n is in metres,
(c) $0.05\,(h_n)^{3/4}$ for shear wall and other structures where h_n is in metres, or
(d) other established methods of mechanics using a structural model that complies with the requirements of Sentence 4.1.8.3.(8), except that,
  (i) for moment-resisting frames, T_a shall not be taken greater than 1.5 times that determined in Clause (a),
  (ii) for braced frames, T_a shall not be taken greater than 2.0 times that determined in Clause (b),
  (iii) for shear wall structures, T_a shall not be greater than 2.0 times that determined in Clause (c),
  (iv) for other structures, T_a shall not be taken greater than that determined in Clause (c), and
  (v) for the purpose of calculating the deflections, the period without the upper limit specified in Subclauses (d)(i) to (iv) may be used, except that, for walls, coupled walls and wall-frame systems, T_a shall not exceed 4.0 s, and for moment-resisting frames, braced frames, and other systems, T_a shall not exceed 2.0 s.

(See Appendix A.)

(4) For single-*storey buildings* with steel deck or wood roof diaphragms, the fundamental lateral period, T_a, in the direction under consideration is permitted to be taken as,

(a) $0.05\,(h_n)^{3/4} + 0.004\,L$ for shear walls,
(b) $0.035\,h_n + 0.004\,L$ for steel moment frames and steel braced frames, or
(c) the value obtained from methods of mechanics using a structural model that complies with the requirements of Sentence 4.1.8.3.(8), except that T_a shall not be greater than 1.5 times the value determined in Clause (a) or (b), as applicable,

where L is the shortest length of the diaphragm, in m, between adjacent vertical elements of the SFRS in the direction perpendicular to the direction under consideration.

(5) The weight, W, of the *building* shall be calculated using the formula,

$$W = \sum_{i=1}^{n} W_i$$

(6) The higher mode factor, M_v, and its associated base overturning moment reduction factor, J, shall conform to Tables 4.1.8.11.A. to 4.1.8.11.E.

Table 4.1.8.11.A.
Higher Mode Factor, M_v, and Base Overturning Reduction Factor, J[1][2][3][4] for Moment-Resisting Frames
Forming Part of Sentence 4.1.8.11.(6)

r15

S(0.2)/S(5.0)	M_V For $T_a \leq 0.5$	M_V For $T_a = 1.0$	M_V For $T_a = 2.0$	M_V For $T_a \geq 5.0$	J For $T_a \leq 0.5$	J For $T_a = 1.0$	J For $T_a = 2.0$	J For $T_a \geq 5.0$
5	1	1	1	[5]	1	0.97	0.92	[5]
20	1	1	1	[5]	1	0.93	0.85	[5]
40	1	1	1	[5]	1	0.87	0.78	[5]
65	1	1	1.03	[5]	1	0.80	0.70	[5]
Column 1	2	3	4	5	6	7	8	9

Notes to Table 4.1.8.11.A.:

r15 (1) For intermediate values of the spectral ratio S(0.2)/S(5.0), M_v and J shall be obtained by linear interpolation.

(2) For intermediate values of the fundamental lateral period, T_a, $S(T_a)M_v$ shall be obtained by linear interpolation using the values of M_v obtained in accordance with Note (1).

(3) For intermediate values of the fundamental lateral period, T_a, J shall be obtained by linear interpolation using the values of J obtained in accordance with Note (1).

(4) For a combination of different seismic force resisting systems (SFRS) not given in Table 4.1.8.11.A. that are in the same direction under consideration, use the highest M_v factor of all the SFRS and the corresponding value of J.

(5) For fundamental lateral periods, T_a, greater than 2.0 s, use the 2.0 s values obtained in accordance with Note (1). See Clause 4.1.8.11.(2)(b).

Table 4.1.8.11.B.
Higher Mode Factor, M_v, and Base Overturning Reduction Factor, J[1][2][3][4] for Coupled Walls[5]
Forming Part of Sentence 4.1.8.11.(6)

r15

S(0.2)/S(5.0)	M_V For $T_a \leq 0.5$	M_V For $T_a = 1.0$	M_V For $T_a = 2.0$	M_V For $T_a \geq 5.0$	J For $T_a \leq 0.5$	J For $T_a = 1.0$	J For $T_a = 2.0$	J For $T_a \geq 5.0$
5	1	1	1	1[6]	1	0.97	0.92	0.80[7]
20	1	1	1	1.08[6]	1	0.93	0.85	0.65[7]
40	1	1	1	1.30[6]	1	0.87	0.78	0.53[7]
65	1	1	1.03	1.49[6]	1	0.80	0.70	0.46[7]
Column 1	2	3	4	5	6	7	8	9

Notes to Table 4.1.8.11.B.:

r15 (1) For intermediate values of the spectral ratio S(0.2)/S(5.0), M_v and J shall be obtained by linear interpolation.

(2) For intermediate values of the fundamental lateral period, T_a, $S(T_a)M_v$ shall be obtained by linear interpolation using the values of M_v obtained in accordance with Note (1).

(3) For intermediate values of the fundamental lateral period, T_a, J shall be obtained by linear interpolation using the values of J obtained in accordance with Note (1).

(4) For a combination of different seismic force resisting systems (SFRS) not given in Table 4.1.8.11.B. that are in the same direction under consideration, use the highest M_v factor of all the SFRS and the corresponding value of J.

(5) A "coupled" wall is a wall system with coupling beams, where at least 66% of the base overturning moment resisted by the wall system is carried by the axial tension and compression forces resulting from shear in the coupling beams.

(6) For fundamental lateral periods, T_a, greater than 4.0 s, use the 4.0 s values of $S(T_a)M_v$ obtained by interpolation between 2.0 s and 5.0 s using the value of M_v obtained in accordance with Note (1). See Clause 4.1.8.11.(2)(a).

(7) For fundamental lateral periods, T_a, greater than 4.0 s, use the 4.0 s values of J obtained by interpolation between 2.0 s and 5.0 s using the value of J obtained in accordance with Note (1). See Clause 4.1.8.11.(2)(a).

(4) In *storage garages* subject to the requirements of Sentence (1), where motor vehicles are parked by mechanical means, the ventilation requirements may be reduced by one half.

(5) Except as provided in Sentence (6), ticket and attendant booths of *storage garages* shall be pressurized with a supply of outdoor air.

(6) The requirements of Sentences (1) to (5) shall not apply to *open-air storeys* in a *storage garage*.

(7) A *repair garage* shall have a mechanical ventilation system designed to limit the exposure of workers to,
(a) carbon monoxide to below the time weighted average concentration of 25 parts per million for a normal 8 hour workday or 40 hour work week, and
(b) nitrogen dioxide from diesel powered vehicles to below 0.72 parts per million for a normal 8 hour workday or 40 hour work week.

(8) In a *repair garage*, when a repair bay is not immediately adjacent to an outside garage door opening, a system capable of providing continuous general ventilation of not less than 700 L/s per internal bay shall be provided.

(9) The general ventilation system described in Sentence (8) shall be designed to,
(a) operate continuously, or
(b) be controlled automatically by carbon monoxide monitoring devices, located so as to provide full protection throughout the *repair garage.*

(10) The general ventilation system described in Sentence (8) is not required when tail pipes of vehicles are directly connected to local mechanical exhaust systems that terminate outdoors.

e8 6.2.2.4. Indoor Air Contaminants (See Appendix A.)

r11.1 **(1)** Air contaminants released within *buildings* shall be removed insofar as possible at their points of origin and shall not be permitted to accumulate in concentrations greater than permitted by good engineering practice appropriate to the circumstances such as that described in the publications listed in Article 6.2.1.1." (See Appendix A.)

r11.1 **(2)** Systems serving spaces that contain sources of contamination and systems serving other occupied parts of the *building* but located in or running through spaces that contain sources of contamination shall be designed in such a manner as to prevent the spread of such contamination to other occupied parts of the *building*. (See Appendix A.)

r11.1 **(3)** Heating, ventilating and *air-conditioning* systems shall be designed to minimize growth and spread of bio-contaminants.

r11.1 **(4)** Mechanical rooms containing refrigeration equipment shall be ventilated in accordance with CSA B52, "Mechanical Refrigeration Code".

6.2.2.5. Hazardous Gases, Dusts or Liquids

r11.1 **(1)** Except as provided in Subsection 6.2.13., systems serving spaces that contain hazardous gases, dusts or liquids shall be designed, constructed and installed in conformance with the provisions of the Fire Code made under the *Fire Protection and Prevention Act, 1997*, or in the absence of requirements pertinent to such systems in the Fire Code, to good engineering practice such as is described in the publications of the National Fire Protection Association and in the CCBFC NRCC 56192, "National Fire Code of Canada". (See Appendix A.)

(2) When indoor piping for Class I *flammable liquids* is installed in a trench, the trench shall be,
(a) provided with positive ventilation to the outdoors, or
(b) designed to prevent the accumulation of flammable vapours.

6.2.2.6. Commercial Cooking Equipment

r11.1 **(1)** Except as provided in Article 3.6.3.5., all commercial cooking equipment shall be provided with ventilation systems designed, constructed and installed to conform to NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations".

(2) Fire protection systems for high efficiency, high temperature commercial cooking equipment using vegetable oil or animal fat shall conform to,

r5 (a) ANSI/UL 300, "Fire Extinguishing Systems for Protection of Commercial Cooking Equipment", or

(b) ULC/ORD-C1254.6, "Fire Testing of Restaurant Cooking Area Fire Extinguishing System Units".

6.2.2.7. Crawl Spaces and Attic or Roof Spaces

(1) Every crawl space and every *attic or roof space* shall be ventilated by natural or mechanical means. (See Appendix A.)

6.2.3. Air Duct Systems

6.2.3.1. Application

(1) Except as provided in Sentence (2), this Subsection applies to the design, construction and installation of air duct distribution systems serving heating, ventilating and *air-conditioning* systems.

r6 **(2)** This Subsection does not apply to the design, construction and installation of air duct distribution systems serving heating, ventilating and *air-conditioning* systems that serve a *house* or an individual *dwelling unit* within the scope of Part 9.

r11.1 6.2.3.1A. Drain Pans

(1) Dehumidifying cooling coil assemblies and condensate-producing heat exchangers shall be equipped with drain pans beneath them that are,

(a) designed in accordance with Section 5.11, Drain Pans, of ANSI/ASHRAE 62.1, "Ventilation for Acceptable Indoor Air Quality",

(b) provided with an outlet that is piped to the outside of the airstream in a location where condensate can be eliminated,

(c) installed so that water drains freely from the pan, and

(d) provided with a drain line that is *indirectly connected* to a *drainage system* in accordance with Article 7.4.2.1.

6.2.3.2. Materials in Air Duct Systems

r11.1 **(1)** Except as provided in Sentences (2) to (4) and in Article 3.6.4.3., all ducts, duct connectors, associated fittings and *plenums* used in air duct systems shall be constructed of steel, aluminum alloy, copper, clay or similar *noncombustible* material.

(2) Ducts, associated fittings and *plenums* are permitted to contain *combustible* material provided they,

(a) conform to the appropriate requirements for Class 1 duct materials in CAN/ULC-S110, "Test for Air Ducts",

r19.1 (b) conform to Article 3.1.5.15. in a *building* required to be of *noncombustible construction* or in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*,

(c) conform to Subsection 3.1.9.,

r19.1 (d) are used only in horizontal runs in a *building* required to be of *noncombustible construction* or in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*,

(e) are not used in vertical runs serving more than 2 *storeys* in a *building* required to be of *noncombustible construction*, and

(f) are not used in air duct systems in which the air temperature may exceed 120°C.

6.2.5. Heating Appliances, General

6.2.5.1. Location of Appliances

(1) Except for *appliances* installed in *dwelling units*, fuel-fired heating *appliances* shall be located, enclosed or separated from the remainder of the *building* in conformance with Section 3.6.

6.2.5.2. Appliances Installed Outside the Building

(1) Fuel-fired *appliances* installed outside a *building* shall be,
(a) designed and constructed for outdoor use,
(b) installed not less than 1 200 mm from the property line, measured horizontally, and
(c) installed not less than 3 m from an adjacent wall of the same *building* when such wall contains an opening or openings within 3 *storeys* above and 5 m horizontally from the *appliance*, unless such openings are protected by a *closure* assembly having a 45 min *fire-protection rating* determined in conformance with Article 3.1.8.4., or by wired glass conforming to Article 3.1.8.14.

6.2.6. Incinerators

6.2.6.1. Applicable Standard

r11.1 **(1)** The design, construction, installation and material alteration of every indoor incinerator shall conform to NFPA 82, "Incinerators and Waste and Linen Handling Systems and Equipment".

6.2.7. Unit Heaters

6.2.7.1. Clearances

(1) Every *unit heater* using either steam or hot water as the heating medium shall be installed such that the clearances between the *appliance* and adjacent *combustible* material conform to Table 6.2.9.3.

6.2.8. Radiators and Convectors

6.2.8.1. Lining or Backing

r19.1 **(1)** A *noncombustible* lining or backing shall be provided for every steam or hot water radiator and convector,
(a) located in a recess or concealed space, or
(b) attached to the face of a wall of *combustible construction* or *encapsulated mass timber construction*.

(2) Every steam or hot water radiator and convector shall be installed to conform to the clearance requirements of Table 6.2.9.3.

6.2.9. Piping for Heating and Cooling Systems

6.2.9.1. Piping Materials and Installation

(1) Piping shall be made from materials designed to withstand the effects of temperatures and pressures that may occur in the system.

(2) Every pipe used in a heating or *air-conditioning* system shall be installed to allow for expansion and contraction due to temperature changes.

(3) Supports and anchors for piping in a heating or *air-conditioning* system shall be designed and installed to ensure that undue stress is not placed on the supporting structure.

6.2.9.2. Insulation and Coverings

(1) Insulation and coverings on pipes shall be composed of material suitable for the operating temperature of the system to withstand deterioration from softening, melting, mildew and mould.

(2) Insulation and coverings on pipes in which the temperature of the fluid exceeds 120°C,
(a) shall be made of *noncombustible* material, or
(b) shall not flame, glow, smoulder or smoke when tested in accordance with ASTM C411, "Hot-Surface Performance of High-Temperature Thermal Insulation", at the maximum temperature to which such insulation or covering is to be exposed in service.

r19.1 **(3)** Except as permitted by Sentence (7), where *combustible* insulation is used on piping in *horizontal service space* or a *vertical service space*, the insulation and coverings on that piping shall have a *flame-spread rating* on any exposed surface and on any surface that would be exposed by cutting through the material in any direction,
(a) not more than 25 in a *building* required to be of *noncombustible construction* or in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, or
(b) not more than 75 in a *building* permitted to be of *combustible construction*.

(4) Except as provided in Sentence (7), insulation and coverings on piping located in rooms and spaces other than the *service spaces* described in Sentence (3) shall have a *flame-spread rating* of not more than that required for the interior finish for the ceiling of the room or space.

(5) Except as provided in Sentence (7), where *combustible* insulation and covering is used on piping in *buildings* described in Subsection 3.2.6., they shall have a smoke developed classification of not more than 100.

(6) Exposed piping or equipment subject to human contact shall be insulated so that the temperature of the exposed surface does not exceed 70°C. (See Appendix A.)

(7) No *flame-spread rating* or smoke developed classification limitations are required where *combustible* insulation and coverings are used on piping when such piping is,
(a) located within a concealed space in a wall,
(b) located in a floor slab, or
(c) enclosed in a *noncombustible* raceway or conduit.

Part 9

Housing and Small Buildings

Section 9.1. General

9.1.1. Application

9.1.1.1. Scope

(1) The scope of this Part shall be as described in Subsection 1.1.2. of Division A.

9.1.1.2. Signs

(1) Signs shall conform to the requirements in Section 3.15.

9.1.1.3. Self-Service Storage Buildings

(1) *Self-service storage buildings* shall conform to the requirements in Section 3.10.

9.1.1.4. Tents and Air-Supported Structures

(1) Tents shall conform to the requirements in Subsection 3.14.1.

(2) *Air-supported structures* shall conform to the requirements in Subsection 3.14.2.

9.1.1.5. Proximity to Existing Above Ground Electrical Conductors

(1) Where a *building* is constructed in close proximity to existing above ground electrical conductors, the requirements of Subsection 3.1.19. shall apply.

9.1.1.6. Food Premises

(1) The requirements of Subsection 3.7.6. apply to all *food premises.*

9.1.1.7. Radon

(1) In addition to all other requirements, a *building* in the following designated areas shall be designed and constructed so that the annual average concentration of radon 222 does not exceed 200 Bq/m^3 of air and the annual average concentration of the short lived daughters of radon 222 does not exceed 0.02 working levels inside the *building* for,
(a) the City of Elliot Lake in the Territorial District of Algoma,
(b) the Township of Faraday in the County of Hastings, and
(c) the geographic Township of Hyman in the Territorial District of Sudbury.

9.1.1.8. Building in Flood Plains

(1) *Buildings* constructed on flood plains shall,
(a) be designed and constructed in accordance with good engineering practice to withstand anticipated vertical and horizontal hydrostatic pressures acting on the structure, and
(b) incorporate floodproofing measures that will preserve the integrity of *exits* and *means of egress* during times of flooding.

9.1.1.9. Site Assembled and Factory-Built Buildings (See Appendix A.)

r19.1 **(1)** Except as provided in Sentence (2), a manufactured *building* or manufactured part of a *building* is deemed to comply with this Code if it is designed and constructed in compliance with,
(a) CSA Z240.2.1, "Structural Requirements for Manufactured Homes", if the *building* is constructed in sections not wider than 4.88 m, or
(b) CSA A277, "Procedure for Certification of Prefabricated Buildings, Modules, and Panels".

(2) The requirements of this Code shall apply to,
(a) *building* components designed and constructed outside the place of manufacture, and
(b) site installation of such *buildings*.

9.1.1.10. Public Pools and Public Spas

(1) *Public pools* shall conform to the requirements of Section 3.11. and *public spas* shall conform to the requirements of Section 3.12.

9.1.1.11. Shelf and Rack Storage Systems

(1) *Shelf and rack storage systems* shall conform to the requirements of Section 3.16.

r6 ### 9.1.1.12. Houses

(1) A *house* is permitted above another *house* provided there is not more than one *dwelling unit* in each *house*.

Section 9.2. Reserved

Section 9.3. Materials, Systems and Equipment

9.3.1. Concrete

9.3.1.1. General

r11.1 **(1)** Except as provided in Sentence (2) and Articles 9.3.1.6. and 9.3.1.7., unreinforced and nominally reinforced concrete shall be designed, mixed, placed, cured and tested in accordance with the requirements for "R" class concrete stated in Section 9 of CSA A23.1, "Concrete Materials and Methods of Concrete Construction".

(2) Unreinforced and nominally reinforced site-batched concrete shall be designed, mixed, placed and cured in accordance with Articles 9.3.1.2. to 9.3.1.9.

Division C

Administrative Provisions

Part 1

General

r19 **(6)** A shed is exempt from the requirement to obtain a permit under section 8 of the Act and is exempt from compliance with this Code, provided that the shed,
(a) is not more than 15 m^2 in *gross area*,
(b) is not more than one *storey* in *building height*,
(c) is not attached to a *building* or any other structure,
(d) is used only for storage purposes ancillary to a principal *building* on the lot, and
(e) does not have plumbing.

1.3.1.2. Applications for Permits Under Section 8 of the Act

(1) An application for a permit under section 8 of the Act to *construct* or *demolish* a *building* shall be made by,
(a) the owner of the property on which the proposed *construction* or *demolition* is to take place, or
(b) the authorized agent of the owner referred to in Clause (a).

(2) An application referred to in Sentence (1) shall be in a form approved by the *Minister*.

(3) In Sentence (1),

"owner" includes, in respect of the property on which the *construction* or *demolition* will take place, the registered owner, a lessee and a mortgagee in possession.

1.3.1.3. Period Within Which a Permit is Issued or Refused

(1) Subject to Sentences (2) and (3) and unless the circumstances set out in Sentence (6) exist, if an application for a permit under subsection 8(1) of the Act that meets the requirements of Sentence (5) is submitted to a *chief building official*, the *chief building official* shall, within the time period set out in Column 2 of Table 1.3.1.3. corresponding to the class of *building* described in Column 1 of Table 1.3.1.3. for which the application is made,
(a) issue the permit, or
(b) refuse to issue the permit and provide in writing all of the reasons for the refusal.

(2) If an application for a permit under subsection 8(1) of the Act proposes *construction* or *demolition* of two or more *buildings* of different classes described in Column 1 of Table 1.3.1.3. that have different time periods in Column 2 of Table 1.3.1.3., the longer of the time periods shall be the time period for the purposes of Sentence (1).

(3) If an application for a permit under subsection 8(1) of the Act proposes *construction* or *demolition* of a *building* described in Sentence (4), the time period for the purposes of Sentence (1) shall be the longer of,
(a) 10 days, and
(b) the time period corresponding to the class of the *building* described in Column 1 of Table 1.3.1.3. that the *building* described in Sentence (4) serves, if any.

(4) A *building* referred to in Sentence (3) is,
(a) a structure occupying an area of 10 m^2 or less that contains *plumbing*, including the *plumbing* appurtenant to it,
(b) *plumbing* not located in a structure,
(c) a *sewage system*, or
(d) a structure designated in Article 1.3.1.1. of Division A.

(5) The requirements that an application for a permit under subsection 8(1) of the Act must meet for the purposes of Sentence (1) are,
(a) that the application is made in the form described in Sentence 1.3.1.2.(2),
(b) that the applicant for the permit is a person described in Clause 1.3.1.2.(1)(a) or (b),
(c) that all applicable fields on the application form and required schedules are completed,
(d) that all required schedules are submitted with the application,
(e) that payment is made of all fees that are required, under the applicable by-law, resolution or regulation made under clause 7(1)(c) of the Act, to be paid when the application is made, and

(f) that the applicant has declared in writing that,
  (i) the application meets all the requirements set out in Clauses (a) to (e),
  (ii) the application is accompanied by the plans and specifications prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the Act,
  (iii) the application is accompanied by the information and documents prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the Act which enable the *chief building official* to determine whether the proposed *building*, *construction* or *demolition* will contravene any *applicable law*, and
  (iv) the proposed *building*, *construction* or *demolition* will not contravene any *applicable law*.

(6) The *chief building official* is not required to make a decision within the time period required by Sentence (1) with respect to an application that meets the requirements of Sentence (5) if the *chief building official*,
(a) determines that,
  (i) the application is not accompanied by the plans, specifications, information and documents referred to in Subclauses (5)(f)(ii) and (iii), or
  (ii) the proposed *building*, *construction* or *demolition* will contravene any *applicable law*, and
(b) advises the applicant of his or her determination and provides in writing the reasons for the determination within two days.

(7) Subject to Sentences (9) and (10), the time period described in Sentences (1) to (3) and in Clause (6)(b) shall begin on the day following the day on which an application that meets the requirements of Sentence (5) is submitted to the *chief building official*.

(8) The time periods described in Column 2 of Table 1.3.1.3. and in Clause (6)(b) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

r13 **(8.1)** Despite Sentence (8), the time periods described in Column 2 of Table 1.3.1.3. and in Clause (6)(b) include days when the offices of the *principal authority* are not open for the transaction of business with the public if the reason given by the *principal authority* for the offices not being open is related to coronavirus (COVID-19).

Table 1.3.1.3.
Period Within Which Permit Shall be Issued or Refused
Forming Part of Article 1.3.1.3.

Item	Class of *Building*	Time Period
r6 1	(a) Except for a *retirement home*, a *house*, where no *dwelling unit* is located above another *dwelling unit*. (b) A detached structure that serves a *building* described in Clause (a) and does not exceed 55 m² in *building area*. (c) A tent to which Section 3.14. of Division B applies. (d) A sign to which Section 3.15. of Division B applies.	10 days
2	(a) *Buildings* described in Clause 1.1.2.4.(1)(a), (b) or (c) of Division A, other than *buildings* described in Column 1 of any of Items 1 and 4 of this Table. (b) *Farm buildings* that do not exceed 600 m² in *building area*.	15 days
r6 3	(a) *Buildings* described in Clause 1.1.2.2.(1)(a) or (b) of Division A, other than *buildings* described in Column 1 of any of Items 1 and 4 of this Table. (b) *Farm buildings* exceeding 600 m² in *building area*. (c) *Retirement homes*.	20 days
4	(a) *Post-disaster buildings*. (b) *Buildings* to which Subsection 3.2.6. of Division B or any provision in Articles 3.2.8.3. to 3.2.8.11. of Division B applies.	30 days
	Column 1	2

(9) The time period in Sentence (10) applies where,
(a) an application is made for the *construction* of a *building* that is served by a *sewage system*,
(b) *construction* is proposed in respect of the *sewage system* that serves the *building*, and
(c) a board of health, conservation authority, planning board or the council of an upper-tier municipality is responsible for the enforcement of the provisions of the Act and this Code related to the *sewage system* under section 3.1 of the Act or pursuant to an agreement under section 6.2 of the Act.

(10) The time period described in Sentences (1) to (3) and in Clause (6)(b) for an application referred to in Clause (9)(a) shall begin on the day following the later of,
(a) the day on which an application that meets the requirements of Sentence (5) is submitted to the *chief building official*, and
(b) the day on which a permit for the *construction* of the *sewage system* referred to in Clause (9)(b) is issued.

1.3.1.4. Permits Under Section 10 of the Act

r1 **(1)** Except as provided in Sentence (2), the following changes in use of a *building* or part of a *building* constitute an increase in hazard for the purposes of section 10 of the Act and require a permit under section 10 of the Act:
(a) a change of the *major occupancy* of all or part of a *building* that is designated with a "Y" in Table 1.3.1.4. takes place,
(b) a *suite* of a Group C *major occupancy* is converted into more than one *suite* of Group C *major occupancy*,
(c) a *suite* or part of a *suite* of a Group A, Division 2 or a Group A, Division 4 *major occupancy* is converted to a *gaming premises*,
(d) a *farm building* or part of a *farm building* is changed to a *major occupancy*,
(e) a *building* or part of a *building* is changed to a *post-disaster building*,
r6 (f) a *building* or part of a *building* is changed to a *retirement home*, or
(g) the use of a *building* or part of a *building* is changed and the previous *major occupancy* of the *building* or part of the *building* cannot be determined.

(2) A person is exempt from the requirement to obtain a permit under section 10 of the Act where the change in use of the *building* or part of the *building* will result from proposed *construction* and a permit under section 8 of the Act has been issued in respect of such *construction*.

(3) A person is exempt from the requirement to obtain a permit under section 10 of the Act for the change of use of a *building* in unorganized territory.

Table 1.3.1.4.
Permit Required for Change of Use
Forming Part of Sentence 1.3.1.4.(1)[1]

		FROM[2]												
		A-1	A-2	A-3	A-4	B-1	B-2	B-3	C	D	E	F-1	F-2	F-3
TO[3]	A-1	N[5]	Y	Y	N[5]	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-2	Y	N[5]	Y	N[5]	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-3	Y	Y	N[5]	N[5]	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-4	Y	Y	Y	N[5]	Y	Y	Y	Y	Y	Y	Y	Y	Y
	B-1	Y	Y	Y	N[5]	N[5]	Y	Y	Y	Y	Y	Y	Y	Y
	B-2	Y	Y	Y	N[5]	Y	N[5]	Y	Y	Y	Y	Y	Y	Y
	B-3	Y	Y	Y	N[5]	Y	N[5]	N[5]	Y	Y	Y	Y	Y	Y
	C	Y	Y	Y	N[5]	Y	N[5]	N[5]	[4]	Y	Y	Y	Y	Y
	D	N[5]	N[5]	Y	N[5]	Y	N[5]	N[5]	Y	N[5]	Y	Y	N[5]	N[5]
	E	Y	Y	Y	N[5]	Y	Y	Y	Y	Y	N[5]	Y	Y	Y
	F-1	Y	Y	Y	N[5]	Y	Y	Y	Y	Y	Y	N[5]	Y	Y
	F-2	Y	Y	Y	N[5]	Y	Y	Y	Y	Y	Y	N[5]	N[5]	Y
	F-3	Y	N[5]	Y	N[5]	Y	Y	Y	Y	N[5]	N[5]	N[5]	N[5]	N[5]
Col. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Notes to Table 1.3.1.4.:

r5 (1) See Clause 1.3.1.4.(1)(a), Subclause 3.17.1.1.(1)(a)(i) of Division B and Clause 9.40.1.1.(1)(a) of Division B.
(2) *Major occupancy* of all or part of a *building* before change of use.
(3) *Major occupancy* of all or part of a *building* after change of use.
r5 (4) See Clause 1.3.1.4.(1)(b), Subclause 3.17.1.1.(1)(a)(ii) of Division B and Clauses 9.40.1.1.(1)(b) and 11.4.2.3.(1)(b) of Division B.
(5) "N" is only applicable where the *major occupancy* of the entire *suite* is changed.

1.3.1.5. Conditional Permits

(1) The *chief building official* shall not issue a conditional permit for any stage of *construction* under subsection 8(3) of the Act unless compliance with the following applicable laws has been achieved in respect of the proposed *building* or *construction:*

r15 (0.a) section 3 of the *Building Transit Faster Act, 2020* with respect to the issuance of a permit under that section,
(a) regulations made by a conservation authority under clause 28(1)(c) of the *Conservation Authorities Act* with respect to permission of the authority for the construction of a building or structure if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development,
r16 (b) section 5 of the *Environmental Assessment Act* with respect to the approval of the Minister or the Ontario Land Tribunal to proceed with an undertaking,
(c) subsection 24(3) of the *Niagara Escarpment Planning and Development Act,*
r16 (d) subsection 27(9) of the *Ontario Heritage Act,*
(e) subsection 30(2) of the *Ontario Heritage Act* with respect to a consent of the council of a *municipality* to the alteration or *demolition* of a *building* where the council of the *municipality* has given a notice of intent to designate the *building* under subsection 29(3) of that Act,
(f) section 33 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the alteration of property,
(g) section 34 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the *demolition* of a *building*,
(h) section 34.5 of the *Ontario Heritage Act* with respect to the consent of the Minister to the alteration or *demolition* of a designated *building*,

(i) subsection 34.7(2) of the *Ontario Heritage Act* with respect to a consent of the Minister to the alteration or *demolition* of a *building* where the Minister has given a notice of intent to designate the *building* under section 34.6 of that Act,
(j) by-laws made under section 40.1 of the *Ontario Heritage Act*,
(k) section 42 of the *Ontario Heritage Act* with respect to the permit given by the council of a *municipality* for the erection, alteration or *demolition* of a *building*,
r7 (l) section 17.4 of the *Ontario New Home Warranties Plan Act* with respect to the provision of a confirmation by the Registrar for the *construction* of a residential condominium conversion project.

(2) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3)(a) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where,
(a) a committee of adjustment has made a decision under section 45 of the *Planning Act* authorizing one or more minor variances from the provisions of any by-laws made under sections 34 and 38 of that Act,
(b) such minor variance or variances result in the achievement of full compliance with such by-laws, and
(c) no person informed the committee of adjustment of objections to the minor variances either in writing or in person at the hearing of the application.

(3) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3)(a) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where the *construction* in respect of which the conditional permit is issued is required in order to comply with an order issued under subsection 21(1) of the *Fire Protection and Prevention Act, 1997* or under subsection 15.9(4) of the Act.

r15 **(3.1)** Reserved.

r15 **(3.2)** Reserved.

(4) A permit issued under subsection 8(3) of the Act shall indicate its conditional nature.

1.3.1.6. Information to be Given to Tarion Warranty Corporation

(1) This Article prescribes, for the purposes of subsection 8(8.1) of the Act, the information relating to permits issued under section 8 of the Act and the applications for those permits that the *chief building official* is required to give to *Tarion Warranty Corporation* and the time within which the information is required to be given.

(2) The *chief building official* shall give the following information to *Tarion Warranty Corporation* with respect to permits issued under section 8 of the Act in respect of the *construction* of *buildings* described in Sentence (4),
(a) the dates the permits are issued and the numbers or other identifying symbols for the permits, and
(b) the information contained in the application forms submitted in respect of the permits, other than the information contained in the schedules or other attachments to the application forms.

(3) Despite Sentence (2), the *chief building official* is not required to give to *Tarion Warranty Corporation* information which relates to the extension or material alteration or repair of an existing *building*.

(4) The *buildings* referred to in Sentence (2) are any *building* whose proposed use is classified as a Group C *major occupancy* and which is not a *boarding, lodging or rooming house* or a *building* containing a *hotel*.

(5) The *chief building official* shall give the information described in Sentence (2) within 45 days after the day on which the permits to which the information relates are issued.

(6) The time period described in Sentence (5) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

r17 ### 1.3.1.7. Information to be Given to the Fire Chief or Clerk

(1) This Article applies to *buildings*,
(a) *constructed* using,
  (i) lightweight pre-engineered floor or roof systems containing lightweight elements such as wood I-joists, cold-formed steel joists, wood truss assemblies with metal or wood plates and metal web wood joists, or
  (ii) lightweight floor or roof systems containing solid sawn lumber joist less than 38 mm by 235 mm,
(b) other than a *house*, and
(c) for which a permit under section 8 of the Act is issued after July 1, 2022.

(2) The *chief building official* shall give the following information to the chief of the fire department and the clerk of every municipality that does not have a fire department in respect of *buildings* described in Sentence (1):
(a) the dates the permits are issued and the numbers or other identifying symbols for the permits,
(b) the address of the *building*, and
(c) a description of the floor or roof system.

(3) The *chief building official* shall give the information described in Sentence (2) within 45 days after the day on which the permits to which the information relates are issued.

(4) The time period described in Sentence (3) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

1.3.2. Site Documents

1.3.2.1. Permit Posting

(1) Where a permit has been issued pursuant to the Act, the person to whom it is issued shall have the permit or a copy of it posted at all times during *construction* or *demolition* in a conspicuous place on the property in respect of which the permit was issued.

1.3.2.2. Documentation on Site

(1) The person in charge of the *construction* of the *building* shall keep and maintain on the site of the *construction*,
(a) at least one copy of drawings and specifications certified by the *chief building official* or a person designated by the *chief building official* to be a copy of those submitted with the application for the permit to *construct* the *building*, together with changes that are authorized by the *chief building official* or a person designated by the *chief building official*,
(b) copies of authorizations of the Building Materials Evaluation Commission on the basis of which the permit was issued, and
(c) copies of rulings of the *Minister*, made under clause 29(1)(a) or (c) of the Act, on the basis of which the permit was issued.

1.3.3. Occupancy of Buildings

1.3.3.1. Occupancy Permit — General

(1) Except as permitted in Sentence 1.3.3.2.(1), a person may occupy or permit to be occupied any *building* or part of it that has not been fully completed at the date of occupation where the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it prior to its completion in accordance with Sentence (3).

r5 **(2)** Sentence (1) does not apply in respect of the occupancy of a *building* to which Article 1.3.3.4. or 1.3.3.5. applies.

(3) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building*, where,

(a) the structure of the *building* or part of it is completed to the roof,
(b) the enclosing walls of the *building* or part of them are completed to the roof,
(c) the walls enclosing the space to be occupied are completed, including balcony *guards*,
(d) all required *fire separations* and *closures* are completed on all *storeys* to be occupied,
r5 (e) all required *exits* are completed, including all *fire separations*, doors, door hardware, self-closing devices, *guards* and handrails, from the uppermost floor to be occupied down to *grade* level and below if an *exit* connects with lower *storeys*,
(f) all shafts including *closures* are completed to the floor-ceiling assembly above the *storey* to be occupied and have a temporary *fire separation* at such assembly,
r5 (g) measures have been taken to prevent access to parts of the *building* and site that are incomplete or still under construction,
r5 (h) floors, halls, lobbies and required *means of egress* are free of loose materials and other hazards,
r5 (i) if *service rooms* should be in operation, required *fire separations* and *closures* are completed,
(j) all *building drains*, *building sewers*, *water systems*, *drainage systems* and *venting systems* are complete and tested as operational for the *storeys* to be occupied,
(k) required lighting, heating and electrical supply are provided for the *suites*, rooms and common areas to be occupied,
(l) required lighting in corridors, stairways and *exits* is completed and operational up to and including all *storeys* to be occupied,
(m) required standpipe, sprinkler and fire alarm systems are complete and operational up to and including all *storeys* to be occupied, together with required pumper connections for such standpipes and sprinklers,
(n) required fire extinguishers have been installed on all *storeys* to be occupied,
r5 (o) main garbage rooms, chutes and ancillary services are completed to all *storeys* to be occupied,
(p) required firefighting access routes have been provided and are accessible, and
(q) the *sewage system* has been completed and is operational.

(4) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building*, the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (3) after receipt of a *certificate for the occupancy of a building not fully completed* issued by the *registered code agency* in respect of the *building*.

1.3.3.2. Conditions for Residential Occupancy

(1) A person may occupy or permit to be occupied a *building* intended for *residential occupancy* that has not been fully completed at the date of occupation provided that,

(a) the *building*,
  (i) is of three or fewer *storeys* in *building height* and has a *building area* not exceeding 600 m²,
  (ii) has not more than 1 *dwelling unit* above another *dwelling unit*,
  (iii) has not more than 2 *dwelling units* sharing a common *means of egress*,
  (iv) has no accommodation for tourists, and
r6 (v) is not used for a *retirement home*.
(b) the following *building* components and systems are complete, operational and inspected:
  (i) required *exits*, handrails and *guards*, fire alarm and detection systems, and *fire separations*,
  (ii) required exhaust fume barriers and self-closing devices on doors between an attached or built-in garage and a *dwelling unit*,
  (iii) water supply, sewage disposal, lighting and heating systems, and
  (iv) protection of foamed plastics required by Article 9.10.17.10. of Division B,
(c) the following *building* components and systems are complete, operational, inspected and tested:
  (i) *water systems*,
  (ii) *building drains* and *building sewers*, and
  (iii) *drainage systems* and *venting systems*, and
r5 (d) where applicable, the *building* conforms to Article 9.1.1.7. of Division B.

(2) Sentence (1) does not apply in respect of the occupancy of a *building* to which Article 1.3.3.4. or 1.3.3.5. applies.

1.3.3.3. Notification

(1) Where a person has occupied or permitted the occupancy of a *building* under Article 1.3.3.1. or 1.3.3.2., such person shall notify the *chief building official* forthwith upon completion of the *building*.

1.3.3.4. Occupancy Permit — Certain Buildings of Residential Occupancy

(1) No person shall occupy or permit to be occupied a *building* described in Sentence (3), or part of it, unless the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it in accordance with Sentence (4).

(2) This Article does not apply in respect of the *occupancy* of an existing *building*, or part of it, that has been subject to extension or material alteration or repair.

(3) A *building* referred to in Sentence (1) is a *building* intended for *residential occupancy* that,
(a) is of three or fewer *storeys* in *building height* and has a *building area* not exceeding 600 m²,
(b) has no accommodation for tourists,
(c) does not have a *dwelling unit* above another *dwelling unit*,
(d) does not have any *dwelling units* sharing a common *means of egress*, and
r6 (e) does not contain a *retirement home*.

(4) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building* described in Sentence (3), where,
(a) the structure of the *building* with respect to the *dwelling unit* to be occupied is substantially complete and ready to be used for its intended purpose,
(b) the *building* envelope, including, but not limited to, cladding, roofing, windows, doors, assemblies requiring *fire-resistance ratings*, *closures*, insulation, *vapour barriers* and air barriers, with respect to the *dwelling unit* to be occupied, is substantially complete,
(c) the walls enclosing the *dwelling unit* to be occupied conform to Sentence 9.25.2.3.(7) of Division B,
(d) required electrical supply is provided for the *dwelling unit* to be occupied,
(e) required firefighting access routes to the *building* have been provided and are accessible,
(f) the following *building* components and systems are complete and operational for the *dwelling unit* to be occupied:
r5 (i) required *exits*, floor access and egress systems, handrails, *guards*, *smoke alarms*, carbon monoxide alarms and *fire separations*, including, but not limited to, *fire stops*,
(ii) required exhaust fume barriers and self-closing devices on doors between an attached or built-in garage and the *dwelling unit*,
(iii) water supply, sewage disposal, lighting and heating systems, and
(iv) protection of foamed plastics required by Article 9.10.17.10. of Division B,
(g) the following *building* components and systems are complete, operational and tested for the *dwelling unit* to be occupied:
(i) *water system*,
(ii) *building drain* and *building sewer*, and
(iii) *drainage system* and *venting system*,
(h) required *plumbing fixtures* in the *dwelling unit* to be occupied are substantially complete and operational, and
(i) where applicable, the *building* conforms to Article 9.1.1.7. of Division B with respect to the *dwelling unit* to be occupied.

(5) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of a *building* described in Sentence (3), the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (4) after receipt of a *certificate for the occupancy of a building described in Sentence 1.3.3.4.(3) of Division C* issued by the *registered code agency* in respect of the *building*.

r5 1.3.3.5. Occupancy Permit — Buildings Within the Scope of Article 3.2.2.43A. or 3.2.2.50A.

(1) No person shall occupy or permit to be occupied a *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A. of Division B, or part of it, unless the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it in accordance with Sentence (3).

(2) This Article does not apply in respect of the occupancy of an existing *building*, or part of it, that has been subject to extension or material alteration or repair.

(3) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building* described in Sentence (1), where,

(a) the structure of the *building* is completed to the roof,
(b) the *building* envelope, including, but not limited to, cladding, roofing, windows, doors, assemblies requiring *fire-resistance ratings*, *closures*, insulation, *vapour barriers* and air barriers, is complete,
(c) the walls enclosing the space to be occupied are completed, including balcony *guards*,
(d) all required *fire separations* and *closures* are completed,
(e) all required *exits* are completed, including all *fire separations*, doors, door hardware, self-closing devices, *guards* and handrails,
(f) all shafts including *closures* are completed,
(g) measures have been taken to prevent access to parts of the *building* and site that are incomplete or still under construction,
(h) floors, halls, lobbies and required *means of egress* are free of loose materials and other hazards,
(i) if *service rooms* should be in operation, required *fire separations* and *closures* are completed,
(j) all *building drains*, *building sewers*, *water systems*, *drainage systems* and *venting systems* are complete and tested as operational for the *storeys* to be occupied,
(k) required lighting, heating and electrical supply are provided for the *suites*, rooms and common areas to be occupied,
(l) required lighting in corridors, stairways and *exits* is completed and operational,
(m) required standpipe, sprinkler and fire alarm systems are complete and operational, together with required pumper connections for such standpipes and sprinklers,
(n) required *smoke alarms* and carbon monoxide alarms are complete and operational,
(o) required fire extinguishers have been installed,
(p) main garbage rooms, chutes and ancillary services are completed to all *storeys* to be occupied,
(q) required firefighting access routes have been provided and are accessible, and
(r) the *sewage system* has been completed and is operational.

(4) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of a *building* described in Sentence (1), the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (3) after receipt of a *certificate for the occupancy of a building described in Sentence 1.3.3.5.(1) of Division C* issued by the *registered code agency* in respect of the *building*.

r10 1.3.3.6. Occupancy Permit — Buildings in the Lower Don Area of Toronto

(1) Except as provided in Sentence (2), this Article applies to *buildings* constructed on land in the City of Toronto being the land outlined in red on a map numbered 230 and filed at the Toronto office of the Ministry of Municipal Affairs and Housing located at 777 Bay Street.

(2) This Article does not apply to a *building* that complies with,

(a) the official plan of the City of Toronto approved under section 17 of the *Planning Act* as the official plan read on the day Ontario Regulation 388/18 is filed, or
(b) a by-law made by the City of Toronto under section 34 of the *Planning Act* as the by-law read on the day Ontario Regulation 388/18 is filed.

(3) No person shall occupy or permit to be occupied a *building* or part of it to which this Article applies, unless the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it in accordance with Sentence (4).

(4) The *chief building official* or a person designated by the *chief building official* shall not issue a permit authorizing occupation of a *building* or part of it unless,

(a) hydraulic modelling carried out by or on behalf of the Toronto Region Conservation Authority demonstrates that the lot or parcel of land on which the *building* is constructed is no longer susceptible to flooding due to the completion of the flood protection features described in Section 4.5 of WT, "Port Lands Flood Protection and Enabling Infrastructure Due Diligence Report", and

(b) the *construction* of the *building* or part of it is in compliance with Clauses 1.3.3.1.(3)(a) to (q), 1.3.3.2.(1)(a) to (d), 1.3.3.4.(4)(a) to (i) or 1.3.3.5.(3)(a) to (r), as applicable.

1.3.4. Fire Department Inspection

1.3.4.1. Fire Department Approval

(1) Subject to Sentence (2), if the council of a *municipality* assigns specific responsibility for the enforcement of any portion of this Code respecting fire safety matters to an *inspector* who is the chief of the fire department of the *municipality*, the *chief building official* shall not issue a permit to *construct* a *building* unless the *inspector* approves the drawings submitted with the application for the permit as complying with that portion of this Code.

(2) If a *registered code agency* has been appointed under clause 4.1(4)(a) or (c) of the Act,

(a) a *municipality* shall not assign responsibility under Sentence (1) to the chief of the fire department with respect to a *building* for which the *registered code agency* has been appointed, and

(b) any assignment of responsibility under Sentence (1) with respect to a *building* for which the *registered code agency* is appointed shall be cancelled as of the date of the appointment.

1.3.5. Notices and Inspections

1.3.5.1. Prescribed Notices

(1) This Article sets out the notices that are required under section 10.2 of the Act.

(2) The person to whom a permit under section 8 of the Act is issued shall notify the *chief building official* or, where a *registered code agency* is appointed under the Act in respect of the *construction* to which the notice relates, the *registered code agency* of,

(a) readiness to *construct* footings,

(b) substantial completion of footings and *foundations* prior to commencement of backfilling,

(c) substantial completion of structural framing and ductwork and piping for heating and *air-conditioning* systems, if the *building* is within the scope of Part 9 of Division B,

(d) substantial completion of structural framing and roughing-in of heating, ventilation, *air-conditioning* and air-contaminant extraction equipment, if the *building* is not a *building* to which Clause (c) applies,

(e) substantial completion of insulation and *vapour barriers*,

(f) substantial completion of *air barrier systems*,

(g) substantial completion of all required *fire separations* and *closures* and all fire protection systems including standpipe, sprinkler, fire alarm and emergency lighting systems,

(h) substantial completion of fire access routes,

(i) readiness for inspection and testing of,
  (i) *building sewers* and *building drains*,
  (ii) *water service pipes*,
  (iii) *fire service mains*,
  (iv) *drainage systems* and *venting systems*,
  (v) the *water distribution system*, and
  (vi) *plumbing* fixtures and *plumbing* appliances,

(j) readiness for inspection of suction and gravity outlets, covers and suction piping serving outlets of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or a *public spa*,

(k) substantial completion of the circulation / *recirculation system* of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or *public spa* and substantial completion of the pool before it is first filled with water,

(l) readiness to *construct* the *sewage system*,

(m) substantial completion of the installation of the *sewage system* before the commencement of backfilling,

(n) substantial completion of installation of *plumbing* not located in a structure, before the commencement of backfilling,

(o) completion of *construction* and installation of components required to permit the issue of an occupancy permit under Sentence 1.3.3.1.(3) or to permit occupancy under Sentence 1.3.3.2.(1), if the *building* or part of the *building* to be occupied is not fully completed, and

r5 (p) completion of *construction* and installation of components required to permit the issue of an occupancy permit under Sentence 1.3.3.4.(4) or 1.3.3.5.(3).

1.3.5.2. Additional Notices

(1) A by-law, resolution or regulation made by a *principal authority* under clause 7(1)(e) of the Act may require that notice of one or more of the following stages of *construction* be given by the person to whom a permit is issued under section 8 of the Act:

(a) commencement of *construction* of the *building*,

(b) substantial completion of structural framing for each *storey*, if the *building* is a type of *building* that is within the scope of Division B, other than Part 9,

(c) commencement of *construction* of,
  (i) masonry fireplaces and masonry *chimneys*,
  (ii) factory-built fireplaces and allied *chimneys*, or
  (iii) *stoves*, ranges, *space heaters* and add-on *furnaces* using solid fuels and allied *chimneys*,

(d) substantial completion of interior finishes,

(e) substantial completion of heating, ventilating, *air-conditioning* and air-contaminant extraction equipment,

(f) substantial completion of exterior cladding,

(g) substantial completion of site grading,

(h) substantial completion of the pool deck and dressing rooms for a *public pool* or *public spa* and readiness for inspection of the emergency stop system for a *public pool* or *public spa*,

(i) completion and availability of drawings of the *building* as constructed, and

r5 (j) completion of a *building* for which an occupancy permit is required under Article 1.3.3.4. or 1.3.3.5.

1.3.5.3. Prescribed Inspections

(1) Except as provided in Sentence (2), an *inspector* or *registered code agency*, as the case may be, shall, not later than two days after receipt of a notice given under Sentence 1.3.5.1.(2), undertake a site inspection of the *building* to which the notice relates.

(2) Where a notice given under Sentence 1.3.5.1.(2) relates to matters described in Clause 1.3.5.1.(2)(l) or (m), an *inspector* or *registered code agency*, as the case may be, shall, not later than five days after receipt of the notice, undertake a site inspection of the *sewage system* to which the notice relates.

(3) When undertaking an inspection required under Sentence (1) or (2), the *inspector* or *registered code agency*, as the case may be, may consider reports concerning whether the *building* or a part of the *building* complies with the Act or this Code.

r16 **(3.1)** For greater certainty, when undertaking an inspection required under Sentence (1) or (2), the *inspector* or *registered code agency*, as the case may be, may choose to not attend at the physical site of the *building* and may instead undertake the inspection using other means.

(4) The time periods referred to in Sentences (1) and (2) shall begin on the day following the day on which the notice is given.

(5) The time periods referred to in Sentences (1) and (2) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

r13 **(6)** Despite Sentence (5), the time periods referred to in Sentences (1) and (2) include days when the offices of the *principal authority* are not open for the transaction of business with the public if the reason given by the *principal authority* for the offices not being open is related to coronavirus (COVID-19).

1.3.5.4. Construction of Sewage Systems

(1) The following information is prescribed for the purposes of subsection 15.12(3) of the Act and must be provided to the *chief building official* before the commencement of the *construction* of a *sewage system*:

(a) the information described in Sentence 3.3.4.1.(2) as it relates to,
  (i) the person registered under Article 3.3.3.2., and
  (ii) the person with the qualifications described in Clause 3.3.3.2.(1)(a) who will supervise *construction* on-site of the *sewage system*, and

(b) the name and telephone number of the representative of the person described in Subclause (a)(i) who may be contacted by the *chief building official* in respect of the *construction* of the *sewage system.*

1.3.5.5. Orders

(1) An order issued under subsection 12(2), 13(1) or (6), 14(1) or 15.10.1(2) or clause 18(1)(f) of the Act shall be in a form approved by the *Minister*.

1.3.6. As Constructed Plans

1.3.6.1. Application (See Appendix A.)

(1) Where a by-law, resolution or regulation has been made by a *principal authority* under clause 7(1)(g) of the Act, the *chief building official* may require that *as constructed plans* for the whole of, or any part or system of, a *building* or any class of *buildings* be provided by the persons responsible for the *construction*.

r18 ## 1.3.7. Temporary Health or Residential Facilities
(This Subsection is revoked on March 31, 2023)

1.3.7.1. Application

(1) In this Subsection,

"proponent" means a person or entity described in clause (a) or (b) of the definition of "temporary health or residential facility";

"temporary health or residential facility" means a *building* or structure that is used or intended to be used to provide, on a temporary basis for the purpose of responding to the COVID-19 pandemic and its effects, health care or sleeping accommodation, by or on behalf of,

(a) any health service provider as defined in paragraphs 1 to 5 of the definition of "health service provider" in subsection 1 (2) of the *Connecting Care Act, 2019*, or
(b) any government, including, for greater certainty, a municipality.

1.3.7.2. Exemption

(1) The *construction* of a temporary health or residential facility and the conversion of all or part of an existing *building* or structure to a temporary health or residential facility are exempt from the requirement to obtain a permit under section 8 or 10 of the Act and are exempt from compliance with this Code.

1.3.7.3. Conditions for Occupancy

(1) Where *construction* is undertaken to establish a temporary health or residential facility, before the facility or a part of the facility can be occupied the following conditions must be satisfied:

1. An *architect* and a *professional engineer* have designed or taken responsibility for the design of the *construction* of the facility or the part of the facility and have provided the designs to the *chief building official*.
2. The *chief building official* has provided to the proponent an attestation that the *chief building official* has received the designs described in paragraph 1.
3. An *architect* and a *professional engineer* have,
    i. undertaken a general review of the construction of the facility or the part of the facility,
    ii. prepared written reports arising out of the general review, and
    iii. provided the reports to the chief building official.
4. The *chief building official* has provided to the proponent an attestation that *the chief building official* has received the reports described in paragraph 3.

(2) Sentence (1) applies to a temporary health or residential facility or a part of the facility if the facility or the part of the facility is *constructed* and occupied on or after the day this Sentence comes into force.

1.3.7.4. Inspections

(1) A *chief building official* or an *inspector* shall, in accordance with Sentence (2), undertake an inspection of the temporary health or residential facility pursuant to subsection 15.9 (1) of the Act to determine whether the facility is unsafe as described in subsection 15.9 (2) of the Act.

(2) An inspection described in Sentence (1) shall be undertaken on or before the following dates:

1. The date the facility is occupied, or, where the facility is occupied in stages, the date each part of the facility is occupied.
2. A date that is not later than one month after the date of the previous inspection.

(3) For greater certainty, for the purpose of paragraph 2 of Sentence (2), if the temporary health or residential facility was inspected in accordance with Ontario Regulation 141/20 (Temporary Health or Residential Facilities) made under the *Reopening Ontario (A Flexible Response to COVID-19) Act, 2020*, the date of the previous inspection is the date that it was last inspected under that Regulation.

(4) When undertaking an inspection required under Sentence (1), the inspector may consider reports concerning whether the temporary health or residential facility or part of the facility is unsafe as described in subsection 15.9 (2) of the Act.

Section 1.4. Search Warrant

1.4.1. Forms

1.4.1.1. Information & Warrant Forms

r3 **(1)** An information to obtain a warrant to enter and search a *building*, receptacle or place under subsection 21(1) of the Act shall be in Form 1.4.1.1.A.

r3 **(2)** A warrant to enter and search a *building*, receptacle or place under subsection 21(1) of the Act shall be in Form 1.4.1.1.B.

1.10.2.5. Certificate as Alternative to Maintenance Inspection

(1) The *principal authority* that administers the *maintenance inspection program* established under Sentence 1.10.2.3.(1), may, as an alternative to conducting an inspection of a *sewage system* required under Sentence 1.10.2.3.(1), accept a certificate described in Sentence (2) from the owner of the property on which the *sewage system* is located.

(2) The certificate required by Sentence (1) shall satisfy the requirements of Sentence 1.10.1.3.(2) and for these purposes Sentences 1.10.1.3.(3) to (5) apply with necessary modifications.

r16 1.11. Tiny Houses

1.11.1. Tiny Houses Constructed Off-Site

1.11.1.1. Scope

(1) This Section applies to *houses* that,
(a) have not more than one *dwelling unit*,
(b) are 37 m² or less in *building area*, and
(c) are to be,
  (i) partially *constructed* in one *municipality* and moved to be installed at a location in another *municipality* without having been previously occupied, or
  (ii) partially *constructed* at one location and moved to be installed at a location that is not yet known without having been previously occupied.

(2) Except as provided in this Section, the requirements in this Part apply to *houses* described in Sentence (1).

1.11.1.2. Permits

(1) Provided the conditions described in Sentence (2) are complied with, if an applicant for a permit under section 8 of the Act makes an application to the *chief building official* of the *municipality* in which a *house* is to be partially *constructed* but not installed, the applicant is exempt from demonstrating compliance with,
(a) either,
  (i) if the application is for a permit described in subsection 8 (1) of the Act, clause 8(2)(a) of the Act but only with respect to demonstrating compliance with *applicable law*, or
  (ii) if the application is for a conditional permit described in subsection 8 (3) of the Act, clause 8(3)(a) of the Act, and
(b) requirements of this Code related to site installation of the *house*.

(2) For a permit applicant to be exempt from the provisions described in Sentence (1), the following conditions must be satisfied:

1. If the site the *house* is intended to be installed on is known by the permit applicant,
   i. the permit application must state the address or location of the site,
   ii. the permit application must include such information about the anticipated site installation that is necessary to design the *house*, and
   iii. the proposed *construction* must comply with the location-dependent requirements of this Code that are applicable to a *house* that is *constructed* at that address or location.

2. If the site the *house* is intended to be installed on is not known by the permit applicant,
    i. the permit application must include a declaration of assumptions related to the location of the *house* that have been used in the design of the *house*,
    ii. the permit application must include such information about the anticipated site installation that is necessary to design the *house*, and
    iii. the proposed *construction* must comply with the location-dependent requirements of this Code that are applicable to a *house* that is *constructed* at a location that has the characteristics set out in the declaration.

(3) For the purposes of paragraphs 1 and 2 of Sentence (2), "location-dependent requirements" include, but are not limited to, provisions related to climatic loads, seismic loads, temperature based requirements, *limiting distance* and *exposing building face*, *soil* gas control and firefighting access.

(4) An applicant for a permit described in Sentence (1) shall provide the following to a purchaser of a *house constructed* in accordance with a permit described in Sentence (1):

1. all plans, specifications, documents and other information submitted or received by the person described in Sentence (1) in respect of the permit described in Sentence (1), including any as-constructed plans and any declaration of assumptions described in subparagraph 2 i of Sentence (2), and
2. all letters of compliance described in Sentence 1.11.1.3.(3) and all documents and other information received by the person described in Sentence (1) in respect of all inspections completed by an *inspector* or *registered code agency*, as the case may be.

(5) No person shall install a *house* at a site in a *municipality* unless a permit under section 8 of the Act has been issued therefor by the *chief building official* of that *municipality*.

(6) The *chief building official* of the *municipality* in which the *house* is to be installed shall issue the permit described in Sentence (5) if the applicant,

(a) demonstrates the proposed *construction* complies with the applicable provisions described in Clauses (1) (a) and (b),
(b) demonstrates compliance with the other requirements of section 8 of the Act, and
(c) submits all plans, specifications, documents and other information described in Sentence (4) that the applicant has been provided.

(7) For the purposes of an application for a permit described in Sentence (5), the time periods described in Sentences 1.3.1.3.(1) and (3) and Clause 1.3.1.3.(6)(b) shall begin on the later of,

(a) the date the permit described in Sentence (1) is issued, or
(b) the date described in Sentence 1.3.1.3.(7).

1.11.1.3. Inspections

(1) Where a permit is applied for as described in Sentence 1.11.1.2.(1) or (5), the person to whom a permit under section 8 of the Act is issued shall give notice as described in Articles 1.3.5.1. and 1.3.5.2. to the *chief building official* or *registered code agency*, as the case may be, of the *municipality* who issued the permit in respect of the *construction* to which the notice relates.

(2) Where a permit is applied for as described in Sentence 1.11.1.2.(5), the person to whom a permit under section 8 of the Act is issued shall provide the *chief building official* of the *municipality* in which the *house* is to be installed,

(a) any additional letters of compliance, documents or other information related to inspections completed by an *inspector* or *registered code agency*, as the case may be, of the *municipality* in which the *house* was partially *constructed* that was not provided when the permit was applied for, or
(b) confirmation that no additional letters of compliance, documents or other information have been provided to the person.

(3) The *chief building official* of the *municipality* in which a *house* was partially *constructed* but not installed shall provide the person to whom a permit was issued with a letter of compliance that confirms,

(a) which prescribed notices described in Sentence 1.3.5.1.(2) were received by the *chief building official* or *registered code agency*, as the case may be,

(b) that inspections described in Sentence 1.3.5.3.(1) were undertaken in respect of the *construction* to which the notices relate, and

(c) that no contraventions of the Act or this Code were found or that remedial steps were carried out to resolve any contraventions that were found.

r19.1 1.12. Off-Site Construction of Buildings

1.12.1. Site Assembled and Factory-Built Buildings

1.12.1.1. Certification and Compliance

(1) Except as provided in Sentence (2), a manufactured *building* or a manufactured part of a *building* within the scope of Part 3 is deemed to comply with this Code if it is certified in accordance with CSA A277, "Procedure for Certification of Prefabricated Buildings, Modules, and Panels".

(2) The requirements of this Code shall apply to,

(a) *building* components designed and constructed outside the place of manufacture, and

(b) site installation of such *buildings.*

e3 # Part 3

Qualifications

(2) For the purposes of a registration or a renewal of a registration, a person who was qualified on December 31, 2014 under Sentence 3.1.3.1.(1), as it read on that date, is deemed to have the qualifications set out in Clauses (1)(a) and (b).

(3) If a person is given notice of a knowledge maintenance examination that relates to the subject matter of an examination program referred to in Clause (1)(a) or (b), as applicable, either after December 31, 2014 under Sentence 3.1.5.6.(1) or, on or before December 31, 2014, under Sentence 3.1.5.1.(2), as it read on that date, and does not successfully complete the knowledge maintenance examination referred in the notice by the end of the eighteenth month following the month in which the *director* gives notice of the knowledge maintenance examination to the person, Sentence (2) ceases to apply to the person at the end of that period with respect to the qualifications set out in Clause (1)(a) or (b), as applicable.

3.1.4. Inspectors

3.1.4.1. Qualifications

(1) Except as provided in Article 3.1.4.3. or 3.1.4.4., the following are prescribed as qualifications for a person to be appointed and to remain appointed under the Act as an *inspector* whose duties include plans review or inspection under the Act:

(a) the person must be registered with the *director*.

(2) A registration shall be in a form established by the *director*.

(3) A person who was qualified on December 31, 2014 under Sentence 3.1.4.1.(1) in a category of qualification set out in Column 2 of Table 3.5.2.1., as they read on that date, is deemed to be registered in the class of registration that corresponds to that category of qualification until the earlier of,

(a) the day the person is registered in that class of registration under Sentence 3.1.4.2.(1), and

(b) March 31, 2015.

3.1.4.2. Registration and Renewal of a Registration

(1) Subject to Article 3.1.5.7., the *director* may register an applicant, or renew a registration, in each class of registration applied for, if,

r6 (a) the applicant or registered person has successfully completed the examination program administered or authorized by the Ministry of Municipal Affairs relating to the person's knowledge of the Act and this Code in the category of qualification set out in Column 2 of Table 3.5.2.1. that corresponds to each class of registration set out in Column 1 of Table 3.5.2.1. for which application is made,

(b) the application is complete, and

(c) all fees required under Article 3.1.5.3. are paid.

(2) For the purposes of a registration or a renewal of a registration in a class of registration, a person who was qualified on December 31, 2014 under Sentence 3.1.4.1.(1) in a category of qualification set out in Column 2 of Table 3.5.2.1., as they read on that date, is deemed to have the qualifications set out in Clause (1)(a) in that category of qualification.

(3) If a person is given notice of a knowledge maintenance examination that relates to the subject matter of an examination program in the category of qualification either after December 31, 2014 under Sentence 3.1.5.6.(1) or, on or before December 31, 2014, under Sentence 3.1.5.1.(2), as it read on that date, and does not successfully complete the knowledge maintenance examination referred in the notice by the end of the eighteenth month following the month in which the *director* gives notice of the knowledge maintenance examination to the person, Sentence (2) ceases to apply to the person at the end of that period.

r19.1 3.1.4.3. Qualifications for Intern Inspectors

(1) A person may be appointed or remain appointed under the Act as an intern *inspector* whose duties include supervised plans review or inspection under the Act, even if the person does not have the qualification set out in Article 3.1.4.1., if the person is enrolled in an internship program that,

(a) is approved by the Minister, or

(b) meets the minimum requirements described in Sentence (2).

(2) For the purposes of Clause (1)(b), the following are the minimum requirements for an internship program:

(a) the internship program in a *municipality* shall be established and administered by the *chief building official* of the *municipality*,

(b) the *chief building official* shall notify the *director* in writing within 30 days of the date an internship program is established, altered or revoked,

(c) the *chief building official* shall establish and maintain a written policy with respect to the,

  (i) enrolment of persons in the internship program, and

  (ii) the supervision of an intern *inspector* by an *inspector* or *chief building official* who is registered in the class of registration in respect of which the intern *inspector* will exercise the powers or perform the duties,

(d) the *chief building official* shall ensure that the written policy described in Clause (c) is brought to the attention of the public,

(e) every 12 months, the *chief building official* shall prepare and transmit to the *director* a report that contains information about,

  (i) the number of intern *inspectors* that entered or left the internship program in the past 12 months,

  (ii) the number of intern *inspectors* that were enrolled in the internship program that became registered with the *director* under Sentence 3.1.4.2.(1) in the past 12 months,

  (iii) the number of intern *inspectors* enrolled in the internship program at any point in the past 12 months who has been trained or practiced as a building official in a country other than Canada, and

  (iv) the number of persons who were refused enrolment in the program or whose enrolment in the program was terminated,

(f) subject to Sentence (3), each intern *inspector* enrolled in the internship program in respect of a type of *building* described in Column 3 of Table 3.5.2.1. is not eligible to be enrolled in the program in respect of that type of *building* for longer than 18 months, and

(g) the *chief building official* shall provide to the *director* such information as the *director* requests.

(3) The *director* may, at the request of a *chief building official*, authorize an intern *inspector* to be enrolled in a program for more than 18 months if the *director* has reasonable grounds to believe there are extenuating circumstances including maternity or parental leave, illness, disability, bereavement or personal hardship.

(4) The *chief building official* shall notify the *director* of any failure in *construction* or *demolition* or in the enforcement of the Act or this Code associated with the internship program or a person enrolled in the program within 10 days of the *chief building official* becoming aware of the failure.

(5) The *director* may terminate a program described in Clause (1)(b) if the *director* has reasonable grounds to believe the program has or will result in a failure in *construction* or *demolition* or in the enforcement of the Act or this Code associated with the internship program or a person enrolled in the program.

(6) An intern *inspector* who is exempt under Sentence (1) shall be supervised by an *inspector* or *chief building official* who is registered in the class of registration in respect of which the intern *inspector* will exercise the powers or perform the duties.

3.1.4.4. Qualifications for Maintenance Program Inspectors

(1) A person may be appointed or remain appointed under the Act as an *inspector* whose duties include *maintenance inspections* of *sewage systems*, even if the person does not have the qualification set out in Article 3.1.4.1. in respect of these duties.

(2) An *inspector* who is exempt under Sentence (1) is authorized to conduct *maintenance inspections* of *sewage systems* only if the following conditions are met:

(a) the person is supervised by an *inspector* or *chief building official* who is registered in the class of registration described in Column 1 of Item 10 of Table 3.5.2.1., and

(b) the person does not issue orders under the Act.

3.1.5. Qualifications — Chief Building Officials, Supervisors and Managers, and Inspectors

3.1.5.1. Application for Registration or Renewal of a Registration

(1) An application for registration or renewal of a registration shall be made to the *director* in a form established by the *director*.

(2) An application for renewal of a registration shall be made at least 60 days before the expiry of the registration to be renewed.

(3) An application for registration or renewal of a registration shall include an undertaking by the applicant or registered person to comply with the conditions set out in Article 3.1.5.5.

(4) An application for registration or renewal of a registration shall,

r5 (a) set out the applicant's or registered person's name, residence address, residential mailing address, if different from the residence address, and email address, if applicable,

(b) set out the name and address of every *principal authority* that has appointed the person as a *chief building official* or *inspector* under the Act, and

(c) contain evidence, provided by the applicant or registered person, that the applicant or registered person has the qualifications set out in Clauses 3.1.2.2.(1)(a) and (b), 3.1.3.2.(1)(a) and (b), or 3.1.4.2.(1)(a), as applicable.

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2012 Building Code Compendium

Volume 2

April 29, 2022 update
(Containing O. Regs. 867/21; 217/22; 434/22; 451/22)

COMMENCEMENT

Supplementary Standards SA-1, SB-1 to SB-13 and SC-1 come into force on the 1st day of January, 2014.

See "Code Amendment History" page in the Preface of Volume 1 for information concerning amendments to Supplementary Standards issued through Minister's Rulings.

a1 Amendment made to Appendix A or B issued for January 1st, 2014.
a2 Amendment made to Appendix A or B issued for January 1st, 2014.
a2.1 Amendment made to Appendix A or B issued for January 1st, 2015.
a3 Amendment made to Appendix A or B issued for January 1st, 2015.
a4 Amendment made to Appendix A or B issued for July 7th, 2016.
a5 Amendment made to Appendix A or B issued for July 1st, 2017.
a5.1 Amendment made to Appendix A or B issued for January 1st, 2018.
a6 Amendment made to Appendix A or B issued for January 18th, 2018.
a7 Amendment made to Appendix A or B issued for May 4th, 2018.
a8 Amendment made to Appendix A or B issued for June 29th, 2018.
a9 Amendment made to Appendix A or B issued for July 20th, 2018.
a10 Amendment made to Appendix A or B issued for May 2nd, 2019.
a10.1 Amendment made to Appendix A or B issued for January 1st, 2020.
a10.2 Amendment made to Appendix A or B issued for January 1st, 2022.
a11 Amendment made to Appendix A or B issued for December 16th, 2020.
a12 Amendment made to Appendix A or B issued for January 1st, 2022.
a13 Amendment made to Appendix A or B issued for July 1st, 2022.

EDITORIAL

e1 Editorial correction issued for January 1st, 2014.
e2 Editorial correction issued for January 1st, 2014.
e2.1 Editorial correction issued for January 1st, 2015.
e3 Editorial correction issued for January 1st, 2015.
e4 Editorial correction issued for July 7th, 2016.
e5 Editorial correction issued for January 1st, 2017.
e6 Editorial correction issued for January 1st, 2018.
e7 Editorial correction issued for January 1st, 2020.
e7.1 Editorial correction issued for January 1st, 2022.
e8 Editorial correction issued for December 16th, 2020.
e9 Editorial correction issued for January 1st, 2022.

COVER PHOTO CREDITS

1	2	3	4
5	6	7	8

1. Stephen Hawking Centre at the Perimeter Institute of Theoretical Physics; Teeple Architects Inc.; Scott Norsworthy Photography
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Public Heritage Building

This definition addresses smaller heritage buildings that are to be made available to the public for viewing as examples of an architectural period or periods in the past, depicting how our forebears lived, worked or played, and what artifacts, objects or clothing were in use at that time. These buildings are not considered museums as such, and therefore would not be subject to the more stringent requirements of assembly occupancies for that use.

Service Room

Typical examples of service rooms include boiler rooms, furnace rooms, incinerator rooms, garbage handling rooms, and rooms to accommodate air-conditioning or heating appliances, pumps, compressors and electrical equipment. Rooms such as elevator machine rooms and common laundry rooms are not considered as service rooms.

Suite

Tenancy in the context of the term "suite" applies to both rental and ownership tenure. In a condominium arrangement, for example, dwelling units are considered separate suites even though they are individually owned. In order to be of complementary use, a series of rooms that constitute a suite are in reasonably close proximity to each other and have access to each other either directly by means of a common doorway or indirectly by a corridor, vestibule or other similar arrangement.

The term "suite" does not apply to rooms such as service rooms, common laundry rooms and common recreational rooms that are not leased or under a separate tenure in the context of the Code. Similarly, the term suite is not normally applied in the context of buildings such as schools and hospitals, since the entire building is under a single tenure. A rented room in a long-term care home could be considered as a suite if the room was under a separate tenure. A hospital bedroom on the other hand is not considered to be under a separate tenure, since the patient has little control of that space, even though he pays the hospital a per diem rate for the privilege of using the hospital facilities, which include the sleeping areas.

For certain requirements in the Code, the expression "room or suite" is used (e.g. travel distance). This means that the requirement applies within the rooms of suites as well as to the suite itself and to rooms that may be located outside the suite. In other places the expression "suite, and rooms not located within a suite" is used (e.g. for the installation of smoke and heat detectors). This means that the requirement applies to individual suites as defined, but not to each room within the suite. The rooms "not within a suite" would include common laundry rooms, common recreational rooms and service rooms, that are not considered as tenant occupied space.

a12 A-1.4.1.3. Applicable Law.

Applicants for building permits are required to establish compliance with applicable law. The following table lists contact information for those agencies responsible for the statutory provisions defined in Sentence 1.4.1.3.(1):

Applicable Law Provision	Responsible Agency	Contact
City of Toronto Act, 2006: Subsection 102(3) of the *City of Toronto Act, 2006* By-laws made under section 108 of the *City of Toronto Act, 2006* but only with respect to the issuance of a permit for the construction of a green roof. Section 114 of the *City of Toronto Act, 2006*, with respect to the approval by the City of Toronto or the Ontario Land Tribunal of plans and drawings.	City of Toronto	General Inquiry: ph: 311 or 416-392-2489

Applicable Law Provision	Responsible Agency	Contact
Clean Water Act, 2006: Clause 59(1)(b) of the *Clean Water Act, 2006* with respect to the issuance of a notice by the risk management official for the construction of a building.	Ministry of the Environment, Conservation and Parks	General Inquiry: ph: 416-325-4000 or 800-565-4923
Conservation Authorities Act: Clause 28(1)(c) under the *Conservation Authorities Act*, with respect to the permission of the authority for the construction of a building if the control of flooding, erosion, dynamic beaches or pollution may be affected by the development.	Local Conservation Authority	
Child Care and Early Years Act, 2014: Section 14 of Regulation 137/15, under the *Child Care and Early Years Act, 2014,* with respect to the approval of plans for a new building to be erected or an existing building to be used, altered or renovated for use as a child care centre or for alterations or renovations to be made to premises used by a child care centre.	Ministry of Children, Community and Social Services	General Inquiry: ph: 416-212-7432 Central East Regional Office ph: 905-868-8900 Central West Regional Office ph: 905-567-7177 or 877-832-2818 Eastern Regional Office ph: 613-234-1188 or 800-267-5111 Hamilton/Niagara Regional Office ph: 905-521-7280 North East Regional Office ph: 705-474-3540 or 800-461-6977 Northern Regional Office ph: 705-564-6699 or 800-265-1222 South East Regional Office ph: 613-545-0539 or 800-646-3209 South West Regional Office ph: 519-438-5111 or 800-265-4197 Toronto Regional Office ph: 416-325-0500
Development Charges Act, 1997: Sections 28 and 53 under the *Development Charges Act, 1997*.	Local Municipality	
Education Act: *Education Act*, Section 194, with respect to the approval of the Minister for the demolition of a building.	Ministry of Education	General Inquiry ph: 416-325-2929 or 800-387-5514
Education Act: Sections 257.83 and 257.93 under the *Education Act*.	Local Municipality	
Elderly Persons Centres Act: Section 6 of Regulation 314, of the *Elderly Persons Centres Act*, with respect to the approval of the Minister for the construction of a building project.	Ministry of Health and Long-Term Care	General Inquiry: ph: 416-327-4327 or 800-268-1153

Applicable Law Provision	Responsible Agency	Contact
Environmental Assessment Act: Section 5 of the *Environmental Assessment Act,* with respect to the approval of the Ministry or the Ontario Land Tribunal to proceed with an undertaking. Subsection 5(4) of the *Environmental Assessment Act*	Ministry of the Environment, Conservation and Parks	General Inquiry: ph: 416-325-4000 or 800-565-4923 Environmental Approvals Branch ph: 416-314-8001 or 800-461-6290
Environmental Protection Act: Section 46 of the *Environmental Protection Act* with respect to the approval of the Minister to use land or land covered by water that has been used for the disposal of waste. Section 47.3 of the *Environmental Protection Act*, with respect to the issuance of a renewable energy approval. Section 168.3.1 of the *Environmental Protection Act*, with respect to the construction of a building to be used in connection with a change of use of a property. Paragraph 2 of Subsection 168.6(1) of the *Environmental Protection Act*, if a certificate of property use has been issued in respect of the property under subsection 168.6(1) of the Act.	Ministry of the Environment, Conservation and Parks	General Inquiry: ph: 416-325-4000 or 800-565-4923 Central Region ph: 416-326-6700 or 800-810-8048 Eastern Region ph: 613-549-4000 or 800-267-0974 Northern Region ph: 807-475-1205 or 800-875-7772 Southwestern Region ph: 519-873-5000 or 800-265-7672 West Central Region ph: 905-521-7640 or 800-668-4557
Milk Act Section 14 of the *Milk Act*, with respect to the permit from the Director for the construction or alteration of any building intended for use as a plant.	Ministry of Agriculture, Food and Rural Affairs	General Inquiry ph: 519-826-3100 or 888-466-2372
Municipal Act, *2001* Subsection 133(4) of the *Municipal Act*, *2001.*	Local Municipality	
Niagara Escarpment Planning and Development Act: Subsection 24(3) of the *Niagara Escarpment Planning and Development Act.*	Ministry of Natural Resources and Forestry	General Inquiry ph: 800-667-1940 Niagara Escarpment Commission ph: 905-877-5191
Nutrient Management Act, 2002: Section 11.1 of O. Reg. 267/03 of the *Nutrient Management Act, 2002*, with respect to a proposed building or structure to house farm animals or store nutrients if that Regulation requires the preparation and approval of a nutrient management strategy before construction of the proposed building or structure.	Ministry of Agriculture, Food and Rural Affairs	General Inquiry ph: 519-826-3100 or 888-466-2372

Applicable Law Provision	Responsible Agency	Contact
Ontario Heritage Act: Subsection 27(9) of the *Ontario Heritage Act*, with respect to a notice to the council of a municipality to the demolition or removal of a building from a registered property. Subsection 30(2) of the *Ontario Heritage Act*, with respect to a consent of the council of a municipality to the alteration or demolition of a building. Section 33 of the *Ontario Heritage Act*, with respect to the consent of the council of a municipality for the alteration of a property. Section 34 of the *Ontario Heritage Act*, with respect to the consent of the council of a municipality for the demolition of a building. By-laws made under Section 40.1 of the *Ontario Heritage Act* Section 42 of the *Ontario Heritage Act*, with respect to the permit given by the council of a municipality for the erection, alteration, or demolition of a building.	Local Municipality	
Ontario Heritage Act: Section 34.5 of the *Ontario Heritage Act,* with respect to a consent of the Minister to the alteration or demolition of a designated building Subsection 34.7(2) of the *Ontario Heritage Act*, with respect to a consent of the Minister to the alteration or demolition of a designated building	Ministry of Tourism, Culture and Sport	General Inquiry: ph: 416-326-9326
Ontario Planning and Development Act, 1994, Section 14 *Ontario Planning and Development Act, 1994*, with respect to any conflict between a development plan made under that Act and a zoning by-law that affects the proposed building or structure. Subsection 17(1) *Ontario Planning and Development Act, 1994* with respect to orders made under that Act.	Ministry of Municipal Affairs and Housing	General Inquiry: ph: 416-585-7041 Central Municipal Services Office ph: 416-585-6226 or 800-668-0230 Eastern Municipal Services Office ph: 613-545-2100 or 800-267-9438 Northeastern Municipal Services Office ph: 705-564-0120 or 800-461-1193 Northwestern Municipal Services Office ph: 807-475-1651 or 800-465-5027 Southwestern Municipal Services Office ph: 519-873-4020 or 800-265-4736

Applicable Law Provision	Responsible Agency	Contact
Planning Act: Section 33 of the *Planning Act*, except where in the case of demolition of a residential property, a permit to demolish the property is obtained under that Section By-laws made under Sections 34 or 38 of the *Planning Act*. Section 41 of the *Planning Act*, with respect to the approval by the council of the municipality of the Municipal Board of plans and drawings. Section 42 of the *Planning Act*, with respect to the payment of money to the Municipality. Section 46 of the *Planning Act*. By-laws made under O. Reg. 608/06 (Development Permits) made under the *Planning Act*. By-laws made under O. Reg. 246/01 (Development Permits) made under the *Planning Act*.	Local Municipality	
Planning Act: Section 47 of the *Planning Act,* with respect to orders made under that Act.	Ministry of Municipal Affairs and Housing	General Inquiry: ph: 416-585-7041 Central Municipal Services Office ph: 416-585-6226 or 800-668-0230 Eastern Municipal Services Office ph: 613-545-2100 or 800-267-9438 Northeastern Municipal Services Office ph: 705-564-0120 or 800-461-1193 Northwestern Municipal Services Office ph: 807-475-1651 or 800-465-5027 Southwestern Municipal Services Office ph: 519-873-4020 or 800-265-4736
Public Lands Act: Section 2 of O. Reg. 453/96 of the *Public Lands Act*, with respect to the work permit from the Minister authorizing the construction or placement of a building on public land.	Ministry of Natural Resources and Forestry	General Inquiry ph: 800-667-1940
Public Transportation and Highway Improvement Act: Section 34 or 38 of the *Public Transportation and Highway Improvement Act*, with respect to the permit from the Minister for the placement, erection or alteration of any building or other structure or the use of land.	Ministry of Transportation	General Inquiry ph: 800-268-4686 Central Region: ph: 416-235-5412 Eastern Region: ph: 800-267-0295 Northeastern Region: ph: 705-472-7900 or 800-461-9547 Northwestern Region: ph: 807-473-2000 or 800-465-5034 Southwestern Region: ph: 519-873-4335 or 800-265-6072

A-1.5.1.1.(1) Application of Referenced Documents.

Documents referenced in the Building Code may contain provisions covering a wide range of issues, including issues that are unrelated to the objectives and functional statements stated in Parts 2 and 3 of Division A respectively; e.g. aesthetic issues such as colour-fastness or uniformity. Sentence 1.5.1.1.(1) is intended to make it clear that, whereas referencing a document in the Building Code generally has the effect of making the provisions of that document part of the Code, provisions that are unrelated to buildings or to the objectives and functional statements attributed to the provisions in Division B where the document is referenced are excluded.

Furthermore, many documents referenced in the Building Code contain references to other documents, which may also, in turn, refer to other documents. These secondary and tertiary referenced documents may contain provisions that are unrelated to buildings or to the objectives and functional statements of the Building Code: such provisions - no matter how far down the chain of references they occur - are not included in the intent of Sentence 1.5.1.1.(1) of Division A.

A-2.2.1.1.(1) Objectives.

Listing of Objectives

e9 Any gaps in the numbering sequence of the objectives are due to the fact that there is a master list of objectives covering the Building Code, Fire Code and the three principal model National Code Documents (National Building Code of Canada 2015, National Plumbing Code of Canada 2015 and National Fire Code of Canada 2015) but not all objectives are pertinent to all Codes.

The Building

Where the term “the building” is used in the wording of the objectives, it refers to the building for which compliance with the Building Code is being assessed.

Emergency

The term “emergency" - in the context of safety in buildings - is often equated to the term “fire emergency”; however, the wording of objectives OS3.7 and OS5.9 makes it clear that the Code addresses any type of emergency that would require the rapid evacuation of the building, such as the release of hazardous substances or the presence of intruders.

A-3.2.1.1.(1) Functional Statements.

Listing of Functional Statements

The numbered functional statements are grouped according to functions that deal with closely related subjects. For example, the first group deals with fire risks, the second group deals with emergency egress and response, etc. There are gaps in the numbering sequence for the following reasons:

- Each group has unused numbers which allows for the possible future creation of additional functional statements within any one group.

e9 - There is a master list of functional statements covering the Building Code, Fire Code and the three principal model National Code Documents (National Building Code of Canada 2015, National Plumbing Code of Canada 2015 and National Fire Code of Canada 2015) but not all functional statements are pertinent to all Codes.

Explanatory Material for Division B

A-1.1.2.1.(2) Winter Design Temperatures.

The 2.5 percent values referenced in Sentence 1.1.2.1.(2) are the least restrictive temperatures that can be used. If a designer chooses to use the 1 percent values shown in MMAH Supplementary Standard SB-1, they would be in excess of the Code minimums and would be considered acceptable.

A-1.3.2.1. Abbreviations of Proper Names.

The following table provides contact information for organizations referenced in this Code:

	Name	Address	Contact
	ACGIH	American Conference of Governmental Industrial Hygienists 1330 Kemper Meadow Drive Cincinnati, Ohio 45240 USA	ph: 513-742-2020 fax: 513-742-3355 web site: www.acgih.org
	AISI	American Iron and Steel Institute 25 Massachusetts Ave., NW Suite 800 Washington, DC 20001 USA	ph: 202-452-7100 fax: 202-452-1039 web site: www.steel.org
	ANSI	American National Standards Institute 25 West 43rd Street, 4th Floor New York, New York 10036 USA	ph: 212-642-4900 fax: 212-398-0023 web site: www.ansi.org
a13	APA	The Engineered Wood Association 7011 S. 19th Street Tacoma, WA 98466-5333 USA	ph: (253) 620-7400 fax: (253) 565-7265 web site: www.apawood.org
	APHA	American Public Health Association 800 I Street, NW Washington, DC 20001 USA	ph: 202-777-2742 fax: 202-777-2534 web site: www.apha.org
a10.1	ASCE	American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191 USA	ph: 800-584-2723 web site: www.asce.org
	ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, N.E. Atlanta, Georgia 30329 USA	ph: 404-636-8400 800-527-4723 fax: 404-321-5478 web site: www.ashrae.org
	ASME	The American Society of Mechanical Engineers Three Park Avenue New York, New York 10016-5990 USA	ph: 800-843-2763 fax: 973-882-1717 web site: www.asme.org
	ASPE	American Society of Plumbing Engineers 6400 Shafer Court, Suite 350 Rosemont, Illinois 60018 USA	ph: 847-296-0002 fax: 847-296-2963 web site: www.aspe.org
	ASSE	American Society of Sanitary Engineering 901 Canterbury Suite A Westlake, Ohio 44145 USA	ph: 440-835-3040 fax: 440-835-3488 web site: www.asse-plumbing.org
	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive PO Box C700 West Conshohocken, Pennsylvania 19428-2959 USA	ph: 610-832-9585 fax: 610-832-9555 web site: www.astm.org
	AWS	American Welding Society 8669 NW 36th Street, Suite 130 Doral, Florida 33166 USA	ph: 800-443-9353 fax: 305- 443-5647 web site: www.aws.org

Name	Address	Contact
AWWA	American Water Works Association 6666 W. Quincy Ave. Denver, Colorado 80235 USA	ph: 303-794-7711; 800-926-7337 fax: 303-347-0804 web site: www.awwa.org
BCMOHS	British Columbia Ministry of Health Population Health and Wellness, Health Protection 1515 Blanshard Street, 4th Floor Victoria, British Columbia V8W 3C8	ph: (250) 952-1469 fax: (250) 952-1713 web site: http://www.health.gov.bc.ca
BNQ	Bureau de Normalisation du Québec 333, rue Franquet Québec, Québec G1P 4C7	ph: 418-652-2238 800-386-5114 fax: 418-652-2292 web site: www.bnq.qc.ca
CCBFC	Canadian Commission on Building and Fire Codes National Research Council Canada Building M-23A 1200 Montreal Road Ottawa, Ontario K1A 0R6	ph: 613-993-9960 fax: 613-952-4040 web site: www.nationalcodes.ca
CGSB	Canadian General Standards Board 11 Laurier Street Gatineau, Quebec K1A 1G6	ph: 819-956-0425 800-665-2472 fax: 819-956-5740 web site: www.pwgsc.gc.ca/cgsb
CSA	Canadian Standards Association 5060 Spectrum Way, Suite 100 Mississauga, Ontario L4W 5N6	ph: 416-747-4044 800-463-6727 fax: 416-747-2510 web site: www.csa.ca
CWC	Canadian Wood Council 99 Bank Street, Suite 400 Ottawa, Ontario K1P 6B9	ph: 613-747-5544 800-463-5091 fax: 613-747-6264 web site: www.cwc.ca
DBR	Institute for Research in Construction National Research Council Canada Building M-23A 1200 Montreal Road Ottawa, Ontario K1A 0R6 *The Division of Building Research (DBR) is now known as the Institute for Research in Construction.*	ph: 613-993-9960 fax: 613-952-4040 web site: www.nationalcodes.ca
EPA	Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Avenue, N.W. Washington, DC 20460 USA	ph: (202) 272-0167 web site: www.epa.gov
FINA	Fédération Internationale de Natation Avenue de l'Avant-Poste No 4 CH-1005 Lausanne, Switzerland	ph: (+41-21) 310-47-10 fax: (+41-21) 312-66-10 web site: www.fina.org
a10.1 GRHC	Green Roofs for Healthy Cities 406 King Street East Toronto, Ontario M5A 1L4	ph. 416-971-4494 web site: www.greenroofs.org
HC	Health Canada Address Locator 0900C2 Ottawa, Ontario K1A 0K9	ph: 866-225-0709 fax: 613-941-5366 web site: www.hc-sc.gc.ca

A-3.1.5.5.(1) Combustible Elements.

These requirements allow for exterior wall assemblies incorporating combustible elements on buildings of noncombustible construction. Since the tested assemblies must be representative of actual construction, the performance of the entire assembly is assessed with regard to its ability to resist flame propagation up the outside of a building. The thermal barrier protection limits the impact of an interior fire on the wall assembly.

These requirements, in combination, thus allow for wall assemblies containing both combustible cladding elements and non-loadbearing combustible framing members. These wall assemblies can be used as infill or panel type walls between structural elements, or attached directly to a loadbearing noncombustible structural system. These requirements, however, do not waive others specifically intended for the protection of combustible insulation in buildings of noncombustible construction.

These requirements are predicated upon the assumption that the manufacturing process and field installation procedure are both carried out under an independent quality assurance program designed to confirm that the product and its application are consistent with the system as tested.

a10.1 A-3.1.5.5.(1)(b)(i) Flame-Spread Distance.

The maximum flame-spread distance referred to in Subclause 3.1.5.5.(1)(b)(i) means the distance between the top of the opening and the highest observable instance of flaming along the wall assembly; thus, intermittent flaming to a height of 5 m above the opening is acceptable.

a10.1 A-3.1.5.5.(1)(b)(ii) Heat Flux Measurement.

The heat flux to the assembly referred to in Subclause 3.1.5.5.(1)(b)(ii) is the maximum one-minute averaged heat flux measured by transducers located 3.5 m above the top of the opening. The intent of this criterion is to limit the spread of fire on the wall assembly to a height of 3.5 m above the opening.

Fire tests have shown that flame does not spread on the exterior surface of a wall assembly where the heat flux is less than 35 kW/m^2 above the opening.

e7 A-3.1.5.12A.(2)(e) Foamed Plastic Insulation Protection.

The standard fire exposure temperature in CAN/ULC-S101, “Fire Endurance Tests of Building Construction and Materials”, is the same as in CAN/ULC-S124, “Test for the Evaluation of Protective Coverings for Foamed Plastic”. A thermal barrier that, when tested in conformance with CAN/ULC-S101, “Fire Endurance Tests of Building Construction and Materials”, will not exceed an average temperature rise of 140°C on its unexposed face after a period of 10 min satisfies this requirement.

A-3.1.5.18.(1) Wire and Cable Flammability.

In regulating the flammability characteristics of optical fibre cables and electrical wires and cables installed in a building, it is intended that the requirements of this Sentence and of other similar Sentences in the Code apply to wires and cables that are essentially a part of the distribution systems for power or communications. These distribution systems will normally include branch circuits that terminate at an outlet box in the space to be served and, at that location, cable terminators or plugs for individual items of equipment will be plugged in.

a13 A-3.1.6. Encapsulated Mass Timber Construction and Materials Permitted.

The permission to use encapsulated mass timber construction and other combustible materials stated in Articles 3.1.6.2., 3.1.6.3., 3.1.6.9. and 3.1.6.10. does not waive the requirements regarding types of construction and cladding stated in Article 3.2.3.7.

a13 A-3.1.6.3. Structural Mass Timber Elements.

Structural timber elements may consist of any number of large cross-section timber products, such as solid-sawn timber, glued-laminated timber (glulam), structural composite lumber (SCL), cross-laminated timber (CLT), and nail-laminated timber (NLT).

The minimum dimensions required for structural timber elements in encapsulated mass timber construction were established so that such elements will exhibit the fire performance characteristics of mass timber rather than those of lightweight, small-dimensioned wood elements (e.g., lumber), including reduced-ignition propensity and reduced average rate of fuel contribution. Note that the dimensions stated in Table 3.1.6.3. do not reflect a specific fire-resistance rating; larger dimensions may be required to satisfy fire-resistance rating requirements.

The reference to Article 3.2.2.16. means that heavy timber construction is permitted to be used for the roof assembly (and its supports) in buildings of encapsulated mass timber construction that are sprinklered and not more than 2 storeys in building height. It follows that the minimum dimensions stated in Table 3.1.4.7. would apply to those elements rather than the ones stated in Table 3.1.6.3. Furthermore, the roof elements and supports made of heavy timber construction do not need to conform to the encapsulation requirements of Article 3.1.6.4., nor are they limited by the flame-spread rating or maximum thickness or cut-through requirements of Article 3.1.6.14.

a13 A-3.1.6.4.(1) Encapsulation of Mass Timber Elements.

The general intent of Sentence 3.1.6.4.(1) is that all exposed surfaces of the mass timber elements be encapsulated, including the upper surface of a mass timber floor assembly. However, the exposed surfaces in certain concealed spaces formed by or contained within mass timber elements are exempted from complying with this Sentence (see Sentences 3.1.6.3.(4), 3.1.6.16.(2) and 3.1.6.17.(2), and Articles 3.1.6.7. and 3.1.6.12.). Moreover, the upper surface of a mass timber roof assembly need not be encapsulated where there is no concealed space above it. As well, the exterior side of a mass timber exterior wall assembly need not be encapsulated; however, the provisions of Article 3.1.6.9. and Subsection 3.2.3. for exterior walls still need to be considered.

a13 A-3.1.6.4.(3) to (6) Fire-Resistance Rating of Mass Timber with Exposed Surfaces.

Portions of mass timber elements required to have a fire-resistance rating are permitted to be exposed in accordance with the permissions stated in Sentences 3.1.6.4.(3) to (6); however, it is important to note that applying those permissions does not waive the requirement for these elements to have a fire-resistance rating.

a13 A-3.1.6.4.(4) Exposed Surfaces of Mass Timber Walls.

The primary objective of encapsulating mass timber elements is to limit the probability that these elements will significantly contribute to fire spread and fire duration in the event of a fire. Since thick wood members require a source of imposed heat flux to burn, the stipulation in Clause 3.1.6.4.(4)(a) that the exposed surfaces of mass timber walls face the same direction within a suite is intended to reduce the potential of re-radiation between burning mass timber surfaces that face each other, which could sustain flaming combustion into the decay phase of a fire if the sprinkler system failed to operate or to control the fire. Additionally, the maximum percentage of exposed surface area stated in Article 3.1.6.4. is low so that it is not sufficient to sustain a ventilation-controlled fire that might provide the radiation required to sustain flaming combustion into the decay phase of a fire if the sprinkler system failed to operate or to control the fire.

a13 A-3.1.6.6. Encapsulation Materials.

Research has been conducted on different types of encapsulation materials, such as gypsum board, gypsum concrete and cement board. The results of tests using an intermediate-scale furnace and of cone calorimeter tests indicate that a combustible timber element protected with a 38 mm thick layer of gypsum-concrete topping or with two layers of 12.7 mm Type X gypsum board will not ignite or contribute significant heat to a fire until average temperatures of 325 to 380°C are attained at the interface between the encapsulation material or assembly of materials and the combustible substrate. These temperatures are consistent with the ignition temperatures of wood-based materials.

a13 A-3.1.6.6.(2) Protection of Gypsum Board from Foot Traffic.

Where gypsum board is used as the encapsulation material on the top of a mass timber floor assembly, it should be protected from physical impact arising from normal pedestrian traffic that could damage it and possibly compromise its encapsulation rating.

a13 A-3.1.6.9.(1) and (2) Exterior Cladding.

The requirements in Sentences 3.1.6.9.(1) and (2) are intended to reduce the potential for fire spread on the exterior cladding of buildings of encapsulated mass timber construction through the use of noncombustible finishes on the exterior of the wall assembly or the use of a cladding/wall assembly that has been proven to resist flame propagation. These cladding/wall assembly combinations can be used as infill or panel-type walls between structural elements, or attached directly to a loadbearing structural system. Note that the requirements in Article 3.1.6.9. do not supersede the provisions in Subsection 3.2.3. regarding spatial separation and exposure protection.

A-3.1.8.1.(1)(b) Barrier to Control Smoke Spread.

Although a fire separation is not always required to have a fire-resistance rating, the fire separation should act as a barrier to the spread of smoke and fire until some response is initiated.

When choosing products for the fire stopping, the physical characteristics of the material used at the joints as well as the nature of the assembly and its potential movement should be taken into consideration.

If the fire-resistance rating of a fire separation is waived on the basis of the presence of an automatic sprinkler system, it is intended that the fire separation will be constructed so that it will remain in place and act as a barrier against the spread of smoke for a period of time until the sprinklers have actuated and controlled the fire.

A-3.1.8.1.(2) Installation of Closures.

Although there is no explicit performance statement in the Code that means of egress should be free of smoke, it is the intent that during the period when occupants are using a means of egress to evacuate from a floor area, the smoke contamination should not reach levels that would inhibit movement to the exit. This is particularly critical for persons with disabilities, who may not move at the same rate as other persons and who could be more susceptible to the effects of smoke contamination. NFPA 80, “Fire Doors and Other Opening Protectives”, requires that a fire door protecting a means of egress be designed to minimize the possibility of smoke passing through the opening.

Although self-closing devices are not required for all doors in a fire separation (see Article 3.1.8.11.), it is assumed that in a fire situation every door in a fire separation is closed. Article 3.3.3.5. prohibits grilles and similar openings for certain fire separations in hospitals and long term care homes.

Although fire dampers that release on the fusion of a fusible link will help to control the spread of fire, a substantial quantity of smoke could have passed through the opening before that event. They are frequently located below the upper levels of a room and so the release of the fusible link of the fire damper that protects an opening will be delayed until the temperature at the level of the opening becomes high enough to fuse the link.

Similar concern has to be considered for other closure devices that are permitted to remain open on fusible links, and their location should be restricted in accordance with NFPA 80, “Fire Doors and Other Opening Protectives”, and this Code, except where their installation in another location will not allow the products of combustion to spread into means of egress.

A-3.1.8.3.(4) Fire Separation Continuity.

The continuity of a fire separation where it abuts against another fire separation, a floor, a ceiling or an exterior wall assembly is maintained by filling all gaps at the juncture of the assemblies with a material that will ensure the integrity of the fire separation at that location.

a10.1 A-3.1.8.9.(3) Combination Smoke/Fire Dampers.

A combination smoke/fire damper may be used in lieu of a fire damper to meet the requirement of Sentence 3.1.8.9.(2).

A-3.1.8.9.(5) Fire Damper Access.

It is intended that an access door be provided in the duct and, if the duct is enclosed with an architectural finish, that a second access door be provided through that finish.

A-3.1.8.16.(1) Wired Glass and Glass Block.

The permission to include wired glass and glass block in doors and fire separations between an exit and the adjacent floor area does not permit the inclusion of those items in fire separations between exits and other parts of the building that are not included in the floor area. Examples include other exit facilities and vertical service spaces, including those used for building services and elevator hoistways.

A-3.1.8.17.(1) Fire-Protection Rating for Doors.

The provisions in Articles 3.1.8.15. to 3.1.8.17. do not waive a requirement for a door to have a fire-protection rating. To achieve this rating in a door test, it may be necessary to limit the area of glass in the door. If this area is less than the area limits of Article 3.1.8.16., it is the governing criterion. Conversely, if the area limits of Article 3.1.8.16. are less than the area required to achieve a fire-protection rating, then the area limits of this Article govern.

A-3.1.9. Penetrations.

In the application of Subsection 3.1.9., a building service is considered to penetrate an assembly if it passes into or through the assembly. In some situations a service item enters an assembly through a membrane at one location, runs within the assembly, and then leaves the assembly through a membrane at another location.

The term “membrane penetration” usually designates an opening made through one side (wall, floor or ceiling membrane) of an assembly, whereas the term “through-penetration” designates an opening that passes through an entire assembly. Fire stopping of membrane penetrations involves installing a material, device or assembly to resist for a prescribed time period the passage of flame and heat through the openings in a protective membrane caused by cables, cable trays, conduit, tubing, pipes or similar items. Fire stopping of a though-penetration involves installing an assembly of specific materials or products that are designed, tested and fire-resistance rated to resist for a prescribed period of time the spread of fire through penetrations.

Products for fire stopping within a barrier are required to address movement of the assembly and to control smoke spread; as such, the flexibility of the material used at the flexible joints as well as the nature of the assembly and its potential movement must be taken into consideration.

A-3.1.9.1.(1)(b) Tightly Fitted.

The intention behind the use of the term “tightly fitted” is to reinforce that there are to be no gaps between the building service or other penetrating item and the membrane or assembly it penetrates. A typical means of fire stopping for a service or other penetration through a concrete slab or wall is “cast in place” concrete.

A-3.1.9.2.(1) Penetration of Fire Separations by Electrical Boxes.

The provisions dealing with outlet boxes assume size, quantities and concentrations of partial depth penetrations that would not significantly affect the fire resistance of the assembly, including the temperature rise on the unexposed side of a wall. Sentence 3.1.9.2.(1) is not intended to allow large electrical distribution and control boxes to be recessed into an assembly required to have a fire-resistance rating unless they were incorporated in the assembly at the time of testing.

Electrical boxes used as junction boxes, for lighting fixtures and communication cable should be treated in a similar manner.

a10.1 A-3.1.9.3A. Outlet Boxes.

For the purposes of Article 3.1.9.3A., outlet boxes include, but are not limited to, electrical boxes, junction boxes, high and low voltage outlets, switches, enclosures for electrical equipment, laundry boxes, and shower diverters.

A-3.1.9.4.(1) Combustible Piping Penetrations.

The use of combustible pipe for sprinkler systems, water supply, drains or other services is governed by other requirements in Part 3. This Article regulates the use of combustible piping through penetrations of fire separations or a membrane that forms part of an assembly that is required to have a fire-resistance rating. Where permitted by this Article, combustible pipe may penetrate a fire separation or a membrane that forms part of an assembly that is required to have a fire resistance rating.

A-3.1.10.2.(4) Firewall Construction.

Inherent in the use of a firewall is the intent that this specialized wall construction provide the required fire-resistance rating while also being designed to resist physical damage - arising out of normal use - that would compromise the rating of the assembly. Traditionally, this has been accomplished by prescribing the use of noncombustible materials, which was, in fact, restricted to concrete or masonry. Sentences 3.1.10.2.(3) and (4) are intended to retain both of the characteristics of firewalls, while permitting greater flexibility in the use of materials and designs. The fire-resistance rating and damage protection attributes of a firewall may be provided by a single fire- and damage-resistant material such as concrete or masonry, by a fire- and damage-resistant membrane on a structural frame, or by separate components - one that provides the fire-resistance rating and another one that protects the firewall against damage.

If the firewall is composed of separate components, the fire-resistance rating of the fire-resistive component needs to be determined for this assembly on its own. In addition, if the damage protection component is physically attached to the fire-resistive component (for example, as a sacrificial layer), then, for the purposes of determining the overall performance of the assembly, it is also necessary to determine through testing whether failure of the damage protection component during a fire affects the performance of the fire-resistive component.

a13 A-3.1.11.3.(3) Fire Blocks between Nailing and Supporting Elements.

Sentence 3.1.11.3.(3) applies to the portion of the combustible ceiling finish that is attached using nailing elements and constructed in accordance with Sentence 3.1.6.14.(3), which permits 10% of the ceiling finish within a fire compartment to have a flame-spread rating not more than 150. Where this portion of ceiling finish creates a concealed space above it, exposed combustible elements within that space require fire blocks to limit the spread of fire.

a13 A-3.1.11.5.(1) Fire Blocks in Combustible Construction.

Combustible construction referred to in Sentence 3.1.11.5.(1) includes all types of construction that do not comply with the requirements for noncombustible construction or encapsulated mass timber construction. All of the elements within the concealed space can be combustible, unless required to be of noncombustible materials (e.g., certain categories of pipework and ducts). However, the value of the flame-spread rating of the combustible materials determines the permitted extent of the concealed space between fire blocks. The materials to be considered should include all construction materials regulated by this Code, including the framing and building services that are located in the concealed space. When designing fire blocking, consideration should be given to avoid restricting venting capabilities within concealed spaces. (See also Note A-5.6.2.1.)

a13 A-3.1.11.5.(3) and (3.1) Fire Blocks in Concealed Spaces.

To reduce the risk of fire spread in combustible concealed spaces within the types of buildings referred to in Sentences 3.1.11.5.(3) and (3.1), fire blocking is required regardless of whether the horizontal concealed space is protected by sprinklers or not, unless the space is filled with noncombustible insulation so that any air gap at the top of the insulation is very small. (See also Note A-3.1.11.5.(1) for roof venting.)

A 5- or 6-storey building constructed in accordance with Article 3.2.2.43A. and buildings constructed in accordance with Articles 3.2.2.42A., 3.2.2.49A. or 3.2.2.50A. are required to be sprinklered in accordance with NFPA 13, "Installation of Sprinkler Systems" (see Article 3.2.5.13.). NFPA 13 generally requires sprinklering of any concealed spaces of combustible construction or where large amounts of combustibles are present. However, NFPA 13 allows combustible concealed spaces to be unsprinklered in certain cases, including where concealed spaces are filled almost entirely with noncombustible insulation, where spaces contain only materials with a low flame-spread rating, and where limited access or the size of the space makes it impractical to install sprinklers. For certain types of construction in combustible concealed spaces that are not sprinklered, NFPA 13 mandates fire blocking beyond the minimum specified in Sentence 3.1.11.5.(3).

A-3.1.11.7.(6) Integrity of Fire Blocks.

Sentence 3.1.11.7.(6) together with Article 3.1.9.1., is intended to ensure that the integrity of fire blocks in maintained at areas where they are penetrated. This requirement is satisfied by the use of generic fire stops such as mineral wool, gypsum plaster or Portland cement mortar, as well as rated fire stops.

A-3.1.13.2.(2) Folding Partition.

Folding partitions used to divide a space into separate rooms are not considered as doors for the purposes of this Sentence.

A-3.1.15.1.(1) Roof Covering.

The tests described in CAN/ULC-S107 are intended to measure the relative fire-performance of roof coverings when exposed to a fire originating from sources outside the building. When metal deck or a similar noncombustible rigid roof surface is directly exposed to the exterior (a covering material on its exterior surface has not been provided), the requirements of this Sentence need not apply.

a10 A-3.1.21.1. Reserved.

a3 A-3.2.1.1.(3)(a) Mezzanine Area.

The permitted area of the mezzanine for the purposes of determining the allowable percentage is to be based on the open area of the floor of the space in which the mezzanine is located. The Code does not restrict the enclosing of space below the mezzanine. However, the enclosed area must be deducted from the area of the overall space before applying the percentage allowance.

A-3.2.1.1.(9) Accessible Service Space.

These service spaces are often referred to as interstitial spaces and are designed to allow service personnel to enter and undertake maintenance or installation within the space. Catwalks or flooring are usually included to provide a walking or access surface. Even when flooring is included, it is not intended that the interstitial space should be considered as a storey for the purposes of the Code unless the space is used for purposes other than servicing or the storage of materials and equipment to be used for building services within that space.

A-3.2.2.2.(1) Special and Unusual Structures.

Examples of structures which cannot be identified with the descriptions of buildings in Articles 3.2.2.20. to 3.2.2.83. include grain elevators, refineries and towers. Publications that may be consulted to establish good engineering practice for the purposes of Article 3.2.2.2. include the NFPA Fire Protection Handbook, Factory Mutual Data Sheets, and publications of the Society for Fire Protection Engineering.

A-3.2.2.18.(1) Sprinkler Extent.

It is not the intent of Article 3.2.2.6. and Sentences 3.2.2.4.(1) and (2) to require the installation of an automatic sprinkler system throughout all storeys of a building regardless of the options in Articles 3.2.2.20. to 3.2.2.83. in order to construct one or more storeys without the installation of sprinklers.

Furthermore, unlike the model National Building Code, it is not the intent of this Code to require an automatic sprinkler system in storeys below a storey where an automatic sprinkler system is required. Similarly, if the uppermost storey or storeys of a building can be constructed without the installation of an automatic sprinkler system it is not necessary that an automatic sprinkler system required in a lower storey be extended into the upper storey or storeys.

a13 A-3.2.2.42A.(4) and 3.2.2.49A.(3) Occupancy Combinations in Buildings of Mixed Construction.

Buildings conforming to the building height and area limits and the other fire protection requirements of Article 3.2.2.42A. or 3.2.2.49A. may be entirely constructed of encapsulated mass timber construction and incorporate the occupancies specifically permitted by Sentence 3.2.2.42A.(4) or 3.2.2.49A.(3): e.g., Group A, Division 2 major occupancies on the first to third storeys, Group E major occupancies on the first and second storeys, and a parking garage on the first to fourth storeys.

Alternatively, the requirements of Articles 3.2.2.4. to 3.2.2.8. for superimposed major occupancies can be applied, resulting in buildings of mixed construction conforming to the building height and area limits for encapsulated mass timber construction and in which the lower storeys are of noncombustible construction and the upper storeys are of encapsulated mass timber construction. For example, a Group A, Division 2 or Group B, Division 3 major occupancy could be located on the first 4 storeys of a 12-storey Group C building constructed in accordance with Article 3.2.2.42A., as long as these first 4 storeys were constructed of noncombustible construction in accordance with Article 3.2.2.23. or 3.2.2.38., as applicable. (See also Articles 3.2.2.6. and 3.2.2.7.)

a13 A-3.2.2.43A.(4) and 3.2.2.50A.(3) Occupancy Combinations in Buildings of Mixed Construction.

Buildings conforming to the building height and area limits and the other fire protection requirements of Article 3.2.2.43A. or 3.2.2.50A. may be entirely constructed of combustible construction and incorporate the occupancies specifically permitted by Sentence 3.2.2.43A.(5) or 3.2.2.50.(4): e.g., Group A, Division 2 and Group E major occupancies on the first and second storeys, and a parking garage on the first to third storeys.

Alternatively, the requirements of Articles 3.2.2.4. to 3.2.2.8. for superimposed major occupancies can be applied, resulting in buildings of mixed construction conforming to the building height and area limits of Article 3.2.2.43A. or 3.2.2.50A. and in which the lower storeys are of noncombustible construction and the upper storeys are of combustible construction. For example, a Group A, Division 2 or Group B, Division 3 major occupancy could be located on the first 4 storeys of a 6-storey Group C building constructed in accordance with Article 3.2.2.43A., as long as these first 4 storeys were constructed of noncombustible construction in accordance with Article 3.2.2.23. or 3.2.2.38., as applicable. (See also Articles 3.2.2.6. and 3.2.2.7.)

a3 A-3.2.2.43A.(5) and A-3.2.2.50A.(4) Five– and Six–Storey Buildings of Combustible Construction.

This Sentence and the exemptions noted in Sentences 3.2.2.6.(1) and 3.2.2.7.(1) permit a building within the scope of Articles 3.2.2.43A. and 3.2.2.50A. to be entirely of combustible construction and include certain assembly and mercantile occupancies and storage garages below the third storey.

A-3.2.3. Fire Protection Related to Limiting Distance Versus Separation Between Buildings.

Building Code provisions that address protection against fire spread from building to building use the limiting distance (see definition in Article 1.4.1.2. of Division A) for a building rather than using the distance between adjacent buildings on separate properties, so that the design and construction of a building on one property does not affect the design and construction of a building on an adjacent property.

The Building Code requirements that deal with reducing the probability of building-to-building fire spread were originally developed based on the assumption that the exposing building faces of the adjacent buildings are of similar size and configuration, and are equidistant from the shared property line. Where the buildings are of different sizes, the smaller building may be subject to a higher heat flux in the event of a fire compared to the larger building. Where the buildings are closely spaced and not equidistant from the property line, the construction of the building with the greater limiting distance does not recognize the proximity of the building with the lesser limiting distance.

The Building Code has more stringent requirements for buildings having lesser limiting distance with regards to the maximum area and spacing of unprotected openings, and the construction, cladding and fire resistance of walls. This increased stringency recognises that the fire hazard is greater where the buildings are close together and that adjacent buildings may have exposing building faces of different sizes, configurations or limiting distances, which could further increase the hazard.

The enforcement authority may also address limiting distances through legal agreements with parties involved that stipulate that the limiting distance be measured to a line that is not the property line. Such agreements would normally be registered with the titles of both properties.

A-3.2.3.1.(4) Spatial Separation Design.

In the application of Sentences 3.2.3.1.(3) and (4), it is intended that Sentence (3) be used first to establish the basic requirements for the exterior wall in terms of fire-resistance rating, type of construction and type of cladding. The percentage of unprotected openings determined from the application of Sentence (3) would be unnecessarily restrictive if the actual unprotected openings occur in a plane that is set back from the front of the building face.

Sentence (4) applies to the calculation of the allowable percentage of unprotected openings based upon projection onto a plane that is in front of all unprotected openings. The application of these two Sentences is shown in Figure A-3.2.3.1.(4). The modifications permitted by Article 3.2.3.12. would be applied, if applicable, to the area of unprotected openings derived from Sentence (4).

a3 The emergency call button is intended to provide a local visual signal outside of the washroom to alert others that someone in the washroom needs assistance. It is not required to be linked to a central monitoring station. Where central monitoring is not provided, such as in the case of a small building or a standalone washroom in a park, an additional sign informing the washroom users that there is no central monitoring may be appropriate.

a2.1 A-3.8.3.12.(6) Universal Washrooms for Small Buildings.

The permission for a smaller universal washroom to be provided in small buildings recognizes the limited space available for construction of service and amenity spaces while still balancing available space with the needs of people with disabilities.

a2.1 A-3.8.3.13.(1) Minimum Number of Barrier-Free Showers.

The intent of the requirement for one or more barrier-free showers in a group of showers is to address the increased demand for accessible facilities in publicly accessible buildings such as arenas, community recreation centres and private health and fitness facilities where the accessible shower stall is located in the same room as non-accessible showers. It is not the intent of the Code to require single shower stalls or single private use showers that are part of a private office suite to be barrier-free accessible.

A-3.8.3.13.(2)(b) Clear Space at Entrances to Showers.

The clear space at the entrance to a shower may be encroached upon by fixtures such as a wall hung sink which does not interfere with the leg rests of the wheelchair. However, this sink could restrict movement for persons who need to make a lateral transfer if it were installed at the seat end of the shower.

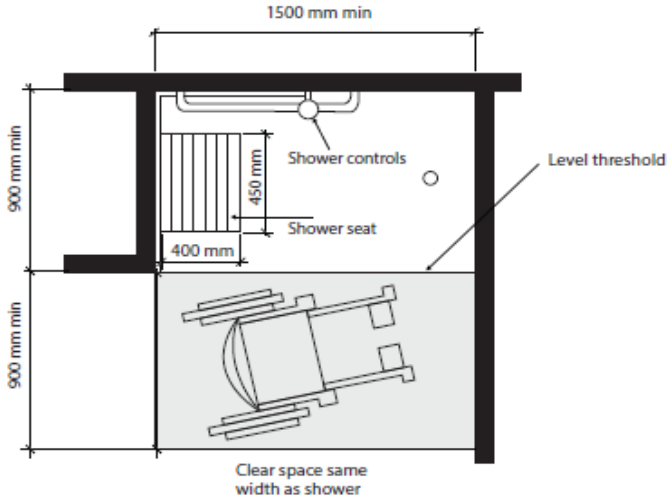


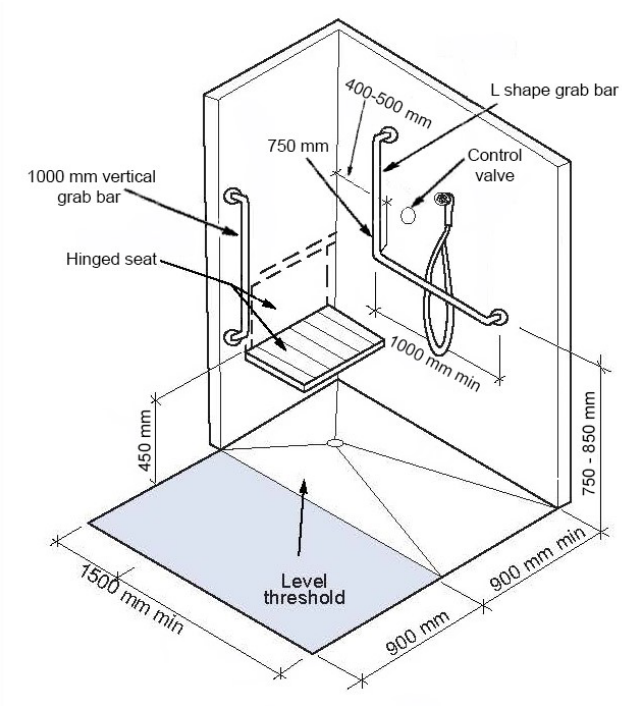
Figure A-3.8.3.13.(2)(b)
Shower Design

a10.1 A-3.8.3.13.(2)(f) and (g) Shower Seat and Grab Bars.

Only one grab bar is required, to be installed on the wall next to the seat; a grab bar behind the seat prevents the user from leaning against the wall, while one located on the wall opposite the seat cannot be reached from the seated position.

The use of two straight grab bars installed at a 90° angle to one another is not acceptable. The Code requires a continuous L-shaped grab bar. The seat itself may be used in conjunction with the bar for transfer. If design flexibility is required, fold away grab bars may be used as an alternative.

a3 A grab bar installed within a barrier-free shower stall on the same wall as the shower controls should have 900 mm long horizontal and vertical components.



a11 Figure A-3.8.3.13.(2)(e), (f) and (g)
Accessible Shower

a13 A-3.8.3.13.(4) Showers and Bathtubs.

The grab bars and their mounting position must facilitate getting in and out of the bathtub from a seated or standing position, as appropriate, to limit the need for twisting the body.

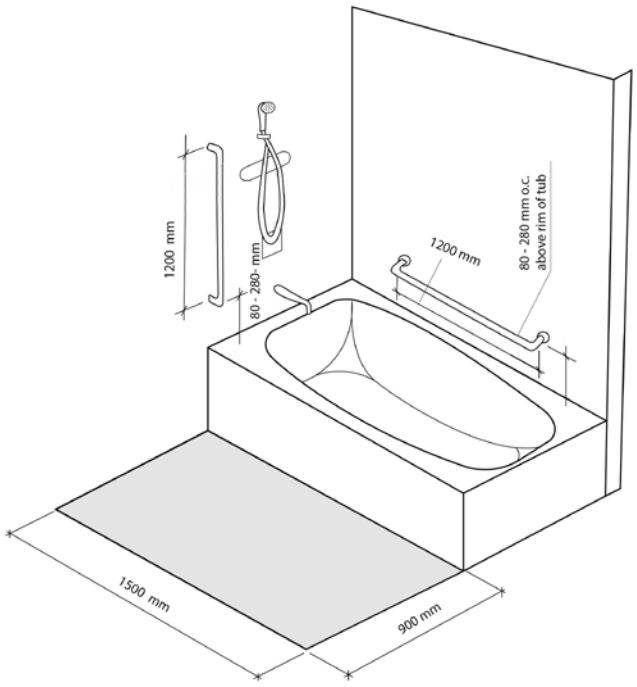


Figure A-3.8.3.13.(4)
Bathtub

MMAH Supplementary Standard SB-2

Fire Performance Ratings

March 31, 2022 update

COMMENCEMENT

MMAH Supplementary Standard SB-2 comes into force on the 1st day of January, 2014.

r5 SB-2 as amended by Ontario Regulation 191/14 comes into force on the 1st day of January, 2015.
r11.1 SB-2 as amended by Ontario Regulation 88/19 comes into force on the 1st day of January, 2020.
r19.1 SB-2 as amended by Ontario Regulation 451/22 comes into force on the 1st day of July 2022.

r11.1 SB-2 Fire-Performance Ratings

Section 1 General

This Supplementary Standard is based in large measure on Appendix D of the model National Building Code of Canada 2020. The content of Appendix D was prepared on the recommendations of the Standing Committee on Fire Performance Ratings, which was established by the Canadian Commission on Building and Fire Codes (CCBFC) for this purpose.

1.1. Introduction

1.1.1. Scope

(1) This fire-performance information is presented in a form closely linked to the performance requirements and the minimum materials specifications of the 2012 Building Code.

(2) The ratings have been assigned only after careful consideration of all available literature on assemblies of common building materials, where they are adequately identified by description. The assigned values based on this information will, in most instances, be conservative when compared to the ratings determined on the basis of actual tests on individual assemblies.

(3) The fire-performance information set out in this Supplementary Standard applies to materials and assemblies of materials which comply in all essential details with the minimum structural design standards described in Part 4 of Division B in the 2012 Building Code. Additional requirements, where appropriate, are described in other Sections of this Supplementary Standard.

(4) Section 2 of this Supplementary Standard assigns fire-resistance ratings for walls, floors, roofs, columns and beams related to CAN/ULC-S101, "Fire Endurance Tests of Building Construction and Materials", and describes methods for determining these ratings.

(5) Section 3 assigns flame-spread ratings and smoke developed classifications for surface materials related to CAN/ULC-S102, "Test for Surface Burning Characteristics of Building Materials and Assemblies" and CAN/ULC-S102.2, "Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies".

(6) Section 4 describes noncombustibility in building materials when tested in accordance with CAN/ULC-S114, "Test for Determination of Non-Combustibility in Building Materials".

(7) Section 5 contains requirements for the installation of fire doors and fire dampers in fire-rated stud wall assemblies.

r19.1 **(8)** Section 6 contains construction specifications for exterior wall assemblies that are deemed to satisfy the criteria of Clause 3.1.5.5.(1)(b) when tested in accordance with CAN/ULC-S134, “Fire Test of Exterior Wall Assemblies”.

r19.1 **(9)** Section 7 contains background information regarding fire test reports, obsolete materials and assemblies, assessment of archaic assemblies and the development of the component additive method.

1.1.2. Referenced Documents

(1) Where documents are referenced in this Supplementary Standard, they shall be the editions designated in Table 1.1.2.

r19.1

Table 1.1.2.
Documents Referenced in SB-2 Fire-Performance Ratings

Issuing Agency	Document Number	Title of Document	Reference
ANSI	A208.1-2009	Particleboard	Table 3.1.1.A.
ASTM	C330 / C330M-13	Lightweight Aggregates for Structural Concrete	1.4.3.(2)
ASTM	C840-18b	Application and Finishing of Gypsum Board	2.3.9.(1)
ASTM	C1396 / C1396M-17	Gypsum Board	1.5.1.(1); 1.5.1.(2) Table 3.1.1.A.
ASTM	D2898-10	Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing	6.1.1.
CCBFC	NRCC 30629	Supplement to the National Building Code of Canada 1990	6
CGSB	4-GP-36M-1978	Carpet Underlay, Fibre Type	Table 3.1.1.B.
CGSB	CAN/CGSB-4.129-97	Carpets for Commercial Use	Table 3.1.1.B.
CGSB	CAN/CGSB-11.3-M87	Hardboard	Table 3.1.1.A.
CGSB	CAN/CGSB-92.2-M90	Trowel or Spray Applied Acoustical Material	2.3.4.(5)
CSA	A23.1-14 / A23.2-14	Concrete Materials and Methods of Concrete Construction / Test Methods and Standard Practices for Concrete	1.4.3.(1)
CSA	A23.3-14	Design of Concrete Structures	2.1.5.(2); 2.6.6.(1) Table 2.6.6.B. 2.8.2.(1); Table 2.8.2.
CSA	CAN/CSA-A82-14	Fired Masonry Brick Made from Clay or Shale	Table 2.6.1.A.
CSA	A82.22-M1977	Gypsum Plasters	Table 3.1.1.A.
CSA	CAN/CSA-A82.27-M91	Gypsum Board	1.5.1.(1); 1.5.1.(2) Table 3.1.1.A.
CSA	A82.30-M1980	Interior Furring, Lathing and Gypsum Plastering	1.7.2.(1); 2.3.9.(1) Table 2.5.1.
CSA	A165.1-14	Concrete Block Masonry Units	Table 2.1.1.
CSA	O86-14	Engineering Design in Wood	2.11.3.; 2.11.4.
CSA	O112.10-08	Evaluation of Adhesives for Structural Wood Products (Limited Moisture Exposure)	2.3.6.(4)
CSA	O121-08	Douglas Fir Plywood	Table 3.1.1.A.
CSA	O141-05	Softwood Lumber	2.3.6.(2); Table 2.4.1.
CSA	O151-09	Canadian Softwood Plywood	Table 3.1.1.A.
CSA	O153-13	Poplar Plywood	Table 3.1.1.A.
CSA	O325-07	Construction Sheathing	Table 3.1.1.A.
CSA	O437.0-93	OSB and Waferboard	Table 3.1.1.A.
CSA	S16-14	Design of Steel Structures	2.6.6.(1); 2.6.6.(3) Table 2.6.6.B.
Column 1	2	3	4

Table 1.1.2. (Cont'd)
Documents Referenced in SB-2 Fire-Performance Ratings

Issuing Agency	Document Number	Title of Document	Code Reference
NFPA	80-2013	Fire Doors and Other Opening Protectives	5.2.1.(1); 5.2.1.(2)
ULC	CAN/ULC-S101-14	Fire Endurance Tests of Building Construction and Materials	1.1.1.(4); 1.12.1. 2.3.2.; 2.11.1.
ULC	CAN/ULC-S102-10	Test for Surface Burning Characteristics of Building Materials and Assemblies	1.1.1.(5); 6.1.1.
ULC	CAN/ULC-S102.2-10	Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies	1.1.1.(5) Table 3.1.1.B.
ULC	CAN/ULC-S112.2-07	Fire Test of Ceiling Firestop Flap Assemblies	2.3.10.; 2.3.11.
ULC	CAN/ULC-S134-13	Fire Test of Exterior Wall Assemblies	1.1.1.; 6.1.1.
ULC	CAN/ULC-S114–05	Test for Determination of Non-Combustibility in Building Materials	1.1.1.(6) 4.1.1.; 4.2.1.
ULC	CAN/ULC-S702-14	Mineral Fibre Thermal Insulation for Buildings	Table 2.3.4.A. Table 2.3.4.D. 2.3.5.(2); 2.3.5.(4) Table 2.6.1.E.; 7.4.
ULC	CAN/ULC-S702.1-14	Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification	6.1.1.
ULC	CAN/ULC-S703-09	Cellulose Fibre Insulation for Buildings	2.3.4.(5)
ULC	CAN/ULC-S706.1-16	Wood Fibre Thermal Insulation for Buildings	Table 3.1.1.A.
Column 1	2	3	4

Notes to Table 1.3.1.2.:
(1) Some titles have been abridged to omit superfluous wording.

1.1.3. Applicability of Ratings

(1) The ratings shown in this document apply if more specific test values are not available. The construction of an assembly that is the subject of an individual test report must be followed in all essential details if the fire-resistance rating reported is to be applied for use with the Building Code.

1.1.4. Higher Ratings

r19.1 **(1)** The authority having jurisdiction may allow higher fire-resistance ratings than those derived from this Supplementary Standard, where supporting evidence justifies a higher rating. Additional information is provided in summaries of published test information and the reports of fire tests carried out by NRC, which are included in Section 7, Background Information.

1.1.5. Additional Information on Fire Rated Assemblies

(1) Assemblies containing materials for which there is no nationally recognized standard are not included in this Supplementary Standard. Many such assemblies have been rated by Underwriters Laboratories (UL), Underwriters' Laboratories of Canada (ULC) or Intertek Testing Services NA Ltd. (ITS).

1.2. Interpretation of Test Results

1.2.1. Limitations

(1) The fire-performance ratings set out in this Supplementary Standard are based on those that would be obtained from the standard methods of test described in the Building Code. The test methods are essentially a means of comparing the performance of one building component or assembly with another in relation to its performance in fire.

(2) Since it is not practicable to measure the fire resistance of constructions in situ, they must be evaluated under some agreed test conditions. A specified fire-resistance rating is not necessarily the actual time that the assembly would endure in situ in a building fire, but is that which the particular construction must meet under the specified methods of test.

(3) Considerations arising from departures in use from the conditions established in the standard test methods may, in some circumstances, have to be taken into account by the designer and the authority having jurisdiction. Some of these conditions are covered at present by the provisions of the Building Code.

(4) For walls and partitions, the stud spacing previously specified as 16 and 24 inch on centre have been converted to 406 and 610 mm respectively to represent actual stud spacing used in the field to accommodate modular sheathing panel dimensions. These metric dimensions are deemed to comply with test results based on reported stud spacing of 400 mm or 600 mm on centre.

1.3. Concrete

1.3.1. Aggregates in Concrete

(1) Low density aggregate concretes generally exhibit better fire performance than natural stone aggregate concretes. A series of tests on concrete masonry walls, combined with mathematical analysis of the test results, has allowed further distinctions between certain low density aggregates to be made.

1.4. Types of Concrete

1.4.1. Description

(1) For purposes of this Supplementary Standard, concretes are described as Types S, N, L, L_1, L_2, L40S, $L_1$20S or $L_2$20S as described in Sentences (2) to (8).

(2) Type S concrete is the type in which the coarse aggregate is granite, quartzite, siliceous gravel or other dense materials containing at least 30% quartz, chert or flint.

(3) Type N concrete is the type in which the coarse aggregate is cinders, broken brick, blast furnace slag, limestone, calcareous gravel, trap rock, sandstone or similar dense material containing not more than 30% of quartz, chert or flint.

(4) Type L concrete is the type in which all the aggregate is expanded slag, expanded clay, expanded shale or pumice.

(5) Type L_1 concrete is the type in which all the aggregate is expanded shale.

(6) Type L_2 concrete is the type in which all the aggregate is expanded slag, expanded clay or pumice.

(7) Type L40S concrete is the type in which the fine portion of the aggregate is sand and low density aggregate in which the sand does not exceed 40% of the total volume of all aggregates in the concrete.

(8) Type $L_1$20S and Type $L_2$20S concretes are the types in which the fine portion of the aggregate is sand and low density aggregate in which the sand does not exceed 20% of the total volume of all aggregates in the concrete.

1.4.2. Determination of Ratings

(1) Where concretes are described as being of Type S, N, L, L_1 or L_2, the rating applies to the concrete containing the aggregate in the group that provides the least fire resistance. If the nature of an aggregate cannot be determined accurately enough to place it in one of the groups, the aggregate shall be considered as being in the group that requires a greater thickness of concrete for the required fire resistance.

1.4.3. Description of Aggregates

(1) The descriptions of the aggregates in Type S and Type N concretes apply to the coarse aggregates only. Coarse aggregate for this purpose means that retained on a 5 mm sieve using the method of grading aggregates described in CSA A23.1 / A23.2, "Concrete Materials and Methods of Concrete Construction / Test Methods and Standard Practices for Concrete".

(2) Increasing the proportion of sand as fine aggregate in low density concretes requires increased thicknesses of material to produce equivalent fire-resistance ratings. Low density aggregates for Type L and Types L-S concretes used in loadbearing components shall conform to ASTM C330 / C330M, "Lightweight Aggregates for Structural Concrete".

(3) Non-loadbearing low density components of vermiculite and perlite concrete, in the absence of other test evidence, shall be rated on the basis of the values shown for Type L concrete.

1.5. Gypsum Board

1.5.1. Types of Gypsum Board

(1) Where the term “gypsum board” is used in this Supplementary Standard, it is intended to include, in addition to gypsum board, gypsum backing board and gypsum base for veneer plaster as described in
(a) CAN/CSA-A82.27-M, "Gypsum Board", or
(b) ASTM C1396 / C1396M, "Gypsum Board".

(2) Where the term “Type X gypsum board” is used in this Supplementary Standard, it applies to special fire-resistant gypsum board as described in
(a) CAN/CSA-A82.27-M, "Gypsum Board", or
(b) ASTM C1396 / C1396M, "Gypsum Board".

1.6. Equivalent Thickness

1.6.1. Method of Calculating

(1) The thickness of solid-unit masonry and concrete described in this Supplementary Standard shall be the thickness of solid material in the unit or component thickness. For units that contain cores or voids, the Tables refer to the equivalent thickness determined in conformance with Sentences (2) to (10).

(2) Where a plaster finish is used, the equivalent thickness of a wall, floor, column or beam protection shall be equal to the sum of the equivalent thicknesses of the concrete or masonry units and the plaster finish measured at the point that will give the least value of equivalent thickness.

(3) Except as provided in Sentence (5), the equivalent thickness of a hollow masonry unit shall be calculated as equal to the actual overall thickness of a unit in millimetres multiplied by a factor equal to the net volume of the unit and divided by its gross volume.

(4) Net volume shall be determined using a volume displacement method that is not influenced by the porous nature of the units.

(5) Gross volume of a masonry unit shall be equal to the actual length of the unit multiplied by the actual height of the unit multiplied by the actual thickness of the unit.

(6) Where all the core spaces in a wall of hollow concrete masonry or hollow-core precast concrete units are filled with grout, mortar, or loose fill materials such as expanded slag, burned clay or shale (rotary kiln process), vermiculite or perlite, the equivalent thickness rating of the wall shall be considered to be the same as that of a wall of solid units, or a solid wall of the same concrete type and the same overall thickness.

(7) The equivalent thickness of hollow-core concrete slabs and panels having a uniform thickness and cores of constant cross section throughout their length shall be obtained by dividing the net cross-sectional area of the slab or panel by its width.

(8) The equivalent thickness of concrete panels with tapered cross sections shall be the cross section determined at a distance of 2 t or 150 mm, whichever is less, from the point of minimum thickness, where t is the minimum thickness.

(9) Except as permitted in Sentence (10), the equivalent thickness of concrete panels with ribbed or undulating surfaces shall be

(a) t_a for s less than or equal to 2 t,

(b) $t + (4\ t/s - 1)(t_a - t)$ for s less than 4 t and greater than 2 t, and

(c) t for s greater than or equal to 4 t

where

t = minimum thickness of panel,

t_a = average thickness of panel (unit cross-sectional area divided by unit width), and

s = centre to centre spacing of ribs or undulations.

(10) Where the total thickness of a panel described in Sentence (9), exceeds 2 t, only that portion of the panel which is less than 2 t from the non-ribbed surface shall be considered for the purpose of the calculations in Sentence (9).

1.7. Contribution of Plaster or Gypsum Board Finish to Fire Resistance of Masonry or Concrete

1.7.1. Determination of Contribution

(1) Except as provided in Sentences (2) to (5), the contribution of a plaster or gypsum board finish to the fire resistance of a masonry or concrete wall, floor or roof assembly shall be determined by multiplying the actual thickness of the finish by the factor shown in Table 1.7.1., depending on the type of masonry or concrete to which it is applied. This corrected thickness shall then be included in the equivalent thickness as described in Subsection 1.6.

(2) Where a plaster or gypsum board finish is applied to a concrete or masonry wall, the calculated fire-resistance rating of the assembly shall not exceed twice the fire-resistance rating provided by the masonry or concrete because structural collapse may occur before the limiting temperature is reached on the surface of the non-fire-exposed side of the assembly.

(3) Where a plaster or gypsum board finish is applied only on the non-fire-exposed side of a hollow clay tile wall, no increase in fire resistance is permitted because structural collapse may occur before the limiting temperature is reached on the surface of the non-fire-exposed side of the assembly.

(4) The contribution to fire resistance of a plaster or gypsum board finish applied to the non-fire-exposed side of a monolithic concrete or unit masonry wall shall be determined in conformance with Sentence (1), but shall not exceed 0.5 times the contribution of the concrete or masonry wall.

r19.1 **(5)** When applied to the fire-exposed side, the contribution of a gypsum lath and plaster or gypsum board finish to the fire resistance of masonry or concrete wall, floor or roof assemblies shall be determined from Table 2.3.4.A. or 2.3.4.D.

r19.1 ## 2.3.3. Limitations of Component Additive Method

(See Section 7 Background Information.)

(1) The fire-resistance rating of a framed assembly depends primarily on the time during which the membrane on the fire-exposed side remains in place.

(2) The assigned times in Sentences 2.3.4.(2) to (4) are not intended to be construed as the fire-resistance ratings of the individual components of an assembly, nor are they intended to be construed as times that are applicable or acceptable for use beyond the method and systems described in this Subsection. These assigned times are the individual contributions of each component to the overall fire-resistance rating of an assembly, which are permitted to be derived using the component additive method described in this Subsection..

(3) The fire-resistance rating calculated by the component additive method cannot be increased by installing membranes in multiple layers, other than as specified in Tables 2.3.4.A., 2.3.4.B. and 2.3.4.C.

2.3.4. Method of Calculation

(1) In the component additive method, the fire-resistance rating of a framed assembly is calculated by adding the time assigned in Sentence (2) for the membrane on the fire-exposed side to the time assigned in Sentence (3) for the framing members and then adding any time assigned in Sentence (4) for additional protective measures, such as the inclusion of insulation or of reinforcement of a membrane. For loadbearing walls where resilient metal channels are installed with a single layer of gypsum board membrane in accordance with Table 2.3.4.A, the fire-resistance rating determined using this method of calculation must be reduced by 10 min.

(2) The times to be used in the component additive method that have been assigned to membranes on the fire-exposed side of the assembly, which are partly based on their ability to remain in place during fire tests, are listed in Tables 2.3.4.A., 2.3.4.B., 2.3.4.C. and 2.3.4.D. (This is not to be confused with the fire-resistance rating of the membrane, which also takes into account the rise in temperature on the unexposed side of the membrane. [See Sentence 2.3.3.(2).])

(3) The times to be used in the component additive method that have been assigned to wall framing members and to floor and roof framing members are listed in Tables 2.3.4.E. and 2.3.4.F. respectively.

(4) Preformed insulation of glass, rock or slag fibre and cellulose fibre insulation provide additional protection to wood studs by shielding the studs from exposure to the fire and thus delaying the time of collapse. The use of preformed glass fibre, preformed rock or slag fibre and dry-blown cellulose insulation material does not decrease the rating of wall assemblies with the membranes identified in Table 2.3.4.A. Similarly, the use of preformed glass fibre, preformed rock or slag fibre and cellulose insulation material does not decrease the rating of floors joists constructed with wood joists, wood trusses, wood I-joists and cold-formed-steel floor joists (C-shaped joists), provided the insulation is not in direct contact with the members identified in Table 2.3.4.B. The use of reinforcement in the membrane exposed to fire also adds to the fire resistance by extending the time to failure. Table 2.3.4.G. shows the time increments that may be added to the fire resistance if these features are incorporated in the assembly.

(5) Cellulose fibre insulation conforming to CAN/ULC-S703, "Cellulose Fibre Insulation for Buildings", applied in conformance with CAN/CGSB-92.2-M, "Trowel or Spray Applied Acoustical Material", does not affect the fire-resistance rating of a non-loadbearing cold-formed-steel stud wall assembly, provided that it is sprayed to either face of the wall cavity.

Table 2.3.4.A.
Time Assigned to Protective Membranes on Fire-Exposed Side of Wood-Framed and Cold-Formed-Steel-Framed Walls

Description of Finish	Time, min	
	Loadbearing Walls	Non-Loadbearing Walls
11.0 mm Douglas Fir plywood phenolic bonded	—	10(1)
14.0 mm Douglas Fir plywood phenolic bonded	—	15(1)
12.7 mm Type X gypsum board	25(2)	25
15.9 mm Type X gypsum board	40(2)	40(3)
Double 12.7 mm Type X gypsum board(4)	50	80
Column 1	2	3

Notes to Table 2.3.4.A.:
(1) Applies to stud cavities filled with mineral wool conforming to CAN/ULC-S702, "Mineral Fibre Thermal Insulation for Buildings", and having a mass per unit area of not less than 2 kg/m^2, with no additional credit for insulation according to Table 2.3.4.G.
(2) Applies only to wood-framed walls.
(3) Applies only to steel-framed walls.
(4) Resilient metal channels are permitted to be installed at a spacing of 406 mm o.c. with no effect on the rating of the wall assembly.

Table 2.3.4.B.
Time Assigned to Gypsum Board Membranes on Fire-Exposed Side of Floors

Description of Finish	Resilient Metal Channels(1)	Time, min	
		Floors with Wood or Steel Joists	Floors with Open-Web Steel Joists
12.7 mm Type X gypsum board	Spaced ≤ 406 mm o.c.(2)	25(3)	–
15.9 mm Type X gypsum board		40	–
12.7 mm Type X gypsum board	—	25(4)	25
15.9 mm Type X gypsum board		40(4)	40
Double 12.7 mm Type X gypsum board	Spaced ≤ 406 mm o.c.(5)	50(3)	—
Double 12.7 mm Type X gypsum board	Spaced at 610 mm o.c.(6)	45(3)	—
Double 15.9 mm Type X gypsum board	Spaced ≤ 610 mm o.c.(6)	60(3)	—
Column 1	2	3	4

Notes to Table 2.3.4.B.:
(1) See Figures 1, 2 and 4 in MMAH Supplementary Standard SB-3, “Fire and Sound Resistance of Building Assemblies” for the attachment of single and double layers of gypsum board to resilient metal channels.
(2) Resilient metal channels must be installed to achieve the stated rating.
(3) Applies to wood joists, wood trusses, wood I-joists and cold-formed steel joists (C-shaped joists).
(4) Applies to wood joists and pre-fabricated metal-plate-connected wood trusses.
(5) Resilient metal channels must be installed or gypsum board must be applied directly to the structural members, which must be spaced not more than 406 mm o.c.
(6) Resilient metal channels are permitted to be installed with no effect on the rating of the floor assembly. Gypsum board is also permitted to be applied directly to the structural members.

2.10.5. Minimum Cover

(1) Except as provided in Sentence (2), in unbonded post- tensioned prestressed concrete beams, the concrete cover to the tendon at the anchor shall be not less than 15 mm greater than the minimum required away from the anchor. The concrete cover to the anchorage bearing plate and to the end of the tendon, if it projects beyond the bearing plate, shall be not less than 25 mm.

(2) The requirements in Sentence (1) do not apply to those portions of beams not likely to be exposed to fire (such as the ends and the tops of flanges of beams immediately below slabs).

r19.1 2.11. Mass Timber Elements

2.11.1. Determination of Ratings

(1) The calculation methods described in this Subsection are intended to be used to determine fire-resistance ratings for structural mass timber elements on the basis of the elements being subjected to the standard fire exposure conditions described in CAN/ULC-S101, “Fire Endurance Tests of Building Construction and Materials”.

(2) Loadbearing mass timber members, such as beams and columns, subjected to the conditions described in Sentence (1) are assigned a fire-resistance rating that relates to the time at which the applied load is no longer sustained.

(3) Mass timber wall, floor and roof assemblies subjected to the conditions described in Sentence (1) are assigned a fire-resistance rating that relates to the lesser of the times at which

(a) an average temperature rise of 140°C or a maximum temperature rise of 180°C at any individual location is recorded on the unexposed side of the assembly,
(b) there is passage of flame or gases hot enough to ignite cotton pads through the unexposed side of the assembly, or
(c) the applied load is no longer sustained, where the assembly is loadbearing.

2.11.2. Applicability of Calculation Methods

(1) Method A described in Article 2.11.3. applies to glued-laminated timber beams and columns required to have fire-resistance ratings greater than those afforded under the provisions of Article 3.1.4.6.

(2) Method B described in Article 2.11.4. applies to mass timber elements, including solid sawn timber and glued-laminated timber beams and columns, required to have fire-resistance ratings greater than those afforded under the provisions of Article 3.1.4.6.

(3) The calculation methods described in Articles 2.11.3. and 2.11.4. are separate and independent methods that use different approaches to determine fire-resistance ratings for mass timber elements.

2.11.3. Method A for Glued-Laminated Timber Beams and Columns

(1) The fire-resistance rating of glued-laminated timber beams and columns in minutes is permitted to be taken as equal to

(a) 0.1 fB [4 - 2(B/D)] for beams which may be exposed to fire on 4 sides,
(b) 0.1 fB [4 - (B/D)] for beams which may be exposed to fire on 3 sides,
(c) 0.1 fB [3 - (B/D)] for columns which may be exposed to fire on 4 sides, and
(d) 0.1 fB [3 - (B/2D)] for columns which may be exposed to fire on 3 sides,

where

f = the load factor shown in Figure 2.11.3.A.,

B = the full dimension of the smaller side of a beam or column in millimetres before exposure to fire (see Figure 2.11.3.B.),

D = the full dimension of the larger side of a beam or column in millimetres before exposure to fire (see Figure 2.11.3.B.),

k = the effective length factor obtained from CSA O86, "Engineering Design in Wood",

L = the unsupported length of a column in millimetres.

(2) The factored resistance of a beam or column shall be determined by using the specified strengths in CSA O86, "Engineering Design in Wood".

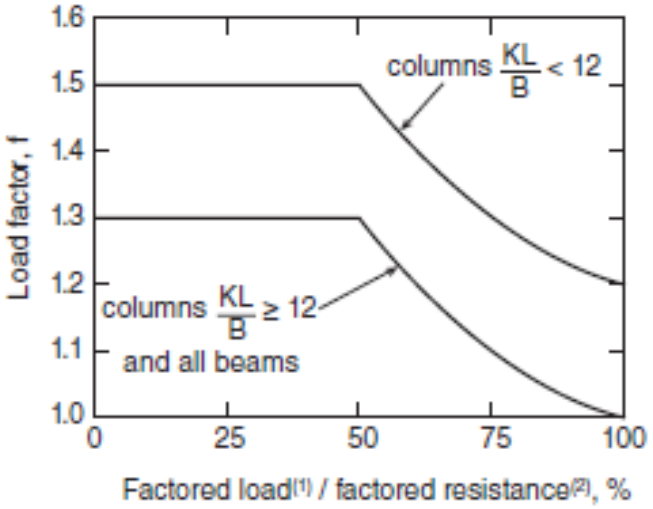


Figure 2.11.3.A.
Factors to Compensate for Partially Loaded Columns and Beams

Note to Figure 2.11.3.A.:
(1) In the case of beams, use bending moment in place of load.
(2) See Sentence 2.11.3.(2).

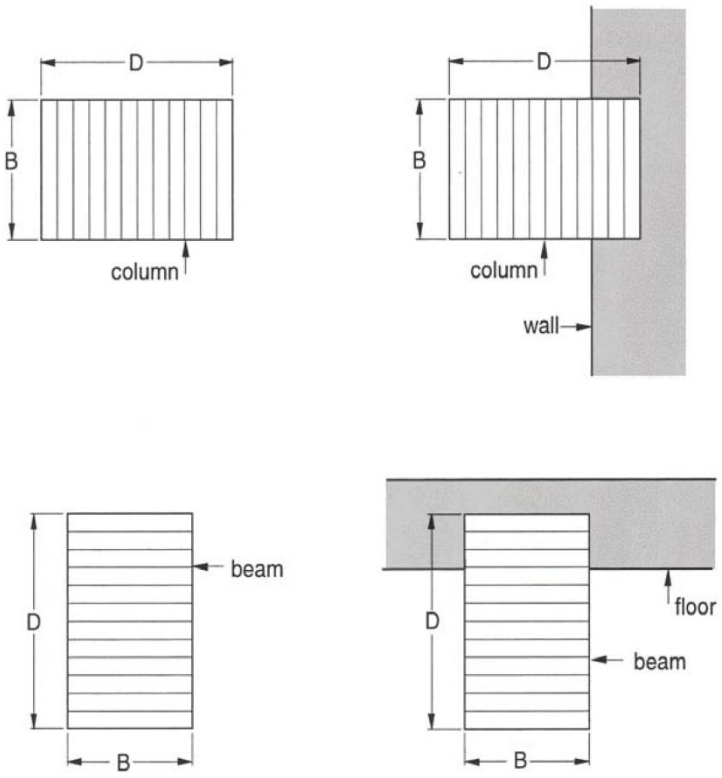


Figure 2.11.3.B.
Full Dimensions of Glued-Laminated Beams and Columns

2.11.4. Method B for Mass Timber Elements

(1) The fire-resistance rating of structural mass timber members, such as beams and columns constructed of glued-laminated timber, solid sawn timber, or structural composite lumber, is permitted to be determined using the calculation method described in Annex B, Fire resistance of large cross-section wood elements, of CSA O86, "Engineering Design in Wood".

(2) Except as provided in Sentences (3) to (6), the fire-resistance rating of mass timber wall, floor and roof assemblies, including those constructed of cross-laminated timber, is permitted to be determined using the calculation method described in Annex B, Fire resistance of large cross-section wood elements, of CSA O86, "Engineering Design in Wood".

(3) Except as provided in Sentence (4), the assemblies described in Sentence (2) shall be protected to maintain the integrity and thermal insulation properties of the assembly for the time period corresponding to the calculated fire-resistance rating as follows:

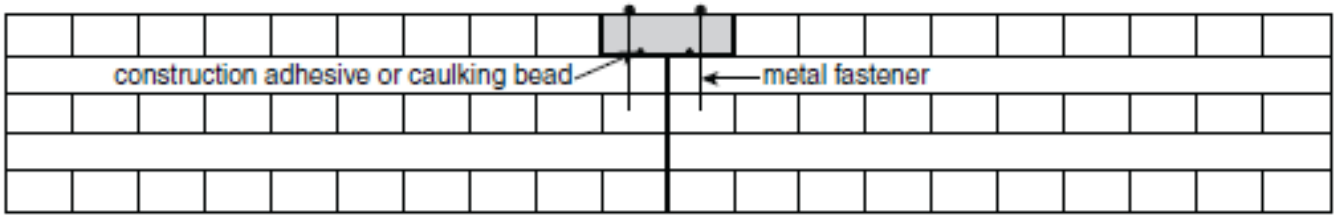
(a) except as provided in Clause (b), for floor and roof assemblies, by applying at least one of the following layers to the unexposed surface of the assembly:
  (i) OSB or plywood not less than 12.5 mm thick, with the joints in the layer staggered relative to those in the assembly,
  (ii) concrete topping not less than 38 mm thick, or
  (iii) gypsum-concrete topping not less than 25 mm thick,

(b) for plank decking designed in accordance with Clause B.10 of CSA O86, "Engineering Design in Wood", by applying at least one of the layers described in Clause B.10.4 of CSA O86 to the unexposed surface of the assembly,

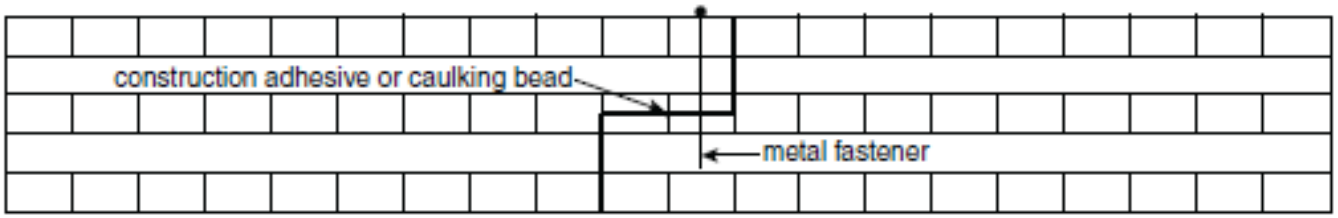
(c) for interior wall assemblies, by applying at least one of the following layers to at least one side of the assembly, with the joints in the layer staggered relative to those in the assembly:
  (i) OSB or plywood not less than 12.5 mm thick, or
  (ii) Type X gypsum board not less than 12.7 mm thick, and

(d) for exterior wall assemblies, by applying at least one of the following layers to at least one side of the assembly, with the joints in the layer staggered relative to those in the assembly:
  (i) OSB or plywood not less than 12.5 mm thick,
  (ii) Type X gypsum board not less than 12.7 mm thick,
  (iii) gypsum sheathing not less than 12.7 mm thick applied to the exterior (unexposed) side of the assembly, or
  (iv) rock or slag insulation sheathing not less than 50 mm thick applied to the exterior (unexposed) side of the assembly.

(4) For wall, floor and roof assemblies constructed of cross-laminated timber, the joints between cross-laminated timber panels in the assembly need not be protected in accordance with Sentence (3), provided the joints are either lapped or splined to maintain the integrity and thermal insulation properties of the assembly for the time period corresponding to the calculated fire-resistance rating. (See Figure 2.11.4.(4).)



Side view of splined joint between cross-laminated timber panels



Side view of lapped joint between cross-laminated timber panels

Figure 2.11.4.(4)
Joints Between Cross-Laminated Timber Panels in Wall, Floor and Roof Assemblies

(5) For interior wall assemblies, the additional times assigned in Clause B.8.1 of CSA O86, "Engineering Design in Wood", shall only be applied to the calculated fire-resistance rating where both sides of the assembly are protected in accordance with Clause B.8 of CSA O86. Where the level of protection differs on the two sides, the additional time corresponding to the lesser level of protection shall be applied.

(6) For exterior wall assemblies, the additional times assigned in Clause B.8.1 of CSA O86, "Engineering Design in Wood", shall only be applied to the calculated fire-resistance rating where

(a) the interior (fire-exposed) side of the assembly is protected in accordance with Clause B.8 of CSA O86, and

(b) except where the assembly is constructed of cross-laminated timber panels with lapped or splined joints as described in Sentence (4), the exterior (unexposed) side of the assembly is protected in accordance with Clause (3)(d).

3.1.4. Effect of Surface Coatings

(1) Thin surface coatings can modify flame-spread characteristics either upward or downward. Table 3.1.1.A. includes a number of thin coatings that increase the flame-spread rating of the base material, so that these may be considered where more precise control over flame spread hazard is desired.

3.1.5. Proprietary Materials

(1) Information on flame-spread rating of proprietary materials and fire-retardant treatments that cannot be described in sufficient detail to ensure reproducibility is available through the listing and labelling services of Underwriters' Laboratories of Canada, Intertek Testing Services NA Ltd. or other recognized testing laboratory.

r19.1 **(2)** A summary of flame-spread test results published prior to 1965 has been prepared by NRC (see Item (1) in Subsection 7.1.).

3.1.6. Limitations and Conditions

(1) The propagation of flame along a surface in the standard test involves some finite depth of the material or materials behind the surface, and this involvement extends to the depth to which temperature variations are to be found during the course of the test; for many commonly used lining materials, such as wood, the depth involved is about 25 mm.

(2) For all the combustible materials described in Table 3.1.1.A., a minimum dimension is shown, and this represents the thickness of the test samples on which the rating has been based; when used in greater thicknesses than that shown, these materials may have a slightly lower flame-spread rating, and thinner specimens may have higher flame-spread ratings.

(3) No rating has been included for foamed plastic materials because it is not possible at this time to identify these products with sufficient accuracy on a generic basis. Materials of this type which melt when exposed to the test flame generally show an increase in flame-spread rating as the thickness of the test specimen increases.

3.1.7. Referenced Standards

In Tables 3.1.1.A. and 3.1.1.B., the standards applicable to the materials described are noted because the ratings depend on conformance with these specifications.

Section 4 Noncombustibility

4.1. Test Method

4.1.1. Determination of Noncombustibility

(1) Noncombustibility is required of certain components of buildings by the provisions of this Code, which specifies noncombustibility by reference to CAN/ULC-S114, "Test for Determination of Non-Combustibility in Building Materials".

(2) The test to which reference is made in Sentence (1) is severe, and it may be assumed that any building material containing even a small proportion of combustibles will itself be classified as combustible. The specimen, 38 mm by 51 mm, is exposed to a temperature of 750°C in a small furnace. The essential criteria for noncombustibility are that the specimen does not flame or contribute to temperature rise.

4.2. Materials Classified as Combustible

4.2.1. Combustible Materials

(1) Most materials from animal or vegetable sources will be classed as combustible by CAN/ULC-S114, "Test for Determination of Non-Combustibility in Building Materials", and wood, wood fibreboard, paper, felt made from animal or vegetable fibres, cork, plastics, asphalt and pitch would therefore be classed as combustible.

4.2.2. Composite Materials

(1) Materials that consist of combustible and noncombustible elements in combination will in many cases also be classed as combustible, unless the proportion of combustibles is very small. Some mineral wool insulations with combustible binder, cinder concrete, cement and wood chips and wood-fibred gypsum plaster would also be classed as combustible.

4.2.3. Effect of Chemical Additives

(1) The addition of a fire-retardant chemical is not sufficient to change a combustible product to a noncombustible product.

4.3. Materials Classified as Noncombustible

4.3.1. Typical Examples

(1) Noncombustible materials include brick, ceramic tile, concrete made from Portland cement with noncombustible aggregate, plaster made from gypsum with noncombustible aggregate, metals commonly used in buildings, glass, granite, sandstone, slate, limestone and marble.

Section 5 Protection of Openings in Fire-Rated Assemblies

5.1. Scope

5.1.1. Installation Information

(1) The information in this Section specifies requirements for the installation of fire doors and fire dampers in gypsum-board-protected stud wall assemblies.

5.2. Installation of Fire Doors and Fire Dampers

5.2.1. References

(1) Fire doors and fire dampers in gypsum-board-protected steel stud non-loadbearing walls required to have a fire-resistance rating shall be installed in conformance with Section 9.24. of Division B of the Building Code and the applicable requirements of NFPA 80, "Fire Doors and Other Opening Protectives".

(2) Fire doors and fire dampers in gypsum-board-protected wood stud walls required to have a fire-resistance rating shall be installed in conformance with Section 9.23. of Division B of the Building Code and the applicable requirements of NFPA 80, "Fire Doors and Other Opening Protectives".

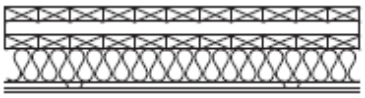
r19.1 Section 6 Fire Performance of Exterior Wall Assemblies

6.1. Scope

6.1.1. Exterior Wall Assemblies

(1) Table 6.1.1. shows construction specifications for exterior wall assemblies that are deemed to satisfy the criteria of Clause 3.1.5.5.(1)(b) when tested in accordance with CAN/ULC-S134, “Fire Test of Exterior Wall Assemblies”.

Table D-6.1.1.
Construction Specifications for Exterior Wall Assemblies that are Deemed to Satisfy the Criteria of Clause 3.1.5.5.(1)(b) when Tested in Accordance with CAN/ULC-S134

Wall Number	Structural Members	Absorptive Material	Sheathing	Cladding	Design
EXTW-1	38 mm × 89 mm wood studs spaced at 400 mm o.c.[(1)(2)]	89 mm thick rock or slag fibre in cavities formed by studs[(3)(4)]	—	12.7 mm thick fire-retardant-treated plywood siding[(5)]	
EXTW-2	38 mm × 140 mm wood studs spaced at 400 mm o.c.[(1)(2)]	140 mm thick rock or slag fibre in cavities formed by studs[(3)(4)]	Gypsum sheathing ≥ 12.7 mm thick	Noncombustible exterior cladding	
EXTW-3	38 mm × 140 mm wood studs spaced at 400 mm o.c.[(1)(2)]	140 mm thick rock or slag fibre in cavities formed by studs[(3)(4)]	15.9 mm thick fire-retardant-treated plywood[(6)]	Noncombustible exterior cladding	
EXTW-4	38 mm × 140 mm wood studs spaced at 600 mm o.c.[(1)(7)] attached to cross-laminated timber (CLT) wall panels ≥ 38 mm thick[(8)]	140 mm thick glass, rock or slag fibre in cavities formed by studs[(3)]	Gypsum sheathing ≥ 12.7 mm thick	Noncombustible exterior cladding	
EXTW-5	89 mm horizontal Z-bars spaced at 600 mm o.c. attached to CLT wall panels ≥ 105 mm thick[(8)]	89 mm thick rock or slag fibre in cavities formed by Z-bars[(3)(4)]	—	Noncombustible exterior cladding attached to 19 mm vertical hat channels spaced at 600 mm o.c.	
Col. 1	2	3	4	5	6

Notes to Table 6.1.1.:

(1) The stated stud dimensions are maximum values. Where wood studs with a smaller depth are used, the thickness of the absorptive material in the cavities formed by the studs must be reduced accordingly.
(2) Horizontal blocking between the vertical studs or horizontal stud plates must be installed at vertical intervals of not more than 2 324 mm, such that the maximum clear length between the horizontal blocking or stud plates is 2 286 mm.
(3) The absorptive material must conform to CAN/ULC-S702.1, "Standard for Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification".
(4) The absorptive material must have a density not less than 32 kg/m^3.
(5) The fire-retardant-treated plywood siding must conform to the requirements of Article 3.1.4.5. and must have been conditioned in conformance with ASTM D2898, "Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing", before being tested in accordance with CAN/ULC-S102, "Test for Surface Burning Characteristics of Building Materials and Assemblies".
(6) The fire-retardant-treated plywood must conform to the requirements of Article 3.1.4.5.
(7) Horizontal blocking between the vertical studs or horizontal stud plates must be installed at vertical intervals of not more than 2 438 mm, such that the maximum clear length between the horizontal blocking or stud plates is 2 400 mm.
(8) A water-resistant barrier is permitted to be attached to the face of the CLT wall panels.

r19.1 Section 7 Background Information

7.1. Fire Test Reports

Summaries of available fire test information have been published by NRC as follows:

(1) M. Galbreath, Flame Spread Performance of Common Building Materials. Technical Paper No. 170, Division of Building Research, National Research Council Canada, Ottawa, April 1964. NRCC 7820.

(2) M. Galbreath and W.W. Stanzak, Fire Endurance of Protected Steel Columns and Beams. Technical Paper No. 194, Division of Building Research, National Research Council Canada, Ottawa, April 1965. NRCC 8379.

(3) T.Z. Harmathy and W.W. Stanzak, Elevated-Temperature Tensile and Creep Properties of Some Structural and Prestressing Steels. American Society for Testing and Materials, Special Technical Publication 464, 1970, p. 186 (DBR Research Paper No. 424) NRCC 11163.

(4) T.Z. Harmathy, Thermal Performance of Concrete Masonry Walls in Fire. American Society for Testing and Materials, Special Technical Publication 464, 1970, p. 209 (DBR Research Paper No. 423) NRCC 11161.

(5) L.W. Allen, Fire Endurance of Selected Non-Loadbearing Concrete Masonry Walls. DBR Fire Study No. 25, Division of Building Research, National Research Council Canada, Ottawa, March 1970. NRCC 11275.

(6) A. Rose, Comparison of Flame Spread Ratings by Radiant Panel, Tunnel Furnace, and Pittsburgh-Corning Apparatus. DBR Fire Study No. 22, Division of Building Research, National Research Council Canada, Ottawa, June 1969. NRCC 10788.

(7) T.T. Lie and D.E. Allen, Calculation of the Fire Resistance of Reinforced Concrete Columns. DBR Technical Paper No. 378, Division of Building Research, National Research Council Canada, Ottawa, August 1972. NRCC 12797.

(8) W.W. Stanzak, Column Covers: A Practical Application of Sheet Steel as a Protective Membrane. DBR Fire Study No. 27, Division of Building Research, National Research Council Canada, Ottawa, February 1972. NRCC 12483.

(9) W.W. Stanzak, Sheet Steel as a Protective Membrane for Steel Beams and Columns. DBR Fire Study No. 23, Division of Building Research, National Research Council Canada, Ottawa, November 1969. NRCC 10865.

(10) W.W. Stanzak and T.T. Lie, Fire Tests on Protected Steel Columns with Different Cross-Sections. DBR Fire Study No. 30, Division of Building Research, National Research Council Canada, Ottawa, February 1973. NRCC 13072.

(11) G. Williams-Leir and L.W. Allen, Prediction of Fire Endurance of Concrete Masonry Walls. DBR Technical Paper No. 399, Division of Building Research, National Research Council Canada, Ottawa, November 1973. NRCC 13560.

(12) G. Williams-Leir, Prediction of Fire Endurance of Concrete Slabs. DBR Technical Paper No. 398, Division of Building Research, National Research Council Canada, Ottawa, November 1973. NRCC 13559.

(13) A. Rose, Flammability of Fibreboard Interior Finish Materials. Building Research Note No. 68, Division of Building Research, National Research Council Canada, Ottawa, October 1969.

(14) L.W. Allen, Effect of Sand Replacement on the Fire Endurance of Lightweight Aggregate Masonry Units. DBR Fire Study No. 26, Division of Building Research, National Research Council Canada, Ottawa, September 1971. NRCC 12112.

(15) L.W. Allen, W.W. Stanzak and M. Galbreath, Fire Endurance Tests on Unit Masonry Walls with Gypsum Board. DBR Fire Study No. 32, Division of Building Research, National Research Council Canada, Ottawa, February 1974, NRCC 13901.

(16) W.W. Stanzak and T.T. Lie, Fire Resistance of Unprotected Steel Columns. Journal of Structural Division, Proc., Am. Soc. Civ. Eng., Vol. 99, No. ST5 Proc. Paper 9719, May 1973 (DBR Research Paper No. 577) NRCC 13589.

(17) T.T. Lie and T.Z. Harmathy, Fire Endurance of Concrete-Protected Steel Columns. A.C.I. Journal, January 1974, Title No. 71-4 (DBR Technical Paper No. 597) NRCC 13876.

(18) T.T. Lie, A Method for Assessing the Fire Resistance of Laminated Timber Beams and Columns. Can. J. Civ. Eng., Vol. 4, No. 2, June 1977 (DBR Technical Paper No. 718) NRCC 15946.

(19) T.T. Lie, Calculation of the Fire Resistance of Composite Concrete Floor and Roof Slabs. Fire Technology, Vol. 14, No. 1, February 1978 (DBR Technical Paper No. 772) NRCC 16658.

(20) M.A. Sultan, Y.P Séguin and P. Leroux. Results of Fire Resistance Tests on Full-Scale Floor Assemblies, Institute for Research in Construction, National Research Council of Canada, Ottawa, May 1998, IRC-IR-764.

(21) M.A. Sultan, J.C. Latour, P. Leroux, R.C. Monette, Y.P Séguin and J.P. Henrie, Results of Fire Resistance Tests on Full-Scale Floor Assemblies – Phase II, Institute for Research in Construction, National Research Council of Canada, Ottawa, March 2005, RR-184.

(22) M.A. Sultan and G.D. Lougheed, Results of Fire Resistance Tests on Full-Scale Gypsum Board Wall Assemblies, Institute for Research in Construction, National Research Council of Canada, Ottawa, August 2002, IRC-IR-833.

(23) V.K.R. Kodur, M.A. Sultan, J.C. Latour, P. Leroux, R.C. Monette, Experimental Studies on the Fire Resistance of Load-Bearing Steel Stud Walls, Research Report, National Research Council of Canada, Ottawa, August 2013, RR-343.

(24) E. Gibbs, B.C. Taber, G.D. Lougheed, J.Z. Su and N. Bénichou, Solutions for Mid-Rise Wood Construction: Full-Scale Standard Fire Test for Exterior Wall Assembly Using Lightweight Wood Frame Construction with Gypsum Sheathing (Test EXTW-1), Report to Research Consortium for Wood and Wood-Hybrid Mid-Rise Buildings, National Research Council Canada, Ottawa, December 2014, A1-100035-01.4.

(25) E. Gibbs, B.C. Taber, G.D. Lougheed, J.Z. Su and N. Bénichou, Solutions for Mid-Rise Wood Construction: Full-Scale Standard Fire Test for Exterior Wall Assembly Using a Simulated Cross-Laminated Timber Wall Assembly with Gypsum Sheathing (Test EXTW-2), Report to Research Consortium for Wood and Wood-Hybrid Mid-Rise Buildings, National Research Council Canada, Ottawa, December 2014, A1-100035-01.5.

(26) E. Gibbs, B.C. Taber, G.D. Lougheed, J.Z. Su and N. Bénichou, Solutions for Mid-Rise Wood Construction: Full-Scale Standard Fire Test for Exterior Wall Assembly Using Lightweight Wood Frame Construction with Interior Fire-Retardant-Treated Plywood Sheathing (Test EXTW-3), Report to Research Consortium for Wood and Wood-Hybrid Mid-Rise Buildings, National Research Council Canada, Ottawa, December 2014, A1-100035-01.6.

(27) E. Gibbs and J. Su, Full Scale Exterior Wall Test on Nordic Cross-Laminated Timber System, National Research Council Canada, Ottawa, January 2015, A1-006009.1.

7.2. Obsolete Materials and Assemblies

Building materials, components and structural members and assemblies in buildings constructed before 1995 may have been assigned ratings based on earlier editions of The Supplement to the National Building Code of Canada or older reports of fire tests. To assist users in determining the ratings of these obsolete assemblies and structural members, the following list of reference documents has been prepared. Although some of these publications are out of print, reference copies are available through NRC.

(1) M. Galbreath, Fire Endurance of Unit Masonry Walls. Technical Paper No. 207, Division of Building Research, National Research Council Canada, Ottawa, October 1965. NRCC 8740.

(2) M. Galbreath, Fire Endurance of Light Framed and Miscellaneous Assemblies. Technical Paper No. 222, Division of Building Research, National Research Council Canada, Ottawa, June 1966. NRCC 9085.

(3) M. Galbreath, Fire Endurance of Concrete Assemblies. Technical Paper No. 235, Division of Building Research, National Research Council Canada, Ottawa, November 1966. NRCC 9279.

(4) Guideline on Fire Ratings of Archaic Materials and Assemblies. Rehabilitation Guideline #8, U.S. Department of Housing and Urban Development, Germantown, Maryland 20767, October 1980.

(5) T.Z. Harmathy, Fire Test of a Plank Wall Construction. Fire Study No. 2, Division of Building Research, National Research Council Canada, Ottawa, July 1960. NRCC 5760.

(6) T.Z. Harmathy, Fire Test of a Wood Partition. Fire Study No. 3, Division of Building Research, National Research Council Canada, Ottawa, October 1960. NRCC 5769.

7.3. Assessment of Archaic Assemblies

Information in this document applies to new construction. Please refer to early editions of the Supplement to the National Building Code of Canada for the assessment or evaluation of assemblies that do not conform to the information in this edition of the Building Code. As with other documents, this Code is revised according to the information presented to the standing committee responsible for its content, and with each update new material may be added and material that is not relevant may be deleted.

7.4. Development of the Component Additive Method

The component additive method was developed based upon the following observations and conclusions drawn from published as well as unpublished test information.

Study of the test data showed that structural failure preceded failure by other criteria (transmission of heat or hot gases) in most of the tests of loadbearing wood-framed assemblies. The major contributor to fire resistance was the membrane on the fire-exposed side.

Fire tests of wood joist floors without protective ceilings resulted in structural failure between 8 and 10 min. Calculation of the time for wood joists to approach breaking stress, based upon the charring rate of natural woods, suggested a time of 10 min for structural failure. This time was subtracted from the fire-resistance test results of wood joist floors and the remainder considered to be the contribution of the membrane.

The figures obtained for the contribution of membranes were then applied to the test results for open web steel joist floors and wood and steel stud walls and values of 20 min for the contribution of wood stud framing and 10 min for steel framing were derived.

The fire-resistance rating has been limited to 1.5 h as this method of developing ratings for framed assemblies was new and untried. Although this is the subject of current review, no decision has been made to extend the ratings beyond 1.5 h.

(1) M. Galbreath, G. C. Gosselin, and R. B. Chauhan, Historical Guide to Chapter 2 of the Supplement to the National Building Code of Canada, Committee Paper FPR 1-3, Prepared for the Standing Committee on Fire Performance Ratings, May 1987.

Example showing fire-resistance rating of a typical membrane assembly, calculated using the component additive method.

1 Hour Gypsum Board/Wood Stud Interior Partition

A 1 h fire-resistance rating is required for an interior wood framed partition, using 12.7 mm Type X gypsum board.

(a) Since gypsum board is used (Sentence 2.3.4.(2) and Table 2.3.4.A.) time assigned to 12.7 mm Type X gypsum board membrane on the fire-exposed side of the partition = 25 min
(b) Time assigned to wood framing members at 406 mm o.c. (Sentence 2.3.4.(3) and Table 2.3.4.E.) = 20 min
(c) Time assigned to insulation, if the spaces between the studs are filled with preformed insulation of rock or slag fibres conforming to CAN/ULC-S702, "Mineral Fibre Thermal Insulation for Buildings", (Sentence 2.3.4.(4) and Table 2.3.4.G.) = 15 min
(d) Time assigned to the membrane on the non-fire-exposed side (Sentence 2.3.5.(1)) = 0 min
Fire-resistance rating = 25 + 20 + 15 = 60 min

Important Notice

Pending Amendments –
Keep in a Secure Place.

These changes come into effect
November 1, 2022.

These pages, which have date bars at the bottom, are to replace or add to the existing corresponding pages on
November 1, 2022.

Division C

Administrative Provisions

Part 1

General

(i) subsection 34.7(2) of the *Ontario Heritage Act* with respect to a consent of the Minister to the alteration or *demolition* of a *building* where the Minister has given a notice of intent to designate the *building* under section 34.6 of that Act,
(j) by-laws made under section 40.1 of the *Ontario Heritage Act*,
(k) section 42 of the *Ontario Heritage Act* with respect to the permit given by the council of a *municipality* for the erection, alteration or *demolition* of a *building*,
r7 (l) section 17.4 of the *Ontario New Home Warranties Plan Act* with respect to the provision of a confirmation by the Registrar for the *construction* of a residential condominium conversion project.

(2) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3)(a) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where,
(a) a committee of adjustment has made a decision under section 45 of the *Planning Act* authorizing one or more minor variances from the provisions of any by-laws made under sections 34 and 38 of that Act,
(b) such minor variance or variances result in the achievement of full compliance with such by-laws, and
(c) no person informed the committee of adjustment of objections to the minor variances either in writing or in person at the hearing of the application.

(3) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3)(a) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where the *construction* in respect of which the conditional permit is issued is required in order to comply with an order issued under subsection 21(1) of the *Fire Protection and Prevention Act, 1997* or under subsection 15.9(4) of the Act.

r15 **(3.1)** Reserved.

r15 **(3.2)** Reserved.

(4) A permit issued under subsection 8(3) of the Act shall indicate its conditional nature.

1.3.1.6. Information to be Given to Tarion Warranty Corporation

(1) This Article prescribes, for the purposes of subsection 8(8.1) of the Act, the information relating to permits issued under section 8 of the Act and the applications for those permits that the *chief building official* is required to give to *Tarion Warranty Corporation* and the time within which the information is required to be given.

(2) The *chief building official* shall give the following information to *Tarion Warranty Corporation* with respect to permits issued under section 8 of the Act in respect of the *construction* of *buildings* described in Sentence (4),
(a) the dates the permits are issued and the numbers or other identifying symbols for the permits, and
(b) the information contained in the application forms submitted in respect of the permits, other than the information contained in the schedules or other attachments to the application forms.

(3) Despite Sentence (2), the *chief building official* is not required to give to *Tarion Warranty Corporation* information which relates to the extension or material alteration or repair of an existing *building*.

(4) The *buildings* referred to in Sentence (2) are any *building* whose proposed use is classified as a Group C *major occupancy* and which is not a *boarding, lodging or rooming house* or a *building* containing a *hotel*.

(5) The *chief building official* shall give the information described in Sentence (2) within 45 days after the day on which the permits to which the information relates are issued.

(6) The time period described in Sentence (5) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

r17 ### 1.3.1.7. Information to be Given to the Fire Chief or Clerk

(1) This Article applies to *buildings*,
(a) *constructed* using,
  (i) lightweight pre-engineered floor or roof systems containing lightweight elements such as wood I-joists, cold-formed steel joists, wood truss assemblies with metal or wood plates and metal web wood joists, or
  (ii) lightweight floor or roof systems containing solid sawn lumber joist less than 38 mm by 235 mm,
(b) other than a *house*, and
(c) for which a permit under section 8 of the Act is issued after July 1, 2022.

(2) The *chief building official* shall give the following information to the chief of the fire department and the clerk of every municipality that does not have a fire department in respect of *buildings* described in Sentence (1):
(a) the dates the permits are issued and the numbers or other identifying symbols for the permits,
(b) the address of the *building*, and
(c) a description of the floor or roof system.

(3) The *chief building official* shall give the information described in Sentence (2) within 45 days after the day on which the permits to which the information relates are issued.

(4) The time period described in Sentence (3) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

1.3.2. Site Documents

1.3.2.1. Permit Posting

(1) Where a permit has been issued pursuant to the Act, the person to whom it is issued shall have the permit or a copy of it posted at all times during *construction* or *demolition* in a conspicuous place on the property in respect of which the permit was issued.

1.3.2.2. Documentation on Site

(1) The person in charge of the *construction* of the *building* shall keep and maintain on the site of the *construction*,
(a) at least one copy of drawings and specifications certified by the *chief building official* or a person designated by the *chief building official* to be a copy of those submitted with the application for the permit to *construct* the *building*, together with changes that are authorized by the *chief building official* or a person designated by the *chief building official*,
(b) copies of authorizations of the Building Materials Evaluation Commission on the basis of which the permit was issued, and
(c) copies of rulings of the *Minister*, made under clause 29(1)(a) or (c) of the Act, on the basis of which the permit was issued.

1.3.3. Occupancy of Buildings

1.3.3.1. Occupancy Permit — General

(1) Except as permitted in Sentence 1.3.3.2.(1), a person may occupy or permit to be occupied any *building* or part of it that has not been fully completed at the date of occupation where the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it prior to its completion in accordance with Sentence (3).

r19.2 **(2)** Sentence (1) does not apply in respect of the occupancy of a *building* to which Article 1.3.3.4., 1.3.3.5. or 1.3.3.7. applies.

r5 1.3.3.5. Occupancy Permit — Buildings Within the Scope of Article 3.2.2.43A. or 3.2.2.50A.

(1) No person shall occupy or permit to be occupied a *building* within the scope of Article 3.2.2.43A. or 3.2.2.50A. of Division B, or part of it, unless the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it in accordance with Sentence (3).

(2) This Article does not apply in respect of the occupancy of an existing *building*, or part of it, that has been subject to extension or material alteration or repair.

(3) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building* described in Sentence (1), where,

(a) the structure of the *building* is completed to the roof,
(b) the *building* envelope, including, but not limited to, cladding, roofing, windows, doors, assemblies requiring *fire-resistance ratings*, *closures*, insulation, *vapour barriers* and air barriers, is complete,
(c) the walls enclosing the space to be occupied are completed, including balcony *guards*,
(d) all required *fire separations* and *closures* are completed,
(e) all required *exits* are completed, including all *fire separations*, doors, door hardware, self-closing devices, *guards* and handrails,
(f) all shafts including *closures* are completed,
(g) measures have been taken to prevent access to parts of the *building* and site that are incomplete or still under construction,
(h) floors, halls, lobbies and required *means of egress* are free of loose materials and other hazards,
(i) if *service rooms* should be in operation, required *fire separations* and *closures* are completed,
(j) all *building drains*, *building sewers*, *water systems*, *drainage systems* and *venting systems* are complete and tested as operational for the *storeys* to be occupied,
(k) required lighting, heating and electrical supply are provided for the *suites*, rooms and common areas to be occupied,
(l) required lighting in corridors, stairways and *exits* is completed and operational,
(m) required standpipe, sprinkler and fire alarm systems are complete and operational, together with required pumper connections for such standpipes and sprinklers,
(n) required *smoke alarms* and carbon monoxide alarms are complete and operational,
(o) required fire extinguishers have been installed,
(p) main garbage rooms, chutes and ancillary services are completed to all *storeys* to be occupied,
(q) required firefighting access routes have been provided and are accessible, and
(r) the *sewage system* has been completed and is operational.

(4) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of a *building* described in Sentence (1), the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (3) after receipt of a *certificate for the occupancy of a building described in Sentence 1.3.3.5.(1) of Division C* issued by the *registered code agency* in respect of the *building*.

r10 1.3.3.6. Occupancy Permit — Buildings in the Lower Don Area of Toronto

(1) Except as provided in Sentence (2), this Article applies to *buildings* constructed on land in the City of Toronto being the land outlined in red on a map numbered 230 and filed at the Toronto office of the Ministry of Municipal Affairs and Housing located at 777 Bay Street.

(2) This Article does not apply to a *building* that complies with,

(a) the official plan of the City of Toronto approved under section 17 of the *Planning Act* as the official plan read on the day Ontario Regulation 388/18 is filed, or
(b) a by-law made by the City of Toronto under section 34 of the *Planning Act* as the by-law read on the day Ontario Regulation 388/18 is filed.

(3) No person shall occupy or permit to be occupied a *building* or part of it to which this Article applies, unless the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it in accordance with Sentence (4).

(4) The *chief building official* or a person designated by the *chief building official* shall not issue a permit authorizing occupation of a *building* or part of it unless,

(a) hydraulic modelling carried out by or on behalf of the Toronto Region Conservation Authority demonstrates that the lot or parcel of land on which the *building* is constructed is no longer susceptible to flooding due to the completion of the flood protection features described in Section 4.5 of WT, "Port Lands Flood Protection and Enabling Infrastructure Due Diligence Report", and

r19.2 (b) the *construction* of the *building* or part of it is in compliance with Clauses 1.3.3.1.(3)(a) to (q), 1.3.3.2.(1)(a) to (d), 1.3.3.4.(4)(a) to (i), 1.3.3.5.(3)(a) to (r) or 1.3.3.7.(8)(a) to (y), as applicable.

r19.2 1.3.3.7. Occupancy Permit — Super Tall Buildings

(1) This Article applies to a *building*,

(a) that is 65 or more *storeys* in *building height* or more than 250 m in height, and

(b) for which the applicant for the permit has provided notice in accordance with Sentence (6) to the *chief building official* that they intend to occupy or permit the *building* or part of the *building* to be occupied in accordance with this Article.

(2) This Article applies to the occupation of a *building* where the structure and enclosing walls of the *building* are not completed to the roof.

(3) For greater certainty, once the structure and enclosing walls of the *building* are completed to the roof, Article 1.3.3.1. applies to the authorization of occupation of the remainder of the *building*.

(4) This Article does not permit the occupation of exterior balconies, podiums, terraces, platforms and contained open spaces.

(5) This Article does not permit occupation if the *means of egress* are located on faces of the *building* where there is overhead lifting of heavy construction materials, elements and equipment.

(6) The notice described in Clause (1)(b) must have been provided to the *chief building official*,

(a) on or before December 1, 2022, where the first application for a permit under section 8 of the Act in respect of the *building* was made on or before November 1, 2022, or

(b) at the time the first application for a permit under section 8 of the Act is made in respect of the *building*, where the application was made after November 1, 2022.

(7) No person shall occupy or permit to be occupied a *building* or part of a *building* described in Sentence (1) unless *the chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it in accordance with Sentence (8).

(8) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building* where,

(a) the structure of the *building* or part of it is completed to the floor of the *storey* that is 10 *storeys* above the uppermost *storey* to be occupied, other than parts of the floor-ceiling assemblies that are unable to be completed because of the ongoing *construction*,

(b) the enclosing walls of the *building* or part of the enclosing walls are completed to the floor of the *storey* that is 5 *storeys* above the uppermost *storey* to be occupied,

(c) the walls enclosing the space to be occupied are completed, including balcony guards,

(d) all required *fire separations* and doors, including door hardware and self-closing devices, are completed on all *storeys* up to the floor of the *storey* that is 5 *storeys* above the uppermost *storey* to be occupied,

(e) all required *closures* are completed on all *storeys* up to and including the uppermost *storey* to be occupied,
(f) all required *exits* are completed, including all *fire separations*, doors, door hardware, self-closing devices, *guards* and handrails, from the uppermost floor to be occupied down to *grade* level and below if an *exit* connects with lower *storeys*,
(g) all shafts, including *closures*, are completed to the floor-ceiling assembly that is 5 *storeys* above the uppermost *storey* to be occupied and have a temporary *fire separation* at such assembly,
(h) all shafts in the parts of the *building* that are incomplete or are still under *construction* are protected against falling objects,
(i) where there is a crane mast inside the *building*, walls acting as *guards* shall,
  (i) separate the crane mast from the parts of the *building* to be occupied, and
  (ii) be designed and constructed to withstand the loading values specified in Sentence 4.1.5.15.(1) of Division B, where the crane mast or part of the crane mast is located in a *storage garage*,
(j) the ceiling of the floor-ceiling assembly above the uppermost *storey* to be occupied is complete and weather-tight and the floor-ceiling assembly is insulated to prevent condensation,
(k) measures have been taken to,
  (i) separate the parts of the *building* to be occupied from the parts of the *building* and site that are incomplete or still under *construction*,
  (ii) prevent access to parts of the *building* and site that are incomplete or still under *construction*, and
  (iii) protect occupants and members of the public while *construction* is ongoing,
(l) floors, halls, lobbies and required *means of egress* are free of loose materials and other hazards,
(m) if *service rooms* should be in operation, required *fire separations* and *closures* are completed,
(n) all *building drains*, *building sewers*, *water systems*, *drainage systems* and *venting systems* are complete and tested as operational for the *storeys* to be occupied,
(o) required lighting, heating and electrical supply are provided for the *suites*, rooms and common areas to be occupied,
(p) required lighting in corridors, stairways and *exits* is completed and operational up to and including all *storeys* to be occupied,
(q) required ventilation is installed and operational for the *floor areas* to be occupied,
(r) required sprinkler, fire alarm and smoke control systems, along with required pumper connections for the sprinklers, are complete and operational up to and including the *storey* to be occupied,
(s) required standpipe systems are installed and operational up to the *storey* below the uppermost *storey* for which the structure of the *building* is complete, including required pumper connections for such standpipe systems,
(t) required fire extinguishers have been installed on all *storeys* to be occupied and for which the structure of the *building* is complete,
(u) main garbage rooms, chutes and ancillary services are completed to all *storeys* to be occupied,
(v) required firefighting access routes have been provided and are accessible,
(w) required elevators for use by firefighters are complete and tested as operational up to and including the *storey* immediately above the uppermost *storey* to be occupied,
(x) a covered way is installed and complete over all required *means of egress* from the *building*, and all other areas on the property that can be accessed by occupants of the *building*, that,
  (i) has an unobstructed height of at least 2400 mm,
  (ii) has an unobstructed width of at least the width of the *means of egress*,
  (iii) is capable of supporting any loads likely to be encountered as determined by a *professional engineer*, including snow loads and impact loads from *construction*,
  (iv) has a weather-tight roof,
  (v) has partitions with smooth surfaces on the side accessible to occupants,
  (vi) has adequate lighting within the covered way, and
  (vii) otherwise complies with the requirements in Articles 3.8.1.3., and 3.8.2.2. of Division B, as applicable, and
(y) the requirements set out in Sentences (9) to (13) are complied with.

(9) The person to whom a permit under section 8 of the Act is issued in respect of the *building*, and such other person as the *chief building official* determines, shall,
(a) agree in writing with the *municipality* to assume all risk in occupying or authorizing the occupation of the *building* or part of it in accordance with this Article and comply with such other conditions as the *chief building official* considers necessary, including the provision of security, indemnities and evidence of insurance, and

(b) submit to the *chief building official*,
  (i) a plan for phasing of *construction* and occupancy,
  (ii) a site safety plan addressing the means to ensure safety of the occupants and public while *construction* is ongoing, including,
    A. measures to protect occupants and the public from risks associated with the lifting of heavy construction materials, elements and equipment,
    B. measures for safeguarding occupant wellbeing while construction is ongoing, including the disposal of construction debris, noise, dust, odour, harmful airborne chemicals, non-airborne contaminants, pests and vibrations, including the transfer of vibrations from concrete pumping and pouring to the parts of the building to be occupied, and
    C. measures to address risks, hazards and occupant comfort associated with the proximity of exterior crane masts, concrete pumping pipes and exterior hoists and their tie-back systems,
  (iii) a report from a *professional engineer* that attests,
    A. to the adequacy of the measures to safeguard life, health and property,
    B. that ongoing *construction* will not adversely impact the structural adequacy of the parts of the *building* to be occupied, and
    C. that the design of the climbing barriers, fall protection systems and horizontal and vertical safety nets meets the requirements of Sentence (11),
  (iv) a report from a third-party *professional engineer* that has reviewed the adequacy of the measures to safeguard life, health and property, if that review is required by *chief building official*, and
  (v) the report arising from the review conducted in accordance with Sentence (12).

(10) Measures described in Clause (8)(k) shall include,
(a) providing heat, hot water, cold water, gas, electricity, plumbing or other utility services for the parts of the *building* to be occupied separate from the services that serve the parts of the *building* that are incomplete or still under *construction*,
(b) providing access to the parts of the *building* to be occupied, including access for occupants, vehicles and deliveries, that is separate and independent from access to the parts of the *building* and site that are incomplete or still under *construction*,
(c) ensuring that elevators that serve the parts of the *building* to be occupied are not used for *construction*,
(d) ensuring that access to the construction area, including any construction staging and loading areas, shall be on a different face of the *building* than the access to and within the parts of the *building* to be occupied,
(e) installing temporary or permanent physical barriers to protect the parts of the *building* to be occupied from falling machinery, equipment, tools, construction materials and any other material or debris, and
(f) installing climbing physical barriers, fall protection and horizontal and vertical safety nets in accordance with Sentence (11).

(11) The climbing physical barriers, fall protection systems and horizontal and vertical safety nets referred to in Clause (10)(f), shall,
(a) in the case of horizontal fall protection systems and safety nets, extend not less than 3 m from the face of the *building*,
(b) be installed where there is *construction* on the exterior of the *building* or a *storey* that is unenclosed, and
(c) be located immediately below the *storey* where the *construction* is located.

(12) Prior to occupancy, the *construction* of the parts of the *building* to be occupied shall be reviewed by a *professional engineer* or an *architect* in accordance with Article 1.2.2.1.

(13) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1 (4) (b) or (c) of the Act in respect of the *construction* of the *building*, the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (8) after receipt of a *certificate for the occupancy of a building not fully completed* issued by the *registered code agency* in respect of the *building*.

1.3.4. Fire Department Inspection

1.3.4.1. Fire Department Approval

(1) Subject to Sentence (2), if the council of a *municipality* assigns specific responsibility for the enforcement of any portion of this Code respecting fire safety matters to an *inspector* who is the chief of the fire department of the *municipality*, the *chief building official* shall not issue a permit to *construct* a *building* unless the *inspector* approves the drawings submitted with the application for the permit as complying with that portion of this Code.

(2) If a *registered code agency* has been appointed under clause 4.1(4)(a) or (c) of the Act,

(a) a *municipality* shall not assign responsibility under Sentence (1) to the chief of the fire department with respect to a *building* for which the *registered code agency* has been appointed, and

(b) any assignment of responsibility under Sentence (1) with respect to a *building* for which the *registered code agency* is appointed shall be cancelled as of the date of the appointment.

1.3.5. Notices and Inspections

1.3.5.1. Prescribed Notices

(1) This Article sets out the notices that are required under section 10.2 of the Act.

(2) The person to whom a permit under section 8 of the Act is issued shall notify the *chief building official* or, where a *registered code agency* is appointed under the Act in respect of the *construction* to which the notice relates, the *registered code agency* of,

(a) readiness to *construct* footings,

(b) substantial completion of footings and *foundations* prior to commencement of backfilling,

(c) substantial completion of structural framing and ductwork and piping for heating and *air-conditioning* systems, if the *building* is within the scope of Part 9 of Division B,

(d) substantial completion of structural framing and roughing-in of heating, ventilation, *air-conditioning* and air-contaminant extraction equipment, if the *building* is not a *building* to which Clause (c) applies,

(e) substantial completion of insulation and *vapour barriers*,

(f) substantial completion of *air barrier systems*,

(g) substantial completion of all required *fire separations* and *closures* and all fire protection systems including standpipe, sprinkler, fire alarm and emergency lighting systems,

(h) substantial completion of fire access routes,

(i) readiness for inspection and testing of,

  (i) *building sewers* and *building drains*,

  (ii) *water service pipes*,

  (iii) *fire service mains*,

  (iv) *drainage systems* and *venting systems*,

  (v) the *water distribution system*, and

  (vi) *plumbing* fixtures and *plumbing* appliances,

(j) readiness for inspection of suction and gravity outlets, covers and suction piping serving outlets of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or a *public spa*,

(k) substantial completion of the circulation / *recirculation system* of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or *public spa* and substantial completion of the pool before it is first filled with water,

(l) readiness to *construct* the *sewage system*,

(m) substantial completion of the installation of the *sewage system* before the commencement of backfilling,

(n) substantial completion of installation of *plumbing* not located in a structure, before the commencement of backfilling,

(o) completion of *construction* and installation of components required to permit the issue of an occupancy permit under Sentence 1.3.3.1.(3) or to permit occupancy under Sentence 1.3.3.2.(1), if the *building* or part of the *building* to be occupied is not fully completed, and

r19.2 (p) completion of *construction* and installation of components required to permit the issue of an occupancy permit under Sentence 1.3.3.4.(4), 1.3.3.5.(3) or 1.3.3.7.(8).

1.3.5.2. Additional Notices

(1) A by-law, resolution or regulation made by a *principal authority* under clause 7(1)(e) of the Act may require that notice of one or more of the following stages of *construction* be given by the person to whom a permit is issued under section 8 of the Act:

(a) commencement of *construction* of the *building*,
(b) substantial completion of structural framing for each *storey*, if the *building* is a type of *building* that is within the scope of Division B, other than Part 9,
(c) commencement of *construction* of,
  (i) masonry fireplaces and masonry *chimneys*,
  (ii) factory-built fireplaces and allied *chimneys*, or
  (iii) *stoves*, ranges, *space heaters* and add-on *furnaces* using solid fuels and allied *chimneys*,
(d) substantial completion of interior finishes,
(e) substantial completion of heating, ventilating, *air-conditioning* and air-contaminant extraction equipment,
(f) substantial completion of exterior cladding,
(g) substantial completion of site grading,
(h) substantial completion of the pool deck and dressing rooms for a *public pool* or *public spa* and readiness for inspection of the emergency stop system for a *public pool* or *public spa*,
(i) completion and availability of drawings of the *building* as constructed, and

r19.2 (j) completion of a *building* for which an occupancy permit is required under Article 1.3.3.4., 1.3.3.5. or 1.3.3.7.

1.3.5.3. Prescribed Inspections

(1) Except as provided in Sentence (2), an *inspector* or *registered code agency*, as the case may be, shall, not later than two days after receipt of a notice given under Sentence 1.3.5.1.(2), undertake a site inspection of the *building* to which the notice relates.

(2) Where a notice given under Sentence 1.3.5.1.(2) relates to matters described in Clause 1.3.5.1.(2)(l) or (m), an *inspector* or *registered code agency*, as the case may be, shall, not later than five days after receipt of the notice, undertake a site inspection of the *sewage system* to which the notice relates.

(3) When undertaking an inspection required under Sentence (1) or (2), the *inspector* or *registered code agency*, as the case may be, may consider reports concerning whether the *building* or a part of the *building* complies with the Act or this Code.

r16 **(3.1)** For greater certainty, when undertaking an inspection required under Sentence (1) or (2), the *inspector* or *registered code agency*, as the case may be, may choose to not attend at the physical site of the *building* and may instead undertake the inspection using other means.

(4) The time periods referred to in Sentences (1) and (2) shall begin on the day following the day on which the notice is given.

(5) The time periods referred to in Sentences (1) and (2) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

r13 **(6)** Despite Sentence (5), the time periods referred to in Sentences (1) and (2) include days when the offices of the *principal authority* are not open for the transaction of business with the public if the reason given by the *principal authority* for the offices not being open is related to coronavirus (COVID-19).

1.3.5.4. Construction of Sewage Systems

(1) The following information is prescribed for the purposes of subsection 15.12(3) of the Act and must be provided to the *chief building official* before the commencement of the *construction* of a *sewage system*:

(a) the information described in Sentence 3.3.4.1.(2) as it relates to,
  (i) the person registered under Article 3.3.3.2., and
  (ii) the person with the qualifications described in Clause 3.3.3.2.(1)(a) who will supervise *construction* on-site of the *sewage system*, and

(b) the name and telephone number of the representative of the person described in Subclause (a)(i) who may be contacted by the *chief building official* in respect of the *construction* of the *sewage system*.

1.3.5.5. Orders

(1) An order issued under subsection 12(2), 13(1) or (6), 14(1) or 15.10.1(2) or clause 18(1)(f) of the Act shall be in a form approved by the *Minister*.

1.3.6. As Constructed Plans

1.3.6.1. Application (See Appendix A.)

(1) Where a by-law, resolution or regulation has been made by a *principal authority* under clause 7(1)(g) of the Act, the *chief building official* may require that *as constructed plans* for the whole of, or any part or system of, a *building* or any class of *buildings* be provided by the persons responsible for the *construction*.

r18 ## 1.3.7. Temporary Health or Residential Facilities
(This Subsection is revoked on March 31, 2023)

1.3.7.1. Application

(1) In this Subsection,

"proponent" means a person or entity described in clause (a) or (b) of the definition of "temporary health or residential facility";

"temporary health or residential facility" means a *building* or structure that is used or intended to be used to provide, on a temporary basis for the purpose of responding to the COVID-19 pandemic and its effects, health care or sleeping accommodation, by or on behalf of,

(a) any health service provider as defined in paragraphs 1 to 5 of the definition of "health service provider" in subsection 1 (2) of the *Connecting Care Act, 2019*, or

(b) any government, including, for greater certainty, a municipality.

1.3.7.2. Exemption

(1) The *construction* of a temporary health or residential facility and the conversion of all or part of an existing *building* or structure to a temporary health or residential facility are exempt from the requirement to obtain a permit under section 8 or 10 of the Act and are exempt from compliance with this Code.

1.3.7.3. Conditions for Occupancy

(1) Where *construction* is undertaken to establish a temporary health or residential facility, before the facility or a part of the facility can be occupied the following conditions must be satisfied:

1. An *architect* and a *professional engineer* have designed or taken responsibility for the design of the *construction* of the facility or the part of the facility and have provided the designs to the *chief building official*.
2. The *chief building official* has provided to the proponent an attestation that the *chief building official* has received the designs described in paragraph 1.
3. An *architect* and a *professional engineer* have,
   i. undertaken a general review of the construction of the facility or the part of the facility,
   ii. prepared written reports arising out of the general review, and
   iii. provided the reports to the chief building official.
4. The *chief building official* has provided to the proponent an attestation that *the chief building official* has received the reports described in paragraph 3.

(2) Sentence (1) applies to a temporary health or residential facility or a part of the facility if the facility or the part of the facility is *constructed* and occupied on or after the day this Sentence comes into force.

1.3.7.4. Inspections

(1) A *chief building official* or an *inspector* shall, in accordance with Sentence (2), undertake an inspection of the temporary health or residential facility pursuant to subsection 15.9 (1) of the Act to determine whether the facility is unsafe as described in subsection 15.9 (2) of the Act.

(2) An inspection described in Sentence (1) shall be undertaken on or before the following dates:

1. The date the facility is occupied, or, where the facility is occupied in stages, the date each part of the facility is occupied.
2. A date that is not later than one month after the date of the previous inspection.

(3) For greater certainty, for the purpose of paragraph 2 of Sentence (2), if the temporary health or residential facility was inspected in accordance with Ontario Regulation 141/20 (Temporary Health or Residential Facilities) made under the *Reopening Ontario (A Flexible Response to COVID-19) Act, 2020*, the date of the previous inspection is the date that it was last inspected under that Regulation.

(4) When undertaking an inspection required under Sentence (1), the inspector may consider reports concerning whether the temporary health or residential facility or part of the facility is unsafe as described in subsection 15.9 (2) of the Act.

Section 1.4. Search Warrant

1.4.1. Forms

1.4.1.1. Information & Warrant Forms

r3 **(1)** An information to obtain a warrant to enter and search a *building*, receptacle or place under subsection 21(1) of the Act shall be in Form 1.4.1.1.A.

r3 **(2)** A warrant to enter and search a *building*, receptacle or place under subsection 21(1) of the Act shall be in Form 1.4.1.1.B.

3.7.4.3. Issuance of Certificates by Registered Code Agencies

(1) Subject to Sentence (2), every certificate issued under the Act by a *registered code agency* shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by the *registered code agency* or, if the *registered code agency* is a corporation or partnership, by a person who has the qualifications set out in Clause 3.4.3.2.(1)(a).

r5 **(2)** If the certificate is issued in respect of the *construction* of a *building* that would be required to be designed by and under the general review of an *architect* or a *professional engineer* or a combination of both, the certificate shall also be signed on behalf of the *registered code agency* by an *architect* or a *professional engineer* or both, as the case may be, who is an officer, director, partner or employee of the *registered code agency*.

(3) A *registered code agency* may issue a *plans review certificate* if the *registered code agency*,
(a) has been appointed to perform the functions described in clause 4.1(4)(a) or (c) of the Act in respect of the proposed *construction* of the *building* to which the *plans review certificate* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
(c) is satisfied on reasonable grounds that, on date on which the *plans review certificate* is issued, the proposed *construction* of the *building* to which the *plans review certificate* relates is in compliance with this Code.

(4) A *registered code agency* may issue a *change certificate* if the *registered code agency*,
(a) has been appointed to perform the functions described in clause 4.1(4)(a), (b) or (c) of the Act in respect of the *construction* or proposed *construction* of the *building* to which the *change certificate* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
(c) is satisfied on reasonable grounds that, on the date on which the *change certificate* is issued, the proposed *construction* of the *building* to which the *change certificate* relates is in compliance with this Code.

(5) A *registered code agency* may issue a *certificate for the occupancy of a building not fully completed* if the *registered code agency*,
(a) has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building* to which the *certificate for the occupancy of a building not fully completed* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
r19.2 (c) is satisfied on reasonable grounds that, on the date on which the *certificate for the occupancy of a building not fully completed* is issued, the *construction* of the *building* to which the *certificate for the occupancy of a building not fully completed* relates is in compliance with Clauses 1.3.3.1.(3)(a) to (q) or 1.3.3.7.(8)(a) to (y), as applicable.

(6) A *registered code agency* may issue a *certificate for the occupancy of a building described in Sentence 1.3.3.4.(3) of Division C* if the *registered code agency*,
(a) has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of a *building* described in Sentence 1.3.3.4.(3) to which the certificate applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
r5 (c) is satisfied on reasonable grounds that, on the date on which the *certificate for the occupancy of a building described in Sentence 1.3.3.4.(3) of Division C* is issued, the *construction* of the *building* to which the certificate relates is in compliance with Clauses 1.3.3.4.(4)(a) to (i).

r5 **(7)** A *registered code agency* may issue a *certificate for the occupancy of a building described in Sentence 1.3.3.5.(1) of Division C* if the *registered code agency*,
(a) has been appointed to perform the functions described in clause 4.1 (4)(b) or (c) of the Act in respect of the *construction* of a *building* described in Sentence 1.3.3.5.(1) to which the certificate applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and

(c) is satisfied on reasonable grounds that, on the date on which the *certificate for the occupancy of a building described in Sentence 1.3.3.5.(1) of Division C* is issued, the *construction* of the *building* to which the certificate relates is in compliance with Clauses 1.3.3.5.(3)(a) to (r).

r5 **(8)** A *registered code agency* may issue a *final certificate* if the *registered code agency*,
(a) has been appointed to perform the functions described in clause 4.1 (4)(b) or (c) of the Act in respect of the *construction* of the *building* to which the *final certificate* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
(c) is satisfied on reasonable grounds that on the date on which the *final certificate* is issued, the *construction* of the *building* to which the *final certificate* relates is in compliance with this Code.

r5 **(9)** Every certificate issued under the Act by a *registered code agency* shall be in a form approved by the *Minister*.

3.7.4.4. Issuance of Orders by Registered Code Agencies

(1) Orders under subsections 13(6) and 14(1) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by the *registered code agency* or a person who has the qualifications set out in Clause 3.4.3.2.(1)(a).

(2) Orders under subsections 12(2) and 13(1) and clause 18(1)(f) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by the *registered code agency* or by a person who has the qualifications set out in Clause 3.4.3.2.(1)(b) or (c).

3.7.4.5. Authorized Persons

(1) Persons who have the qualifications set out in Clause 3.4.3.2.(1)(a), (b) or (c) are prescribed for the purposes of subsection 15.17(1) of the Act.

(2) The certificate of authorization referred to in subsection 15.17(2) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by a representative of the *registered code agency* who has the qualifications set out in Clause 3.4.3.2.(1)(a) and shall contain the following information:
(a) the name of the *registered code agency* and any identifying number issued by the *director* to the *registered code agency*,
(b) the title, business address and business telephone number of a representative of the *registered code agency* who may be contacted to answer questions about the certificate and the authorization to which it relates,
(c) the name of the authorized person and any identifying number issued by the *director* to the authorized person in respect of that person's qualifications,
(d) the scope of the powers that may be exercised and the functions that may be performed by the authorized person,
(e) the date of issuance of the certificate.

(3) Every person described in Sentence (1) shall carry his or her certificate of authorization when performing duties and shall produce the certificate for inspection upon request.

3.7.4.6. Prohibition

(1) A *registered code agency* shall not dismiss, suspend, demote, discipline, harass or otherwise disadvantage an employee, or deny an employee a benefit of employment, by reason that,
(a) the employee, acting in good faith and on the basis of reasonable belief, has disclosed to the *director* that the *registered code agency* or any other person has contravened or intends to contravene a provision of the Act or this Code or a predecessor of this Code,
(b) the employee, acting in good faith and on the basis of reasonable belief, has refused or stated an intention of refusing to do anything that is a contravention of a provision of the Act or this Code or a predecessor of this Code,