INCOMING CODE CHANGES OF THE 2020 NATIONAL CONSTRUCTION CODES

The tables below list the Building Code changes expected to be introduced in the 2020 edition of the National Construction Codes, which the Ministry of Municipal Affairs and Housing is proposing to adopt. The nature of the proposed changes may have substantial impact on building design, construction practices and enforcement. As part of Ontario's harmonization effort, some of the existing Ontario Sentences may be removed or replaced by the corresponding National Construction Code provisions.

The first three columns of the tables list Ontario's current Building Code requirements, while the fourth and fifth columns are their National Construction Code equivalent. The sixth column is a "tracked change" version of the proposed changes, comparing the text of the current Ontario requirements with the proposed requirement based on the National Construction Code requirements being introduced. The red strikethroughs indicate text that is being deleted and the green underlines indicate new text that is being added into the requirements. The seventh column lists the corresponding National proposed change form (PCF) that provides additional information on the rationale, justification, and analysis of the code changes.

It is important to note that these tables contain only the Sentences that are proposed to be changed, all other Sentences will remain unchanged. Furthermore, only the changes captured in the fifth column will be proceeding and all cross-references maintained, unless otherwise marked in the sixth column. This may result in Ontario's numbering of Articles and Sentences to remain different, though the requirements themselves may be the same

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DIVISION A PART 1 – COMPLIANCE AND GENERAL

Subject	Current Ontario Code Subsection / Article	Current Ontario Code Provision(s)	Proposed National Code Subsection /Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Home-type care occupancies	1.1.2.4. Application of Part 9	**(1)** Subject to Articles 1.1.2.6. and 1.3.1.2., Part 9 of Division B applies to all *buildings*, (a) of three or fewer *storeys* in *building height*, (b) having a *building area* not exceeding 600 m^2, and (c) used for *major occupancies* classified as, (i) Group C, *residential occupancies* other than *buildings* used for *retirement homes*, (ii) Group D, *business and personal services occupancies*, (iii) Group E, *mercantile occupancies*, or (iv) Group F, Divisions 2 and 3, *medium hazard industrial occupancies* and *low hazard industrial occupancies*.	1.3.3.3. Application of Part 9	**(1)** Subject to Articles 1.1.2.6. and 1.3.1.2., Part 9 of Division B applies to all *buildings*, (a) of three or fewer *storeys* in *building height*, (b) having a *building area* not exceeding 600 m^2, and (c) used for *major occupancies* classified as, (0.i) Group B, Division 4, *home-type care occupancies*, (i) Group C, *residential occupancies* other than *buildings* used for *retirement homes*, (ii) Group D, *business and personal services occupancies*, (iii) Group E, *mercantile occupancies*, or (iv) Group F, Divisions 2 and 3, *medium hazard industrial occupancies* and *low hazard industrial occupancies*.	**(1)** Subject to Articles 1.1.2.6. and 1.3.1.2., Part 9 of Division B applies to all *buildings*, (a) of three or fewer *storeys* in *building height*, (b) having a *building area* not exceeding 600 m^2, and (c) used for *major occupancies* classified as, (0.i) Group B, Division 4, *home-type care occupancies*, (i) Group C, *residential occupancies* other than *buildings* used for *retirement homes*, (ii) Group D, *business and personal services occupancies*, (iii) Group E, *mercantile occupancies*, or (iv) Group F, Divisions 2 and 3, *medium hazard industrial occupancies* and *low hazard industrial occupancies*.	https://www.dropbox.com/s/cf91y4g4g108nz7/Proposed_Change_1313.pdf?dl=0
Large farm buildings	1.1.2.6.A. (new)	N/A	1.3.3.5. Application of Part 2	(1) Part 2 of Division B applies to all *buildings* that are (a) more than 600 m^2 in *building area* or more than 3 *storeys* in *building height* used for *major occupancies* classified as Group G, Division 1, 2 or 3 *agricultural occupancies*, or (b) used for *major occupancies* classified as Group G, Division 4, *agricultural occupancies with no human occupants*.	(1) Part 2 of Division B applies to all *buildings* that are (a) more than 600 m^2 in *building area* or more than 3 *storeys* in *building height* used for *major occupancies* classified as Group G, Division 1, 2 or 3 *agricultural occupancies*, or (b) used for *major occupancies* classified as Group G, Division 4, *agricultural occupancies with no human occupants*.	https://www.dropbox.com/s/am8alwkwx9wqb5q/Proposed_Change_1018.pdf?dl=0
Farm buildings	1.1.2.6.B. (new)	N/A	1.3.3.6. Classification of Buildings Containing Agricultural Occupancies	(1) *Buildings* or parts of *buildings* containing an *agricultural occupancy* that has an *occupant load* of not more than one person per 40 m^2 shall be classified according to their *major occupancy* as belonging to Group G, Division 1, 2, 3 or 4. (2) *Buildings* or parts of *buildings* containing an *agricultural occupancy* that has an *occupant load* of	(2) *Buildings* or parts of *buildings* containing an *agricultural occupancy* that has an *occupant load* of not more than one person per 40 m^2 shall be classified according to their *major occupancy* as belonging to Group G, Division 1, 2, 3 or 4. (2) *Buildings* or parts of *buildings* containing an *agricultural occupancy* that has an *occupant load* of	https://www.dropbox.com/s/am8alwkwx9wqb5q/Proposed_Change_1018.pdf?dl=0

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				more than one person per 40 m^2 shall be classified according to their *major occupancy* as belonging to one of the Groups and Divisions listed in Table 3.1.2.1. of Division B. (3) For the purposes of Sentences (1) and (2), the *occupant load* shall be determined based on the *floor area* or the part of the *floor area* that contains the *agricultural occupancy*. (4) A *building* intended for use by more than one *major occupancy* shall be classified according to all the *major occupancies* for which it is used or intended to be used.	more than one person per 40 m^2 shall be classified according to their *major occupancy* as belonging to one of the Groups and Divisions listed in Table 3.1.2.1. of Division B. (3) For the purposes of Sentences (1) and (2), the *occupant load* shall be determined based on the *floor area* or the part of the *floor area* that contains the *agricultural occupancy*. (4) A *building* intended for use by more than one *major occupancy* shall be classified according to all the *major occupancies* for which it is used or intended to be used.	
Racking Storage Systems	1.1.2.2. Application of Parts 3, 4, 5 and 6	(2) Subject to Articles 1.1.2.6. and 1.3.1.2., Part 4 of Division B applies to, … (i) an *outdoor pool* that has a water depth greater than 3.5 m at any point, and (j) a *permanent solid nutrient storage facility* with supporting walls exceeding 1 000 mm in exposed height.	N/A	N/A	(2) Subject to Articles 1.1.2.6. and 1.3.1.2., Part 4 of Division B applies to, … (i) an *outdoor pool* that has a water depth greater than 3.5 m at any point, ~~and~~ (j) a *permanent solid nutrient storage facility* with supporting walls exceeding 1 000 mm in exposed height, and (k) *Pallet racks.*	Note: A consequential changes triggered by the NBC proposals in Proposed Change Form (PCF) 1195.
Racking Storage Systems	1.3.1.1. Designated Structures	**(1)** The following structures are designated for the purposes of clause (d) of the definition of *building* in subsection 1(1) of the Act: … (j) an outdoor *public spa*, and (k) a *permanent solid nutrient storage facility* with supporting walls exceeding 1 000 mm in exposed height.	N/A	N/A	**(1)** The following structures are designated for the purposes of clause (d) of the definition of *building* in subsection 1(1) of the Act: … (j) an outdoor *public spa*, ~~and~~ (k) a *permanent solid nutrient storage facility* with supporting walls exceeding 1 000 mm in exposed height, and (l) *Pallet racks.*	Note: A consequential changes triggered by the NBC proposals in Proposed Change Form (PCF) 1195.
Small farm buildings	1.3.1.2. 1.1.1.1. Farm Buildings	(1) Except as provided in Sentences (2) to (7), *farm buildings* shall conform to the requirements in the CCBFC NRCC 38732, "National Farm Building Code of Canada". 1.1.1.2.	1.1.1.3. Application of this Code	(1) Except as provided in Sentences (2) to (7), *farm buildings* not more than 3 *storeys* in *building height* and not more than 600 m^2 in *building area* used for *major occupancies* classified as Group G, Division 1, 2, or 3 *agricultural occupancies* shall conform to the requirements of the CCBFC NRCC 38732, "National Farm Building Code of Canada.	(1) Except as provided in Sentences (2) to (7), *farm buildings* not more than 3 *storeys* in *building height* and not more than 600 m^2 in *building area* used for *major occupancies* classified as Group G, Division 1, 2, or 3 *agricultural occupancies* shall conform to the requirements ~~in~~of the CCBFC NRCC 38732, "National Farm Building Code of Canada~~".~~ .	https://www.dropbox.com/s/f358kklvewntebk/Proposed_Change_1016.pdf?dl=0
Agricultural occupancy	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code...	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Agricultural occupancy* means the *occupancy* of a *building* or part thereof that is located on land that is	(1) Each of the words and terms in italics in this Code... *Agricultural occupancy* means the *occupancy* of a *building* or part thereof that is located on land that is	https://www.dropbox.com/s/xao0h9r7q3aq6rm/Proposed_Change_1015.pdf?dl=0

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				associated with and devoted to the practice of farming, and is used for the purpose of producing crops, raising farm animals, or the preparation, marketing, storage or processing of the agricultural products.	associated with and devoted to the practice of farming, and is used for the purpose of producing crops, raising farm animals, or the preparation, marketing, storage or processing of the agricultural products.	
Agricultural occupancy with no human occupants	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code...	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Agricultural occupancy with no human occupants* (Group G, Division 4) means an *agricultural occupancy* that is not intended to be occupied by persons under normal use and is generally used for the storage of agricultural materials and by-products.	(1) Each of the words and terms in italics in this Code... *Agricultural occupancy with no human occupants* (Group G, Division 4) means an *agricultural occupancy* that is not intended to be occupied by persons under normal use and is generally used for the storage of agricultural materials and by-products.	https://www.dropbox.com/s/xao0h9r7q3aq6rm/Proposed_Change_1015.pdf?dl=0
Combustible construction	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Combustible construction* means a type of construction that does not meet the requirements for *noncombustible construction*.	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Combustible construction* means that type of construction that does not meet the requirements for *noncombustible construction* or *encapsulated mass timber construction.*	(1) Each of the words and terms in italics in this Code... *Combustible construction* means ~~a~~that type of construction that does not meet the requirements for *noncombustible construction*~~.~~ or *encapsulated mass timber construction.*	https://www.dropbox.com/s/jl7zhipjwc6baa1/Proposed_Change_1023.pdf?dl=0
Encapsulated mass timber construction	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code...	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *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.	(1) Each of the words and terms in italics in this Code... *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.	https://www.dropbox.com/s/jl7zhipjwc6baa1/Proposed_Change_1023.pdf?dl=0
Encapsulation rating	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code...	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *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.	(1) Each of the words and terms in italics in this Code... *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.	https://www.dropbox.com/s/jl7zhipjwc6baa1/Proposed_Change_1023.pdf?dl=0

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Farm building	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Farm building* means all or part of a *building*, (a) that does not contain any area used for *residential occupancy*, (b) that is associated with and located on land devoted to the practice of farming, and (c) that is used essentially for the housing of equipment or livestock or the production, storage or processing of agricultural and horticultural produce or feeds.	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Farm building* means a *building* or part thereof that contains an *agricultural occupancy*.	(1) Each of the words and terms in italics in this Code... ~~*Farm building* means all or part of a *building*,~~ ~~(a) that does not contain any area used for *residential occupancy*,~~ ~~(b) that is associated with and located on land devoted to the practice of farming, and~~ ~~(c) that is used essentially for the housing of equipment or livestock or the production, storage or processing of agricultural and horticultural produce or feeds.~~ *Farm building* means a *building* or part thereof that contains an *agricultural occupancy.*	https://www.dropbox.com/s/xao0h9r7q3aq6rm/Proposed_Change_1015.pdf?dl=0
Greenhouse agricultural occupancy,	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code...	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Greenhouse agricultural occupancy* (Group G, Division 3) means an *agricultural occupancy* where plants are grown in a *building* or part thereof that is primarily constructed of roofs and walls designed to transmit natural light.	(1) Each of the words and terms in italics in this Code... *Greenhouse agricultural occupancy* (Group G, Division 3) means an *agricultural occupancy* where plants are grown in a *building* or part thereof that is primarily constructed of roofs and walls designed to transmit natural light.	https://www.dropbox.com/s/xao0h9r7q3aq6rm/Proposed_Change_1015.pdf?dl=0
High-hazard agricultural occupancy	1.4.1.2. Defined Terms	Each of the words and terms in italics in this Code...	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *High-hazard agricultural occupancy* (Group G, Division 1) means an *agricultural occupancy* containing sufficient quantities of highly *combustible* and flammable or explosive materials which, because of their inherent characteristics, constitute a special fire hazard.	(1) Each of the words and terms in italics in this Code... *High-hazard agricultural occupancy* (Group G, Division 1) means an *agricultural occupancy* containing sufficient quantities of highly *combustible* and flammable or explosive materials which, because of their inherent characteristics, constitute a special fire hazard.	https://www.dropbox.com/s/xao0h9r7q3aq6rm/Proposed_Change_1015.pdf?dl=0
Home-type care occupancies	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code...	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Home-type care occupancy* (Group B, Division 4) means the *occupancy* or use of a *building* consisting of a single detached housekeeping unit where care is provided to residents and may include the living space of the caregiver and their family.	(1)- Each of the words and terms in italics in this Code... *Home-type care occupancy* (Group B, Division 4) means the *occupancy* or use of a *building* consisting of a single detached housekeeping unit where care is provided to residents and may include the living space of the caregiver and their family.	https://www.dropbox.com/s/cf91y4g4g108nz7/Proposed_Change_1313.pdf?dl=0

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Racking Storage Systems	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code...	N/A	N/A	(1) Each of the words and terms in italics in this Code... *Pallet rack* means a combination of frames, beams, and accessories used after assembly into a structure to support unit loads whether or not such loads are palletized.	Note: A consequential changes triggered by the NBC proposals in Proposed Change Form (PCF) 1195.
Major occupancy	1.4.1.2. Definitions	(1) Each of the words and terms in italics in this Code... *Major occupancy* means the principal *occupancy* for which a *building* or part of a *building* is used or intended to be used, and is deemed to include the subsidiary *occupancies* that are an integral part of the principal *occupancy*. The *major occupancy* classifications used in this Code are as follows: (a) Group A, Division 1 - *Assembly occupancies* intended for the production and viewing of the performing arts, (b) Group A, Division 2 - *Assembly occupancies* not elsewhere classified in Group A, (c) Group A, Division 3 - *Assembly occupancies* of the arena type, (d) Group A, Division 4 - *Assembly occupancies* in which occupants are gathered in the open air, (e) Group B, Division 1 - *Detention occupancies*, (f) Group B, Division 2 - *Care and treatment occupancies*, (g) Group B, Division 3 - *Care occupancies*, (h) Group C - *Residential occupancies*, (i) Group D - *Business and personal services occupancies*, (j) Group E - *Mercantile occupancies*, (k) Group F, Division 1 - *High hazard industrial occupancies*, (l) Group F, Division 2 - *Medium hazard industrial occupancies*, and (m) Group F, Division 3 - *Low hazard industrial occupancies*.	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Major occupancy* means the principal *occupancy* for which a *building* or part of a *building* is used or intended to be used, and shall be deemed to include the subsidiary *occupancies* that are an integral part of the principal *occupancy*. The *major occupancy* classifications used in this Code are as follows: (a) Group A, Division 1 - *Assembly occupancies* intended for the production and viewing of the performing arts, (b) Group A, Division 2 - *Assembly occupancies* not elsewhere classified in Group A, (c) Group A, Division 3 - *Assembly occupancies* of the arena type, (d) Group A, Division 4 - *Assembly occupancies* in which occupants are gathered in the open air, (e) Group B, Division 1 - *Detention occupancies*, (f) Group B, Division 2 - *Care and treatment occupancies*, (g) Group B, Division 3 - *Care occupancies*, (g.1) Group B, Division 4 – *Home-type care occupancies*, (h) Group C - *Residential occupancies*, (i) Group D - *Business and personal services occupancies*, (j) Group E - *Mercantile occupancies*, (k) Group F, Division 1 - *High hazard industrial occupancies*, (l) Group F, Division 2 - *Medium hazard industrial occupancies*, (m) Group F, Division 3 - *Low hazard industrial occupancies*, (n) Group G, Division 1 – *High-hazard agricultural occupancies*, (o) Group G, Division 2 - *Agricultural occupancies* not elsewhere classified in Group G,	(1) Each of the words and terms in italics in this Code... *Major occupancy* means the principal *occupancy* for which a *building* or part of a *building* is used or intended to be used, and ~~is~~shall be deemed to include the subsidiary *occupancies* that are an integral part of the principal *occupancy*. The *major occupancy* classifications used in this Code are as follows: (a) Group A, Division 1 - *Assembly occupancies* intended for the production and viewing of the performing arts, (b) Group A, Division 2 - *Assembly occupancies* not elsewhere classified in Group A, (c) Group A, Division 3 - *Assembly occupancies* of the arena type, (d) Group A, Division 4 - *Assembly occupancies* in which occupants are gathered in the open air, (e) Group B, Division 1 - *Detention occupancies*, (f) Group B, Division 2 - *Care and treatment occupancies*, (g) Group B, Division 3 - *Care occupancies*, (g.1) Group B, Division 4 – *Home-type care occupancies*, (h) Group C - *Residential occupancies*, (i) Group D - *Business and personal services occupancies*, (j) Group E - *Mercantile occupancies*, (k) Group F, Division 1 - *High hazard industrial occupancies*, (l) Group F, Division 2 - *Medium hazard industrial occupancies*, ~~and~~ (m) Group F, Division 3 - *Low hazard industrial occupancies*~~.~~, (n) Group G, Division 1 – *High-hazard agricultural occupancies*,	https://www.dropbox.com/s/xao0h9r7q3aq6rm/Proposed_Change_1015.pdf?dl=0 and https://www.dropbox.com/s/cf91y4g4g108nz7/Proposed_Change_1313.pdf?dl=0

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				(p) Group G, Division 3 – *Greenhouse agricultural occupancies*, and (q) Group G, Division 4 – *Agricultural occupancies with no human occupants*.	(o) Group G, Division 2 - *Agricultural occupancies* not elsewhere classified in Group G, (p) Group G, Division 3 – *Greenhouse agricultural occupancies*, and (q) Group G, Division 4 – *Agricultural occupancies with no human occupants.*	
Post-disaster building	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Post-disaster building* means a *building* that is essential to the provision of services in the event of a disaster, and includes, (a) hospitals, emergency treatment facilities and blood banks, (b) telephone exchanges, (c) power generating stations and electrical substations, (d) control centres for land transportation, (e) public water treatment and storage facilities, (f) water and sewage pumping stations, (g) emergency response facilities, (h) fire, rescue and police stations, (i) storage facilities for vehicles or boats used for fire, rescue and police purposes, and (j) communications facilities, including radio and television stations.	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Post-disaster building* means a *building* that is necessary for the provision of essential services to the general public in the event of a disaster, and includes, (a) hospitals, emergency treatment facilities and blood banks, (b) telephone exchanges, (c) power generating stations and electrical substations, (c.1) control centres for natural gas distribution, (d) control centres for land transportation, (e) water treatment facilities, (e.1) water storage facilities, (f) water and sewage pumping stations, (f.1) sewage treatment facilities (g) emergency response facilities, (h) fire, rescue and police stations, (i) storage facilities for vehicles or boats used for fire, rescue and police purposes, and (j) communications facilities, including radio and television stations.	(1) Each of the words and terms in italics in this Code... *Post-disaster building* means a *building* that is ~~essential to~~necessary for the provision of essential services to the general public in the event of a disaster, and includes, (a) hospitals, emergency treatment facilities and blood banks, (b) telephone exchanges, (c) power generating stations and electrical substations, (c.1) control centres for natural gas distribution, (d) control centres for land transportation, (e) ~~public~~ water treatment ~~and~~facilities, (e.1) water storage facilities, (f) water and sewage pumping stations, (f.1) sewage treatment facilities (g) emergency response facilities, (h) fire, rescue and police stations, (i) storage facilities for vehicles or boats used for fire, rescue and police purposes, and (j) communications facilities, including radio and television stations.	https://www.dropbox.com/s/t27bbrk22vnuzo7/Proposed_Change_404.pdf?dl=0
Ramp	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Ramp* means a path of travel having a slope steeper than 1 in 20.	1.4.1.2. Defined Terms	(1) Each of the words and terms in italics in this Code... *Ramp* means a path of travel having a slope steeper than 1 in 20.	(1) Each of the words and terms in italics in this Code... *Ramp* means a path of travel having a slope steeper than 1 in 20.	https://www.dropbox.com/s/3tb5nz35vy64dg3/Proposed_Change_1063.pdf?dl=0

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PART 2 – FARM BUILDINGS

- Part 2 changes are mainly to address the large Farm building provisions which are new in the National Building Code and therefore there are many new articles added to the Building Code.
- Establishing a new occupancy group may consequentially result in many editorial changes in other parts of the Building Code.

Subject	Current Ontario Code Subsection / Article	Current Ontario Code Provision(s)	Proposed National Code Subsection and Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Large Farm Buildings - General Technical Requirements	N/A	N/A	**2.1.1. Scope** 2.1.1.1. Scope	(1) This Part is concerned with the fire, structural, heating, ventilation and air-conditioning performance of *farm buildings*, as well as processes and operations carried out therein that involve a risk of explosion, high flammability or related conditions that create a hazard to life safety.	(1) This Part is concerned with the fire, structural, heating, ventilation and air-conditioning performance of *farm buildings*, as well as processes and operations carried out therein that involve a risk of explosion, high flammability or related conditions that create a hazard to life safety.	https://www.dropbox.com/s/nkz1pgzautxmxvh/Proposed_Change_1417.pdf?dl=0
Large Farm Buildings - General Technical Requirements	N/A	N/A	**2.1.1. Application** 2.1.1.1. Application	(1) Except as provided in Sentence (2), this Part applies to all *farm buildings* as described in Article 1.3.3.5. and Sentence 1.3.3.6.(1) of Division A. (2) Subsections 2.2.6. and 2.2.7. do not apply to Group G, Division 4 *major occupancies*.	(1) Except as provided in Sentence (2), this Part applies to all *farm buildings* as described in Article 1.3.3.5. and Sentence 1.3.3.6.(1) of Division A. (2) Subsections 2.2.6. and 2.2.7. do not apply to Group G, Division 4 *major occupancies*.	https://www.dropbox.com/s/nkz1pgzautxmxvh/Proposed_Change_1417.pdf?dl=0
Large Farm Buildings - General Technical Requirements	N/A	N/A	**2.1.3. Definitions** 2.1.3.1. Defined Terms	(1) Words that appear in italics are defined in Article 1.4.1.2. of Division A.	(1) Words that appear in italics are defined in Article 1.4.1.2. of Division A.	https://www.dropbox.com/s/nkz1pgzautxmxvh/Proposed_Change_1417.pdf?dl=0
Large Farm Buildings - General Technical Requirements	N/A	N/A	**2.1.4. Classification of Farm Buildings by Major Occupancy** 2.1.4.1. Classification	(1) Every *farm building* or part of a *farm building* shall be classified according to its *major occupancy* as belonging to one of the Groups or Divisions described in Table 2.1.4.1.	(1) Every *farm building* or part of a *farm building* shall be classified according to its *major occupancy* as belonging to one of the Groups or Divisions described in Table 2.1.4.1.	https://www.dropbox.com/s/nkz1pgzautxmxvh/Proposed_Change_1417.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.1. Classification	(1) Every *farm building* or part of a *farm building* shall be classified in accordance with Subsection 2.1.4. (2) Portions of *farm buildings* that do not contain Group G, Division 1, 2, 3 or 4 *major occupancies*	(1) Every *farm building* or part of a *farm building* shall be classified in accordance with Subsection 2.1.4. (2) Portions of *farm buildings* that do not contain Group G, Division 1, 2, 3 or 4 *major occupancies*	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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				shall be classified according to their *major occupancy* as belonging to one of the Groups or Divisions described in Table 3.1.2.1. and those portions shall conform to the requirements in Part 3.	shall be classified according to their *major occupancy* as belonging to one of the Groups or Divisions described in Table 3.1.2.1. and those portions shall conform to the requirements in Part 3.	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.2. Prohibition of Occupancy Combinations	(1) *Buildings* classified as a Group G, Division 1 or 4 *major occupancy* shall not contain a Group A, B or C *occupancy*. (2) *Buildings* classified as a Group G, Division 2 or 3 *major occupancy* shall not contain a Group A, Division 1 or 3, or Group B *occupancy*.	(1) *Buildings* classified as a Group G, Division 1 or 4 *major occupancy* shall not contain a Group A, B or C *occupancy*. (2) *Buildings* classified as a Group G, Division 2 or 3 *major occupancy* shall not contain a Group A, Division 1 or 3, or Group B *occupancy*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.3. Exceptions for Major Occupancies	(1) In a *farm 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 Subsection 2.2.2., provided they are not classified as Group F, Division 1 or Group G, Division 1 *occupancies*.	(1) In a *farm 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 Subsection 2.2.2., provided they are not classified as Group F, Division 1 or Group G, Division 1 *occupancies*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.4. Separation of Occupancies	(1) Except as provided in Sentence (2), *major occupancies* shall be separated from adjoining *major occupancies* by *fire separations* having *fire-resistance ratings* conforming to Table 2.2.1.4. (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 Section for the lower *major occupancy*. (3) *Occupancies* other than *major occupancies* shall be separated from adjoining *occupancies* belonging to a different Group or Division by *fire separations* having *fire-resistance ratings* that conform to Table 2.2.1.4., but need not be more than 1 h.	(1) Except as provided in Sentence (2), *major occupancies* shall be separated from adjoining *major occupancies* by *fire separations* having *fire-resistance ratings* conforming to Table 2.2.1.4. (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 Section for the lower *major occupancy*. (3) *Occupancies* other than *major occupancies* shall be separated from adjoining *occupancies* belonging to a different Group or Division by *fire separations* having *fire-resistance ratings* that conform to Table 2.2.1.4. but need not be more than 1 h.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.5. Fire Separations and Closures	(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 Section, have a *fire-resistance rating* as specified. (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.	(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 Section, have a *fire-resistance rating* as specified. (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.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.6. Penetrations in Fire Separations and Fire-Rated Assemblies	(1) Penetrations of a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* shall conform to Articles 3.1.9.1. to 3.1.9.4.	(1) Penetrations of a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* shall conform to Articles 3.1.9.1. to 3.1.9.4.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.7. Firewalls	(1) A *firewall* that separates a *building* or *buildings* with *floor areas* containing a Group G, Division 1 *major occupancy* shall be constructed as a *fire separation* of *noncombustible construction* having a *fire-resistance rating* not less than 4 h. (2) A *firewall* that separates a *building* or *buildings* with *floor areas* containing a Group G *major occupancy* and a *major occupancy* prohibited by Article 2.2.1.2. shall be constructed as a *fire separation* of *noncombustible construction* having a *fire-resistance rating* not less than 4 h. (3) *Firewalls* shall conform to the requirements of Articles 3.1.10.1. and 3.1.10.3. to 3.1.10.7. and 3.1.10.2.(3)	(1) A *firewall* that separates a *building* or *buildings* with *floor areas* containing a Group G, Division 1 *major occupancy* shall be constructed as a *fire separation* of *noncombustible construction* having a *fire-resistance rating* not less than 4 h. (2) A *firewall* that separates a *building* or *buildings* with *floor areas* containing a Group G *major occupancy* and a *major occupancy* prohibited by Article 2.2.1.2. shall be constructed as a *fire separation* of *noncombustible construction* having a *fire-resistance rating* not less than 4 h. (3) *Firewalls* shall conform to the requirements of Articles 3.1.10.1. and 3.1.10.3. to 3.1.10.7. and 3.1.10.2.(3)	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.8. Fire Blocks	(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*. (2) Concealed spaces in walls and *partitions* shall be separated by *fire blocks* into compartments not more than 3 m in height and 20 m in length. (3) Horizontal concealed spaces within a floor assembly or roof assembly of *combustible construction*, in which sprinklers are not installed, shall be separated by *fire blocks* into compartments not more than 900 m2 in area. (4) Except as permitted by Sentence (5), *fire blocks* shall be constructed of materials that will 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, “Standard Method of Fire Endurance Tests of Building Construction and Materials.” (5) *Fire blocks* need not be tested in conformance with Sentence (4) if they are constructed of not less than (a) 0.38 mm sheet steel, (b) 12.7 mm gypsum board, (c) 12.5 mm plywood, OSB or waferboard, with joints backed with similar material, (d) 2 layers of 19 mm lumber with joints staggered, or (e) 38 mm lumber.	(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*. (2) Concealed spaces in walls and *partitions* shall be separated by *fire blocks* into compartments not more than 3 m in height and 20 m in length. (3) Horizontal concealed spaces within a floor assembly or roof assembly of *combustible construction*, in which sprinklers are not installed, shall be separated by *fire blocks* into compartments not more than 900 m2 in area. (4) Except as permitted by Sentence (5), *fire blocks* shall be constructed of materials that will 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, “Standard Method of Fire Endurance Tests of Building Construction and Materials.” (5) *Fire blocks* need not be tested in conformance with Sentence (4) if they are constructed of not less than (a) 0.38 mm sheet steel, (b) 12.7 mm gypsum board, (c) 12.5 mm plywood, OSB or waferboard, with joints backed with similar material, (d) 2 layers of 19 mm lumber with joints staggered, or (e) 38 mm lumber.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire	N/A	N/A	**2.2.1. General**	(1) Except as permitted by Sentence (2) and required by Sentence (3), fuel-fired *appliances* shall be	(1) Except as permitted by Sentence (2) and required by Sentence (3), fuel-fired *appliances* shall be	https://www.dropbox.com/s/5whijqx63htoqef/

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Protection and Occupant Safety			2.2.1.9. Additional Fire Separations	installed in *service rooms* separated from the remainder of the *farm building* by (a) a *fire separation* having a *fire-resistance rating* not less than 45 min in a *floor area* that is not *sprinklered* throughout, or (b) a *fire separation* not required to have a *fire-resistance rating* in a *floor area* that is *sprinklered* throughout. (2) A fuel-fired *appliance* that serves only one room is not required to be installed in a *service room* separated from the remainder of the *farm building*. (3) Incinerators shall be installed in *service rooms* that a) do not contain other fuel-fired *appliances*, and b) are separated from the remainder of the *farm building* by a *fire separation* having a *fire-resistance rating* not less than (i) 2 h, where the *service room* is adjacent to a Group G, Division 1 *major occupancy* in a *floor area* that is not *sprinklered* throughout, (ii) 1 h, where the *service room* is adjacent to a Group G, Division 1 *major occupancy* in a *floor area* that is *sprinklered* throughout, (iii) 1 h, where the *service room* is adjacent to a Group G, Division 2 or 3 *major occupancy* in a *floor area* that is not *sprinklered* throughout, or (iv) 30 min, where the *service room* is adjacent to a Group G, Division 2 or 3 *major occupancy* in a *floor area* that is *sprinklered* throughout. (4) A room containing a device that produces open flames, heat or sparks and used for crop drying shall be separated from the remainder of the *farm building* by (a) a *fire separation* having a *fire-resistance rating* not less than 45 min in a *floor area* that is not *sprinklered* throughout, or (b) a *fire separation* not required to have a *fire-resistance rating* in a *floor area* that is *sprinklered* throughout. (5) A room intended to be used for repairing farm machinery shall be separated from the remainder of the *farm building* by a *fire separation* having a *fire-resistance rating* not less than	installed in *service rooms* separated from the remainder of the *farm building* by (a) a *fire separation* having a *fire-resistance rating* not less than 45 min in a *floor area* that is not *sprinklered* throughout, or (b) a *fire separation* not required to have a *fire-resistance rating* in a *floor area* that is *sprinklered* throughout. (2) A fuel-fired *appliance* that serves only one room is not required to be installed in a *service room* separated from the remainder of the *farm building*. (3) Incinerators shall be installed in *service rooms* that a) do not contain other fuel-fired *appliances*, and b) are separated from the remainder of the *farm building* by a *fire separation* having a *fire-resistance rating* not less than (i) 2 h, where the *service room* is adjacent to a Group G, Division 1 *major occupancy* in a *floor area* that is not *sprinklered* throughout, (ii) 1 h, where the *service room* is adjacent to a Group G, Division 1 *major occupancy* in a *floor area* that is *sprinklered* throughout, (iii) 1 h, where the *service room* is adjacent to a Group G, Division 2 or 3 *major occupancy* in a *floor area* that is not *sprinklered* throughout, or (iv) 30 min, where the *service room* is adjacent to a Group G, Division 2 or 3 *major occupancy* in a *floor area* that is *sprinklered* throughout. (4) A room containing a device that produces open flames, heat or sparks and used for crop drying shall be separated from the remainder of the *farm building* by (a) a *fire separation* having a *fire-resistance rating* not less than 45 min in a *floor area* that is not *sprinklered* throughout, or (b) a *fire separation* not required to have a *fire-resistance rating* in a *floor area* that is *sprinklered* throughout. (5) A room intended to be used for repairing farm machinery shall be separated from the remainder of the *farm building* by a *fire separation* having a *fire-resistance rating* not less than	Proposed_Change_1418.pdf?dl=0

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				(a) 1 h, in a *floor area* that is not *sprinklered* throughout, or (b) 30 min, in a *floor area* that is *sprinklered* throughout. (6) Storage areas for *dangerous goods* shall be separated from the remainder of the *farm building* in accordance with Sentences 3.3.6.2.(1) and (2).	(a) 1 h, in a *floor area* that is not *sprinklered* throughout, or (b) 30 min, in a *floor area* that is *sprinklered* throughout. (6) Storage areas for *dangerous goods* shall be separated from the remainder of the *farm building* in accordance with Sentences 3.3.6.2.(1) and (2).	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.10. Determination of Fire-Resistance Ratings	(1) Except as permitted by Sentence (2), the rating of a material, assembly of materials, or 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, "Standard Method of Fire Endurance Tests of Building Construction and Materials." (2) A material, assembly of materials, or structural member is permitted to be assigned a *fire-resistance rating* on the basis of MMAH Supplementary Standard SB-2, "Fire Performance Ratings"..	(1) Except as permitted by Sentence (2), the rating of a material, assembly of materials, or 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, "Standard Method of Fire Endurance Tests of Building Construction and Materials." (2) A material, assembly of materials, or structural member is permitted to be assigned a *fire-resistance rating* on the basis of MMAH Supplementary Standard SB-2, "Fire Performance Ratings"..	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.11. Determination of Flame-Spread Ratings	(1) *Flame-spread ratings* shall be determined in accordance with Article 3.1.12.1.	(1) *Flame-spread ratings* shall be determined in accordance with Article 3.1.12.1.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.12. Flame-Spread Rating	(1) Except as provided in Sentences (2) and (3), the *flame-spread rating* of interior wall and ceiling finishes, including glazing and skylights, shall be not more than 150. (2) The *flame-spread rating* of interior wall and ceiling finishes in *exits* shall conform to Sentence 3.1.13.2.(1). (3) Subject to the requirement of Article 2.2.1.13., the *flame-spread rating* on any exposed surface of foamed plastic insulation, and on any surface that would be exposed by cutting through the insulation in any direction, shall be not more than 500.	(1) Except as provided in Sentences (2) and (3), the *flame-spread rating* of interior wall and ceiling finishes, including glazing and skylights, shall be not more than 150. (2) The *flame-spread rating* of interior wall and ceiling finishes in *exits* shall conform to Sentence 3.1.13.2.(1). (3) Subject to the requirement of Article 2.2.1.13., the *flame-spread rating* on any exposed surface of foamed plastic insulation, and on any surface that would be exposed by cutting through the insulation in any direction, shall be not more than 500.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.13. Foamed Plastics	(1) Foamed plastics installed in *farm buildings* shall be protected in conformance with Sentence 3.1.4.2.(1).	(1) Foamed plastics installed in *farm buildings* shall be protected in conformance with Sentence 3.1.4.2.(1).	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.14. Fabrics and Films	(1) Fabrics and films used in connection with tents and *air-supported structures* shall conform to CAN/ULC-S109, "Standard Method for Flame Tests of Flame-Resistant Fabrics and Films."	(1) Fabrics and films used in connection with tents and *air-supported structures* shall conform to CAN/ULC-S109, "Standard Method for Flame Tests of Flame-Resistant Fabrics and Films."	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire	N/A	N/A	**2.2.1. General** 2.2.1.15. Electrical	(1) The installation of electrical wiring and electrical equipment shall conform to the requirements of	(1) The installation of electrical wiring and electrical equipment shall conform to the requirements of	https://www.dropbox.com/s/5whijqx63htoqef/

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Protection and Occupant Safety			Wiring and Equipment	(a) the Ontario Electrical Safety Code made under made under the Electricity Act, 1998, or (b) CSA C22.1, "Canadian Electrical Code, Part I," in the absence of the regulations referred to in Clause (a). (2) Electrical wiring installed in a concealed space shall be enclosed in rigid conduit or otherwise protected against damage.	(a) the Ontario Electrical Safety Code made under made under the Electricity Act, 1998, or (b) CSA C22.1, "Canadian Electrical Code, Part I," in the absence of the regulations referred to in Clause (a). (2) Electrical wiring installed in a concealed space shall be enclosed in rigid conduit or otherwise protected against damage.	Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.16. Wires and Cables	(1) Wires and cables installed in *farm buildings* shall conform to Article 3.1.4.3.	(1) Wires and cables installed in *farm buildings* shall conform to Article 3.1.4.3.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.1. General** 2.2.1.17. Occupant Load	(1) If a *floor area* or part of a *floor area* has been designed for an *occupant load* other than that prescribed in Sentence 1.3.3.6.(1) of Division A or this Part, a permanent sign indicating that *occupant load* shall be posted in a conspicuous location.	(1) If a *floor area* or part of a *floor area* has been designed for an *occupant load* other than that prescribed in Sentence 1.3.3.6.(1) of Division A or this Part, a permanent sign indicating that *occupant load* shall be posted in a conspicuous location.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major Occupancy** 2.2.2.1. Farm Buildings with Multiple Agricultural Major Occupancies	(1) In a *farm building* containing more than one agricultural *major occupancy* classified in more than one Division, the *building height* and *building area* of the entire *farm building* shall be used in determining the construction requirements and the fire safety requirements for each of the *major occupancies*.	(1) In a *farm building* containing more than one agricultural *major occupancy* classified in more than one Division, the *building height* and *building area* of the entire *farm building* shall be used in determining the construction requirements and the fire safety requirements for each of the *major occupancies*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major** 2.2.2.2. Exceptions in Determining Building Height	(1) The space above a *mezzanine* need not be considered as a *storey*, provided the conditions of Sentence 3.2.1.1.(3), (4), (5) or (7) are met. (2) Platforms conforming to Sentence 3.2.1.1.(6) need not be considered as a *storey*.	(1) The space above a *mezzanine* need not be considered as a *storey*, provided the conditions of Sentence 3.2.1.1.(3), (4), (5) or (7) are met. (2) Platforms conforming to Sentence 3.2.1.1.(6) need not be considered as a *storey*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major** 2.2.2.3. Group G, Division 1, up to 3 Storeys,	(1) A *building* classified as Group G, Division 1 is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided (a) the *building* is *sprinklered* throughout, (b) it is not more than 3 *storeys* in *building height*,	(1) A *building* classified as Group G, Division 1 is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided (a) the *building* is *sprinklered* throughout, (b) it is not more than 3 *storeys* in *building height*,	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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			Limited Area, Sprinklered	(c) it has a *building area* not more than (i) 4 800 m2, if 1 *storey* in *building height*, (ii) 2 400 m2, if 2 *storeys* in *building height*, or (iii) 1 600 m2, if 3 *storeys* in *building height*, (d) floor assemblies, including the floor assembly immediately above a *basement*, are *fire separations* with a *fire-resistance rating* not less than 45 min, and (e) *loadbearing* walls, columns and arches have a *fire-resistance rating* not less than that required for the supported assembly.	(c) it has a *building area* not more than (i) 4 800 m2, if 1 *storey* in *building height*, (ii) 2 400 m2, if 2 *storeys* in *building height*, or (iii) 1 600 m2, if 3 *storeys* in *building height*, (d) floor assemblies, including the floor assembly immediately above a *basement*, are *fire separations* with a *fire-resistance rating* not less than 45 min, and (e) *loadbearing* walls, columns and arches have a *fire-resistance rating* not less than that required for the supported assembly.	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major** 2.2.2.4. Group G, Division 1, One Storey	(1) A *building* classified as Group G, Division 1 is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided (a) it is not more than 1 *storey* in *building height*, and (b) except as provided in Sentence (2), it has a *building area* not more than 2 400 m^2. (2) Where the *building* referred to in Sentence (1) is a *farm building* housing livestock with a below-floor storage area for liquid manure, the *building* is permitted to have a *building area* of any size.	(1) A *building* classified as Group G, Division 1 is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided (a) it is not more than 1 *storey* in *building height*, and (b) except as provided in Sentence (2), it has a *building area* not more than 2 400 m^2. (2) Where the *building* referred to in Sentence (1) is a *farm building* housing livestock with a below-floor storage area for liquid manure, the *building* is permitted to have a *building area* of any size.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major** 2.2.2.5. Group G, Division 2, Any Height, Any Area, Sprinklered	(1) A *building* classified as Group G, Division 2 of any *building height* or *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided (a) the *building* is *sprinklered* throughout, (b) floor assemblies are *fire separations* with a *fire-resistance rating* not less than 45 min, and (c) *loadbearing* walls, columns and arches have a *fire-resistance rating* not less than that required for the supported assembly.	(1) A *building* classified as Group G, Division 2 of any *building height* or *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided (a) the *building* is *sprinklered* throughout, (b) floor assemblies are *fire separations* with a *fire-resistance rating* not less than 45 min, and (c) *loadbearing* walls, columns and arches have a *fire-resistance rating* not less than that required for the supported assembly.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major** 2.2.2.6. Group G, Division 2, up to 3 Storeys, Any Area	(1) A *building* classified as Group G, Division 2 of any *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided the *building* is not more than 3 *storeys* in *building height*.	(1) A *building* classified as Group G, Division 2 of any *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided the *building* is not more than 3 *storeys* in *building height*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major** 2.2.2.7. Group G, Division 3, One Storey, Any Area	(1) A *building* classified as Group G, Division 3 of any *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided the *building* is not more than 1 *storey* in *building height*.	(1) A *building* classified as Group G, Division 3 of any *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination, provided the *building* is not more than 1 *storey* in *building height*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.2. Building Size and Construction Relative to Major** 2.2.2.8. Group G, Division 4, Any Height, Any Area	(1) A *building* classified as Group G, Division 4 of any *building height* or *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination.	(1) A *building* classified as Group G, Division 4 of any *building height* or *building area* is permitted to be of *combustible construction* or *noncombustible construction*, used singly or in combination.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.3. Fire Alarm and Detection Systems** 2.2.3.1. Determination of Requirement for a Fire Alarm System	(1) A fire alarm system complying with Sentence (2) shall be installed in a *building* that is not *sprinklered* throughout and that (a) contains a Group G, Division 1 *major occupancy* with an *occupant load* more than 25, or (b) contains a Group G, Division 2 or 3 *major occupancy* (i) with an *occupant load* more than 150, (ii) in a *building* more than 1 *storey* in *building height*, or (iii) in a *building* with a *basement* used for a purpose other than the housing of service equipment. (2) Except as otherwise provided in this Section, the fire alarm system required by Sentence (1) shall comply with Articles 3.2.4.2., 3.2.4.4., 3.2.4.5. and 3.2.4.19. and Sentences 3.2.4.9.(1) and (4).	(1) A fire alarm system complying with Sentence (2) shall be installed in a *building* that is not *sprinklered* throughout and that (a) contains a Group G, Division 1 *major occupancy* with an *occupant load* more than 25, or (b) contains a Group G, Division 2 or 3 *major occupancy* (i) with an *occupant load* more than 150, (ii) in a *building* more than 1 *storey* in *building height*, or (iii) in a *building* with a *basement* used for a purpose other than the housing of service equipment. (2) Except as otherwise provided in this Section, the fire alarm system required by Sentence (1) shall comply with Articles 3.2.4.2., 3.2.4.4., 3.2.4.5. and 3.2.4.19. and Sentences 3.2.4.9.(1) and (4).	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.3. Fire Alarm and Detection Systems** 2.2.3.2. Types of Fire Alarm Systems	(1) The fire alarm system required by Sentence 2.2.3.1.(1) shall be (a) a single-stage system in a Group G, Division 1 *major occupancy*, and (b) a single- or 2-stage system in a Group G, Division 2 or 3 *major occupancy*.	(1) The fire alarm system required by Sentence 2.2.3.1.(1) shall be (a) a single-stage system in a Group G, Division 1 *major occupancy*, and (b) a single- or 2-stage system in a Group G, Division 2 or 3 *major occupancy*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire	N/A	N/A	**2.2.3. Fire Alarm and**	(1) Where a fire alarm system is required by Sentence 2.2.3.1.(1),	(1) Where a fire alarm system is required by Sentence 2.2.3.1.(1),	https://www.dropbox.com/s/5whijqx63htoqef/

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Protection and Occupant Safety			**Detection Systems** 2.2.3.3. Design of Fire Alarm Systems	(a) the air-handling system, where provided, shall be designed to prevent the circulation of smoke upon a signal from a duct-type *smoke detector* if the air-handling system serves more than 1 *storey*, and (b) a manual station shall be installed in every *floor area* near every *exit*.	(a) the air-handling system, where provided, shall be designed to prevent the circulation of smoke upon a signal from a duct-type *smoke detector* if the air-handling system serves more than 1 *storey*, and (b) a manual station shall be installed in every *floor area* near every *exit*.	Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.3. Fire Alarm and Detection Systems** 2.2.3.4. Fire Alarm Signals	(1) Except as provided in Sentence (3), the fire alarm system required by Sentence 2.2.3.1.(1) shall include (a) audible signal devices conforming to Sentences 3.2.4.20.(1) to (4), (6) and (12), (b) an audible *alarm signal* device with a sound pressure level not less than 110 dBA installed on the exterior of the *farm building*, and (c) visual signal devices installed in any *floor area* in which (i) the ambient noise level is more than 87 dBA, (ii) the occupants use ear protection devices, or (iii) the occupants are located in sound-insulating enclosures. (2) The visual signal devices required by Clause (1)(c) shall be installed so that the signal from at least one device is visible throughout the *floor area* or portion thereof in which they are installed. (3) The audible *alarm signal* devices referred to in Clauses (1)(a) and (b) need not be provided in areas where animals are present, provided that visual signal devices are installed in accordance with Sentence (2).	(1) Except as provided in Sentence (3), the fire alarm system required by Sentence 2.2.3.1.(1) shall include (a) audible signal devices conforming to Sentences 3.2.4.20.(1) to (4), (6) and (12), (b) an audible *alarm signal* device with a sound pressure level not less than 110 dBA installed on the exterior of the *farm building*, and (c) visual signal devices installed in any *floor area* in which (i) the ambient noise level is more than 87 dBA, (ii) the occupants use ear protection devices, or (iii) the occupants are located in sound-insulating enclosures. (2) The visual signal devices required by Clause (1)(c) shall be installed so that the signal from at least one device is visible throughout the *floor area* or portion thereof in which they are installed. (3) The audible *alarm signal* devices referred to in Clauses (1)(a) and (b) need not be provided in areas where animals are present, provided that visual signal devices are installed in accordance with Sentence (2).	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.3. Fire Alarm and Detection Systems** 2.2.3.5. Silencing of Alarm Signals	(1) The fire alarm system required by Sentence 2.2.3.1.(1) shall (a) 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 20 min, and (b) not incorporate manual silencing switches other than those installed inside the fire alarm control unit.	(1) The fire alarm system required by Sentence 2.2.3.1.(1) shall (a) 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 20 min, and (b) not incorporate manual silencing switches other than those installed inside the fire alarm control unit.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.3. Fire Alarm and Detection Systems**	(1) Where an automatic sprinkler system is provided, it shall be electrically supervised to indicate a supervisory signal on a fire alarm system annunciator or a sprinkler system annunciator for each condition described in Sentence 3.2.4.10.(3).	(1) Where an automatic sprinkler system is provided, it shall be electrically supervised to indicate a supervisory signal on a fire alarm system annunciator or a sprinkler system annunciator for each condition described in Sentence 3.2.4.10.(3).	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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			2.2.3.6. Electrical Supervision			
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.3. Fire Alarm and Detection Systems** 2.2.3.7. Fire Detectors	(1) Where a fire alarm system is required in a *farm building* in accordance with Sentence 2.2.3.1.(1), *fire detectors* shall be (a) except as provided in Sentence (2), installed throughout the *farm building*, and (b) connected to the fire alarm system. (2) The *fire detectors* referred to in Sentence (1) need not be provided within *floor areas* that are *sprinklered*.	(1) Where a fire alarm system is required in a *farm building* in accordance with Sentence 2.2.3.1.(1), *fire detectors* shall be (a) except as provided in Sentence (2), installed throughout the *farm building*, and (b) connected to the fire alarm system. (2) The *fire detectors* referred to in Sentence (1) need not be provided within *floor areas* that are *sprinklered*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.4. Provisions for Firefighting** 2.2.4.1. Fire Department Access to Buildings	(1) Access for fire department equipment shall be provided to each *farm building* by means of a *street*, private roadway or yard. (2) Where access to a *farm building* as required in Sentence (1) is provided by means of a roadway or yard, the design and location of such roadway or yard shall take into account connection with public thoroughfares, weight of firefighting equipment, width of roadway, radius of curves, overhead clearance, location of fire hydrants, location of fire department connections and vehicular parking.	(1) Access for fire department equipment shall be provided to each *farm building* by means of a *street*, private roadway or yard. (2) Where access to a *farm building* as required in Sentence (1) is provided by means of a roadway or yard, the design and location of such roadway or yard shall take into account connection with public thoroughfares, weight of firefighting equipment, width of roadway, radius of curves, overhead clearance, location of fire hydrants, location of fire department connections and vehicular parking.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.4. Provisions for Firefighting** 2.2.4.2. Automatic Sprinkler Systems	(1) Where an automatic sprinkler system is provided, it shall conform to Article 3.2.5.13. (2) Where a fire pump is installed as part of the automatic sprinkler system referred to in Sentence (1), it shall conform to Article 3.2.5.19. (3) The automatic sprinkler system referred to in Sentence (1) shall be equipped with waterflow-detecting devices that are (a) installed in accordance with Sentence 3.2.4.17.(1), and (b) connected to (i) the fire alarm system, where provided, so that, upon its actuation, an *alert signal* or an *alarm signal* is initiated, or (ii) an audible signal device, where a fire alarm system is not provided.	(1) Where an automatic sprinkler system is provided, it shall conform to Article 3.2.5.13. (2) Where a fire pump is installed as part of the automatic sprinkler system referred to in Sentence (1), it shall conform to Article 3.2.5.19. (3) The automatic sprinkler system referred to in Sentence (1) shall be equipped with waterflow-detecting devices that are (a) installed in accordance with Sentence 3.2.4.17.(1), and (b) connected to (i) the fire alarm system, where provided, so that, upon its actuation, an *alert signal* or an *alarm signal* is initiated, or (ii) an audible signal device, where a fire alarm system is not provided.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.4. Provisions for Firefighting** 2.2.4.3. Portable Fire Extinguishers	(1) Portable extinguishers shall be provided and installed in accordance with the provisions of Part 6 of Division B of the Fire Code made under the *Fire Protection and Prevention Act*, 1997.	(1) Portable extinguishers shall be provided and installed in accordance with the provisions of Part 6 of Division B of the Fire Code made under the *Fire Protection and Prevention Act*, 1997.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.5. Emergency Lighting** 2.2.5.1. Minimum Lighting Requirements	(1) Where lighting is provided in a *farm building*, emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in (a) *exits*, and (b) principal routes providing *access to exit* in open *floor areas* and in *service rooms*. (2) The minimum value of the illumination required by Sentence (1) shall be 1 lx. (3) An emergency power supply shall be (a) provided to maintain the emergency lighting required by Sentence (1) from a power source such as batteries or generators that will continue to supply power in the event that the regular power supply to the *farm building* is interrupted, and (b) designed and installed such that, upon failure of the regular power, it will assume the electrical load automatically for a period of 30 min.	(1) Where lighting is provided in a *farm building*, emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in (a) *exits*, and (b) principal routes providing *access to exit* in open *floor areas* and in *service rooms*. (2) The minimum value of the illumination required by Sentence (1) shall be 1 lx. (3) An emergency power supply shall be (a) provided to maintain the emergency lighting required by Sentence (1) from a power source such as batteries or generators that will continue to supply power in the event that the regular power supply to the *farm building* is interrupted, and (b) designed and installed such that, upon failure of the regular power, it will assume the electrical load automatically for a period of 30 min.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.1. Means of Egress	(1) *Means of egress* complying with this Subsection shall be provided from every *floor area* containing a Group G, Division 1, 2 or 3 *major occupancy*. (2) If a platform or contained open space is provided, egress requirements shall conform to the appropriate requirements of Article 2.2.6.2. for rooms. (3) *Means of egress* from roofs shall be provided in accordance with Sentence 3.3.1.3.(3). (4) *Means of egress* from rooftop enclosures shall be provided in accordance with Sentence 3.3.1.3.(5) and (6).	(1) *Means of egress* complying with this Subsection shall be provided from every *floor area* containing a Group G, Division 1, 2 or 3 *major occupancy*. (2) If a platform or contained open space is provided, egress requirements shall conform to the appropriate requirements of Article 2.2.6.2. for rooms. (3) *Means of egress* from roofs shall be provided in accordance with Sentence 3.3.1.3.(3). (4) *Means of egress* from rooftop enclosures shall be provided in accordance with Sentence 3.3.1.3.(5) and (6).	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.2. Egress Doorways	(1) Except as provided in Sentence (2), at least one egress doorway shall be provided from every room. (2) A minimum of 2 egress doorways located so that one doorway could provide egress from the room as required by Article 2.2.6.3. if the other doorway becomes inaccessible to the occupants due to a fire originating in the room, shall be provided for every room (a) that is used for a Group G, Division 1 *major occupancy*, other than one housing livestock with a below-floor storage area for liquid manure, where the area of the room is more than (i) 15 m2, in a *floor area* that is not *sprinklered* throughout, or	(1) Except as provided in Sentence (2), at least one egress doorway shall be provided from every room. (2) A minimum of 2 egress doorways located so that one doorway could provide egress from the room as required by Article 2.2.6.3. if the other doorway becomes inaccessible to the occupants due to a fire originating in the room, shall be provided for every room (a) that is used for a Group G, Division 1 *major occupancy*, other than one housing livestock with a below-floor storage area for liquid manure, where the area of the room is more than (i) 15 m2, in a *floor area* that is not *sprinklered* throughout, or	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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				(ii) 30 m2, in a *floor area* that is *sprinklered* throughout, (b) in a *floor area* that is not *sprinklered* throughout and contains a Group G, Division 1 *major occupancy* housing livestock with a below-floor storage area for liquid manure or a Group G, Division 2 or 3 *major occupancy*, where (i) the area of the room is more than 200 m2, or (ii) the travel distance within the room to the nearest egress doorway is more than 15 m, or (c) in a *floor area* that is *sprinklered* throughout and contains a Group G, Division 1 *major occupancy* housing livestock with a below-floor storage area for liquid manure or a Group G, Division 2 or 3 *major occupancy*, where (i) the area of the room is more than 300 m2, or (ii) the travel distance within the room to the nearest egress doorway is more than 25 m. (3) Where 2 egress doorways are required by Sentence (2), they shall be placed at a distance from one another equal to or greater than one third of the maximum overall diagonal dimension of the area to be served, measured as the shortest distance that smoke would have to travel between the nearest required egress doorways.	(ii) 30 m2, in a *floor area* that is *sprinklered* throughout, (b) in a *floor area* that is not *sprinklered* throughout and contains a Group G, Division 1 *major occupancy* housing livestock with a below-floor storage area for liquid manure or a Group G, Division 2 or 3 *major occupancy*, where (i) the area of the room is more than 200 m2, or (ii) the travel distance within the room to the nearest egress doorway is more than 15 m, or (c) in a *floor area* that is *sprinklered* throughout and contains a Group G, Division 1 *major occupancy* housing livestock with a below-floor storage area for liquid manure or a Group G, Division 2 or 3 *major occupancy*, where (i) the area of the room is more than 300 m2, or (ii) the travel distance within the room to the nearest egress doorway is more than 25 m. (3) Where 2 egress doorways are required by Sentence (2), they shall be placed at a distance from one another equal to or greater than one third of the maximum overall diagonal dimension of the area to be served, measured as the shortest distance that smoke would have to travel between the nearest required egress doorways.	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.3. Travel Distance	(1) If more than one egress doorway is required from a room referred to in Sentence 2.2.6.2.(2), the travel distance within the room to the nearest egress doorway shall not exceed the maximum travel distance specified in Article 2.2.7.5. for *exits*.	(1) If more than one egress doorway is required from a room referred to in Sentence 2.2.6.2.(2), the travel distance within the room to the nearest egress doorway shall not exceed the maximum travel distance specified in Article 2.2.7.5. for *exits*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.4. Headroom Clearance	(1) Except within a *service space*, the minimum headroom clearance in every *access to exit* shall conform to the requirements of Article 3.4.3.5. for *exits*.	(1) Except within a *service space*, the minimum headroom clearance in every *access to exit* shall conform to the requirements of Article 3.4.3.5. for *exits*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings**	(1) The minimum width of an *access to exit*, including obstructions, shall be 750 mm. (2) A fuel-fired *appliance* shall not be installed in a corridor serving as an *access to exit*.	(1) The minimum width of an *access to exit*, including obstructions, shall be 750 mm. (2) A fuel-fired *appliance* shall not be installed in a corridor serving as an *access to exit*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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			2.2.6.5. Access to Exits			
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.6. Door Swing	(1) Except as provided in Sentence (2), a door that provides *access to exit* from a room shall (a) be a sliding door, or (b) swing on a vertical axis. (2) A door that opens into a facility providing *access to exit* from a room that is used for a Group G, Division 1 *major occupancy*, other than one housing livestock with a below-floor storage area for liquid manure, shall swing on a vertical axis in the direction of travel to the *exit*.	(1) Except as provided in Sentence (2), a door that provides *access to exit* from a room shall (a) be a sliding door, or (b) swing on a vertical axis. (2) A door that opens into a facility providing *access to exit* from a room that is used for a Group G, Division 1 *major occupancy*, other than one housing livestock with a below-floor storage area for liquid manure, shall swing on a vertical axis in the direction of travel to the *exit*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.7. Doors and Door Hardware	(1) A door that provides *access to exit* from a room shall (a) provide a clear opening of not less than 750 mm if there is only one door leaf, (b) in a doorway with multiple leaves, have the active leaf providing a clear opening of not less than 750 mm, (c) not open onto a step, and (d) except as provided in Sentence (2), have a threshold not more than 13 mm higher than the surrounding finished floor surface. (2) The door referred to in Sentence (1) is permitted to have a threshold not more than 100 mm higher than the surrounding finished floor surface, where the threshold is used to confine (a) the spillage of liquids classified as *dangerous goods* within a room, or (b) animal litter within an animal containment area. (3) Door release hardware shall conform to Article 2.2.7.8.	(1) A door that provides *access to exit* from a room shall (a) provide a clear opening of not less than 750 mm if there is only one door leaf, (b) in a doorway with multiple leaves, have the active leaf providing a clear opening of not less than 750 mm, (c) not open onto a step, and (d) except as provided in Sentence (2), have a threshold not more than 13 mm higher than the surrounding finished floor surface. (2) The door referred to in Sentence (1) is permitted to have a threshold not more than 100 mm higher than the surrounding finished floor surface, where the threshold is used to confine (a) the spillage of liquids classified as *dangerous goods* within a room, or (b) animal litter within an animal containment area. (3) Door release hardware shall conform to Article 2.2.7.8.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.8. Ramps and Stairways	(1) Except as permitted by Sentence (3), ramps and stairways that do not serve as *exits* shall (a) be not less than 750 mm wide, and (b) conform to Articles 3.3.1.15., 3.4.3.5., 3.4.6.1. to 3.4.6.3., 3.4.6.8. and 3.4.6.9. (2) Except as permitted by Sentence (3), the maximum slope of a ramp shall be 1 in 6. (3) Ramps and stairways need not comply with Sentences (1) and (2), provided (a) they are intended only	(1) Except as permitted by Sentence (3), ramps and stairways that do not serve as *exits* shall (a) be not less than 750 mm wide, and (b) conform to Articles 3.3.1.15., 3.4.3.5., 3.4.6.1. to 3.4.6.3., 3.4.6.8. and 3.4.6.9. (2) Except as permitted by Sentence (3), the maximum slope of a ramp shall be 1 in 6. (3) Ramps and stairways need not comply with Sentences (1) and (2), provided (a) they are intended only	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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				(i) for occasional use for servicing equipment and machinery, or (ii) for use as animal handling ramps, and (b) they do not serve as *exits*.	(i) for occasional use for servicing equipment and machinery, or (ii) for use as animal handling ramps, and (b) they do not serve as *exits*.	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.9. Floor Openings	(1) Except as provided in Article 2.2.6.10., floor openings shall be provided with a cover at floor level that is capable of resisting the loads specified in Section 2.3. for the adjacent area of floor. (2) Openings through the cover required by Sentence (1) shall be of a size that prevents the passage of a spherical object whose diameter is more than 100 mm.	(1) Except as provided in Article 2.2.6.10., floor openings shall be provided with a cover at floor level that is capable of resisting the loads specified in Section 2.3. for the adjacent area of floor. (2) Openings through the cover required by Sentence (1) shall be of a size that prevents the passage of a spherical object whose diameter is more than 100 mm.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.10. Guards	(1) Except as provided in Sentence (3), a *guard* not less than 1 070 mm high shall be provided (a) around floor openings, where provision of a cover in accordance with Sentence 2.2.6.9.(1) is not practical, and (b) at locations where the difference in elevation between two adjacent surfaces is more than 600 mm. (2) The *guard* required by Sentence (1) shall consist of (a) a top railing, (b) an intermediate rail located at the mid-height of the *guard*, and (c) where tools or other objects could fall from an upper floor surface onto a person on an adjacent lower surface, a toe board extending not less than 125 mm above the upper floor surface. (3) Sentence (1) does not apply (a) to vehicle repair pits, (b) to loading docks, or (c) where access is provided for maintenance purposes only.	(1) Except as provided in Sentence (3), a *guard* not less than 1 070 mm high shall be provided (a) around floor openings, where provision of a cover in accordance with Sentence 2.2.6.9.(1) is not practical, and (b) at locations where the difference in elevation between two adjacent surfaces is more than 600 mm. (2) The *guard* required by Sentence (1) shall consist of (a) a top railing, (b) an intermediate rail located at the mid-height of the *guard*, and (c) where tools or other objects could fall from an upper floor surface onto a person on an adjacent lower surface, a toe board extending not less than 125 mm above the upper floor surface. (3) Sentence (1) does not apply (a) to vehicle repair pits, (b) to loading docks, or (c) where access is provided for maintenance purposes only.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings** 2.2.6.11. Signage	(1) Warning signs shall be installed in accordance with Subsection 2.14.2. of Division B of the Fire Code made under the Fire Protection and Prevention Act, 1997.	(1) Warning signs shall be installed in accordance with Subsection 2.14.2. of Division B of the Fire Code made under the Fire Protection and Prevention Act, 1997.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.6. Safety within Farm Buildings**	(1) A glass or transparent door shall be designed and constructed so that the existence and position of the door is readily apparent, by attaching visually	(1) A glass or transparent door shall be designed and constructed so that the existence and position of the door is readily apparent, by attaching visually	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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			2.2.6.12. Transparent Doors and Panels	contrasting hardware, bars or other permanent fixtures to it. (2) Transparent doors and panels shall conform to Sentences 3.3.1.18.(1.1), (2) and (4.1). (3) Transparent panels used in a door that provides *access to exit* that, because of their physical configuration or design, could be mistaken as a *means of egress* shall be made inaccessible by barriers or railings.	contrasting hardware, bars or other permanent fixtures to it. (2) Transparent doors and panels shall conform to Sentences 3.3.1.18.(1.1), (2) and (4.1). (3) Transparent panels used in a door that provides *access to exit* that, because of their physical configuration or design, could be mistaken as a *means of egress* shall be made inaccessible by barriers or railings.	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.1. Exit Facilities	(1) *Exit* facilities complying with this Subsection shall be provided from every *floor area* containing a Group G, Division 1, 2 or 3 *major occupancy*.	(1) *Exit* facilities complying with this Subsection shall be provided from every *floor area* containing a Group G, Division 1, 2 or 3 *major occupancy*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.2. Types of Exits	(1) An *exit* from any *floor area* shall be one of the following: (a) an exterior doorway conforming to Sentences 2.2.7.6.(1) and (2) and Articles 2.2.7.7., 2.2.7.8. and 3.4.6.11., (b) an openable window or panel conforming to Sentence 2.2.7.6.(3), or (c) an *exit* facility listed in Article 3.4.1.4. that conforms to Articles 3.4.1.5., 3.4.1.6. and 3.4.6.10., 3.4.2.2.(1) and Subsection 3.4.4.	(1) An *exit* from any *floor area* shall be one of the following: (a) an exterior doorway conforming to Sentences 2.2.7.6.(1) and (2) and Articles 2.2.7.7., 2.2.7.8. and 3.4.6.11., (b) an openable window or panel conforming to Sentence 2.2.7.6.(3), or (c) an *exit* facility listed in Article 3.4.1.4. that conforms to Articles 3.4.1.5., 3.4.1.6. and 3.4.6.10., 3.4.2.2.(1) and Subsection 3.4.4.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.3. Minimum Number of Exits	(1) Except as provided by Sentences (2) and (3), every *floor area* shall be served by at least 2 *exits*. (2) A *floor area* classified as a Group G, Division 1 *major occupancy* is permitted to be served by a single *exit*, provided the *floor area* is not more than (a) 10 m^2, where the *floor area* is not *sprinklered* throughout, or (b) 20 m^2, where the *floor area* is *sprinklered* throughout. (3) A *floor area* classified as a Group G, Division 2 or 3 *major occupancy* is permitted to be served by a single *exit*, provided the *floor area* is not more than (a) 200 m^2, where the *floor area* is not *sprinklered* throughout, or (b) 300 m^2, where the *floor area* is *sprinklered* throughout.	(1) Except as provided by Sentences (2) and (3), every *floor area* shall be served by at least 2 *exits*. (2) A *floor area* classified as a Group G, Division 1 *major occupancy* is permitted to be served by a single *exit*, provided the *floor area* is not more than (a) 10 m^2, where the *floor area* is not *sprinklered* throughout, or (b) 20 m^2, where the *floor area* is *sprinklered* throughout. (3) A *floor area* classified as a Group G, Division 2 or 3 *major occupancy* is permitted to be served by a single *exit*, provided the *floor area* is not more than (a) 200 m^2, where the *floor area* is not *sprinklered* throughout, or (b) 300 m^2, where the *floor area* is *sprinklered* throughout.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.4. Distance between Exits	(1) The minimum distance between 2 *exits* from a *floor area* shall be one half the maximum diagonal dimension of the *floor area*.	(1) The minimum distance between 2 *exits* from a *floor area* shall be one half the maximum diagonal dimension of the *floor area*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire	N/A	N/A	**2.2.7. Exits**	(1) Except as permitted by Sentence (2), the travel distance to at least one *exit* shall be not more than	(1) Except as permitted by Sentence (2), the travel distance to at least one *exit* shall be not more than	https://www.dropbox.com/s/5whijqx63htoqef/

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Protection and Occupant Safety			2.2.7.5. Location of Exits	(a) 30 m, in a *floor area* that contains a Group G, Division 1 *major occupancy*, other than one housing livestock with a below-floor storage area for liquid manure, (b) 60 m, in a *floor area* that contains a Group G, Division 1 *major occupancy* housing livestock with a below-floor storage area for liquid manure, (c) 60 m, in a *floor area* that contains a Group G, Division 2 or 3 *major occupancy* and that is not *sprinklered* throughout, and (d) 90 m, in a *floor area* that contains a Group G, Division 2 or 3 *major occupancy* and that is *sprinklered* throughout. (2) A *floor area* containing a Group G, Division 3 *major occupancy* need not comply with Sentence (1), provided (a) *exits* are placed not more than 60 m apart along the perimeter of the *floor area*, and (b) eachmain aisle in the *floor area* (i) leads directly to an *exit* in at least two opposite directions, and (ii) has a minimum width of 750 mm. (3) *Exits* shall be located and arranged in conformance with Sentence 3.4.2.5.(3).	(a) 30 m, in a *floor area* that contains a Group G, Division 1 *major occupancy*, other than one housing livestock with a below-floor storage area for liquid manure, (b) 60 m, in a *floor area* that contains a Group G, Division 1 *major occupancy* housing livestock with a below-floor storage area for liquid manure, (c) 60 m, in a *floor area* that contains a Group G, Division 2 or 3 *major occupancy* and that is not *sprinklered* throughout, and (d) 90 m, in a *floor area* that contains a Group G, Division 2 or 3 *major occupancy* and that is *sprinklered* throughout. (2) A *floor area* containing a Group G, Division 3 *major occupancy* need not comply with Sentence (1), provided (a) *exits* are placed not more than 60 m apart along the perimeter of the *floor area*, and (b) eachmain aisle in the *floor area* (i) leads directly to an *exit* in at least two opposite directions, and (ii) has a minimum width of 750 mm. (3) *Exits* shall be located and arranged in conformance with Sentence 3.4.2.5.(3).	Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.6. Width and Height of Exits	(1) The minimum clear width of an exterior doorway used as an *exit* shall be 750 mm. (2) Except as provided in Sentence (3), the minimum headroom clearance in every *exit* shall conform to Article 3.4.3.5. (3) An openable window or panel used as an *exit* shall have (a) an opening not less than 900 mm by 550 mm, and (b) a fire escape or stair, where required by Article 2.2.7.9.	(1) The minimum clear width of an exterior doorway used as an *exit* shall be 750 mm. (2) Except as provided in Sentence (3), the minimum headroom clearance in every *exit* shall conform to Article 3.4.3.5. (3) An openable window or panel used as an *exit* shall have (a) an opening not less than 900 mm by 550 mm, and (b) a fire escape or stair, where required by Article 2.2.7.9.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.7. Direction of Exit Door Swing	(1) Except as permitted by Sentence (2), every *exit* door shall (a) open in the direction of *exit* travel, and (b) swing on its vertical axis. (2) *Exit* doors that serve a Group G, Division 2 *major occupancy* housing animals need not conform to Clause (1)(a).	(1) Except as permitted by Sentence (2), every *exit* door shall (a) open in the direction of *exit* travel, and (b) swing on its vertical axis. (2) *Exit* doors that serve a Group G, Division 2 *major occupancy* housing animals need not conform to Clause (1)(a).	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.8. Exit Door Hardware	(1) Door release hardware on *exit* doors shall (a) be operable with one hand, (b) permit the door to be readily opened from the inside with not more than one releasing operation and without requiring keys, special devices or specialized knowledge of the door-opening mechanism, and (c) be installed not more than 1 200 mm above the finished floor.	(1) Door release hardware on *exit* doors shall (a) be operable with one hand, (b) permit the door to be readily opened from the inside with not more than one releasing operation and without requiring keys, special devices or specialized knowledge of the door-opening mechanism, and (c) be installed not more than 1 200 mm above the finished floor.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.9. Exit Stairs and Fire Escapes	(1) Where an exterior doorway used as an *exit* is more than 300 mm above adjacent ground level, a stair or fire escape shall be provided. (2) Where the bottom of an openable window or panel used as an *exit* is more than 2 500 mm above adjacent ground level, a stair or fire escape shall be provided. (3) Fire escapes required by Sentences (1) and (2) shall conform to Articles 3.4.7.2. and 3.4.7.4. to 3.4.7.7. (4) *Exit* stairs shall conform to Clause 3.4.6.1.(1)(a) and Articles 3.4.6.3. to 3.4.6.6. and 3.4.6.8. (5) The minimum width of *exit* stairs shall be 900 mm.	(1) Where an exterior doorway used as an *exit* is more than 300 mm above adjacent ground level, a stair or fire escape shall be provided. (2) Where the bottom of an openable window or panel used as an *exit* is more than 2 500 mm above adjacent ground level, a stair or fire escape shall be provided. (3) Fire escapes required by Sentences (1) and (2) shall conform to Articles 3.4.7.2. and 3.4.7.4. to 3.4.7.7. (4) *Exit* stairs shall conform to Clause 3.4.6.1.(1)(a) and Articles 3.4.6.3. to 3.4.6.6. and 3.4.6.8. (5) The minimum width of *exit* stairs shall be 900 mm.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.7. Exits** 2.2.7.10. Exit Signs	(1) *Farm buildings* shall comply with the requirements for *exit* signs stated in Subsection 3.4.5.	(1) *Farm buildings* shall comply with the requirements for *exit* signs stated in Subsection 3.4.5.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.1. General	(1) Except as provided in Sentences (2) to (4), the storage, handling and use of hazardous substances shall be in conformance with (a) the *Fire Code made under the Fire Protection and Prevention Act*, 1997, or (b) the CCBFC NRCC 56912, "National Fire Code of Canada", in the absence of regulations referred to in Clause (a). (2) *Farm buildings* or parts of *farm buildings* used for the storage, handling, use and processing of *dangerous goods* shall comply with Articles 3.3.6.1. to 3.3.6.7. (3) The production, handling, storage and utilization of biogas shall be in conformance with ANSI/CSA-B149.6, "Code for digester gas, landfill gas, and biogas generation and utilization." (4) Where the Fire Code made under the Fire Protection and Prevention Act, 1997 applies due to	(1) Except as provided in Sentences (2) to (4), the storage, handling and use of hazardous substances shall be in conformance with (a) the *Fire Code made under the Fire Protection and Prevention Act*, 1997, or (b) the CCBFC NRCC 56912, "National Fire Code of Canada", in the absence of regulations referred to in Clause (a). (2) *Farm buildings* or parts of *farm buildings* used for the storage, handling, use and processing of *dangerous goods* shall comply with Articles 3.3.6.1. to 3.3.6.7. (3) The production, handling, storage and utilization of biogas shall be in conformance with ANSI/CSA-B149.6, "Code for digester gas, landfill gas, and biogas generation and utilization." (4) Where the Fire Code made under the Fire Protection and Prevention Act, 1997 applies due to	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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				the quantity and nature of the stored product, *farm buildings* used for the storage of ammonium nitrate shall (a) be classified as Group G, Division 2 *major occupancies*, and (b) comply with Article 3.3.6.6. (5) Systems for the ventilation of cooking equipment that is used in processes producing grease-laden vapours shall be designed and installed in conformance with Articles 3.6.3.5. and 6.2.2.6.	the quantity and nature of the stored product, *farm buildings* used for the storage of ammonium nitrate shall (a) be classified as Group G, Division 2 *major occupancies*, and (b) comply with Article 3.3.6.6. (5) Systems for the ventilation of cooking equipment that is used in processes producing grease-laden vapours shall be designed and installed in conformance with Articles 3.6.3.5. and 6.2.2.6.	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.2. Exhaust Ventilation and Explosion Venting	(1) Except as provided in Sentence (3), an exhaust ventilation system designed in conformance with the appropriate requirements of Section 2.4. shall be provided in a *farm building* or part of a *farm building* in which dust, fumes, gases, vapours or other impurities or contaminants have the potential to create a fire or explosion hazard. (2) Except as provided in Sentence (3), *farm buildings* shall comply with Sentence 3.3.1.19.(4). (3) *Farm buildings* housing livestock with a below-floor storage area for liquid manure need not comply with Sentences (1) and (2), provided they comply with Article 2.2.8.3.	(1) Except as provided in Sentence (3), an exhaust ventilation system designed in conformance with the appropriate requirements of Section 2.4. shall be provided in a *farm building* or part of a *farm building* in which dust, fumes, gases, vapours or other impurities or contaminants have the potential to create a fire or explosion hazard. (2) Except as provided in Sentence (3), *farm buildings* shall comply with Sentence 3.3.1.19.(4). (3) *Farm buildings* housing livestock with a below-floor storage area for liquid manure need not comply with Sentences (1) and (2), provided they comply with Article 2.2.8.3.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.3. Below-Floor Storage Areas for Liquid Manure	(1) *Farm buildings* housing livestock with a below-floor storage area for liquid manure shall be provided with a ventilation system conforming to Subsection 2.4.2. (2) Where the ventilation system required by Sentence (1) relies on electrical power for normal operation, it shall be provided with an emergency power supply conforming to Sentence (3). (3) The emergency power supply required by Sentence (2) shall be (a) supplied from a generator, batteries or a combination thereof, (b) equipped with audible and visual trouble indicators, (c) capable of operating the trouble indicators for not less than 24 h, (d) capable of operating the ventilation system under full load for not less than 2 h, and (e) designed so that, in the event of a failure of the normal power source to the *farm building*, there is an immediate automatic transfer to emergency power.	(1) *Farm buildings* housing livestock with a below-floor storage area for liquid manure shall be provided with a ventilation system conforming to Subsection 2.4.2. (2) Where the ventilation system required by Sentence (1) relies on electrical power for normal operation, it shall be provided with an emergency power supply conforming to Sentence (3). (3) The emergency power supply required by Sentence (2) shall be (a) supplied from a generator, batteries or a combination thereof, (b) equipped with audible and visual trouble indicators, (c) capable of operating the trouble indicators for not less than 24 h, (d) capable of operating the ventilation system under full load for not less than 2 h, and (e) designed so that, in the event of a failure of the normal power source to the *farm building*, there is an immediate automatic transfer to emergency power.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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				(4) Where a fuel-fired engine or turbine for the emergency power supply required by Sentence (2) is dependent on a fuel supply located outside the *farm building*, the fuel supply shall be provided with a shut-off valve in conformance with Sentence 3.2.7.7.(1). (5) Where exhaust piping for the emergency power supply required by Sentence (2) penetrates a required *fire separation*, the piping shall be enclosed in a *service space* that is separated from the remainder of the *farm building* by a *fire separation* having a *fire-resistance rating* not less than that of the penetrated *fire separation*, but not less than 45 min.	(4) Where a fuel-fired engine or turbine for the emergency power supply required by Sentence (2) is dependent on a fuel supply located outside the *farm building*, the fuel supply shall be provided with a shut-off valve in conformance with Sentence 3.2.7.7.(1). (5) Where exhaust piping for the emergency power supply required by Sentence (2) penetrates a required *fire separation*, the piping shall be enclosed in a *service space* that is separated from the remainder of the *farm building* by a *fire separation* having a *fire-resistance rating* not less than that of the penetrated *fire separation*, but not less than 45 min.	
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.4. Welding and Cutting	(1) Except as provided in Sentence (2), welding and cutting operations shall be carried out in a room conforming to Sentence 3.3.1.24.(1). (2) Sentence (1) need not apply to *agricultural occupancies* where the welding and cutting operations do not present a fire or explosion hazard to adjacent areas.	(1) Except as provided in Sentence (2), welding and cutting operations shall be carried out in a room conforming to Sentence 3.3.1.24.(1). (2) Sentence (1) need not apply to *agricultural occupancies* where the welding and cutting operations do not present a fire or explosion hazard to adjacent areas.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.5. Liquid Manure Storage Tanks and Piping Systems	(1) This Article does not apply to below-floor storage areas for liquid manure. (2) Access covers for liquid manure storage tanks shall be designed in accordance with Section 2.3. to support the imposed loads. (3) Access covers for liquid manure storage tanks that weigh less than 20 kg shall be equipped with locking devices. (4) Ladders shall not be installed on closed liquid manure storage tanks. (5) Liquid manure storage tanks without a cover that are located outdoors shall be surrounded by a permanent safety fence or wall that (a) extends not less than 1.5 m above adjacent ground level, (b) is adequately secured at ground level, and (c) has gates with latches. (6) Where an access point for filling, agitation, emptying or a similar operation is provided for a liquid manure storage tank described in Sentence (5), a curb or barrier shall be installed between the access point and the storage tank that is (a) not less than 450 mm high, or (b) of sufficient height to prevent unintended vehicle entry.	(1) This Article does not apply to below-floor storage areas for liquid manure. (2) Access covers for liquid manure storage tanks shall be designed in accordance with Section 2.3. to support the imposed loads. (3) Access covers for liquid manure storage tanks that weigh less than 20 kg shall be equipped with locking devices. (4) Ladders shall not be installed on closed liquid manure storage tanks. (5) Liquid manure storage tanks without a cover that are located outdoors shall be surrounded by a permanent safety fence or wall that (a) extends not less than 1.5 m above adjacent ground level, (b) is adequately secured at ground level, and (c) has gates with latches. (6) Where an access point for filling, agitation, emptying or a similar operation is provided for a liquid manure storage tank described in Sentence (5), a curb or barrier shall be installed between the access point and the storage tank that is (a) not less than 450 mm high, or (b) of sufficient height to prevent unintended vehicle entry.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.6. Gas Traps or Valves	(1) Except as permitted by Sentence (2), where storage tanks for liquids capable of releasing hazardous gases or vapours are connected to a *farm building* by a piping system, a gas trap or valve shall be installed in the piping system to prevent such gases or vapours from entering the *farm building*. (2) Where storage tanks for liquid manure are connected to a *farm building* by a piping system, a pull plug is permitted to be installed in the piping system to prevent hazardous gases and vapours from entering the *farm building*.	(1) Except as permitted by Sentence (2), where storage tanks for liquids capable of releasing hazardous gases or vapours are connected to a *farm building* by a piping system, a gas trap or valve shall be installed in the piping system to prevent such gases or vapours from entering the *farm building*. (2) Where storage tanks for liquid manure are connected to a *farm building* by a piping system, a pull plug is permitted to be installed in the piping system to prevent hazardous gases and vapours from entering the *farm building*.	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.7. Dangerous Goods Storage	(1) The storage of *dangerous goods* in packages or containers in *farm buildings* or parts of *farm buildings* shall comply with Parts 3 and 4 of Division B of the CCBFC NRCC 56192, "National Fire Code of Canada".	(1) The storage of *dangerous goods* in packages or containers in *farm buildings* or parts of *farm buildings* shall comply with Parts 3 and 4 of Division B of the CCBFC NRCC 56192, "National Fire Code of Canada".	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0
Large Farm Buildings - Fire Protection and Occupant Safety	N/A	N/A	**2.2.8. Hazardous Substances, Processes and Equipment** 2.2.8.8. Pesticide Storage Areas	(1) In addition to the requirements of Article 2.2.8.7., pesticide storage areas in *farm buildings* shall be designed in conformance with this Article. (2) Pesticide storage areas shall be (a) ventilated with outdoor air in accordance with Subsection 2.4.2. by dedicated natural or mechanical means at a rate sufficient to prevent the accumulation of *dangerous goods* classified as toxic or flammable gases, (b) accessible only from the outdoors, and (c) secured against unauthorized entry. (3) Floors of pesticide storage areas shall (a) be constructed of concrete or other impervious material, (b) not have a floor drain, and (c) be provided with a curb at the perimeter of the storage area that is (i) designed to contain accidental spillage of the largest container in the storage area, and (ii) not less than 50 mm high. (4) Pesticide storage areas shall be separated from (a) food, feed and water supplies, (b) other *occupancies* by a *fire separation* having a *fire-resistance rating* not less than 1 h, and	(1) In addition to the requirements of Article 2.2.8.7., pesticide storage areas in *farm buildings* shall be designed in conformance with this Article. (2) Pesticide storage areas shall be (a) ventilated with outdoor air in accordance with Subsection 2.4.2. by dedicated natural or mechanical means at a rate sufficient to prevent the accumulation of *dangerous goods* classified as toxic or flammable gases, (b) accessible only from the outdoors, and (c) secured against unauthorized entry. (3) Floors of pesticide storage areas shall (a) be constructed of concrete or other impervious material, (b) not have a floor drain, and (c) be provided with a curb at the perimeter of the storage area that is (i) designed to contain accidental spillage of the largest container in the storage area, and (ii) not less than 50 mm high. (4) Pesticide storage areas shall be separated from (a) food, feed and water supplies, (b) other *occupancies* by a *fire separation* having a *fire-resistance rating* not less than 1 h, and	https://www.dropbox.com/s/5whijqx63htoqef/Proposed_Change_1418.pdf?dl=0

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				(c) other *buildings* by a *limiting distance* not less than 6 m.	(c) other *buildings* by a *limiting distance* not less than 6 m.	
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.1. Structural Design Requirements** 2.3.1.1. General	(1) Except as otherwise provided in this Section, the structural design of *farm buildings* shall conform to Part 4. (2) Except as provided in Sentence (3), *farm buildings* shall be classified in the Low Importance Category as described in Table 4.1.2.1.B. (3) Liquid manure storage tanks shall be classified in the Normal Importance Category as described in Table 4.1.2.1.B. (4) In lieu of the requirements of Article 4.2.2.1., a *subsurface investigation* of the *farm building* site is permitted to be carried out by a suitably qualified person prior to or during construction.	(1) Except as otherwise provided in this Section, the structural design of *farm buildings* shall conform to Part 4. (2) Except as provided in Sentence (3), *farm buildings* shall be classified in the Low Importance Category as described in Table 4.1.2.1.B. (3) Liquid manure storage tanks shall be classified in the Normal Importance Category as described in Table 4.1.2.1.B. (4) In lieu of the requirements of Article 4.2.2.1., a *subsurface investigation* of the *farm building* site is permitted to be carried out by a suitably qualified person prior to or during construction.	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.2. Loads Due to Use and Occupancy** 2.3.2.1. Loads Supported on a Floor or Suspended from a Ceiling	(1) In addition to the requirements of Article 4.1.5.3., the specified *live load* supported on a floor or suspended from a ceiling shall be not less than the applicable value listed in Table 2.3.2.1. (Table 2.3.2.1. - Minimum Specified Live Loads on a Floor or Ceiling)	(1) In addition to the requirements of Article 4.1.5.3., the specified *live load* supported on a floor or suspended from a ceiling shall be not less than the applicable value listed in Table 2.3.2.1. (See the National PCF for Table 2.3.2.1. - Minimum Specified Live Loads on a Floor or Ceiling)	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.2. Loads Due to Use and Occupancy** 2.3.2.2. Poultry Manure	(1) Areas designed for the accumulation of poultry manure, such as solid floors and dropping pits under a wire floor, slotted floor or cage, shall be designed for a specified *live load* of not less than 1 kPa for each 100 mm depth of manure. (2) Where machinery or vehicles not exceeding 1 000 kg in gross weight are used for manure clean-out in a poultry barn, the barn floor shall be designed for a specified two-wheel *live load* of not less than 6 kN in addition to the specified *live load* prescribed in Sentence (1).	(1) Areas designed for the accumulation of poultry manure, such as solid floors and dropping pits under a wire floor, slotted floor or cage, shall be designed for a specified *live load* of not less than 1 kPa for each 100 mm depth of manure. (2) Where machinery or vehicles not exceeding 1 000 kg in gross weight are used for manure clean-out in a poultry barn, the barn floor shall be designed for a specified two-wheel *live load* of not less than 6 kN in addition to the specified *live load* prescribed in Sentence (1).	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.2. Loads Due to Use and Occupancy** 2.3.2.3. Stored Products	(1) Floors supporting stored products shall be designed for the specified *live load* due to their intended use and *occupancy*, but not for less than 5 kPa.	(1) Floors supporting stored products shall be designed for the specified *live load* due to their intended use and *occupancy*, but not for less than 5 kPa.	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.2. Loads Due to Use and Occupancy** 2.3.2.4. Farm Machinery and Vehicles	(1) The specified uniformly distributed *live load* on an area of floor used for farm machinery or vehicles shall be (a) for farm machinery and vehicles not exceeding 4 000 kg in gross weight, not less than 2.4 kPa,	(1) The specified uniformly distributed *live load* on an area of floor used for farm machinery or vehicles shall be (a) for farm machinery and vehicles not exceeding 4 000 kg in gross weight, not less than 2.4 kPa,	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0

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				(b) for farm machinery and vehicles exceeding 4 000 kg but not exceeding 9 000 kg in gross weight, not less than 6 kPa, and (c) for farm machinery and vehicles exceeding 9 000 kg in gross weight, not less than 12 kPa. (2) The specified *live load* due to possible concentrations of load resulting from the use of an area of floor for farm machinery or vehicles shall be in accordance with Article 4.1.5.9. (3) Where an area of floor is used for processing or for loading or unloading of vehicles, the minimum specified *live loads* prescribed in Sentences (1) and (2) shall be increased by 50% for the area.	(b) for farm machinery and vehicles exceeding 4 000 kg but not exceeding 9 000 kg in gross weight, not less than 6 kPa, and (c) for farm machinery and vehicles exceeding 9 000 kg in gross weight, not less than 12 kPa. (2) The specified *live load* due to possible concentrations of load resulting from the use of an area of floor for farm machinery or vehicles shall be in accordance with Article 4.1.5.9. (3) Where an area of floor is used for processing or for loading or unloading of vehicles, the minimum specified *live loads* prescribed in Sentences (1) and (2) shall be increased by 50% for the area.	
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.2. Loads Due to Use and Occupancy** 2.3.2.5. Liquid Manure Storage Tanks	(1) Tops of liquid manure storage tanks that are accessible to vehicular traffic or used as a floor in a *farm building* shall be designed for the loads due to their intended use and *occupancy*. (2) Tops of liquid manure storage tanks that are located outdoors but not exposed to vehicular traffic shall be designed for the *dead load* plus the snow and rain loads prescribed in Subsection 4.1.6. or for the *dead load* plus 2 kPa, whichever produces the most critical effect. (3) Walls and partitions of liquid manure storage tanks shall be designed for (a) an internal lateral pressure based on an equivalent fluid density of 10 kN/m3 for liquid manure, and (b) the anticipated internal lateral ice pressure. (4) Vertical external walls of liquid manure storage tanks located below ground level shall be designed for (a) the anticipated lateral earth pressure, which shall not be used to reduce the effects of the internal lateral pressures specified in Sentence (3), and (b) a lateral surcharge load of 5 kPa, applied uniformly below ground level, where earth within 1.5 m of the walls is subject to vehicular loads. (5) Concrete used for liquid manure storage tanks shall conform to the appropriate exposure class of CSA A23.1, “Concrete materials and methods of concrete construction.” (6) Liquid manure storage tank walls, bases and appurtenances, including piping for the conveyance	(1) Tops of liquid manure storage tanks that are accessible to vehicular traffic or used as a floor in a *farm building* shall be designed for the loads due to their intended use and *occupancy*. (2) Tops of liquid manure storage tanks that are located outdoors but not exposed to vehicular traffic shall be designed for the *dead load* plus the snow and rain loads prescribed in Subsection 4.1.6. or for the *dead load* plus 2 kPa, whichever produces the most critical effect. (3) Walls and partitions of liquid manure storage tanks shall be designed for (a) an internal lateral pressure based on an equivalent fluid density of 10 kN/m3 for liquid manure, and (b) the anticipated internal lateral ice pressure. (4) Vertical external walls of liquid manure storage tanks located below ground level shall be designed for (a) the anticipated lateral earth pressure, which shall not be used to reduce the effects of the internal lateral pressures specified in Sentence (3), and (b) a lateral surcharge load of 5 kPa, applied uniformly below ground level, where earth within 1.5 m of the walls is subject to vehicular loads. (5) Concrete used for liquid manure storage tanks shall conform to the appropriate exposure class of CSA A23.1, “Concrete materials and methods of concrete construction.” (6) Liquid manure storage tank walls, bases and appurtenances, including piping for the conveyance	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0

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				of liquid manure and associated connections and joints, shall be designed and constructed to minimize leakage of liquid manure.	of liquid manure and associated connections and joints, shall be designed and constructed to minimize leakage of liquid manure.	
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.3. Loads Due to Snow** 2.3.3.1. Unobstructed Slippery Roofs	(1) For unobstructed slippery roofs of *farm buildings* with a roof slope, α, greater than 15° but not greater than 60° from horizontal, where snow and ice can slide completely off the roof, the slope factor, Cs shall be calculated as follows: $C_s = \frac{60° - \alpha}{53°}$	(1) For unobstructed slippery roofs of *farm buildings* with a roof slope, α, greater than 15° but not greater than 60° from horizontal, where snow and ice can slide completely off the roof, the slope factor, Cs shall be calculated as follows: $C_s = \frac{60° - \alpha}{53°}$	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.3. Loads Due to Snow** 2.3.3.2. Roof Areas of Greenhouses	(1) In a *farm building* classified as a Group G, Division 3 *major occupancy* where heating and drainage systems are installed to prevent the accumulation of snow and water, the supporting structure for the light-transmitting roof areas is permitted to be designed for a specified roof snow load of not less than 1 kPa, provided (a) the heating system is capable of maintaining a minimum interior temperature of 10°C throughout the *farm building*, and (b) an emergency power supply is provided that (i) is supplied from a power source such as batteries, a generator, or a combination thereof, and (ii) will continue to supply power to the heating system in the event that the regular power supply to the *farm building* is interrupted.	(1) In a *farm building* classified as a Group G, Division 3 *major occupancy* where heating and drainage systems are installed to prevent the accumulation of snow and water, the supporting structure for the light-transmitting roof areas is permitted to be designed for a specified roof snow load of not less than 1 kPa, provided (a) the heating system is capable of maintaining a minimum interior temperature of 10°C throughout the *farm building*, and (b) an emergency power supply is provided that (i) is supplied from a power source such as batteries, a generator, or a combination thereof, and (ii) will continue to supply power to the heating system in the event that the regular power supply to the *farm building* is interrupted.	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0
Large Farm Buildings Technical Provisions – Structural Design Requirements	N/A	N/A	**2.3.4. Loads Due to Earthquakes** 2.3.4.1. Application Limitation	(1) *Farm buildings* need not be designed for loads due to earthquakes in accordance with Subsection 4.1.8. where (a) the Seismic Category is SC1, or (b) the Seismic Category is SC2, and the R_dR_o value of the seismic force resisting system (SFRS) is equal to or greater than 3.0. (2) For the purpose of Sentence (1), the Seismic Category is permitted to be determined on the basis of $I_ES(0.2)$ alone. (3) For the purpose of Sentences (1) and (2), the Seismic Category is permitted to be determined by assigning Site Class D without carrying out a *subsurface investigation.*	(1) *Farm buildings* need not be designed for loads due to earthquakes in accordance with Subsection 4.1.8. where (a) the Seismic Category is SC1, or (b) the Seismic Category is SC2, and the R_dR_o value of the seismic force resisting system (SFRS) is equal to or greater than 3.0. (2) For the purpose of Sentence (1), the Seismic Category is permitted to be determined on the basis of $I_ES(0.2)$ alone. (3) For the purpose of Sentences (1) and (2), the Seismic Category is permitted to be determined by assigning Site Class D without carrying out a *subsurface investigation.*	https://www.dropbox.com/s/x7qvdy7eicb92g7/Proposed_Change_1416.pdf?dl=0

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Large Farm Buildings Technical Provisions - Heating, Ventilating and Air-conditioning Requirements	N/A	N/A	**2.4.1. General** 2.4.1.1. Application	(1) Except as provided in Sentence (2), and except as otherwise provided in this Section, systems and equipment for heating, ventilating and air-conditioning services in *farm buildings* shall conform to Part 6. (2) *Farm buildings* need not comply with Articles 6.2.2.3. and 6.2.5.1. and Sentences 6.2.3.11.(3) and 6.2.3.8.(11).	(1) Except as provided in Sentence (2), and except as otherwise provided in this Section, systems and equipment for heating, ventilating and air-conditioning services in *farm buildings* shall conform to Part 6. (2) *Farm buildings* need not comply with Articles 6.2,2.3. and 6.2.5.1. and Sentences 6.2.3.11.(3) and 6.2.3.8.(11).	https://www.dropbox.com/s/tqun1ctl4t3i4j5/Proposed_Change_1419.pdf?dl=0
Large Farm Buildings Technical Provisions - Heating, Ventilating and Air-conditioning Requirements	N/A	N/A	**2.4.2. Ventilation** 2.4.2.1. Required Ventilation	(1) Except as provided in Sentence (2), the rates at which outdoor air is supplied in *farm buildings* by ventilation systems shall be in accordance with good engineering practice as described in Article 6.2.1.1. (2) Except as otherwise provided in this Subsection, *farm buildings* containing a Group G, Division 4 *major occupancy* need not comply with Sentence (1).	(1) Except as provided in Sentence (2), the rates at which outdoor air is supplied in *farm buildings* by ventilation systems shall be in accordance with good engineering practice as described in Article 6.2.1.1. (2) Except as otherwise provided in this Subsection, *farm buildings* containing a Group G, Division 4 *major occupancy* need not comply with Sentence (1).	https://www.dropbox.com/s/tqun1ctl4t3i4j5/Proposed_Change_1419.pdf?dl=0
Large Farm Buildings Technical Provisions - Heating, Ventilating and Air-conditioning Requirements	N/A	N/A	**2.4.2. Ventilation** 2.4.2.2. Greenhouses	(1) Except as provided in Sentence (2), where a fuel-fired *appliance* is installed in a *farm building* containing a Group G, Division 3 *major occupancy*, separate combustion air and *flue* systems shall be provided. (2) Sentence (1) need not apply where the fuel-fired *appliance* (a) is specifically designed as a generator of carbon dioxide for enrichment of the atmosphere in the *farm building*, and (b) conforms to CSA B149.1, "Natural Gas and Propane Installation Code."	(1) Except as provided in Sentence (2), where a fuel-fired *appliance* is installed in a *farm building* containing a Group G, Division 3 *major occupancy*, separate combustion air and *flue* systems shall be provided. (2) Sentence (1) need not apply where the fuel-fired *appliance* (a) is specifically designed as a generator of carbon dioxide for enrichment of the atmosphere in the *farm building*, and (b) conforms to CSA B149.1, "Natural Gas and Propane Installation Code."	https://www.dropbox.com/s/tqun1ctl4t3i4j5/Proposed_Change_1419.pdf?dl=0
Large Farm Buildings Technical Provisions - Heating, Ventilating and Air-conditioning Requirements	N/A	N/A	**2.4.2. Ventilation** 2.4.2.3. Controlled-Atmosphere Storage Areas	(1) This Article applies to controlled-atmosphere storage areas that, during storage periods, contain an atmosphere with an oxygen content less than 19.5% or more than 23% by volume. (2) During storage periods, controlled-atmosphere storage areas need not comply with Sentence 2.4.2.1.(1). (3) Prior to a controlled-atmosphere storage area being accessed after a storage period and while the storage area is accessible between storage periods, the ventilation system of the storage area shall (a) supply outdoor air to the storage area at a rate in accordance with Sentence 2.4.2.1.(1), and (b) ensure that the atmosphere in the storage area has an oxygen content not less than 19.5% and not more than 23% by volume.	(1) This Article applies to controlled-atmosphere storage areas that, during storage periods, contain an atmosphere with an oxygen content less than 19.5% or more than 23% by volume. (2) During storage periods, controlled-atmosphere storage areas need not comply with Sentence 2.4.2.1.(1). (3) Prior to a controlled-atmosphere storage area being accessed after a storage period and while the storage area is accessible between storage periods, the ventilation system of the storage area shall (a) supply outdoor air to the storage area at a rate in accordance with Sentence 2.4.2.1.(1), and (b) ensure that the atmosphere in the storage area has an oxygen content not less than 19.5% and not more than 23% by volume.	https://www.dropbox.com/s/tqun1ctl4t3i4j5/Proposed_Change_1419.pdf?dl=0

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				(4) A warning sign shall be provided at each entrance to a controlled-atmosphere storage area in accordance with Sentence 2.14.2.1.(5) of Division B of the NFC.	(4) A warning sign shall be provided at each entrance to a controlled-atmosphere storage area in accordance with Sentence 2.14.2.1.(5) of Division B of the NFC.	
Large Farm Buildings Technical Provisions - Heating, Ventilating and Air-conditioning Requirements	N/A	N/A	**2.4.2. Ventilation** 2.4.2.4. Silos and Grain Storage Bins	(1) Where an enclosed tower silo, horizontal silo, or grain storage bin is connected to an adjacent feed room, mechanical exhaust ventilation shall be provided to remove air from the lowest floor level of the feed room to the outdoors at a rate not less than 3 air changes per hour. (2) The ventilation system of the *farm building* in which the feed room referred to in Sentence (1) is located shall be designed to prevent airflow from the feed room to any other part of the *floor area* of the *farm building*. (3) Enclosed horizontal silos shall be ventilated by (a) openings at roof or eave level with an area not less than 1% of the floor area of the silo, consisting of (i) a continuous ridge opening, (ii) openings in both gable ends, or (iii) openings in the eaves on each side of the roof, and (b) openings at floor level with an area not less than 1% of the floor area of the silo.	(1) Where an enclosed tower silo, horizontal silo, or grain storage bin is connected to an adjacent feed room, mechanical exhaust ventilation shall be provided to remove air from the lowest floor level of the feed room to the outdoors at a rate not less than 3 air changes per hour. (2) The ventilation system of the *farm building* in which the feed room referred to in Sentence (1) is located shall be designed to prevent airflow from the feed room to any other part of the *floor area* of the *farm building.* (3) Enclosed horizontal silos shall be ventilated by (a) openings at roof or eave level with an area not less than 1% of the floor area of the silo, consisting of (i) a continuous ridge opening, (ii) openings in both gable ends, or (iii) openings in the eaves on each side of the roof, and (b) openings at floor level with an area not less than 1% of the floor area of the silo.	https://www.dropbox.com/s/tqun1ctl4t3i4j5/Proposed_Change_1419.pdf?dl=0
Large Farm Buildings Technical Provisions - Heating, Ventilating and Air-conditioning Requirements	N/A	N/A	**2.4.2. Ventilation** 2.4.2.5. Below-Floor Storage Areas for Liquid Manure	(1) *Farm buildings* housing livestock with a below-floor storage area for liquid manure shall be provided with a ventilation system that supplies outdoor air at a rate that is (a) sufficient to limit the concentrations of *dangerous goods* classified as flammable gases to not more than 25% of their lower explosive limit, (b) sufficient to limit the concentrations of *dangerous goods* classified as toxic gases to those permitted in the applicable provincial or territorial regulations or municipal bylaws or, in the absence of such regulations or bylaws, in the ACGIH's "Industrial Ventilation: A Manual of Recommended Practice for Design," and (c) not less than 2 air changes per hour.	(1) *Farm buildings* housing livestock with a below-floor storage area for liquid manure shall be provided with a ventilation system that supplies outdoor air at a rate that is (a) sufficient to limit the concentrations of *dangerous goods* classified as flammable gases to not more than 25% of their lower explosive limit, (b) sufficient to limit the concentrations of *dangerous goods* classified as toxic gases to those permitted in the applicable provincial or territorial regulations or municipal bylaws or, in the absence of such regulations or bylaws, in the ACGIH's "Industrial Ventilation: A Manual of Recommended Practice for Design," and (c) not less than 2 air changes per hour.	https://www.dropbox.com/s/tqun1ctl4t3i4j5/Proposed_Change_1419.pdf?dl=0
Large Farm Buildings Technical Provisions -	N/A	N/A	**2.4.3. Heating Appliances**	(1) Fuel-fired heating *appliances* shall be located and separated from the remainder of the *farm building* in conformance with Article 2.2.1.9.	(1) Fuel-fired heating *appliances* shall be located and separated from the remainder of the *farm building* in conformance with Article 2.2.1.9.	https://www.dropbox.com/s/tqun1ctl4t3i4j5/Proposed_Change_1419.pdf?dl=0

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Heating, Ventilating and Air-conditioning Requirements			2.4.3.1. Location of Appliances			

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PART 3 FIRE PROTECTION, OCCUPANT SAFETY AND ACCESSIBILITY

PART 3 – ACCESSIBILITY

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link(s) to the National PCF(s)
Accessibility - Inclusive Signage	3.8.3.7. Assistive Listening Devices	(1) In *buildings* of *assembly occupancy*, all classrooms, auditoria, meeting rooms and *theatres* with an area of more than 100 m^2 and an *occupant load* of more than 75 shall be equipped with assistive listening systems encompassing the entire seating area.	3.8.2.9. Assistive Listening Systems	(1) In a *building* of *assembly occupancy*, all classrooms, auditoria, meeting rooms and *theatres* with an area of more than 100 m^2 shall be equipped with an assistive listening system complying with Subsection 3.8.3. (2) In each location where information, goods or services are provided to the public at service counters in *buildings* of *assembly occupancy*, at least one of the service counters shall be equipped with (a) an assistive listening system or adaptive technology conforming to Subsection 3.8.3., and (b) an amplification system, where there is a barrier to communication, such as a glass screen.	(1) In ~~*buildings*~~*a building* of *assembly occupancy*, all classrooms, auditoria, meeting rooms and *theatres* with an area of more than 100 m^2 ~~and an *occupant load* of more than 75~~ shall be equipped with an assistive listening ~~systems encompassing~~ system complying with Subsection 3.8.3. (2) In each location where information, goods or services are provided to the ~~entire seating area.~~ public at service counters in *buildings* of *assembly occupancy*, at least one of the service counters shall be equipped with (a) an assistive listening system or adaptive technology conforming to Subsection 3.8.3., and (b) an amplification system, where there is a barrier to communication, such as a glass screen.	https://www.dropbox.com/s/vqyw0he2a1koy5m/Proposed_Change_1590.pdf?dl=0
Accessibility – Inclusive Signage	3.8.3.7. Assistive Listening Devices	N/A	3.8.3.19. Assistive Listening Systems	(1) Assistive listening systems required by Sentence 3.8.2.9.(1) shall encompass the entire seating area. (2) Assistive listening systems or adaptive technologies required by Sentence 3.8.2.9.(2) shall provide for the clear communication required for the exchange of information, goods and services.	(1) Assistive listening systems required by Sentence 3.8.3.7.(1) shall encompass the entire seating area. (2) Assistive listening systems or adaptive technologies required by Sentence 3.8.3.7.(2) shall provide for the clear communication required for the exchange of information, goods and services.	https://www.dropbox.com/s/vqyw0he2a1koy5m/Proposed_Change_1590.pdf?dl=0
Accessibility - Anthropometrics	3.2.7.1. Minimum Lighting Requirements	(2) The minimum value of the illumination required by Sentence (1) shall not be less than 10 1x. (3) Rooms and spaces used by the public shall be illuminated as described in Article 9.34.2.7.	3.2.7.1. Minimum Lighting Requirements	(2) The minimum level of the illumination required by Sentence (1) shall be not less than 10 lx. (3) Rooms and spaces used by the public shall be equipped to provide illumination as described in Sentences (3.1) to (3.4) and Article 9.34.2.7.	(2) The minimum ~~value~~level of the illumination required by Sentence (1) shall be not ~~be~~ less than 10 lx. (3) Rooms and spaces used by the public shall be ~~illuminated~~ equipped to provide illumination as	https://www.dropbox.com/s/3a51giqcmkm00wt/Proposed_Change_1591.pdf?dl=0

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				(3.1) The minimum level of illumination over the entire length of escalators and moving walks shall be not less than 100 lx at the level of the treads and walking surfaces. (3.2) Except as provided in Sentence (3.3) and except for light switches and internally illuminated controls, the minimum level of illumination at controls required by Article 3.8.1.5. shall be not less than 100 lx. (3.3) Where visual information is provided at controls referred to in Sentence (3.2), the minimum level of illumination at the controls shall be not less than 200 lx, except where the visual information is internally illuminated. (3.4) Except for internally illuminated signs, the minimum level of illumination at signs displaying visual information required by Clauses 3.4.6.10.(5)(b) and 3.4.6.16.(4)(g1), 3.4.6.18.(3), 3.4.6.18.(4)(a) and Articles 3.4.6.19. shall be not less than 200 lx.	described in Sentences (3.1) to (3.4) and Article 9.34.2.7. (3.1) The minimum level of illumination over the entire length of escalators and moving walks shall be not less than 100 lx at the level of the treads and walking surfaces. (3.2) Except as provided in Sentence (3.3) and except for light switches and internally illuminated controls, the minimum level of illumination at controls required by Article 3.8.1.5. shall be not less than 100 lx. (3.3) Where visual information is provided at controls referred to in Sentence (3.2), the minimum level of illumination at the controls shall be not less than 200 lx, except where the visual information is internally illuminated. (3.4) Except for internally illuminated signs, the minimum level of illumination at signs displaying visual information required by Clauses 3.4.6.10.(5)(b) and 3.4.6.16.(4)(g1), 3.4.6.18.(3), 3.4.6.18.(4)(a) and Articles 3.4.6.19. shall be not less than 200 lx.	
Accessibility — Inclusive signage	3.4.6.16. Door Release Hardware	(4) Except as permitted by Sentence 3.3.1.12.(6), electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on exit doors other than doors described in Sentence (5) provided, … (g) a legible sign having the words EMERGENCY EXIT UNLOCKED BY FIRE ALARM is permanently mounted on the door, (h) the lettering on the sign required in Clause (g) is at least 25 mm high with a 5 mm stroke,	3.4.6.16. Door Release Hardware	(4) Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on doors, other than provided … (g) a visual information sign complying with Subsection 3.8.3 is permanently mounted on the door, (h) a tactile information sign complying with Subsection 3.8.3. is permanently mounted near the door, … (l) where they are installed on doors providing emergency crossover access to *floor areas* from *exit* stairs in accordance with Article 3.4.6.18., (i) the locking device releases immediately upon the operation of a manual station for the fire alarm system located on the wall on the *exit* stair side not more than 600 mm from the door,	(4) Except as permitted by Sentence 3.3.1.12.(6), electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position are permitted to be installed on ~~exit~~ doors, other than doors described in Sentence (5) provided~~,~~ … (g)~~-~~ a ~~legible~~visual information sign having the words EMERGENCY EXIT UNLOCKED BY FIRE ALARM is permanently mounted on the door, (h) ~~the lettering on the~~ a tactile information sign ~~required in Clause (g)~~ complying with Subsection 3.8.3. is ~~at least 25~~permanently mounted near the door, … (l) where they are installed on doors providing emergency crossover access to *floor areas* from *exit* stairs in accordance with Article 3.4.6.18..	https://www.dropbox.com/s/ux4904t32wutxw7/Proposed_Change_1561.pdf?dl=0 https://www.dropbox.com/s/umn9hpo3bdwi2kd/Proposed_Change_1105.pdf?dl=0 https://www.dropbox.com/s/b8gunu2ca1ya0wv/Proposed_Change_1126.pdf?dl=0 https://www.dropbox.com/s/bo3opstmqczr43x/Proposed_Change_1127.pdf?dl=0

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				(ii) a visual information sign displaying the words "Re-entry door unlocked by fire alarm" that complies with Subsection 3.8.3. is permanently mounted on the door on the *exit* stair side, and (iii) a tactile information sign displaying the words "Re-entry door unlocked by fire alarm" that complies with Subsection 3.8.3. is permanently mounted near the door on the exit stair side.	(i) the locking device releases immediately upon the operation of a manual station for the fire alarm system located on the wall on the *exit* stair side not more than 600 mm ~~high with a 5 mm stroke,~~ from the door, (ii) a visual information sign displaying the words "Re-entry door unlocked by fire alarm" that complies with Subsection 3.8.3. is permanently mounted on the door on the *exit* stair side, and (iii) a tactile information sign displaying the words "Re-entry door unlocked by fire alarm" that complies with Subsection 3.8.3. is permanently mounted near the door on the exit stair side.	
Accessibility - Inclusive signage	3.4.6.18. Emergency Crossover Access to Floor Areas	(3) Doors referred to in Sentence (1) shall be identified by a permanently mounted sign on the stair side to indicate that they are openable from that side. (4) Locked doors intended to prevent entry into a *floor area* from an *exit* stair shall, (a) be identified by a permanently mounted sign on the stair side to indicate the location of the nearest unlocked door in each direction of travel, and …	3.4.6.18. Emergency Crossover Access to Floor Areas	(3) Doors referred to in Sentence (1) shall be identified by visual and tactile information signs complying with Subsection 3.8.3. mounted on the stairway side to indicate that they are openable from that side. (4) Locked doors intended to prevent entry into a floor area from an exit stair shall (a) be identified by visual and tactile information signs complying with Subsection 3.8.3. mounted on the stairway side to indicate the location of the nearest unlocked door in each direction of travel, and …	(3) Doors referred to in Sentence (1) shall be identified by ~~a permanently~~visual and tactile information signs complying with Subsection 3.8.3. mounted ~~sign~~ on the ~~stair~~stairway side to indicate that they are openable from that side. (4) Locked doors intended to prevent entry into a floor area from an exit stair shall~~,~~ ~~(~~(a) be identified by ~~a permanently~~visual and tactile information signs complying with Subsection 3.8.3. mounted ~~sign~~ on the ~~stair~~stairway side to indicate the location of the nearest unlocked door in each direction of travel, and …	https://www.dropbox.com/s/ptc0nyfpxkme8z8/Proposed_Change_1561.pdf?dl=0
Accessibility - Inclusive signage	3.4.6.19. Floor Numbering	(1) Arabic numerals indicating the assigned floor number shall, (a) be mounted permanently on each side of doors to *exit* stair shafts, (b) be not less than 60 mm high, raised approximately 0.7 mm above the surface, (c) be located 1 500 mm from the finished floor, and (d) be contrasting in colour with the surface to which they are applied. (2) Upper case letters indicating the designation assigned to each *exit* stair shaft shall be mounted permanently on each side of doors to the *exit* stair shaft and shall, (a) be not less than 60 mm high, raised approximately 0.7 mm above the surface, (b) be located 1 500 mm from the finished floor, and	3.4.6.19. Floor Numbering and Identification of stair Shafts.	(1) Arabic numerals indicating the assigned floor number in both visual and tactile forms in accordance with Subsection 3.8.3. shall be mounted permanently on the wall on the stair side and on the floor side at the latch side of doors to *exit* stair shafts. (2) Upper case letters indicating the designation assigned to each *exit* stair shaft in both visual and tactile forms in accordance with Subsection 3.8.3. shall be mounted permanently on the wall on the stair side and on the floor side at the latch side of doors to *exit* stair shafts.	(1) Arabic numerals indicating the assigned floor number in both visual and tactile forms in accordance with Subsection 3.8.3. shall~~,~~ ~~(a)~~ be mounted permanently on ~~each~~the wall on the stair side and on the floor side at the latch side of doors to *exit* stair shafts~~,~~. ~~(b) be not less than 60 mm high, raised approximately 0.7 mm above the surface,~~ ~~(c) be located 1 500 mm from the finished floor, and~~ ~~(d) be contrasting in colour with the surface to which they are applied.~~ (2) Upper case letters indicating the designation assigned to each *exit* stair shaft in both visual and tactile forms in accordance with Subsection 3.8.3. shall be mounted permanently on ~~each~~the wall on the stair side and on the floor side at the latch side of doors to ~~the~~ *exit* stair ~~shaft and shall,~~ ~~(a) be not less than 60 mm high, raised approximately 0.7 mm above the surface,~~	https://www.dropbox.com/s/ptc0nyfpxkme8z8/Proposed_Change_1561.pdf?dl=0

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		(c) be contrasting in colour with the surface on which they are applied.			~~(b) be located 1 500 mm from the finished floor, and~~ ~~(c) be contrasting in colour with the surface on which they are applied~~shafts.	
Accessibility - Inclusive signage	3.8.3.1. Accessibility Signs	N/A	3.8.3.9. Accessible Signs	(1) Visual information signs required by Subsections 3.4.5. and 3.4.6. shall comply with Clauses 4.5.2, 4.5.3 and 4.5.4 of CSA B651, “Accessible design for the built environment.” (2) Tactile information signs required by Subsections 3.4.5. and 3.4.6. shall (a) have Braille and tactile characters in accordance with Clauses 4.5.6.2 and 4.5.6.3 of CSA B651, “Accessible design for the built environment,” (b) be installed on the wall closest to the latch side of the door or on the nearest wall on the right side of the door, where there is no wall at the latch side, and (c) be centred 1 500 mm above the finished floor with the edge of the sign located not more than 300 mm from the door. (3) Signs required by Article 3.8.3.1.A. shall incorporate the International Symbol of Access or the International Symbol of Access for Hearing Loss and appropriate graphical or textual information that clearly indicates the type of facilities available.	(1) Visual information signs required by Subsections 3.4.5. and 3.4.6. shall comply with Clauses 4.5.2, 4.5.3 and 4.5.4 of CSA B651, “Accessible design for the built environment.” (2) Tactile information signs required by Subsections 3.4.5. and 3.4.6. shall (a) have Braille and tactile characters in accordance with Clauses 4.5.6.2 and 4.5.6.3 of CSA B651, “Accessible design for the built environment,” (b) be installed on the wall closest to the latch side of the door or on the nearest wall on the right side of the door, where there is no wall at the latch side, and (c) be centred 1 500 mm above the finished floor with the edge of the sign located not more than 300 mm from the door. (3) Signs required by Article 3.8.3.1.A. shall incorporate the International Symbol of Access or the International Symbol of Access for Hearing Loss and appropriate graphical or textual information that clearly indicates the type of facilities available.	https://www.dropbox.com/s/ptc0nyfpxkme8z8/Proposed_Change_1561.pdf?dl=0
Accessibility — Inclusive signage	3.8.3.1. Accessibility Signs	(1) Where a *building* is required to have a *barrier-free* entrance, signs incorporating the International Symbol of Access shall be installed to indicate the location of, (a) that entrance, (b) ramps located in a required *barrier-free* path of travel serving that entrance, and (c) an exterior passenger loading zone conforming to Sentence 3.8.2.2.(3), if one is provided. (2) Where a washroom, elevator, telephone or parking area is required to accommodate persons with disabilities, it shall be identified by a sign consisting of the International Symbol of Access and such other graphic, tactile or written directions as are needed to indicate clearly the type of facility available. (3) Where a washroom is not designed to accommodate persons with disabilities in a *storey*	3.8.2.10. Signs and indicators	(1.1) Signs providing visual information in accordance with Subsection 3.8.3. shall be installed to indicate the location of (a) *barrier-free* entrances, (b) *barrier-free* washrooms, (c) *barrier-free* showers, (d) *barrier-free* elevators, (e) *barrier-free* parking spaces, and (f) assistive listening systems or adaptive technologies. … (3) Where a washroom is not designed to accommodate persons with physical disabilities in a *storey* to which a *barrier-free* path of travel is required by Article 3.8.2.1., signs providing visual and tactile information in accordance with Subsection	(1~~) Where a *building* is required to have a *barrier-free* entrance, signs incorporating the International Symbol of Access~~.1) Signs providing visual information in accordance with Subsection 3.8.3. shall be installed to indicate the location of~~,~~ ~~(a) that entrance,~~ (a) *barrier-free* entrances, (b)~~ ramps located in a required~~ *barrier-free* ~~path of travel serving that entrance, and~~washrooms, ~~(c) an exterior passenger loading zone conforming to Sentence 3.8.2.2.(3), if one is provided.~~ ~~(2) Where a washroom, elevator, telephone or parking area is required to accommodate persons with disabilities, it shall be identified by a sign consisting of the International Symbol of Access and such other graphic, tactile or written directions as are~~	https://www.dropbox.com/s/s4z8kk3yloem9zq/Proposed_Change_1569.pdf?dl=0

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		that is required by Article 3.8.2.1. to have a *barrier-free* path of travel, signs shall be provided to indicate the location of a washroom required to be *barrier-free*. (4) Signs incorporating the International Symbol of Access shall be installed where necessary to indicate the location of a *barrier-free means of egress*. (5) Where a wall mounted tactile sign is provided in a *building*, characters, symbols or pictographs on the sign shall be located not less than 1 200 mm and not more than 1 500 mm above the finished floor. (6) Where a wall mounted tactile sign is provided in a *storey* that is not required by Article 3.8.2.1. to have a *barrier-free* path of travel, characters, symbols or pictographs on the sign shall conform to Sentence (5).		3.8.3. shall be installed to indicate the location of *barrier-free* facilities. … (7) Except for doors that serve *service spaces* or are located within a *suite*, signs installed at or near doors shall provide the same information in both visual and tactile forms in accordance with Subsection 3.8.3. (8) Directional signs shall provide visual information in accordance with Subsection 3.8.3.	~~needed to indicate clearly the type of facility available.~~ (c) *barrier-free* showers, (d) *barrier-free* elevators, (e) *barrier-free* parking spaces, and (f) assistive listening systems or adaptive technologies. … (3) Where a washroom is not designed to accommodate persons with physical disabilities in a *storey* ~~that~~to which a *barrier-free* path of travel is required by Article 3.8.2.1~~. to have a *barrier-free* path of travel,~~., signs providing visual and tactile information in accordance with Subsection 3.8.3.~~ shall be ~~provided~~installed to indicate the location of ~~a washroom required to be~~ *barrier-free* facilities. ~~(4) Signs incorporating the International Symbol of Access shall be installed where necessary to indicate the location of a *barrier-free means of egress*.~~ ~~(5) Where a wall mounted tactile sign is provided in a *building*, characters, symbols or pictographs on the sign shall be located not less than 1 200 mm and not more than 1 500 mm above the finished floor.~~ ~~(6) Where a wall mounted tactile sign is provided in a *storey* that is not required by Article 3.8.2.1. to have a *barrier-free* path of travel, characters, symbols or pictographs on the sign shall conform to Sentence (5).~~ … (7) Except for doors that serve *service spaces* or are located within a *suite*, signs installed at or near doors shall provide the same information in both visual and tactile forms in accordance with Subsection 3.8.3. (8) Directional signs shall provide visual information in accordance with Subsection 3.8.3.	
Accessibility — Inclusive signage	3.4.5.1. Exit Signage	(1) Except as provided by Sentences (9) and (10), every exit door shall have an exit sign placed over or adjacent to it if the exit serves, (a) a building more than 2 storeys in building height, (b) a building having an occupant load of more than 150, or	3.4.5.1. Exit Signs	(1) Every exit door shall have an exit sign providing visual information placed over or adjacent to it if the exit serves, (a) a building more than 2 storeys in building height, (b) a building having an occupant load of more than 150, or (c) a room or floor area that has a fire escape as part of a required means of egress.	(1) Except as provided by Sentences (9) and (10), every exit door shall have an exit sign providing visual information placed over or adjacent to it if the exit serves, (a) a building more than 2 storeys in building height, (b) a building having an occupant load of more than 150, or	https://www.dropbox.com/s/ptc0nyfpxkme8z8/Proposed_Change_1561.pdf?dl=0

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		(c) a room or floor area that has a fire escape as part of a required means of egress. (2) Except as provided by Sentence (7), every exit sign shall, (a) be visible on approach to the exit, (b) consist of a green pictogram and white graphic symbol meeting the visibility specifications referred to in ISO 3864-1, "Graphical Symbols – Safety Colours and Safety Signs – Part 1: Design Principles for Safety Signs and Safety Markings", and (c) conform to ISO 7010, "Graphical Symbols - Safety Colours and Safety Signs - Registered Safety Signs" for the following symbols: (i) E001 emergency exit left, (ii) E002 emergency exit right, (iii) E005 90-degree directional arrow, and (iv) E006 45-degree directional arrow.		(2) Every exit sign providing visual information shall (a) be visible on approach to the exit, (b) consist of a green and white or lightly tinted graphical symbol meeting the colour specifications referred to in ISO 3864-1, "Graphical symbols - Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings," and (c) conform to ISO 7010, "Graphical symbols – Safety colours and safety signs – Registered safety signs," for the following symbols (i) E001 emergency exit left, (ii) E002 emergency exit right, (iii) E005 90-degree directional arrow, and (iv) E006 45-degree directional arrow.	(c) a room or floor area that has a fire escape as part of a required means of egress. (2) Except as provided by Sentence (7), every exit sign providing visual information shall~~,~~ (a) be visible on approach to the exit, (b) consist of a green ~~pictogram~~ and white ~~graphic~~or lightly tinted graphical symbol meeting the ~~visibility~~colour specifications referred to in ISO-3864-~~-~~1, "Graphical Symbols – Safety Colours and Safety Signs – Part 1: Design Principles for Safety Signs and Safety Markings", and (c) conform to ISO 7010, "Graphical Symbols - Safety Colours and Safety Signs - Registered Safety Signs" for the following symbols: (i) E001 emergency exit left, (ii) E002 emergency exit right, (iii) E005 90-degree directional arrow, and (iv) E006 45-degree directional arrow.	
Accessibility — Inclusive signage	3.4.5.1.A. Exit Signs with Tactile Information	N/A	3.4.5.2. Exit Signs with Tactile Information	(1) An exit sign displaying the word "EXIT" in tactile form that complies with Subsection 3.8.3. shall be mounted on the approach side of exit doors described in Sentence 3.4.5.1.(1), in the direction of travel to the exit.	(1) An exit sign displaying the word "EXIT" in tactile form that complies with Subsection 3.8.3. shall be mounted on the approach side of exit doors described in Sentence 3.4.5.1.(1), in the direction of travel to the exit.	https://www.dropbox.com/s/ptc0nyfpxkme8z8/Proposed_Change_1561.pdf?dl=0
Accessibility	3.2.7.3. Emergency Lighting	N/A	3.2.7.3. Emergency Lighting	(1) Emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in, … (o) universal washrooms, universal shower rooms and accessible change spaces required by Article 3.8.2.3.	(1) Emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in, … (o) universal washrooms, universal shower rooms and accessible change spaces required by Article 3.8.2.3.	https://www.dropbox.com/s/59imwavxieibbvh/Proposed_Change_1553.pdf?dl=0
Accessibility — Inclusive signage	3.3.1.17.A Tactile Walking Surface Indicators	N/A	3.3.1.19. Tactile Warning Surface Indicators	(1) Except as provided in Sentence (2), tactile attention indicators complying with Clauses 4.3.5.3.1, 4.3.5.3.3 and 4.3.5.3.4 of CSA B651, "Accessible design for the built environment," shall be installed (a) at the top of flights of stairs that are not enclosed, and (b) at drop-off edges with a change in elevation greater than 300 mm that are unprotected by a guard.	(1) Except as provided in Sentence (2), tactile attention indicators complying with Clauses 4.3.5.3.1, 4.3.5.3.3 and 4.3.5.3.4 of CSA B651, "Accessible design for the built environment," shall be installed (a) at the top of flights of stairs that are not enclosed, and (b) at drop-off edges with a change in elevation greater than 300 mm that are unprotected by a guard.	https://www.dropbox.com/s/94dfx4j8l2ii702/Proposed_Change_1570.pdf?dl=0

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				(2) Sentence (1) does not apply to service spaces, bleachers addressed in Subsection 3.3.2., stages, loading docks, industrial occupancies, within dwelling units, and to stairs and drop-off edges serving not more than two dwelling units.	(2) Sentence (1) does not apply to service spaces, bleachers addressed in Subsection 3.3.2., stages, loading docks, industrial occupancies, within dwelling units, and to stairs and drop-off edges serving not more than two dwelling units.	
Accessibility - Low-Cost and No-Cost Items	3.3.1.12. Doors and Door Hardware	(1) Except as required by Article 3.3.3.4. and Sentences 3.3.4.11.(11), 3.8.3.3.(1) and (2), a door that opens into or is located within a *public corridor* or other facility that provides *access to exit* from a *suite*, (a) shall provide a clear opening of not less than 800 mm, if there is only one door leaf, (b) shall, in a doorway with multiple leaves, have the active leaf providing a clear opening of not less than 800 mm,	3.3.1.13. Doors and Door Hardware	(1) Except as required by Article 3.3.3.4., a door that opens into or is located within a *public corridor* or other facility that provides *access to exit* from a *suite* shall (a) provide a clear opening of not less than 850 mm if there is only one door leaf, (b) in a doorway with multiple leaves, have the active leaf providing a clear opening of not less than 850 mm,	(1) Except as required by Article 3.3.3.4. and Sentences 3.3.4.11.(11), 3.8.3.3.(1) and (2), a door that opens into or is located within a *public corridor* or other facility that provides *access to exit* from a *suite*~~,~~ shall (a) ~~shall~~ provide a clear opening of not less than ~~800~~850 mm~~,~~ if there is only one door leaf, (b) ~~shall,~~ in a doorway with multiple leaves, have the active leaf providing a clear opening of not less than ~~800~~850 mm,	https://www.dropbox.com/s/0c20no0orv0quu8/Proposed_Change_1344.pdf?dl=0
Accessibility - Low-Cost and No-Cost Items	3.4.3.2. Exit Width	N/A	3.4.3.2. Exit Width	(Table 3.4.3.2.-A - Minimum Widths of Exit Corridors, Passageways, Ramps, Stairs and Doorways in Group A, Group B, Division 1, and Groups C, D, E and F Occupancies) (Table 3.4.3.2.-B - Minimum Widths of Exit Corridors, Passageways, Ramps, Stairs and Doorways in Group B, Division 2 and Division 3 Occupancies)	(See the National PCF for the changes in the tables)	https://www.dropbox.com/s/0c20no0orv0quu8/Proposed_Change_1344.pdf?dl=0
Accessibility - Anthropometrics	3.8.3.15 Shelves or Counters ~~for Telephones~~	N/A	3.8.2.11 and 3.8.3.20. Counters	(6) Where a service counter is provided, at least one section of it shall comply with Sentence (7). (7) A section of a service counter required to be *barrier-free* in accordance with Sentence (6) shall (a) be not less than 800 mm long centred over a knee space conforming to Clause (c), (b) have a surface not more than 865 mm above the floor, and (c) forward-facing interaction with a person or a device is required, have a knee space underneath it that is (i) not less than 800 mm wide, (ii) not less than 685 mm high, and (iii) not less than 485 mm deep.	(6) Where a service counter is provided, at least one section of it shall comply with Sentence (7). (7) A section of a service counter required to be *barrier-free* in accordance with Sentence (6) shall (a) be not less than 800 mm long centred over a knee space conforming to Clause (c), (b) have a surface not more than 865 mm above the floor, and (c) forward-facing interaction with a person or a device is required, have a knee space underneath it that is (i) not less than 800 mm wide, (ii) not less than 685 mm high, and (iii) not less than 485 mm deep.	https://www.dropbox.com/s/e1z7z2u9rhvre0e/Proposed_Change_1534.pdf?dl=0
Accessibility - Inclusive Building Entrance	3.8.1.2. Entrances	N/A	3.8.2.2. Entrances	(7) Except for service entrances and entrances to *suites* within a *suite* of *residential occupancy* that has not been provided with a barrier-free path of travel as per Sentence 3.8.2.1.(5), all pedestrian entrances to a *barrier-free storey* of a *building* referred to in Sentence 3.8.1.1.(1) shall be *barrier-free* and shall connect to a *barrier-free* exterior path of travel complying with Sentence 3.8.1.3.A.(1).	(7) Except for service entrances and entrances to *suites* within a *suite* of *residential occupancy* that has not been provided with a barrier-free path of travel as per Sentence 3.8.2.1.(5), all pedestrian entrances to a *barrier-free storey* of a *building* referred to in Sentence 3.8.1.1.(1) shall be *barrier-free* and shall	https://www.dropbox.com/s/vdcpvb33q3ac3mt/Proposed_Change_1473.pdf?dl=0

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				(8) A *barrier-free* entrance required by Sentence (1) shall be designed in accordance with Subsection 3.8.3.	connect to a *barrier-free* exterior path of travel complying with Sentence 3.8.1.3.A.(1). (8) A *barrier-free* entrance required by Sentence (1) shall be designed in accordance with Subsection 3.8.3.	
Accessibility — Anthropometrics	3.8.1.3.A Exterior Barrier-Free Paths of Travel to Building Entrances and Exterior Passenger-Loading Zones (New)	N/A	3.8.2.5. Exterior Barrier-Fee Paths of Travel to Building Entrances and Exterior Passenger-Loading Zones	(1) A direct exterior *barrier-free* path of travel that complies with Subsection 3.8.3. shall be provided between a *barrier-free* entrance referred to in Article 3.8.1.2. and (a) a designated *barrier-free* parking area, where provided, (b) an exterior passenger-loading zone, where provided, and (c) a public thoroughfare. (2) In *storage garages*, a *barrier-free* path of travel that complies with Subsection 3.8.2. shall be provided between each parking level with *barrier-free* parking and all other parts of the *building* required to be provided with *barrier-free* access in accordance with Subsection 3.8.1. that are served by that *storage garage*. (3) Exterior passenger-loading zones shall comply with Subsection 3.8.3.	(1) A direct exterior *barrier-free* path of travel that complies with Subsection 3.8.3. shall be provided between a *barrier-free* entrance referred to in Article 3.8.1.2. and (a) a designated *barrier-free* parking area, where provided, (b) an exterior passenger-loading zone, where provided, and (c) a public thoroughfare. (2) In *storage garages*, a *barrier-free* path of travel that complies with Subsection 3.8.2. shall be provided between each parking level with *barrier-free* parking and all other parts of the *building* required to be provided with *barrier-free* access in accordance with Subsection 3.8.1. that are served by that *storage garage*. (3) Exterior passenger-loading zones shall comply with Subsection 3.8.3.	https://www.dropbox.com/s/xxfwqvnmibwq9bu/Proposed_Change_1531.pdf?dl=0
Accessibility - Inclusive Access to Floor Level	3.8.2.1. Areas Requiring Barrier-Free Path of Travel	(1) Except as permitted by Sentence (3), a barrier-free path of travel from the entrances required by Sentences 3.8.1.2.(1) and (3) to be barrier-free shall be provided, (a) throughout the entrance storey, (b) except as permitted by Sentence (2), to and throughout all normally occupied floor areas and rooftop amenity spaces, and (c) throughout all normally occupied floor areas and rooftop amenity spaces that, (i) are exempt from the application of Clause (b), and (ii) are served by a passenger elevator, escalator, inclined moving walk, or other platform equipped passenger elevating device. (3) A barrier-free path of travel described in Sentence (1) is not required to extend, …	3.8.2.3. Areas Requiring a Barrier-Free Path of Travel	(1) Except as permitted by Sentence (2), a *barrier-free* path of travel from the entrances required by Sentences 3.8.1.2.(1) and (3) to be *barrier-free* shall be provided throughout the entrance *storey* and within all other normally occupied *floor areas*. (See Article 3.3.1.7. for additional requirements regarding *floor areas* above or below the *first storey* to which a *barrier-free* path of travel is required.) … (3) A *barrier-free* path of travel for persons in wheelchairs is not required … (g1) within a parking level with no *barrier-free* parking spaces, … (l) to the floor level above or below the entrance level in *buildings* no more than 2 *storeys* in *building height* or in 2-*storey suites*, unless the floor level above or below	(1) Except as permitted by Sentence (~~3~~2), a *barrier-free* path of travel from the entrances required by Sentences 3.8.1.2.(1) and (3) to be *barrier-free* shall be provided~~, (a)~~ throughout the entrance *storey*~~, (b) except as permitted by Sentence (2), to~~ and ~~throughout~~within all other normally occupied *floor areas* ~~and rooftop amenity spaces, and~~. (See ~~(c) throughout all normally occupied~~Article 3.3.1.7. for additional requirements regarding *floor areas* ~~and rooftop amenity~~above or below the *first storey* to which a *barrier-free* path of travel is required.) … (3) A *barrier-free* path of travel for persons in wheelchairs is not required … (g1) within a parking level with no *barrier-free* parking spaces~~ that,~~ … (l) to the floor level above or below the entrance level in *buildings* no more than 2 *storeys* in	https://www.dropbox.com/s/4rh2thuihf84ob3/Proposed_Change_1481.pdf?dl=0 https://www.dropbox.com/s/exev1nu3rmxkoik/Proposed_Change_1482.pdf?dl=0 https://www.dropbox.com/s/oyjtkpaek1e4v8i/Proposed_Change_1535.pdf?dl=0

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				(i) is served by a passenger elevator, a platform-equipped passenger-elevating device, an escalator or an inclined moving walk, (ii) is 600 m^2 or more in *floor area*, (iii) contains facilities that are not contained on the entrance level, but that are integral to the principal function of the entrance level, or (iv) contains an *assembly occupancy* more than 100 m^2 in *floor area*,	*building height* or in 2-*storey suites*, unless the floor level above or below (i) ~~are exempt from the application of Clause (b), and~~ ~~(ii) are~~is served by a passenger elevator, a platform-equipped passenger-elevating device, an escalator~~,~~ or an inclined moving walk~~, or other platform equipped passenger elevating device.~~ (~~3) A barrier-free path of travel described in Sentence (1~~ii) is 600 m^2 or more in *floor area*, (iii) contains facilities that are not ~~required~~contained on the entrance level, but that are integral to ~~extend,~~the principal function of the entrance level, or (iv) contains an *assembly occupancy* more than 100 m^2 in *floor area*,	
Accessibility - Anthropometrics	3.8.2.2. Access to parking Areas	(1) A *barrier-free* path of travel shall be provided from the entrance described in Article 3.8.1.2. to, (a) an exterior parking area, where exterior parking is provided, and (b) at least one parking level, where a passenger elevator serves an indoor parking level.	3.8.2.5. Exterior Barrier-Free Paths of Travel and Exterior Passenger-Loading Zones	(1) A direct exterior *barrier-free* path of travel shall comply with Subsection 3.8.3. and shall be provided between a *barrier-free* entrance referred to in Article 3.8.2.2. and (a) a designated *barrier-free* parking area, where provided, (b) an exterior passenger-loading zone, where provided, and (c) a public thoroughfare. … (4) In *storage garages*, a *barrier-free* path of travel that complies with Subsection 3.8.3. shall be provided between each parking level with *barrier-free* parking and all other parts of the *building* required to be provided with *barrier-free* access in accordance with Subsection 3.8.2. that are served by that *storage garage*.	(1) A *barrier-free* path of travel shall be provided from the entrance described in Article 3.8.1.2. to … (c) a public thoroughfare. … (4) In *storage garages*, a *barrier-free* path of travel that complies with Subsection 3.8.3. shall be provided between each parking level~~,~~ ~~where a passenger elevator serves an indoor parking level.~~ with *barrier-free* parking and all other parts of the *building* required to be provided with *barrier-free* access in accordance with Subsection 3.8.2. that are served by that *storage garage*.	https://www.dropbox.com/s/xxfwqvnmibwq9bu/Proposed_Change_1531.pdf?dl=0
Accessibility — Inclusive Building Entrance	3.8.3.3. Doorways and Doors	N/A	3.8.2.7. Power Door Operators	… (16) Except as provided in Sentences (12) and 3.8.1.2.(5) and except for doors provided with hold-open devices, doors equipped with a self-closing device shall be equipped with power door operators complying with Subsection 3.8.3. that allow persons to activate the opening of the doors in the intended direction of travel, where the doors are located (a) in an entrance referred to in Article 3.8.1.2., including the interior doors of a vestibule where provided,	(16) Except as provided in Sentences (12) and 3.8.1.2.(5) and except for doors provided with hold-open devices, doors equipped with a self-closing device shall be equipped with power door operators complying with Subsection 3.8.3. that allow persons to activate the opening of the doors in the intended direction of travel, where the doors are located (a) in an entrance referred to in Article 3.8.1.2., including the interior doors of a vestibule where provided, (b) in a *barrier-free* path of travel, between the entrance referred to in Clause (a) and the	https://www.dropbox.com/s/pwnj0dskdkk55y3/Proposed_Change_1474.pdf?dl=0

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				(b) in a *barrier-free* path of travel, between the entrance referred to in Clause (a) and the entrance doors to *suites* or rooms served by a *public corridor* or a corridor used by the public, and (c) in an entrance to a washroom with a *barrier-free* water closet.	entrance doors to *suites* or rooms served by a *public corridor* or a corridor used by the public, and (c) in an entrance to a washroom with a *barrier-free* water closet.	
Accessibility — Anthropometrics	3.8.3.2. Exterior Walks	(1) Except as provided in Sentence (2), exterior walks that form part of a barrier-free path of travel shall, … (e) have not less than 1 100 mm wide surface of a different texture to that surrounding it, where the line of travel is level and even with adjacent walking surfaces,	3.8.3.3. Exterior Walks	(1) Except as provided in Sentence (2), exterior walks that form part of a barrier-free path of travel shall, … (e) be not less than 1 600 mm wide, and … (i) be designed in accordance with Clause 8.2.1 of CSA B651, "Accessible design for the built environment."	(1) Except as provided in Sentence (2), exterior walks that form part of a barrier-free path of travel shall, … (e) have not less than ~~1 100~~ 1 600 mm wide surface of a different texture to that surrounding it, where the line of travel is level and even with adjacent walking surfaces, … (i) be designed in accordance with Clause 8.2.1 of CSA B651, "Accessible design for the built environment."	https://www.dropbox.com/s/vjmlu8rcrsxjpa9/Proposed_Change_1577.pdf?dl=0
Accessibility — Inclusive Plumbing Accommodation	3.8.3.16.A. Water-Bottle Filling Stations	N/A	3.8.3.11 water-Bottle Filling Stations	(1) Where more than one Water-bottle filling station is provided, at least one shall be equipped with controls that (a) activate automatically, or (b) comply with Clause 3.8.1.5.(1)(c). (2) Water-bottle filling stations required by Sentence (1) that are located in a *storey* where a *barrier-free* path of travel is required shall (a) be located along the *barrier-free* path of travel, (b) have a clear floor space of 800 mm by 1 350 mm in front of them, (c) where they have frontal access, provide a knee clearance in accordance with Clause 3.8.3.11.(1)(c), (d) be operable at a height of not more than 1 200 mm above the floor , and (e) be equipped with controls that (i) activate automatically, or (ii) comply with Sentence 3.8.1.5.(1).	(1) Where more than one Water-bottle filling station is provided, at least one shall be equipped with controls that (a) activate automatically, or (b) comply with Clause 3.8.1.5.(1)(c). (2) Water-bottle filling stations required by Sentence (1) that are located in a *storey* where a *barrier-free* path of travel is required shall (a) be located along the *barrier-free* path of travel, (b) have a clear floor space of 800 mm by 1 350 mm in front of them, (c) where they have frontal access, provide a knee clearance in accordance with Clause 3.8.3.11.(1)(c), (d) be operable at a height of not more than 1 200 mm above the floor , and (e) be equipped with controls that (i) activate automatically, or (ii) comply with Sentence 3.8.1.5.(1).	https://www.dropbox.com/s/fcvszfpcqdbmy3e/Proposed_Change_1551.pdf?dl=0
Accessibility - Inclusive Plumbing Accommodation	3.8.2.3. Washrooms Required to be Barrier-Free	N/A	3.8.2.8. Plumbing Facilities	(7) In *buildings* containing Group A, Group B, Division 2 or Group E *major* *occupancies* where at least one of these *major occupancies* has an *occupant load* of more than 500, at least one universal washroom on the *storey* on which the main *barrier-free* entrance to the *building* is located shall	(7) In *buildings* containing Group A, Group B, Division 2 or Group E *major* *occupancies* where at least one of these *major occupancies* has an *occupant load* of more than 500, at least one universal washroom on the *storey* on which the main *barrier-free* entrance to the *building*	

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				incorporate an accessible change space conforming to Subsection 3.8.3.	is located shall incorporate an accessible change space conforming to Subsection 3.8.3.	
Accessibility — Inclusive Plumbing Accommodation	3.8.3.13 Showers and Bathtubs	N/A	3.8.3.17. Showers	… (6) At each location where a showering facility is provided for use by the general public or customers, or as part of a common-use area for employees, at least one universal dressing and shower room conforming to Sentence (7) shall be provided. (7) A universal dressing and shower room required by Sentence (6) shall (a) be located in a *barrier-free* path of travel, (b) have a door capable of being locked from the inside and released from the outside in the event of an emergency, (c) have a lavatory and a mirror conforming to Article 3.8.3.11., (d) have a shower conforming to Sentence (1), (e) have a bench that is at least 1 830 mm long by 760 mm wide and 480 mm to 520 mm high, (f) have a clear transfer space adjacent to the long side of the bench that is 900 mm wide and as long as the bench, and (g) have a coat hook conforming to Clause 3.8.3.12.(1)(g).	(6) At each location where a showering facility is provided for use by the general public or customers, or as part of a common-use area for employees, at least one universal dressing and shower room conforming to Sentence (7) shall be provided. (7) A universal dressing and shower room required by Sentence (6) shall (a) be located in a *barrier-free* path of travel, (b) have a door capable of being locked from the inside and released from the outside in the event of an emergency, (c) have a lavatory and a mirror conforming to Article 3.8.3.11., (d) have a shower conforming to Sentence (1), (e) have a bench that is at least 1 830 mm long by 760 mm wide and 480 mm to 520 mm high, (f) have a clear transfer space adjacent to the long side of the bench that is 900 mm wide and as long as the bench, and (g) have a coat hook conforming to Clause 3.8.3.12.(1)(g).	https://www.dropbox.com/s/hnqt8f0mvfrexf6/Proposed_Change_1595%20%281%29.pdf?dl=0
Accessibility - Anthropometrics	3.8.3.4. Ramps	(1) Ramps located in a barrier-free path of travel shall, (a) have a minimum width of 900 mm between handrails, … (c) have a level area of at least 1 670 mm by 1 670 mm at the top and bottom of a ramp and where a door is located in a ramp, so that the level area extends at least 600 mm beyond the latch side of the door opening, except that where the door opens away from the ramp, the area extending beyond the latch side of the door opening may be reduced to 300 mm,	3.8.3.5. Ramps	(1) A ramp located in a *barrier-free* path of travel shall (a) have a clear width not less than 1 000 mm, … (c) have a level area not less than 1 700 mm by 1 700 mm at the top and bottom and at intermediate levels of a ramp …	(1) ~~Ramps~~A ramp located in a *barrier-free* path of travel shall~~,~~ (a) have a ~~minimum~~clear width ~~of 900~~not less than 1 000 mm ~~between handrails~~, … (c) have a level area ~~of at least~~not less than 1 ~~670~~700 mm by 1 ~~670~~700 mm at the top and bottom and at intermediate levels of a ramp and where a door is located in a ramp, so that the level area extends at least 600 mm beyond the latch side of the door opening, except that where the door opens away from the ramp, the area extending beyond the latch side of the door opening may be reduced to 300 mm,	https://www.dropbox.com/s/t6p9ribrzczwt1v/Proposed_Change_1580.pdf?dl=0
Accessibility — Anthropometrics	3.8.3.5. Passenger Elevating Devices	(1) A passenger elevating device referred to in Article 3.8.2.1. shall conform to CSA B355, “Lifts for Persons with Physical Disabilities”.	3.8.3.7. Passenger Elevating Devices	(1) A passenger-elevating device referred to in Article 3.8.2.1. located in a *barrier-free* path of travel shall (a) conform to CSA B355, “Platform lifts and stair lifts for barrier-free access,” (b) have a clear floor space not less than 1 500 mm long by 1 000 mm wide, and	(1) A passenger~~-~~-elevating device referred to in Article 3.8.2.1. located in a *barrier-free* path of travel shall (a) conform to CSA B355, “~~Lifts~~Platform lifts and stair lifts for ~~Persons with Physical Disabilities”.~~barrier-free access,”	https://www.dropbox.com/s/6y6xld4gzpjz4dh/Proposed_Change_1624.pdf?dl=0

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				(c) have entry doors or gates (i) providing a clear width not less than 850 mm in the open position if located on the short side of the passenger-elevating device, or (ii) providing a clear width not less than 1 000 mm in the open position if located at either end of the long side of the passenger-elevating device.	(b) have a clear floor space not less than 1 500 mm long by 1 000 mm wide, and (c) have entry doors or gates (i) providing a clear width not less than 850 mm in the open position if located on the short side of the passenger-elevating device, or (ii) providing a clear width not less than 1 000 mm in the open position if located at either end of the long side of the passenger-elevating device.	
Accessibility — Anthropometrics	3.3.1.8. Headroom Clearance	(1) Except within the *floor area* of a *storage garage*, the minimum headroom clearance in every *access to exit* shall conform to the requirements of Article 3.4.3.5. for *exits*.	3.3.1.8. Headroom and Protruding Objects	(1) Except within the *floor area* of a *storage garage*, the minimum headroom clearance in every *access to exit* shall conform to the requirements of Article 3.4.3.4. for *exits*. (2) Except as permitted by Sentence (3) and except for paths of travel in *service rooms* and *dwelling units*, protruding *building* elements located within 1 980 mm of the floor shall not project more than 100 mm horizontally into paths of travel in a manner that would create a hazard. (3) The horizontal projection of a protruding *building* element referred to in Sentence (2) is permitted to be more than 100 mm, provided the clearance between the protruding element and the floor is less than 680 mm.	(1) Except within the *floor area* of a *storage garage*, the minimum headroom clearance in every *access to exit* shall conform to the requirements of Article 3.4.3.~~5~~4. for *exits*. (2) Except as permitted by Sentence (3) and except for paths of travel in *service rooms* and *dwelling units*, protruding *building* elements located within 1 980 mm of the floor shall not project more than 100 mm horizontally into paths of travel in a manner that would create a hazard. (3) The horizontal projection of a protruding *building* element referred to in Sentence (2) is permitted to be more than 100 mm, provided the clearance between the protruding element and the floor is less than 680 mm.	https://www.dropbox.com/s/15txlbyr8czjmv0/Proposed_Change_1532.pdf?dl=0
Accessibility — Anthropometrics	3.3.1.9. Corridor	(3) Except as permitted by Sentence (4), obstructions located within 1 980 mm of the floor shall not project more than 100 mm horizontally in a manner that would create a hazard for a person with a visual disability traveling adjacent to the walls in, (a) an *exit* passageway, (b) a *public corridor*, (c) a corridor used by the public, (d) a corridor serving classrooms, or (e) a corridor serving patients' or residents' sleeping rooms in a Group B, Division 2 or Division 3 *occupancy*. (4) The horizontal projection of an obstruction referred to in Sentence (3) is permitted to be more than 100 mm provided the clearance between the obstruction and the floor is less than 680 mm.	3.3.1.9. Corridor	N/A	~~(3) Except as permitted by Sentence (4), obstructions located within 1 980 mm of the floor shall not project more than 100 mm horizontally in a manner that would create a hazard for a person with a visual disability traveling adjacent to the walls in,~~ ~~(a) an *exit* passageway,~~ ~~(b) a *public corridor*,~~ ~~(c) a corridor used by the public,~~ ~~(d) a corridor serving classrooms, or~~ ~~(e) a corridor serving patients' or residents' sleeping rooms in a Group B, Division 2 or Division 3 *occupancy*.~~ ~~(4) The horizontal projection of an obstruction referred to in Sentence (3) is permitted to be more than 100 mm provided the clearance between the obstruction and the floor is less than 680 mm.~~	https://www.dropbox.com/s/15txlbyr8czjmv0/Proposed_Change_1532.pdf?dl=0

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Accessibility	3.4.6.7. Ramp Slope	(1) Except as required for aisles by Article 3.3.2.4., the maximum slope of a ramp shall be, (a) 1 in 10 in any *assembly*, *care*, *care and treatment*, *detention* or *residential occupancy*, (b) 1 in 6 in rooms or *floor areas* classified as *mercantile occupancy* or *industrial occupancy*, (c) 1 in 8 in any other *floor area*, and (d) 1 in 10 for an exterior ramp.	3.4.6.7. Ramp Slope	(1) Except as provided in Sentence (2) and as provided for aisles in Article 3.3.2.4., ramps shall have a uniform slope along their length and a maximum slope of 1 in 12. (2) Except as provided in Section 3.8., ramps in *industrial occupancies* shall have a uniform slope along their length and a maximum slope of (a) 1 in 6 for interior ramps, and (b) 1 in 10 for exterior ramps.	(1) Except as ~~required~~provided in Sentence (2) and as provided for aisles ~~by~~in Article 3.3.2.4., ~~the~~ramps shall have a uniform slope along their length and a maximum slope of ~~a ramp shall be,~~1 in 12. ~~(a) 1 in 10 in any *assembly*, *care*, *care and treatment*, *detention* or *residential occupancy*,~~ ~~(b) 1 in 6 in rooms or *floor areas* classified as *mercantile occupancy* or *industrial occupancy*,~~ ~~(c) 1 in 8 in any other *floor area*~~(2) Except as provided in Section 3.8., ramps in *industrial occupancies* shall have a uniform slope along their length and a maximum slope of (a) 1 in 6 for interior ramps, and (~~d~~b) 1 in 10 for ~~an~~ exterior ~~ramp~~ramps.	https://www.dropbox.com/s/zc715fa6xnfj9w9/Proposed_Change_1503.pdf?dl=0

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PART 3 – ENCAPSULATED MASS TIMBER CONSTRUCTION

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
EMTC	3.1.6.1. Scope (New)	N/A	3.1.6.1. Scope	(1) *Encapsulated mass timber construction* permitted in this Part shall conform to this Subsection.	(1) *Encapsulated mass timber construction* permitted in this Part shall conform to this Subsection.	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.6.2. Materials Permitted (New)	N/A	3.1.6.2. Materials Permitted	(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.	(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.	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.6.3. Structural Mass Timber Elements (New)	N/A	3.1.6.3. Structural Mass Timber Elements	(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	(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	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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				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)	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. (See the National PCF for Table 3.1.6.3. - Minimum Dimensions of Structural Mass Timber Elements in Encapsulated Mass Timber Construction)	
EMTC	3.1.6.4. Encapsulation of Mass Timber Elements (New)	N/A	3.1.6.4. Encapsulation of Mass Timber Elements	(1) Except as provided in Sentences (3) to (6), Sentence 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., 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. (2) Except as provided in Sentence 3.1.6.11.(1), the material or assembly of materials referred to in 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 the 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	(1) Except as provided in Sentences (3) to (6), Sentence 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., 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. (2) Except as provided in Sentence 3.1.6.11.(1), the material or assembly of materials referred to in 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 the 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	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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				a *suite* or *fire compartment* need not be protected in accordance with Sentence (1), provided (a) their 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. (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. (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*. (6) The exposed surfaces of mass timber ceilings within a *suite* need not be protected in accordance with Sentence (1), provided their aggregate area 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.	a *suite* or *fire compartment* need not be protected in accordance with Sentence (1), provided (a) their 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. (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. (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*. (6) The exposed surfaces of mass timber ceilings within a *suite* need not be protected in accordance with Sentence (1), provided their aggregate area 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.	
EMTC	3.1.6.5. Determination of Encapsulation Ratings (New)	N/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 tests conducted in conformance with CAN/ULC-S146, “Standard Method of Test for the Evaluation of Encapsulation Materials and Assemblies of Materials for the Protection of Structural Timber Elements.”	(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 tests conducted in conformance with CAN/ULC-S146, “Standard Method of Test for the Evaluation of Encapsulation Materials and Assemblies of Materials for the Protection of Structural Timber Elements.”	https://www.dropbox.com/sh/mzcti c9gffs0m6j/AAA eWgwsGEQ3gMt G5WE9e71Sa?dl =0
EMTC	3.1.6.6. Encapsulation Materials (New)	N/A	3.1.6.6. Encapsulation Materials	(1) Gypsum-concrete topping and concrete not less than 38 mm thick are deemed to have an *encapsulation rating* of 50min when installed on the upper side of amass 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	(1) Gypsum-concrete topping and concrete not less than 38 mm thick are deemed to have an *encapsulation rating* of 50min when installed on the upper side of amass 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	https://www.dropbox.com/sh/mzcti c9gffs0m6j/AAA eWgwsGEQ3gMt G5WE9e71Sa?dl =0

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				(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, "Standard Specification for Gypsum Board," or (ii) CAN/CSA A82.27-M, "Gypsum Board."	(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, "Standard Specification for Gypsum Board," or (ii) CAN/CSA A82.27-M, "Gypsum Board."	
EMTC	3.1.6.7. Combustible Roofing Materials (New)	N/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) said 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	(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) said 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	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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				deck to not less than 150 mm above the adjacent sheathing, and (v) except as permitted by Subclause (b)(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.	deck to not less than 150 mm above the adjacent sheathing, and (v) except as permitted by Subclause (b)(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.	
EMTC	3.1.6.8. Combustible Window Sashes and Frames (New)	N/A	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. (Table 3.1.6.3. - Minimum Dimensions of Structural Mass Timber Elements in Encapsulated Mass Timber Construction)	(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. (See the National PCF for Table 3.1.6.3. - Minimum Dimensions of Structural Mass Timber Elements in Encapsulated Mass Timber Construction)	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.6.9. Exterior Cladding (New)	N/A	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*. (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*,	(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*. (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*,	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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				(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 be 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 of Clause 3.1.5.5.(1)(b), or (e) a combination of *noncombustible* cladding and the cladding described in Clauses (a) to (d).	(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 be 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 of Clause 3.1.5.5.(1)(b), or (e) a combination of *noncombustible* cladding and the cladding described in Clauses (a) to (d).	
EMTC	3.1.6.9. Exterior Cladding (New)	N/A	3.1.6.9. Exterior Cladding	(3) The permitted area of *combustible* cladding in Clause (2)(a) or (b) shall not exceed 5% of the cladding on each exterior wall of each *storey* where the time from receipt of notification of a fire by the fire department until the arrival of the first fire department vehicle at the *building* exceeds 10 min in 10% or more of all fire department calls to the *building*. (4) An exterior wall assembly constructed in conformance with Section 6 in MMAH Supplementary Standard SB-2,	(3) The permitted area of *combustible* cladding in Clause (2)(a) or (b) shall not exceed 5% of the cladding on each exterior wall of each *storey* where the time from receipt of notification of a fire by the fire department until the arrival of the first fire department vehicle at the *building* exceeds 10 min in 10% or more of all fire department calls to the *building*. (4) An exterior wall assembly constructed in conformance with Section 6 in MMAH Supplementary Standard SB-2,	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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				"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 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, "Standard Practice for 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*.	"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 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, "Standard Practice for 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*.	
EMTC	3.1.6.10. Combustible Components in Exterior Walls (New)	N/A	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*.	(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*.	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.6.11. Nailing Elements (New)	N/A	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	(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	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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				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.	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.	
EMTC	3.1.6.12. Combustible Flooring Elements (New)	N/A	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.	(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.	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.6.13. Combustible Stairs (New)	N/A	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.	(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.	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.6.14. Combustible Interior Finishes (New)	N/A	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*.	(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*.	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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				(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, 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 25 on any exposed surface or on any surface that would be exposed by cutting through the material in any direction, except that 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.	(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, 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 25 on any exposed surface or on any surface that would be exposed by cutting through the material in any direction, except that 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.	
EMTC	3.1.6.15. Combustible Elements in Partitions (New)	N/A	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 19 mm 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*.	(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 19 mm 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*.	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.6.16. Exposed Construction Materials and Components in	N/A	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	(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	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0

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	Concealed Spaces (New)			within floor, roof, and wall assemblies 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.	within floor, roof, and wall assemblies 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.	
EMTC	3.1.6.17. Penetration by Outlet Boxes (New)	N/A	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-resistance rating* shall be separated by a distance of not less than 600 mm. (Table 3.1.6.3. - Minimum Dimensions of Structural Mass Timber Elements in Encapsulated Mass Timber Construction)	(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-resistance rating* shall be separated by a distance of not less than 600 mm. (See the National PCF for Table 3.1.6.3. - Minimum Dimensions of Structural Mass Timber Elements in Encapsulated Mass Timber Construction)	https://www.dropbox.com/s/niz5tvf9rn25r5i/Proposed_Change_1024.pdf?dl=0
EMTC	3.1.3.1. Separation of Major Occupancies	(3) In a *building* within the scope of 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*. (4) In a *building* within the scope of 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*.	3.1.3.1. Separation of Major Occupancies Table 3.1.3.1	(3) In a *building* within the scope of Article 3.2.2.43A. or Article 3.2.2.42A, a *fire separation* with a 2 h *fire-resistance rating* is required between the Group C and Group A, Division 2 *major occupancies*. (4) In a *building* within the scope of Article 3.2.2.50A. or Article 3.2.2.49A, a *fire separation* with a 2 h *fire-resistance rating* is required between the Group D and Group A, Division 2 *major occupancies*. (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*. (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*.	(3) In a *building* within the scope of Article 3.2.2.43A~~.,~~ or Article 3.2.2.42A, a *fire separation* with a 2 h *fire-resistance rating* is required between the Group C and Group A, Division 2 *major occupancies*. (4) In a *building* within the scope of Article 3.2.2.50A~~.,~~ or Article 3.2.2.49A, a *fire separation* with a 2 h *fire-resistance rating* is required between the Group D and Group A, Division 2 *major occupancies*. (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*. (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*.	https://www.dropbox.com/s/wt7j0kacx80i0mt/Proposed_Change_1033.pdf?dl=0
EMTC	3.1.7.5. Rating of Supporting Construction	(3) Except for *noncombustible construction* required by Subclauses 3.2.2.43A.(2)(c)(i) and 3.2.2.50A.(2)(c)(i), if and assembly is required to be of *noncombustible construction* and have a *fire-resistance rating*, it shall be supported by *noncombustible construction*.	3.1.7.5. Rating of Supporting Construction	(3) Except as provided in Sentence (4) and for *noncombustible* roof assemblies required by Clauses 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*. (4) Except for portions 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 portions of	(3) Except as provided in Sentence (4) and for *noncombustible* ~~*construction*~~roof assemblies required by Clauses Subclauses 3.2.2.43A.(2)(c)(i) and 3.2.2.50A.(2)(c)(i), if ~~and~~an assembly is required to be of *noncombustible construction* and have a *fire-resistance rating*, it shall be supported by *noncombustible construction*. (4) Except for portions of a *building* constructed in accordance with Article 3.2.2.7. that are required to be of *noncombustible construction*, assemblies of	https://www.dropbox.com/s/f3ncqetvhgxbr9y/Proposed_Change_1035.pdf?dl=0

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				buildings permitted to be of *encapsulated mass timber construction* are permitted to be supported by *encapsulated mass timber construction*.	*noncombustible construction* in *buildings* or portions of *buildings* permitted to be of *encapsulated mass timber construction* are permitted to be supported by *encapsulated mass timber construction*.	
EMTC	3.1.11.3. Fire Blocks between Nailing and Supporting Elements	N/A	3.1.11.3. Fire Blocks between Nailing and Supporting Elements	(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. (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) 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. (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.	https://www.dropbox.com/s/klh637rv983nm2i/Proposed_Change_1036.pdf?dl=0
EMTC	3.1.11.5. Fire Blocks in Horizontal Concealed Spaces	(4) Sentence (3) does 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.	3.1.11.5. Fire Blocks in Horizontal Concealed Spaces	(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 thereof 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 (a) not more than 600 m2 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) not more than 300 m2 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. (4) Sentence (3) and (3.1) does 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.	~~(4) Sentence (3~~(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 thereof 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 (a) not more than 600 m2 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) not more than 300 m2 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. (4) Sentence (3) and (3.1) does 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.	https://www.dropbox.com/s/klh637rv983nm2i/Proposed_Change_1036.pdf?dl=0
EMTC	3.1.11.7. Fire Blocks Material	(4) In a *building* permitted to be of *combustible construction*, in a *combustible* roof system permitted by Sentence 3.1.5.3.(2), and in a raised platform permitted by Sentence 3.1.5.8.(2), *fire blocks* are permitted to be, (a) solid lumber or a structural composite lumber product conforming to ASTM D5456,	3.1.11.7. Fire Blocks Material	(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). (4) In a *building* permitted to be of *combustible construction*, in a *combustible* roof system permitted by Sentence 3.1.5.3.(2), and in a raised platform permitted by	(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). (4) In a *building* permitted to be of *combustible construction*, in a *combustible* roof system permitted by Sentence 3.1.5.3.(2), and in a raised platform permitted by	https://www.dropbox.com/s/klh637rv983nm2i/Proposed_Change_1036.pdf?dl=0

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		"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.		Sentence 3.1.5.8.(2) and 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.	Sentence 3.1.5.8.(2) and 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.	
EMTC	3.1.13.12. Encapsulated Mass Timber Construction (New)	N/A	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*.	(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*.	https://www.dropbox.com/s/w5mpyv63rq86g76/Proposed_Change_1039.pdf?dl=0
EMTC	3.1.15.2. Roof Coverings	(1) Except as provided by Sentences (2) and (3), every roof covering shall have a Class A, B or C classification as determined in accordance with Article 3.1.15.1. …	3.1.15.2. Roof Coverings	(1) Except as provided in 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. … (4) Roof coverings in *buildings* or parts of *buildings* permitted to be of *encapsulated mass timber construction* shall have a Class A classification where the roof height is greater than 25 m measured from the floor of the *first storey* to the highest point of the roof.	(1) Except as provided ~~by~~in Sentences (2) ~~and (3~~to (4), every roof covering shall have a Class A, B or C classification as determined in accordance with Article 3.1.15.1. … (4) Roof coverings in *buildings* or parts of *buildings* permitted to be of *encapsulated mass timber construction* shall have a Class A classification.	https://www.dropbox.com/s/lxcpmf0cjff2er4/Proposed_Change_1040.pdf?dl=0
EMTC	3.2.1.2. Storage Garage Considered as a Separate Building	(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*,	3.2.1.2. Storage Garage Considered as a Separate Building	(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* throughout, (b) every opening in the exterior wall is separated from *storeys* above the opening by a projection of	(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*~~,~~ throughout, (b) every opening in the exterior wall is separated from *storeys* above the opening by a projection of	https://www.dropbox.com/s/95g5v1l4sr8kzkt/Proposed_Change_1042.pdf?dl=0

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		(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 (ii) 2 m beyond the exterior face of the *storage garage* if the upper *storeys* are permitted to be of *combustible 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 (ii) 2 m if the upper *storeys* are permitted to be of *combustible construction*.		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 (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 (ii) 2 m if the upper *storeys* are permitted to be of *combustible construction* or *encapsulated mass timber construction*.	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 (ii) 2 m beyond the exterior face of the *storage garage* if the upper *storeys* are permitted to be of *combustible construction*~~, or~~ 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 (ii) 2 m if the upper *storeys* are permitted to be of *combustible construction*~~.~~ or *encapsulated mass timber construction.*	
EMTC	3.2.2.42A. Group C, up to 12 storeys, Sprinklered (New)	N/A	3.2.2.48. Group C, up to 12 storeys, Sprinklered	(1) A *building* classified as Group C is permitted to conform to Sentence (2), provided (a) it is *sprinklered* throughout, (b) it is not more than 12 *storeys* in *building height*, (c) it has a height not more than 42 m measured between the floor of the *first storey* and the uppermost floor level that does not serve a rooftop enclosure for elevator machinery, a stairway or a *service room* used only for service to the *building*, and (d) it has a *building area* not more than 6 000 m2. (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 one *storey*, subject to the requirements of Sentence 3.3.4.2.(3), the floor assemblies, including floors	(1) A *building* classified as Group C is permitted to conform to Sentence (2), provided (a) it is *sprinklered* throughout, (b) it is not more than 12 *storeys* in *building height*, (c) it has a height not more than 42 m measured between the floor of the *first storey* and the uppermost floor level that does not serve a rooftop enclosure for elevator machinery, a stairway or a *service room* used only for service to the *building*, and (d) it has a *building area* not more than 6 000 m2. (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 one *storey*, subject to the requirements of Sentence 3.3.4.2.(3), the floor assemblies, including floors	https://www.dropbox.com/s/tvhah20i1h7w6px/Proposed_Change_1029.pdf?dl=0

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				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*.	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*.	
EMTC	3.2.2.49A. Group C, up to 12 storeys, Sprinklered (New)	N/A	3.2.2.57. Group D, up to 12 storeys, Sprinklered	(1) A *building* classified as Group D is permitted to conform to Sentence (2), provided (a) it is *sprinklered* throughout, (b) it is not more than 12 *storeys* in *building height*, (c) it has a height not more than 42 m measured between the floor of the *first storey* and the uppermost floor level that does not serve a rooftop enclosure for elevator machinery, a stairway or a *service room* used only 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*,	(1) A *building* classified as Group D is permitted to conform to Sentence (2), provided (a) it is *sprinklered* throughout, (b) it is not more than 12 *storeys* in *building height*, (c) it has a height not more than 42 m measured between the floor of the *first storey* and the uppermost floor level that does not serve a rooftop enclosure for elevator machinery, a stairway or a *service room* used only 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*,	https://www.dropbox.com/s/nb4644dsap4sxau/Proposed_Ch.pdf?dl=0

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				(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*	(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*	
EMTC	3.2.2.6. Multiple Major Occupancies	(1) Except as permitted by Articles 3.2.2.7. and 3.2.2.8. and Sentences 3.2.2.43A.(5) 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*.	3.2.2.6. Multiple Major Occupancies	(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*.	(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*.	https://www.dropbox.com/s/550lsireqdnliaj/Propose%20%281%29.pdf?dl=0
EMTC	3.2.2.7. Superimposed Major Occupancies	(1) Except as permitted by Article 3.2.2.8. and Sentences 3.2.2.43A.(5) 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*.	3.2.2.7. Superimposed Major Occupancies	(1) Except as provided in Article 3.2.2.8. and Sentences 3.2.2.18.(2), 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* were of that *major occupancy*.	(1) Except as ~~permitted by~~provided in Article 3.2.2.8. and Sentences 3.2.2.18.(2), 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~~were of that *major occupancy*.	https://www.dropbox.com/s/qsnovj9mjynkmm2/Proposed_Change_1032.pdf?dl=0
EMTC	3.2.2.11. Exterior Balconies	(1) 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.*	3.2.2.11. Exterior Balconies	(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*. (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).	(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*. (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).	https://www.dropbox.com/s/0bp4id21mbea16x/Proposed_Change_10.pdf?dl=0
EMTC	3.2.3.7. Construction of Exposing Building Face	(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. … (3) Except as provided by Sentences (4) to (6), 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”. …	3.2.3.7. Construction of Exposing Building Face	(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. … (3) Except as provided by Sentences (4) to (6) and Article 3.1.6.9., 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”. …	(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. … (3) Except as provided by Sentences (4) to (6~~),~~) and Article 3.1.6.9., 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”. …	https://www.dropbox.com/s/9pw52nlfrly4gdr/Proposed_Cha.pdf?dl=0 https://www.dropbox.com/s/yfh9fy1mhoo7ixx/Proposed_Change_1322.pdf?dl=0 https://www.dropbox.com/s/zm65ln0gzzy0ty8/Proposed_Change_1069.pdf?dl=0

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		(5) Except as provided by Sentence (6) and Article 3.1.6.9, 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.		(5) Except as provided by Sentence (6) and Article 3.1.6.9, 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.	(5) Except as provided by Sentence (6) and Article 3.1.6.9, 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.	https://www.dropbox.com/s/jcdc0tndrqbtjd9/Proposed_Change_1296.pdf?dl=0
EMTC	3.2.3.19. Walkway between Buildings	(3) A *walkway* connected to a *building* required to be of *noncombustible 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.	3.2.3.19. Walkway between Buildings	(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*. (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*	(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*. (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,~~	https://www.dropbox.com/s/ticacgq0zb66fx1/Proposed_Change.pdf?dl=0

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				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.	*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.	
EMTC	3.2.6.1. Application	(1) 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*, (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 (e) containing a *retirement home*, where the floor level of the highest *storey* of the *retirement home* is more than 18 m above *grade*.	3.2.6.1. Application	(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, 2 or 3 *occupancy*, (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 (e) containing a *retirement home*, where the floor level of the highest *storey* of the *retirement home* is more than 18 m above *grade*. (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*.	(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*, (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 (e) containing a *retirement home*, where the floor level of the highest *storey* of the *retirement home* is more than 18 m above *grade*. (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*.	https://www.dropbox.com/s/724xn8ycrj62xtb/Proposed_Change_1034.pdf?dl=0
EMTC	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	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	(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	https://www.dropbox.com/s/61pfgr0srf4y03t/Proposed_Change_1047.pdf?dl=0

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		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, (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), 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.		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, (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), (iv.1) totally enclosed non-metallic 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.	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, (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), ~~and~~ (iv.1) totally enclosed non-metallic 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.	
EMTC	6.2.3.2. Materials in Air Duct Systems	(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", (b) conform to Article 3.1.5.15. in a *building* required to be of *noncombustible construction*, (c) conform to Subsection 3.1.9., (d) are used only in horizontal runs in a *building* required to be of *noncombustible construction*,	3.6.5. Air Duct and Plenum Systems 3.6.5.1. Duct Materials	(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", (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., (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*,	(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", (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., (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*,	https://www.dropbox.com/s/61pfgr0srf4y03t/Proposed_Change_1047.pdf?dl=0

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		(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.		(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.	(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.	
EMTC	6.2.9.2. Insulation and Coverings	(3) Except as provided in Sentence (7), where *combustible* insulation is used on piping in a *horizontal* or *vertical service space*, the insulation and coverings on such pipes shall have a *flame-spread rating* throughout the material of not more than 25 in *buildings* of *noncombustible construction* and not more than 75 in *buildings* of *combustible construction*.	3.6.5.5. Insulation and Coverings	(2) Except as permitted by Sentence (5), where *combustible* insulation is used on piping in a *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*.	(~~3~~2) Except as ~~provided in~~permitted by Sentence (~~7~~5), where *combustible* insulation is used on piping in a *horizontal service space* or a *vertical service space*, the insulation and coverings on ~~such pipes~~that piping shall have a *flame-spread rating* ~~throughout~~, on any exposed surface and on any surface that would be exposed by cutting through the material ~~of~~in any direction, (a) not more than 25 in ~~*buildings*~~a *building* required to be of *noncombustible construction* ~~and~~or in a *building* or part of a *building* permitted to be of *encapsulated mass timber construction*, or (b) not more than 75 in ~~*buildings*~~a *building* permitted to be of *combustible construction*.	https://www.dropbox.com/s/rbeznggysfmzs7dy/Proposed_Change_1049.pdf?dl=0
EMTC	3.2.5.13. Automatic Sprinkler Systems	(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 3.2.2.43A. or 3.2.2.50A., other than, (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*.	3.2.5.12. Automatic Sprinkler Systems	(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., Article 3.2.2.43A., Article 3.2.2.49A. or 3.2.2.50A., other than, (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*.	(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.~~43A.~~42A., Article 3.2.2.43A., Article 3.2.2.49A. or 3.2.2.50A., other than, (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*.	https://www.dropbox.com/s/fd1thvhlgsu98je/Proposed_Change_1294.pdf?dl=0

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PART 3 – BUILDING FIRE SAFETY

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Building Fire Safety	3.1.5.2. Minor Combustible Components	(1) The following minor *combustible* components are permitted in a *building* required to be of *noncombustible* *construction*: (a) paint, (b) self-adhesive tapes, mastics and caulking materials applied to provide flexible seals between the major components of exterior wall construction, (c) *fire stops* conforming to Sentence 3.1.9.1.(1) and *fire blocks* conforming to Article 3.1.11.7., (d) tubing for pneumatic controls provided it has an outside diameter not more than 10 mm, (e) adhesives, *vapour barriers* and sheathing papers, (f) electrical outlet and junction boxes, (g) wood blocking within wall assemblies intended for the attachment of handrails, fixtures, and similar items mounted on the surface of the wall, and (h) similar minor components.	3.1.5.2. Minor Combustible Components	(1) The following minor *combustible* components are permitted in a *building* required to be of *noncombustible construction*: (a) paint, (b) self-adhesive tapes, mastics and caulking materials, including foamed plastic air sealants, applied to provide a seal between the major components of exterior wall construction, (c) *firestops* and *fire blocks* conforming to Sentence 3.1.9.1.(1) and Article 3.1.11.7., (d) tubing for pneumatic controls provided it has an outside diameter not more than 10 mm, (e) adhesives, *vapour barriers* and sheathing papers, (f) electrical outlet and junction boxes, (g) wood blocking intended for the attachment of window elements within exterior wall assemblies, (h) wood blocking within wall assemblies intended for the attachment of handrails, fixtures, and similar items mounted on the surface of the wall, and (i) similar minor components.	(1) The following minor *combustible* components are permitted in a *building* required to be of *noncombustible construction*: ~~*construction:*~~ (a) paint, (b) self-adhesive tapes, mastics and caulking materials, including foamed plastic air sealants, applied to provide ~~flexible seals~~a seal between the major components of exterior wall construction, (c) ~~*fire stops* conforming to Sentence 3.1.9.1.(1) and~~ *firestops* and *fire blocks* conforming to Sentence 3.1.9.1.(1) and Article 3.1.11.7., (d) tubing for pneumatic controls provided it has an outside diameter of not more than 10 mm, (e) adhesives, *vapour barriers* and sheathing papers, (f) electrical outlet and junction boxes, (g) wood blocking intended for the attachment of window elements within exterior wall assemblies, (h) wood blocking within wall assemblies intended for the attachment of handrails, fixtures, and similar items mounted on the surface of the wall, and (~~h~~i) similar minor components.	https://www.dropbox.com/s/7y8a2jivykic362/Proposed_Change_1356.pdf?dl=0
Building Fire Safety	3.1.5.4. Combustible Glazing and Skylights	(5) *Combustible* window sashes and frames are permitted in a *building* required to be of *noncombustible construction* provided, (a) each window in an exterior wall face is an individual unit separated by a wall of *noncombustible construction* from every other opening in the exterior wall, (b) windows in exterior walls in contiguous *storeys* are separated by not less than 1 000 mm of *noncombustible construction*, and	3.1.5.4. Combustible Glazing and Skylights	(5) *Combustible* window sashes and frames are permitted in a *building* required to be of *noncombustible construction*, provided they are vertically non-contiguous between *storeys*.	(5) *Combustible* window sashes and frames are permitted in a *building* required to be of *noncombustible construction*, provided~~,~~ ~~(a) each window in an exterior wall face is an individual unit separated by a wall of *noncombustible construction* from every other opening in the exterior wall,~~ ~~(b) windows in exterior walls in~~ they are vertically non-contiguous between *storeys* ~~are separated by not less than 1 000 mm of *noncombustible construction*, and~~	https://www.dropbox.com/s/aclsj8rn55p5v5d/Proposed_Change_1355.pdf?dl=0

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		(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.			~~(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.~~	
Building Fire Safety	3.1.5.12A. Foamed Plastic Insulation	(2) Except as provided in Sentences (3) and (4), foamed plastic insulation with a *flame-spread rating* not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in a *building* required to be of *noncombustible construction*, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a thermal barrier that, (a) consists of not less than 12.7 mm thick gypsum board mechanically fastened to a supporting assembly independent of the insulation, (b) consists of lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, (c) consists of masonry, (d) consists of concrete, or (e) meets the requirements of classification B when tested in conformance with CAN/ULC-S124, "Test for the Evaluation of Protective Coverings for Foamed Plastic".	3.1.5.15. Foamed Plastic Insulation	(2) Except as provided in Sentences (3), (4) and 3.1.5.7.(1) foamed plastic insulation with a *flame-spread rating* not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in a *building* required to be of *noncombustible construction*, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a thermal barrier consisting of (a) not less than 12.7 mm thick gypsum board mechanically fastened to a supporting assembly independent of the insulation, (b) lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, (c) masonry, (d) concrete, or (e) any thermal barrier that meets the requirements of classification B when tested in conformance with CAN/ULC-S124, "Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastic."	(2) Except as provided in Sentences (3), (4) and ~~(4),~~3.1.5.7.(1) foamed plastic insulation with a *flame-spread rating* not more than 500 on any exposed surface, or any surface that would be exposed by cutting through the material in any direction, is permitted in a *building* required to be of *noncombustible construction*, provided the insulation is protected from adjacent space in the *building*, other than adjacent concealed spaces within wall assemblies, by a thermal barrier ~~that,~~consisting of (a) ~~consists of~~ not less than 12.7 mm thick gypsum board mechanically fastened to a supporting assembly independent of the insulation, (b) ~~consists of~~ lath and plaster, mechanically fastened to a supporting assembly independent of the insulation, (c) ~~consists of~~ masonry, (d) ~~consists of~~ concrete, or ~~(e)~~(e) any thermal barrier that meets the requirements of classification B when tested in conformance with CAN/ULC-S124, "Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastic~~".~~."	https://www.dropbox.com/s/xcbji1ba7f84snp/Proposed_Change_1312.pdf?dl=0
Building Fire Safety	3.2.2.17. ~~Sprinklers in Lieu of Roof Rating~~ Roof Assemblies and Mezzanines in Gymnasiums, Swimming Pools, Arenas and Rinks	N/A	3.2.2.17. Roof Assemblies and Mezzanines in Gymnasiums, Swimming Pools, Arenas and Rinks	(1) The requirements for a roof assembly to have a *fire-resistance rating* stated in Articles 3.2.2.25., 3.2.2.30. and 3.2.2.32. are permitted to be waived for gymnasiums, swimming pools, arenas, and rinks, provided (a) the roof carries no loads other than normal roof loads, including permanent access walks, and ventilating, sound and lighting equipment, and (b) no part of the roof assembly is less than 6 m above the main floor or balcony, except that the restriction concerning minimum distance shall not apply to (i) an inclined and stepped floor ascending from the main floor which is used for seating purposes only, or (ii) a balcony used for seating purposes only. (2) The requirements for a *mezzanine* to have a *fire-resistance rating* stated in Articles 3.2.2.25., 3.2.2.30. and 3.2.2.32. are permitted to be waived for gymnasiums, swimming pools, arenas, and rinks, provided	(1) The requirements for a roof assembly to have a *fire-resistance rating* stated in Articles 3.2.2.25., 3.2.2.30. and 3.2.2.32. are permitted to be waived for gymnasiums, swimming pools, arenas, and rinks, provided (a) the roof carries no loads other than normal roof loads, including permanent access walks, and ventilating, sound and lighting equipment, and (b) no part of the roof assembly is less than 6 m above the main floor or balcony, except that the restriction concerning minimum distance shall not apply to (i) an inclined and stepped floor ascending from the main floor which is used for seating purposes only, or (ii) a balcony used for seating purposes only. (2) The requirements for a *mezzanine* to have a *fire-resistance rating* stated in Articles 3.2.2.25., 3.2.2.30. and 3.2.2.32. are permitted to be waived for gymnasiums, swimming pools, arenas, and rinks, provided	https://www.dropbox.com/s/6ydvyqyk5tvbfl6/Proposed_Change_1314.pdf?dl=0

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				(a) the *mezzanine* is not required to be considered as a *storey* as per Sentences 3.2.1.1.(3) to (5), (b) the *mezzanine* is used only for ventilating, sound and lighting equipment, and (c) no part of the *mezzanine* is less than 6 m above the main floor or balcony, except that this minimum distance shall not apply to (i) an inclined and stepped floor ascending from the main floor that is used for seating purposes only, or (ii) a balcony used for seating purposes only.	(a) the *mezzanine* is not required to be considered as a *storey* as per Sentences 3.2.1.1.(3) to (5), (b) the *mezzanine* is used only for ventilating, sound and lighting equipment, and (c) no part of the *mezzanine* is less than 6 m above the main floor or balcony, except that this minimum distance shall not apply to (i) an inclined and stepped floor ascending from the main floor that is used for seating purposes only, or (ii) a balcony used for seating purposes only.	
Building Fire Safety	3.2.2.25. Group A, Division 2, up to 2 Storeys	(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* and, if of *combustible construction*, shall have a *fire-resistance rating* not less than 45 min, (b) *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less 45 min, (c) roof assemblies shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, except that in a *building* not more than 1 *storey* in *building height*, the *fire-resistance rating* is permitted to be waived provided the roof assembly is constructed as a *fire-retardant treated wood* roof system conforming to Article 3.1.14.1., and the *building area* is not more than, (i) 800 m^2 if facing one *street*, (ii) 1 000 m^2 if facing two *streets*, or (iii) 1 200 m^2 if facing three *streets*, and (d) *loadbearing* walls, columns and arches supporting an assembly required to have a *fire-resistance rating* shall, (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *noncombustible construction*.	3.2.2.25. Group A, Division 2, up to 2 Storeys	(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* and, if of *combustible construction*, shall have a *fire-resistance rating* not less than 45 min, (b) except as permitted by Article 3.2.2.17., *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, (c) except as permitted by Article 3.2.2.17., roof assemblies shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, except that in a *building* not more than 1 *storey* in *building height*, the *fire-resistance rating* is permitted to be waived provided the roof assembly is constructed as a *fire-retardant-treated wood* roof system conforming to Article 3.1.14.1., and the *building area* is not more than (i) 800 m^2 if facing one *street*, (ii) 1 000 m^2 if facing 2 *streets*, or (iii) 1 200 m^2 if facing 3 *streets*, and (d) *loadbearing* walls, columns and arches supporting an assembly required to have a *fire-resistance rating* shall (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *noncombustible construction*.	(2) The *building* referred to in Sentence (1) is permitted to be of *combustible construction* or *noncombustible construction* used singly or in combination, and ~~*construction* used singly or in combination, and,~~ (a) floor assemblies shall be *fire separations* and, if of *combustible construction*, shall have a *fire-resistance rating* not less than 45 min, ~~(b)~~(b) except as permitted by Article 3.2.2.17., *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, ~~(c)~~(c) except as permitted by Article 3.2.2.17., roof assemblies shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, except that in a *building* not more than 1 *storey* in *building height*, the *fire-resistance rating* is permitted to be waived provided the roof assembly is constructed as a *fire-retardant~~-~~treated wood* roof system conforming to Article 3.1.14.1., and the *building area* is not more than~~,~~ (i) 800 m^2 if facing one *street*, (ii) 1 000 m^2 if facing ~~two~~2 *streets*, or (iii) 1 200 m^2 if facing ~~three~~3 *streets*, and (d) *loadbearing* walls, columns and arches supporting an assembly required to have a *fire-resistance rating* shall~~,~~ (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *noncombustible construction*.	https://www.dropbox.com/s/6ydvyqyk5tvbfl6/Proposed_Change_1314.pdf?dl=0

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Building Fire Safety	3.2.2.30. Group A, Division 3, up to 2 Storeys	(2) Except as permitted by Clauses (c) and (d), 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, (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *heavy timber construction*, and (d) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly, except that arches and structural members within the *storey* immediately below a roof assembly are permitted to be of *heavy timber construction*.	3.2.2.30. Group A, Division 3, up to 2 Storeys	(2) Except as permitted by Clauses (c) and (d), 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) except as permitted by Article 3.2.2.17., *mezzanines* shall have a *fire-resistance rating* not less than 1 h, (c) except as permitted by Article 3.2.2.17.,] roof assemblies shall (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *heavy timber construction*, and (d) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly, except that arches and structural members within the *storey* immediately below a roof assembly are permitted to be of *heavy timber construction*.	(2) Except as permitted by Clauses (c) and (d), 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)~~(b) except as permitted by Article 3.2.2.17., *mezzanines* shall have a *fire-resistance rating* not less than 1 h, (c) except as permitted by Article 3.2.2.17.,] roof assemblies shall~~,~~ (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *heavy timber construction*, and (d) *loadbearing* walls, columns and arches shall have a *fire-resistance rating* not less than that required for the supported assembly, except that arches and structural members within the *storey* immediately below a roof assembly are permitted to be of *heavy timber construction*.	https://www.dropbox.com/s/6ydvyqyk5tvbfl6/Proposed_Change_1314.pdf?dl=0
Building Fire Safety	3.2.2.32. Group A, Division 3, One Storey, Increased Area	(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) *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, (b) roof assemblies shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, except that the *fire-resistance rating* is permitted to be waived provided the roof assembly is constructed as a *fire-retardant treated wood* roof system conforming to Article 3.1.14.1., and the *building area* is not more than, (i) 1 200 m^2 if facing one *street*, (ii) 1 500 m^2 if facing two *streets*, or (iii) 1 800 m^2 if facing three *streets*, and (c) *loadbearing* walls, columns and arches supporting an assembly required to have a *fire-resistance rating* shall, (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *noncombustible construction*.	3.2.2.32. Group A, Division 3, One Storey, Increased Area	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 Article 3.2.2.17., *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, (b) except as permitted by Article 3.2.2.17., roof assemblies shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, except that the *fire-resistance rating* is permitted to be waived provided the roof assembly is constructed as a *fire-retardant-treated wood* roof system conforming to Article 3.1.14.1., and the *building area* is not more than (i) 1 200 m^2 if facing one *street*, (ii) 1 500 m^2 if facing 2 *streets*, or (iii) 1 800 m^2 if facing 3 *streets*, and (c) *loadbearing* walls, columns and arches supporting an assembly required to have a *fire-resistance rating* shall (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *noncombustible construction*.	~~(~~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)~~(a) except as permitted by Article 3.2.2.17., *mezzanines* shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, ~~(b)~~(b) except as permitted by Article 3.2.2.17., roof assemblies shall have, if of *combustible construction*, a *fire-resistance rating* not less than 45 min, except that the *fire-resistance rating* is permitted to be waived provided the roof assembly is constructed as a *fire-retardant~~-~~treated wood* roof system conforming to Article 3.1.14.1., and the *building area* is not more than~~,~~ (i) 1 200 m^2 if facing one *street*, (ii) 1 500 m^2 if facing ~~two~~2 *streets*, or (iii) 1 800 m^2 if facing ~~three~~3 *streets*, and (c) *loadbearing* walls, columns and arches supporting an assembly required to have a *fire-resistance rating* shall~~,~~ (i) have a *fire-resistance rating* not less than 45 min, or (ii) be of *noncombustible construction*.	https://www.dropbox.com/s/6ydvyqyk5tvbfl6/Proposed_Change_1314.pdf?dl=0

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Building Fire Safety	3.2.3.6. Combustible Projections	(3.1) Subject to Sentence (4), the face of a roof soffit is permitted to project to the property line, where it faces a *street*, lane or public thoroughfare. (4) Where roof soffits project to less than 1.2 m from the centre line of a lane or public thoroughfare or from an imaginary line between two *buildings* or *fire compartments* on the same property, they shall, (a) have no openings, and (b) be protected by, (i) not less than 0.38 mm thick sheet steel, (ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits and Fascia, for Residential Use”, (iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board installed according to CSA A82.31-M, “Gypsum Board Application”, (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.	3.2.3.6. Combustible Projections	(4) The face of a roof soffit is permitted to project to the property line, where it faces a *public way*. (5) Where roof soffits project to less than 1.2 m from the centre line of a *public way*, or from an imaginary line between two *buildings* or *fire compartments* on the same property, they shall (a) have no openings, and (b) be protected by (i) not less than 0.38 mm thick sheet steel, (ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use,” (iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board installed according to CSA A82.31-M, “Gypsum Board Application,” (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.	~~(3.1) Subject to Sentence~~ (4~~), the~~) The face of a roof soffit is permitted to project to the property line, where it faces a ~~*street*, lane or~~ *public* ~~thoroughfare~~*way*. (4~~5~~) Where roof soffits project to less than 1.2 m from the centre line of a ~~lane or~~ *public* ~~thoroughfare~~*way*, or from an imaginary line between two *buildings* or *fire compartments* on the same property, they shall~~,~~ (a) have no openings, and (b) be protected by~~,~~ (i) not less than 0.38 mm thick sheet steel, (ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use~~”,~~” (iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board installed according to CSA A82.31-M, “Gypsum Board Application”, (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.	https://www.dropbox.com/s/ukaaht98tuwgfzs/Proposed_Change_1309.pdf?dl=0

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PART 3 – PENETRATIONS

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Penetrations	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.	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 in conformance with Article 3.1.8.3., and (b) as required in this Part, have a *fire-resistance rating* as specified.	(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~~,~~ in conformance with Article 3.1.8.3., and (b) as required in this Part, have a *fire-resistance rating* as specified.	https://www.dropbox.com/s/hg5ch24w7gih9je/Proposed_Change_1359.pdf?dl=0
Penetrations	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.	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) Except as provided in Sentence (5), the continuity of a *fire separation* having a *fire-resistance rating* that abuts another *fire separation*, a floor, a ceiling, or a roof shall be maintained by a *firestop* conforming to Sentence (3). (3) The *firestop* required in Sentence (2) shall have an FT rating not less than the *fire-resistance rating* of the abutting *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems." (4) Except as provided in Sentence (5), joints located in a horizontal plane between a floor and an exterior wall shall be sealed by a *firestop* that, when subjected to the fire test method in ASTM E2307, "Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-storey Test Apparatus," has an F rating not less than the *fire-resistance rating* of the horizontal *fire separation*. (5) Joints between ceilings and walls, between floors and walls, and between walls at corners need not comply with Sentences (2) and (4) where such joints consist of gypsum	(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~~ Except as provided in 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~~5), the ~~shaft abuts on or intersects,~~ ~~(i) a floor,~~ ~~(ii) a roof slab, or~~ ~~(iii) a roof deck.~~	https://www.dropbox.com/s/hg5ch24w7gih9je/Proposed_Change_1359.pdf?dl=0 and https://www.dropbox.com/s/896ri236dr2du06/Proposed_Change_1500.pdf?dl=0

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		(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.		board that is attached to framing members and arranged so as to restrict the passage of flame and smoke through the joints.	~~(4) The~~ continuity of a *fire separation* ~~shall be maintained where it~~ having a *fire-resistance rating* that abuts another *fire separation*, a floor, a ceiling, or ~~an exterior wall assembly.~~ a roof shall be maintained by a *firestop* conforming to Sentence (3). (3) The *firestop* required in Sentence (2) shall have an FT rating not less than the *fire-resistance rating* of the abutting *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems." (4) Except as provided in Sentence (5), joints located in a horizontal plane between a floor and an exterior wall shall be sealed by a *firestop* that, when subjected to the fire test method in ASTM E2307, "Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-storey Test Apparatus," has an F rating not less than the *fire-resistance rating* of the horizontal *fire separation*. (5) Joints between ceilings and walls, between floors and walls, and between walls at corners need not comply with Sentences (2) and (4) where such joints consist of gypsum board that is attached to framing members and arranged so as to restrict the passage of flame and smoke through the joints.	
Penetrations	3.1.9.1. Fire Stops	(1) Except as provided in Sentences (2) to (5) and Article 3.1.9.3A., penetrations of a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* shall be, (a) sealed by a *fire stop* that, when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Firestop Systems", has an F rating not less than the *fire-protection rating* required for *closures* in the *fire separation* in conformance with Table 3.1.8.4., or (b) tightly fitted. (2) Penetrations of a *firewall* or a horizontal *fire separation* that is required to have a *fire-resistance rating* in conformance with Article 3.2.1.2. shall be sealed at the penetration by a *fire stop* that, when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Firestop Systems", has an FT rating not less than the *fire-resistance rating* required for the *fire separation*. (3) Penetrations of a *fire separation* in conformance with Sentence 3.6.4.2.(2) shall be sealed by a *fire stop* that, when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Firestop Systems",	3.1.9.1. Fire Stops	(1) Except as provided in Sentences (2) to (7) and Article 3.1.9.3A., penetrations of a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* shall be (a) sealed by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the required *fire-resistance rating* of the *fire separation*, or (b) cast in place, where the item penetrating the *fire separation* is steel, ferrous, copper, concrete or masonry. (2) Except as permitted in Sentence (6), penetrations of a *firewall* or a horizontal *fire separation* that is required to have a *fire-resistance rating* in conformance with Article 3.2.1.2. shall be sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the *fire-resistance rating* for the *fire separation*. (3) Except as permitted in Sentences (6) and (7), penetrations of a *fire separation* in conformance with Sentence 3.6.4.2.(2) shall be sealed by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115,	(1) Except as provided in Sentences (2) to (~~5~~7) and Article 3.1.9.3A., penetrations of a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* shall be~~,~~ (a) sealed by a ~~*fire stop*~~*firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems~~",~~," has an F rating not less than the ~~*fire-protection rating*~~ required ~~for *closures*~~*fire-resistance rating* of the *fire separation*, or (b) cast in place, where the item penetrating the *fire separation* ~~in conformance with Table 3.1.8.4., or~~is steel, ferrous, copper, concrete or masonry. ~~(b) tightly fitted.~~ (2) Except as permitted in Sentence (6), penetrations of a *firewall* or a horizontal *fire separation* that is required to have a *fire-resistance rating* in conformance with Article 3.2.1.2. shall be sealed at the penetration by a ~~*fire stop*~~*firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems~~",~~," has an FT rating not less than the *fire-resistance rating* ~~required~~ for the *fire separation*.	https://www.dropbox.com/s/nwa0qjx46cvnu0k/Proposed_Change_1361.pdf?dl=0 https://www.dropbox.com/s/6ivb6xfa7ke1l7g/Proposed_Change_1363.pdf?dl=0 https://www.dropbox.com/s/xqd3fkfpz4r2fxi/Proposed_Change_1508.pdf?dl=0 https://www.dropbox.com/s/adk4jbxj1p1djah/Propos

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		has an FT rating not less than the *fire-resistance rating* required for the *fire separation* of the assembly.		"Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the *fire-resistance rating* for the *fire separation* of the assembly. … 6) Service equipment penetrations through a horizontal *fire separation* having a *fire-resistance rating* as described in Sentences (2) and (3) that are contained within the cavity of a wall above and below the horizontal *fire separation* are permitted to be sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the *fire-resistance rating* for the *fire separation*. (7) Service equipment penetrations through a horizontal *fire separation* having a *fire-resistance rating* as described in Sentence (3) are permitted to be sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the *fire-resistance rating* for the *fire separation*, provided the penetration (a) is contained within the concealed space of a floor or ceiling assembly having a *fire-resistance rating*, (b) is located above a ceiling membrane that is a horizontal *fire separation*, or (c) is contained within a *horizontal service space* conforming to Subsection 3.6.4. that is directly above or below the floor.	(3) ~~Penetrations~~Except as permitted in Sentences (6) and (7), penetrations of a *fire separation* in conformance with Sentence 3.6.4.2.(2) shall be sealed by a ~~*fire stop*~~*firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems~~",~~," has an FT rating not less than the *fire-resistance rating* ~~required~~ for the *fire separation* of the assembly. … 6) Service equipment penetrations through a horizontal *fire separation* having a *fire-resistance rating* as described in Sentences (2) and (3) that are contained within the cavity of a wall above and below the horizontal *fire separation* are permitted to be sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the *fire-resistance rating* for the *fire separation*. (7) Service equipment penetrations through a horizontal *fire separation* having a *fire-resistance rating* as described in Sentence (3) are permitted to be sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the *fire-resistance rating* for the *fire separation*, provided the penetration (a) is contained within the concealed space of a floor or ceiling assembly having a *fire-resistance rating*, (b) is located above a ceiling membrane that is a horizontal *fire separation*, or (c) is contained within a *horizontal service space* conforming to Subsection 3.6.4. that is directly above or below the floor.	ed_Change_1523.pdf?dl=0
Penetrations	3.1.9.2. Combustibility of Service Penetrations	(1) Except as permitted by Articles 3.1.9.3. and 3.1.9.4., pipes, ducts, electrical outlet boxes, totally enclosed raceways or other similar service equipment that penetrate an assembly required to have a *fire-resistance rating* shall be *noncombustible* unless the assembly has been tested incorporating that service equipment.	3.1.9.2. Combustibility of Service Penetrations (To be removed)	N/A	~~(1) Except as permitted by Articles 3.1.9.3. and 3.1.9.4., pipes, ducts, electrical outlet boxes, totally enclosed raceways or other similar service equipment that penetrate an assembly required to have a *fire-resistance rating* shall be *noncombustible* unless the assembly has been tested incorporating that service equipment.~~	https://www.dropbox.com/s/1bwmjf1gcspx0zo/Proposed_Change_1499.pdf?dl=0
Penetrations	3.1.9.3. Penetration by Wires, Cables and Outlet Boxes	(1) Optical fibre cables and electrical wires and cables in totally enclosed *noncombustible* raceways are permitted to penetrate an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2. (2) Except as permitted by Sentence (3), totally enclosed nonmetallic raceways conforming to Article	3.1.9.~~3.~~ 2. Service Equipment Penetrations	(1) Ducts, electrical outlet boxes, pipes, totally enclosed raceways, optical fibre cables, electrical wires and cables, and other similar service equipment are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* provided they are protected at the penetration with a *firestop* conforming to Sentence 3.1.9.1.(1).	(1) ~~Optical fibre cables and~~Ducts, electrical ~~wires and cables in~~outlet boxes, pipes, totally enclosed ~~*noncombustible*~~ raceways ~~are permitted to penetrate an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2.~~ ~~(2) Except as permitted by Sentence (3), totally enclosed nonmetallic raceways conforming to Article 3.1.5.20.,~~	https://www.dropbox.com/s/1bwmjf1gcspx0zo/Proposed_Change_1499.pdf?dl=0

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		3.1.5.20., optical fibre cables, and electrical wires and cables, single or grouped, with *combustible* insulation, jackets or sheathes that conform to the requirements of Clause 3.1.5.18.(1)(a) and that are not installed in totally enclosed *noncombustible* raceways are permitted to penetrate an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2., provided the overall diameter of the single or grouped wires or cables, or the raceways is not more than 25 mm. (3) Single conductor metal sheathed cables with *combustible* jacketing that are more than 25 mm in overall diameter are permitted to penetrate a *fire separation* required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2., provided the cables are not grouped and are spaced a minimum of 300 mm apart. (4) *Combustible* totally enclosed raceways that are embedded in a concrete floor slab are permitted in an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2., provided the concrete cover between the raceway and the bottom of the slab is not less than 50 mm. (5) *Combustible* electrical outlet boxes are permitted in an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2., provided the opening through the membrane into the box is not more than 160 cm2.		(2) *Combustible* totally enclosed raceways that are embedded in a concrete floor slab are permitted in an assembly required to have a *fire-resistance rating*, provided the concrete cover between the raceway and the bottom of the slab is not less than 50 mm.	optical fibre cables, ~~and~~ electrical wires and cables, ~~single or grouped, with *combustible* insulation, jackets or sheathes that conform to the requirements of Clause 3.1.5.18.(1)(a) and that are not installed in totally enclosed *noncombustible* raceways are permitted to penetrate~~and other similar service equipment are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* ~~without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2.,~~ provided ~~the overall diameter of the single or grouped wires or cables, or the raceways is not more than 25 mm.~~they are protected at the penetration with a *firestop* conforming to Sentence 3.1.9.1.(1). ~~(3) Single conductor metal sheathed cables with *combustible* jacketing that are more than 25 mm in overall diameter are permitted to penetrate a *fire separation* required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2., provided the cables are not grouped and are spaced a minimum of 300 mm apart.~~ ~~(4~~(2) *Combustible* totally enclosed raceways that are embedded in a concrete floor slab are permitted in an assembly required to have a *fire-resistance rating*~~ without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2.,~~, provided the concrete cover between the raceway and the bottom of the slab is not less than 50 mm. ~~(5) *Combustible* electrical outlet boxes are permitted in an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by Article 3.1.9.2., provided the opening through the membrane into the box is not more than 160 cm2.~~	https://www.dropbox.com/s/cyb001ucjhy9v54/Proposed_Change_1515.pdf?dl=0 https://www.dropbox.com/s/yfjd49ve95nv5cu/Proposed_Change_1517.pdf?dl=0
Penetrations	3.1.9.3A. Penetration by Outlet Boxes	(1) Except as provided in Sentences (2) and (3), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *fire stop* that has an FT rating not less than the *fire-resistance rating* of the *fire separation* when subjected to the fire test method in CAN/ULC-S115, “Fire Tests of Firestop Systems”. (2) Except as provided in Sentences 3.1.9.1.(2) and (3), *noncombustible* outlet boxes that penetrate a vertical *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* need not conform to Sentence (1), provided, (a) they do not exceed, (i) 160 cm² in area, and (ii) an aggregate area of 650 cm² in any 9.3 m² of surface area, and	3.1.9.3. Penetration by Outlet Boxes	(1) Except as provided in Sentence (3), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that has an FT rating not less than the *fire-resistance rating* of the *fire separation* when subjected to the fire test method in CAN/ULC-S115, “Standard Method of Fire Tests of Firestop Systems.” (2) *Combustible* outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, “Standard Method of Fire Tests of Firestop Systems,” has an FT rating not less than the *fire-resistance rating* for the *fire separation*. (3) Except as provided in Sentences 3.1.9.1.(2) and (3), *noncombustible* outlet boxes that penetrate a vertical *fire separation* or a membrane forming part of an assembly	(1) Except as provided in ~~Sentences (2) and~~Sentence (3), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a ~~*fire stop*~~*firestop* that has an FT rating not less than the *fire-resistance rating* of the *fire separation* when subjected to the fire test method in CAN/ULC-S115, “Standard Method of Fire Tests of Firestop Systems~~”.~~.” (2) *Combustible* outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, “Standard Method of Fire Tests of Firestop Systems,” has an FT rating not less than the *fire-resistance rating* for the *fire separation*. (3) Except as provided in Sentences 3.1.9.1.(2) and (3), *noncombustible* outlet boxes that penetrate a vertical *fire separation* or a membrane forming part of an assembly	https://www.dropbox.com/s/4nl38chgzdw1an5/Proposed_Change_1502.pdf?dl=0 https://www.dropbox.com/s/yfjd49ve95nv5cu/Proposed_Change_1517.pdf?dl=0

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		(b) the annular space between the membrane and *noncombustible* electrical outlet boxes does not exceed 3 mm. (3) In addition to the requirements of Sentence (2), outlet boxes on opposite sides of a vertical *fire separation* having a *fire-resistance rating* shall be separated by, (a) a horizontal distance of not less than 600 mm, or (b) a *fire block* conforming to Article 3.1.11.7.		required to have a *fire-resistance rating* need not conform to Sentence (1), provided (a) they do not exceed, (i) 160 cm² in area, and (ii) an aggregate area of 650 cm² in any 9.3 m² of surface area, and (b) the annular space between the membrane and the *noncombustible* electrical outlet boxes does not exceed 3 mm. (4) Outlet boxes on opposite sides of a vertical *fire separation* having a *fire-resistance rating* shall be separated by (a) a horizontal distance of not less than 600 mm, (b) a *fire block* conforming to Article 3.1.11.7, or (c) a *firestop* installed on each outlet box that has an FT rating not less than the *fire-resistance rating* of the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems."	required to have a *fire-resistance rating* need not conform to Sentence (1), provided~~,~~ (a) they do not exceed, (i) 160 cm² in area, and (ii) an aggregate area of 650 cm² in any 9.3 m² of surface area, and (b) the annular space between the membrane and the *noncombustible* electrical outlet boxes does not exceed 3 mm. ~~(3) In addition to the requirements of Sentence (2), outlet~~(4) Outlet boxes on opposite sides of a vertical *fire separation* having a *fire-resistance rating* shall be separated by~~,~~ (a) a horizontal distance of not less than 600 mm,~~ or~~ (b) a *fire block* conforming to Article 3.1.11.7~~.~~, or (c) a *firestop* installed on each outlet box that has an FT rating not less than the *fire-resistance rating* of the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems."	
Penetrations	3.1.9.4. Combustible Piping Penetrations	(1) Except as permitted by Sentences (3) to (8), *combustible* piping shall not be used if any part of the piping system penetrates, (a) a *fire separation* required to have a *fire-resistance rating*, or (b) a membrane that forms part of an assembly required to have a *fire-resistance rating*. (2) *Combustible* piping that is part of a system described in Sentence (1) shall not be located in a *vertical service space*. (3) Except as provided by Sentences (4) to (7), *combustible* piping is permitted to penetrate a *fire separation* required to have a *fire-resistance rating* or is permitted to penetrate a membrane that forms part of an assembly required to have a *fire-resistance rating*, provided the piping is sealed at the penetration by a *fire stop* that has an F rating not less than the *fire-resistance rating* required for the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Firestop Systems", with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side. (4) Except as required by Sentence (7), *combustible* drain piping is permitted to penetrate a horizontal *fire separation*, provided it leads directly from a	3.1.9.4. Combustible Piping Penetrations	(1) *Combustible* sprinkler piping is permitted to penetrate a *fire separation* provided the *fire compartments* on each side of the *fire separation* are *sprinklered*. (2) *Combustible* water distribution piping is permitted to penetrate a *fire separation* that is required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by, provided the piping is protected at the penetration with a *firestop* in conformance with Clauses (4)(a) and (b). (3) Except as permitted by Sentences (4), (5), (7) and (8), *combustible* piping shall not be used in a drain, waste and vent piping system if any part of that system penetrates (a) a *fire separation* required to have a *fire-resistance rating*, or (b) a membrane that forms part of an assembly required to have a *fire-resistance rating*. (4) *Combustible* drain, waste and vent piping is permitted to penetrate a *fire separation* required to have a *fire-resistance rating* or a membrane that forms part of an assembly required to have a *fire-resistance rating*, provided (a) except as provided in Clause (b), the piping is sealed at the penetration by a *firestop* that has an F rating not less than the *fire-resistance rating* required for the *fire separation* when subjected to	(1) *Combustible* sprinkler piping is permitted to penetrate a *fire separation* provided the *fire compartments* on each side of the *fire separation* are *sprinklered*. (2) *Combustible* water distribution piping is permitted to penetrate a *fire separation* that is required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required by, provided the piping is protected at the penetration with a *firestop* in conformance with Clauses (4)(a) and (b). (3) Except as permitted by Sentences (~~3) to~~4), (5), (7) and (8), *combustible* piping shall not be used in a drain, waste and vent piping system if any part of ~~the piping~~that system penetrates~~,~~ (a) a *fire separation* required to have a *fire-resistance rating*, or (b) a membrane that forms part of an assembly required to have a *fire-resistance rating*. (~~2~~4) *Combustible* ~~piping that is part of a system described in Sentence (1) shall not be located in a *vertical service space*.~~ ~~(3) Except as provided by Sentences (4) to (7), *combustible*~~drain, waste and vent piping is permitted to penetrate a *fire separation* required to have a *fire-resistance rating* or ~~is permitted to penetrate~~ a membrane	https://www.dropbox.com/s/bs87r494l4ly7n0/Proposed_Change_1083.pdf?dl=0 https://www.dropbox.com/s/tfmoarghc2yoxi2/Proposed_Change_1365.pdf?dl=0 https://www.dropbox.com/s/gzlrsjeiiywn3rg/Proposed_Change_1501.pdf?dl=0

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		noncombustible water closet through a concrete floor slab and the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a). (5) Except as required by Sentence (7), *combustible* piping is permitted to penetrate a vertical or horizontal *fire separation*, provided the *fire compartments* on each side of the *fire separation* are *sprinklered* and the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a). (6) Except as required by Sentence (7), *combustible* piping not more than 25 mm in diameter containing chlorine gas is permitted to penetrate a *fire separation* between a chlorine gas *service room* built in conjunction with a *public pool* or *public spa* and the remainder of the *building*, provided the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a). (7) Where *combustible* piping penetrates a *firewall* or a horizontal *fire separation* described in Sentence 3.2.1.2.(1), the piping shall be sealed at the penetration by a *fire stop* that has an FT rating not less than the *fire-resistance rating* required for the *firewall* or horizontal *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Firestop Systems", and, (a) the *fire stop* shall have been tested with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side, or (b) the *fire compartments* on each side of the *firewall* or horizontal *fire separation* shall be *sprinklered*. (8) *Combustible* piping for central vacuum cleaning systems is permitted to penetrate a *fire separation*, provided the installation conforms to the requirements that apply to *combustible* piping specified in Sentence (3).		the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," (b) in *buildings* more than 3 *storeys* in *building height*, the piping is sealed at the penetration by a *firestop* that has an F rating not less than the *fire-resistance rating* required for the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side, and (c) the piping is not located in a *vertical service space*. (5) *Combustible* drain, waste and vent piping is permitted on one side of a vertical *fire separation* provided it is not located in a *vertical service space*. (6) *Combustible* piping for central vacuum systems is permitted to penetrate a *fire separation* provided the installation conforms to the requirements that apply to *combustible* drain, waste and vent piping specified in Sentence (4). (7) Except as provided in Sentence (8), penetrations of a *fire separation* that incorporate transitions between *combustible* and *noncombustible* drain, waste and vent piping shall be sealed by a *firestop* that has an F rating not less than the *fire-resistance rating* required for the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side. (8) Transitions between vertical *noncombustible* drain, waste and vent piping and *combustible* branches for drain, waste and vent piping are permitted on either side of a *fire separation*, provided they are not located in a *vertical service space*. (9) Except as required by Sentence (7), *combustible* piping not more than 25 mm in diameter containing chlorine gas is permitted to penetrate a fire separation between a chlorine gas *service room* built in conjunction with a *public pool or public spa* and the remainder of the *building*, provided the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a).	that forms part of an assembly required to have a *fire-resistance rating*, provided (a) except as provided in Clause (b), the piping is sealed at the penetration by a *firestop* that has an F rating not less than the *fire ~~stop~~-resistance rating* required for the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," (b) in *buildings* more than 3 *storeys* in *building height*, the piping is sealed at the penetration by a *firestop* that has an F rating not less than the *fire-resistance rating* required for the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems~~",~~," with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side~~.~~, and ~~(4) Except as required by Sentence (7), *combustible* drain piping is permitted to penetrate a horizontal *fire separation*, provided it leads directly from a *noncombustible* water closet through a concrete floor slab and the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a).~~ ~~(5) Except as required by Sentence (7), *combustible* piping is permitted to penetrate a vertical or horizontal *fire separation*, provided the *fire compartments*~~ (c) the piping is not located in a *vertical service space*. (5) *Combustible* drain, waste and vent piping is permitted on ~~each~~one side of a vertical *fire separation* provided it is not located in a *vertical service space*. (6) *Combustible* piping for central vacuum systems is permitted to penetrate a *fire separation* provided the installation conforms to the requirements that apply to *combustible* drain, waste and vent piping specified in Sentence (4). (7) Except as provided in Sentence (8), penetrations of a *fire separation* that incorporate transitions between *combustible* and *noncombustible* drain, waste and vent piping shall be sealed by a *firestop* that has an F rating not less than the *fire-resistance rating* required for the *fire separation* ~~are *sprinklered* and the piping is sealed at~~when subjected to the ~~penetration by a~~ fire ~~*stop* in conformance~~test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," with a pressure differential of 50 Pa between the exposed and unexposed sides, with ~~Clause 3.1.9.1.(1)(~~the higher pressure on the exposed side.	

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					(8) Transitions between vertical *noncombustible* drain, waste and vent piping and *combustible* branches for drain, waste and vent piping are permitted on either side of a ~~).~~ *fire separation*, provided they are not located in a *vertical service space*. (~~6~~9) Except as required by Sentence (7), *combustible* piping not more than 25 mm in diameter containing chlorine gas is permitted to penetrate a fire separation between a chlorine gas *service room* built in conjunction with a *public pool or public spa* and the remainder of the *building*, provided the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a). ~~(7) Where *combustible* piping penetrates a *firewall* or a horizontal *fire separation* described in Sentence 3.2.1.2.(1), the piping shall be sealed at the penetration by a *fire stop* that has an FT rating not less than the *fire resistance rating* required for the *firewall* or horizontal *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Fire Tests of Firestop Systems", and,~~ ~~(a) the *fire stop* shall have been tested with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side, or~~ ~~(b) the *fire compartments* on each side of the *firewall* or horizontal *fire separation* shall be *sprinklered*.~~ ~~(8) *Combustible* piping for central vacuum cleaning systems is permitted to penetrate a *fire separation*, provided the installation conforms to the requirements that apply to *combustible* piping specified in Sentence (3).~~	
Public Pools and Public Spas	3.1.9.4. Combustible Piping Penetrations	(6) Except as required by Sentence (7), *combustible* piping not more than 25 mm in diameter containing chlorine gas is permitted to penetrate a *fire separation* between a chlorine gas *service room* built in conjunction with a *public pool* or *public spa* and the remainder of the *building*, provided the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a).	N/A	N/A	~~(6) Except as required by Sentence (7), *combustible* piping not more than 25 mm in diameter containing chlorine gas is permitted to penetrate a *fire separation* between a chlorine gas *service room* built in conjunction with a *public pool* or *public spa* and the remainder of the *building*, provided the piping is sealed at the penetration by a *fire stop* in conformance with Clause 3.1.9.1.(1)(a).~~	Note: This Sentence will be moved to Sections 3.11. (Public Pool) and 3.12. (Public Spas)

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PART 3 – COMBUSTION CONSTRUCTION (MID RISE WOOD PROVISIONS)

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Combustible Construction	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. (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*. (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*, (b.1) a *retirement home*, or (c) except as permitted by Sentence (6), a Group F, Division 3 *major occupancy*. (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.	3.1.3.2. 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. (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*.	(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. (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*. (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*,~~ ~~(b.1)~~ a *retirement home*~~, or~~ ~~(c) except as permitted by Sentence (6), a Group F, Division 3 *major occupancy*.~~ ~~(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.~~	https://www.dropbox.com/s/dqzijkshtj1js41/Proposed_Change_1064.pdf?dl=0
Combustible Construction	3.1.11.5. Fire Blocks in Horizontal Concealed Spaces	(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,	3.1.11.5. Fire Blocks in Horizontal Concealed Spaces	(3) Except as provided in Sentence (5), in *buildings* or parts of a buildings conforming to Article 3.2.2.43A. or 3.2.2.50A., horizontal concealed spaces within a floor assembly or roof assembly of *combustible construction*	(3) Except as provided ~~by~~in Sentence (~~4), a~~5), in *buildings* or parts of a buildings conforming to Article 3.2.2.43A. or 3.2.2.50A., horizontal concealed ~~space~~spaces within a floor assembly or roof assembly of *combustible construction* ~~in a *building* within the scope of Article~~	https://www.dropbox.com/s/cbixkqwz5wastwn/Proposed_Change_1090.pdf?dl=0

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		(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.		shall be separated by construction conforming to Article 3.1.11.7. into compartments that are (a) not more than 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) not more than 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.	~~3.2.2.43A. or 3.2.2.50A.~~ shall be separated by construction conforming to Article 3.1.11.7. into compartments that are (a) 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) not more than 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.	

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PART 3 – FIRE ALARM AND DETECTIONS SYSTEM

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Fire Alarm and Detection System	3.2.4.1. Determination of Requirement for a Fire Alarm System	(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.	3.2.4.1. Determination of Requirement for a Fire Alarm System	(3) A fire alarm system is not required in a *residential occupancy* that is not *sprinklered*, where (a) not more than 4 *suites* share a common *means of egress*, or (b) each *suite* has direct access to an exterior *exit* facility leading to ground level.	~~(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~~(3) A fire alarm system is not required in a ~~*hotel* 3 *storeys* or less in *building height* provided~~ *residential occupancy* that is not *sprinklered*, where (a) not more than 4 *suites* share a common *means of egress*, or (b) each *suite* has direct access to an exterior *exit* facility leading to ground level.	https://www.dropbox.com/s/2f35z5g85z8h4z3/Proposed_Change_1345.pdf?dl=0
Fire Alarm and Detection System	3.2.4.10. Electrical Supervision	(5) If a fire alarm system is required in a *building*, electrical supervision shall be provided to indicate, on the fire alarm system annunciator, a loss of power to a heat tracing cable that is installed to heat, (a) a standpipe riser, (b) a sprinkler line as part of a fire suppression system, or (c) an *exit* or *means of egress* to keep it free of ice and snow. (6) In a *building* regulated by the provisions of Subsection 3.2.6., the indication of a supervisory signal in accordance with Sentence (3) shall be transmitted to a proprietary control centre or to an independent central station.	3.2.4.9. Electrical Supervision	(5) Heat-tracing cables installed on standpipe risers, and sprinkler lines, or an *exit* or *means of egress* to keep it free of ice and snow shall be electrically supervised by the fire alarm system for loss of power. (6) Indication of a supervisory signal in accordance with Sentences (3) and (5) shall be transmitted to the fire department in conformance with Sentence 3.2.4.7.(4).	(5) ~~If a fire alarm system is required in a *building*, electrical supervision shall be provided to indicate, on the fire alarm system annunciator, a loss of power to a heat~~ Heat-tracing ~~cable that is~~cables installed ~~to heat,~~ ~~(a) a~~on standpipe ~~riser,~~ ~~(b) a~~risers, and sprinkler ~~line as part of a fire suppression system~~lines, or ~~(c)~~ an *exit* or *means of egress* to keep it free of ice and snow~~.~~ ~~(6) In a *building* regulated~~ shall be electrically supervised by the ~~provisions of Subsection 3.2.6., the indication~~fire alarm system for loss of power. (6) Indication of a supervisory signal in accordance with ~~Sentence~~Sentences (3) and (5) shall be transmitted to ~~a proprietary control centre or to an independent central station.~~the fire department in conformance with Sentence 3.2.4.7.(4).	https://www.dropbox.com/s/93avc633fuxa6h7/Proposed_Change_1298.pdf?dl=0

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Fire Alarm and Detection System	3.2.4.20. Audibility of Alarm Systems	(6) Except as required by Sentence (5), the sound pressure level from a fire alarm audible signal device in a *floor area* shall be not less than 10 dBA above the ambient noise level, but with a minimum value not less than 65 dBA. … (13) Audible signal devices, within *dwelling units* that are wired on separate signal circuits, need not include a means for silencing as required by Sentence (9) provided the fire alarm system includes a provision for the automatic signal silence within *dwelling units,* where, (a) the automatic signal silence cannot occur within the first 60 s of operation or within the zone of initiation, (b) a subsequent alarm elsewhere in the *building* will reactuate the silenced audible signal devices within *dwelling units*, (c) after a period of not more than 10 min, the silenced audible signal devices will be restored to continuous audible signal if the alarm is not acknowledged, and (d) the voice communication system referred to in Article 3.2.4.23. or 3.2.4.24. has a provision to override the automatic signal silence to allow the transmission of voice messages through silenced audible signal device circuits that serve the *dwelling units*.	3.2.4.18. Audibility of Alarm Systems	(5.1) Audible signal devices in sleeping rooms in a *building* of *residential* or *care occupancy* shall emit a low frequency signal. … (7) Except as required by Sentence (5), the sound pressure level from a fire alarm system's audible signal device within a *floor area* shall be not less than 10 dBA above the ambient noise level without being less than 65 dBA when any intervening doors between the device and the rest of the *floor area* are closed. … (13) Audible signal devices within *dwelling units* that are wired on separate signal circuits in accordance with Clause (10)(b) need not include a means for silencing as required by Sentence (9), provided the fire alarm system includes a provision for an automatic signal silence within *dwelling units*, where (a) the automatic signal silence cannot occur within the first 60 s of operation or within the zone of initiation, (b) a subsequent alarm elsewhere in the *building* will reactuate the silenced audible signal devices within *dwelling units*, (c) after a period of not more than 10 min, the silenced audible signal devices will be restored to continuous audible signal if the alarm is not acknowledged, and (d) the voice communication systems referred to in Articles 3.2.4.22. and 3.2.4.23. have a provision to override the automatic signal silence to allow the transmission of voice messages through silenced audible signal device circuits that serve the *dwelling units*.	~~(6~~(5.1) Audible signal devices in sleeping rooms in a *building* of *residential* or *care occupancy* shall emit a low frequency signal. … (7) Except as required by Sentence (5), the sound pressure level from a fire alarm system's audible signal device ~~in~~within a *floor area* shall be not less than 10 dBA above the ambient noise level~~, but with a minimum value not~~ without being less than 65 dBA when any intervening doors between the device and the rest of the *floor area* are closed. … (13) Audible signal devices~~,~~ within *dwelling units* that are wired on separate signal circuits~~,~~ in accordance with Clause (10)(b) need not include a means for silencing as required by Sentence (9~~)~~), provided the fire alarm system includes a provision for ~~the~~an automatic signal silence within *dwelling units*, where~~,~~ (a) the automatic signal silence cannot occur within the first 60 s of operation or within the zone of initiation, (b) a subsequent alarm elsewhere in the *building* will reactuate the silenced audible signal devices within *dwelling units*, (c) after a period of not more than 10 min, the silenced audible signal devices will be restored to continuous audible signal if the alarm is not acknowledged, and (d) the voice communication ~~system~~systems referred to in ~~Article~~Articles 3.2.4.22. and 3.2.4.23. ~~or 3.2.4.24. has~~have a provision to override the automatic signal silence to allow the transmission of voice messages through silenced audible signal device circuits that serve the *dwelling units*.	https://www.dropbox.com/s/lhsp11jlipg9wf0/Proposed_Change_999.pdf?dl=0 https://www.dropbox.com/s/pigdbqwehevkivy/Proposed_Change_1097.pdf?dl=0 https://www.dropbox.com/s/9sf0ly7bg7b7k2q/Proposed_Change_1297.pdf?dl=0
Fire Alarm and Detection System	3.2.4.19. Alert and Alarm Signals	(1) In a two stage fire alarm system described in Sentence 3.2.4.4.(2), the same audible signal devices are permitted to be used to sound the *alert signals* and the *alarm signals.* (2) If audible signal devices with voice reproduction capabilities are intended for paging and similar voice message use, other than during a fire emergency, they shall be installed so that *alert signals* and *alarm signals* take priority over all other signals. (3) Audible signal devices forming part of a fire alarm or voice communication system shall not be used for playing	3.2.4.17. Alert and Alarm Signals	(1) In a 2-stage fire alarm system described in Sentence 3.2.4.4.(2), the same audible signal devices are permitted to be used to sound the *alert signals* and the *alarm signals*. (2) If audible signal devices with voice reproduction capabilities are intended for paging and similar voice message use, other than during a fire emergency, they shall be installed so that *alert signals* and *alarm signals* take priority over all other signals. (3) Audible signal devices forming part of a fire alarm or voice communication system shall not be used for playing music or background noise.	(1) In a ~~two-~~2-stage fire alarm system described in Sentence 3.2.4.4.(2), the same audible signal devices are permitted to be used to sound the *alert signals* and the *alarm signals*. (2) If audible signal devices with voice reproduction capabilities are intended for paging and similar voice message use, other than during a fire emergency, they shall be installed so that *alert signals* and *alarm signals* take priority over all other signals. (3) Audible signal devices forming part of a fire alarm or voice communication system shall not be used for playing music or background noise.	https://www.dropbox.com/sh/yyrfyjfpet2kd6c/AAAxBKzrxTVkTmG-mtDKQO5Oa?dl=0 https://www.dropbox.com/s/lhsp11jlipg9wf0/Proposed_Change_999.pdf?dl=0

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		music or background noise. (4) Except as permitted by Sentence (6), visual signal devices shall be installed in addition to audible signal devices, (a) in a *building* or portion of a *building* intended for use primarily by persons with hearing impairment, (b) in a *public corridor* serving a Group A, B, C, D or E *occupancy*, (c) in a corridor used by the public and in a *floor area* or part of a *floor area* where the public may congregate in a Group A *occupancy*, (d) in not less than 10% of the *suites* of a *hotel* or motel, (e) in a washroom for *public use* described in Sentence 3.8.2.3.(2), (3), (4) or (6), and (f) in the living space in a *suite* of *residential occupancy* in a Group C *major occupancy* apartment *building*. (5) Visual signal devices are permitted to be installed in lieu of audible signal devices in the compartments referred to in Article 3.3.3.6. (6) Visual signal devices required by Clauses (4)(b) and (c) are not required in, (a) a classroom, and (b) a 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.			~~(4) Except as permitted by Sentence (6), visual signal devices shall be installed in addition to audible signal devices,~~ ~~(a) in a *building* or portion of a *building* intended for use primarily by persons with hearing impairment,~~ ~~(b) in a *public corridor* serving a Group A, B, C, D or E *occupancy*,~~ ~~(c) in a corridor used by the public and in a *floor area* or part of a *floor area* where the public may congregate in a Group A *occupancy*,~~ ~~(d) in not less than 10% of the *suites* of a *hotel* or motel,~~ ~~(e) in a washroom for *public use* described in Sentence 3.8.2.3.(2), (3), (4) or (6), and~~ ~~(f) in the living space in a *suite* of *residential occupancy* in a Group C *major occupancy* apartment *building*.~~ ~~(5) Visual signal devices are permitted to be installed in lieu of audible signal devices in the compartments referred to in Article 3.3.3.6.~~ ~~(6) Visual signal devices required by Clauses (4)(b) and (c) are not required in,~~ ~~(a) a classroom, and~~ ~~(b) a 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.~~	
Fire Alarm and Detection System	3.2.4.21. ~~Visual Signals~~ Visible Signals	(1) Visual signal devices required by Sentences 3.2.4.19.(4) and 3.2.4.20.(7) and (8) shall be installed so that the signal from at least one device is visible throughout the *floor area* or portion of it in which they are installed. (2) Visual signal devices permitted by Sentence 3.2.4.19.(5) shall be installed so that the signal from at least one device is visible throughout the compartment in which they are installed.	3.2.4.18. Visible Signals	(1) Where a fire alarm system is installed, visible signal devices shall be provided in addition to *alarm signal* devices (a) in *buildings* or portions thereof intended for use primarily by persons with a hearing impairment, (b) in *assembly occupancies* in which music and other sounds associated with performances could exceed 100 dBA, (c) in any *floor area* in which the ambient noise level is more than 87 dBA, (d) in any *floor area* in which the occupants (i) use ear protection devices, (ii) are located in an audiometric booth, or (iii) are located in sound-insulating enclosures,	(1) ~~Visual~~Where a fire alarm system is installed, visible signal devices shall be provided in addition to *alarm signal* devices (a) in *buildings* or portions thereof intended for use primarily by persons with a hearing impairment, (b) in *assembly occupancies* in which music and other sounds associated with performances could exceed 100 dBA, (c) in any *floor area* in which the ambient noise level is more than 87 dBA, (d) in any *floor area* in which the occupants (i) use ear protection devices, (ii) are located in an audiometric booth, or (iii) are located in sound-insulating enclosures,	https://www.dropbox.com/sh/yyrfyjfpet2kd6c/AAAxBKzrxTVkTmG-mtDKQO5Oa?dl=0 https://www.dropbox.com/s/lhsp11jlipg9wf0/Proposed_Change_999.pdf?dl=0

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				(e) in *public corridors* serving a Group B, C, D or E *occupancy*, (f) in a corridor used by the public and in a *floor area* or part of a *floor area* where the public may congregate in a Group A *occupancy*, (g) in not less than 10% of the *suites* of *residential occupancy* in a *hotel* or motel, and (h) in a washroom for *public use* described in Sentence 3.8.2.3.(2), (3), (4) or (6), and (i) in the living space in a *suite* of *residential occupancy* in a Group C *major occupancy* apartment *building*. (2) Visible signal devices are permitted to be installed in lieu of audible signal devices in the compartments referred to in Article 3.3.3.6. (3) Visible signal devices required by Sentence (1) shall be installed so that the signal from at least one device is visible throughout the *floor area* or portion thereof in which they are installed. (4) Visual signal devices required by Clauses (1)(e) and (f) are not required in, (a) a classroom, and (b) a 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.	(e) in *public corridors* serving a Group B, C, D or E *occupancy*, (f) in a corridor used by the public and in a *floor area* or part of a *floor area* where the public may congregate in a Group A *occupancy*, (g) in not less than 10% of the *suites* of *residential occupancy* in a *hotel* or motel, and (h) in a washroom for *public use* described in Sentence 3.8.2.3.(2), (3), (4) or (6), and (i) in the living space in a *suite* of *residential occupancy* in a Group C *major occupancy* apartment *building*. (2) Visible signal devices are permitted to be installed in lieu of audible signal devices in the compartments referred to in Article 3.3.3.6. (3) Visible signal devices required by ~~Sentences 3.2.4.19.(4) and 3.2.4.20.(7) and (8~~ Sentence (1) shall be installed so that the signal from at least one device is visible throughout the *floor area* or portion ~~of it~~thereof in which they are installed. (~~2~~4) Visual signal devices ~~permitted~~required by Clauses (1)(e) and (f) are not required in, (a) a classroom, and (b) a Group B, Division~~Sentence~~ 3~~.2.4.19.(5) shall be installed so~~ occupancy that ~~the signal from at least one device is visible throughout the compartment in which they are installed.~~ contains sleeping accommodation for not more than 10 persons and not more than six occupants require assistance in evacuation in case of an emergency.	
Fire Alarm and Detection System	3.2.4.22. Smoke Alarms	(6) *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors*, (a) are capable of independently sounding audible signals within the individual *suites*, (b) except as provided by Sentence (7), are installed in conformance with CAN/ULC-S524, “Installation of Fire Alarm Systems”, and verified in conformance with CAN/ULC-S537, “Verification of Fire Alarm Systems”, and (c) form part of the fire alarm system. …	3.2.4.20. Smoke Alarms	(6) *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors* (a) are capable of independently sounding audible signals with a sound pressure level between 75 dBA and 110 dBA within the individual *suites* (b) except as provided in Sentence (7), are installed in conformance with CAN/ULC-S524, “Standard for Installation of Fire Alarm Systems,” and verified in conformance with CAN/ULC-S537, “Verification of Fire Alarm Systems”, (c) form part of the fire alarm system. …	(6) *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors*~~,~~ (a) are capable of independently sounding audible signals with a sound pressure level between 75 dBA and 110 dBA within the individual *suites*~~,~~ (b) except as provided ~~by~~in Sentence (7), are installed in conformance with CAN/ULC-S524, “Standard for Installation of Fire Alarm Systems~~”,~~” and verified in conformance with CAN/ULC-S537, “Verification of Fire Alarm Systems”~~, and~~ (c) form part of the fire alarm system. …	https://www.dropbox.com/s/ryhb3baubssk940/Proposed_Change_1324.pdf?dl=0 https://www.dropbox.com/s/4pvyutqq3eci81w/Proposed_Change_1325.pdf?dl=0 https://www.dropbox.com/s/idmwljfi8lw1fki/Propose

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		(8) If more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be wired so that the actuation of one *smoke alarm* will cause all *smoke alarms* within the *dwelling unit* to sound.		(8) If more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be interconnected so that the actuation of one *smoke alarm* will cause all *smoke alarms* within the *dwelling unit* to sound.	(8) If more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be ~~wired~~interconnected so that the actuation of one *smoke alarm* will cause all *smoke alarms* within the *dwelling unit* to sound.	d_Change_1328.pdf?dl=0

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PART 3 – FIRE PROTECTION SYSTEM - SPRINKLER SYSTEM

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Fire Protection Systems	3.2.5.12. Automatic Sprinkler Systems	(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*.	3.2.5.12. Automatic Sprinkler Systems	(3) Instead of the requirements of Sentence (1), NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings andManufactured Homes," is permitted to be used for the design, construction and installation of an automatic sprinkler system installed (a) in a *building* of *residential occupancy* throughout that contains not more than 2 *dwelling units*, (b) in a *building* of *residential occupancy* throughout that contains more than 2 *dwelling units*, provided (i) except for a *secondary suite*, no *dwelling unit* is located above another *dwelling unit*, (ii) all *suites* are separated by a vertical *fire separation* having a *fire-resistance rating* of not less than 1 h that provides continuous protection from the top of the footing to the underside of the roof deck, with any space between the top of the wall and the roof deck tightly filled with mineral wool or *noncombustible* material, (iii) each *dwelling unit* has its own sprinkler water supply provided in accordance with NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," (iv) a passive purge sprinkler system design is used as described in NFPA 13D, "Standard for the installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," and (v) where the sprinkler system is taken into consideration for the reduction of *limiting distance*, all rooms, including closets, bathrooms and attached garages, that adjoin an *exposing building face* are sprinklered,	(3) ~~Except as required by~~ Instead of the requirements of Sentence (~~9~~1), NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings ~~and Manufactured~~and Manufactured Homes~~",~~," is permitted to be used for the design, construction~~,~~ and installation ~~and testing~~ of an automatic sprinkler system installed (a) in a *building* of *residential occupancy* throughout that contains not more than ~~two~~2 *dwelling units*~~.~~, (b) in a *building* of *residential occupancy* throughout that contains more than 2 *dwelling units*, provided (i) except for a *secondary suite*, no *dwelling unit* is located above another *dwelling unit*, (ii) all *suites* are separated by a vertical *fire separation* having a *fire-resistance rating* of not less than 1 h that provides continuous protection from the top of the footing to the underside of the roof deck, with any space between the top of the wall and the roof deck tightly filled with mineral wool or *noncombustible* material, (iii) each *dwelling unit* has its own sprinkler water supply provided in accordance with NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," (iv) a passive purge sprinkler system design is used as described in NFPA 13D, "Standard for the installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," and (v) where the sprinkler system is taken into consideration for the reduction of *limiting distance*, all rooms, including closets, bathrooms and attached garages, that adjoin	https://www.dropbox.com/s/mb0m4mht7wq9d50/Proposed_Change_539.pdf?dl=0 https://www.dropbox.com/s/tho6dhvkvxlma4d/Proposed_Change_1284.pdf?dl=0

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				notwithstanding any exemption stated in NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes." … (10) Except as provided in Subsection 3.2.8., closely spaced sprinklers and associated draft stops need not be installed around floor openings in conformance with NFPA 13, "Standard for the Installation of Sprinkler Systems."	an *exposing building face* are sprinklered, notwithstanding any exemption stated in NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes." … (10) Except as provided in Subsection 3.2.8., closely spaced sprinklers and associated draft stops need not be installed around floor openings in conformance with NFPA 13, "Standard for the Installation of Sprinkler Systems."	
Fire Protection Systems	3.2.8.2. Exceptions to Special Protection	(5) Except as permitted by Sentence (6), openings for stairways, escalators and inclined moving walks need not conform to the requirements in Articles 3.2.8.3. to 3.2.8.11. provided, (a) the opening for each stairway, escalator or walk does not exceed 10 m^2, (b) the *building* is *sprinklered* throughout, and (c) the *interconnected floor space* contains only Group A, Division 1, 2 or 3, Group D or Group E *occupancies*.	3.2.8.2. Exceptions to Special Protection	(5) Except as permitted by Sentence (6), openings for escalators and inclined moving walks need not conform to the requirements in Articles 3.2.8.3. to 3.2.8.8. provided (a) the opening for each escalator or walk does not exceed 10 m^2, (b) the *building* is *sprinklered* throughout, (c) closely spaced sprinklers and associateddraft stops are installed around the openings in conformance with NFPA 13, "Standard for the Installation of Sprinkler Systems," and (d) the *interconnected floor space* contains only Group A, Division 1, 2 or 3, Group D or Group E *major occupancies*.	(5) Except as permitted by Sentence (6), openings for ~~stairways,~~ escalators and inclined moving walks need not conform to the requirements in Articles 3.2.8.3. to 3.2.8.~~11~~8. provided~~,~~ (a) the opening for each ~~stairway,~~ escalator or walk does not exceed 10 m^2, (b) the *building* is *sprinklered* throughout, (c) closely spaced sprinklers and associateddraft stops are installed around the openings in conformance with NFPA 13, "Standard for the Installation of Sprinkler Systems," and (~~c~~d) the *interconnected floor space* contains only Group A, Division 1, 2 or 3, Group D or Group E *major occupancies*.	https://www.dropbox.com/s/mb0m4mht7wq9d50/Proposed_Change_539.pdf?dl=0
Fire Protection Systems	3.2.8.3. ~~Configuration~~ Sprinklers (New)	N/A	3.2.8.3. Sprinklers	(1) A *building* containing an *interconnected floor space* shall be *sprinklered* throughout. (2) Except for large floor openings as defined in NFPA 13, "Standard for the Installation of Sprinkler Systems," closely spaced sprinklers and associated draft stops shall be installed around floor openings in conformance with NFPA 13.	(1) A *building* containing an *interconnected floor space* shall be *sprinklered* throughout. (2) Except for large floor openings as defined in NFPA 13, "Standard for the Installation of Sprinkler Systems," closely spaced sprinklers and associated draft stops shall be installed around floor openings in conformance with NFPA 13.	https://www.dropbox.com/s/mb0m4mht7wq9d50/Proposed_Change_539.pdf?dl=0
Fire Protection Systems	3.2.6.5. Elevator for Use by Firefighters	(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".	3.2.6.5. Elevator for Use by Firefighters	(6) Electrical conductors for the operation of the elevator referred to in Sentence (1) shall (a) be installed in *service spaces* conforming to Section 3.6. that do not contain other *combustible* material, or (b) conform to CAN/ULC-S139, "Standard Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control and Data Cables," including the hose stream application, to provide a circuit integrity rating of not less than 1 h.	(6) Electrical conductors for the operation of the elevator referred to in Sentence (1) shall (a) 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".~~(b) conform to CAN/ULC-S139, "Standard Fire Test for Circuit Integrity of Fire-	https://www.dropbox.com/s/g4kiv802f7bipr8/Proposed_Change_1072.pdf?dl=0

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					Resistive Power, Instrumentation, Control and Data Cables," including the hose stream application, to provide a circuit integrity rating of not less than 1 h.	
Fire Protection Systems	3.2.7.9. Emergency Power for Building Services	(1) An emergency power supply capable of operating under a full load for not less than 2 h shall be provided by an emergency generator for, (a) every elevator serving *storeys* above the *first storey* in a *building* that is more than 36 m high measured between *grade* and the floor level of the top *storey* and every elevator for firefighters in conformance with Sentence (2), (b) water supply for firefighting in conformance with Article 3.2.5.7., if the supply is dependent on electrical power supplied to the *building*, and the *building* is within the scope of Subsection 3.2.6., (c) fans and other electrical equipment that are installed to maintain the air quality specified in Articles 3.2.6.2. and 3.3.3.6., other than air handling systems described in Sentence 3.2.6.2.(5.1), and (d) fans required for venting by Article 3.2.6.6.	3.2.7.9. Emergency Power for Building Services	(1) An emergency power supply capable of operating under a full load for not less than 2 h shall be provided by an emergency generator for (a) every elevator serving *storeys* above the *first storey* in a *building* that is more than 36 m high measured between *grade* and the floor level of the top *storey* and every elevator for firefighters in conformance with Sentence (2), (b) except as provided in Sentence (4), equipment that supplies water for fire suppression as required by Articles 3.2.5.7.and 3.2.9.1. and Sentences 3.2.5.13.(1) and (2) and 3.2.5.19.(1), if the supply depends solely on electrical power supplied to the *building*, (c) fans and other electrical equipment that are installed to maintain the air quality specified in Articles 3.2.6.2. and 3.3.3.6., (d) fans required for venting by Article 3.2.6.6., and (e) fans required by Clause 3.2.8.4.(1)(c) and Article 3.2.8.7. in *buildings* within the scope of Subsection 3.2.6. … (4) The emergency power supply required by Clause (1)(b) for the water supply for firefighting need not be provided for sprinkler systems conforming to NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes."	(1) An emergency power supply capable of operating under a full load for not less than 2 h shall be provided by an emergency generator for~~,~~ (a) every elevator serving *storeys* above the *first storey* in a *building* that is more than 36 m high measured between *grade* and the floor level of the top *storey* and every elevator for firefighters in conformance with Sentence (2), (b) except as provided in Sentence (4), equipment that supplies water ~~supply~~ for ~~firefighting in conformance with Article~~fire suppression as required by Articles 3.2.5.7~~.~~,and 3.2.9.1. and Sentences 3.2.5.13.(1) and (2) and 3.2.5.19.(1), if the supply ~~is dependent~~depends solely on electrical power supplied to the *building*, ~~and the *building* is within the scope of Subsection 3.2.6.,~~ (c) fans and other electrical equipment that are installed to maintain the air quality specified in Articles 3.2.6.2. and 3.3.3.6., ~~other than air handling systems described in Sentence 3.2.6.2.(5.1), and~~ (d) fans required for venting by Article 3.2.6.6~~.~~., and (e) fans required by Clause 3.2.8.4.(1)(c) and Article 3.2.8.7. in *buildings* within the scope of Subsection 3.2.6. … (4) The emergency power supply required by Clause (1)(b) for the water supply for firefighting need not be provided for sprinkler systems conforming to NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes."	https://www.dropbox.com/s/7vdrowcxu1lgbd8/Proposed_Change_1085.pdf?dl=0 https://www.dropbox.com/s/2mtv04z6gm9dyz/Proposed_Change_1493.pdf?dl=0

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PART 3 – SAFETY GLAZING

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Safety Glazing	3.1.8.14. Wired Glass and Glass Block	(1) Except as permitted by Articles 3.1.8.16. and 3.1.8.17. for the separation of *exits*, an opening in a *fire separation* having a *fire-resistance rating* not more than 1 h is permitted to be protected with fixed wired glass assemblies or glass blocks installed in conformance with NFPA 80, "Fire Doors and Other Opening Protectives".	3.1.8.16. Wired Glass and Glass Block	(1) Except as permitted by Articles 3.1.8.18. and 3.1.8.19. for the separation of *exits*, an opening in a *fire separation* having a *fire-resistance rating* not more than 1 h is permitted to be protected with fixed wired glass assemblies or glass blocks installed in conformance with NFPA 80, "Standard for Fire Doors and Other Opening Protectives."	(1) Except as permitted by Articles 3.1.8.~~16~~18. and 3.1.8.~~17~~19. for the separation of *exits*, an opening in a *fire separation* having a *fire-resistance rating* not more than 1 h is permitted to be protected with fixed wired glass assemblies or glass blocks installed in conformance with NFPA 80, "Standard for Fire Doors and Other Opening Protectives".	https://www.dropbox.com/s/23cztaz4vdfaq2y/Proposed_Change_1444.pdf?dl=0
Safety Glazing	3.1.8.15. Temperature Rise Limit for Doors	(Table 3.1.8.15. - Restrictions on Temperature Rise and Glazing for Closures)	3.1.8.17. Temperature Rise Limit for Doors	(Table 3.1.8.17. - Restrictions on Temperature Rise and Glazing for Closures)	Please see the National PCF for the changes in the tables	https://www.dropbox.com/s/23cztaz4vdfaq2y/Proposed_Change_1444.pdf?dl=0
Safety Glazing	3.1.8.16. Area Limits for Wired Glass and Glass Block	(1) Except as permitted by Article 3.1.8.17., the maximum area of wired glass in a door used in the locations shown in Table 3.1.8.15. shall conform to the Table. (2) Except as permitted by Article 3.1.8.17., the maximum area of glass block and wired glass panels not in a door, used in the locations shown in Table 3.1.8.15., shall conform to the Table.	3.1.8.~~16~~18-. Area Limits for Wired Glass, Glass Block and Safety Glazing.	(1) Except as permitted by Article 3.1.8.17., the maximum aggregate area of wired glass or safety glazing in a door used in the locations shown in Table 3.1.8.15. shall conform to the Table. (2) Except as permitted by Article 3.1.8.17., the maximum aggregate area of glass block, wired glass or safety glazing panels not in a door used in the locations shown in Table 3.1.8.15. shall conform to the Table.	(1) Except as permitted by Article 3.1.8.17., the maximum aggregate area of wired glass or safety glazing in a door used in the locations shown in Table 3.1.8.15. shall conform to the Table. (2) Except as permitted by Article 3.1.8.17., the maximum aggregate area of glass block ~~and~~, wired glass or safety glazing panels not in a door~~,~~ used in the locations shown in Table 3.1.8.15~~.~~, shall conform to the Table.	https://www.dropbox.com/s/23cztaz4vdfaq2y/Proposed_Change_1444.pdf?dl=0
Safety Glazing	3.1.8.17. Temperature Rise and Area Limits Waived	(1) The temperature rise limits and glass area limits required by Articles 3.1.8.15. and 3.1.8.16. are waived for a *closure* between an *exit* enclosure and an enclosed vestibule or corridor provided, (a) the vestibule or corridor is separated from the remainder of the *floor area* by a *fire separation* having a *fire resistance rating* not less than 45 min, (b) the *fire separation* required by Clause (a) contains no wired glass or glass block within 3 m of the *closure* into the *exit* enclosure, and (c) the vestibule or corridor contains no *occupancy*.	3.1.8.19. Temperature Rise and Area Limits Waived	(1) The temperature rise limits and glass area limits required by Articles 3.1.8.15. and 3.1.8.16. are waived for a *closure* between an *exit* enclosure and an enclosed vestibule or corridor, provided (a) the vestibule or corridor is separated from the remainder of the *floor area* by a *fire separation* having a *fire-resistance rating* not less than 45 min, (b) the *fire separation* required by Clause (a) contains no wired glass, glass block or safety glazing within 3 m of the *closure* into the *exit* enclosure, and (c) the vestibule or corridor contains no *occupancy*.	(1) The temperature rise limits and glass area limits required by Articles 3.1.8.15. and 3.1.8.16. are waived for a *closure* between an *exit* enclosure and an enclosed vestibule or corridor, provided~~,~~ (a) the vestibule or corridor is separated from the remainder of the *floor area* by a *fire separation* having a *fire~~-~~ resistance rating* not less than 45 min, (b) the *fire separation* required by Clause (a) contains no wired glass~~-or,~~ glass block or safety glazing within 3 m of the *closure* into the *exit* enclosure, and (c) the vestibule or corridor contains no *occupancy*.	https://www.dropbox.com/s/23cztaz4vdfaq2y/Proposed_Change_1444.pdf?dl=0

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Safety Glazing	3.3.1.18. Transparent Doors and Panels	(2) A glass door shall be constructed of, (a) laminated or tempered safety glass conforming to CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass", or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass".	3.3.1.19. Transparent Doors and Panels	(2) A glass door shall be constructed of (a) laminated or tempered safety glazing conforming to CAN/CGSB-12.1, "Safety Glazing," or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass."	(2) A glass door shall be constructed of~~,~~ (a) laminated or tempered safety ~~glass~~glazing conforming to CAN/CGSB-12.1~~-M, "Tempered or Laminated~~ , "Safety ~~Glass",~~Glazing," or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass".	https://www.dropbox.com/s/7fcz3ke7n3dk57q/Proposed_Change_1472.pdf?dl=0
Safety Glazing	3.3.2.15. Safety Glazing (New)	N/A	3.3.2.15. Safety Glazing	(1) Except as permitted in Sentence (3), glazing in all fixed and operable panels of doors shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing." (2) Except as permitted in Sentence (4), glazing in all fixed and operable panels of windows shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing." (3) Glazing in individual fixed or operable panels of a door need not comply with Sentence (1), where (a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the door, or (b) the glazed opening in the door does not permit the passage of a sphere whose diameter is more than 75 mm. (4) Glazing in individual fixed or operable panels of a window need not comply with Sentence (2), where (a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the window, or (b) the glazing is located more than 915 mm away from the walking surface on each side of the window measured perpendicular to the plane of the glazing.	(1) Except as permitted in Sentence (3), glazing in all fixed and operable panels of doors shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing." (2) Except as permitted in Sentence (4), glazing in all fixed and operable panels of windows shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing." (3) Glazing in individual fixed or operable panels of a door need not comply with Sentence (1), where (a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the door, or (b) the glazed opening in the door does not permit the passage of a sphere whose diameter is more than 75 mm. (4) Glazing in individual fixed or operable panels of a window need not comply with Sentence (2), where (a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the window, or (b) the glazing is located more than 915 mm away from the walking surface on each side of the window measured perpendicular to the plane of the glazing.	https://www.dropbox.com/s/23cztaz4vdfaq2y/Proposed_Change_1444.pdf?dl=0
Safety Glazing	3.4.6.15. Revolving Doors	(3) An electrically powered revolving door is not required to conform to Sentences (1) and (2) provided, (a) the door leaves will collapse and stop automatic rotation of the door system and not obstruct the doorway if a force not more than that specified in Sentence 3.4.6.16.(2) is applied at the centre of a door leaf, (b) the door leaves are capable of being opened from inside the *building* without requiring keys, special devices, or specialized knowledge of the door opening mechanism, (c) the allowable exiting capacity is based on the clear width of passage through the door enclosure when the doors are fully collapsed,	3.4.6.15. Revolving Doors	(3) An electrically powered revolving door is not required to conform to Sentences (1) and (2) provided (a) the door leaves will collapse and stop automatic rotation of the door system and not obstruct the doorway if a force not more than that specified in Sentence 3.4.6.16.(2) is applied at the centre of a door leaf, (b) the door leaves are capable of being opened from inside the *building* without requiring keys, special devices, or specialized knowledge of the door opening mechanism, (c) the allowable exiting capacity is based on the clear width of passage through the door enclosure when the doors are fully collapsed, (d) a permanent sign, whose centre line is between 1 000 mm and 1 500 mm above the floor, is	(3) An electrically powered revolving door is not required to conform to Sentences (1) and (2) provided~~,~~ (a) the door leaves will collapse and stop automatic rotation of the door system and not obstruct the doorway if a force not more than that specified in Sentence 3.4.6.16.(2) is applied at the centre of a door leaf, (b) the door leaves are capable of being opened from inside the *building* without requiring keys, special devices, or specialized knowledge of the door opening mechanism, (c) the allowable exiting capacity is based on the clear width of passage through the door enclosure when the doors are fully collapsed, (d) a permanent sign, whose ~~centreline~~centre line is between 1~~-~~ 000 mm and 1 500 mm above the	https://www.dropbox.com/s/7fcz3ke7n3dk57q/Proposed_Change_1472.pdf?dl=0

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		(d) a permanent sign, whose centreline is between 1 000 mm and 1 500 mm above the floor, is placed on each face of each door leaf indicating the method for collapsing the door leaf in an emergency, and (e) glass used for door leaves and enclosure panels is safety glass conforming to, (i) CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass", or (ii) CAN/CGSB-12.11-M, "Wired Safety Glass".		placed on each face of each door leaf indicating the method for collapsing the door leaf in an emergency, and (e) glass used for door leaves and enclosure panels is safety glazing conforming to, (i) CAN/CGSB-12.1, "Safety Glazing," or (ii) CAN/CGSB-12.11-M, "Wired Safety Glass."	floor, is placed on each face of each door leaf indicating the method for collapsing the door leaf in an emergency, and (e) glass used for door leaves and enclosure panels is safety ~~glass~~glazing conforming to, (i) CAN/CGSB-12.1~~-M, "Tempered or Laminated~~ , "Safety ~~Glass",~~Glazing," or (ii) CAN/CGSB-12.11-M, "Wired Safety Glass".	
Safety Glazing	3.7.4.11. Safety Glass	(1) Glass, other than safety glass, shall not be used for a shower or bathtub enclosure.	3.7.2.5. Safety Glazing	(1) Glazing used for a shower or bathtub enclosure shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing."	(1) ~~Glass, other than safety glass, shall not be~~Glazing used for a shower or bathtub enclosure~~.~~ shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing."	https://www.dropbox.com/s/wf2ohwelw3bdou6/Proposed_Change_1446.pdf?dl=0

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PART 3 – USE AND EGRESS

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Use and Egress	3.3.1.20. Guards	(6) Sentence (1) does not apply at the front edges of *stages*, floor pits in *repair garages* and loading docks.	3.3.1.18. Guards	(6) Sentence (1) does not apply (a) to the front edges of *stages*, (b) to floor pits in *repair garages*, (c) to loading docks, or (d) where access is provided for maintenance purposes only.	(6) Sentence (1) does not apply ~~at~~ (a) to the front edges of *stages*, (b) to floor pits in *repair garages* ~~and~~, (c) to loading docks, or (d) where access is provided for maintenance purposes only.	https://www.dropbox.com/s/e18iag4sfgtqj1p/Proposed_Change_1131.pdf?dl=0
Use and Egress	3.3.2.6. Doors	(1) A door equipped with a latching mechanism in an *access to exit* from a room or *suite* of *assembly occupancy* containing an *occupant load* more than 100 shall be equipped with a device that will release the latch and allow the door to swing wide open when a force not more than that specified in Sentence 3.8.3.3.(7) is applied to the device in the direction of travel to the *exit*.	3.3.2.7. Doors	(1) A door equipped with a latching mechanism in an *access to exit* from a room or *suite* of *assembly occupancy* containing an *occupant load* more than 100 shall be equipped with a device that complies with Sentence 3.4.6.16.(2.1).	(1) A door equipped with a latching mechanism in an *access to exit* from a room or *suite* of *assembly occupancy* containing an *occupant load* more than 100 shall be equipped with a device that complies with ~~containing an *occupant load* more than 100 shall be equipped with a device that will release the latch and allow the door to swing wide open when a force not more than that specified in Sentence 3.8.3.3.(~~Sentence 3.4.6.16.(2.1)~~7) is applied to the device in the direction of travel to the *exit*.~~	https://www.dropbox.com/s/vj36zxocosco3lu/Proposed_Change_1105.pdf?dl=0
Use and Egress	3.4.6.16 Door Release Hardware	(2) If a door is equipped with a latching mechanism, a device that will release the latch and allow the door to swing wide open when a force of not more than 90 N is applied to the device in the direction of travel to the *exit* shall be installed on, (a) every *exit* door from a *floor area* containing an *assembly occupancy* having an *occupant load* more than 100, (b) every door leading to an *exit* lobby from an *exit* stair shaft, and every exterior door leading from an *exit* stair shaft in a *building* having an *occupant load* more than 100, and (c) every *exit* door from a *floor area* containing a *high hazard industrial occupancy*.	3.4.6.16 Door Release Hardware	(2) If a door is equipped with a latching mechanism, a device complying with Sentence (3) shall be installed on (a) every *exit* door from a *floor area* containing an *assembly occupancy* having an *occupant load* more than 100, (b) every door leading to an *exit* lobby from an *exit* stair shaft, and every exterior door leading from an *exit* stair shaft in a *building* having an *occupant load* more than 100, and (c) every *exit* door from a *floor area* containing a *high-hazard industrial occupancy*. (2.1) The device required in Sentence (2) shall (a) extend across not less than one half of the width of the door,	(2) If a door is equipped with a latching mechanism, a device ~~that will release the latch and allow the door to swing wide open when a force of not more than 90 N is applied to the device in the direction of travel to the *exit*~~complying with Sentence (3) shall be installed on~~,~~ (a) every *exit* door from a *floor area* containing an *assembly occupancy* having an *occupant load* more than 100, (b) every door leading to an *exit* lobby from an *exit* stair shaft, and every exterior door leading from an *exit* stair shaft in a *building* having an *occupant load* more than 100, and (c) every *exit* door from a *floor area* containing a *high -hazard industrial occupancy*. (2.1) The device required in Sentence (2) shall	https://www.dropbox.com/s/vj36zxocosco3lu/Proposed_Change_1105.pdf?dl=0

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				(b) release the latch, and (c) allow the door to swing wide open when a force not more than that specified in Sentence 3.8.3.3.(7) is applied to the device in the direction of travel to the *exit*.	(a) extend across not less than one half of the width of the door, (b) release the latch, and (c) allow the door to swing wide open when a force not more than that specified in Sentence 3.8.3.3.(7) is applied to the device in the direction of travel to the *exit*.	
Use and Egress	3.3.4.8. Protection of Openable Windows	(1) Except as provided by Sentence (2), openable windows in *suites* of *residential occupancy* shall be protected by, (a) a *guard* with a minimum height of 1 070 mm constructed in accordance with Article 3.3.1.17., or (b) a mechanism capable of controlling the free swinging or sliding of the openable part of the window so as to limit any clear unobstructed opening to a size that will prevent the passage of a sphere having a diameter more than 100 mm.	3.3.4.8. Protection of Openable Windows	(1) Except as provided in Sentence (2), openable windows in *suites* of *residential occupancy* shall be protected by (a) a *guard* with a minimum height of 1 070 mm constructed in accordance with Article 3.3.1.17., or (b) a mechanism that can only be released with the use of tools or special knowledge to control the free swinging or sliding operation of the openable part of the window so as to limit any clear unobstructed opening to not more than 100 mm measured either vertically or horizontally.	(1) Except as provided ~~by~~in Sentence (2), openable windows in *suites* of *residential occupancy* shall be protected by~~,~~ (a) a *guard* with a minimum height of 1 070 mm constructed in accordance with Article 3.3.1.17., or (b) a mechanism ~~capable~~that can only be released with the use of ~~controlling~~tools or special knowledge to control the free swinging or sliding operation of the openable part of the window so as to limit any clear unobstructed opening to ~~a size that will prevent the passage of a sphere having a diameter~~not more than 100 mm measured either vertically or horizontally.	https://www.dropbox.com/s/8izf0ncnmb2vhqw/Proposed_Change_1327.pdf?dl=0
Use and Egress	3.4.6.5. Handrails	(5) Handrails shall be continuously graspable along their entire length, shall be free of any sharp or abrasive elements, and shall have, (a) a circular cross-section with an outside diameter not less than 30 mm and not more than 43 mm, or (b) any non-circular cross-section with a perimeter not less than 100 mm and not more than 125 mm and whose largest cross-sectional dimension is not more than 45 mm.	3.4.6.5. Handrails	(5) Handrails shall be continuously graspable along their entire length, be free of any sharp or abrasive elements, and have (a) a circular cross-section with an outside diameter not less than 30 mm and not more than 50 mm, or (b) a non-circular cross-section with a perimeter not less than 100 mm and not more than 160 mm] and whose largest cross-sectional dimension is not more than 57 mm.	(5) Handrails shall be continuously graspable along their entire length, ~~shall~~ be free of any sharp or abrasive elements, and ~~shall~~ have~~,~~ (a) a circular cross-section with an outside diameter not less than 30 mm and not more than ~~43~~50 mm, or (b) ~~any~~a non-circular cross-section with a perimeter not less than 100 mm and not more than ~~125~~160 mm] and whose largest cross-sectional dimension is not more than ~~45~~57 mm.	https://www.dropbox.com/s/yqhakuq1km34hlj/Proposed_Change_1357.pdf?dl=0
Use and Egress	3.5.4.1. Elevator Car Dimensions	(1) If an elevator is installed to conform to the requirements of Article 3.3.1.7., or if one or more elevators are provided in a *building* more than three *storeys* in *building height*, each *storey* having elevator service shall be served by at least one elevator that has inside dimensions that will accommodate and provide adequate access for a patient stretcher 2 010 mm long and 610 mm wide in the prone position.	3.5.4.1. Elevator Car Dimensions	(1) Except as provided in Sentence (2), if an elevator is installed to conform to the requirements of Article 3.3.1.7., or if one or more elevators are provided in a *building* more than three *storeys* in *building height*, each *storey* having elevator service shall be served by at least one elevator that has inside dimensions that will accommodate and provide adequate access for a patient stretcher 2 010 mm long and 610 mm wide in the prone position. (1.1) The inside dimensions stipulated in Sentence (1) do not apply to limited-use/limited-application elevators designed and installed in accordance with ASME A17.1/CSA B44, “Safety Code for Elevators and Escalators.”	~~(1) If~~(1) Except as provided in Sentence (2), if an elevator is installed to conform to the requirements of Article 3.3.1.7., or if one or more elevators are provided in a *building* more than three *storeys* in *building height*, each *storey* having elevator service shall be served by at least one elevator that has inside dimensions that will accommodate and provide adequate access for a patient stretcher 2 010 mm long and 610 mm wide in the prone position. (1.1) The inside dimensions stipulated in Sentence (1) do not apply to limited-use/limited-application elevators designed and installed in accordance with ASME A17.1/CSA B44, “Safety Code for Elevators and Escalators.”	https://www.dropbox.com/s/4zxltpnyx47o2s3/Proposed_Change_1128.pdf?dl=0 https://www.dropbox.com/s/0tifoval9j8fenu/Proposed_Change_1129.pdf?dl=0
Use and Egress	3.7.4.10. Plumbing Fixtures	(1) If mobile homes do not have individual plumbing facilities connected to a central water supply and	3.7.2.4. Mobile Home Facilities (To be removed)	N/A	~~(1) If mobile homes do not have individual plumbing facilities connected to a central water supply and drainage system, a service *building* shall be provided for public use.~~	https://www.dropbox.com/s/j56k2244qlgyrbp/Propos

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	for Mobile Home Facilities	drainage system, a service *building* shall be provided for public use. (2) The service *building* required by Sentence (1) shall contain, (a) at least one water closet for each sex if the service *building* facilities serve not more than 10 mobile homes, and (b) an additional water closet for each sex for each additional 10 mobile homes. (3) If a service *building* is required by Sentence (1) it shall contain lavatories as required by Sentence 3.7.4.2.(5) and at least, (a) one laundry tray or similar facility, and (b) one bathtub or shower for each sex.			~~(2) The service *building* required by Sentence (1) shall contain,~~ ~~(a) at least one water closet for each sex if the service *building* facilities serve not more than 10 mobile homes, and~~ ~~(b) an additional water closet for each sex for each additional 10 mobile homes.~~ ~~(3) If a service *building* is required by Sentence (1) it shall contain lavatories as required by Sentence 3.7.4.2.(5) and at least,~~ ~~(a) one laundry tray or similar facility, and~~ ~~(b) one bathtub or shower for each sex.~~	ed_Change_1338.pdf?dl=0
Use and Egress	3.7.4.2. Plumbing Fixtures, General	(1) For the purposes of this Subsection, the *occupant load* shall be determined in accordance with the provisions in Subsection 3.1.17. except that in a Group D *occupancy*, the area per person shall be 14 m2.	3.7.2.1. Plumbing and Drainage Systems	(1) Except as provided in Sentence (2), for the purposes of this Subsection, the *occupant load* shall be determined in accordance with the provisions in Subsection 3.1.17. except that in a Group D *occupancy*, the area per person shall be 14 m^2. (1.1.) For the purpose of this Subsection, the *occupant load* for *floor areas* that are classified as an *industrial occupancy* is permitted to be based solely on the total number of staff for which the *floor area* is designed, where the *floor area* is only intermittently occupied or where the presence of occupants is transitory.	~~(1) For~~(1) Except as provided in Sentence (2), for the purposes of this Subsection, the *occupant load* shall be determined in accordance with the provisions in Subsection 3.1.17. except that in a Group D *occupancy*, the area per person shall be 14 m^2. (1.1.) For the purpose of this Subsection, the *occupant load* for *floor areas* that are classified as an *industrial occupancy* is permitted to be based solely on the total number of staff for which the *floor area* is designed, where the *floor area* is only intermittently occupied or where the presence of occupants is transitory.	https://www.dropbox.com/s/rtmau7inpkg5uki/Proposed_Change_1349.pdf?dl=0
Use and Egress	3.3.1.12. Doors and Door Hardware	(5) Door release hardware shall be installed not more than 1 200 mm above the finished floor.	3.3.1.13. Doors and Door Hardware	(5) Door release hardware shall be installed between 900 mm and 1 100 mm above the finished floor.	(5) Door release hardware shall be installed ~~not more than~~between 900 mm and 1 ~~200~~100 mm above the finished floor.	https://www.dropbox.com/s/f17wzc16d7ydojj/Proposed_Change_1126.pdf?dl=0
Use and Egress	3.4.6.16. Door Release Hardware	(8) Door hardware for the operation of the doors referred to in this Section shall be installed at a height not more than 1 200 mm above the finished floor.	3.4.6.16. Door Release Hardware	(7) Door release hardware for the operation of the doors referred to in this Section shall be installed between 900 mm and 1 100 mm above the finished floor.	(~~8~~7) Door release hardware for the operation of the doors referred to in this Section shall be installed ~~at a height not more than~~between 900 mm and 1 ~~200~~100 mm above the finished floor.	https://www.dropbox.com/s/f17wzc16d7ydojj/Proposed_Change_1126.pdf?dl=0
Use and Egress	3.2.7.3. Emergency Lighting	(1) Emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in, (a) *exits*, (b) principal routes providing *access to exit* in an open *floor area* and in *service rooms*, (c) corridors used by the public,	3.2.7.3. Emergency Lighting	(1) Emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in, (a) *exits*, (b) principal routes providing *access to exit* in an open *floor area* and in *service rooms*, (c) corridors used by the public, (d) corridors serving patients' or residents' sleeping rooms in a Group B, Division 2 or 3 *occupancy*,	(1) Emergency lighting shall be provided to an average level of illumination not less than 10 lx at floor or tread level in, (a) *exits*, (b) principal routes providing *access to exit* in an open *floor area* and in *service rooms*, (c) corridors used by the public, (d) corridors serving patients' or residents' sleeping rooms in a Group B, Division 2 or 3 *occupancy*,	https://www.dropbox.com/s/t15d5a71sqp88xe/Proposed_Change_1127.pdf?dl=0

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		(d) corridors serving patients' or residents' sleeping rooms in a Group B, Division 2 or 3 *occupancy*, (e) corridors serving classrooms, (f) underground *walkways*, (g) *public corridors*, (h) *floor areas* or parts of them where the public may congregate in, (i) Group A, Division 1 *occupancies*, or (ii) Group A, Divisions 2 and 3 *occupancies* having an *occupant load* of 60 or more, (i) *floor areas* or parts of them in day care centres where persons are cared for, (j) food preparation areas in commercial kitchens, (k) principal routes providing *access to exit* in a *floor area* that is not subdivided into rooms or *suites* of rooms served by corridors in a *business and personal services occupancy*, a *mercantile occupancy* or an *industrial occupancy*, (l) internal corridors or aisles serving as principal routes to *exits* in a *business and personal services occupancy*, a *mercantile occupancy* or an *industrial occupancy* that is subdivided into rooms or *suites* of rooms, and is not served by a *public corridor*, and (m) washrooms with *fixtures* for *public use*.		(e) corridors serving classrooms, (f) underground *walkways*, (g) *public corridors*, (h) *floor areas* or parts of them where the public may congregate in, (i) Group A, Division 1 *occupancies*, or (ii) Group A, Divisions 2 and 3 *occupancies* having an *occupant load* of 60 or more, (i) *floor areas* or parts of them in day care centres where persons are cared for, (j) food preparation areas in commercial kitchens, (k) principal routes providing *access to exit* in a *floor area* that is not subdivided into rooms or *suites* of rooms served by corridors in a *business and personal services occupancy*, a *mercantile occupancy* or an *industrial occupancy*, (l) internal corridors or aisles serving as principal routes to *exits* in a *business and personal services occupancy*, a *mercantile occupancy* or an *industrial occupancy* that is subdivided into rooms or *suites* of rooms, and is not served by a *public corridor*, (m) washrooms with *fixtures* for *public use*, and (n) locations where doors are equipped with an electromagnetic lock as described in Clauses 3.4.6.16.(4)(k),	(e) corridors serving classrooms, (f) underground *walkways*, (g) *public corridors*, (h) *floor areas* or parts of them where the public may congregate in, (i) Group A, Division 1 *occupancies*, or (ii) Group A, Divisions 2 and 3 *occupancies* having an *occupant load* of 60 or more, (i) *floor areas* or parts of them in day care centres where persons are cared for, (j) food preparation areas in commercial kitchens, (k) principal routes providing *access to exit* in a *floor area* that is not subdivided into rooms or *suites* of rooms served by corridors in a *business and personal services occupancy*, a *mercantile occupancy* or an *industrial occupancy*, (l) internal corridors or aisles serving as principal routes to *exits* in a *business and personal services occupancy*, a *mercantile occupancy* or an *industrial occupancy* that is subdivided into rooms or *suites* of rooms, and is not served by a *public corridor*, ~~and~~ (m) washrooms with *fixtures* for *public use*~~.~~, and (n) locations where doors are equipped with an electromagnetic lock as described in Clauses 3.4.6.16.(4)(k),	

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PART 3 – OTHER SUBJECTS

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Proposed National Code Subsection/ Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Technical Differences within the National Codes	3.6.2.5. ~~Combustible Refuse Storage~~ Storage of Combustible Refuse and Recycling	(1) Except as required by Sentence 3.6.3.3.(9), a room for the storage of *combustible* refuse shall be, (a) separated from the remainder of the *building* by a *fire separation* with a *fire-resistance rating* not less than 1 h, and (b) *sprinklered*.	3.6.2.5. Storage of Combustible Refuse and Recycling	(1) Except as required by Sentence 3.6.3.3.(9), a room for the temporary storage of *combustible* refuse and materials for recycling shall be (a) separated from the remainder of the *building* by a *fire separation* with a *fire-resistance rating* not less than 1 h, except that a *fire separation* with a *fire-resistance rating* not less than 45 min is permitted where the *fire-resistance rating* of the floor assembly is not required to exceed 45 min, and (b) *sprinklered*.	(1) Except as required by Sentence 3.6.3.3.(9), a room for the temporary storage of *combustible* refuse and materials for recycling shall be~~,~~ (a) separated from the remainder of the *building* by a *fire separation* with a *fire-resistance rating* not less than 1 h, ~~and~~except that a *fire separation* with a *fire-resistance rating* not less than 45 min is permitted where the *fire-resistance rating* of the floor assembly is not required to exceed 45 min, and (b) *sprinklered*.	https://www.dropbox.com/s/78achp0j1nu87uf/Proposed_Change_1080.pdf?dl=0
Soft Conversion	3.1.5.3. Combustible Roofing Materials	(4) Wood nailer facings to parapets, not more than 600 mm high, are permitted on a *building* required to be of *noncombustible construction*, if the facings and any roof membranes covering the facings are protected by sheet metal.	3.1.5.3. Combustible Roofing Materials	(4) Wood nailer facings to parapets that are not more than 610 mm high are permitted on a *building* required to be of *noncombustible construction*, provided the facings and any roof membranes covering the facings are protected by sheet metal.	(4) Wood nailer facings to parapets~~,~~ that are not more than ~~600~~610 mm high~~,~~ are permitted on a *building* required to be of *noncombustible construction*, ~~if~~provided the facings and any roof membranes covering the facings are protected by sheet metal.	https://www.dropbox.com/s/0ksr0r5pxngenia/Proposed_Change_1307.pdf?dl=0

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PART 3 – MISCELLANEOUS

Subject	Current Ontario Code Subsection/ Article	Current Ontario Code Provision(s)	Current National Code Subsection/ Article	Current National Code Provision(s)	Proposed Changes to the Code Provision(s)	Note
Building Fire Safety	3.2.1.1. Exceptions in Determining Building Height	(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.	N/A	N/A	~~(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.	Remaining item from Phase 1 of the Consultation
Number and Location of Exits from Floor Areas	3.4.2.2. Mezzanine Exiting	N/A	3.4.2.2. Means of Egress from Mezzanines	(2) The *means of egress* from a *mezzanine* need not conform to Sentence (1), provided (a) the *mezzanine* is not required to terminate at a vertical *fire separation*, as permitted in Sentence 3.2.8.2.(1), (b) the *occupant load* of the *mezzanine* is not more than 60, (c) the area of the *mezzanine* does not exceed the area limits stated in Table 3.4.2.2., and (d) the distance limits stated in Table 3.4.2.2. measured along the path of travel are not exceeded from any point on the *mezzanine* to (i) an egress door serving the space that the *mezzanine* overlooks, if the space is served by a single egress door, or (ii) the egress stairway leading to an *access to exit* in the space below if that space is required to be served by 2 or more egress doorways in conformance with Sentence 3.3.1.5.(1).	(2.1) The *means of egress* from a *mezzanine* need not conform to Sentence (1), provided (a) the *mezzanine* is not required to terminate at a vertical *fire separation*, as permitted in Sentence 3.2.8.2.(1), (b) the *occupant load* of the *mezzanine* is not more than 60, (c) the area of the *mezzanine* does not exceed the area limits stated in Table 3.4.2.2., and (d) the distance limits stated in Table 3.4.2.2. measured along the path of travel are not exceeded from any point on the *mezzanine* to (i) an egress door serving the space that the *mezzanine* overlooks, if the space is served by a single egress door, or (ii) the egress stairway leading to an *access to exit* in the space below if that space is required to be served by 2 or more egress doorways in conformance with Sentence 3.3.1.5.(1).	Remaining item from Phase 1 of the Consultation
Number and Location of Exits from Floor Areas	3.4.2.2. Mezzanine Exiting	N/A	3.4.2.2. Means of Egress from Mezzanines	(3) At least half of the required *means of egress* from a *mezzanine* shall comply with Sentence (1) if the *mezzanine* is not required to terminate at a *fire separation* as permitted by Sentence 3.2.8.2.(1).	(3.1) At least half of the required *means of egress* from a *mezzanine* shall comply with Sentence (1) if the *mezzanine* is not required to terminate at a *fire separation* as permitted by Sentence 3.2.8.2.(1).	Remaining item from Phase 1 of the Consultation

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High Buildings	3.1.13.7. High Buildings	N/A	3.1.13.7. High Buildings	(4) A door serving 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 (a) it has a *flame-spread rating* not more than 200, (b) it has a smoke developed classification not more than 300, and (c) the aggregate area of all doors is not more than 10% of the area of the wall in which they are located.	(4.1) A door serving 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 (a) it has a *flame-spread rating* not more than 200, (b) it has a smoke developed classification not more than 300, and (c) the aggregate area of all doors is not more than 10% of the area of the wall in which they are located.	Remaining item from Phase 1 of the Consultation

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PART 4 STRUCTURAL DESIGN

Subject	Current Ontario Code Subsection / Article	Current Ontario Code Provision(s)	Proposed National Code Subsection /Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link(s) to National the PCF(s)
Importance Categories	4.1.2.1. Loads and Effects	(Table 4.1.2.1.B. Importance Categories for Buildings)	4.1.2.1. Loads and Effects	(Table 4.1.2.1. Importance Categories for Buildings)	(Refer to the National PCF for the changes in the tables)	https://www.dropbox.com/s/16dgix1tl6ezq8j/Proposed_Change.pdf?dl=0
Serviceability	4.1.3.4. Serviceability	**(1)** A *building* and its structural components shall be checked for serviceability limit states as defined in Clause 4.1.3.1.(1)(a) under the effect of service loads for serviceability criteria specified or recommended in Articles 4.1.3.5. and 4.1.3.6. and in the standards listed in Section 4.3.	4.1.3.4. Serviceability	(1) A *building* and its structural components shall be checked for serviceability limit states as defined in Clause 4.1.3.1.(1)(a) under the effect of service loads for serviceability criteria specified or recommended in Articles 4.1.3.5. and 4.1.3.6. and in the standards listed in Section 4.3. (2) The effect of service loads on the serviceability limit states shall be determined in accordance with this Article and the load combinations listed in Table 4.1.3.4., the applicable combination being that which results in the most critical effect. (3) Other load combinations that must also be considered are the principal loads acting with the companion loads taken as zero. (4) Deflections calculated for load types P, T, and H, if present, with load factors of 1.0 shall be included with the calculated deflections due to principal loads. (5) The determination of the deflection shall consider the following: (a) for materials that result in increased deformations over time under sustained loads, the deflection calculation shall consider the portion of *live load*, L, that is sustained over time, Ls, and the portion that is transitory, Lt, and (b) the calculated deflection due to *dead load*, D, and sustained *live load*, Ls, shall be increased by a creep factor as specified in the standards listed in Section 4.3. to obtain the additional long-term deflection. (6) The determination of the long-term settlement of *foundations* shall consider the following: (a) for *foundation soil* types that result in increased settlement over time under sustained loads, the additional long-term settlements shall be determined for the	(1) A *building* and its structural components shall be checked for serviceability limit states as defined in Clause 4.1.3.1.(1)(a) under the effect of service loads for serviceability criteria specified or recommended in Articles 4.1.3.5. and 4.1.3.6. and in the standards listed in Section 4.3. (2) The effect of service loads on the serviceability limit states shall be determined in accordance with this Article and the load combinations listed in Table 4.1.3.4., the applicable combination being that which results in the most critical effect. (3) Other load combinations that must also be considered are the principal loads acting with the companion loads taken as zero. (4) Deflections calculated for load types P, T, and H, if present, with load factors of 1.0 shall be included with the calculated deflections due to principal loads. (5) The determination of the deflection shall consider the following: (a) for materials that result in increased deformations over time under sustained loads, the deflection calculation shall consider the portion of *live load*, L, that is sustained over time, Ls, and the portion that is transitory, Lt, and (b) the calculated deflection due to *dead load*, D, and sustained *live load*, Ls, shall be increased by a creep factor as specified in the standards listed in Section 4.3. to obtain the additional long-term deflection. (6) The determination of the long-term settlement of *foundations* shall consider the following: (a) for *foundation soil* types that result in increased settlement over time under sustained loads, the additional long-term settlements shall be determined for the	https://www.dropbox.com/s/pwswlkhvu71oi70/Proposed_Change_1190.pdf?dl=0

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				portion of *live load*, L, that is sustained over time, Ls, and the portion that is transitory, Lt, and (b) the additional long-term settlements due to *dead load*, D, and sustained *live loads*, Ls, shall be calculated from the *foundation soil* properties provided by a qualified professional geotechnical engineer (Table 4.1.3.4. Loads and Load Combinations for Serviceability)	portion of *live load*, L, that is sustained over time, Ls, and the portion that is transitory, Lt, and (b) the additional long-term settlements due to *dead load*, D, and sustained *live loads*, Ls, shall be calculated from the *foundation soil* properties provided by a qualified professional geotechnical engineer (Table 4.1.3.4. Loads and Load Combinations for Serviceability)	
Fatigue and Vibration	4.1.3.6. Vibration	**(1)** Floor systems susceptible to vibration shall be designed so that vibrations will have no significant adverse effects on the intended *occupancy* of the *building*. **(2)** Where the fundamental vibration frequency of a structural system supporting an *assembly occupancy* used for rhythmic activities, such as dancing, concerts, jumping exercises or gymnastics, is less than 6 Hz, the effects of resonance shall be investigated by means of a dynamic analysis. **(3)** A *building* susceptible to lateral vibration under wind load shall be designed in accordance with Article 4.1.7.1. so that the vibrations will have no significant adverse effects on the intended use and *occupancy* of the *building*.	4.1.3.6. Vibration	(1) Floor systems susceptible to vibration shall be designed so that vibrations will have no significant adverse effects on the intended *occupancy* of the *building*. (2) Where floor vibrations caused by resonance with operating machinery or equipment are anticipated, dynamic analysis of the floor system shall be carried out. (3) Where the fundamental vibration frequency of a structural system supporting an *assembly occupancy* used for rhythmic activities, such as dancing, concerts, jumping exercises or gymnastics, is less than 6 Hz, the effects of resonance shall be investigated by means of a dynamic analysis. (4) A *building* susceptible to lateral vibration under wind load shall be designed in accordance with Article 4.1.7.1. so that the vibrations will have no significant adverse effects on the intended use and *occupancy* of the *building*.	(1) Floor systems susceptible to vibration shall be designed so that vibrations will have no significant adverse effects on the intended *occupancy* of the *building*. (2) Where floor vibrations caused by resonance with operating machinery or equipment are anticipated, dynamic analysis of the floor system shall be carried out. (3) Where the fundamental vibration frequency of a structural system supporting an *assembly occupancy* used for rhythmic activities, such as dancing, concerts, jumping exercises or gymnastics, is less than 6 Hz, the effects of resonance shall be investigated by means of a dynamic analysis. (~~3~~4) A *building* susceptible to lateral vibration under wind load shall be designed in accordance with Article 4.1.7.1. so that the vibrations will have no significant adverse effects on the intended use and *occupancy* of the *building*.	https://www.dropbox.com/s/yy7pifmk80wpa6q/Proposed_Change_1191.pdf?dl=0
Partition Weight	4.1.4.1. Dead Loads	**(1)**The specified *dead load* for a structural member consists of, (a) the weight of the member itself, (b) the weight of all materials of construction incorporated into the *building* to be supported permanently by the member, (c) the weight of *partitions*, (d) the weight of permanent equipment, and (e) the vertical load due to earth, plants and trees. **(2)** Except as provided in Sentence (5), in areas of a *building* where *partitions* other than permanent *partitions* are shown on the drawings, or where *partitions* might be added in the future, allowance shall be made for the weight of such *partitions*. **(3)** The *partition* weight allowance in Sentence (2) shall be determined from the actual or anticipated weight of the *partitions* placed in any probable position, but shall be not less than 1 kPa over the area of floor being considered.	4.1.4.1. Dead Loads	(1) The specified *dead load* for a structural member consists of (a) the weight of the member itself, (b) the weight of all materials of construction incorporated into the *building* to be supported permanently by the member, (c) the weight of *partitions*, (d) the weight of permanent equipment, and (e) the vertical load due to *soil*, superimposed earth, plants and trees. (2) In areas of a *building* for which *partitions* are shown on the drawings, the weight of *partitions* referred to in Clause (1)(c) shall be taken as the actual weight of such *partitions*. (3) In areas of a *building* for which *partitions* are not shown on the drawings, the weight of *partitions* referred to in Clause (1)(c) shall be a *partition* weight allowance determined from the anticipated weight and position of the *partitions*, but shall not be less than 1 kPa over the area of floor being considered. (4) The weights of *partitions* and *partition* weight	(1) The specified *dead load* for a structural member consists of~~,~~ (a) the weight of the member itself, (b) the weight of all materials of construction incorporated into the *building* to be supported permanently by the member, (c) the weight of *partitions*, (d) the weight of permanent equipment, and (e) the vertical load due to *soil*, superimposed earth, plants and trees. (2) ~~Except as provided in Sentence (5), in~~ In areas of a *building* ~~where *partitions* other than permanent~~for which *partitions* are shown on the drawings, ~~or where *partitions* might be added in the future, allowance shall be made for~~ the weight of *partitions* referred to in Clause (1)(c) shall be taken as the actual weight of such *partitions*. (3) In areas of a *building* for which *partitions* are not shown on the drawings, the weight of *partitions* referred to in Clause (1)(c) shall be a ~~The~~ *partition* weight allowance ~~in Sentence (2) shall be~~ determined	https://www.dropbox.com/s/o8k2kxk4fu9hyw7/Proposed_Change_1448.pdf?dl=0

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		(4) *Partition* loads used in design shall be shown on the drawings. **(5)** In cases where the *dead load* of the *partition* is counteractive, the load allowances referred to in Sentences (2) and (3) shall not be included in the design calculations. **(6)** **(6)** Except for structures where the *dead load* of *soil* is part of the load-resisting system, where the *dead load* due to *soil*, superimposed earth, plants and trees is counteractive, it shall not be included in the design calculations.		allowances used in the design shall be shown on the drawings as provided in Clause 2.2.4.3.(1)(d) of Division C. (5) Where the *partition* weight allowance referred to in Sentence (3) is counteractive to other loads, it shall not be included in the design calculations. (6) Except for structures where the *dead load* of *soil* is part of the load-resisting system, where the *dead load* due to *soil*, superimposed earth, plants and trees is counteractive to other loads, it shall not be included in the design calculations.	from the ~~actual or~~ anticipated weight ~~of the *partitions* placed in any probable~~ and position of the *partitions*, but shall ~~be~~ not be less than 1 kPa over the area of floor being considered. (4) *Partition* loads used in design shall be shown on the drawings. (5) ~~In cases where the *dead load* of~~ Where the *partition* weight allowance referred to in Sentence (3) is counteractive~~, the load allowances referred to in Sentences (2) and (3)~~ to other loads, it shall not be included in the design calculations. (6) Except for structures where the *dead load* of *soil* is part of the load-resisting system, where the *dead load* due to *soil*, superimposed earth, plants and trees is counteractive to other loads, it shall not be included in the design calculations.	
Live Load Due to Use and Occupancy — Other	4.1.5.3. Full and Partial Loading	**(1)** The uniformly distributed *live load* shall be not less than the value listed in Table 4.1.5.3., which may be reduced as provided in Article 4.1.5.8., applied uniformly over the entire area, or on any portions of the area, whichever produces the most critical effects in the members concerned. (Table 4.1.5.3. Specified Uniformly Distributed Live Loads on an Area of Floor or Roof)	4.1.5.3. Full and Partial Loading	(1) The uniformly distributed *live load* shall be not less than the value listed in Table 4.1.5.3., which may be reduced as provided in Article 4.1.5.8., applied uniformly over the entire area or on any portions of the area, whichever produces the most critical effects in the members concerned. (Table 4.1.5.3. Specified Uniformly Distributed Live Loads on an Area of Floor or Roof)	(1) The uniformly distributed *live load* shall be not less than the value listed in Table 4.1.5.3., which may be reduced as provided in Article 4.1.5.8., applied uniformly over the entire area~~,~~ or on any portions of the area, whichever produces the most critical effects in the members concerned. (Refer to the National PCF for the changes in the tables)	https://www.dropbox.com/s/htgijrbygrjz0s9/Proposed_Change_740.pdf?dl=0
Live Load Due to Use and Occupancy — Vehicle Loads	4.1.5.5. Loads on Exterior Areas	**(1)** Exterior areas accessible to vehicular traffic shall be designed for their intended use, including the weight of firefighting equipment, but not for less than the snow and rain loads prescribed in Subsection 4.1.6. **(2)** Except as provided in Sentences (3) and (4), roofs shall be designed for the uniform *live loads* specified in Table 4.1.5.3., the concentrated *live loads* listed in Table 4.1.5.9., or the snow and rain loads prescribed in Subsection 4.1.6., whichever produces the most critical effects in the members concerned. **(3)** Exterior areas accessible to pedestrian traffic, but not vehicular traffic, shall be designed for their intended use, but not for less than the greater of, (a) the *live load* prescribed for assembly areas in Table 4.1.5.3., or (b) the snow and rain loads prescribed in Subsection 4.1.6. **(4)** Roof parking decks shall be designed for the uniformly distributed *live loads* specified in Table 4.1.5.3., the concentrated *live loads* listed in Table 4.1.5.9., or the roof snow load, whichever produces the most critical effect in the members concerned.	4.1.5.5. Loads on Exterior Areas	(1) Exterior areas accessible to vehicular traffic shall be designed for their intended use, including the weight of firefighting equipment, but not for less than the snow and rain loads prescribed in Subsection 4.1.6. (2) Except as provided in Sentences (3) and (4), roofs shall be designed for either the uniform *live loads* specified in Table 4.1.5.3., the concentrated *live loads* listed in Table 4.1.5.9., or the snow and rain loads prescribed in Subsection 4.1.6., whichever produces the most critical effect. (3) Exterior areas accessible to pedestrian traffic, but not vehicular traffic, shall be designed for their intended use, but not for less than the greater of (a) the *live load* prescribed for assembly areas in Table 4.1.5.3., or (b) the snow and rain loads prescribed in Subsection 4.1.6. (4) Roof parking decks and exterior areas accessible to vehicular traffic shall be designed (a) for the appropriate load combination listed in Sentence 4.1.3.2.(2) with a *live load*, **L**, consisting of either a uniformly distributed *live load* as specified in Table 4.1.5.3. or a concentrated *live load* as listed in Table 4.1.5.9., whichever produces the most critical effect, and a companion snow	(1) Exterior areas accessible to vehicular traffic shall be designed for their intended use, including the weight of firefighting equipment, but not for less than the snow and rain loads prescribed in Subsection 4.1.6. (2) Except as provided in Sentences (3) and (4), roofs shall be designed for either the uniform *live loads* specified in Table 4.1.5.3., the concentrated *live loads* listed in Table 4.1.5.9., or the snow and rain loads prescribed in Subsection 4.1.6., whichever produces the most critical ~~effects in the members concerned~~effect. (3) Exterior areas accessible to pedestrian traffic, but not vehicular traffic, shall be designed for their intended use, but not for less than the greater of~~,~~ (a) the *live load* prescribed for assembly areas in Table 4.1.5.3., or (b) the snow and rain loads prescribed in Subsection 4.1.6. (4) Roof parking decks and exterior areas accessible to vehicular traffic shall be designed (a) for the appropriate load combination listed in Sentence 4.1.3.2.(2) with a *live load*, **L**, consisting of either a uniformly distributed *live ~~loads~~load* as specified in Table 4.1.5.3~~., the~~, or a concentrated *live ~~loads~~load* as listed in Table 4.1.5.9., ~~or the~~	https://www.dropbox.com/s/vro5rac7zgqzgo3/Proposed_Change_181.pdf?dl=0

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				load, **S**, as prescribed in Subsection 4.1.6., but with the companion-load factor reduced to 0.2, and (b) such that the load combination in Clause (a) is not less than the snow and rain loads prescribed in Subsection 4.1.6. with the *live load* taken as zero. (5) Roof parking decks that are used for the long-term storage of vehicles shall be designed for the appropriate load combination listed in Sentence 4.1.3.2.(2) with a *live load*, **L**, consisting of either a uniformly distributed *live load* as specified in Table 4.1.5.3. or a concentrated *live load* as listed in Table 4.1.5.9., whichever produces the most critical effect, and a snow load, **S**, as prescribed in Subsection 4.1.6.	~~roof snow load,~~ whichever produces the most critical effect ~~in~~, and a companion snow load, **S**, as prescribed in Subsection 4.1.6., but with the companion-load factor reduced to 0.2, and (b) such that the load combination in Clause (a) is not less than the ~~members concerned~~snow and rain loads prescribed in Subsection 4.1.6. with the *live load* taken as zero. (5) Roof parking decks that are used for the long-term storage of vehicles shall be designed for the appropriate load combination listed in Sentence 4.1.3.2.(2) with a *live load*, **L**, consisting of either a uniformly distributed *live load* as specified in Table 4.1.5.3. or a concentrated *live load* as listed in Table 4.1.5.9., whichever produces the most critical effect, and a snow load, **S**, as prescribed in Subsection 4.1.6.	
Live Load Due to Use and Occupancy	4.1.5.8. Variation with Tributary Area	**(1)** An area used for *assembly occupancies* designed for a *live load* of less than 4.8 kPa and roofs designed for the minimum loading specified in Table 4.1.5.3. shall have no reduction for tributary area. **(2)** Where a structural member supports a tributary area of a floor or a roof, or a combination of them, that is greater than 80 m² and either used for *assembly occupancies* designed for a *live load* of 4.8 kPa or more, or used for storage, manufacturing, retail stores, garages or as a footbridge, the specified *live load* due to use and *occupancy* is the load specified in Article 4.1.5.3. multiplied by, $0.5 + \sqrt{20/A}$ "A"is the tributary area in square metres for this type of use and *occupancy*. **(3)** Where a structural member supports a tributary area of a floor or a roof or a combination of them, that is greater than 20 m² and used for any use or *occupancy* other than *assembly occupancies* and those indicated in Sentences (1) and (2), the specified *live load* due to use and *occupancy*, is the load specified in Article 4.1.5.3. multiplied by, $0.3 + \sqrt{9.8/B}$ where, "B" is the tributary area in square metres for this type of use and occupancy. **(4)** Where the specified *live load* for a floor is reduced in accordance with Sentence (2) or (3), the structural drawings shall indicate that a *live load* reduction factor for tributary area has been applied	4.1.5.8. Variation with Tributary Area	(1) One- and two-way floor slabs shall have no reduction for tributary area applied to *live load*. (2) An area used for *assembly occupancies* designed for a *live load* of less than 4.8 kPa and roofs designed for the minimum loading specified in Table 4.1.5.3. shall have no reduction for tributary area. (3) Where a structural member supports a tributary area of a floor or a roof, or a combination thereof, that is greater than 80 m^2 and either used for *assembly occupancies* designed for a *live load* of 4.8 kPa or more, or used for storage, manufacturing, retail stores, garages or as a footbridge, the specified *live load* due to use and *occupancy* is the load specified in Article 4.1.5.3. multiplied by $0.5 + \sqrt{20/A}$ where A is the tributary area in square metres for this type of use and *occupancy*. (4) Where a structural member supports a tributary area of a floor or a roof, or a combination thereof, that is greater than 20 m^2 and used for any use or *occupancy* other than those indicated in Sentences (2) and (3), the specified *live load* due to use and *occupancy* is the load specified in Article 4.1.5.3. multiplied by $0.3 + \sqrt{9.8/B}$ where B is the tributary area in square metres for this type of use and *occupancy*. (5) Where the specified *live load* for a floor is reduced in accordance with Sentence (3) or (4), the structural drawings shall indicate that a *live load* reduction factor for tributary area has been applied and which structural elements are impacted by this factor.	(1) One- and two-way floor slabs shall have no reduction for tributary area applied to *live load*. (2) An area used for *assembly occupancies* designed for a *live load* of less than 4.8 kPa and roofs designed for the minimum loading specified in Table 4.1.5.3. shall have no reduction for tributary area. (~~2~~3) Where a structural member supports a tributary area of a floor or a roof, or a combination ~~of them~~thereof, that is greater than 80 m² and either used for *assembly occupancies* designed for a *live load* of 4.8 kPa or more, or used for storage, manufacturing, retail stores, garages or as a footbridge, the specified *live load* due to use and *occupancy* is the load specified in Article 4.1.5.3. multiplied by~~,~~ $0.5 + \sqrt{20/A}$ where "A" is the tributary area in square metres for this type of use and *occupancy*. (~~3~~4) Where a structural member supports a tributary area of a floor or a roof, or a combination ~~of them~~thereof, that is greater than 20 m² and used for any use or *occupancy* other than ~~*assembly occupancies* and~~ those indicated in Sentences (~~1) and (~~2) and (3), the specified *live load* due to use and *occupancy*~~,~~ is the load specified in Article 4.1.5.3. multiplied by~~,~~ $0.3 + \sqrt{9.8/B}$ where~~, "~~ B" is the tributary area in square metres for this type of use and *occupancy*. (~~4~~5) Where the specified *live load* for a floor is reduced in accordance with Sentence (~~2~~3) or (~~3~~4), the structural drawings shall indicate that a *live load* reduction factor for tributary area has been applied	https://www.dropbox.com/s/hkz093iqxx62gi2/Proposed_Change_1189.pdf?dl=0

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					and which structural elements are impacted by this factor.	
Live Load Due to Use and Occupancy — Guard Loads and Effects	4.1.5.14. Loads on Guards and Handrails	**(1)** The minimum specified horizontal load applied outward at the minimum required height of every required *guard* shall be, (a) 3.0 kN/m for open viewing stands without fixed seats and for *means of egress* in grandstands, stadia, bleachers and arenas, (b) a concentrated load of 1.0 kN applied at any point so as to produce the most critical effect, for access ways to equipment platforms, contiguous stairs and similar areas where the gathering of many people is improbable, and (c) 0.75 kN/m or a concentrated load of 1.0 kN applied at any point so as to produce the most critical effect, whichever governs for locations other than those described in Clauses (a) and (b). **(2)** The minimum specified horizontal load applied inward at the minimum required height of every required *guard* shall be half that specified in Sentence (1). **(3)** Individual elements within the *guard*, including solid panels and pickets, shall be designed for a load of 0.5 kN applied outward over an area of 100 mm by 100 mm located at any point in the element or elements so as to produce the most critical effect. **(4)** The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed the limits required by Part 3 when each of these elements is subjected to a specified *live load* of 0.1 kN applied in opposite directions in the in-plane direction of the *guard* so as to produce the most critical effect. **(5)** The loads required in Sentence (3) need not be considered to act simultaneously with the loads provided for in Sentences (1), (2) and (6). **(6)** The minimum specified load applied vertically at the top of every required *guard* shall be 1.5 kN/m and need not be considered to act simultaneously with the horizontal load provided for in Sentence (1). **(7)** Handrails and their supports shall be designed and constructed to withstand the following loads, which need not be considered to act simultaneously: (a) a concentrated load not less than 0.9 kN applied at any point and in any direction for all handrails, and	4.1.5.14. Loads on Guards and Handrails	(1) The minimum horizontal specified *live load* applied outward at the minimum required height of every required *guard* shall be (a) 3.0 kN/m for open viewing stands without fixed seats and for *means of egress* in grandstands, stadia, bleachers and arenas, (b) 1.0 kN applied at any point, so as to produce the most critical effect, for access ways to equipment platforms, contiguous stairs and similar areas where the gathering of many people is improbable, and (c) 0.75 kN/m or 1.0 kN applied at any point so as to produce the most critical effect, whichever governs, for locations other than those described in Clauses (a) and (b). (2) The minimum horizontal specified *live load* applied inward at the minimum required height of every required *guard* shall be half that specified in Sentence (1). (3) Individual elements within the *guard*, including solid panels and pickets, shall be designed for a horizontal specified *live load* of 0.5 kN applied outward over an area of 100 mm by 100 mm located at any point on the element or elements so as to produce the most critical effect. (4) The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed the limits required by Part 3 when each of these elements is subjected to a horizontal specified *live load* of 0.1 kN applied in opposite directions in the in-plane direction of the *guard* so as to produce the most critical effect. (5) The specified *live loads* required in Sentence (3) need not be considered to act simultaneously with the loads provided for in Sentences (1), (2), (6) and (7). (6) The minimum specified 2018 *live load* applied vertically at the top of every required *guard* shall be 1.5 kN/m and need not be considered to act simultaneously with the horizontal specified *live load* provided for in Sentences (1), (3) and (7). (7) Handrails and their supports shall be designed and constructed to withstand the following minimum specified *live loads*, which need not be considered to act simultaneously:	(1) The minimum ~~specified~~ horizontal specified *live load* applied outward at the minimum required height of every required *guard* shall be~~,~~ (a) 3.0 kN/m for open viewing stands without fixed seats and for *means of egress* in grandstands, stadia, bleachers and arenas, (b) ~~a concentrated load of~~ 1.0 kN applied at any point, so as to produce the most critical effect, for access ways to equipment platforms, contiguous stairs and similar areas ~~where the gathering of many people is improbable, and~~ where the gathering of many people is improbable, and~~—~~ (c) 0.75 kN/m or ~~a concentrated load of~~ 1.0 kN applied at any point so as to produce the most critical effect, whichever governs, for locations other than those described in Clauses (a) and (b). (2) The minimum ~~specified~~ horizontal specified *live load* applied inward at the minimum required height of every required *guard* shall be half that specified in Sentence (1). (3) Individual elements within the *guard*, including solid panels and pickets, shall be designed for a horizontal specified *live load* of 0.5 kN applied outward over an area of 100 mm by 100 mm located at any point ~~in~~on the element or elements so as to produce the most critical effect. (4) The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed the limits required by Part 3 when each of these elements is subjected to a horizontal specified *live load* of 0.1 kN applied in opposite directions in the in-plane direction of the *guard* so as to produce the most critical effect. (5) The specified *live loads* required in Sentence (3) need not be considered to act simultaneously with the loads provided for in Sentences (1), (2), (6) and (~~6~~7). (6) The minimum specified 2018 *live load* applied vertically at the top of every required *guard* shall be 1.5 kN/m and need not be considered to act simultaneously with the horizontal specified *live load* provided for in ~~Sentence~~Sentences (1), (3) and (7). (7) Handrails and their supports shall be designed and constructed to withstand the following minimum	https://www.dropbox.com/s/0viqgnailikro0l/Proposed_Change_950.pdf?dl=0

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		(b) a uniform load not less than 0.7 kN/m applied in any direction to handrails not located within *dwelling units*		(a) 0.9 kN applied at any point and in any direction for all handrails, and (b) 0.7 kN/m applied in any direction for handrails not located within *dwelling units*.	specified *live loads*, which need not be considered to act simultaneously: (a) ~~a concentrated load not less than~~ 0.9 kN applied at any point and in any direction for all handrails, and (b) ~~a uniform load not less than~~ 0.7 kN/m applied in any direction ~~to~~for handrails not located within *dwelling units*.	
Snow Loads	4.1.6.2. Specified Snow Load	**(2)**The basic roof snow load factor, C_b, shall be, (a) for $l_c \leq (70/C_w^2)$, 0.8, and (b) for $l_c > (70/C_w^2)$, (i) calculated using the following formula: $\frac{1}{C_w}\left[1 - (1-0.8C_w)\exp\left(-\frac{l_c C_w^2 - 70}{100}\right)\right]$ where, l_c = characteristic length of the upper or lower roof, defined as 2w-w^2/l, in metres, w = smaller plan dimension of the roof, in metres, and l = larger plan dimension of the roof, in metres, or (ii) determined in accordance with Table 4.1.6.2.B., using linear interpolation for intermediate values of $l_c C_w^2$.	4.1.6.2. Specified Snow Load	(2) The basic roof snow load factor, Cb, shall (a) be determined as follows: (i) $C_b = 0.8 \text{ for } l_c \leq \left(\frac{70}{C_w^2}\right), \text{ and}$ (ii) $C_b = \frac{1}{C_w}\left[1 - (1-0.8C_w)\exp\left(-\frac{l_c C_w^2 - 70}{100}\right)\right] \text{ for } l_c$ where l_c = characteristic length of the upper or lower roof, defined as 2w – w^2/l, in m, w = smaller plan dimension of the roof, in m, and l = larger plan dimension of the roof, in m, (b) conform to Table 4.1.6.2.-B, using linear interpolation for intermediate values of or (c) be taken as equal to 1 for any roof structure with a mean height of less than 1+ Ss/γ, in m, above *grade*, where the value of γ is determined in accordance with Article 4.1.6.13.	(2) The basic roof snow load factor, Cb, shall (a) be~~,~~ determined as follows: ~~(a) for $l_c \leq (70/C_w^2)$, 0.8, and~~ ~~(b) for $l_c > (70/C_w^2)$,~~ ~~(i) calculated using the following formula:~~ ~~$\frac{1}{C_w}\left[1 - (1-0.8C_w)\exp\left(-\frac{l_c C_w^2 - 70}{100}\right)\right]$~~ (i) $C_b = 0.8 \text{ for } l_c \leq \left(\frac{70}{C_w^2}\right), \text{ and}$ (ii) $C_b = \frac{1}{C_w}\left[1 - (1-0.8C_w)\exp\left(-\frac{l_c C_w^2 - 70}{100}\right)\right] \text{ for } l_c$ where~~,~~ l_c = characteristic length of the upper or lower roof, defined as 2w-w^2/l, in metres, w = smaller plan dimension of the roof, in ~~metres~~m, and l = larger plan dimension of the roof, in ~~metres, or~~m, (b) conform to ~~(ii)~~ ~~determined in accordance with~~ Table 4.1.6.2.~~.~~B~~,~~, using linear interpolation for intermediate values of ~~$l_c C_w^2$.~~or (c) be taken as equal to 1 for any roof structure with a mean height of less than 1+ Ss/γ, in m, above *grade*, where the value of γ is determined in accordance with Article 4.1.6.13.	https://www.dropbox.com/s/k35uha9pwoliglp/Proposed_Change_1121.pdf?dl=0
Other — Structural Design	4.1.6.4. Specified Rain Load	**(4)** Where scuppers are provided and where the position, shape and deflection of the loaded surface make an accumulation of rainwater possible, the loads due to rain shall be the lesser of either the one-day rainfall determined in conformance with Subsection 1.1.2. or a depth of rainwater equal to 30	4.1.6.4. Specified Rain Load	(4) Where scuppers are provided as secondary drainage systems and where the position, shape and deflection of the loaded surface make an accumulation of rainwater possible, the loads due to rain shall be the lesser of either the one-day rainfall determined in conformance with Subsection 1.1.2. or	(4) Where scuppers are provided as secondary drainage systems and where the position, shape and deflection of the loaded surface make an accumulation of rainwater possible, the loads due to rain shall be the lesser of either the one-day rainfall determined in conformance with Subsection 1.1.2. or	https://www.dropbox.com/s/3azqh6sbk02dym7/Proposed_Change_957.pdf?dl=0

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		mm above the level of the scuppers, applied over the horizontal projection of the surface and tributary areas.		a depth of rainwater equal to 30 mm above the bottom of the scuppers, applied over the horizontal projection of the surface and tributary areas.	a depth of rainwater equal to 30 mm above the ~~level~~bottom of the scuppers, applied over the horizontal projection of the surface and tributary areas.	
Snow Loads	4.1.6.5. Multi-level Roofs	**(1)** The drifting load of snow on a roof adjacent to a higher roof shall be taken as trapezoidal, as shown in Figure 4.1.6.5.A., where the accumulation factor, C_a, is, $C_a = C_{a0} - (C_{a0} - 1)(x/x_d)$, for $0 \le x \le x_d$ or $C_a = 1.0$, for $x > x_d$ where, C_{a0} = peak value of C_a at x = 0 as specified in Sentences (3) and (4) and as shown in Figure 4.1.6.5.A., x = distance from roof step as shown in Figure 4.1.6.5.A., and xd = length of drift as specified in Sentence (2) and as shown in Figure 4.1.6.5.A **(2)** The length of the drift, x_d, shall be calculated as follows: $x_d = 5\frac{C_b S_s}{\gamma}(C_{a0} - 1)$ where, γ = specific weight of snow as specified in Article 4.1.6.13. **(3)** The value of C_{a0} for each of Cases I, II and III shall be the lesser of, $C_{a0} = \beta\frac{\gamma h}{C_b S_s}$ and $C_{a0} = \frac{F}{C_b}$ where, β = 1.0 for Case I and 0.67 for Cases II and III, h = difference in elevation between the lower roof surface and the top of the parapet on the upper roof as shown in Figure 4.1.6.5.A., and $F = 0.35\beta\sqrt{\frac{\gamma(l_{cs} - 5h'_p)}{S_s}} + C_b$, but F ≤ 5 for $C_{ws} = 1.0$ where, C_{ws} = value for C_w applicable to the source of drifting,	4.1.6.5. Multi-level Roofs	(1) The drifting load of snow on a roof adjacent to a higher roof shall be taken as trapezoidal, as shown in Figure 4.1.6.5.-A, and the accumulation factor, Ca, shall be determined as follows: $C_a = C_{a0} - (C_{a0} - 1)(x/x_d)$, for $0 \le x \le x_d$ or $C_a = 1.0$, for $x > x_d$ where C_{a0} = peak value of Ca at x = 0 determined in accordance with Sentences (3) , (4) and (5) and as shown in Figure 4.1.6.5.-B, x = distance from roof step as shown in Figure 4.1.6.5.-A, and x_d = length of drift determined in accordance with Sentence (2) and as shown in Figure 4.1.6.5.-A. (2) The length of the drift, x_d, shall be calculated as follows: $x_d = 5\frac{C_b S_s}{\gamma}(C_{a0} - 1)$ where γ = specific weight of snow as specified in Article 4.1.6.13. (3) Except as provided in Sentence (4), the value of Ca0 for each of Cases I, II and III shall be the lesser of: $C_{a0} = \beta\frac{\gamma h}{C_b S_s}$ and $C_{a0} = \frac{F}{C_b}$ where β = 1.0 for Case I, and 0.67 for Cases II and III, h = difference in elevation between the lower roof surface and the top of the parapet on the upper roof as shown in Figure 4.1.6.5.-A, and $F = 0.35\beta\sqrt{\frac{\gamma(l_{cs} - 5h'_p)}{S_s}} + C_b$, but F ≤ 5 for $C_{ws} = 1.0$ where C_{ws} = value of C_w applicable to the source of drifting, l_{cs} = characteristic length of the source area for drifting, defined as,	(1) The drifting load of snow on a roof adjacent to a higher roof shall be taken as trapezoidal, as shown in Figure 4.1.6.5.A., ~~where~~, and the accumulation factor, Ca, ~~is,~~shall be determined as follows: $C_a = C_{a0} - (C_{a0} - 1)(x/x_d)$, for $0 \le x \le x_d$ or $C_a = 1.0$, for $x > x_d$ where~~,~~ C_{a0} = peak value of Ca at x = 0 ~~as specified~~determined in accordance with Sentences (3) ~~and~~, (4) and (5) and as shown in Figure 4.1.6.5~~.A.,~~.B, x = distance from roof step as shown in Figure 4.1.6.5.A., and x_d = length of drift ~~as specified in~~determined in accordance with Sentence (2) and as shown in Figure 4.1.6.5.A (2) The length of the drift, x_d, shall be calculated as follows: $x_d = 5\frac{C_b S_s}{\gamma}(C_{a0} - 1)$ where~~,~~ γ = specific weight of snow as specified in Article 4.1.6.13. (3) ~~The~~ Except as provided in Sentence (4), the value of Ca0 for each of Cases I, II and III shall be the lesser of~~,~~: $C_{a0} = \beta\frac{\gamma h}{C_b S_s}$ and $C_{a0} = \frac{F}{C_b}$ where~~,~~ β = 1.0 for Case I, and 0.67 for Cases II and III, h = difference in elevation between the lower roof surface and the top of the parapet on the upper roof as shown in Figure 4.1.6.5.A., and $F = 0.35\beta\sqrt{\frac{\gamma(l_{cs} - 5h'_p)}{S_s}} + C_b$, but F ≤ 5 for $C_{ws} = 1.0$ where~~,~~ C_{ws} = value ~~for~~of C_w applicable to the source of drifting,	https://www.dropbox.com/s/oyplgnrx39pgonw/Proposed_C.pdf?dl=0

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		l_{cs} = the characteristic length of the source area for drifting, defined as, $l_{cs} = 2w_s - \frac{w_s^2}{l_s}$, where w_s and l_s are respectively the shorter and longer dimensions of the relevant source areas for snow drifting shown in Figure 4.1.6.5.B. for Cases I, II and III, and $h'_p = h_p - \left(\frac{0.8S_s}{\gamma}\right)$, but $0 \leq h'_p \leq \left(\frac{l_{cs}}{5}\right)$ where, h_p = height of the roof perimeter parapet of the source area, to be taken as zero unless all the roof edges of the source area have parapets. **(4)** The value of C_{a0} shall be the highest of Cases I, II and III, considering the different roof source areas for drifting snow, as specified in Sentence (3) and Figure 4.1.6.5.B. (Figure 4.1.6.5.A.) (Figure 4.1.6.5.B.)		$l_{cs} = 2w_s - \frac{w_s^2}{l_s}$, where w_s and ls are respectively the shorter and longer dimensions of the relevant source areas for snow drifting shown in Figure 4.1.6.5.-B for Cases I, II and III, and $h'_p = h_p - \left(\frac{0.8S_s}{\gamma}\right)$, but $0 \leq h'_p \leq \left(\frac{l_{cs}}{5}\right)$ where hp = height of the roof perimeter parapet of the source area, to be taken as zero unless all the roof edges of the source area have parapets. (4) Where h ≥ 5 m, the value of C_{a0} for Case I is permitted to be taken as $C_{a0} = \left(\frac{25-h}{20}\right)\left(\frac{F}{C_b} - 1\right) + 1$ for 5 m ≤ h ≤ 25 m, and $C_{a0} = 1$ for h > 25 m The value of Ca0 shall be the highest of Cases I, II and III, considering the different roof source areas for drifting snow, as specified in Sentences (3) and (4) and Figure 4.1.6.5.-B. (Figure 4.1.6.5.-A Snow load factors for lower level roofs and Table 4.1.6.5.-A) (Figure 4.1.6.5.-B and Table 4.1.6.5.-B)	l_{cs} = characteristic length of the source area for drifting, defined as, $l_{cs} = 2w_s - \frac{w_s^2}{l_s}$, where w_s and ls are respectively the shorter and longer dimensions of the relevant source areas for snow drifting shown in Figure 4.1.6.5~~.~~B~~.~~ for Cases I, II and III, and $h'_p = h_p - \left(\frac{0.8S_s}{\gamma}\right)$, but $0 \leq h'_p \leq \left(\frac{l_{cs}}{5}\right)$ where~~,~~ hp ~~=~~ = height of the roof perimeter parapet of the source area, to be taken as zero unless all the roof edges of the source area have parapets. (4) Where h ≥ 5 m, the value of C_{a0} for Case I is permitted to be taken as $C_{a0} = \left(\frac{25-h}{20}\right)\left(\frac{F}{C_b} - 1\right) + 1$ for 5 m ≤ h ≤ 25 m, and $C_{a0} = 1$ for h > 25 m The value of Ca0 shall be the highest of Cases I, II and III, considering the different roof source areas for drifting snow, as specified in ~~Sentence~~Sentences (3) and (4) and Figure 4.1.6.5~~.~~B. (See the National PCF for the changes in the tables and figures)	
Snow Loads	4.1.6.8. Snow Drift at Corners	**(1)**The drift loads on the lower level roof against the two faces of an outside corner of an upper level roof or roof obstruction shall be extended radially around the corner as shown in Figure 4.1.6.8.A. and may be taken as the least severe of the drift loads lying against the two faces of the corner. **(2)**The drift loads on the lower level roof against the two faces of an inside corner of an upper level roof or a parapet shall be calculated for each face and applied as far as the bisector of the corner angle as shown in Figure 4.1.6.8.B. (Figure 4.1.6.8.A.)	4.1.6.8. Snow Drift at Corners	(1) The drift loads on the lower level roof against the two faces of an outside corner of an upper level roof or roof obstruction shall be extended radially around the corner as shown in Figure 4.1.6.8.-A and may be taken as the least severe of the drift loads lying against the two faces of the corner. (2) The drift loads on the lower level roof against the two faces of an inside corner of an upper level roof or a parapet shall be calculated for each face and the higher of the two loads shall be applied where the drifts overlap as shown in Figure 4.1.6.8.-B. (Figure 4.1.6.8.-A)	(1) The drift loads on the lower level roof against the two faces of an outside corner of an upper level roof or roof obstruction shall be extended radially around the corner as shown in Figure 4.1.6.8.A. and may be taken as the least severe of the drift loads lying against the two faces of the corner. (2) The drift loads on the lower level roof against the two faces of an inside corner of an upper level roof or a parapet shall be calculated for each face and ~~applied as far as~~ the ~~bisector~~higher of the ~~corner angle~~two loads shall be applied where the drifts overlap as shown in Figure 4.1.6.8.B. (See the National PCF for the changes in the figures)	https://www.dropbox.com/s/lhdmd1rcpo9mjkm/Proposed_Change_1171.pdf?dl=0
Snow Loads for Roofs with Solar Panels	4.1.6.16. Roofs with Solar Panels (new)	N/A	4.1.6.16. Roofs with Solar Panels	(1) Where solar panels are installed on a roof, the snow loads, S, shall be determined in accordance with Sentences (2) to (6) or with the requirements for roofs without solar panels, whichever produces the most critical effect. (2) For the purposes of this Article, solar panels shall be classified as (a) Parallel Flush, where the panels are installed parallel to the roof surface with their upper	(1) Where solar panels are installed on a roof, the snow loads, S, shall be determined in accordance with Sentences (2) to (6) or with the requirements for roofs without solar panels, whichever produces the most critical effect. (2) For the purposes of this Article, solar panels shall be classified as (a) Parallel Flush, where the panels are installed parallel to the roof surface with their upper	https://www.dropbox.com/s/kldkjse8e8mappb/Proposed_Change_1199.pdf?dl=0

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				surface less than or equal to $C_bC_wS_s/\gamma$ above the roof surface, (b) Parallel Raised, where the panels are installed parallel to the roof surface with their upper surface greater than $C_bC_wS_s/\gamma$ above the roof surface, or (c) Tilted, where the panels are installed at an angle to the roof surface with their highest edge greater than $C_bC_wS_s/\gamma$ above the roof surface. (3) For sloped roofs with solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that the slope factor, C_s, shall be (a) taken as 1.0 for roof areas extending upslope from the downslope edge of a panel or array of panels at an angle of 45° from each side edge of the panel or array, and (b) as specified in Sentences 4.1.6.2.(5) to (7) for all other roof areas. (4) For sloped roofs with Parallel Flush solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that (a) C_s shall be determined in accordance with Sentence (3), (b) where the gap width, wg, between the panels along the roof slope is greater than or equal to the panel width, wp, along the roof slope, the accumulation factor, Ca, shall be taken as (i) 0.0 for the panels, (ii) 2.0 for roof areas within a distance of w_p downslope from a downslope panel edge, and (iii) 1.0 for all other roof areas (c) where the gap width, w_g, between the panels along the roof slope is less than the panel width, wp, along the roof slope, C_a shall be taken as (i) 0.0 for panel areas within a distance of wg downslope from an upslope panel edge, (ii) 1.0 for other panel areas, (iii) 2.0 for roof areas in gaps between the panels, and (iv) 1.0 for all other roof areas (5) For roofs with Parallel Raised solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that	surface less than or equal to $C_bC_wS_s/\gamma$ above the roof surface, (b) Parallel Raised, where the panels are installed parallel to the roof surface with their upper surface greater than $C_bC_wS_s/\gamma$ above the roof surface, or (c) Tilted, where the panels are installed at an angle to the roof surface with their highest edge greater than $C_bC_wS_s/\gamma$ above the roof surface. (3) For sloped roofs with solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that the slope factor, C_s, shall be (a) taken as 1.0 for roof areas extending upslope from the downslope edge of a panel or array of panels at an angle of 45° from each side edge of the panel or array, and (b) as specified in Sentences 4.1.6.2.(5) to (7) for all other roof areas. (4) For sloped roofs with Parallel Flush solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that (a) C_s shall be determined in accordance with Sentence (3), (b) where the gap width, wg, between the panels along the roof slope is greater than or equal to the panel width, wp, along the roof slope, the accumulation factor, Ca, shall be taken as (i) 0.0 for the panels, (ii) 2.0 for roof areas within a distance of w_p downslope from a downslope panel edge, and (iii) 1.0 for all other roof areas (c) where the gap width, w_g, between the panels along the roof slope is less than the panel width, wp, along the roof slope, C_a shall be taken as (i) 0.0 for panel areas within a distance of wg downslope from an upslope panel edge, (ii) 1.0 for other panel areas, (iii) 2.0 for roof areas in gaps between the panels, and (iv) 1.0 for all other roof areas (5) For roofs with Parallel Raised solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that	

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				(a) where the roof is flat, the accumulation factor, C_a, shall be taken as (i) 1.0 for the panels, (ii) 1.0 for roof areas not under the panels, (iii) 1.0 for roof areas under the panels within a distance of min ($2h_g$, $2w_g$) from a panel edge, where hg is the gap height between the lower surface of the panels and the roof surface, and w_g is the gap width between the panels, and (iv) 0.0 for other roof areas under the panels, and (b) where the roof is sloped, the snow loads, S, derived from Clause (a) shall be used, except that (i) Cs shall be determined in accordance with Sentence (3), (ii) S shall be taken as 0.0 on the panels, and (iii) S for all roof areas shall be taken as the sum of S on the panels, as derived from Subclause (a)(i) and shifted by a distance of wp downslope onto the roof, where wp is the panel width along the roof slope, and S on the roof areas, as derived from Subclauses (a)(ii) to (a)(iv). (6) For flat roofs with Tilted solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that (a) C_a shall be taken as 0.0 for the panels, (b) C_a shall be taken as 1.0 for roof areas beyond a distance of $5(h – C_bC_wS_s/\gamma)$ from the lowest edge of the panels, where h is the height of the highest edge of the panels above the roof surface, (c) except as provided in Clauses (d) and (e), for roof areas within a distance of $5(h – C_bC_wS_s/\gamma)$ from the lowest edge of the panels, Ca shall be taken as (i) 1.25 for $(hg – C_bC_wS_s/\gamma) \leq 0.3$ m, where hg is the gap height between the lowest edge of the panels and the roof surface, (ii) $1.294 – 0.1471(hg – C_bC_wS_s/\gamma)$ for $0.3 < (hg – C_bC_wS_s/\gamma) \leq 2.0$ m, and (iii) 1.0 for $(hg – C_bC_wS_s/\gamma) > 2.0$ m, (d) except as provided in Clause (e), C_a shall be taken as 2.0 for roof areas within a distance of w_{ph} beyond the lowest edge of the panels, where w_{ph} is the horizontal projection of the	(a) where the roof is flat, the accumulation factor, C_a, shall be taken as (i) 1.0 for the panels, (ii) 1.0 for roof areas not under the panels, (iii) 1.0 for roof areas under the panels within a distance of min ($2h_g$, $2w_g$) from a panel edge, where hg is the gap height between the lower surface of the panels and the roof surface, and w_g is the gap width between the panels, and (iv) 0.0 for other roof areas under the panels, and (b) where the roof is sloped, the snow loads, S, derived from Clause (a) shall be used, except that (i) Cs shall be determined in accordance with Sentence (3), (ii) S shall be taken as 0.0 on the panels, and (iii) S for all roof areas shall be taken as the sum of S on the panels, as derived from Subclause (a)(i) and shifted by a distance of wp downslope onto the roof, where wp is the panel width along the roof slope, and S on the roof areas, as derived from Subclauses (a)(ii) to (a)(iv). (6) For flat roofs with Tilted solar panels, the snow loads, S, shall be determined in accordance with the requirements for roofs without solar panels, except that (a) C_a shall be taken as 0.0 for the panels, (b) C_a shall be taken as 1.0 for roof areas beyond a distance of $5(h – C_bC_wS_s/\gamma)$ from the lowest edge of the panels, where h is the height of the highest edge of the panels above the roof surface, (c) except as provided in Clauses (d) and (e), for roof areas within a distance of $5(h – C_bC_wS_s/\gamma)$ from the lowest edge of the panels, Ca shall be taken as (i) 1.25 for $(hg – C_bC_wS_s/\gamma) \leq 0.3$ m, where hg is the gap height between the lowest edge of the panels and the roof surface, (ii) $1.294 – 0.1471(hg – C_bC_wS_s/\gamma)$ for $0.3 < (hg – C_bC_wS_s/\gamma) \leq 2.0$ m, and (iii) 1.0 for $(hg – C_bC_wS_s/\gamma) > 2.0$ m, (d) except as provided in Clause (e), C_a shall be taken as 2.0 for roof areas within a distance of w_{ph} beyond the lowest edge of the panels, where w_{ph} is the horizontal projection of the	

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				panel width, wp, along the sloped panel edges, and (e) where the panels, panel supports or back plates obstruct snow from sliding under the panels, the load of the increased volume of snow in the gaps between the panels shall be considered to be uniformly distributed.	panel width, wp, along the sloped panel edges, and (e) where the panels, panel supports or back plates obstruct snow from sliding under the panels, the load of the increased volume of snow in the gaps between the panels shall be considered to be uniformly distributed.	
Wind Loads	4.1.7.2. Classification of Buildings	**(3)** A *building* shall be classified as very dynamically sensitive if, (a) its lowest natural frequency is less than or equal to 0.25 Hz, or (b) its height is more than 6 times its minimum effective width, where the minimum effective width is determined in accordance with Clause (2)(c).	4.1.7.2. Classification of Buildings	(3) A *building* shall be classified as very dynamically sensitive if (a) its lowest natural frequency is less than or equal to 0.25 Hz, or (b) it contains a human occupancy, and its height is more than 6 times its minimum effective width as defined in Clause (2)(c).	(3) A *building* shall be classified as very dynamically sensitive if~~,~~ (a) its lowest natural frequency is less than or equal to 0.25 Hz, or (b) it contains a human occupancy, and its height is more than 6 times its minimum effective width~~, where the minimum effective width is determined~~ as defined in ~~accordance with~~ Clause (2)(c).	https://www.dropbox.com/s/yqqwnvo74h0g9u7/Proposed_Change_1192.pdf?dl=0
Wind Loads	4.1.7.5. External Pressure Coefficients	**(1)** Applicable values of external pressure coefficients, C_p, are provided in, (a) Sentences (2) to (5), and (b) Article 4.1.7.6. for certain shapes of low *buildings*. **(2)** For the design of the main structural system, the value of C_p shall be established as follows, where H is the height of the *building* and D is the width of the *building* parallel to the wind direction: (a) on the windward face, C_p = 0.6 for H/D < 0.25 = 0.27(H/D + 2) for 0.25 ≤ H/D < 1.0 = 0.8 for H/D ≥ 1.0, (b) on the leeward face, C_p = –0.3 for H/D < 0.25 = –0.27(H/D + 0.88) for 0.25 ≤ H/D < 1.0 = –0.5 for H/D ≥ 1.0, and (c) on the walls parallel to the wind, C_p = –0.7. **(3)** For the design of roofs, the value of C_p shall be established as follows, where x is the distance from the upwind edge of the roof: (a) for H/D ≥ 1.0, C_p = –1.0, and (b) for H/D <1.0, C_p = –1.0 for x ≤ H = –0.5 for x > H **(4)** For the design of the cladding and of secondary structural elements supporting the cladding, the value of C_p shall be established as follows, where W and D are the widths of the *building*: (a) on walls, C_p shall be taken as ±0.9, except that within a distance equal to the larger of	4.1.7.5. External Pressure Coefficients	(1) Applicable values of external pressure coefficients, C_p, are provided in (a) Sentences (2) to (9) and (b) Article 4.1.7.6. for certain shapes of low *buildings*. (2) For the design of the main structural system, the value of C_p shall be established as follows, where H is the height of the *building* and D is the width of the *building* parallel to the wind direction: (a) on the windward face, C_p = 0.6 for H/D < 0.25 = 0.27(H/D + 2) for 0.25 ≤ H/D < 1.0, and = 0.8 for H/D ≥ 1.0, (b) on the leeward face, C_p = –0.3 for H/D < 0.25, = –0.27(H/D + 0.88) for 0.25 ≤ H/D < 1.0, and = –0.5 for H/D ≥ 1.0, and (c) on the walls parallel to the wind, C_p = –0.7. (3) For the design of roofs, the value of Cp shall be established as follows, where x is the distance from the upwind edge of the roof: (a) for H/D ≥ 1.0, C_p = –1.0, and (b) for H/D < 1.0, C_p = –1.0 for x ≤ H, and = –0.5 for x > H. (4) For the design of the cladding and of secondary structural elements supporting the cladding, the value of C_p shall be established as follows, where W and D are the widths of the *building*: (a) on walls, C_p shall be taken as ±0.9, except that within a distance equal to the larger of 0.1D and 0.1W from a *building* corner, the negative value of Cp shall be taken as –1.2,	(1) Applicable values of external pressure coefficients, C_p, are provided in~~,~~ (a) Sentences (2) to (~~5),~~9) and (b) Article 4.1.7.6. for certain shapes of low *buildings*. (2) For the design of the main structural system, the value of C_p shall be established as follows, where H is the height of the *building* and D is the width of the *building* parallel to the wind direction: (a) on the windward face, C_p = 0.6 for H/D < 0.25 = 0.27(H/D + 2) for 0.25 ≤ H/D < 1.0, and = 0.8 for H/D ≥ 1.0, (b) on the leeward face, C_p = –0.3 for H/D < 0.25, = –0.27(H/D + 0.88) for 0.25 ≤ H/D < 1.0, and = –0.5 for H/D ≥ 1.0, and (c) on the walls parallel to the wind, C_p = –0.7. (3) For the design of roofs, the value of Cp shall be established as follows, where x is the distance from the upwind edge of the roof: (a) for H/D ≥ 1.0, C_p = –1.0, and (b) for H/D < 1.0, C_p = –1.0 for x ≤ H, and = –0.5 for x > H. (4) For the design of the cladding and of secondary structural elements supporting the cladding, the value of C_p shall be established as follows, where W and D are the widths of the *building*: (a) on walls, C_p shall be taken as ±0.9, except that within a distance equal to the larger of	https://www.dropbox.com/s/ku3k1s0gpsc3mm6/Proposed_Change_1179.pdf?dl=0

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		0.1D and 0.1W from a *building* corner the negative value of C_p shall be taken as –1.2, (b) on walls where vertical ribs deeper than 1 m are placed on the facade, C_p shall be taken as ±0.9, except that within a distance equal to the larger of 0.2D and 0.2W from a *building* corner the negative value of C_p shall be taken as –1.4, and (c) on roofs, C_p shall be taken as –1.0, except that, (i) within a distance equal to the larger of 0.1D and 0.1W from a roof edge, C_p shall be taken as –1.5, (ii) in a zone that is within a distance equal to the larger of 0.2D and 0.2W from a roof corner, C_p shall be taken as –2.3 but is permitted to be taken as –2.0 for roofs with perimeter parapets that are higher than 1 m, and (iii) on lower levels of flat stepped roofs, positive pressure coefficients established for the walls of the steps apply for a distance b as shown in Figure 4.1.7.6.D. **(5)** For the design of balcony *guards*, the internal pressure coefficient, C_{pi}, shall be taken as zero and the value of C_p shall be taken as ±0.9, except that within a distance equal to the larger of 0.1D and 0.1W from a *building* corner, C_p shall be taken as ±1.2.		(b) on walls where vertical ribs deeper than 1 m are placed on the facade, C_p shall be taken as ±0.9, except that, within a distance equal to the larger of 0.2D and 0.2W from a *building* corner, the negative value of C_p shall be taken as –1.4, and (c) on roofs, C_p shall be taken as –1.0, except that (i) within a distance equal to the larger of 0.1D and 0.1W from a roof edge, C_p shall be taken as –1.5, (ii) in a zone that is within a distance equal to the larger of 0.2W and 0.2D from a roof corner, Cp shall be taken as –2.3 but is permitted to be taken as –2.0 for roofs with perimeter parapets that are higher than 1 m, and (iii) on lower levels of flat stepped roofs, positive pressure coefficients established for the walls of the steps apply for a distance b. (5) Except as provided in Sentence (6), for the design of balcony *guards*, the internal pressure coefficient, Cpi, shall be taken as zero and the value of C_p shall be taken as ±0.9, except that, within a distance equal to the larger of 0.1W and 0.1D from a *building* corner, Cp shall be taken as ±1.2. (6) Where the top of the balcony *guard* is 2.0 m or less below the roof surface, the values of C_p shall be taken as equal to those determined for parapets in Sentences (7) and (8). (7) To determine the contribution from parapets to the wind loads on the main structural system, the values of C_p shall be taken as (a) on the outer faces, equal to those for the structural design on the walls below, (b) on the inner face of the windward parapet, equal to that on the upwind edge of a roof surface at the level of the top of the parapet, and (c) on the inner faces of the other parapets, zero. (8) For the structural design of parapets themselves, the values of C_p shall be taken as equal to those specified in Sentence (7), except that the value of C_p on the inner face of the leeward parapet shall be taken as equal to that on the outer face of the windward parapet. (9) For the design of cladding on parapets, the values of C_p shall be taken as	0.1D and 0.1W from a *building* corner, the negative value of Cp shall be taken as –1.2, (b) on walls where vertical ribs deeper than 1 m are placed on the facade, C_p shall be taken as ±0.9, except that, within a distance equal to the larger of 0.2D and 0.2W from a *building* corner, the negative value of C_p shall be taken as –1.4, and (c) on roofs, C_p shall be taken as –1.0, except that~~,~~ (i) within a distance equal to the larger of 0.1D and 0.1W from a roof edge, C_p shall be taken as –1.5, (ii) in a zone that is within a distance equal to the larger of 0.2D and 0.2W from a roof corner, Cp shall be taken as –2.3 but is permitted to be taken as –2.0 for roofs with perimeter parapets that are higher than 1 m, and (iii) on lower levels of flat stepped roofs, positive pressure coefficients established for the walls of the steps apply for a distance b~~ as shown in Figure 4.1.7.6.D~~. ~~For~~(5) Except as provided in Sentence (6), for the design of balcony *guards*, the internal pressure coefficient, Cpi, shall be taken as zero and the value of C_p shall be taken as ±0.9, except that within a distance equal to the larger of 0.1D and 0.1W from a *building* corner, C_p shall be taken as ±1.2. (6) Where the top of the balcony *guard* is 2.0 m or less below the roof surface, the values of C_p shall be taken as equal to those determined for parapets in Sentences (7) and (8). (7) To determine the contribution from parapets to the wind loads on the main structural system, the values of C_p shall be taken as (a) on the outer faces, equal to those for the structural design on the walls below, (b) on the inner face of the windward parapet, equal to that on the upwind edge of a roof surface at the level of the top of the parapet, and (c) on the inner faces of the other parapets, zero. (8) For the structural design of parapets themselves, the values of C_p shall be taken as equal to those specified in Sentence (7), except that the value of C_p on the inner face of the leeward parapet shall be taken as equal to that on the outer face of the windward parapet.	

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				(a) on the outer vertical surfaces, equal to those on the cladding on the walls below, and (b) on the inner and top surfaces, equal to those on the cladding of a roof surface at the level of the top of the parapet.	(9) For the design of cladding on parapets, the values of C_p shall be taken as (a) on the outer vertical surfaces, equal to those on the cladding on the walls below, and (b) on the inner and top surfaces, equal to those on the cladding of a roof surface at the level of the top of the parapet.	
Wind Loads	4.1.7.6. External Pressure Coefficients for Low Buildings	N/A	4.1.7.6. External Pressure Coefficients for Low Buildings	(10) The wind loads on balcony *guards* on low *buildings* shall be as specified in Sentences 4.1.7.5.(5) and (6). (11) The wind loads on parapets on low *buildings* shall be as specified in Sentences 4.1.7.5.(7) to (9).	(10) The wind loads on balcony *guards* on low *buildings* shall be as specified in Sentences 4.1.7.5.(5) and (6). (11) The wind loads on parapets on low *buildings* shall be as specified in Sentences 4.1.7.5.(7) to (9).	https://www.dropbox.com/s/hrjgne8ipnerpy3/Proposed_Change_1175.pdf?dl=0
Wind Loads	4.1.7.7. Internal Pressure Coefficient	**(1)** The internal pressure coefficient, C_{pi}, shall be as prescribed in Table 4.1.7.7. (Table 4.1.7.7. Internal Pressure Coefficients)	4.1.7.7. Internal Pressure Coefficient	(1) The internal pressure coefficient, C_{pi}, for *buildings* shall be as prescribed in Table 4.1.7.7. (2) The internal pressure coefficient, C_{pi}, for cladding on parapets shall be –0.70 to +0.70. (Table 4.1.7.7. Internal Pressure Coefficients)	(1) The internal pressure coefficient, C_{pi}, for *buildings* shall be as prescribed in Table 4.1.7.7. (2) The internal pressure coefficient, C_{pi}, for cladding on parapets shall be –0.70 to +0.70. (Refer to the National PCF for the changes in the tables)	https://www.dropbox.com/s/q444oaysrq5k5cb/Proposed_Change_1177.pdf?dl=0
Wind Load	4.1.7.9. Full and Partial Wind Loading	**(1)**Except where the wind loads are derived from the combined C_pC_g values determined in accordance with Article 4.1.7.6., *buildings* and structural members shall be capable of withstanding the effects of, (a) the full wind loads acting along each of the two principal horizontal axes considered separately, (b) the wind loads as described in Clause (a) but with 100% of the load removed from any one portion of the area, (c) the wind loads as described in Clause (a) but with both axes considered simultaneously at 75% of their full value, and (d) the wind loads as described in Clause (c) but with 50% of these loads removed from any portion of the area.	4.1.7.9. Full and Partial Wind Loading	(1) Except where the wind loads are derived from the combined C_pC_g values determined in accordance with Article 4.1.7.6., *buildings* and structural members shall be capable of withstanding the effects of the following loads: (a) the full wind loads acting along each of the 2 principal horizontal axes considered separately, (b) 75% of the wind loads described in Clause (a) but offset from the central geometric axis of the *building* by 15% of its width normal to the direction of the force to produce the worst load effect, (c) the wind loads described in Clause (a) but with both axes considered simultaneously at 75% of their full value, and (d) 56% of the wind loads described inClause (a) but with both axes considered simultaneously and offset from the central geometric axis of the *building* by 15% of its width normal to the direction of the force.	(1) Except where the wind loads are derived from the combined C_pC_g values determined in accordance with Article 4.1.7.6., *buildings* and structural members shall be capable of withstanding the effects of~~,~~ the following loads: (a) the full wind loads acting along each of the two principal horizontal axes considered separately, (b) 75% of the wind loads ~~as~~ described in Clause (a) but ~~with 100% of the load removed~~offset from ~~any one portion~~the central geometric axis of the ~~area~~*building* by 15% of its width normal to the direction of the force to produce the worst load effect, (c) the wind loads ~~as~~ described in Clause (a) but with both axes considered simultaneously at 75% of their full value, and (d) 56% of the wind loads ~~as~~ described in Clause (~~c~~a) but with ~~50% of these loads removed~~both axes considered simultaneously and offset from ~~any portion~~the central geometric axis of the ~~area.~~ *building* by 15% of its width normal to the direction of the force.	https://www.dropbox.com/s/6ceww15uhtfx82r/Proposed_Change_1150.pdf?dl=0
Solar Collectors	4.1.7.12A. Roof-Mounted Solar Panels on Buildings of Any Height (new)	N/A	4.1.7.12. Roof-Mounted Solar Panels on Buildings of Any Height	(1) Where solar panels are installed on a roof, the roof wind loads shall account for the wind loads on the solar panels, as determined in accordance with Sentences (2) to (7), or shall be determined in the same way as for the roof without solar panels, whichever approach results in the most critical effect.	(1) Where solar panels are installed on a roof, the roof wind loads shall account for the wind loads on the solar panels, as determined in accordance with Sentences (2) to (7), or shall be determined in the same way as for the roof without solar panels, whichever approach results in the most critical effect.	https://www.dropbox.com/s/0rhboz6kr5rdtwb/Proposed_Change_1143.pdf?dl=0

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				(2) For an array of solar panels where the panels are installed close and parallel to the roof surface with their upper surface not more than 250 mm above the roof surface and with gaps around the panels of not less than 6 mm, the net positive or negative pressure difference between the upper and lower surfaces of a panel or the array shall be calculated as follows: $p = I_W q C_e C_t C_g C_p E \gamma_a$ where I_w, q, C_e, C_t, C_g, C_p = as defined in Sentence 4.1.7.3.(1), determined in the same manner as for the roof cladding, E = edge factor, as provided in Sentence (4), γ_a = pressure equalization factor, as provided in Sentence (3). (3) The pressure equalization factor, γ_a, in Sentence (2) shall be (a) for a panel or an array where the panel chord length, L_p, is greater than 2 m or for a panel or an array that is within a distance of $2h_2$ from the roof edge or ridge, where h_2 is the height of the panel's highest point above the roof surface, taken as 1.0, and (b) for other panels or arrays, determined from Figure 4.1.7.12.-A based on the area of the panel or array over which the wind load is being calculated. (4) The edge factor, E, in Sentence (2) shall be taken as (a) 1.5 within a distance of $1.5L_p$ from an exposed edge of the array of solar panels, as defined in Sentence (5), and (b) 1.0 elsewhere. (5) For the purposes of Clause (4)(a), an exposed edge of the array of solar panels shall be considered to occur (a) where the distance to the next row of panels or the distance across a gap in the same row of panels exceeds 4h2 or 1.2 m, whichever is greater, or (b) where the distance to the roof edge exceeds 4h2 or 1.2 m, whichever is greater, and exceeds 0.5h, where h is the reference height of the roof. (6) For an array of solar panels mounted on a roof with a slope, α, less than or equal to 7°, where the panels are tilted relative to the roof surface, have a chord length, L_p, not greater than 2 m, and are installed such that the height of their lowest point above the roof surface, h_1, is not greater than 0.6 m,	(2) For an array of solar panels where the panels are installed close and parallel to the roof surface with their upper surface not more than 250 mm above the roof surface and with gaps around the panels of not less than 6 mm, the net positive or negative pressure difference between the upper and lower surfaces of a panel or the array shall be calculated as follows: $p = I_W q C_e C_t C_g C_p E \gamma_a$ where I_w, q, C_e, C_t, C_g, C_p = as defined in Sentence 4.1.7.3.(1), determined in the same manner as for the roof cladding, E = edge factor, as provided in Sentence (4), γ_a = pressure equalization factor, as provided in Sentence (3). (3) The pressure equalization factor, γ_a, in Sentence (2) shall be (a) for a panel or an array where the panel chord length, L_p, is greater than 2 m or for a panel or an array that is within a distance of $2h_2$ from the roof edge or ridge, where h_2 is the height of the panel's highest point above the roof surface, taken as 1.0, and (b) for other panels or arrays, determined from Figure 4.1.7.12.A based on the area of the panel or array over which the wind load is being calculated. (4) The edge factor, E, in Sentence (2) shall be taken as (a) 1.5 within a distance of $1.5L_p$ from an exposed edge of the array of solar panels, as defined in Sentence (5), and (b) 1.0 elsewhere. (5) For the purposes of Clause (4)(a), an exposed edge of the array of solar panels shall be considered to occur (a) where the distance to the next row of panels or the distance across a gap in the same row of panels exceeds 4h2 or 1.2 m, whichever is greater, or (b) where the distance to the roof edge exceeds 4h2 or 1.2 m, whichever is greater, and exceeds 0.5h, where h is the reference height of the roof. (6) For an array of solar panels mounted on a roof with a slope, α, less than or equal to 7°, where the panels are tilted relative to the roof surface, have a chord length, L_p, not greater than 2 m, and are installed such that the height of their lowest point above the roof surface, h_1, is not greater than 0.6 m,	

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				the height of their highest point above the roof surface, h_2, is not greater than 1.2 m, and their tilt angle relative to the roof surface, ω, is not greater than 35°, or where the panels are installed parallel to the roof surface with their upper surface greater than 250 mm above the roof surface and with gaps not less than 6 mm between the panels, the net positive or negative pressure difference between the upper and the lower surfaces of a panel or the array shall be calculated as follows: $p_{net} = I_W q C_e C_t (C_g C_p)_{net}$ where I_W, q, C_e and C_t = as defined in Sentence 4.1.7.3.(1), determined in the same manner as for the roof cladding, and $(C_g C_p)_{net}$ = net gust pressure coefficient, as provided in Sentence (7). (7) The net gust pressure coefficient, $(C_g C_p)_{net}$, in Sentence (6) shall be calculated as follows: $(C_g C_p)_{net} = \pm \gamma_p \gamma_c E (C_g C_p)_n$ where γ_p = parapet factor, determined as the lesser of 1.2 and (0.9 + h_{pt}/h), γ_c = chord factor, determined as the greater of (0.6 + 0.2L_p) and 0.8, E = as defined in Sentence (2), $(C_g C_p)_n$ = normalized gust pressure coefficient, determined from Figure 4.1.7.12.-B based on ω and A_N, where h_{pt} = height of the parapet above the roof surface, in m, h = reference height of the roof, in m, L_p = panel chord length, in m, ω = panel tilt angle relative to the roof surface, A_N = normalized panel or array area, calculated as $A_N = \frac{1000A}{\max(L_b^2, 25)}$ where A = panel or array area over which the wind load is being calculated, in m^2, L_b = normalized *building* length, in m, determined as the lesser of $0.4\sqrt{hW_L}$, h and W_S, where W_L = longest horizontal dimension of the *building*, in m, and W_S = smallest horizontal dimension of the *building*, in m. (Figure 4.1.7.12.-A)	the height of their highest point above the roof surface, h_2, is not greater than 1.2 m, and their tilt angle relative to the roof surface, ω, is not greater than 35°, or where the panels are installed parallel to the roof surface with their upper surface greater than 250 mm above the roof surface and with gaps not less than 6 mm between the panels, the net positive or negative pressure difference between the upper and the lower surfaces of a panel or the array shall be calculated as follows: $p_{net} = I_W q C_e C_t (C_g C_p)_{net}$ where I_W, q, C_e and C_t = as defined in Sentence 4.1.7.3.(1), determined in the same manner as for the roof cladding, and $(C_g C_p)_{net}$ = net gust pressure coefficient, as provided in Sentence (7). (7) The net gust pressure coefficient, $(C_g C_p)_{net}$, in Sentence (6) shall be calculated as follows: $(C_g C_p)_{net} = \pm \gamma_p \gamma_c E (C_g C_p)_n$ where γ_p = parapet factor, determined as the lesser of 1.2 and (0.9 + h_{pt}/h), γ_c = chord factor, determined as the greater of (0.6 + 0.2L_p) and 0.8, E = as defined in Sentence (2), $(C_g C_p)_n$ = normalized gust pressure coefficient, determined from Figure 4.1.7.12.B based on ω and A_N, where h_{pt} = height of the parapet above the roof surface, in m, h = reference height of the roof, in m, L_p = panel chord length, in m, ω = panel tilt angle relative to the roof surface, A_N = normalized panel or array area, calculated as $A_N = \frac{1000A}{\max(L_b^2, 25)}$ where A = panel or array area over which the wind load is being calculated, in m^2, L_b = normalized *building* length, in m, determined as the lesser of $0.4\sqrt{hW_L}$, h and W_S, where W_L = longest horizontal dimension of the *building*, in m, and W_S = smallest horizontal dimension of the *building*, in m. (Figure 4.1.7.12.A)	

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				(Figure 4.1.7.12.-B)	(Figure 4.1.7.12.B)	
Wind Loads	4.1.7.14. Attached Canopies on Low Buildings with a Height H ≤ 20 m (new)	N/A	4.1.7.14. Attached Canopies on Low Buildings with a Height H ≤ 20 m	(1) For the purpose of this Article, "attached canopy" shall mean a horizontal canopy with a maximum slope of 2% that is attached to a *building* wall at any height, h_c, above ground level. (2) The specified external wind pressure, p, and the specified net external wind pressure, p_{net}, for attached canopies on exterior walls of low *buildings* with a height H ≤ 20 m shall be determined as follows: $p = I_W q C_e C_t C_g C_p$, and $p_{net} = I_W q C_e C_t (C_g C_p)_{net}$ where p = specified external wind pressure acting statically and, in a direction, normal to the upper or lower surface of the canopy, considered positive when acting towards the surface and negative when acting away from the surface, p_{net} = specified net external wind pressure acting statically on the canopy, considered positive when acting in a downward direction and negative when acting in an upward direction, I_W = importance factor for wind load, as provided in Table 4.1.7.3., q = reference velocity pressure, as provided in Sentence 4.1.7.3.(4), C_e = exposure factor, as provided in Sentences 4.1.7.3.(5) and (7), C_t = topographic factor, as provided in Article 4.1.7.4., C_gC_p = gust pressure coefficient on the upper or lower surface of the canopy, as given in Figure 4.1.7.14.-A, and $(C_gC_p)_{net}$ = net gust pressure coefficient on the canopy, considering simultaneous contributions from the upper and lower surfaces of the canopy, as given in Figure 4.1.7.14.-B.	(1) For the purpose of this Article, "attached canopy" shall mean a horizontal canopy with a maximum slope of 2% that is attached to a *building* wall at any height, h_c, above ground level. (2) The specified external wind pressure, p, and the specified net external wind pressure, p_{net}, for attached canopies on exterior walls of low *buildings* with a height H ≤ 20 m shall be determined as follows: $p = I_W q C_e C_t C_g C_p$, and $p_{net} = I_W q C_e C_t (C_g C_p)_{net}$ where p = specified external wind pressure acting statically and, in a direction, normal to the upper or lower surface of the canopy, considered positive when acting towards the surface and negative when acting away from the surface, p_{net} = specified net external wind pressure acting statically on the canopy, considered positive when acting in a downward direction and negative when acting in an upward direction, I_W = importance factor for wind load, as provided in Table 4.1.7.3., q = reference velocity pressure, as provided in Sentence 4.1.7.3.(4), C_e = exposure factor, as provided in Sentences 4.1.7.3.(5) and (7), C_t = topographic factor, as provided in Article 4.1.7.4., C_gC_p = gust pressure coefficient on the upper or lower surface of the canopy, as given in Figure 4.1.7.14.A, and $(C_gC_p)_{net}$ = net gust pressure coefficient on the canopy, considering simultaneous contributions from the upper and lower surfaces of the canopy, as given in Figure 4.1.7.14.B.	https://www.dropbox.com/s/bdl8cntdycekcm4/Proposed_Change_1122.pdf?dl=0
Earthquake Load and Effects	4.1.8.1. Analysis	**(1)** Except as permitted in Sentence (2), the deflections and specified loading due to earthquake motions shall be determined according to the requirements of Articles 4.1.8.2. to 4.1.8.22. **(2)** Where $I_EF_sS_a(0.2)$ and $I_EF_sS_a(2.0)$ are less than 0.16 and 0.03 respectively, the deflections and specified loading due to earthquake motions are permitted to be determined in accordance with Sentences (3) to (15), where,	4.1.8.1. Analysis	(1) Except as permitted in Sentence (2), the deflections and specified loading due to earthquake motions shall be determined according to the requirements of Articles 4.1.8.2. to 4.1.8.22. (2) Where $I_EF_sS_a(0.2, X_{450})$ and $I_EF_sS_a(2.0, X_{450})$ are less than 0.16 and 0.03 respectively, the deflections and specified loading due to earthquake motions are permitted to be determined in accordance with Sentences (3) to (15), where	(1) Except as permitted in Sentence (2), the deflections and specified loading due to earthquake motions shall be determined according to the requirements of Articles 4.1.8.2. to 4.1.8.22. (2) Where $I_EF_sS_a(0.2, X_{450})$ and $I_EF_sS_a(2.0, X_{450})$ are less than 0.16 and 0.03 respectively, the deflections and specified loading due to earthquake motions are permitted to be determined in accordance with Sentences (3) to (15), where,	https://www.dropbox.com/s/c28y08oueo5x2ep/Proposed_Change_1403.pdf?dl=0

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		(a) I_E is the earthquake importance factor and has a value of 0.8, 1.0, 1.3 and 1.5 for *buildings* of Low, Normal, High and Post-Disaster importance respectively, (b) F_s is the site coefficient based on the average $\overline{N}_{60}$ or s_u, as defined in Article 4.1.8.2., for the top 30 m of *soil* below the footings, pile caps or mat *foundations* and has a value of, (i) 1.0 for *rock* sites or when $\overline{N}_{60} > 50$ or $s_u > 100$ kPa, (ii) 1.6 when $15 \leq \overline{N}_{60} \leq 50$ or $50 \text{ kPa} \leq s_u \leq 100$ kPa, and (iii) 2.8 for all other cases, and (c) $S_a(T)$ is the 5% damped spectral response acceleration value for period T, determined in accordance with Subsection 1.1.2. **(3)** The structure shall have a clearly defined, (a) SFRS, as defined in Article 4.1.8.2., to resist the earthquake loads and their effects, and (b) load path or paths that will transfer the inertial forces generated by the earthquake to the *foundations* and supporting ground. **(4)** An unreinforced masonry SFRS shall not be permitted where, (a) I_E is greater than 1.0, or (b) the height above *grade* is greater than or equal to 30 m. **(5)** The height above *grade* of SFRS designed in accordance with CSA S136, "North American Specification for the Design of Cold-Formed Steel Structural Members", shall be less than 15 m. **(6)** Earthquake forces shall be assumed to act horizontally and independently about any two orthogonal axes. **(7)** The minimum lateral earthquake design force, V_s, at the base of the structure in the direction under consideration shall be calculated as follows: $V_s = F_s S_a(T_s) I_E W_t / R_s$ where, $S_a(T_s)$ = value of S_a at T_s determined by linear interpolation between the value of S_a at 0.2 s, 0.5 s and 1.0 s, and = $S_a(0.2)$ for $T_s \leq 0.2$ s, W_t = sum of W_i over the height of the *building*, where W_i is defined in Article 4.1.8.2., and		(a) I_E is the earthquake importance factor and has a value of 0.8, 1.0, 1.3 and 1.5 for *buildings* in the Low, Normal, High and Post-Disaster Importance Categories respectively, (b) F_s is the site coefficient based on the average $\overline{N}_{60}$ or, as defined in Article 4.1.8.2., for the top 30 m of *soil* below the footings, *pile* caps, or mat *foundations* and has a value of (i) 1.0 for *rock* sites or when $\overline{N}_{60} > 50$ or $\overline{S}_u > 100$ kPa , (ii) 1.6 when $15 \leq \overline{N}_{60} \leq 50$ or $50 \text{ kPa} \leq \overline{S}_u \leq 100$ kPa , and (iii) 2.8 for all other cases, and (c) $S_a(T, X_{450})$ is the 5% damped spectral acceleration value at period T for site designation X_{450}, as defined in Article 4.1.8.2., determined in accordance with Subsection 1.1.3. and corresponding to a 2% probability of exceedance in 50 years. (3) The structure shall have a clearly defined (a) seismic force resisting system (SFRS) to resist the earthquake loads and their effects, and (b) load path (or paths) that will transfer the inertial forces generated in an earthquake to the supporting ground. (4) An unreinforced masonry SFRS shall not be permitted where (a) I_E is greater than 1.0, or (b) the height above *grade* is greater than or equal to 30m. (5) The height above *grade* of an SFRS designed in accordance with CSA S136, "North American Specification for the Design of Cold-Formed Steel Structural Members (using the Appendix B provisions applicable to Canada)," shall be less than 15 m. (6) Earthquake forces shall be assumed to act horizontally and independently about any two orthogonal axes. (7) The specified lateral earthquake force, V_s, at the base of the structure in the direction under consideration shall be calculated as follows: $V_s = F_s S_a(T_s, X_{450}) I_E W / R_s$ where $S_a(T_s, X_{450})$ = value of $S_a(T_s, X_{450})$ determined by linear interpolation between the values of $S_a(0.2, X_{450})$, $S_a(0.5, X_{450})$ and $S_a(1.0, X_{450})$,	(a) I_E is the earthquake importance factor and has a value of 0.8, 1.0, 1.3 and 1.5 for *buildings* ~~of~~in the Low, Normal, High and Post-Disaster ~~importance~~Importance Categories respectively, (b) F_s is the site coefficient based on the average $\overline{N}_{60}$ or~~-s_u~~, as defined in Article 4.1.8.2., for the top 30 m of *soil* below the footings, *pile* caps, or mat *foundations* and has a value of~~,~~ (i) 1.0 for *rock* sites or when ~~$\overline{N}_{60} >$~~ $\overline{N}_{60} \geq 50$ or ~~s_u~~ $\overline{S}_u > 100$ kPa , (ii) 1.6 when $15 \leq$ ~~$\overline{N}_{60} \leq$~~ $\overline{N}_{60} \leq 50$ or $50 \text{ kPa} \leq$ ~~s_u~~ $\overline{S}_u \leq 100$ kPa , and (iii) 2.8 for all other cases, and (c) $S_a(T,$ $X_{450})$ is the 5% damped spectral ~~response~~ acceleration value ~~for~~at period T~~,~~ for site designation X_{450}, as defined in Article 4.1.8.2., determined in accordance with Subsection 1.1.~~2. (3)~~ , and corresponding to a 2% probability of exceedance in 50 years. (3) The structure shall have a clearly defined~~,~~ (a) seismic force resisting system (SFRS~~, as defined in Article 4.1.8.2.,~~) to resist the earthquake loads and their effects, and (b) load path (or paths) that will transfer the inertial forces generated ~~by the~~in an earthquake to the ~~*foundations and*~~ supporting ground. (4) An unreinforced masonry SFRS shall not be permitted where~~,~~ (a) I_E is greater than 1.0, or (b) the height above *grade* is greater than or equal to ~~30 m~~30m. (5) The height above *grade* of an SFRS designed in accordance with CSA S136, "North American Specification for the Design of Cold-Formed Steel Structural Members~~",~~ (using the Appendix B provisions applicable to Canada)," shall be less than 15 m. (6) Earthquake forces shall be assumed to act horizontally and independently about any two orthogonal axes. (7) The ~~minimum~~specified lateral earthquake ~~design~~ force, V_s, at the base of the structure in the direction under consideration shall be calculated as follows: $V_s = F_s S_a(T_s) I_E W_t / R_s$ where~~,~~	https://www.dropbox.com/s/a6ksflb1di3b4kg/Propos.pdf?dl=0

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		R_s = 1.5 except R_s = 1.0 for structures where the *storey* strength is less than that in the *storey* above and for an unreinforced masonry SFRS, where, T_s = fundamental lateral period of vibration of the *building*, as defined in Article 4.1.8.2., = $0.085(h_n)^{3/4}$ for steel moment frames, = $0.075(h_n)^{3/4}$ for concrete moment frames, = 0.1 N for other moment frames, = $0.025h_n$ for braced frames, and = $0.05(h_n)^{3/4}$ for shear walls and other structures, where, h_n = height above the base, in m, as defined in Article 4.1.8.2., except that V_s shall not be less than $F_sS_a(1.0)I_EW_t/R_s$ and, in cases where R_s = 1.5, V_s need not be greater than $F_sS_a(0.5)I_EW_t/R_s$. **(8)** The total lateral earthquake design force, V_s, shall be distributed over the height of the *building* in accordance with the following formula: $F_x = V_sW_xh_x / \left(\sum_{i=1}^{n} w_ih_i\right)$ where, F_x = force applied through the centre of mass at level x, W_x,W_i = portion of W that is located at or is assigned to level x or level i respectively, and h_x, h_i = height, in m, above the base of level x and level i as described in Article 4.1.8.2. **(9)** Accidental torsional effects applied concurrently with F_x shall be considered by applying torsional moments about the vertical axis at each level for each of the following cases considered separately: (a) $+0.1D_{nx}F_x$, and (b) $-0.1D_{nx}F_x$. **(10)** Deflections obtained from a linear analysis shall include the effects of torsion and be multiplied by R_s/I_E to get realistic values of expected deflections. **(11)** The deflections described in Sentence (10) shall be used to calculate the largest interstorey deflection, which shall not exceed, (a) $0.01h_s$ for post-disaster buildings,		= $S_a(0.2, X_{450})$ for $T_s \leq 0.2$ s, W_t =sum of W_i over the height of the *building*, where W_i is defined in Article 4.1.8.2., and R_s = 1.5, except R_s = 1.0 for structures where the *storey* strength is less than that in the *storey* above and for an unreinforced masonry SFRS, where Ts = fundamental lateral period of vibration of the *building*, as defined in Article 4.1.8.2., = $0.085(h_n)^{3/4}$ for steel moment frames, = $0.075(h_n)^{3/4}$ for concrete moment frames, = 0.1N for other moment frames, = $0.025\ h_n$ for braced frames, and = $0.05(h_n)^{3/4}$ for shear walls and other structures, where h_n = height, in m, above the base to level n, as defined in Article 4.1.8.2., and N = total number of *storeys* above exterior *grade* to level n, as defined in Article 4.1.8.2., except that, in cases where Rs = 1.5, Vs need not be greater than $F_SS_a(0.1, X_{450})I_EW_t/R_s$. (8) The specified lateral earthquake force, V_s, shall be distributed over the height of the *building* in accordance with the following formula: $F_x = V_sW_xh_x / \left(\sum_{i=1}^{n} W_ih_i\right)$ where F_x = force applied through the centre of mass at level x, W_x, W_i = portion of W that is located at or is assigned to level x or I, respectively, and h_x, h_i = height, in m, above the base to level x or i respectively, as defined in Article 4.1.8.2. (9) Accidental torsional effects applied concurrently with F_x shall be considered by applying torsional moments about the vertical axis at each level for each of the following cases considered separately: (a) $+0.1D_{nx}F_x$, and (b) $-0.1\ D_{nx}F_x$. (10) Deflections obtained from a linear analysis shall include the effects of torsion and be multiplied by R_s/I_E to get realistic values of expected deflections. (11) The deflections referred to in Sentence (10) shall be used to calculate the largest inter*storey* deflection, which shall not exceed (a) $0.01h_s$ for *post-disaster buildings*, (b) $0.02h_s$ for High Importance Category *buildings*, and (c) $0.025h_s$ for all other *buildings*, where hs is the inter*storey* height as defined in Article 4.1.8.2.	$S_a(T_s)$ ~~=~~, X_{450}) = value of S_a ~~at~~ (T_s, X_{450}) determined by linear interpolation between the ~~value~~values of S_a ($0.2, X_{450}$), S_a ~~at 0.2 s,~~ (0.5 ~~s,~~ X_{450}) and S_a (1.0 ~~s, and~~, X_{450}), = $S_a(0.2, X_{450})$ for $T_s \leq 0.2$ s, W_t = sum of W_i over the height of the *building*, where W_i is defined in Article 4.1.8.2., and R_s = 1.5, except R_s = 1.0 for structures where the *storey* strength is less than that in the *storey* above and for an unreinforced masonry SFRS, where~~,~~ Ts = fundamental lateral period of vibration of the *building*, as defined in Article 4.1.8.2., = $0.085(h_n)^{3/4}$ for steel moment frames, = $0.075(h_n)^{3/4}$ for concrete moment frames, = 0.1 N for other moment frames, = $0.025h_n$ for braced frames, and = $0.05(h_n)^{3/4}$ for shear walls and other structures, where~~,~~ h_n = height, in m, above the base~~,~~ to level n, as defined in ~~m~~Article 4.1.8.2., and N = total number of *storeys* above exterior *grade* to level n, as defined in Article 4.1.8.2., except that ~~V_s shall not be less than $F_sS_a(1.0)I_EW_t/R_s$ and~~, in cases where Rs = 1.5, Vs need not be greater than ~~F_sS_a~~ F_SS_a ($0.5$1, X_{450})I_EW_t/R_s. (8) The ~~total~~specified lateral earthquake ~~design~~ force, V_s, shall be distributed over the height of the *building* in accordance with the following formula: $F_x = V_sW_xh_x / \left(\sum_{i=1}^{n} w_ih_i\right)$ where~~,~~ F_x = force applied through the centre of mass at level x, W_x, W_i = portion of W that is located at or is assigned to level x or ~~level i~~I, respectively, and h_x, h_i = height, in m, above the base ~~of~~to level x ~~and level~~or i respectively, as ~~described~~defined in Article 4.1.8.2. (9) Accidental torsional effects applied concurrently with F_x shall be considered by applying torsional moments about the vertical axis at each level for each of the following cases considered separately: (a) $+0.1D_{nx}F_x$, and (b) ~~$-0.1D_{nx}F_x$~~1 $D_{nx}F_x$. (10) Deflections obtained from a linear analysis shall include the effects of torsion and be multiplied by R_s/I_E to get realistic values of expected deflections. (11) The deflections ~~described~~referred to in Sentence (10) shall be used to calculate the largest inter*storey* deflection, which shall not exceed~~,~~	

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		(b) 0.02h_s for High Importance Category *buildings*, and (c) 0.025h_s for all other *buildings*, where h_s is the interstorey height as defined in Article 4.1.8.2. **(12)** When earthquake forces are calculated using R_s = 1.5, the following elements in the SFRS shall have their design forces due to earthquake effects increased by 33%: (a) diaphragms and their chords, connections, struts and collectors, (b) tie downs in wood or drywall shear walls, (c) connections and anchor bolts in steel- and wood-braced frames, (d) connections in precast concrete, and (e) connections in steel moment frames. **(13)** Except as provided in Sentence (14), where cantilever parapet walls, other cantilever walls, exterior ornamentation and appendages, towers, chimneys or penthouses are connected to or form part of a *building*, they shall be designed, along with their connections, for a lateral force, V_{sp}, distributed according to the distribution of mass of the element and acting in the lateral direction that results in the most critical loading for design using the following equation: $V_{sp} = 0.1F_aI_EW_p$ where W_p is the weight of a portion of a structure as defined in Article 4.1.8.2. **(14)** The value of V_{sp} shall be doubled for unreinforced masonry elements. **(15)** Structures designed in accordance with this Article need not comply with the seismic requirements stated in the applicable design standard referenced in Section 4.3.		(12) When earthquake forces are calculated using R_s = 1.5, the following elements in the SFRS shall have their design forces due to earthquake effects increased by 33%: (a) diaphragms and their chords, connections, struts and collectors, (b) tie downs in wood or drywall shear walls, (c) connections and anchor bolts in steel- and wood-braced frames, (d) connections in precast concrete, and (e) connections in steel moment frames. (13) Except as provided in Sentence (14), where cantilever parapet walls, other cantilever walls, exterior ornamentation and appendages, towers, chimneys or penthouses are connected to or form part of a *building*, they shall be designed, along with their connections, for a lateral force, V_{sp}, distributed according to the distribution of mass of the element and acting in the lateral direction that results in the most critical loading for design using the following equation: $V_{sp} = 0.9S_a(0.2, X_{450})F_sI_EW_p$ where W_p = weight of a portion of a structure as defined in Article 4.1.8.2. (14) The value of V_{sp} shall be doubled for unreinforced masonry elements. (15) Structures designed in accordance with this Article need not comply with the seismic requirements stated in the applicable design standard referenced in Section 4.3.	(a) 0.01h_s for *post-disaster buildings*, (b) 0.02h_s for High Importance Category *buildings*, and (c) 0.025h_s for all other *buildings*, where hs is the inter*storey* height as defined in Article 4.1.8.2. (12) When earthquake forces are calculated using R_s = 1.5, the following elements in the SFRS shall have their design forces due to earthquake effects increased by 33%: (a) diaphragms and their chords, connections, struts and collectors, (b) tie downs in wood or drywall shear walls, (c) connections and anchor bolts in steel- and wood-braced frames, (d) connections in precast concrete, and (e) connections in steel moment frames. (13) Except as provided in Sentence (14), where cantilever parapet walls, other cantilever walls, exterior ornamentation and appendages, towers, chimneys or penthouses are connected to or form part of a *building*, they shall be designed, along with their connections, for a lateral force, V_{sp}, distributed according to the distribution of mass of the element and acting in the lateral direction that results in the most critical loading for design using the following equation: ~~$V_{sp} = 0.1F_aI_EW_p$~~ $V_{sp} = 0.9S_a(0.2, X_{450})F_sI_EW_p$ where W_p ~~is the~~= weight of a portion of a structure as defined in Article 4.1.8.2. (14) The value of V_{sp} shall be doubled for unreinforced masonry elements. (15) Structures designed in accordance with this Article need not comply with the seismic requirements stated in the applicable design standard referenced in Section 4.3.	
Earthquake Load and Effects	4.1.8.2. Notation	**(1)** In this Subsection, A_r = response amplification factor to account for type of attachment of mechanical/electrical equipment, as defined in Sentence 4.1.8.18.(1), A_x = amplification factor at level x to account for variation of response of mechanical/electrical equipment with elevation within the *building*, as defined in Sentence 4.1.8.18.(1),	4.1.8.2. Notation	(1) In this Subsection A_r = element or component force amplification factor to account for type of attachment, as defined in Sentence 4.1.8.18.(1), A_x = height factor at level x to account for variation of response of an element and component with elevation within the *building*, as defined in Sentence 4.1.8.18.(1), B_x = ratio at level x used to determine torsional sensitivity, as defined in Sentence 4.1.8.11.(10),	(1) In this Subsection~~,~~ A_r = ~~response~~element or component force amplification factor to account for type of attachment ~~of mechanical/electrical equipment~~, as defined in Sentence 4.1.8.18.(1), A_x = ~~amplification~~height factor at level x to account for variation of response of ~~mechanical/electrical equipment~~an element and component with elevation within the *building*, as defined in Sentence 4.1.8.18.(1),	https://www.dropbox.com/s/jsw8kaoueawj9jj/Proposed_Change_984.pdf?dl=0 https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0

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		B_x = ratio at level x used to determine torsional sensitivity, as defined in Sentence 4.1.8.11.(10), B = maximum value of B_x, as defined in Sentence 4.1.8.11.(10), C_p = seismic coefficient for mechanical/electrical equipment, as defined in Sentence 4.1.8.18.(1), D_{nx} = plan dimension of the *building* at level x perpendicular to the direction of seismic loading being considered, e_x = distance measured perpendicular to the direction of earthquake loading between centre of mass and centre of rigidity at the level being considered, F_a = site coefficient, as defined in Sentence 4.1.8.4.(7), F(PGA) = site coefficient for PGA, as defined in Sentence 4.1.8.4.(5), F(PGV) = site coefficient for PGV, as defined in Sentence 4.1.8.4.(5), F_s = site coefficient, as defined in Sentence 4.1.8.1.(2), F(T) = site coefficient for spectral acceleration, as defined in Sentence 4.1.8.4.(5), F_t = portion of V to be concentrated at the top of the structure, as defined in Sentence 4.1.8.11.(7), F_v = site coefficient, as defined in Sentence 4.1.8.4.(7), F_x = lateral force applied to level x, as defined in Sentence 4.1.8.11.(7), h_i, h_n, h_x = the height above the base (i = 0) to level i, n, or x respectively, where the base of the structure is the level at which horizontal earthquake motions are considered to be imparted to the structure, h_s = interstorey height (h_i - h_{i-1}), I_E = earthquake importance factor of the structure, as described in Sentence 4.1.8.5.(1), J = numerical reduction coefficient for base overturning moment, as defined in Sentence 4.1.8.11.(6), J_X = numerical reduction coefficient for overturning moment at level x, as defined in Sentence 4.1.8.11.(8), Level i = any level in the *building*, i =1 for first level above the base, Level n = level that is uppermost in the main portion of the structure,		B = maximum value of B_x, as defined in Sentence 4.1.8.11.(10), C_p = seismic coefficient for an element or component, as defined in Sentence 4.1.8.18.(1), D_{nx} = plan dimension of the *building* at level x perpendicular to the direction of seismic loading being considered, e_x = distance measured perpendicular to the direction of earthquake loading between centre of mass and centre of rigidity at the level being considered, F_a = acceleration-based site coefficient for application in standards referenced in Subsection 4.1.8., as defined in Sentence 4.1.8.4.(7), F_s = site coefficient as defined in Sentence 4.1.8.1.(2) for application in Article 4.1.8.1., F_t = portion of V to be concentrated at the top of the structure, as defined in Sentence 4.1.8.11.(7), F_v = velocity-based site coefficient for application in standards referenced in Subsection 4.1.8., as defined in Sentence 4.1.8.4.(7), F_x = lateral force applied to level x, as defined in Sentence 4.1.8.11.(7), h_i, h_n, h_x = the height above the base (i = 0) to level i, n, or x respectively, where the base of the structure is the level at which horizontal earthquake motions are considered to be imparted to the structure, h_s = inter *storey* height ($h_i - h_{i-1}$), I_E = earthquake importance factor of the structure, as described in Sentence 4.1.8.5.(1), J = numerical reduction coefficient for base overturning moment, as defined in Sentence 4.1.8.11.(6), J_x = numerical reduction coefficient for overturning moment at level x, as defined in Sentence 4.1.8.11.(8), Level i = any level in the *building*, i = 1 for first level above the base, Level n = level that is uppermost in the main portion of the structure, Level x = level that is under design consideration, M_v = factor to account for higher mode effect on base shear, as defined in Sentence 4.1.8.11.(6), M_x = overturning moment at level x, as defined in Sentence 4.1.8.11.(8), N = total number of *storeys* above exterior *grade* to level n,	B_x = ratio at level x used to determine torsional sensitivity, as defined in Sentence 4.1.8.11.(10), B = maximum value of B_x, as defined in Sentence 4.1.8.11.(10), C_p = seismic coefficient for ~~mechanical/electrical equipment~~an element or component, as defined in Sentence 4.1.8.18.(1), D_{nx} = plan dimension of the *building* at level x perpendicular to the direction of seismic loading being considered, e_x = distance measured perpendicular to the direction of earthquake loading between centre of mass and centre of rigidity at the level being considered, F_a = acceleration-based site coefficient~~,~~ for application in standards referenced in Subsection 4.1.8., as defined in Sentence 4.1.8.4.(7), ~~F(PGA)~~ F_s = site coefficient ~~for PGA, as defined in Sentence 4.1.8.4.(5),~~ ~~F(PGV) = site coefficient for PGV, as defined in Sentence 4.1.8.4.(5),~~ ~~F_s = site coefficient,~~ as defined in Sentence 4.1.8.1.(2~~),~~ ~~F(T) = site coefficient for spectral acceleration, as defined~~) for application in ~~Sentence~~Article 4.1.8.~~4.(5),~~1., F_t = portion of V to be concentrated at the top of the structure, as defined in Sentence 4.1.8.11.(7), F_v = velocity-based site coefficient~~,~~ for application in standards referenced in Subsection 4.1.8., as defined in Sentence 4.1.8.4.(7), F_x = lateral force applied to level x, as defined in Sentence 4.1.8.11.(7), h_i, h_n, h_x = the height above the base (i = 0) to level i, n, or x respectively, where the base of the structure is the level at which horizontal earthquake motions are considered to be imparted to the structure, h_s ~~= interstorey~~ = inter *storey* height (h_i ~~-~~ h_{i-1}), I_E = earthquake importance factor of the structure, as described in Sentence 4.1.8.5.(1), J = numerical reduction coefficient for base overturning moment, as defined in Sentence 4.1.8.11.(6), J_X = numerical reduction coefficient for overturning moment at level x, as defined in Sentence 4.1.8.11.(8),	https://www.dropbox.com/s/c28y08oueo5x2ep/Proposed_Change_1403.pdf?dl=0

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		Level x = level that is under design consideration, M_v = factor to account for higher mode effect on base shear, as defined in Sentence 4.1.8.11.(6), M_x = overturning moment at level x, as defined in Sentence 4.1.8.11.(8), N = total number of *storeys* above exterior *grade* to level n, $\overline{N}_{60}$ = Average Standard Penetration Resistance for the top 30 m, corrected to a rod energy efficiency of 60% of the theoretical maximum, PGA = Peak Ground Acceleration expressed as a ratio to gravitational acceleration, as defined in Sentence 4.1.8.4.(1), PGA_{ref} = reference PGA for determining F(T), F(PGA) and F(PGV), as defined in Sentence 4.1.8.4.(4), PGV = Peak Ground Velocity, in m/s, as defined in Sentence 4.1.8.4.(1), PI = plasticity index for clays, R_d = ductility-related force modification factor reflecting the capability of a structure to dissipate energy through reversed cyclic inelastic behaviour, as given in Article 4.1.8.9., R_o = overstrength-related force modification factor accounting for the dependable portion of reserve strength in a structure designed according to these provisions, as defined in Article 4.1.8.9., R_s = combined overstrength and ductility-related modification factor, as defined in Sentence 4.1.8.1.(7), S_P = horizontal force factor for part or portion of a *building* and its anchorage, as given in Sentence 4.1.8.18.(1), S(T) = design spectral response acceleration, expressed as a ratio to gravitational acceleration, for a period of T, as defined in Sentence 4.1.8.4.(9), S_a(T) = 5% damped spectral response acceleration, expressed as a ratio to gravitational acceleration, for a period of T, as defined in Sentence 4.1.8.4.(1), SFRS = Seismic Force Resisting System(s) is that part of the structural system that has been considered in the design to provide the required resistance to the earthquake forces and effects defined in Subsection 4.1.8.,		$\overline{N}_{60}$ = average standard penetration resistance, in blows per 0.3 m, in the top 30 m of *soil*, corrected to a rod energy efficiency of 60% of the theoretical maximum, PGA (X) = peak ground acceleration, expressed as a ratio to gravitational acceleration, for site designation X, as defined in Sentence 4.1.8.4.(1), PGV (X) = peak ground velocity, in m/s, for site designation X, as defined in Sentence 4.1.8.4.(1), PI = plasticity index for *soil* R_d = ductility-related force modification factor reflecting the capability of a structure to dissipate energy through reversed cyclic inelastic behaviour, as defined in Article 4.1.8.9., R_o = overstrength-related force modification factor accounting for the dependable portion of reserve strength in a structure designed according to these provisions, as defined in Article 4.1.8.9., R_p = element or component response modification factor, as defined in Sentence 4.1.8.18.(1), R_s = combined overstrength and ductility-related modification factor, as defined in Sentence 4.1.8.1.(7), for application in Article 4.1.8.1., SC = Seismic Category assigned to a *building* based on its Importance Category and the design spectral acceleration at 0.2 s and 1.0 s, as defined in Article 4.1.8.5., S_p = horizontal force factor for part or portion of a *building* and its anchorage, as given in Sentence 4.1.8.18.(1), S(T) = design spectral acceleration, expressed as a ratio to gravitational acceleration, at period T, as defined in Sentence 4.1.8.4.(6), Sa (T, X) = 5% damped spectral acceleration, expressed as a ratio to gravitational acceleration, at period T for site designation X, as defined in Sentence 4.1.8.4.(1), SFRS = seismic force resisting system, that part of the structural system that has been considered in the design to provide the required resistance to the earthquake forces and effects defined in Subsection 4.1.8., $\overline{s_u}$ = average undrained shear strength, in kPa, in the top 30 m of *soil*, T = period in seconds, T_a = fundamental lateral period of vibration of the *building* or structure, in s, in the direction	Level i = any level in the *building*, i = 1 for first level above the base, Level n = level that is uppermost in the main portion of the structure, Level x = level that is under design consideration, M_v = factor to account for higher mode effect on base shear, as defined in Sentence 4.1.8.11.(6), M_x = overturning moment at level x, as defined in Sentence 4.1.8.11.(8), N = total number of *storeys* above exterior *grade* to level n, $\overline{N}_{60}$ = average standard penetration resistance ~~for~~, in blows per 0.3 m, in the top 30 m of *soil*, corrected to a rod energy efficiency of 60% of the theoretical maximum, PGA ~~= Peak Ground Acceleration~~ (X) = peak ground acceleration, expressed as a ratio to gravitational acceleration, for site designation X, as defined in Sentence 4.1.8.4.(1), ~~PGA_{ref} = reference PGA~~ PGV (X) = peak ground velocity, in m/s, for ~~determining F(T), F(PGA) and F(PGV),~~site designation X, as defined in Sentence 4.1.8.4.(~~4),~~ ~~PGV = Peak Ground Velocity, in m/s, as defined in Sentence 4.~~1.~~8.4.(1~~), PI = plasticity index for ~~clays,~~*soil* R_d = ductility-related force modification factor reflecting the capability of a structure to dissipate energy through reversed cyclic inelastic behaviour, as ~~given~~defined in Article 4.1.8.9., R_o = overstrength-related force modification factor accounting for the dependable portion of reserve strength in a structure designed according to these provisions, as defined in Article 4.1.8.9., R_p = element or component response modification factor, as defined in Sentence 4.1.8.18.(1), R_s = combined overstrength and ductility-related modification factor, as defined in Sentence 4.1.8.1.(7), for application in Article 4.1.8.1., ~~S_p =~~ SC = Seismic Category assigned to a *building* based on its Importance Category and the design spectral acceleration at 0.2 s and 1.0 s, as defined in Article 4.1.8.5., S_p = horizontal force factor for part or portion of a *building* and its anchorage, as given in Sentence 4.1.8.18.(1),	

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		S_u = average undrained shear strength in the top 30 m of *soil*, T = period in seconds, T_a = fundamental lateral period of vibration of the *building* or structure in seconds in the direction under consideration, as defined in Sentence 4.1.8.11.(3), T_s = fundamental lateral period of vibration of the *building* or structure in seconds in the direction under consideration, as defined in Sentence 4.1.8.11.(7), T_x = floor torque at level x, as defined in Sentence 4.1.8.11.(11), TDD = Total Design Displacement of any point in a seismically isolated structure, within or above the isolation system, obtained by calculating the mean + (I_E × the standard deviation) of the peak horizontal displacements from all sets of ground motion histories analyzed, but not less than $\sqrt{I_E}$ × the mean, where the peak horizontal displacement is based on the vector sum of the two orthogonal horizontal displacements considered for each time step, V = lateral earthquake design force at the base of the structure, as determined by Article 4.1.8.11., V_d = lateral earthquake design force at the base of the structure, as determined by Article 4.1.8.12., V_e = lateral earthquake elastic force at the base of the structure, as determined by Article 4.1.8.12., V_{ed} = lateral earthquake design elastic force at the base of the structure, as determined by Article 4.1.8.12., V_P = lateral force on a part of the structure, as determined by Article 4.1.8.18., V_s = lateral earthquake design force at the base of the structure, as determined by Sentence 4.1.8.1.(7), $\overline{V}_{s30}$ = average shear wave velocity in the top 30 m of *soil* or *rock*, W = *dead load*, as defined in Article 4.1.4.1., except that the minimum *partition* load as defined in Sentence 4.1.4.1.(3) need not exceed 0.5 kPa, plus 25% of the design snow load specified in Subsection 4.1.6., plus 60% of the storage load for areas used for storage, except that *storage garages* need not be considered storage areas, and the full contents of any tanks,		under consideration, as defined in Sentence 4.1.8.11.(3), T_s = fundamental lateral period of vibration of the *building* or structure, in s, in the direction under consideration, as defined in Sentence 4.1.8.1.(7), T_x = floor torque at level x, as defined in Sentence 4.1.8.11.(11), TDD = total design displacement of any point in a seismically isolated structure, within or above the isolation system, obtained by calculating the mean + (I_E × the standard deviation) of the peak horizontal displacements from all sets of ground motion histories analyzed, but not less than $\sqrt{I_E}$ × the mean, where the peak horizontal displacement is based on the vector sum of the two orthogonal horizontal displacements considered for each time step, V = specified lateral earthquake force at the base of the structure, as determined in Article 4.1.8.11., V_d = specified lateral earthquake force at the base of the structure, as determined in Article 4.1.8.12., V_e = lateral earthquake elastic force at the base of the structure, as determined in Article 4.1.8.12., V_{ed} = adjusted lateral earthquake elastic force at the base of the structure, as determined in Article 4.1.8.12., V_p = lateral earthquake force on an element or component, as determined in Article 4.1.8.18., V_s = specified lateral earthquake force at the base of the structure, as determined in Sentence 4.1.8.1.(7), for application in Article 4.1.8.1., V_{s30} = average shear wave velocity, in m/s, in the top 30 m of *soil* or *rock*, W =*dead load*, as defined in Article 4.1.4.1., except that the minimum *partition* weight as defined in Sentence 4.1.4.1.(3) need not exceed 0.5 kPa, plus 25% of the specified snow load as defined in Subsection 4.1.6., plus 60% of the storage load for areas used for storage, except that *storage garages* need not be considered storage areas, and the full contents of any tanks, W_i, W_x = portion of W that is located at or is assigned to level i or x respectively, W_p = weight of a part or portion of a structure, e.g., cladding, *partitions* and appendages, X = site designation, either XV or XS,	S(T) = design spectral ~~response~~ acceleration, expressed as a ratio to gravitational acceleration, ~~for a~~at period ~~of~~ T, as defined in Sentence 4.1.8.4.(~~9~~6), Sa (T~~)~~, X) = 5% damped spectral ~~response~~ acceleration, expressed as a ratio to gravitational acceleration, ~~for a~~at period ~~of~~ T for site designation X, as defined in Sentence 4.1.8.4.(1), ~~SFRS = Seismic Force Resisting System(s) is~~SFRS = seismic force resisting system, that part of the structural system that has been considered in the design to provide the required resistance to the earthquake forces and effects defined in Subsection ~~-~~ 4.1.8., ~~S_u~~s_u = average undrained shear strength, in kPa, in the top 30 m of *soil*, T = period in seconds, T_a = fundamental lateral period of vibration of the *building* or structure, in ~~seconds~~s, in the direction under consideration, as defined in Sentence 4.1.8.11.(3), T_s = fundamental lateral period of vibration of the *building* or structure, in ~~seconds~~s, in the direction under consideration, as defined in Sentence 4.1.8.~~11~~1.(7), T_x = floor torque at level x, as defined in Sentence 4.1.8.11.(11), TDD = ~~Total Design Displacement~~total design displacement of any point in a seismically isolated structure, within or above the isolation system, obtained by calculating the mean + (I_E × the standard deviation) of the peak horizontal displacements from all sets of ground motion histories analyzed, but not less than $\sqrt{I_E}$ × the mean, where the peak horizontal displacement is based on the vector sum of the two orthogonal horizontal displacements considered for each time step, V = specified lateral earthquake ~~design~~ force at the base of the structure, as determined ~~by~~in Article 4.1.8.11., V_d = specified lateral earthquake ~~design~~ force at the base of the structure, as determined ~~by~~in Article 4.1.8.12., V_e = lateral earthquake elastic force at the base of the structure, as determined ~~by~~in Article 4.1.8.12., V_{ed} = adjusted lateral earthquake ~~design~~ elastic force at the base of the structure, as determined ~~by~~in Article 4.1.8.12.,	

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		W_i, W_x = portion of W that is located at or is assigned to level i or x respectively, W_P = weight of a part or portion of a structure, e.g., cladding, *partitions* and appendages, W_t = sum of W_i over the height of the *building*, δ_{ave} = average displacement of the structure at level x, as defined in Sentence 4.1.8.11.(10), and δ_{max} = maximum displacement of the structure at level x, as defined in Sentence 4.1.8.11.(10).		X_S = site designation in terms of Site Class, where S is the Site Class determined in accordance with Sentence 4.1.8.4.(3), X_V = site designation in terms of V_{s30}, where V is the V_{s30} value calculated from in situ measurements of shear wave velocity, X_{450} = site designation X_V with V_{s30} = 450m/s, δ_{ave} = average displacement of the structure at level x, as defined in Sentence 4.1.8.11.(10), and δ_{max} = maximum displacement of the structure at level x, as defined in Sentence 4.1.8.11.(10).	~~V_p =~~V_p = lateral earthquake force on ~~a part of the structure~~an element or component, as determined ~~by~~in Article 4.1.8.18., V_s = specified lateral earthquake ~~design~~ force at the base of the structure, as determined ~~by~~in Sentence 4.1.8.1.(7), for application in Article 4.1.8.1., ~~$\overline{V}_{s30}$~~ V_{s30} = average shear wave velocity, in m/s, in the top 30 m of *soil* or *rock*, W = *dead load*, as defined in Article 4.1.4.1., except that the minimum *partition* ~~load~~weight as defined in Sentence 4.1.4.1.(3) need not exceed 0.5 kPa, plus 25% of the ~~design~~specified snow load ~~specified~~as defined in Subsection 4.1.6., plus 60% of the storage load for areas used for storage, except that *storage garages* need not be considered storage areas, and the full contents of any tanks, W_i, W_x = portion of W that is located at or is assigned to level i or x respectively, W_p = weight of a part or portion of a structure, e.g., cladding, *partitions* and appendages, ~~W_t = sum~~X = site designation, either XV or XS, X_S = site designation in terms of ~~W_t over~~Site Class, where S is the ~~height~~Site Class determined in accordance with Sentence 4.1.8.4.(3), X_V = site designation in terms of V_{s30}, where V is the ~~*building*,~~V_{s30} value calculated from in situ measurements of shear wave velocity, X_{450} = site designation X_V with V_{s30} = 450m/s, δ_{ave} = average displacement of the structure at level x, as defined in Sentence 4.1.8.11.(10), and δ_{max} = maximum displacement of the structure at level x, as defined in Sentence 4.1.8.11.(10).	
Earthquake Design — Site Properties	4.1.8.4. Site Properties	**(1)** The peak ground acceleration (PGA), peak ground velocity (PGV) and the 5% damped spectral response acceleration values, S_a(T), for the reference ground conditions (Site Class C in Table 4.1.8.4.A.) for periods T of 0.2 s, 0.5 s, 1.0 s, 2.0 s, 5.0 s and 10.0 s, shall be determined in accordance with Subsection 1.1.2. and are based on a 2% probability of exceedance in 50 years. **(2)** Site classifications for ground shall conform to Table 4.1.8.4.A. and shall be determined using $\overline{V}_{s30}$, or where $\overline{V}_{s30}$ is not known, using Sentence (3). **(3)** If average shear wave velocity, $\overline{V}_{s30}$, is not known, Site Class shall be determined from energy-	4.1.8.4. Site Properties	(1) For site designation X, as determined in accordance with Sentence (2) or (3), the peak ground acceleration, PGA(X), the peak ground velocity, PGV(X), and the 5% damped spectral acceleration values, S_a(T,X), at periods T of 0.2 s, 0.5 s, 1.0 s, 2.0 s, 5.0 s and 10.0 s shall (a) except as provided in Sentence (4), be determined in accordance with Subsection 1.1.2., and (b) except as provided in Article 4.1.8.23., correspond to a 2% probability of exceedance in 50 years. (2) Except as provided in Sentence (3), the site designation referred to in Sentence (1) shall be	(1) ~~The~~ For site designation X, as determined in accordance with Sentence (2) or (3), the peak ground acceleration~~(~~, PGA~~),~~(X), the peak ground velocity~~(~~, PGV~~)~~(X), and the 5% damped spectral ~~response~~ acceleration values, S_a(T~~), for the reference ground conditions (Site Class C in Table 4.1.8.4.A.) for~~ ,X), at periods T of 0.2 s, 0.5~~-~~ s, 1.0 s, 2.0 s, 5.0 s and 10.0 s~~,~~ shall (a) except as provided in Sentence (4), be determined in accordance with Subsection 1.1.2~~.,~~ and ~~are based on~~ (b) except as provided in Article 4.1.8.23., correspond to a 2% probability of exceedance in 50 years.	https://www.dropbox.com/s/r2axe2f4oglvnaf/Proposed_Change_980.pdf?dl=0 https://www.dropbox.com/s/6llz73cswbpg6df/Proposed_Change_1403.pdf?dl=0

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		corrected Average Standard Penetration Resistance, $\overline{N}_{60}$, or from *soil* average undrained shear strength, s_u, as noted in Table 4.1.8.4.A., $\overline{N}_{60}$ and s_u being calculated based on rational analysis. **(4)** For the purpose of determining the values of F(T) to be used in the calculation of design spectral acceleration, S(T), in Sentence (9), and the values of F(PGA) and F(PGV), the value of PGA_{ref} to be used with Tables 4.1.8.4.B. to 4.1.8.4.I. shall be taken as, (a) 0.8 PGA, where the ratio $S_a(0.2)/PGA < 2.0$, and (b) 1 PGA, in all other cases. **(5)** The values of the site coefficient for design spectral acceleration at period T, F(T), and of similar coefficients F(PGA) and F(PGV) shall conform to Tables 4.1.8.4.B. to 4.1.8.4.I. using linear interpolation for intermediate values of PGA_{ref}. **(6)** Site-specific evaluation is required to determine F(T), F(PGA) and F(PGV) for Site Class F. **(7)** For all applications in Subsection 4.1.8., $F_a = F(0.2)$ and $F_v = F(1.0)$. **(8)** For structures with a fundamental period of vibration equal to or less than 0.5 s that are built on liquefiable *soils*, Site Class and the corresponding values of F(T) may be determined as described in Tables 4.1.8.4.A., 4.1.8.4.B., and 4.1.8.4.C. by assuming that the *soils* are not liquefiable. **(9)** The design spectral acceleration values of S(T) shall be determined as follows, using linear interpolation for intermediate values of T: $S(T) = F(0.2)S_a(0.2)$ or $F(0.5)S_a(0.5)$, whichever is larger, for $T \le 0.2$ s $= F(0.5)S_a(0.5)$ for T = 0.5 s $= F(1.0)S_a(1.0)$ for T = 1.0 s $= F(2.0)S_a(2.0)$ for T = 2.0 s $= F(5.0)S_a(5.0)$ for T = 5.0 s $= F(10.0)S_a(10.0)$ for $T \ge 10.0$ s (Table 4.1.8.4.A. - Site Classification for Seismic Site Response) (Table 4.1.8.4.B. - Values of F(0.2) as a Function of Site Class and PGA_{ref}) (Table 4.1.8.4.C. - Values of F(0.5) as a Function of Site Class and PGA_{ref}) (Table 4.1.8.4.D. - Values of F(1.0) as a Function of Site Class and PGA_{ref}) (Table 4.1.8.4.E. - Values of F(2.0) as a Function of Site Class and PGA_{ref}) (Table 4.1.8.4.F. - Values of F(5.0) as a Function of Site Class and PGA_{ref})		determined using the average shear wave velocity, V_{s30}, calculated from in situ measurements of shear wave velocity, as follows: (a) for the ground profiles described in Table 4.1.8.4.-A, the site designation shall be determined in accordance with the Table, and (b) for all other ground profiles, the site designation shall be X_V, where V is the value of V_{s30}. (3) Where V_{s30} calculated from in situ measurements is not available, the site designation referred to in Sentence (1) shall be X_S, where S is the Site Class determined using the energy-corrected average standard penetration resistance, $\overline{N}_{60}$, or the average undrained shear strength, s_u, in accordance with Table 4.1.8.4.-B, and being calculated based on rational analysis. (4) Site-specific geotechnical evaluation is required to determine the values of PGA(X_F), PGV(X_F) and Sa (T, X_F) for site designation X_F. (5) Where structures on liquefiable *soils* have a fundamental lateral period, T_a, of 0.5 s or less, the site designation X and the corresponding values of S_a(T, X) and PGA(X) are permitted to be determined in accordance with Sentence (1) by assuming that the *soils* are not liquefiable. (6) The design spectral acceleration, S(T), shall be determined in accordance with Table 4.1.8.4.-C, using linear interpolation for intermediate values of T. (7) Where required for the application of a standard referenced in this Subsection, the acceleration-based site coefficient, F_a, for site designation X shall be taken as S(0.2) / S_a(0.2, X_{450}) and the velocity-based site coefficient, F_v, for site designation X shall be taken as S(1.0) / S_a(1.0, X_{450}). (Table 4.1.8.4.-A - Exceptions for Site Designation Using V_{s30} Calculated from In Situ Measurements) (Table 4.1.8.4.-B - Site Classes, S, for Site Designation X_S) (Table 4.1.8.4.-C - Design Spectral Acceleration)	~~**(2)** Site classifications for ground shall conform to Table 4.1.8.4.A. and~~(2) Except as provided in Sentence (3), the site designation referred to in Sentence (1) shall be determined using ~~$\overline{V}_{s30}$, or where $\overline{V}_{s30}$ is not known, using Sentence (3).~~ ~~**(3)** If~~the average shear wave velocity~~, $\overline{V}_{s30}$, is not known, Site Class shall be determined~~, V_{s30}, calculated from ~~energy-corrected Average Standard Penetration Resistance, $\overline{N}_{60}$, or from *soil* average~~ in situ measurements of shear wave velocity, as follows: (a) for the ground profiles described in Table 4.1.8.4.A, the site designation shall be determined in accordance with the Table, and (b) for all other ground profiles, the site designation shall be X_V, where V is the value of V_{s30}. (3) Where V_{s30} calculated from in situ measurements is not available, the site designation referred to in Sentence (1) shall be X_S, where S is the Site Class determined using the energy-corrected average standard penetration resistance, $\overline{N}_{60}$, or the average undrained shear strength, s_u, ~~as noted~~ in accordance with Table 4.1.8.4~~.A., $\overline{N}_{60}$~~.B, and ~~s_u~~ being calculated based on rational analysis. ~~**(4)** For the purpose of determining the values of F(T) to be used in the calculation of design spectral acceleration, S(T), in Sentence (9), and the values of F(PGA) and F(PGV), the value of PGA_{ref} to be used with Tables 4.1.8.4.B. to 4.1.8.4.I. shall be taken as,~~ ~~(a) 0.8 PGA, where the ratio $S_a(0.2)/PGA < 2.0$, and~~ ~~(b) 1 PGA, in all other cases.~~ ~~**(5)** The values of the site coefficient for design spectral acceleration at period T, F(T), and of similar coefficients F(PGA) and F(PGV) shall conform to Tables 4.1.8.4.B. to 4.1.8.4.I. using linear interpolation for intermediate values of PGA_{ref}.~~ ~~**(6)** Site-specific evaluation is~~ (4) Site-specific geotechnical evaluation is required to determine ~~F(T), F(~~the values of PGA(X_F), PGV(X_F) and ~~F(PGV~~Sa (T, X_F) for ~~Site Class F.~~site designation ~~**(7)** For all applications in Subsection 4.1.8., $F_a = F(0.2)$ and $F_v = F(1.0)$.~~ ~~**(8)** For~~ X_F. (5) Where structures ~~with a fundamental period of vibration equal to or less than 0.5 s that are built~~ on liquefiable *soils*~~, Site Class~~ have	

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		(Table 4.1.8.4.G. - Values of F(10.0) as a Function of Site Class and PGA_{ref}) (Table 4.1.8.4.H. - Values of F(PGA) as a Function of Site Class and PGA_{ref}) (Table 4.1.8.4.I. - Values of F(PGV) as a Function of Site Class and PGA_{ref})			a fundamental lateral period, T_a, of 0.5 s or less, the site designation X and the corresponding values of ~~F~~S_a(T~~) may~~, X) and PGA(X) are permitted to be determined ~~as described~~ in ~~Tables 4.~~accordance with Sentence (1~~.8.4.A., 4.1.8.4.B., and 4.1.8.4.C.~~) by assuming that the *soils* are not liquefiable. ~~(9~~(6) The design spectral acceleration ~~values of~~, S(T~~)~~), shall be determined ~~as follows~~in accordance with Table 4.1.8.4.-C, using linear interpolation for intermediate values of T~~:~~. ~~S(T) = F(0.2)S_a(0.2) or F(0.5)S_a(0.5), whichever is larger, for T ≤ 0.2 s~~ ~~= F(0.5)S_a(0.5) for T = 0.5 s~~ ~~= F(1.0)S_a(1.0) for T = 1.0 s~~ ~~= F(2.0)S_a(2.0) for T = 2.0 s~~ ~~= F(5.0)S_a(5.0) for T = 5.0 s~~ ~~= F(10.0)S_a(10.0) for T ≥ 10.0 s~~ (7) Where required for the application of a standard referenced in this Subsection, the acceleration-based site coefficient, F_a, for site designation X shall be taken as S(0.2) / S_a(0.2, X_{450}) and the velocity-based site coefficient, F_v, for site designation X shall be taken as S(1.0) / S_a(1.0, X_{450}). (See the changes in the tables)	
Earthquake Design	4.1.8.5. Importance Factor	**(1)** The earthquake importance factor, I_E, shall be determined according to Table 4.1.8.5. (Table 4.1.8.5. - Importance Factor for Earthquake Loads and Effects, I_E)	4.1.8.5. Importance Factor and Seismic Category	(1) The earthquake importance factor, I_E, shall be determined according to Table 4.1.8.5.-A (2) *Buildings* shall be assigned a Seismic Category in accordance with Table 4.1.8.5.-B. (Table 4.1.8.5.-A- Importance Factor for Earthquake Loads and Effects, I_E) (Table 4.1.8.5.-B - Seismic Categories for Buildings)	(1) The earthquake importance factor, I_E, shall be determined according to Table 4.1.8.5. (2) *Buildings* shall be assigned a Seismic Category in accordance with Table 4.1.8.5 (Refer to the National PCF for the changes in the tables)	https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0
Earthquake Design	4.1.8.6. Structural Configuration	**(1)**Structures having any of the features listed in Table 4.1.8.6. shall be designated irregular. **(2)**Structures not classified as irregular according to Sentence 4.1.8.6.(1) may be considered regular. **(3)** Except as required by Article 4.1.8.10., in cases where $I_E F_a S_a$(0.2) is equal to or greater than 0.35, structures designated as irregular must satisfy the provisions referenced in Table 4.1.8.6 (Table 4.1.8.6. - Structural Irregularities)	4.1.8.6. Structural Configuration	(1) Structures having any of the features listed in Table 4.1.8.6. shall be designated irregular. (2) Structures not classified as irregular according to Sentence 4.1.8.6.(1) may be considered regular. (3) Except as required by Article 4.1.8.10. where the Seismic Category is SC3 or SC4, structures designated as irregular must satisfy the provisions referenced in Table 4.1.8.6. (Table 4.1.8.6. - Structural Irregularities)	(1) Structures having any of the features listed in Table 4.1.8.6. shall be designated irregular. (2) Structures not classified as irregular according to Sentence 4.1.8.6.(1) may be considered regular. (3) Except as required by Article 4.1.8.10~~., in cases where $I_E F_a S_a$(0.2) is equal to or greater than 0.35, structures designated as irregular must satisfy the provisions referenced in Table 4.1.8.6~~. where the Seismic Category is SC3 or SC4, structures designated as irregular must satisfy the provisions referenced in Table 4.1.8.6. (Refer to the National PCF for the changes in the tables)	https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0 https://www.dropbox.com/s/u5fja8s614wpxpg/Proposed_Change_1160.pdf?dl=0 https://www.dropbox.com/s/1alqwcne2ldbjmp/Proposed_Change_1161.pdf?dl=0

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Earthquake Design	4.1.8.7. Methods of Analysis	**(1)**Analysis for design earthquake actions shall be carried out in accordance with the Dynamic Analysis Procedure described in Article 4.1.8.12., except that the Equivalent Static Force Procedure described in Article 4.1.8.11. may be used for structures that meet any of the following criteria: (a) in cases where $I_EF_aS_a(0.2)$ is less than 0.35, (b) regular structures that are less than 60 m in height and have a fundamental lateral period, T_a, less than 2 s in each of two orthogonal directions as defined in Article 4.1.8.8., or (c) structures with structural irregularity, of Type 1, 2, 3, 4, 5, 6 or 8 as defined in Table 4.1.8.6., that are less than 20 m in height and have a fundamental lateral period, T_a, less than 0.5 s in each of two orthogonal directions as defined in Article 4.1.8.8.	4.1.8.7. Methods of Analysis	(1) Analysis for earthquake actions shall be carried out in accordance with the Dynamic Analysis Procedure described in Article 4.1.8.12., except that the Equivalent Static Force Procedure described in Article 4.1.8.11. may be used for structures that meet any of the following criteria: (a) where the Seismic Category is SC1 or SC2, (b) regular structures that are less than 60 m in height and have a fundamental lateral period, T_a, less than 2 s in each of two orthogonal directions as defined in Article 4.1.8.8., or (c) structures with structural irregularity of Type 2, 3, 4, 5, 6 or 8 as defined in Table 4.1.8.6. that are less than 20 m in height and have a fundamental lateral period, T_a, less than 0.5 s in each of two orthogonal directions as defined in Article 4.1.8.8.	(1) Analysis for ~~design~~ earthquake actions shall be carried out in accordance with the Dynamic Analysis Procedure described in Article 4.1.8.12., except that the Equivalent Static Force Procedure described in Article 4.1.8.11. may be used for structures that meet any of the following criteria: (a) ~~in cases~~ where ~~$I_EF_aS_a(0.2)$~~the Seismic Category is ~~less than 0.35~~SC1 or SC2, (b) regular structures that are less than 60 m in height and have a fundamental lateral period, T_a, less than 2 s in each of two orthogonal directions as defined in Article 4.1.8.8., or (c) structures with structural irregularity~~,~~ of Type ~~1,~~ 2, 3, 4, 5, 6 or 8 as defined in Table 4.1.8.6~~.~~, that are less than 20 m in height and have a fundamental lateral period, T_a, less than 0.5 s in each of two orthogonal directions as defined in Article 4.1.8.8.	https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0 https://www.dropbox.com/s/1alqwcne2ldbjmp/Proposed_Change_1161.pdf?dl=0
Earthquake Design	4.1.8.8. Direction of Loading	**(1)** Earthquake forces shall be assumed to act in any horizontal direction, except that the following shall be considered to provide adequate design force levels in the structure: (a) where components of the SFRS are oriented along a set of orthogonal axes, independent analyses about each of the principal axes of the structure shall be performed, (b) where the components of the SFRS are not oriented along a set of orthogonal axes and $I_EF_aS_a(0.2)$ is less than 0.35, independent analyses about any two orthogonal axes is permitted, or (c) where the components of the SFRS are not oriented along a set of orthogonal axes and IEFaSa(0.2) is equal to or greater than 0.35, analysis of the structure independently in any two orthogonal directions for 100% of the prescribed earthquake loads applied in one direction plus 30% of the prescribed earthquake loads in the perpendicular direction, with the combination requiring the greater element strength being used in the design.	4.1.8.8. Direction of Loading	(1) Earthquake forces shall be assumed to act in any horizontal direction, except that the following shall be considered to provide adequate design force levels in the structure: (a) where components of the SFRS are oriented along a set of orthogonal axes, independent analyses about each of the principal axes of the structure shall be performed, (b) where the components of the SFRS are not oriented along a set of orthogonal axes and the Seismic Category is SC1 or SC2, independent analyses about any two orthogonal axes is permitted, or (c) where the components of the SFRS are not oriented along a set of orthogonal axes and the Seismic Category is SC3 or SC4, analysis of the structure independently in any two orthogonal directions for 100% of the specified earthquake loads applied in one direction plus 30% of the specified earthquake loads in the perpendicular direction, with the combination requiring the greater element strength being used in the design.	(1) Earthquake forces shall be assumed to act in any horizontal direction, except that the following shall be considered to provide adequate design force levels in the structure: (a) where components of the SFRS are oriented along a set of orthogonal axes, independent analyses about each of the principal axes of the structure shall be performed, (b) where the components of the SFRS are not oriented along a set of orthogonal axes and ~~$I_EF_aS_a(0.2)$~~the Seismic Category is ~~less than 0.35~~SC1 or SC2, independent analyses about any two orthogonal axes is permitted, or (c) where the components of the SFRS are not oriented along a set of orthogonal axes and ~~IEFaSa(0.2)~~the Seismic Category is ~~equal to~~SC3 or ~~greater than 0.35~~SC4, analysis of the structure independently in any two orthogonal directions for 100% of the ~~prescribed~~specified earthquake loads applied in one direction plus 30% of the ~~prescribed~~specified earthquake loads in the perpendicular direction, with the combination requiring the greater element strength being used in the design.	https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0
Earthquake Design	4.1.8.9. SFRS Force Reduction Factors, System Overstrength Factors, and General Restrictions	**(1)** Except as provided in Sentence 4.1.8.20.(7), the values of R_d and R_o and the corresponding system restrictions shall conform to Table 4.1.8.9. and the requirements of this Subsection. **(2)** When a particular value of R_d is required by this Article, the corresponding R_o shall be used.	4.1.8.9. SFRS Force Modification Factors and General Restrictions	(1) Except as provided in Articles 4.1.8.20. and 4.1.8.22., the values of R_d and R_o and the corresponding system restrictions shall conform to Table 4.1.8.9. and the requirements of this Subsection. (2) When a particular value of R_d is required by this Article, the corresponding R_o shall be used.	(1) Except as provided in ~~Sentence~~Articles 4.1.8.20~~.(7),~~ and 4.1.8.22., the values of R_d and R_o and the corresponding system restrictions shall conform to Table 4.1.8.9. and the requirements of this Subsection. (2) When a particular value of R_d is required by this Article, the corresponding R_o shall be used.	https://www.dropbox.com/s/e8zd6ylmij0arrc/Proposed_Change_1003.pdf?dl=0 https://www.dropbox.com/s/t2gdahqznxc2hkt/

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		(3) For combinations of different types of SFRS acting in the same direction in the same *storey*, R_dR_o shall be taken as the lowest value of R_dR_o corresponding to these systems. **(4)** For vertical variations of R_dR_o, excluding rooftop structures not exceeding two *storeys* in height whose weight is less than the greater of 10% of W and 30% of W_i of the level below, the value of R_dR_o used in the design of any *storey* shall be less than or equal to the lowest value of R_dR_o used in the given direction for the *storeys* above, and the requirements of Sentence 4.1.8.15.(6) must be satisfied. **(5)** If it can be demonstrated through testing, research and analysis that the seismic performance of a structural system is at least equivalent to one of the types of SFRS mentioned in Table 4.1.8.9., then such a structural system will qualify for values of R_d and R_o corresponding to the equivalent type in that Table. (Table 4.1.8.9. - SFRS Ductility-Related Force Modification Factors, R_d, Overstrength-Related Force Modification Factors, R_o, and General Restrictions)		(3) For combinations of different types of SFRS acting in the same direction in the same *storey*, R_dR_o shall be taken as the lowest value of R_dR_o corresponding to these systems. (4) For vertical variations of R_dR_o, excluding rooftop structures not exceeding two *storeys* in height whose weight is less than the greater of 10% of W and 30% of W_i of the level below, the value of R_dR_o used in the design of any *storey* shall be less than or equal to the lowest value of R_dR_o used in the given direction for the *storeys* above, and the requirements of Sentence 4.1.8.15.(6) must be satisfied. (5) If it can be demonstrated through testing, research and analysis that the seismic performance of a structural system is at least equivalent to one of the types of SFRS defined in Table 4.1.8.9., then such a structural system will qualify for values of R_d and R_o corresponding to the equivalent type in that Table. (Table 4.1.8.9. - SFRS Ductility-Related Force Modification Factors, R_d, Overstrength-Related Force Modification Factors, R_o, and General Restrictions)	(3) For combinations of different types of SFRS acting in the same direction in the same *storey*, R_dR_o shall be taken as the lowest value of R_dR_o corresponding to these systems. (4) For vertical variations of R_dR_o, excluding rooftop structures not exceeding two *storeys* in height whose weight is less than the greater of 10% of W and 30% of W_i of the level below, the value of R_dR_o used in the design of any *storey* shall be less than or equal to the lowest value of R_dR_o used in the given direction for the *storeys* above, and the requirements of Sentence 4.1.8.15.(6) must be satisfied. (5) If it can be demonstrated through testing, research and analysis that the seismic performance of a structural system is at least equivalent to one of the types of SFRS ~~mentioned~~defined in Table 4.1.8.9., then such a structural system will qualify for values of R_d and R_o corresponding to the equivalent type in that Table. (Refer to the National PCF for the changes in the tables)	Proposed_Change_1200.pdf?dl=0 https://www.dropbox.com/s/27huvjw9708omdd/Proposed_Change_1201.pdf?dl=0 https://www.dropbox.com/s/neibu1ctcc6kkkh/Proposed_Change_1202.pdf?dl=0 https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0
Earthquake Design	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 $I_EF_aS_a(0.2)$ is less than 0.2 and the forces used for design of the SFRS are multiplied by R_dR_o. **(2)***Post-disaster buildings* shall, (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 $I_EF_aS_a(0.2)$ 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 $I_EF_vS_a(1.0)$ 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 $I_EF_aS_a(0.2)$ 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	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 the Seismic Category is SC1 and the forces used for design of the SFRS are multiplied by R_dR_o. (2) *Post-disaster buildings* shall (a) not have any irregularities conforming to Type 1, 3, 4, 5, 7, 9 or 10 as described in Table 4.1.8.6., where the Seismic Category is SC3 or SC4, (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, (d) where they are constructed with concrete or masonry shear walls, have no *storey* with a lateral stiffness that is less than that of the *storey* above it, and (e) where they are constructed with other types of SFRS, have no *storey* for which the inter*storey* deflection under lateral earthquake forces divided by the inter*storey* height, h_s, is greater than that of the *storey* above it. (3) High Importance Category *buildings* shall (a) not have any irregularities conforming to Type 1, 3, 4, 5, 7, 9 or 10 as described in Table 4.1.8.6., where the Seismic Category is SC4, (b) not have a Type 6 irregularity as described in Table 4.1.8.6.,	(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 ~~$I_EF_aS_a(0.2)$~~the Seismic Category is ~~less than 0.2~~SC1 and ~~the forces used for design of the SFRS are multiplied by R_dR_o.~~ the forces used for design of the SFRS are multiplied by R_dR_o. (2) *Post-disaster buildings* shall~~,~~ (a) not have any irregularities conforming to ~~Types~~Type 1, 3, 4, 5, 7~~ and~~, 9 or 10 as described in Table 4.1.8.6., ~~in cases~~ where ~~$I_EF_aS_a(0.2)$~~the Seismic Category is ~~equal to~~SC3 or ~~greater than 0.35,~~SC4, (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) where they are constructed with concrete or masonry shear walls, have no *storey* with a lateral stiffness that is less than that of the *storey* above it, and (e) where they are constructed with other types of SFRS, have no *storey* for which the inter*storey* deflection under lateral earthquake forces divided by the inter*storey* height, h_s, is greater than that of the *storey* above it. (3) ~~For~~High Importance Category *buildings* ~~having~~shall	https://www.dropbox.com/s/u5fja8s614wpxpg/Proposed_Change_1160.pdf?dl=0 https://www.dropbox.com/s/1alqwcne2ldbjmp/Proposed_Change_1161.pdf?dl=0 https://www.dropbox.com/s/gqpovya544n4n26/Proposed_Change_1162.pdf?dl=0 https://www.dropbox.com/s/t2gdahqznxc2hkt/Proposed_Change_1200.pdf?dl=0 https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0 https://www.dropbox.com/s/kiekt1vfe1exa82/

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		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. **(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. **(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.		(c) have an SFRS with an R_d of at least i) 2.0 where the Seismic Category is SC4, and ii) 1.5 otherwise, (d) where they are constructed with concrete or masonry shear walls, have no *storey* with a lateral stiffness that is less than that of the *storey* above it, and (e) where they are constructed with other types of SFRS, have no *storey* for which the inter*storey* deflection under lateral earthquake forces divided by the inter*storey* height, h_s, is greater than that of the *storey* above it. (4) Where the fundamental lateral period, Ta, is greater than or equal to 1.0 s and $I_E S(1.0)$ 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. (5) For *buildings* in Seismic Category SC3 or SC4 that are constructed with more than 4 *storeys* of continuous wood construction, timber SFRSs consisting of shear walls with wood-based panels or of braced or moment-resisting frames as defined in Table 4.1.8.9. within the continuous wood construction shall not have Type 4 or Type 5 irregularities as described in Table 4.1.8.6. (6) For *buildings* in Seismic Category SC3 or SC4 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, 9 or 10 irregularities as described in Table 4.1.8.6. (7) The ratio, α, for a 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 earthquake loads, which need not be taken as less than R_o multiplied by the specified lateral earthquake force as determined in Article 4.1.8.11. or 4.1.8.12., as appropriate. (8) For *buildings* with a Type 9 irregularity as described in Table 4.1.8.6. and where $I_E S(0.2)$ is	(a) not have any irregularities conforming to Type 1, 3, 4, 5, 7, 9 or 10 as described in Table 4.1.8.6., where the Seismic Category is SC4, (b) not have a Type 6 irregularity as described in Table 4.1.8.6., (c) have an SFRS with an R_d of at least i) 2.0 where the Seismic Category is SC4, and ii) 1.5 otherwise, (d) where they are constructed with concrete or masonry shear walls, have no *storey* with a lateral stiffness that is less than that of the *storey* above it, and (e) where they are constructed with other types of SFRS, have no *storey* for which the inter*storey* deflection under lateral earthquake forces divided by the inter*storey* height, h_s, is greater than that of the *storey* above it. (4) Where the fundamental lateral ~~periods~~period, Ta, ~~of 1~~is greater than or equal to 1.0 s ~~or greater~~ and ~~where $I_E F_v S_a$~~$I_E S$(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~~5) For *buildings* in Seismic Category SC3 or SC4 that are 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~~SFRSs consisting of shear walls with wood-based panels~~,~~ or of braced ~~frames~~ or moment-resisting frames as defined in Table 4.1.8.9. within the continuous wood construction shall not have Type 4 or Type 5 irregularities ~~of Type 4 or 5~~ as described in Table 4.1.8.6. (6) For *buildings* in Seismic Category SC3 or SC4 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, 9 or 10 irregularities as described in Table 4.1.8.6. (7) The ratio, α, for a 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~~,~~	Proposed_Change_1205.pdf?dl=0

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				equal to or greater than 0.5, deflections determined in accordance with Article 4.1.8.13. shall be multiplied by 1.2. (9) For *buildings* where the value of α, as determined in accordance with Sentence (7), exceeds twice the appropriate limit specified in Table 4.1.8.6. for a Type 9 irregularity and where $I_E S(0.2)$ is equal to or greater than 0.5, a Non-linear Dynamic Analysis of the structure shall be carried out in accordance with Article 4.1.8.12. and the following criteria: (a) the analysis shall account for the effects of the vertical response of the *building* mass, (b) the analysis shall account for the effects of the vertical response of *building* components that undergo a vertical displacement when displaced laterally, (c) the analysis shall use vertical ground motion time histories that are compatible with horizontal ground motion time histories scaled to the target response spectrum and that are applied concurrently with the horizontal ground motion time histories, (d) the largest inter*storey* deflection at any level of the *building* as determined from the analysis shall not be greater than 60% of the appropriate limit stated in Sentence 4.1.8.13.(3), and (e) the results of an analysis using the ground motion time histories in Clause (c) multiplied by 1.5 shall satisfy the non-linear acceptance criteria. (10) The design of *buildings* in Seismic Category SC3 or SC4 with a Type 10 irregularity as described in Table 4.1.8.6. shall satisfy the following requirements: (a) the structure shall be designed to resist the additional earthquake forces due to the vertical accelerations of the mass supported by inclined vertical members, and (b) the effects of the horizontal and vertical movements of inclined vertical members, while undergoing earthquake-induced deformations, on the floor systems they support shall be considered in the design of the *building* and accounted for in the application of Sentence 4.1.8.3.(5).	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 as less than R_o multiplied by the ~~minimum~~specified lateral earthquake force as determined in Article 4.1.8.11. or 4.1.8.12~~,~~., as appropriate. (~~6~~8) For *buildings* with a Type 9 irregularity as described in Table 4.1.8.6. and where ~~$I_E F_a S_a$~~ $I_E S(0.2)$ 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~~9) For *buildings* where the value of α, as determined in accordance with Sentence (~~5~~7), exceeds twice the ~~limits~~appropriate limit specified in Table 4.1.8.6. for a Type 9 irregularity~~,~~ and where ~~$I_E F_a S_a$~~ $I_E S(0.2)$ is equal to or greater than 0.5, a Non-linear Dynamic Analysis of the structure shall be carried out in accordance with Article 4.1.8.12. and the following criteria: (a) the analysis shall account for the effects of the vertical response of the *building* mass, (b) the analysis shall account for the effects of the vertical response of *building* components that undergo a vertical displacement when displaced laterally, (c) the analysis shall use vertical ground motion time histories that are ~~not permitted unless~~compatible with horizontal ground motion time histories scaled to the target response spectrum and that are applied concurrently with the horizontal ground motion time histories, (d) the largest inter*storey* deflection at any level of the *building* as determined ~~to be acceptable based on~~ from the analysis shall not be greater than 60% of the appropriate limit stated in Sentence 4.1.8.13.(3), and (e) the results of an analysis using the ground motion time histories in Clause (c) multiplied by 1.5 shall satisfy the non-linear ~~dynamic analysis studies.~~ acceptance criteria. (10) The design of *buildings* in Seismic Category SC3 or SC4 with a Type 10 irregularity as described in Table 4.1.8.6. shall satisfy the following requirements: (a) the structure shall be designed to resist the additional earthquake forces due to the vertical accelerations of the mass supported by inclined vertical members, and	

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					(b) the effects of the horizontal and vertical movements of inclined vertical members, while undergoing earthquake-induced deformations, on the floor systems they support shall be considered in the design of the *building* and accounted for in the application of Sentence 4.1.8.3.(5).	
Earthquake Design	4.1.8.11. Equivalent Static Force Procedure for Structures Satisfying the Conditions of Article 4.1.8.7.	**(11)** Torsional effects shall be accounted for as follows: (a) for a *building* with B ≤ 1.7 or where $I_E F_a S_a(0.2)$ is less than 0.35, by applying torsional moments about a vertical axis at each level throughout the *building*, derived for each of the following load cases considered separately, (i) $T_x = F_x(e_x + 0.10\ D_{nx})$, and (ii) $T_x = F_x(e_x - 0.10\ D_{nx})$ where F_x is the lateral force at each level determined according to Sentence (6) and where each element of the *building* is designed for the most severe effect of the above load cases, or (b) for a *building* with B > 1.7, in cases where $I_E F_a S_a(0.2)$ is equal to or greater than 0.35, by a Dynamic Analysis Procedure as specified in Article 4.1.8.12. **(12)** Where the fundamental lateral period, T_a, is determined in accordance with Clause (3)(d) and the *building* is constructed with more than 4 *storeys* of continuous wood construction and has a timber SFRS consisting of shear walls with wood-based panels, braced frames or moment-resisting frames as defined in Table 4.1.8.9., the lateral earthquake force, V, as determined in accordance with Sentence (2) shall be multiplied by 1.2 but need not exceed the value determined by using Clause (2)(c). (Table 4.1.8.11.A. - Higher Mode Factor, M_v, and Base Overturning Reduction Factor, J for Moment-Resisting Frames) (Table 4.1.8.11.B. - Higher Mode Factor, M_v, and Base Overturning Reduction Factor, J for Coupled Walls) (Table 4.1.8.11.C. - Higher Mode Factor, M_v, and Base Overturning Reduction Factor, J for Braced Frames) (Table 4.1.8.11.D. - Higher Mode Factor, M_v, and Base Overturning Reduction Factor, J for Walls, Wall Frame Systems)	4.1.8.11. Equivalent Static Force Procedure for Structures Satisfying the Conditions of Article 4.1.8.7.	(11) Torsional effects shall be accounted for as follows: (a) for a *building* with B ≤ 1.7 or in Seismic Category SC1 or SC2, by applying torsional moments about a vertical axis at each level throughout the *building*, derived for each of the following load cases considered separately: (i) $T_x = F_x(e_x + 0.10D_{nx})$, and (ii) $T_x = F_x(e_x - 0.10D_{nx})$ where F_x is determined in accordance with Sentence (7) and where each element of the *building* is designed for the most severe effect of the above load cases, or (b) for a *building* with B > 1.7 in Seismic Category SC3 or SC4, by a Dynamic Analysis Procedure as specified in Article 4.1.8.12. (12) Where the fundamental lateral period, Ta, is determined in accordance with Clause (3)(d) and the *building* is constructed with more than 4 *storeys* of continuous wood construction and has a timber SFRS consisting of shear walls with wood-based panels or of braced or moment-resisting frames as defined in Table 4.1.8.9., the specified lateral earthquake force, V, as determined in accordance with Sentence (2) shall be multiplied by 1.2 but need not exceed the value determined by using Clause (2)(c). (Table 4.1.8.11. - Higher Mode Factor, M_v, and Base Overturning Moment Reduction Factor, J)	(11) Torsional effects shall be accounted for as follows: (a) for a *building* with B ≤ 1.7 or ~~where $I_E F_a S_a(0.2)$ is less than 0.35~~in Seismic Category SC1 or SC2, by applying torsional moments about a vertical axis at each level throughout the *building*, derived for each of the following load cases considered separately~~,~~: (i) $T_x = F_x(e_x + 0.10\ D_{nx})$, and (ii) $T_x = F_x(e_x - 0.10\ D_{nx})$ where F_x is ~~the lateral force at each level~~ determined ~~according to~~in accordance with Sentence (~~6~~7) and where each element of the *building* is designed for the most severe effect of the above load cases, or (b) for a *building* with B > 1.7~~,~~ in ~~cases where $I_E F_a S_a(0.2)$ is equal to~~Seismic Category SC3 or ~~greater than 0.35~~SC4, by a Dynamic Analysis Procedure as specified in Article 4.1.8.12. (12) Where the fundamental lateral period, Ta, is determined in accordance with Clause (3)(d) and the *building* is constructed with more than 4 *storeys* of continuous wood construction and has a timber SFRS consisting of shear walls with wood-based panels~~,~~ or of braced ~~frames~~ or moment-resisting frames as defined in Table 4.1.8.9., the specified lateral earthquake force, V, as determined in accordance with Sentence (2) shall be multiplied by 1.2 but need not exceed the value determined by using Clause (2)(c). (Refer to the National PCF for the changes in the tables)	https://www.dropbox.com/s/r2axe2f4oglvnaf/Proposed_Change_980.pdf?dl=0 https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0 https://www.dropbox.com/s/1brjgbiixyk3fim/Proposed_Change_1430.pdf?dl=0

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		(Table 4.1.8.11.E. - Higher Mode Factor, M_v, and Base Overturning Reduction Factor, J for Other Systems)				
Earthquake Design	4.1.8.15. Design Provisions	**(5)** In cases where $I_EF_aS_a(0.2)$ is equal to or greater than 0.35, the elements supporting any discontinuous wall, column or braced frame shall be designed for the lateral load capacity of the components of the SFRS they support.	4.1.8.15. Design Provisions	(5) Where the Seismic Category is SC3 or SC4, the elements supporting any discontinuous wall, column or braced frame shall be designed for the lateral load capacity of the components of the SFRS they support.	(5) ~~In cases where $I_EF_aS_a(0.2)$~~ Where the Seismic Category is ~~equal to~~SC3 or ~~greater than 0.35~~SC4, the elements supporting any discontinuous wall, column or braced frame shall be designed for the lateral load capacity of the components of the SFRS they support.	https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0
Earthquake Design	4.1.8.16. Foundation Provisions	**(6)** In cases where $I_EF_aS_a(0.2)$ is equal to or greater than 0.35, the following requirements shall be satisfied: (a) *piles* or *pile* caps, drilled piers, and caissons shall be interconnected by continuous ties in no fewer than two directions, (b) *piles*, drilled piers, and caissons shall be embedded a minimum of 100 mm into the *pile* cap or structure, and (c) *piles*, drilled piers, and caissons, other than wood *piles*, shall be connected to the *pile* cap or structure for a minimum tension force equal to 0.15 times the factored compression load on the *pile*. **(7)** At sites where $I_EF_aS_a(0.2)$ is equal to or greater than 0.35, *basement* walls shall be designed to resist earthquake lateral pressures from backfill or natural ground. **(8)** At sites where $I_EF_aS_a(0.2)$ is greater than 0.75, the following requirements shall be satisfied: (a) *piles*, drilled piers, or caissons shall be designed and detailed to accommodate cyclic inelastic behaviour when the design moment in the element due to earthquake effects is greater than 75% of its moment capacity, and (b) spread footings founded on *soil* defined as Site Class E or F shall be interconnected by continuous ties in no fewer than two directions.	4.1.8.16. Foundation Provisions	(6) Where the Seismic Category is SC3 or SC4, the following requirements shall be satisfied: (a) *piles* or *pile* caps, drilled piers, and *caissons* shall be interconnected by continuous ties in not less than two directions, (b) *piles*, drilled piers, and *caissons* shall be embedded a minimum of 100 mm into the *pile* cap or structure, and (c) *piles*, drilled piers, and *caissons*, other than wood *piles*, shall be connected to the *pile* cap or structure for a minimum tension force equal to 0.15 times the factored compression load on the *pile*. (7) Where the Seismic Category is SC3 or SC4, *basement* walls shall be designed to resist earthquake lateral pressures from backfill or natural ground. (8) Where the Seismic Category is SC4, the following requirements shall be satisfied: (a) *piles*, drilled piers, or *caissons* shall be designed and detailed to accommodate cyclic inelastic behaviour when the design moment in the element due to earthquake effects is greater than 75% of its moment capacity, and (b) spread footings founded on *soil* designated as X_V, where V_{s30} is less than or equal to 180 m/s, X_E or X_F shall be interconnected by continuous ties in not less than two directions.	(6) ~~In cases where $I_EF_aS_a(0.2)$~~Where the Seismic Category is ~~equal to~~SC3 or ~~greater than 0.35~~ SC4, the following requirements shall be satisfied: (a) *piles* or *pile* caps, drilled piers, and *caissons* shall be interconnected by continuous ties in ~~no fewer~~not less than two directions, (b) *piles*, drilled piers, and *caissons* shall be embedded a minimum of 100 mm into the *pile* cap or structure, and (c) *piles*, drilled piers, and *caissons*, other than wood *piles*, shall be connected to the *pile* cap or structure for a minimum tension force equal to 0.15 times the factored compression load on the *pile*. (7) ~~At sites where $I_EF_aS_a(0.2)$~~Where the Seismic Category is ~~equal to~~SC3 or ~~greater than 0.35,~~SC4, *basement* walls shall be designed to resist earthquake lateral pressures from backfill or natural ground. (8) ~~At sites where $I_EF_aS_a(0.2)$~~Where the Seismic Category is ~~greater than 0.75~~SC4, the following requirements shall be satisfied: (a) *piles*, drilled piers, or *caissons* shall be designed and detailed to accommodate cyclic inelastic behaviour when the design moment in the element due to earthquake effects is greater than 75% of its moment capacity, and (b) spread footings founded on *soil* ~~defined~~designated as ~~Site Class E or~~ X_V, where V_{s30} is less than or ~~F~~equal to 180 m/s, X_E or X_F shall be interconnected by continuous ties in ~~no fewer~~not less than two directions.	https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0
Earthquake Design		**(1)** Except as provided in Sentences (2), (7) and (16), elements and components of *buildings* described in Table 4.1.8.18. and their connections to the structure shall be designed to accommodate the *building* deflections calculated in accordance with Article 4.1.8.13. and the element or component deflections calculated in accordance with Sentence (9), and shall be designed for a lateral force, V_P, applied through	4.1.8.18. Elements of Structures, Non-structural Components and Equipment	(1) Except as provided in Sentences (2), (7) and (16), elements and components of *buildings* described in Table 4.1.8.18. and their connections to the structure shall be designed to accommodate the *building* deflections calculated in accordance with Article 4.1.8.13. and the element or component deflections calculated in accordance with Sentence (9), and shall	(1) Except as provided in Sentences (2), (7) and (16), elements and components of *buildings* described in Table 4.1.8.18. and their connections to the structure shall be designed to accommodate the *building* deflections calculated in accordance with Article 4.1.8.13. and the element or component deflections calculated in accordance with Sentence (9), and shall be designed for a lateral earthquake force, ~~V_P, applied~~	https://www.dropbox.com/s/k38lkwicze4foep/Proposed_Change_986.pdf?dl=0 https://www.dropbox.com/s/llqnxn8ffqyo7hx/Propos.pdf?dl=0

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		the centre of mass of the element or component that is equal to: $V_p = 0.3F_aS_a(0.2)\ I_ES_pW_p$ where, F_a = as defined in Sentence 4.1.8.4.(7), $S_a(0.2)$ = spectral response acceleration value at 0.2 s, as defined in Sentence 4.1.8.4.(1), I_E = importance factor for the *building*, as defined in Article 4.1.8.5., S_p = $C_pA_rA_x/R_p$ (the maximum value of S_p shall be taken as 4.0 and the minimum value of S_p shall be taken as 0.7), where, C_p = element or component factor from Table 4.1.8.18., A_r = element or component force amplification factor from Table 4.1.8.18., A_x = height factor ($1 + 2\ h_x / h_n$), R_p = element or component response modification factor from Table 4.1.8.18., and W_p = weight of the component or element **(2)** For *buildings* other than *post-disaster buildings*, seismically isolated *buildings* and *buildings* with supplemental energy dissipation systems, where $I_EF_aS_a(0.2)$ is less than 0.35, the requirements of Sentence (1) need not apply to Categories 6 through 22 of Table 4.1.8.18. **(3)** For the purpose of applying Sentence (1) for Categories 11 and 12 of Table 4.1.8.18., elements or components shall be assumed to be flexible or flexibly connected unless it can be shown that the fundamental period of the element or component and its connection is less than or equal to 0.06 s, in which case the element or component is classified as being rigid or rigidly connected. **(4)** The weight of access floors shall include the *dead load* of the access floor and the weight of permanent equipment, which shall not be taken as less than 25% of the floor *live load*. **(5)** When the mass of a tank plus its contents or the mass of a flexible or flexibly connected piece of		be designed for a lateral earthquake force, V_p, distributed according to the distribution of mass: $V_p = 0.3F_aS_a(0.2)\ I_ES_pW_p$ Where, S(0.2) = design spectral acceleration value at a period of 0.2 s, as defined in Sentence 4.1.8.4.(6), I_E = importance factor for the *building*, as defined in Article 4.1.8.5., $S_p = C_pA_rA_x/R_p$ (the maximum value of S_p shall be taken as 4.0 and the minimum value of S_p shall be taken as 0.7), where C_p = element or component factor from Table 4.1.8.18., A_r = element or component force amplification factor from Table 4.1.8.18., A_x = height factor ($1 + 2h_x/h_n$), R_p = element or component response modification factor from Table 4.1.8.18., and W_p = weight of the component or element. (2) For *buildings* in Seismic Category SC1 or SC2, other than *post-disaster buildings*, seismically isolated *buildings*, and *buildings* with supplemental energy dissipation systems, the requirements of Sentence (1) need not apply to Categories 6 through 22 of Table 4.1.8.18. (3) For the purpose of applying Sentence (1) for Categories 11 and 12 of Table 4.1.8.18., elements or components shall be assumed to be flexible or flexibly connected unless it can be shown that the fundamental period of the element or component and its connection is less than or equal to 0.06 s, in which case the element or component is classified as being rigid and rigidly connected. (4) The weight of access floors shall include the *dead load* of the access floor and the weight of permanent equipment, which shall not be taken as less than 25% of the floor *live load*. (5) When the mass of a tank plus its contents or the mass of a flexible or flexibly connected piece of machinery, fixture or equipment is greater than 10% of the mass of the supporting floor, the lateral forces shall be determined by rational analysis. (6) Forces shall be applied in the horizontal direction that results in the most critical loading for design, except for Category 6 of Table 4.1.8.18., where the forces shall be applied up and down vertically. (7) Connections to the structure of elements and components listed in Table 4.1.8.18. shall be designed to support the component or element for gravity loads, shall conform to the requirements of	~~through~~V_p, distributed according to the ~~centre~~distribution of mass ~~of the element or component that is equal to~~: $V_p = 0.3F_aS_a(0.2)\ I_ES_pW_p$ ~~where,~~ ~~F_a = as defined in Sentence 4.1.8.4.(7),~~ ~~S~~a Where, S(0.2) = design spectral ~~response~~ acceleration value at a period of 0.2 s, as defined in Sentence 4.1.8.4.(~~1~~6), I_E = importance factor for the *building*, as defined in Article 4.1.8.5., $S_p = C_pA_rA_x/R_p$ (the maximum value of S_p shall be taken as 4.0 and the minimum value of S_p shall be taken as 0.7), where~~,~~ C_p = element or component factor from Table 4.1.8.18., A_r = element or component force amplification factor from Table 4.1.8.18., A_x = height factor ($1 + 2\ h_x / h_n$), R_p = element or component response modification factor from Table 4.1.8.18., and W_p = weight of the component or element. (2) For *buildings* in Seismic Category SC1 or SC2, other than *post-disaster buildings*, seismically isolated *buildings*, and *buildings* with supplemental energy dissipation systems~~, where $I_EF_aS_a(0.2)$ is less than 0.35~~, the requirements of Sentence (1) need not apply to Categories 6 through 22 of Table 4.1.8.18. (3) For the purpose of applying Sentence (1) for Categories 11 and 12 of Table 4.1.8.18., elements or components shall be assumed to be flexible or flexibly connected unless it can be shown that the fundamental period of the element or component and its connection is less than or equal to 0.06 s, in which case the element or component is classified as being rigid ~~or~~and rigidly connected. (4) The weight of access floors shall include the *dead load* of the access floor and the weight of permanent equipment, which shall not be taken as less than 25% of the floor *live load*. (5) When the mass of a tank plus its contents or the mass of a flexible or flexibly connected piece of machinery, fixture or equipment is greater than 10% of the mass of the supporting floor, the lateral forces shall be determined by rational analysis. (6) Forces shall be applied in the horizontal direction that results in the most critical loading for design,	https://www.dropbox.com/s/k8e9nxyu2f3zdn2/Propose.pdf?dl=0 https://www.dropbox.com/s/ab4dkv7zwsebce2/Proposed_Change_1163.pdf?dl=0 https://www.dropbox.com/s/7u45a7nkxezh6dm/Proposed_Change_1195.pdf?dl=0 https://www.dropbox.com/s/392yceshbu3sh7j/Proposed_Change_1203.pdf?dl=0

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		machinery, fixture or equipment is greater than 10% of the mass of the supporting floor, the lateral forces shall be determined by rational analysis. **(6)** Forces shall be applied in the horizontal direction that results in the most critical loading for design, except for Category 6 of Table 4.1.8.18., where the forces shall be applied up and down vertically. **(7)** Connections to the structure of elements and components listed in Table 4.1.8.18. shall be designed to support the component or element for gravity loads, shall conform to the requirements of Sentence (1), and shall also satisfy these additional requirements: (a) friction due to gravity loads shall not be considered to provide resistance to seismic forces, (b) R_p for non-ductile connections, such as adhesives or power-actuated fasteners, shall be taken as 1.0, (c) R_p for anchorage using shallow expansion, chemical, epoxy or cast-in-place anchors shall be 1.5, where shallow anchors are those with a ratio of embedment length to diameter of less than 8, (d) power-actuated fasteners and drop-in anchors shall not be used for tension loads, (e) connections for non-structural elements or components of Category 1, 2 or 3 of Table 4.1.8.18. attached to the side of a *building* and above the first level above *grade* shall satisfy the following requirements: (i) for connections where the body of the connection is ductile, the body shall be designed for values of C_P, A_r and R_p given in Table 4.1.8.18., and all of the other parts of the connection, such as anchors, welds, bolts and inserts, shall be capable of developing 2.0 times the nominal yield resistance of the body of the connection, and (ii) connections where the body of the connection is not ductile shall be designed for values of C_p = 2.0, R_p = 1.0 and A_r given in Table 4.1.8.18., and (f) a ductile connection is one where the body of the connection is capable of dissipating energy through cyclic inelastic behaviour.		Sentence (1), and shall also satisfy these additional requirements: (a) except as provided in Sentence (17), friction due to gravity loads shall not be considered to provide resistance to earthquake forces, (b) R_p for non-ductile connections, such as adhesives or power-actuated fasteners, shall be taken as 1.0, (c) R_p for shallow post-installed mechanical, post-installed adhesive, and cast-in-place anchors in concrete shall be 1.5, where shallow anchors are those with a ratio of embedment length to diameter of less than 8, (d) post-installed mechanical, drop-in and adhesive anchors in concrete shall be pre-qualified for seismic applications by cyclic load testing in accordance with (i) CSA A23.3, "Design of concrete structures," and (ii) ACI 355.2-19, "Qualification of Post-Installed Mechanical Anchors in Concrete (ACI 355.2) and Commentary," or ACI 355.4M, "Qualification of Post-Installed Adhesive Anchors in Concrete (ACI 355.4-19) and Commentary," as applicable, (e) post-installed mechanical and adhesive anchors in masonry and post-installed mechanical anchors in structural steel shall be pre-qualified for seismic applications by cyclic tension load testing, (f) power-actuated fasteners shall not be used for cyclic tension loads, (g) connections for non-structural elements or components of Category 1, 2 or 3 of Table 4.1.8.18. attached to the side of a *building* and above the first level above *grade* shall satisfy the following requirements: (i) for connections where the body of the connection is ductile, the body shall be designed for values of C_p, A_r and R_p given in Table 4.1.8.18., and all of the other parts of the connection, such as anchors, welds, bolts and inserts, shall be capable of developing 2.0 times the nominal yield resistance of the body of the connection, and (ii) connections where the body of the connection is not ductile shall be	except for Category 6 of Table 4.1.8.18., where the forces shall be applied up and down vertically. (7) Connections to the structure of elements and components listed in Table 4.1.8.18. shall be designed to support the component or element for gravity loads, shall conform to the requirements of Sentence (1), and shall also satisfy these additional requirements: (a) except as provided in Sentence (17), friction due to gravity loads shall not be considered to provide resistance to ~~seismic~~earthquake forces, (b) R_p for non-ductile connections, such as adhesives or power-actuated fasteners, shall be taken as 1.0, (c) R_p for ~~anchorage using~~ shallow ~~expansion, chemical, epoxy or~~post-installed mechanical, post-installed adhesive, and cast-in-place anchors in concrete shall be 1.5, where shallow anchors are those with a ratio of embedment length to diameter of less than 8, (d) post-installed mechanical, drop-in and adhesive anchors in concrete shall be pre-qualified for seismic applications by cyclic load testing in accordance with (i) CSA A23.3, "Design of concrete structures," and (ii) ACI 355.2-19, "Qualification of Post-Installed Mechanical Anchors in Concrete (ACI 355.2) and Commentary," or ACI 355.4M, "Qualification of Post-Installed Adhesive Anchors in Concrete (ACI 355.4-19) and Commentary," as applicable, (e) post-installed mechanical and adhesive anchors in masonry and post-installed mechanical anchors in structural steel shall be pre-qualified for seismic applications by cyclic tension load testing, (f) power-actuated fasteners ~~and drop-in anchors~~ shall not be used for cyclic tension loads, ~~(e)~~ (g) connections for non-structural elements or components of Category 1, 2 or 3 of Table 4.1.8.18. attached to the side of a *building* and above the first level above *grade* shall satisfy the following requirements: (i) for connections where the body of the connection is ductile, the body shall be	

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		(8) Floors and roofs acting as diaphragms shall satisfy the requirements for diaphragms stated in Article 4.1.8.15. **(9)** Lateral deflections of elements or components shall be based on the loads defined in Sentence (1) and lateral deflections obtained from an elastic analysis shall be multiplied by R_p/I_E to give realistic values of the anticipated deflections. **(10)** The elements or components shall be designed so as not to transfer to the structure any forces unaccounted for in the design, and rigid elements such as walls or panels shall satisfy the requirements of Sentence 4.1.8.3.(6). **(11)** Seismic restraint for suspended equipment, pipes, ducts, electrical cable trays, etc. shall be designed to meet the force and displacement requirements of this Article and be constructed in a manner that will not subject hanger rods to bending. **(12)** Isolated suspended equipment and components, such as pendent lights, may be designed as a pendulum system provided that adequate chains or cables capable of supporting 2.0 times the weight of the suspended component are provided and the deflection requirements of Sentence (11) are satisfied. **(13)** Free-standing steel pallet storage racks are permitted to be designed to resist earthquake effects using rational analysis, provided the design achieves the minimum performance level required by this Subsection. **(14)** Except as provided in Sentence (15), the relative displacement of glass in glazing systems, $D_{fallout}$, shall be equal to the greater of, (a) 13 mm, or (b) $D_{fallout} \geq 1.25 I_E D_p$, where, $D_{fallout}$ = relative displacement at which glass fallout occurs, and D_p = relative earthquake displacement that the component must be designed to accommodate, calculated in accordance with Article 4.1.8.13. and applied over the height of the glass component. **(15)** Glass need not comply with Sentence (14), provided at least one of the following conditions is met: (a) $I_E F_a S_a(0.2) < 0.35$,		designed for values of $C_p = 2.0$, $R_p = 1.0$ and A_r given in Table 4.1.8.18., and (h) a ductile connection is one where the body of the connection is capable of dissipating energy through cyclic inelastic behaviour. (8) Floors and roofs acting as diaphragms shall satisfy the requirements for diaphragms stated in Article 4.1.8.15. (9) Lateral deflections of elements or components shall be based on the loads defined in Sentence (1) and lateral deflections obtained from an elastic analysis shall be multiplied by R_p/I_E to give realistic values of the anticipated deflections. (10) The elements or components shall be designed so as not to transfer to the structure any forces unaccounted for in the design, and rigid elements such as walls or panels shall satisfy the requirements of Sentence 4.1.8.3.(6). (11) Seismic restraint for suspended equipment, pipes, ducts, electrical cable trays, etc. shall be designed to meet the force and displacement requirements of this Article and be constructed in a manner that will not subject hanger rods to bending. (12) Isolated suspended equipment and components, such as pendent lights, may be designed as a pendulum system provided that adequate chains or cables capable of supporting 2.0 times the weight of the suspended component are provided and the deflection requirements of Sentence (10) are satisfied. (13) Free-standing steel pallet storage racks are permitted to be designed to resist earthquake effects using rational analysis, provided the design achieves the minimum performance level required by Subsection 4.1.8. (14) Except as provided in Sentence (15), the relative displacement of glass in glazing systems, $D_{fallout}$, shall be equal to the greater of (a) $D_{fallout} \geq 1.25 I_E D_p$, where $D_{fallout}$ = relative displacement at which glass fallout occurs, and D_p = relative earthquake displacement that the component must be designed to accommodate, calculated in accordance with Article 4.1.8.13. and applied over the height of the glass component, or (b) 13 mm. (15) Glass need not comply with Sentence (14), provided at least one of the following conditions is met: (a) the Seismic Category is SC1 or SC2,	designed for values of ~~C_p~~C_p, A_r and R_p given in Table 4.1.8.18., and all of the other parts of the connection, such as anchors, welds, bolts and inserts, shall be capable of developing 2.0 times the nominal yield resistance of the body of the connection, and —(ii)— connections where the body of the connection is not ductile shall be designed for values of $C_p = 2.0$, $R_p = 1.0$ and A_r given in Table 4.1.8.18., and (~~f~~h) a ductile connection is one where the body of the connection is capable of dissipating energy through cyclic inelastic behaviour. (8) Floors and roofs acting as diaphragms shall satisfy the requirements for diaphragms stated in Article 4.1.8.15. (9) Lateral deflections of elements or components shall be based on the loads defined in Sentence (1) and lateral deflections obtained from an elastic analysis shall be multiplied by R_p/I_E to give realistic values of the anticipated deflections. (10) The elements or components shall be designed so as not to transfer to the structure any forces unaccounted for in the design, and rigid elements such as walls or panels shall satisfy the requirements of Sentence 4.1.8.3.(6). (11) Seismic restraint for suspended equipment, pipes, ducts, electrical cable trays, etc. shall be designed to meet the force and displacement requirements of this Article and be constructed in a manner that will not subject hanger rods to bending. (12) Isolated suspended equipment and components, such as pendent lights, may be designed as a pendulum system provided that adequate chains or cables capable of supporting 2.0 times the weight of the suspended component are provided and the deflection requirements of Sentence (~~11~~10) are satisfied. (13) Free-standing steel pallet storage racks are permitted to be designed to resist earthquake effects using rational analysis, provided the design achieves the minimum performance level required by ~~this~~ Subsection~~.~~ 4.1.8. (14) Except as provided in Sentence (15), the relative displacement of glass in glazing systems, $D_{fallout}$, shall be equal to the greater of~~,~~ (a)~~13 mm, or~~ ~~(b)~~ $D_{fallout} \geq 1.25 I_E D_p$~~,~~ where~~,~~ $D_{fallout}$ = relative displacement at which glass fallout occurs, and	

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		(b) the glass has sufficient clearance from its frame such that $D_{clear} \geq 1.25\ D_p$ calculated as follows: $D_{clear} = 2C_1(1 + h_pC_2/(b_pC_1))$ where, D_{clear} = relative horizontal displacement measured over the height of the glass panel, which causes initial glass-to-frame contact, C_1 = average of the clearances on both sides between the vertical glass edges and the frame, h_p = height of the rectangular glass panel, C_2 = average of the top and bottom clearances between the horizontal glass edges and the frame, and b_p = width of the rectangular glass panel, (c) the glass is fully tempered, monolithic, installed in a *building* that is not a *post-disaster building*, and no part of the glass is located more than 3 m above a walking surface, or (d) the glass is annealed or heat-strengthened laminated glass in a single thickness with an interlayer no less than 0.76 mm and captured mechanically in a wall system glazing pocket with the perimeter secured to the frame by a wet, glazed, gunable, curing, elastomeric sealant perimeter bead of 13 mm minimum glass contact width. **(16)** For a structure with supplemental energy dissipation, the following criteria shall apply: (a) the value of $S_a(0.2)$ used in Sentence (1) shall be determined from the mean 5% damped floor spectral acceleration values at 0.2 s by averaging the individual 5% damped floor spectra at the base of the structure determined using Non-Linear Dynamic Analysis, and (b) the value of F_a used in Sentence (1) shall be 1. (Table 4.1.8.18. - Elements of Structures and Non-Structural Components and Equipment)		(b) the glass has sufficient clearance from its frame such that $D_{clear} \geq 1.25\ D_p$ calculated as follows: $D_{clear} = 2C_1(1 + h_pC_2/(b_pC_1))$ where D_{clear} = relative horizontal displacement measured over the height of the glass panel, which causes initial glass-to-frame contact, C_1 = average of the clearances on both sides between the vertical glass edges and the frame, h_p = height of the rectangular glass panel, C_2 = averages of the top and bottom clearances between the horizontal glass edges and the frame, and bp = width of the rectangular glass panel, (c) the glass is fully tempered, monolithic, installed in a non-*post-disaster building*, and no part of the glass is located more than 3 m above a walking surface, or (d) the glass is annealed or heat-strengthened laminated glass in a single thickness with an interlayer no less than 0.76 mm and captured mechanically in a wall system glazing pocket with the perimeter secured to the frame by a wet, glazed, gunable, curing, elastomeric sealant perimeter bead of 13 mm minimum glass contact width. (16) For structures with supplemental energy dissipation, elements and components of *buildings* described in Table 4.1.8.18. and their connections to the structure shall be designed for a lateral earthquake force, V_p, determined at each floor level as follows: $$V_p = S_{sed} I_E (C_p A_r / R_p) W_p$$ where S_{sed} = peak spectral acceleration in the period range of T = 0 s to T = 0.5 s determined from the mean 5% damped floor spectral acceleration values by averaging the individual 5% damped floor response spectra at the centroid of the floor area at that floor level determined using Non-Linear Dynamic Analysis, and I_E, C_p, A_r, R_p, W_p = as defined in Sentence (1). (17) For a ballasted array of interconnected solar panels mounted on a roof, where $I_E S(0.2)$ is less than or equal to 1.0, friction due to gravity loads is permitted to be considered to provide resistance to seismic forces, provided (a) the roof is not normally occupied,	D_p = relative earthquake displacement that the component must be designed to accommodate, calculated in accordance with Article 4.1.8.13. and applied over the height of the glass component, or (b) 13 mm. (15) Glass need not comply with Sentence (14), provided at least one of the following conditions is met: ~~(a) $I_E F_a S_a(0.2) < 0.35$,~~ (a) the Seismic Category is SC1 or SC2. (b) the glass has sufficient clearance from its frame such that $D_{clear} \geq 1.25\ D_p$ calculated as follows: $D_{clear} = 2C_1(1 + h_pC_2/(b_pC_1))$ where, D_{clear} = relative horizontal displacement measured over the height of the glass panel, which causes initial glass-to-frame contact, C_1 = average of the clearances on both sides between the vertical glass edges and the frame, h_p = height of the rectangular glass panel, C_2 ~~average~~ = averages of the top and bottom clearances between the horizontal glass edges and the frame, and bp = width of the rectangular glass panel, (c) the glass is fully tempered, monolithic, installed in a ~~*building* that is not a~~ non-*post-disaster building*, and no part of the glass is located more than 3 m above a walking surface, or (d) the glass is annealed or heat-strengthened laminated glass in a single thickness with an interlayer no less than 0.76 mm and captured mechanically in a wall system glazing pocket with the perimeter secured to the frame by a wet, glazed, gunable, curing, elastomeric sealant perimeter bead of 13 mm minimum glass contact width. (16) For ~~a structure~~structures with supplemental energy dissipation, ~~the following criteria shall apply:~~ ~~(a) the value~~elements and components of ~~$S_a(0.2)$ used~~*buildings* described in ~~Sentence (~~Table 4.1~~).~~8.18. and their connections to the structure shall be designed for a lateral earthquake force, V_p, determined at each floor level as follows: $$V_p = S_{sed} I_E (C_p A_r / R_p) W_p$$ where	

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				(b) the roof is surrounded by a parapet extending from the roof surface to not less than the greater of (i) 150 mm above the centre of mass of the array, and (ii) 400 mm above the roof surface, (c) the height of the centre of mass of the array above the roof surface is less than the lesser of (i) 900 mm, and (ii) one half of the smallest plan dimension of the supporting base of the array, (d) the roof slope at the location of the array is less than or equal to 3°, (e) the factored friction resistance calculated using the kinetic friction coefficient determined in accordance with Sentence (18) and a resistance factor of 0.7 is greater than or equal to the lateral force, V_p, on the array determined in accordance with Sentence (1) using values of A_r = 1.0, A_x = 3.0, C_p = 1.0, and R_p = 1.25, (f) the minimum clearance between the array and other arrays or fixed objects is the greater of (i) 225 mm, and (ii) 1 500 $(I_E S(0.2) - 0.4)^2$, in mm, and (g) the minimum clearance between the array and the roof parapet is the greater of (i) 450 mm, and (ii) 3 000 $(I_E S(0.2) - 0.4)^2$, in mm. (18) For the purpose of Clause (17)(e), the kinetic friction coefficient shall be determined in accordance with ASTM G115, “Standard Guide for Measuring and Reporting Friction Coefficients,” through experimental testing that is carried out by an accredited laboratory on a full-scale array or a prototype of the array, that models the interface between the supporting base of the array and the roof surface, and that accounts for the adverse effects of anticipated climatic conditions on the friction resistance. (Table 4.1.8.18. - Elements of Structures and Non-structural Components and Equipment)	S_{sed} = peak spectral acceleration in the period range of T = 0 s to T = 0.5 s determined from the mean 5% damped floor spectral acceleration values ~~at 0.2 s~~ by averaging the individual 5% damped floor response spectra at the ~~base~~centroid of the ~~structure~~floor area at that floor level determined using Non-Linear Dynamic Analysis, and ~~(b) the value of F_a used~~ I_E, C_p, A_r, R_p, W_p = as defined in Sentence (1~~) shall be 1.~~). (17) For a ballasted array of interconnected solar panels mounted on a roof, where $I_E S(0.2)$ is less than or equal to 1.0, friction due to gravity loads is permitted to be considered to provide resistance to seismic forces, provided (a) the roof is not normally occupied, (b) the roof is surrounded by a parapet extending from the roof surface to not less than the greater of (i) 150 mm above the centre of mass of the array, and (ii) 400 mm above the roof surface, (c) the height of the centre of mass of the array above the roof surface is less than the lesser of (i) 900 mm, and (ii) one half of the smallest plan dimension of the supporting base of the array, (d) the roof slope at the location of the array is less than or equal to 3°, (e) the factored friction resistance calculated using the kinetic friction coefficient determined in accordance with Sentence (18) and a resistance factor of 0.7 is greater than or equal to the lateral force, V_p, on the array determined in accordance with Sentence (1) using values of A_r = 1.0, A_x = 3.0, C_p = 1.0, and R_p = 1.25, (f) the minimum clearance between the array and other arrays or fixed objects is the greater of (i) 225 mm, and (ii) 1 500 $(I_E S(0.2) - 0.4)^2$, in mm, and (g) the minimum clearance between the array and the roof parapet is the greater of (i) 450 mm, and (ii) 3 000 $(I_E S(0.2) - 0.4)^2$, in mm. (18) For the purpose of Clause (17)(e), the kinetic friction coefficient shall be determined in accordance with ASTM G115, “Standard Guide for Measuring and Reporting Friction Coefficients,” through experimental testing that is carried out by an	

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					accredited laboratory on a full-scale array or a prototype of the array, that models the interface between the supporting base of the array and the roof surface, and that accounts for the adverse effects of anticipated climatic conditions on the friction resistance. (Refer to the National PCF for the changes in the tables)	
Earthquake Design	4.1.8.23. Additional Performance Requirements for Post-disaster Buildings, High Importance Category Buildings, and a Subset of Normal Importance Category Buildings (new)	N/A	4.1.8.23. Additional Performance Requirements for Post-disaster Buildings, High Importance Category Buildings, and a Subset of Normal Importance Category Buildings	(1) *Buildings* designed in accordance with Articles 4.1.8.19. to 4.1.8.22. need not comply with this Article. (2) The design of *post-disaster buildings* in Seismic Category SC2, SC3 or SC4 shall be verified using 5% damped spectral acceleration values based on a 5% probability of exceedance in 50 years and shall satisfy the following requirements: (a) the *building* shall be shown to behave elastically for a specified lateral earthquake force, V, determined in accordance with Sentence 4.1.8.11.(2) using I_E = 1.0 and R_dR_o = 1.3, (b) the largest inter*storey* deflection at any level of the *building*, as determined in accordance with Sentence 4.1.8.13.(2) using I_E = 1.0 and R_dR_o = 1.0, shall not exceed 0.005h_s, and (c) the connections of elements and components of the *building* described in Table 4.1.8.18. with R_p > 1.5 shall be shown to behave elastically for a lateral force, V_p, determined in accordance with Sentence 4.1.8.18.(1) using R_p = 1.5. (3) The design of High Importance Category *buildings* in Seismic Category SC3 or SC4 shall be verified using 5% damped spectral acceleration values based on a 10% probability of exceedance in 50 years and shall satisfy the following requirements: (a) the *building* shall be shown to behave elastically for a specified lateral earthquake force, V, determined in accordance with Sentence 4.1.8.11.(2) using I_E = 1.0 and R_dR_o = 1.3, (b) the largest inter*storey* deflection at any level of the *building*, as determined in accordance with Sentence 4.1.8.13.(2) using I_E = 1.0 and R_dR_o = 1.0, shall not exceed 0.005h_s, and (c) the connections of elements and components of the *building* described in Table 4.1.8.18 with R_p > I_E = 1.3 shall be shown to behave elastically for a lateral force, V_p, determined	(1) *Buildings* designed in accordance with Articles 4.1.8.19. to 4.1.8.22. need not comply with this Article. (2) The design of *post-disaster buildings* in Seismic Category SC2, SC3 or SC4 shall be verified using 5% damped spectral acceleration values based on a 5% probability of exceedance in 50 years and shall satisfy the following requirements: (a) the *building* shall be shown to behave elastically for a specified lateral earthquake force, V, determined in accordance with Sentence 4.1.8.11.(2) using I_E = 1.0 and R_dR_o = 1.3, (b) the largest inter*storey* deflection at any level of the *building*, as determined in accordance with Sentence 4.1.8.13.(2) using I_E = 1.0 and R_dR_o = 1.0, shall not exceed 0.005h_s, and (c) the connections of elements and components of the *building* described in Table 4.1.8.18. with R_p > 1.5 shall be shown to behave elastically for a lateral force, V_p, determined in accordance with Sentence 4.1.8.18.(1) using R_p = 1.5. (3) The design of High Importance Category *buildings* in Seismic Category SC3 or SC4 shall be verified using 5% damped spectral acceleration values based on a 10% probability of exceedance in 50 years and shall satisfy the following requirements: (a) the *building* shall be shown to behave elastically for a specified lateral earthquake force, V, determined in accordance with Sentence 4.1.8.11.(2) using I_E = 1.0 and R_dR_o = 1.3, (b) the largest inter*storey* deflection at any level of the *building*, as determined in accordance with Sentence 4.1.8.13.(2) using I_E = 1.0 and R_dR_o = 1.0, shall not exceed 0.005h_s, and (c) the connections of elements and components of the *building* described in Table 4.1.8.18 with R_p > I_E = 1.3 shall be shown to behave elastically for a lateral force, V_p, determined	https://www.dropbox.com/s/cmq64tgn7f4eu5p/Proposed_Change_1514.pdf?dl=0

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				in accordance with Sentence 4.1.8.18.(1) using R_p = 1.3. (4) For Normal Importance Category *buildings* in Seismic Category SC4 with a height above *grade* of more than 30 m, the structural framing elements not considered to be part of the SFRS shall be designed to behave elastically for a specified lateral earthquake force, V, determined in accordance with Sentence 4.1.8.11.(2) using spectral acceleration values based on a 10% probability of exceedance in 50 years and R_dR_o = 1.3. (5) For the purposes of applying Sentences (2) to (4), torsional moments due to accidental eccentricities need not be considered if B, as determined in accordance with Sentence 4.1.8.11.(10), does not exceed 1.7. (6) For the purposes of applying Sentences (2) to (4), elements of the SFRS and structural framing elements not considered to be part of the SFRS, when included in the analysis, shall be modeled in accordance with Sentence 4.1.8.3.(8) using elastic properties. (7) All other requirements of Articles 4.1.8.2. to 4.1.8.18. shall be satisfied in meeting the additional requirements of this Article.	in accordance with Sentence 4.1.8.18.(1) using R_p = 1.3. (4) For Normal Importance Category *buildings* in Seismic Category SC4 with a height above *grade* of more than 30 m, the structural framing elements not considered to be part of the SFRS shall be designed to behave elastically for a specified lateral earthquake force, V, determined in accordance with Sentence 4.1.8.11.(2) using spectral acceleration values based on a 10% probability of exceedance in 50 years and R_dR_o = 1.3. (5) For the purposes of applying Sentences (2) to (4), torsional moments due to accidental eccentricities need not be considered if B, as determined in accordance with Sentence 4.1.8.11.(10), does not exceed 1.7. (6) For the purposes of applying Sentences (2) to (4), elements of the SFRS and structural framing elements not considered to be part of the SFRS, when included in the analysis, shall be modeled in accordance with Sentence 4.1.8.3.(8) using elastic properties. (7) All other requirements of Articles 4.1.8.2. to 4.1.8.18. shall be satisfied in meeting the additional requirements of this Article.	
Foundations	4.2.3.2. Preservation Treatment of Wood	**(1)** Wood exposed to *soil* or air above the lowest anticipated *groundwater* table shall be treated with preservative in conformance with CAN/CSA-O80 Series, “Wood Preservation”, and the requirements of the appropriate commodity standard as follows: (a) CAN/CSA-O80.2, “Processing and Treatment”, (b) CAN/CSA-O80.3, “Preservative Formulations”, or (c) CSA O80.15, “Preservative Treatment of Wood for Building Foundation Systems, Basements, and Crawl Spaces by Pressure Processes”.	4.2.3.2. Preservation Treatment of Wood	(1) Wood exposed to *soil*, *rock* or air above the lowest anticipated *groundwater* table shall be treated with preservative in conformance with CAN/CSA-O80 Series, “Wood preservation,” and the requirements of the appropriate standard as follows: (a) CAN/CSA-O80.1, “Specification of treated wood,” CAN/CSA-O80.1, “Specification of Treated Wood,” (b) CAN/CSA-O80.2, “Processing and treatment,” or (c) CAN/CSA-O80.3, “Preservative formulations.” (2) Wood treated as required in Sentence (1) shall be cared for as provided in Clause 4 of CAN/CSA-O80.0, “General requirements for wood preservation, ”CAN/CSA-O80.0, “General Requirements for Wood Preservation.”	(1) Wood exposed to *soil*, *rock* or air above the lowest anticipated *groundwater* table shall be treated with preservative in conformance with CAN/CSA-O80 Series, “Wood ~~Preservation”,~~preservation,” and the requirements of the appropriate ~~commodity~~ standard as follows: ~~—~~(a)~~———~~ CAN/CSA-O80.1, “Specification of treated wood,” CAN/CSA-O80.1, “Specification of Treated Wood,” (b) CAN/CSA-O80.2, “Processing and ~~Treatment”,~~treatment,” or ~~—(b)———~~(c) CAN/CSA-O80.3, “Preservative ~~Formulations”, or~~formulations.” ~~—(c) CSA O80.15, “Preservative Treatment of Wood for Building Foundation Systems, Basements, and Crawl Spaces by Pressure Processes”.~~ (2) Wood treated as required in Sentence (1) shall be cared for as provided in Clause 4 of CAN/CSA-O80.0, “General requirements for wood preservation, ”CAN/CSA-O80.0, “General Requirements for Wood Preservation.”	https://www.dropbox.com/s/110mjid0mt72td5/Proposed_Change_1497.pdf?dl=0

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Special Structures	4.4.1.1. Design Basis for Air-Supported Structures	**(1)** The structural design of *air-supported structures* shall conform to CSA S367, “Air-, Cable-, and Frame-Supported Membrane Structures” using the loads stipulated in Section 4.1., in accordance with limit states design in Subsection 4.1.3.	4.4.1.1. Design Basis for Air-, Cable-, and Frame-Supported Membrane Structures	(1) The structural design of air-, cable-, and frame-supported membrane structures shall conform to CSA S367, “Air-, cable-, and frame-supported membrane structures,” using the loads stipulated in Section 4.1., in accordance with limit states design in Subsection 4.1.3.	(1) The structural design of air-, cable-, and frame-supported membrane structures shall conform to CSA S367, “Air-, ~~Cable~~cable-, and ~~Frame-Supported Membrane Structures”~~frame-supported membrane structures,” using the loads stipulated in Section 4.1., in accordance with limit states design in Subsection- 4.1.3.	https://www.dropbox.com/s/6qc7tc2ubh1iluz/Proposed_Change_1182.pdf?dl=0
Design Basis for Storage Garage	4.4.2.1. Design Basis for Storage Garages and Repair Garages	**(1)** *Storage garages* and *repair garages* shall be designed in conformance with CSA S413, “Parking Structures”.	4.4.2.1. Design Basis for and Repair Garages	(1) *Storage garages* and *repair garages*, including associated ramps and pedestrian areas, shall be designed in conformance with the performance requirements of CSA S413, “Parking structures.”	(1) *Storage garages* and *repair garages*, including associated ramps and pedestrian areas, shall be designed in conformance with the performance requirements of CSA S413, “Parking ~~Structures”.~~ structures.”	https://www.dropbox.com/s/o5lllzgkpobjwhu/Proposed_Ch.pdf?dl=0
Racking Storage Systems	4.4.3A.1. Design Basis for Storage Racks	N/A	4.4.3. Storage Racks 4.4.3.1. Design Basis for Storage Racks	(1) Storage racks including anchorage of racks shall be designed for loads in accordance with this Part.	(1) Storage racks including anchorage of racks shall be designed for loads in accordance with this Part.	https://www.dropbox.com/s/7u45a7nkxezh6dm/Proposed_Change_1195.pdf?dl=0

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PART 5 ENVIRONMENTAL SEPARTION

Subject	Current Ontario Code Subsection / Article	Current Ontario Code Provision(s)	Proposed National Code Subsection /Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Air Leakage	5.4.1.1. Required Resistance to Air Leakage	(1) Where a *building* component or assembly separates interior *conditioned space* from exterior space, interior space from the ground, or environmentally dissimilar interior spaces, the properties and position of the materials and components in those components or assemblies shall be such that they control air leakage or permit venting to the exterior so as to, (a) provide acceptable conditions for the *building* occupants, (b) maintain appropriate conditions for the intended use of the *building*, (c) minimize the accumulation of condensation in and penetration of precipitation into the *building* component or assembly, (d) control heat transfer to roofs where ice damming can occur, and (e) not compromise the operation of *building* services. **(2)** Except as provided in Sentence (3), an *air barrier system* shall be installed to provide the principal resistance to air leakage. **(3)** An *air barrier system* is not required where it can be shown that uncontrolled air leakage will not adversely affect any of, (a) the health or safety of *building* users, (b) the intended use of the *building*, or (c) the operation of *building* services.	5.4.1.1. Required Resistance to Air Leakage	(1) Where a *building* component or assembly separates interior *conditioned space* from exterior space, interior space from the ground, or environmentally dissimilar interior spaces, the properties and position of the materials and components in those components or assemblies shall be such that they control air leakage or permit venting to the exterior so as to (a) provide acceptable conditions for the *building* occupants, (b) maintain appropriate conditions for the intended use of the *building*, (c) minimize the accumulation of condensation in and the penetration of precipitation into the *building* component or assembly, (d) control heat transfer to roofs where ice damming can occur, (e) minimize the ingress of airborne radon and other soil gases from the ground with an aim to controlling the indoor radon concentrations of these gases to an acceptable level, and (f) not compromise the operation of *building* services. (2) Except as provided in Sentence (7), an air barrier system shall be designed and constructed to provide the principal resistance to air leakage to meet the requirements of Sentence (1). (3) The air barrier system shall incorporate air barrier assemblies that meet the appropriate Performance Class as defined in Table 5.4.1.1. (4) The *air barrier system* shall be designed and constructed to be continuous	(1) Where a *building* component or assembly separates interior *conditioned space* from exterior space, interior space from the ground, or environmentally dissimilar interior spaces, the properties and position of the materials and components in those components or assemblies shall be such that they control air leakage or permit venting to the exterior so as to~~,~~ (a) provide acceptable conditions for the *building* occupants, (b) maintain appropriate conditions for the intended use of the *building*, (c) minimize the accumulation of condensation in and the penetration of precipitation into the *building* component or assembly, (d) control heat transfer to roofs where ice damming can occur, (e) minimize the ingress of airborne radon and other soil gases from the ground with an aim to ~~(e~~controlling the indoor radon concentrations of these gases to an acceptable level, and (f) not compromise the operation of *building* services. (2) Except as provided in Sentence (~~3~~7), an air barrier system shall be ~~installed~~designed and constructed to provide the principal resistance to air leakage~~.~~ to meet the requirements of Sentence (1). (3) The air barrier system shall incorporate air barrier assemblies that meet the appropriate Performance Class as defined in Table 5.4.1.1. (4) The *air barrier system* shall be designed and constructed to be continuous	https://www.dropbox.com/s/i4shkfql54rlj8g/Proposed_Change_1335.pdf?dl=0

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				(a) across construction, control and expansion joints, (b) across junctions between different *building* air barrier assemblies, and (c) around penetrations through air barrier assemblies. (5) The structural design of air barrier assemblies, including junctions between air barrier assemblies, subject to air pressure loads shall comply with Article 5.1.4.1. and Subsection 5.2.2. (6) The maximum air leakage rates specified in Table 5.4.1.1. are permitted to be increased where it can be shown that the higher rate will not adversely affect any of (a) the health or safety of the building users, (b) the intended use of the building, or (c) the operation of building services. (7) An air barrier system is not required where it can be shown that uncontrolled air leakage will not adversely affect any of (a) the health or safety of building users, (b) the intended use of the building, or (c) the operation of building services. (Table 5.4.1.1. - Maximum Air Leakage Rates for Air Barrier Assemblies)	(a) across construction, control and expansion joints, (b) across junctions between different *building* air barrier assemblies, and (c) around penetrations through air barrier assemblies. (5) The structural design of air barrier assemblies, including junctions between air barrier assemblies, subject to air pressure loads shall comply with Article 5.1.4.1. and Subsection 5.2.2. (6) The maximum air leakage rates specified in Table 5.4.1.1. are permitted to be increased where it can be shown that the higher rate will not adversely affect any of (a) the health or safety of the building users, (b) the intended use of the building, or (c) the operation of building services. ~~3~~(7) An air barrier system is not required where it can be shown that uncontrolled air leakage will not adversely affect any of~~,~~ (a) the health or safety of building users, (b) the intended use of the building, or (c) the operation of building services. (See the National pcf for Table 5.4.1.1. - Maximum Air Leakage Rates for Air Barrier Assemblies)	
Air Leakage	5.4.1.2. Air Barrier System Properties	**(1)** Except as provided in Sentence (2), materials intended to provide the principal resistance to air leakage shall, (a) have an air leakage characteristic not greater than 0.02 L/(s•m^2) measured at an air pressure difference of 75 Pa when tested in accordance with ASTM E2178, “Air Permeance of Building Materials”, or (b) conform to CAN/ULC-S741, “Air Barrier Materials – Specification”. **(2)** The air leakage limit specified in Sentence (1) is permitted to be increased where it can be shown that the higher rate of leakage will not adversely affect any of, (a) the health or safety of *building* users, (b) the intended use of the *building*, or	5.4.1.2. Air Barrier Assemblies	(1) Except as provided in Sentences (2) and (3), air barrier assemblies not in contact with the ground shall conform with CAN/ULC-S742, “Air Barrier Assemblies – Specification” and meet the selected Performance Class of Table 5.4.1.1. (2) Air barrier assemblies not evaluated in accordance with CAN/ULC-S742, “Air Barrier Assemblies - Specification,” shall be designed and constructed (a) to meet or exceed the selected Performance Class of Table 5.4.1.1., and (b) with at least one air barrier material intended to provide the primary resistance to air leakage that meets the requirements of CAN/ULC-S741, “Air Barrier Materials – Specification.”	(1) Except as provided in ~~Sentence~~Sentences (2~~),~~ ~~materials~~) and (3), air barrier assemblies not in contact with the ground shall conform with CAN/ULC-S742, “Air Barrier Assemblies – Specification” and meet the selected Performance Class of Table 5.4.1.1. (2) Air barrier assemblies not evaluated in accordance with CAN/ULC-S742, “Air Barrier Assemblies - Specification,” shall be designed and constructed (a) to meet or exceed the selected Performance Class of Table 5.4.1.1., and (b) with at least one air barrier material intended to provide the ~~principal~~primary resistance to air leakage ~~shall,~~ ~~(a) have an air leakage characteristic not greater than 0.02 L/(s•m^2) measured at an air~~	https://www.dropbox.com/s/i4shkfql54rlj8g/Proposed_Change_1335.pdf?dl=0

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		(c) the operation of *building* services. **(3)** The *air barrier system* shall be continuous, (a) across construction, control and expansion joints, (b) across junctions between different *building* assemblies, and (c) around penetrations through the *building* assembly. **(4)** The structural design of *air barrier systems* installed in assemblies subject to air pressure loads shall comply with Article 5.1.4.1. and Subsection 5.2.2.		(3) Air barrier assemblies covered in Subsections 5.9.2., 5.9.3. and 5.9.4. shall meet the air barrier performance criteria defined in those Subsections. (4) Below-grade air barrier assemblies in contact with the ground shall minimize the ingress of airborne radon and other soil gases.	~~pressure difference of 75 Pa when tested in accordance with ASTM E2178, "Air Permeance of Building Materials", or~~ ~~(b) conform to~~that meets the requirements of CAN/ULC-S741, "Air Barrier Materials – Specification~~".~~." ~~**(2)** The air leakage limit specified in Sentence (1) is permitted to be increased where it can be shown that the higher rate of leakage will not adversely affect any of,~~ ~~(a) the health or safety of *building* users,~~ ~~(b) the intended use of the *building*, or~~ ~~(c) the operation of *building* services.~~ ~~**(3)** The~~(3) Air barrier assemblies covered in Subsections 5.9.2., 5.9.3. and 5.9.4. shall meet the air barrier performance criteria defined in those Subsections. (4) Below-grade air barrier ~~*system* shall be continuous,~~ ~~(a) across construction, control and expansion joints,~~ ~~(b) across junctions between different *building*~~ assemblies~~, and~~ ~~(c) around penetrations through~~ in contact with the ~~*building* assembly.~~ground shall minimize the ingress of airborne ~~**(4)** The structural design of *air barrier systems* installed in assemblies~~ radon and other soil gases.~~subject to air pressure loads shall comply with Article 5.1.4.1. and Subsection 5.2.2.~~	
Environmental Separation Table 5.9.1.1	5.10.1.1. Compliance with Applicable Standards	(Table 5.10.1.1. - Standards Applicable to Environmental Separators and Assemblies Exposed to the Exterior)	Table 5.9.1.1.	(Table 5.9.1.1. - Standards Applicable to Environmental Separators and Assemblies Exposed to the Exterior)	(See the National PCF's for the proposed changes to the table)	https://www.dropbox.com/s/wjyqup8z8ycv1on/Proposed_Change_1133.pdf?dl=0 https://www.dropbox.com/s/1pn4kyv3m447oh3/Proposed_Change_1134.pdf?dl=0 https://www.dropbox.com/s/r6nqluksqllr4ht/Proposed_Change_1259.pdf?dl=0 https://www.dropbox.com/s/u7faq56b8s5kqxr/

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PART 6 HEATING, VENTILATING AND AIR-CONDITIONING

Subject	Current Ontario Code Subsection / Article	Current Ontario Code Provision(s)	Proposed National Code Subsection /Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Good Engineering Practice	6.2.1. General	**(1)** Heating, ventilating and *air-conditioning* systems, including related mechanical refrigeration systems, shall be designed, constructed and installed to conform to good engineering practice appropriate to the circumstances such as described in, (a) the ASHRAE Handbooks as follows: (i) Fundamentals, (ii) Refrigeration, (iii) HVAC Applications, (iv) HVAC Systems and Equipment, and (v) ANSI/ASHRAE/IESNA 90.1, "Energy Standard for Buildings Except Low-Rise Residential Buildings", (b) CSA F280, "Determining the Required Capacity of Residential Space Heating and Cooling Appliances", and the outside winter design temperatures shall conform to MMAH Supplementary Standard SB-1, "Climatic and Seismic Data", (c) CAN/CSA-F326-M, "Residential Mechanical Ventilation Systems", (d) the NFPA Fire Codes, (e) the HRAI Digest, (f) the Hydronics Institute Manuals, (g) the SMACNA Manuals, (h) ACGIH, "Industrial Ventilation Manual", (i) CAN/CSA-Z317.2, "Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities", (j) reserved,	6.2.1. General	(1) Heating, ventilating and air-conditioning systems, including mechanical refrigeration equipment, shall be designed, constructed and installed in conformance with good engineering practice such as that described in, but not limited to, (a) the ASHRAE Handbooks and Standards, (b) the HRAI Digest, (c) the Hydronics Institute Manuals, (d) the NFPA Standards, (e) the SMACNA Manuals, (f) ACGIH, "Industrial Ventilation: A Manual of Recommended Practice for Design," (g) CSA B214, "Installation code for hydronic heating systems," (h) CAN/CSA-Z317.2, "Special requirements for heating, ventilation, and air-conditioning (HVAC) systems in health care facilities," (i) EPA 625/R-92/016, "Radon Prevention in the Design and Construction of Schools and Other Large Buildings," (j) ASHRAE Guideline 12, "Minimizing the Risk of Legionellosis Associated with Building Water Systems".	(1) Heating, ventilating and air-conditioning systems, including ~~related~~ mechanical refrigeration ~~systems~~equipment, shall be designed, constructed and installed ~~to conform to~~in conformance with good engineering practice ~~appropriate to the circumstances~~ such as that described in, but not limited to, (a) the ASHRAE Handbooks and Standards~~as follows:~~ ~~(i) Fundamentals,~~ ~~(ii) Refrigeration,~~ ~~(iii) HVAC Applications,~~ ~~(iv) HVAC Systems Equipment, and~~ ~~(v) ANSI/ASHRAE/IESNA 90.1, "Energy Standard for Buildings Except Low-Rise Residential Buildings",~~ (b) CSA F280, "Determining the Required Capacity of Residential Space Heating and Cooling Appliances", and the outside winter design temperatures shall conform to MMAH Supplementary Standard SB-1, "Climatic and Seismic Data", (c) CAN/CSA-F326-M, "Residential Mechanical Ventilation Systems", (d) the NFPA Standards, (e) the SMACNA Manuals, (f) ACGIH, "Industrial Ventilation: A Manual~~",~~ of Recommended Practice for Design," (g) CSA B214, "Installation code for hydronic heating systems," (h) CAN/CSA-Z317.2, "Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities",	https://www.dropbox.com/s/zzyyz9o3vm86z3i/Proposed_Change_1270.pdf?dl=0

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		(k) CCBFC NRCC 56191, "National Energy Code of Canada for Buildings", and (l) EPA/625/R-92/016, "Radon Prevention in the Design and Construction of Schools and Other Large Buildings".			(i~~b~~) the HRAI Digest, (j) ASHRAE Guideline 12, "Minimizing the Risk of Legionellosis Associated with Building Water Systems". (k) CCBFC NRCC 56191, "National Energy Code of Canada for Buildings", and (l) EPA/625/R-92/016, "Radon Prevention in the Design and Construction of Schools and Other Large Buildings". (m~~e~~) the Hydronics Institute Manuals,	
Ventilation	6.2.2. Ventilation	**(1)** Except as provided in Sentence (3), all *buildings* shall be ventilated in accordance with this Part. **(2)** Except in *storage garages* and *repair garages* covered by Article 6.2.2.3., the rates at which outdoor air is supplied in *buildings* by ventilation systems shall be not less than the rates required by ANSI/ASHRAE 62.1, "Ventilation for Acceptable Indoor Air Quality". **(3)** Self-contained mechanical ventilation systems serving a *house*, or an individual *dwelling unit* shall conform to, (a) this Part, or (b) Subsection 9.32.3. **(4)** *Live/work units* shall be mechanically ventilated in accordance with the requirements of Sentence (1).	6.3.1. Ventilation	**(1)** Except as provided in Sentence (4), all *buildings* shall be ventilated in accordance with this Part. **(2)** Except in *storage garages* covered by Article 6.3.1.4., outdoor air shall be supplied to *buildings* for ventilation purposes in accordance with one of the following Sections of ANSI/ASHRAE 62.1, "Ventilation for Acceptable Indoor Air Quality," as a minimum: (a) Section 6.2, Ventilation Rate Procedure, excluding the exception stated in Section 6.2.7.1.2 and note H of Table 6.2.2.1, (b) Section 6.3, Indoor Air Quality Procedure, or (c) Section 6.4, Natural Ventilation Procedure, excluding *residential occupancies*. **(3)** Except in *storage garages* covered by Article 6.3.1.4., exhaust ventilation shall be provided in accordance with Section 6.5, Exhaust Ventilation, of ANSI/ASHRAE 62.1, "Ventilation for Acceptable Indoor Air Quality," as a minimum. **(4)** Self-contained heating-season mechanical ventilation systems serving only one *dwelling unit* shall comply with Subsection 9.32.3.	**(1)** Except as provided in Sentence (~~3~~4), all *buildings* shall be ventilated in accordance with this Part. **(2)** Except in *storage garages* ~~and *repair garages*~~ covered by Article 6.~~2.2.3., the rates at which~~3.1.4., outdoor air ~~is~~shall be supplied ~~in~~to *buildings* ~~by~~for ventilation ~~systems shall be not less than the rates required by~~purposes in accordance with one of the following Sections of ANSI/ASHRAE 62.1, "Ventilation for Acceptable Indoor Air Quality~~",~~," as a minimum: ~~(3)~~ (a) Section 6.2, Ventilation Rate Procedure, excluding the exception stated in Section 6.2.7.1.2 and note H of Table 6.2.2.1, (b) Section 6.3, Indoor Air Quality Procedure, or (c) Section 6.4, Natural Ventilation Procedure, excluding *residential occupancies*. **(3)** Except in *storage garages* covered by Article 6.3.1.4., exhaust ventilation shall be provided in accordance with Section 6.5, Exhaust Ventilation, of ANSI/ASHRAE 62.1, "Ventilation for Acceptable Indoor Air Quality," as a minimum. **(4)** Self-contained heating-season mechanical ventilation systems serving ~~a *house*, or an individual~~only one *dwelling unit* shall ~~conform to, (a) this Part, or (b)~~comply with Subsection 9.32.3. **(4~~5~~)** *Live/work units* shall be mechanically ventilated in accordance with the requirements of Sentence (1).	https://www.dropbox.com/s/3arfdt8suv34wfv/Proposed_Change_996.pdf?dl=0
Ventilation	6.2.2. Ventilation	**(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."	6.3.1.6. Indoor Air Contaminants	(1) Air contaminants of concern within *buildings* shall (a) be removed insofar as is possible at their points of origin, and (b) not be permitted to accumulate in concentrations greater than those permitted by applicable provincial or territorial requirements or, in the absence of such	(1) Air contaminants ~~released~~of concern within *buildings* shall (a) be removed insofar as is possible at their points of origin, and~~shall~~ (b) not be permitted to accumulate in concentrations greater than those permitted by applicable provincial or territorial requirements or, in the absence of such	https://www.dropbox.com/s/arng7tqn9ewih88/Proposed_Change_1269.pdf?dl=0

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		(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*. **(3)** Heating, ventilating and *air-conditioning* systems shall be designed to minimize growth and spread of bio-contaminants. **(4)** Mechanical rooms containing refrigeration equipment shall be ventilated in accordance with CSA B52, "Mechanical Refrigeration Code".		requirements, by good engineering practice such as that described in the publications listed in Sentence 6.2.1.1.(1), measured using the methodology described therein. (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*. (3) Heating, ventilating and air-conditioning systems shall be designed to minimize the growth and spread of bio-contaminants.	requirements, by good engineering practice ~~appropriate to the circumstances~~ such as that described in the publications listed in ~~Article~~Sentence 6.2.1.1.~~".~~ .(1), measured using the methodology described therein. (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*. (3) Heating, ventilating and air-conditioning systems shall be designed to minimize the growth and spread of bio-contaminants. **(4)** Mechanical rooms containing refrigeration equipment shall be ventilated in accordance with CSA B52, "Mechanical Refrigeration Code".	
Air Duct System	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.	6.3.2.2. Drain Pans	(1) HVAC systems that generate condensate or introduce liquid water into the airstream in the ducts shall be equipped with drain pans that are (a) designed in accordance with Section 5.10, 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 safely disposed of, (c) installed so that water does not stagnate and drains from the pan, and. (d) designed and installed so as to be accessible for cleaning and maintenance. (2) Drain pans and associated piping shall be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms.	(1) ~~Dehumidifying cooling coil assemblies and~~HVAC systems that generate condensate~~-producing heat exchangers~~ or introduce liquid water into the airstream in the ducts shall be equipped with drain pans ~~beneath them~~ that are~~,~~ (a) designed in accordance with Section 5.~~11~~10, 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~~safely disposed of, (c) installed so that water does not stagnate and 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.~~ (d) designed and installed so as to be accessible for cleaning and maintenance. (2) Drain pans and associated piping shall be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms.	https://www.dropbox.com/s/915r8x63zib0n3f/Proposed_Change_1267.pdf?dl=0
Air Duct System	6.2.3.12. Supply, Return, Intake and Exhaust Air Openings	**(1)** Supply, return and exhaust air openings located less than 2 000 mm above the floor in rooms or spaces in buildings shall be protected by grilles having openings of a size that will not allow the passage of a 15 mm diameter sphere.	6.3.2.9. Supply, Return, Intake and Exhaust Air Openings	(1) Supply, return and exhaust air openings located less than 2 m above the floor in rooms or spaces in *buildings* shall be protected by grilles having openings of a size that will not allow the passage of a 15 mm diam sphere.	(1) Supply, return and exhaust air openings located less than 2 ~~000 mm~~m above the floor in rooms or spaces in *buildings* shall be protected by grilles having openings of a size that will not allow the passage of a 15 mm ~~diameter~~diam sphere.	https://www.dropbox.com/s/2k3yqvebga0af8x/Proposed_Change_1268.pdf?dl=0

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		(2) Outdoor air intakes and exhaust outlets on the exterior of *buildings* shall be designed or located so that the air entering the *building* system will not contain more contaminants than the normal exterior air of the locality in which the *building* is situated. **(3)** Exterior openings for outdoor air intakes and exhaust outlets shall be shielded from the entry of snow and rain and shall be fitted with corrosion-resistant screens of mesh having openings not larger than 15 mm, except where experience has shown that climatic conditions require larger openings to avoid icing over of the screen openings. **(4)** Screens required in Sentence (3) shall be accessible for maintenance. **(5)** *Combustible* grilles, diffusers and other devices for supply, return and exhaust air openings in rooms shall conform to the *flame-spread rating* and smoke developed classification requirements for the interior finish of the surface on which they are installed. **(6)** Outdoor air intakes shall be located so that they are separated a minimum distance from sources of contaminants in accordance with Table 6.2.3.12. (Table 6.2.3.12. - Minimum Separation Distances Between Exhaust and Air Intake Openings)		(2) Outdoor air intakes shall be located so that (a) the quality of the air entering the *building* complies with Sentences 6.2.1.2.(2) and (3), and (b) they are separated a minimum distance from sources of contaminants in accordance with Table 6.3.2.9. (Table 6.3.2.9. - Minimum Distances of Air Intakes from Sources of Contaminants)	(2) Outdoor air intakes ~~and exhaust outlets on the exterior of *buildings*~~ shall be ~~designed or~~ located so that (a) the quality of the air entering the *building* ~~system will not contain more contaminants than the normal exterior air of the locality in which the *building* is situated.~~complies with Sentences 6.2.1.2.(2) and (3), and ~~**(3)** Exterior openings for outdoor air intakes and exhaust outlets shall be shielded from the entry of snow and rain and shall be fitted with corrosion-resistant screens of mesh having openings not larger than 15 mm, except where experience has shown that climatic conditions require larger openings to avoid icing over of the screen openings.~~ ~~**(4)** Screens required in Sentence (3) shall be accessible for maintenance.~~ ~~**(5)** *Combustible* grilles, diffusers and other devices for supply, return and exhaust air openings in rooms shall conform to the *flame-spread rating* and smoke developed classification requirements for the interior finish of the surface on which they are installed.~~ ~~**(6)** Outdoor air intakes shall be located so that~~(b) they are separated a minimum distance from sources of contaminants in accordance with Table 6.3.2.~~3.12.~~9. (See the National PCF for the changes in the tables)	
Air Duct System	6.2.4.11. Exhaust Ducts and Outlets	**(1)** Where an *exhaust duct* passes through or is adjacent to unheated space, the duct shall be insulated to prevent moisture or condensation in the duct. **(2)** Exhaust outlets shall be designed to prevent back draft under wind conditions. **(3)** *Exhaust ducts* directly connected to laundry drying equipment shall be independent of other *exhaust ducts*. **(4)** Exhaust systems shall discharge directly to the outdoors.	6.3.2.10. Exhaust Ducts and Outlets	(8) Where collective venting of multiple installations of laundry-drying equipment is used, the ventilation system shall (a) be connected to a common *exhaust duct* that is vented by one central exhaust fan, (b) include an interlock to activate the central exhaust fan when laundry-drying equipment is in use, and (c) be provided with make-up air.	(~~1~~8) Where ~~an *exhaust duct* passes through or is adjacent to unheated space, the duct shall be insulated to prevent moisture or condensation in the duct.~~ ~~**(2)** Exhaust outlets shall be designed to prevent back draft under wind conditions.~~ ~~**(3)** *Exhaust ducts* directly connected to~~ collective venting of multiple installations of laundry-drying equipment ~~shall be independent of other *exhaust ducts*.~~is used, the ventilation ~~**(4)** Exhaust systems~~system shall ~~discharge directly~~ (a) be connected to a common *exhaust duct* that is vented by one central exhaust fan, (b) include an interlock to activate the ~~outdoors~~central exhaust fan when laundry-drying equipment is in use, and (c) be provided with make-up air.	https://www.dropbox.com/s/7hrj5jp21z31ssv/Proposed_Change_1096.pdf?dl=0
Air Duct System	6.2.3.14. Evaporative Cooling	**(1) Discharge from evaporative cooling towers to ventilation air intakes shall comply with CAN/CSA-Z317.2, "Special Requirements for**	6.3.2.15. Evaporative	(1) Evaporative heat rejection systems shall	(1) ~~**Discharge**~~Evaporative heat rejection systems shall	https://www.dropbox.com/s/g38ocj04clqs3mx

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	Towers, Evaporative Fluid Coolers and Evaporative Condensers	**Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities".** **(2) The distance between the air intakes of evaporative cooling towers, evaporative fluid coolers and evaporative condensers in relation to kitchen exhaust outlets, vegetation or other sources of organic matter shall be not less than 4.6 m.** **(3) Evaporative cooling towers, evaporative fluid coolers and evaporative condensers shall be provided with water treatment equipment for biological growth control in accordance with Subsection 7.6.2. of ASHRAE Guideline 12, "Minimizing the Risk of Legionellosis Associated with Building Water Systems".** **(4) Evaporative cooling towers, evaporative fluid coolers and evaporative condensers shall be provided with access ports, service platforms, fixed ladders and restraint connections to allow visual inspection, maintenance and testing.** **(5)** Evaporative cooling towers shall comply with the requirements of NFPA 214, "Water-Cooling Towers".	Heat Rejection Systems	(a) incorporate a drift eliminator or other means to minimize the dispersion of entrained water droplets, and (b) have a design discharge velocity that does not exceed the maximum discharge velocity recommended by the manufacturer. (2) Evaporative heat rejection systems shall be designed so that water continuously circulates through all parts of the system that are normally wetted when the system is operating. (3) Evaporative heat rejection systems and their components shall be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms and that are compatible with disinfectants, biocides and other cleaning agents. (4) Evaporative heat rejection systems shall be installed such that (a) no discharge air bypasses the drift eliminator or other means referred to in Clause (1)(a), and (b) the systems are accessible for cleaning, inspection and maintenance. (5) Except as provided in Sentence (6), air discharged from evaporative heat rejection systems shall discharge away from the *building*, so as to not re-enter it, to a distance not less than (a) 2.15 m above sidewalks and driveways, (b) 7.6 m from outdoor air intakes, (c) 3 m horizontally or vertically from exterior doors and operable windows, and (d) 3 m horizontally or vertically from occupiable outdoor spaces, excluding maintenance spaces. (6) Air discharged from evaporative heat rejection systems in health care facilities shall discharge away from the *building* in compliance with CAN/CSA-Z317.2, "Special Requirements for Heating, Ventilation, and Air-Conditioning (HVAC) Systems in Health Care Facilities." (7) Air intakes of evaporative heat rejection systems shall incorporate protective measures to minimize the entrainment of vegetation and other organic matter.	(a) incorporate a drift eliminator or other means to minimize the dispersion of entrained water droplets, and (b) have a design discharge velocity that does not exceed the maximum discharge velocity recommended by the manufacturer. (2) Evaporative heat rejection systems shall be designed so that water continuously circulates through all parts of the system that are normally wetted when the system is operating. (3) Evaporative heat rejection systems and their components shall be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms and that are compatible with disinfectants, biocides and other cleaning agents. (4) Evaporative heat rejection systems shall be installed such that (a) no discharge air bypasses the drift eliminator or other means referred to in Clause (1)(a), and (b) the systems are accessible for cleaning, inspection and maintenance. (5) Except as provided in Sentence (6), air discharged from evaporative ~~cooling towers to ventilation~~heat rejection systems shall discharge away from the *building*, so as to not re-enter it, to a distance not less than (a) 2.15 m above sidewalks and driveways, (b) 7.6 m from outdoor air intakes ~~shall comply~~, (c) 3 m horizontally or vertically from exterior doors and operable windows, and (d) 3 m horizontally or vertically from occupiable outdoor spaces, excluding maintenance spaces. (6) Air discharged from evaporative heat rejection systems in health care facilities shall discharge away from the *building* in compliance with CAN/CSA-Z317.2, "Special Requirements for Heating, Ventilation, and Air-Conditioning (HVAC) Systems in Health Care Facilities~~".~~." ~~(2) The distance between the air~~ (7) Air intakes of evaporative ~~cooling towers, evaporative fluid coolers and evaporative condensers in relation to~~	/Proposed_Change_1271.pdf?dl=0

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				(8) Make-up water connections shall be equipped with backflow prevention devices that conform to Article 2.6.2.1. of Division B of the NPC. (9) Water treatment systems and equipment for controlling the proliferation of disease-causing micro-organisms shall (a) be provided in accordance with Section 7.6.2. of ASHRAE Guideline 12, "Minimizing the Risk of Legionellosis Associated with Building Water Systems", and (b) include means for drainage, dilution, cleaning, and application of chemicals for the control of scale, corrosion and biological contamination. (10) Drains, overflows and blow-downs shall be connected to the *building*'s drainage system in accordance with Clause 2.4.2.1.(1)(e) of Division B of the NPC. (11) Evaporative heat rejection systems shall be provided with access openings, service platforms, fixed ladders and fall-restraint connections to allow inspection, maintenance and testing.	~~**kitchen exhaust outlets,**~~heat rejection systems shall incorporate protective measures to minimize the entrainment of vegetation ~~**or**~~and other ~~**sources of**~~ organic matter~~ **shall be not less than 4.6 m**~~. (~~**3) Evaporative cooling towers, evaporative fluid coolers and evaporative condensers**~~8) Make-up water connections shall be ~~**provided**~~equipped with ~~**water**~~backflow prevention devices that conform to Article 2.6.2.1. of Division B of the NPC. (9) Water treatment systems and equipment for ~~**biological growth control**~~ controlling the proliferation of disease-causing micro-organisms shall (a) be provided in accordance with ~~**Subsection**~~Section 7.6.2. of ASHRAE Guideline 12, ~~**"**~~"Minimizing the Risk of Legionellosis Associated with Building Water Systems~~**".**~~", and (b) include means for drainage, dilution, cleaning, and application of chemicals for the control of scale, corrosion and biological contamination. (10) Drains, overflows and blow-downs shall be connected to the *building*'s drainage system in accordance with Clause 2.4.2.1.(1)(e) of Division B of the NPC. (11) Evaporative ~~**cooling towers, evaporative fluid coolers and evaporative condensers**~~heat rejection systems shall be provided with access ~~**ports**~~openings, service platforms, fixed ladders and fall-restraint connections to allow ~~**visual**~~ inspection, maintenance and testing. **(**~~**5**~~12**)** Evaporative cooling towers shall comply with the requirements of NFPA 214, "Water-Cooling Towers".	
Air Duct System	6.2.3.14A. Evaporative Cooling Sections, Evaporative Air Coolers, Misters, Atomizers, Air Washers and Humidifiers	**(1)** The filter and water evaporation medium of every air washer and evaporative cooling section enclosed within a *building* shall be made of *noncombustible* material. **(2)** Sumps for air washer and evaporative cooling sections shall be constructed and installed so that they can be flushed and drained. **(3)** Evaporative air coolers, misters, atomizers, air washers and humidifiers shall be designed in accordance with Sections 8 and 9 of ASHRAE Guideline 12, "Minimizing the Risk of Legionellosis Associated with Building Water Systems".	6.3.2.16. Evaporative Air Coolers, Misters, Atomizers, Air Washers and Humidifiers	(1) Evaporative air coolers, misters, atomizers, air washers and humidifiers shall be designed in accordance with Sections 8 and 9 of ASHRAE Guideline 12, "Minimizing the Risk of Legionellosis Associated with Building Water Systems". (2) Systems referred to in Sentence (1) shall (a) be designed so that water continuously circulates through all parts of the system that are normally wetted when the system is operating, and	~~**(1) The filter and water evaporation medium of every air washer and evaporative cooling section enclosed within a *building* shall be made of *noncombustible* material.**~~ ~~**(2) Sumps for air washer and evaporative cooling sections shall be constructed and installed so that they can be flushed and drained.**~~ ~~**(3**~~(1) Evaporative air coolers, misters, atomizers, air washers and humidifiers shall be designed in accordance with Sections 8 and 9 of ASHRAE Guideline 12, ~~"~~"Minimizing the Risk of Legionellosis	https://www.dropbox.com/s/g38ocj04clqs3mx/Proposed_Change_1271.pdf?dl=0

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		(4) Evaporative cooling sections shall comply with the requirements of NFPA 214, “Water-Cooling Towers”.		(b) incorporate a method of preventing water stagnation within the system itself and the internal plumbing when the system is not operating. (3) All components of systems referred to in Sentence (1), including filters and evaporation media, shall be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease causing micro-organisms. (4) Associated sumps shall (a) be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms, (b) include auxiliary drains to prevent the overflow of water into ductwork, and (c) be installed so that they can be flushed, drained, cleaned and disinfected. (5) Where misters, atomizers or air washers are used in ductwork, the affected duct section shall be (a) designed to ensure drainage of unevaporated and accumulated water, and (b) constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms. (6) Make-up water connections shall be equipped with backflow prevention devices that conform to Article 2.6.2.1. of Division B of the NPC.	Associated with Building Water Systems~~”.~~". ~~**(4)** Evaporative cooling sections shall comply with the requirements of NFPA 214, “Water-Cooling Towers”.~~(2) Systems referred to in Sentence (1) shall (a) be designed so that water continuously circulates through all parts of the system that are normally wetted when the system is operating, and (b) incorporate a method of preventing water stagnation within the system itself and the internal plumbing when the system is not operating. (3) All components of systems referred to in Sentence (1), including filters and evaporation media, shall be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease causing micro-organisms. (4) Associated sumps shall (a) be constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms, (b) include auxiliary drains to prevent the overflow of water into ductwork, and (c) be installed so that they can be flushed, drained, cleaned and disinfected. (5) Where misters, atomizers or air washers are used in ductwork, the affected duct section shall be (a) designed to ensure drainage of unevaporated and accumulated water, and (b) constructed of corrosion-resistant, non-porous materials that do not promote the proliferation of disease-causing micro-organisms. (6) Make-up water connections shall be equipped with backflow prevention devices that conform to Article 2.6.2.1. of Division B of the NPC.	
Radiators and convectors	6.2.8.1. Lining or Backing	**(1)** Every steam or hot water radiator and convector located in a recess or concealed space or attached to the face of a wall of *combustible construction* shall be provided with a *noncombustible* lining or backing. **(2)** Every steam or hot water radiator and convector shall be installed to conform to the clearance requirements of Table 6.2.9.3.	6.4.3.1. Lining or Backing	(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.*	(1) ~~Every~~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* ~~shall be provided with a~~	https://www.dropbox.com/s/bj09axbztddtfmv/Proposed_Change_1060.pdf?dl=0

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				(2) Every steam or hot water radiator and convector shall be installed so as to conform to the clearance requirements of Table 6.7.1.2.	~~*noncombustible* lining or backing~~or *encapsulated mass timber construction*. (2) Every steam or hot water radiator and convector shall be installed so as to conform to the clearance requirements of Table- 6.7.1.2.~~9.3.~~	
Thermal Insulation	6.2.9.2. Insulation and Coverings	**(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.	6.5.1.1. Insulation and Coverings	(3) Exposed piping or equipment subject to human contact shall be insulated so that the temperature of the exposed surface does not exceed 52°C.	**(6)** Exposed piping or equipment subject to human contact shall be insulated so that the temperature of the exposed surface does not exceed ~~70~~52°C.	https://www.dropbox.com/s/8lsbj4qgl9giyul/Proposed_Change_1062.pdf?dl=0

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PART 6 MISCELLANEOUS

Subject	Current Ontario Code Subsection / Article	Current Ontario Code Provision(s)	Current National Code Subsection /Article	Current National Code Provision(s)	Proposed Changes to the Code Provision(s)	Note
Return Air	6.2.4.7. Return-Air System	(10) Except as provided in Sentence (14), return-air from a *dwelling unit* shall not be recirculated to any other *dwelling unit*.	N/A	N/A	(10) ~~Except as provided in Sentence (14), R~~return-air from a *dwelling unit* shall not be recirculated to any other *dwelling unit*.	Remaining item from Phase 1 of the Consultation
Return Air	6.2.4.7. Return-Air System	(14) In a *house* containing two *dwelling units*, return-air from one *dwelling unit* may be recirculated to the other *dwelling unit*, provided a duct-type *smoke detector* is installed in the supply or return air duct system serving the entire *house* which would turn off the fuel supply and electrical power to the heating system upon activation of such detector.	N/A	N/A	~~(14) In a *house* containing two *dwelling units*, return-air from one *dwelling unit* may be recirculated to the other *dwelling unit*, provided a duct-type *smoke detector* is installed in the supply or return air duct system serving the entire *house* which would turn off the fuel supply and electrical power to the heating system upon activation of such detector.~~	Remaining item from Phase 1 of the Consultation

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PART 7 PLUMBING

Subject	Current Ontario Code Subsection / Article	Current Ontario Code Provision(s)	Proposed National Code Subsection /Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link to the National PCF
Other	**Div. A 1.4.1. Definitions of Words and Phrases** 1.4.1.2. Defined Terms	N/A	**Div. A 1.4.1. Definitions of Words and Phrases** 1.4.1.2. Defined Terms	*Stack* means a vertical *sanitary drainage pipe* that passes through one or more *storeys* and includes any *offset* that is part of the *stack*.	*Stack* means a vertical *sanitary drainage pipe* that passes through one or more *storeys* and includes any *offset* that is part of the *stack*.	https://www.dropbox.com/s/ly2oa7asx0mvmel/Proposed_Change_1336.pdf?dl=0
Other - HVAC and Plumbing	**Div. A 1.4.1. Definitions of Words and Phrases** 1.4.1.2. Defined Terms	*Size* means the nominal diameter by which a pipe, fitting, *trap* or other similar item is commercially designated.	**Div. A 1.4.1. Definitions of Words and Phrases** 1.4.1.2. Defined Terms	*Nominal pipe size (NPS)* means the nominal diameter by which a pipe, fitting, *trap* or other similar item is commercially designated.	~~*Size*~~*Nominal pipe size (NPS)* means the nominal diameter by which a pipe, fitting, *trap* or other similar item is commercially designated.	https://www.dropbox.com/s/nftyb6x5fbaeymc/Proposed_Change_1212.pdf?dl=0
Referenced Documents	**Div. B 1.3.1. Referenced Documents** 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.	**Div. B 1.3.1. Referenced Documents** 1.3.1.2. Applicable Editions	**(1)** Where documents are referenced in this Code, they shall be the editions designated in Column 2 of Table 1.3.1.2.	(Refer to the National PCF for the changes in the tables)	https://www.dropbox.com/s/cvk5iq5ii6yzt7c/Proposed_Change_1640.pdf?dl=0
Water-Use Efficiency	7.1.5.1. Sanitary Drainage Systems	**(1)** Every *sanitary drainage system* shall be connected to a public *sanitary sewer*, a public combined sewer or a *private sewage disposal system*.	2.1.2.1. Sanitary Drainage Systems	**(1)** Except where supplying systems that are covered in Section 7.7., *sanitary drainage system* shall be connected to a public *sanitary sewer*, a public combined sewer or a *private sewage disposal system*.	(1) ~~Every~~ Except where supplying systems that are covered in Section 7.7., *sanitary drainage system* shall be connected to a public *sanitary sewer*, a public combined sewer or a *private sewage disposal system*.	https://www.dropbox.com/s/6n96npujyfqkw15/Propose%20%281%29.pdf?dl=0
Water-Use Efficiency	7.1.5.2. Storm Drainage Systems	**(1)** Every *storm drainage system* shall be connected to a public *storm sewage* works, a public combined *sewage* works or a designated storm water disposal location but shall not be connected to a *sanitary sewage* works.	2.1.2.2. Storm Drainage Systems	**(1)** Except as provided in Section 7.7., *storm drainage system* shall be connected to a public *storm sewage* works, a public combined *sewage* works or a designated storm water disposal location but shall not be connected to a *sanitary sewage* works.	(1) ~~Every~~ Except as provided in Section 7.7., *storm drainage system* shall be connected to a public *storm sewage* works, a public combined *sewage* works or a designated storm water disposal location but shall not be connected to a *sanitary sewage* works.	https://www.dropbox.com/s/6n96npujyfqkw15/Propose%20%281%29.pdf?dl=0
Water-Use Efficiency	7.1.5.3. Water Distribution Systems	**(1)** Except as provided in Sentence (2), every *water distribution system* shall be connected,	2.1.2.3. Water Distribution Systems	**(1)** Except as provided in Section 7.7, and Sentence (2), *water distribution system* shall be connected to a	**(1)** Except as provided in Section 7.7, and Sentence (2), ~~every~~ *water distribution system* shall be	https://www.dropbox.com/s/6n96npujyfqkw15

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		(a) to a watermain that is part of a *municipal drinking water system*, or (b) to a *drinking water system*, if a watermain described in Clause (a) is not available.		public water main or a *potable private water supply system*.	connected~~,~~ ~~(a)~~ to a ~~watermain that is part of a municipal drinking~~public water ~~system,~~main or ~~(b) to~~ a ~~drinking~~*potable private water system, if a watermain described in Clause (a) is not available.* *supply system.*	/Propose%20%281%29.pdf?dl=0
Water-Use Efficiency	7.1.5.4. Separate Services	**(1)** Except as provided in Sentences (2) and (3), piping in any *building* shall be connected to the public services separately from piping of any other *building*. **(2)** An ancillary *building* on the same property as the main *building* may be served by the same service. **(3)** *Water service pipes* or *building sewers* serving *buildings* located on the same property may connect into a *private water supply* or a *private sewer* conforming to Article 7.1.5.5. **(4)** No *plumbing* serving a *dwelling unit* shall be installed in or under another unit of the *building* unless the piping is located in a tunnel, pipe corridor, common *basement* or parking garage, so that the piping is *accessible* for servicing and maintenance throughout its length without encroachment on any private living space, but this Sentence does not prevent *plumbing* serving a unit located above another unit from being installed in or under the lower unit.	2.1.2.4. Separate Services	**(1)** Except as provided in Sentences (2) and (3), piping in any *building* shall be connected to the public services separately from piping of any other *building*, except that an ancillary *building* on the same property as the main *building* may be served by the same service. **(2)** No *plumbing* serving a *dwelling unit* shall be installed in or under another unit of the *building* unless the piping is located in a tunnel, pipe corridor, common *basement* or parking garage, so that the piping is *accessible* for servicing and maintenance throughout its length without encroachment on any private living space, but this Sentence does not prevent *plumbing* serving a unit located above another unit from being installed in or under the lower unit. **(3)** *Water service pipes* or *building sewers* serving *buildings* located on the same property may connect into a *private water supply* or a *private sewer* conforming to Article 7.1.5.5.	**(1)** Except as provided in Sentences (2) and (3), piping in any *building* shall be connected to the public services separately from piping of any other *building*~~.~~, except that an ancillary *building* on the same property as the main *building* may be served by the same service. ~~**(2)** An ancillary *building* on the same property as the main *building* may be served by the same service.~~ (2~~**(3)** *Water service pipes or building sewers* serving *buildings* located on the same property may connect into a *private water supply* or a *private sewer* conforming to Article 7.1.5.5.~~ ~~**(4)**~~ No *plumbing* serving a *dwelling unit* shall be installed in or under another unit of the *building* unless the piping is located in a tunnel, pipe corridor, common *basement* or parking garage, so that the piping is *accessible* for servicing and maintenance throughout its length without encroachment on any private living space, but this Sentence does not prevent *plumbing* serving a unit located above another unit from being installed in or under the lower unit. **(3)** *Water service pipes* or *building sewers* serving *buildings* located on the same property may connect into a *private water supply* or a *private sewer* conforming to Article 7.1.5.5.	https://www.dropbox.com/s/6n96npujyfqkw15/Propose%20%281%29.pdf?dl=0
Seismicity	7.1.7.1. Structural Movement	(1) *Plumbing* shall be designed and installed to accommodate the maximum relative structural movement provided for in the *construction* of the *building*.	2.1.4.1. Seismic Restraints and Design	(1) *Plumbing systems* in *buildings* constructed in accordance with Part 3, shall be designed and installed to accommodate the seismic forces addressed in Subsection 4.1.8. of Division B of this Code.	(1) *Plumbing* *systems* in *buildings* constructed in accordance with Part 3, shall be designed and installed to accommodate the ~~maximum relative structural movement provided for in the construction~~seismic forces addressed in Subsection 4.1.8. of ~~the building.~~ Division B of this Code.	https://www.dropbox.com/s/vcy38nd9xt7k457/Proposed_Change_916.pdf?dl=0
Other — HVAC and Plumbing	7.2.2.2. Conformance to Standards	N/A	2.2.2.2. Conformance to Standards	(9) Personal hygiene devices for water closets shall conform to ASME A112.4.2/CSA B45.16, “Personal hygiene devices for water closets”.	(9) Personal hygiene devices for water closets shall conform to ASME A112.4.2/CSA B45.16, “Personal hygiene devices for water closets”.	https://www.dropbox.com/s/f2zgptcnocpyvhn/Proposed_Change_1010.pdf?dl=0
Soft Conversion	7.2.4.3. 90° Elbows	(1) Except as permitted in Sentences (2) and (3), 90° elbows of 4 in. *size* or less that have a centre-line radius that is less than the *size* of the pipe shall not be used to join two *soil* or *waste pipes*. (2) 90° elbows of 4 in. *size* or less in *sanitary drainage systems* may be used,	2.2.4.3. 90° Elbows	(1) Except as permitted in Sentences (2) and (3), 90° elbows of *NPS* 4 or less whose centre-line radius is less than the *NPS* of the pipe shall not be used to join two *sanitary drainage pipes*.	(1) Except as permitted in Sentences (2) and (3), 90° elbows of *NPS* 4 ~~in. size~~ or less ~~that have a~~whose centre-line radius ~~that~~ is less than the ~~size~~*NPS* of the pipe shall not be used to join two ~~soil or waste~~ *sanitary drainage* *pipes*.	https://www.dropbox.com/s/1p16keee2m6uof4/Proposed_Change_1213.pdf?dl=0

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		(a) to change the direction of piping from horizontal to vertical, in the direction of flow, (b) where a *trap arm* enters a wall, or (c) to connect *trap arms* as permitted by Sentence 7.5.6.3.(2).		(2) For *sanitary drainage systems* of *NPS* 4 or less, 90° elbows described in Sentence (1) shall only be permitted (a) to change the direction of piping from horizontal to vertical, in the direction of flow, (b) where a *trap arm* enters a wall, or (c) to connect *trap arms* as permitted by Sentence 7.5.6.3.(2).	(2) ~~90° elbows of 4 in. *size* or less in~~For *sanitary drainage systems* ~~may~~of *NPS* 4 or less, 90° elbows described in Sentence (1) shall only be ~~used,~~permitted (a) to change the direction of piping from horizontal to vertical, in the direction of flow, (b) where a *trap arm* enters a wall, or (c) to connect *trap arms* as permitted by Sentence 7.5.6.3.(2).	
Piping	7.2.5.1. Fibrocement Pipe and Fittings (new)	Reserved	2.2.5.1. Fibrocement Pipe and Fittings	(1) Fibrocement pipe and fittings for use in a drain, waste or vent system shall conform to CAN/CSA-B127.3, “Fibrocement drain, waste, and vent pipe and pipe fittings”.	(1) Fibrocement pipe and fittings for use in a drain, waste or vent system shall conform to CAN/CSA-B127.3, “Fibrocement drain, waste, and vent pipe and pipe fittings”.	https://www.dropbox.com/s/natccbdernb1648/Proposed_Change_1471.pdf?dl=0
Piping and Transfer Systems	7.2.5.7. Crosslinked Polyethylene Pipe and Fittings	(1) Crosslinked polyethylene pipe and its associated fittings used in hot and cold *potable water systems* shall be certified to CSA B137.5, “Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications”.	2.2.5.6. Crosslinked Polyethylene Pipe and Fittings	(1) Crosslinked polyethylene pipe and manufacturer-approved fittings used in hot and cold *potable water systems* shall be certified to CSA B137.5, “Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications”.	(1) Crosslinked polyethylene pipe and ~~its associated~~manufacturer-approved fittings used in hot and cold *potable water systems* shall be certified to CSA B137.5, “Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications”.	https://www.dropbox.com/s/lfrnyf40i9kz028/Proposed_Change_1123.pdf?dl=0
Piping and Transfer Systems	7.2.5.16. Polyethylene of Raised Temperature Tube and Fittings (New)	N/A	2.2.5.15. Polyethylene of Raised Temperature Tube and Fittings	(1) Polyethylene of raised temperature (PE-RT) tube and manufacturer-approved fittings used in hot and cold *potable water systems* shall be certified to CSA B137.18, “Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications”. (2) The use of PE-RT tube shall conform to Table 7.2.5.16.	(1) Polyethylene of raised temperature (PE-RT) tube and manufacturer-approved fittings used in hot and cold *potable water systems* shall be certified to CSA B137.18, “Polyethylene of raised temperature resistance (PE-RT) tubing systems for pressure applications”. (2) The use of PE-RT tube shall conform to Table 7.2.5.16.	https://www.dropbox.com/s/ztxuh76cegrxdnp/Proposed_Change_1007.pdf?dl=0
Piping and Transfer Systems	7.3.4.5. Support for Horizontal Piping	7.3.4.5. Support for Horizontal Piping (2) *Nominally horizontal* piping shall be supported so that, …	2.3.4.5. Support for Horizontal Piping	(2) *Nominally horizontal* piping shall be supported so that, … (n) PE-RT tube or PEX plastic pipe is supported at intervals not exceeding 800 mm.	~~7.3.4.5. Support for Horizontal Piping~~ (2) *Nominally horizontal* piping shall be supported so that, … (n) PE-RT tube or PEX plastic pipe is supported at intervals not exceeding 800 mm.	https://www.dropbox.com/s/ztxuh76cegrxdnp/Proposed_Change_1007.pdf?dl=0
Piping and Transfer Systems	1.4.2.1. Symbols and Other Abbreviations	N/A	1.4.2.1. Symbols and Other Abbreviations	PE-RT polyethylene of raised temperature	PE-RT polyethylene of raised temperature	https://www.dropbox.com/s/ztxuh76cegrxdnp/Proposed_Change_1007.pdf?dl=0
Piping	7.2.5.17. Cellular Core PVC Pipe and Fittings (New)	N/A	2.2.5.16. Cellular Core PVC Pipe and Fittings	(1) Cellular core PVC pipe shall (a) conform to ASTM F3128, “Standard Specification for Poly (Vinyl Chloride) (PVC) Schedule 40 Drain, Waste, and Vent Pipe with a Cellular Core”, and (b) be light grey, as specified in CSA B181.2, “Polyvinylchloride (PVC) and chlorinated	(1) Cellular core PVC pipe shall (a) conform to ASTM F3128, “Standard Specification for Poly (Vinyl Chloride) (PVC) Schedule 40 Drain, Waste, and Vent Pipe with a Cellular Core”, and (b) be light grey, as specified in CSA B181.2, “Polyvinylchloride (PVC) and chlorinated	https://www.dropbox.com/s/35g1s50n0wkujbi/Proposed_Change_1439.pdf?dl=0

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				polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings". (2) Fittings and solvent cements for cellular core PVC pipe shall conform to CSA B181.2, "Polyvinylchloride (PVC) and chlorinated polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings". (3) Cellular core PVC pipe shall only be used in residential *buildings* containing 1 or 2 *dwelling units* and in row houses that do not exceed 3 *storeys* in height.	polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings". (2) Fittings and solvent cements for cellular core PVC pipe shall conform to CSA B181.2, "Polyvinylchloride (PVC) and chlorinated polyvinylchloride (CPVC) drain, waste, and vent pipe and pipe fittings". (3) Cellular core PVC pipe shall only be used in residential *buildings* containing 1 or 2 *dwelling units* and in row houses that do not exceed 3 *storeys* in height.	
Piping	7.2.7.4. Copper Tube	(5) Copper tube shall not be used for the *fixture drain* or the portion of the *vent pipe* below the *flood level rim* of manually flushing or waterless urinals.	2.2.7.4. Copper Tube	(5) Copper tube shall not be used for the *fixture drain* or the portion of the *vent pipe* below the *flood level rim* of a urinals.	(5) Copper tube shall not be used for the *fixture drain* or the portion of the *vent pipe* below the *flood level rim* of ~~manually flushing or waterless~~a urinals.	https://www.dropbox.com/s/ccrtwe9rkzivsab/Proposed_Change_1386.pdf?dl=0
Piping	7.2.10.6. Valves, and Supply and Waste Fittings	N/A	2.2.10.6. Valves, and Supply and Waste Fittings	(3) Manually operated valves of *NPS* 4 or less for use in *plumbing systems* shall conform to ASME A112.4.14/CSA B125.14, "Manually Operated Valves for Use in Plumbing Systems."	(3) Manually operated valves of *NPS* 4 or less for use in *plumbing systems* shall conform to ASME A112.4.14/CSA B125.14, "Manually Operated Valves for Use in Plumbing Systems."	https://www.dropbox.com/s/gayb0vq7k4vi5c1/Proposed_Change_1491.pdf?dl=0
Materials and Equipment - Water Temperature Control	7.6.5.2. ~~Showers~~ Shower Heads and Bathtubs	(1) Except as provided for in Sentences (2) and (3), all valves supplying fixed location shower heads, shall be individually pressure-balanced or thermostatic-mixing valves, conforming to ASME A112.18.1 / CSA B125.1, "Plumbing Supply Fittings". (2) An individually pressure-balanced or thermostatic-mixing valve is not required for shower heads having a single tempered water supply that is controlled by an automatic compensating valve conforming to CSA B125.3, "Plumbing Fittings". (3) Deck-mounted, hand-held, flexible-hose spray attachments are exempt from the thermal shock requirements of Sentences (1) and (4). (4) Pressure-balanced, thermostatic-mixing or combination pressure-balanced and thermostatic-mixing type valves shall be, (a) capable of limiting thermal shock, and (b) designed so that the outlet temperature does not exceed 49°C or equipped with high-limit stops which shall be adjusted to a maximum hot water setting of 49°C.	2.2.10.7. Water Temperature Control	(1) Except as provided in Sentences (2) and (3), water supplied to shower heads or bathtubs shall be controlled by an automatic compensating valve conforming to (a) ASME A112.18.1/CSA B125.1, "Plumbing Supply Fittings", or (b) ASSE 1016/ASME A112.1016/CSA B125.16, "Performance Requirements for Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations". (2) The requirement in Sentence (1) is permitted to be waived where hot water supplied only to bathtubs is controlled by (a) an automatic compensating valve conforming to CSA B125.3, "Plumbing fittings," or (b) a temperature-limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70, "Performance requirements for water temperature limiting devices". (3) The requirement in Sentence (1) is permitted to be waived where the water is supplied by a single tempered water line controlled by an automatic compensating valve conforming to CSA B125.3, "Plumbing fittings".	(1) Except as provided ~~for~~ in Sentences (2) and (3), ~~all valves supplying fixed location~~ water supplied to shower heads~~,~~ or bathtubs shall be ~~individually pressure-balanced or thermostatic-mixing valves,~~controlled by an automatic compensating valve conforming to (a) ASME A112.18.1~~/~~/CSA B125.1, "Plumbing Supply Fittings~~".~~", or ~~(2) An individually pressure-balanced or thermostatic-mixing valve is not required~~(b) ASSE 1016/ASME A112.1016/CSA B125.16, "Performance Requirements for Automatic Compensating Valves for ~~shower heads having a single tempered water supply that~~Individual Showers and Tub/Shower Combinations". (2) The requirement in Sentence (1) is permitted to be waived where hot water supplied only to bathtubs is controlled by (a) an automatic compensating valve conforming to CSA B125.3, "Plumbing ~~Fittings".~~ fittings," or ~~(3) Deck-mounted, hand-held, flexible-hose spray attachments are exempt from the thermal shock requirements of Sentences (1) and (4).~~	https://www.dropbox.com/s/dlqw4bne79gudhq/Proposed_Change_1366.pdf?dl=0

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				(4) Except as provided in Sentence (5), the temperature of water discharging from a shower head or into a bathtub shall not exceed 49°C. (5) In health care facilities and seniors' residences, the temperature of water discharging from a shower head or into a bathtub shall (a) not exceed 43°C, and (b) be adjusted at the shower or bathtub controls.	~~(4) Pressure-balanced, thermostatic-mixing or combination pressure-balanced and thermostatic-mixing type valves shall be,~~ ~~(a) capable of limiting thermal shock, and~~ ~~(b) designed so that the outlet temperature does~~(b) a temperature-limiting device conforming to ASSE 1070/ASME A112.1070/CSA B125.70, "Performance requirements for water temperature limiting devices". (3) The requirement in Sentence (1) is permitted to be waived where the water is supplied by a single tempered water line controlled by an automatic compensating valve conforming to CSA B125.3, "Plumbing fittings". (4) Except as provided in Sentence (5), the temperature of water discharging from a shower head or into a bathtub shall not exceed 49°C. (5) In health care facilities and seniors' residences, the temperature of water discharging from a shower head or into a bathtub shall (a) not exceed ~~49°C or equipped with high-limit stops which shall~~43°C, and (b) be adjusted ~~to a maximum hot water setting of 49°C~~at the shower or bathtub controls.	
Piping	7.2.10.8. Direct Flush Valves	(1) Every direct flush valve shall, (a) open fully and close positively under service pressure, (b) complete its cycle of operation automatically, (c) be provided with a means of regulating the volume of water that it discharges, and (d) be provided with a *vacuum breaker* unless the *fixture* is designed so that *back-siphonage* cannot occur.	2.2.10.8. Copper Tube	(1) Direct flush valves shall, (a) open fully and close positively under service pressure, (b) complete ~~its~~ their cycle of operation automatically, (c) be provided with a means of regulating the volume of water that they discharges~~,~~ (d) be provided with a *vacuum breaker* unless the *fixture* is designed so that *back-siphonage* cannot occur, and (e) conform to ASSE 1037/ASME A112.1037/CSA B125.37, "Performance requirements for pressurized flushing devices for plumbing fixtures".	(1) ~~Every direct~~Direct flush ~~valve~~valves shall, (a) open fully and close positively under service pressure, (b) complete ~~its~~ their cycle of operation automatically, (c) be provided with a means of regulating the volume of water that ~~it~~they discharges~~,~~ ~~and~~ (d) be provided with a *vacuum breaker* unless the *fixture* is designed so that *back-siphonage* cannot occur~~.~~, and (e) conform to ASSE 1037/ASME A112.1037/CSA B125.37, "Performance requirements for pressurized flushing devices for plumbing fixtures".	https://www.dropbox.com/s/tu3mov9xoh6ssl0/Proposed_Change_1489.pdf?dl=0
Piping and Transfer Systems	7.2.10.10. Back-Siphonage Preventers and Backflow Preventers	(1) Except as provided in Sentence (2), *back-siphonage preventers* and *backflow preventers* shall be certified to,	2.2.10.10. Back-Siphonage Preventers and Backflow Preventers	(1) Except as provided in Sentence (2), *back-siphonage preventers* and *backflow preventers* shall be certified to,	(1) Except as provided in Sentence (2), *back-siphonage preventers* and *backflow preventers* shall be certified to,	https://www.dropbox.com/s/cq5rr6w07y7kxbz/Proposed_Change_917.pdf?dl=0

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		(a) CSA B64.0, “Definitions, General Requirements and Test Methods for Vacuum Breakers and Backflow Preventers”, (b) CSA B64.1.1, “Atmospheric Vacuum Breakers (AVB)”, (c) CSA B64.1.2, “Pressure Vacuum Breakers (PVB)”, (d) CSA B64.1.3, “Spill-resistant Pressure Vacuum Breakers (SRPVB)”, (e) CSA B64.1.4, “Vacuum Breaker, Air Space Type (ASVB)”, (f) CSA B64.2, “Hose Connection Vacuum Breakers (HCVB)”, (g) CSA B64.2.1, “Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature”, (h) CSA B64.2.1.1, “Hose Connection Dual Check Vacuum Breakers (HCDVB)”, (i) CSA B64.2.2, “Hose Connection Vacuum Breakers (HCVB) with Automatic Draining Feature”, (j) CSA B64.3, “Dual Check Valve Backflow Preventers with Atmospheric Port (DCAP)”, (k) CSA B64.3.1, “Dual Check Valve Backflow Preventers with Atmospheric Port for Carbonators (DCAPC)”, (l) CSA B64.4, “Reduced Pressure Principle (RP) Backflow Preventers”, (m) CSA B64.5, “Double Check Valve (DCVA) Backflow Preventers”, (n) CSA B64.6, “Dual Check Valve (DuC) Backflow Preventers”, (o) CSA B64.7, “Laboratory Faucet Vacuum Breakers (LFVB)”, (p) CSA B64.8, “Dual Check Valve Backflow Preventers with Intermediate Vent (DuCV)”, or (q) CSA B64.10, “Selection and Installation of Backflow Preventers”.		(a) CSA B64.0, “Definitions, General Requirements and Test Methods for Vacuum Breakers and Backflow Preventers”, (b) CSA B64.1.1, “Atmospheric Vacuum Breakers (AVB)”, (c) CSA B64.1.2, “Pressure Vacuum Breakers (PVB)”, (d) CSA B64.1.3, “Spill-resistant Pressure Vacuum Breakers (SRPVB)”, (e) CSA B64.1.4, “Vacuum Breaker, Air Space Type (ASVB)”, (f) CSA B64.2, “Hose Connection Vacuum Breakers (HCVB)”, (g) CSA B64.2.1, “Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature”, (h) CSA B64.2.1.1, “Hose Connection Dual Check Vacuum Breakers (HCDVB)”, (i) CSA B64.2.2, “Hose Connection Vacuum Breakers (HCVB) with Automatic Draining Feature”, (j) CSA B64.3, “Dual Check Valve Backflow Preventers with Atmospheric Port (DCAP)”, (k) CSA B64.3.1, “Dual Check Valve Backflow Preventers with Atmospheric Port for Carbonators (DCAPC)”, (l) CSA B64.4, “Reduced Pressure Principle (RP) Backflow Preventers”, (l.1) CSA B64.4.1, “Reduced pressure principle backflow preventers for fire protection systems (RPF)”, (m) CSA B64.5, “Double Check Valve (DCVA) Backflow Preventers”, (m.1) CSA B64.5.1, “Double check valve backflow preventers for fire protection systems (DCVAF)”, (n) CSA B64.6, “Dual Check Valve (DuC) Backflow Preventers”, (n.1) CSA B64.6.1, “Dual check valve backflow preventers for fire protection systems (DuCF)”, (o) CSA B64.7, “Laboratory Faucet Vacuum Breakers (LFVB)”,	(a) CSA B64.0, “Definitions, General Requirements and Test Methods for Vacuum Breakers and Backflow Preventers”, (b) CSA B64.1.1, “Atmospheric Vacuum Breakers (AVB)”, (c) CSA B64.1.2, “Pressure Vacuum Breakers (PVB)”, (d) CSA B64.1.3, “Spill-resistant Pressure Vacuum Breakers (SRPVB)”, (e) CSA B64.1.4, “Vacuum Breaker, Air Space Type (ASVB)”, (f) CSA B64.2, “Hose Connection Vacuum Breakers (HCVB)”, (g) CSA B64.2.1, “Hose Connection Vacuum Breakers (HCVB) with Manual Draining Feature”, (h) CSA B64.2.1.1, “Hose Connection Dual Check Vacuum Breakers (HCDVB)”, (i) CSA B64.2.2, “Hose Connection Vacuum Breakers (HCVB) with Automatic Draining Feature”, (j) CSA B64.3, “Dual Check Valve Backflow Preventers with Atmospheric Port (DCAP)”, (k) CSA B64.3.1, “Dual Check Valve Backflow Preventers with Atmospheric Port for Carbonators (DCAPC)”, (l) CSA B64.4, “Reduced Pressure Principle (RP) Backflow Preventers”, (l.1) CSA B64.4.1, “Reduced pressure principle backflow preventers for fire protection systems (RPF)”, (m) CSA B64.5, “Double Check Valve (DCVA) Backflow Preventers”, (m.1) CSA B64.5.1, “Double check valve backflow preventers for fire protection systems (DCVAF)”, (n) CSA B64.6, “Dual Check Valve (DuC) Backflow Preventers”, (n.1) CSA B64.6.1, “Dual check valve backflow preventers for fire protection systems (DuCF)”, (o) CSA B64.7, “Laboratory Faucet Vacuum Breakers (LFVB)”,	

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				(p) CSA B64.8, "Dual Check Valve Backflow Preventers with Intermediate Vent (DuCV)", (p.1) CSA B64.9, "Single check valve backflow preventers for fire protection systems (SCVAF)", or (q) CSA B64.10, "Selection and Installation of Backflow Preventers".	(p) CSA B64.8, "Dual Check Valve Backflow Preventers with Intermediate Vent (DuCV)", ~~or~~ (p.1) CSA B64.9, "Single check valve backflow preventers for fire protection systems (SCVAF)", or (q) CSA B64.10, "Selection and Installation of Backflow Preventers".	
Piping	7.2.10.10. Back-Siphonage Preventers and Backflow Preventers	(2) *Back-siphonage preventers* (anti-siphon fill valves) for tank type water closets shall be certified to CSA B125.3, "Plumbing Fittings".	2.2.10.10. Back-Siphonage Preventers and Backflow Preventers	(2) *Back-siphonage preventers* for tank-type water closets (anti-siphon fill valves) shall be certified to ASSE 1002/ASME A112.1002/CSA B125.12, "Anti-siphon fill valves for water closet tanks".	(2) *Back-siphonage preventers* ~~(anti-siphon fill valves)~~ for tank-~~-~~type water closets (anti-siphon fill valves) shall be certified to ASSE 1002/ASME A112.1002/CSA B125.~~3, "Plumbing Fittings~~12, "Anti-siphon fill valves for water closet tanks".	https://www.dropbox.com/s/40ysa5w1hm2aikv/Proposed_Change_1488.pdf?dl=0
Piping	7.2.10.18. Flexible Water Connectors (new)	N/A	2.2.10.18. Flexible Water Connectors	(1) Flexible water connectors exposed to continuous pressure shall be certified to ASME A112.18.6/CSA B125.6, "Flexible water connectors".	(1) Flexible water connectors exposed to continuous pressure shall be certified to ASME A112.18.6/CSA B125.6, "Flexible water connectors".	https://www.dropbox.com/s/rkdz6w31gci6km7/Proposed_Change_1495.pdf?dl=0
Other - HVAC and Plumbing	7.3.3.4. Unions and Slip Joints	(1) Running thread and packing nut connections and unions with a gasket seal shall not be used downstream of a *trap weir* in a *drainage system* or in a *venting system*.	2.3.3.4. Unions and Slip Joints	(1) Except as provided in Sentence 7.4.6.3.(5), running thread and packing nut connections and unions with a gasket seal shall not be used downstream of a *trap weir* in a *drainage system* or in a *venting system*.	(1) ~~Running~~ Except as provided in Sentence 7.4.6.3.(5), running thread and packing nut connections and unions with a gasket seal shall not be used downstream of a *trap weir* in a *drainage system* or in a *venting system*.	https://www.dropbox.com/s/xy17ic14j3b652v/Proposed_Change_995.pdf?dl=0
Materials and Equipment	7.3.3.8. Connection of Floor Outlet Fixtures	N/A	2.3.3.8. Connection of Floor or Wall Outlet Fixtures	(4.2) Water-closet bowls shall be securely attached to the floor flange, floor or wall carrier.	(4.2) Water-closet bowls shall be securely attached to the floor flange, floor or wall carrier.	https://www.dropbox.com/s/dlw2oa6hjo9q4ys/Proposed_Change_1387.pdf?dl=0
Materials and Equipment	7.3.4.1. Capability of Support	(2) Every floor or wall mounted water closet bowl shall be securely attached to the floor or wall by means of a flange and shall be stable.	2.3.4.1. Capability of Support	N/A	~~(2) Every floor or wall mounted water closet bowl shall be securely attached to the floor or wall by means of a flange and shall be stable.~~	https://www.dropbox.com/s/dlw2oa6hjo9q4ys/Proposed_Change_1387.pdf?dl=0
Soft Conversion	7.3.4.5. Support for Horizontal Piping	(2) *Nominally horizontal* piping shall be supported so that, (a) galvanized iron or steel pipe is supported at intervals not exceeding, (i) 3.75 m if the pipe *size* is 6 in. or more, and (ii) 2 500 mm if the pipe *size* is less than 6 in., (b) lead pipe is supported throughout its length, (c) cast iron pipe is supported, (i) at or adjacent to each hub or joint,	2.3.4.5. Support for Horizontal Piping	(2) *Nominally horizontal* piping shall be supported as stated in Table 2.3.4.5. (4) Where PEX, PE-RT, PP-R, PE/AL/PE or PEX/AL/PEX plastic pipe or tube is installed, hangers shall not compress, cut or abrade the pipe. (5) Where hangers are used to support *nominally horizontal* piping, the hangers shall be (a) supported by metal rods of not less than (i) 6 mm diam to support piping of *NPS* 2 or less, (ii) 8 mm diam to support piping of *NPS* 4 or less, and	(2) *Nominally horizontal* piping shall be supported ~~so that,~~ ~~(a) galvanized iron or steel pipe is supported at intervals not exceeding,~~ ~~(i) 3.75 m if the pipe *size* is 6~~as stated in~~ ~~. or more, and~~ ~~(ii)~~ Table 2~~-500 mm if the pipe *size* is less than 6 in.,~~ .3.4.5. ~~(b) lead pipe is supported throughout its length,~~ ~~(c) cast iron pipe is supported,~~ ~~(i) at or adjacent to each hub or joint,~~	https://www.dropbox.com/s/ystlk5to2b4fyud/Proposed_Change_1197.pdf?dl=0

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		(ii) at intervals not exceeding 3 m, and (iii) at intervals not exceeding 1 000 mm if the pipe has mechanical joints and the length of pipe between adjacent fittings is 300 mm or less, (d) reserved (e) ABS or PVC plastic DWV pipe is supported, (i) at intervals not exceeding 1 200 mm, (ii) at the ends of *branches*, (iii) at changes of direction or elevation, and (iv) if the pipe is a *fixture drain* that is more than 1 000 mm in length, as close as possible to the *trap*, (f) plastic water pipe is supported at intervals not exceeding 1 000 mm, (g) copper tube and copper and brass pipe is supported at intervals not exceeding, (i) 3 m if the tube or pipe is hard temper and larger than 1 in. in *size*, (ii) 2 500 mm if the tube or pipe is hard temper and 1 in. in *size* or less, and (iii) 2 500 mm if the tube is soft temper, (h) aluminum DWV pipe is supported, (i) at intervals not greater than 3 m, (ii) at both sides of all joints, (iii) at all *branch* ends, (iv) at all points where there is a change in direction, and (v) as close to all *traps* as possible, (i) supports and hangers for aluminum DWV pipe shall have a broad support base and shall be free of burrs and rough edges to prevent abrasion of the pipe, (j) where joints in the piping are less rigid than the pipe, the support points shall be selected so as to minimize the shear and bending forces imposed on the joints, (k) PE/AL/PE or PEX/AL/PEX composite pipe is supported at intervals not exceeding 1 000 mm, (l) PP-R plastic pipe is supported,		(iii) 13 mm diam to support piping over *NPS* 4, or (b) solid or perforated metal straps not less than (i) 0.6 mm thick and 12 mm wide to support piping of *NPS* 2 or less, and (ii) 0.8 mm thick and 18 mm wide to support piping of *NPS* 4 or less.	~~(ii) at intervals not exceeding 3 m, and~~ ~~(iii) at intervals not exceeding 1 000 mm if the pipe has mechanical joints and the length of pipe between adjacent fittings is 300 mm or less,~~ ~~(d) reserved~~ ~~(e) ABS or PVC plastic DWV pipe is supported,~~ ~~(i) at intervals not exceeding 1 200 mm,~~ ~~(ii) at the ends of *branches*,~~ ~~(iii) at changes of direction or elevation, and~~ ~~(iv) if the pipe is a *fixture drain* that is more than 1 000 mm in length, as close as possible to the *trap*,~~ ~~(f) plastic water pipe is supported at intervals not exceeding 1 000 mm,~~ ~~(g) copper tube and copper and brass pipe is supported at intervals not exceeding,~~ ~~(i) 3 m if the tube or pipe is hard temper and larger than 1 in. in *size*,~~ ~~(ii) 2 500 mm if the tube or pipe is hard temper and 1 in. in *size* or less, and~~ ~~(iii) 2 500 mm if the tube is soft temper,~~ ~~(h) aluminum DWV pipe is supported,~~ ~~(i) at intervals not greater than 3 m,~~ ~~(ii) at both sides of all joints,~~ ~~(iii) at all *branch* ends,~~ ~~(iv) at all points where there is a change in direction, and~~ ~~(v) as close to all *traps* as possible,~~ ~~(i) supports and hangers for aluminum DWV pipe shall have a broad support base and shall be free of burrs and rough edges to prevent abrasion of the pipe,~~ ~~(j) where joints in the piping are less rigid than the pipe, the support points shall be selected so as to minimize the shear and bending forces imposed on the joints,~~ ~~(k)~~(4) Where PEX, PE-RT, PP-R, PE/AL/PE or PEX/AL/PEX ~~composite pipe is supported at intervals not exceeding 1 000 mm,~~ ~~(l) PP-R~~ plastic pipe ~~is supported,~~	

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		(i) at intervals not exceeding 1 000 mm, (ii) at the end of *branches*, and (iii) at changes of direction and elevation, and (m) stainless steel pipe or tube is supported at intervals not exceeding, (i) 3 000 mm if the pipe or tube *size* is 1 in. or more, and (ii) 2 500 mm if the pipe or tube *size* is less than 1 in. (3) Where plastic pipe or a composite pipe incorporating a plastic component is installed, (a) the pipe shall be aligned without added strain on the piping, (b) the pipe shall not be bent or pulled into position after being welded or joined, and (c) hangers shall not compress, cut or abrade the pipe. (4) Reserved (5) Where hangers are used to support *nominally horizontal* piping, the hangers shall be, (a) supported by metal rods of not less than, (i) 6 mm diam for supporting pipe 2 in. or less in size, (ii) 8 mm diam for supporting pipe 4 in. or less in size, and (iii) 13 mm diam for supporting pipe over 4 in. in size, or (b) solid or perforated metal straps not less than, (i) 0.6 mm nominal thickness, 12 mm wide for pipe 2 in. or less in size, and (ii) 0.8 mm nominal thickness, 18 mm wide for pipe 4 in. or less in size. (6) Where a hanger is attached to concrete or masonry, it shall be fastened by metal or expansion-type plugs that are inserted or built into the concrete or masonry.			~~(i) at intervals not exceeding 1 000 mm,~~ ~~(ii) at the end of *branches*, and~~ ~~(iii) at changes of direction and elevation, and~~ ~~(m) stainless steel pipe~~ or tube ~~is supported at intervals not exceeding,~~ ~~(i) 3 000 mm if the pipe or tube *size* is 1 in. or more, and~~ ~~(ii) 2 500 mm if the pipe or tube *size* is less than 1 in.~~ ~~(3) Where plastic pipe or a composite pipe incorporating a plastic component~~ is installed, ~~(a) the pipe shall be aligned without added strain on the piping,~~ ~~(b) the pipe shall not be bent or pulled into position after being welded or joined, and~~ ~~(c)~~ hangers shall not compress, cut or abrade the pipe. ~~(4) Reserved~~ (5) Where hangers are used to support *nominally horizontal* piping, the hangers shall be~~,~~ (a) supported by metal rods of not less than~~,~~ (i) 6 mm diam ~~for supporting pipe~~to support piping of *NPS* 2 ~~in.~~ or less ~~in size,~~ . (ii) 8 mm diam ~~for supporting pipe~~to support piping of *NPS* 4 ~~in.~~ or less ~~in size~~, and (iii) 13 mm diam ~~for supporting pipe~~to support piping over *NPS* 4 ~~in. in size~~, or (b) solid or perforated metal straps not less than~~,~~ (i) 0.6 mm ~~nominal thickness,~~ thick and 12 mm wide ~~for pipe~~to support piping of *NPS* 2 ~~in.~~ or less ~~in size~~, and (ii) 0.8 mm ~~nominal thickness,~~ thick and 18 mm wide ~~for pipe~~to support piping of *NPS* 4 ~~in.~~ or less ~~in size.~~ ~~(6) Where a hanger is attached to concrete or masonry, it shall be fastened by metal or expansion-type plugs that are inserted or built into the concrete or masonry~~.	
Piping and Transfer Systems	7.3.6.5. Air Tests	(1) Where an air test is made, it shall be conducted in accordance with the manufacturer's instructions for the piping materials, and, (a) air shall be forced into the system until a gauge pressure of 35 kPa is created, and	2.3.6.5. Air Pressure Tests	(1) Air pressure tests shall be conducted in accordance with the manufacturer's instructions for each piping materials, and, (a) air shall be forced into the system until a gauge pressure of 35 kPa is created, and	(1) ~~Where an air test is made, it~~Air pressure tests shall be conducted in accordance with the manufacturer's instructions for ~~the~~each piping materials, and,	https://www.dropbox.com/s/ckjxbcx0898bazb/Proposed_Change_919.pdf?dl=0

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		(b) this pressure shall be maintained for at least 15 min without a drop in pressure.		(b) this pressure shall be maintained for at least 15 min without a drop in pressure.	(a) air shall be forced into the system until a gauge pressure of 35 kPa is created, and (b) this pressure shall be maintained for at least 15 min without a drop in pressure.	
Soft Conversion	7.3.6.7. Ball Tests	(2) The diameter of the ball shall be not less than 50 mm where the *size* of the pipe is 4 in. or more.	2.3.6.7. Ball Tests	(2) The diameter of the ball shall be not less than (a) 50 mm where the *size* of the pipe is 4 *NPS* 3 or more, or (b) 25 mm where the size of the pipe is less than *NPS* 3.	(2) The diameter of the ball shall be not less than (a) 50 mm where the *size* of the pipe is 4 ~~in.~~*NPS* 3 or more, or (b) 25 mm where the size of the pipe is less than *NPS* 3.	https://www.dropbox.com/s/eivqaaeno80osi7/Proposed_Change_1215.pdf?dl=0
Soft Conversion	7.4.2.3. Direct Connections	(1) Two or more *fixture outlet pipes* that serve outlets from a single *fixture* that is listed in Clause 7.4.2.1.(1)(d) may be *directly connected* to a *branch* that, (a) has a *size* of at least 1¼ in., and (b) is terminated above the *flood level rim* of a *directly connected fixture* with a minimum diameter waste of 1½ in. to form an *air break*.	2.4.2.3. Direct Connections	(1) Two or more *fixture outlet pipes* that serve outlets from a single *fixture* that is listed in Clause 7.4.2.1.(1)(d) may be *directly connected* to a *branch* that, (a) has a *nominal pipe size* of not less than *NPS* 1¼ in., and (b) is terminated above the *flood level rim* of a *directly connected fixture* with a minimum diameter waste of not less than *NPS* 1½ in. to form an *air break*.	(1) Two or more *fixture outlet pipes* that serve outlets from a single *fixture* that is listed in Clause 7.4.2.1.(1)(d) may be *directly connected* to a *branch* that, (a) has a *nominal pipe size* of ~~at least~~not less than *NPS* 1¼ in., and (b) is terminated above the *flood level rim* of a *directly connected fixture* with a minimum diameter waste of not less than *NPS* 1½ in. to form an *air break*.	https://www.dropbox.com/s/wvakxylm1el9imk/Proposed_Change_1216.pdf?dl=0
Piping and Transfer Systems	7.4.7.4. Location of Cleanouts	(6) A *cleanout* serving a *fixture* in health care facilities, mortuaries, laboratories and similar *occupancies*, where contamination by body fluids is likely, shall be located a minimum of 150 mm above the *flood level rim* of the *fixture*.	2.4.7.4. Location of Cleanouts	(6) *Cleanouts* serving a *fixture drains* in health care facilities, mortuaries, laboratories and similar *occupancies*, where contamination by hazardous waste is likely, shall be located a minimum of 150 mm above the *flood level rim* of the *fixture*.	(6) ~~A *cleanout*~~*Cleanouts* serving a *fixture drains* in health care facilities, mortuaries, laboratories and similar *occupancies*, where contamination by ~~body fluids~~hazardous waste is likely, shall be located a minimum of 150 mm above the *flood level rim* of the *fixture*.	https://www.dropbox.com/s/rz2q4hfo6a5b7wc/Proposed_Change_1009.pdf?dl=0
Piping and Transfer Systems	7.4.4.4. Neutralizing and Dilution Tanks	(1) Where a *fixture* or equipment discharges corrosive or acid waste, it shall discharge into a neutralizing or diluting tank that is connected to the *sanitary drainage system* through, (a) a *trap*, or (b) *indirect connection*.	2.4.4.4. Neutralizing and Dilution Tanks	(1) Where a *fixture* or equipment discharges corrosive or acid waste, it shall discharge into a neutralizing or diluting tank that is connected to the *sanitary drainage system* through, (a) a *trap*, or (b) *indirect connection*.	(1) Where a *fixture* or equipment discharges corrosive or acid waste, it shall discharge into a neutralizing or diluting tank that is connected to the *sanitary drainage system* through, (a) a *trap*, or (b) *indirect connection*.	https://www.dropbox.com/s/rz2q4hfo6a5b7wc/Proposed_Change_1009.pdf?dl=0
Other - HVAC and Plumbing	7.4.6.3. Sumps or Tanks	N/A	2.4.6.3. Sumps or Tanks	(2.1) Where the sump or tank receives subsurface water from a *subsoil drainage pipe*, it shall be provided with a water- and air-tight cover.	(2.1) Where the sump or tank receives subsurface water from a *subsoil drainage pipe*, it shall be provided with a water- and air-tight cover.	https://www.dropbox.com/s/1uqdxvnx7fr5crh/Proposed_Change_1383.pdf?dl=0
Soft Conversion	7.4.6.5. Mobile Home Sewer Service	(1) A *building sewer* intended to serve a mobile home shall, (a) be not less than 4 in. in *size*, (b) be terminated above ground, (c) be provided with, (i) a tamperproof terminal connection that is capable of being repeatedly connected, disconnected and sealed,	2.4.6.5. Mobile Home Sewer Service	(1) A *building sewer* intended to serve a mobile home shall be, (a) not less than *NPS* 4, (b) terminated above ground, (c) provided with, (i) a tamperproof terminal connection that is capable of being repeatedly connected, disconnected and sealed,	(1) A *building sewer* intended to serve a mobile home shall be, (a) ~~be~~ not less than *NPS* 4 ~~in. in *size*~~, (b) ~~be~~ terminated above ground, (c) ~~be~~ provided with, (i) a tamperproof terminal connection that is capable of being repeatedly connected, disconnected and sealed,	https://www.dropbox.com/s/nklw7cvc4y5eby2/Proposed_Change_1217.pdf?dl=0

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		(ii) a protective concrete pad, and (iii) a means to protect it from frost heave, and (d) be designed and constructed in accordance with good engineering practice.		(ii) a protective concrete pad, and (iii) a means to protect it from frost heave, and (d) designed and constructed in accordance with good engineering practice.	(ii) a protective concrete pad, and (iii) a means to protect it from frost heave, and (d) ~~be~~ designed and constructed in accordance with good engineering practice.	
Soft Conversion	7.4.7.1. Cleanouts for Drainage Systems	(4) Where a *cleanout* is required on a *building sewer* 8 in. or larger in *size*, it shall be a manhole. (5) Where there is a change of direction greater than 45° in a *sanitary building drain* or a *sanitary building sewer*, a *cleanout* shall be installed at each change in direction. (6) Every *sanitary building drain* or *storm building drain* shall be provided with a *cleanout* fitting that is located as close as practical to the place where the drain leaves the *building*.	2.4.7.1. Cleanouts for Drainage Systems	(4) Where a *cleanout* is required on a *building sewer* of *NPS* 8 or larger, it shall be a manhole. (5) Where there is a change of direction greater than 45° in a *sanitary building drain* or a *sanitary building sewer*, a *cleanout* shall be installed at each change in direction, except that pipes not more than *NPS* 6 may change direction (a) by not more than 5° every 3 m, or (b) by the use of fittings with a cumulative change in direction of not more than 45°. (6) Every *sanitary building drain* or *storm building drain* shall be provided with a *cleanout* fitting of *NPS* 4 or larger that is located as close as practical to the place where the *building drain* leaves the *building*.	(4) Where a *cleanout* is required on a *building sewer* of *NPS* 8 ~~in.~~ or larger ~~in size~~, it shall be a manhole. (5) Where there is a change of direction greater than 45° in a *sanitary building drain* or a *sanitary building sewer*, a *cleanout* shall be installed at each change in direction~~.~~, except that pipes not more than *NPS* 6 may change direction (a) by not more than 5° every 3 m, or (b) by the use of fittings with a cumulative change in direction of not more than 45°. (6) Every *sanitary building drain* or *storm building drain* shall be provided with a *cleanout* fitting of *NPS* 4 or larger that is located as close as practical to the place where the *building drain* leaves the *building*.	https://www.dropbox.com/s/pfawt53zt96mhel/Proposed_Change_1224.pdf?dl=0
Soft Conversion	7.4.7.2. Size and Spacing of Cleanouts	(1) Except as provided in Sentences (2) and (3), on drainage piping of 4 in. *size* and smaller, the minimum *size cleanout* opening shall be the same *size* as the drainage pipe and on drainage piping larger than the 4 in. *size*, the *cleanout* opening shall be 4 in. or larger and the maximum spacing between *cleanouts* on horizontal pipe shall be, (a) in the case of a sink *waste pipe*, 6 m, (b) in the case of a horizontal *sanitary drainage pipe*, or *storm drainage pipe*, other than a *waste pipe* from a sink, 15 m, and (c) in the case of a horizontal *sanitary drainage pipe* or *storm drainage pipe* larger than 4 in. *size*, 30 m. (2) The spacing between manholes serving a *building sewer*, (a) 24 in. or less in *size* shall not exceed 90 m, and (b) over 24 in. in *size* shall not exceed 150 m.	2.4.7.2. Size and Spacing of Cleanouts	(1) Except as provided in Sentences (2), (3) and Sentence 7.4.7.1.(6), on drainage piping of *NPS* 4 and smaller, the minimum *size cleanout* opening shall be the same *size* as the drainage pipe and on drainage piping larger than the *NPS* 4, the *cleanout* opening shall be *NPS* 4 or larger and the maximum spacing between *cleanouts* on horizontal pipe shall be, (a) in the case of a sink *waste pipe*, 6 m, (b) in the case of a horizontal *sanitary drainage pipe*, or *storm drainage pipe*, other than a *waste pipe* from a sink, 15 m, and (c) in the case of a horizontal *sanitary drainage pipe* or *storm drainage pipe* larger than *NPS* 4, 30 m. (2) The spacing between manholes serving a *building sewer*, (a) of *NPS* 24 or less shall not exceed 90 m, and (b) over *NPS* 24 shall not exceed 150 m.	(1) Except as provided in Sentences (2), (3) and ~~(3~~Sentence 7.4.7.1.(6), on drainage piping of *NPS* 4 ~~in. size~~ and smaller, the minimum *size cleanout* opening shall be the same *size* as the drainage pipe and on drainage piping larger than the *NPS* 4 ~~in. size~~, the *cleanout* opening shall be *NPS* 4 ~~in.~~ or larger and the maximum spacing between *cleanouts* on horizontal pipe shall be, (a) in the case of a sink *waste pipe*, 6 m, (b) in the case of a horizontal *sanitary drainage pipe*, or *storm drainage pipe*, other than a *waste pipe* from a sink, 15 m, and (c) in the case of a horizontal *sanitary drainage pipe* or *storm drainage pipe* larger than *NPS* 4 ~~in. size~~, 30 m. (2) The spacing between manholes serving a *building sewer*, (a) of *NPS* 24 ~~in.~~ or less ~~in size~~ shall not exceed 90 m, and (b) over *NPS* 24 ~~in. in size~~ shall not exceed 150 m.	https://www.dropbox.com/s/pfawt53zt96mhel/Proposed_Change_1224.pdf?dl=0
Piping and Transfer Systems	7.4.7.4. Location of Cleanouts	(6) A *cleanout* serving a *fixture* in health care facilities, mortuaries, laboratories and similar *occupancies*, where contamination by body fluids is likely, shall be located a minimum of 150 mm above the *flood level rim* of the *fixture*.	2.4.7.4. Location of Cleanouts	(6) *Cleanouts* serving a *fixture drains* in health care facilities, mortuaries, laboratories and similar *occupancies*, where contamination by hazardous waste is likely, shall be located a minimum of 150 mm above the *flood level rim* of the *fixture*.	(6) ~~A *cleanout*~~*Cleanouts* serving a *fixture drains* in health care facilities, mortuaries, laboratories and similar *occupancies*, where contamination by ~~body fluids~~hazardous waste is likely, shall be located a	https://www.dropbox.com/s/vtorcjxivfy2zd6/Proposed_Change_988.pdf?dl=0

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					minimum of 150 mm above the *flood level rim* of the *fixture*.	https://www.dropbox.com/s/ef2g91u9gmifnje/Proposed_Change_1009.pdf?dl=0
Soft Conversion	7.4.8.1. Minimum Slope	(1) Except as provided in Sentences (2) and (3), every drainage pipe that has a *size* of 3 in. or less shall have a downward slope in the direction of flow of at least 1 in 50.	2.4.8.1. Minimum Slope	(1) Except as provided in Sentences (2) and (3), drainage pipes that are *NPS* 3 or less shall have a downward slope in the direction of flow of at least 1 in 50.	(1) Except as provided in Sentences (2) and (3), ~~every~~ drainage ~~pipe~~pipes that ~~has a *size* of~~are *NPS* 3 ~~in.~~ or less shall have a downward slope in the direction of flow of at least 1 in 50.	https://www.dropbox.com/s/2gwqyk1uywvci60/Proposed_Change_1226.pdf?dl=0
Soft Conversion	7.4.9.2. Serving Water Closets	(1) The *size* of every drainage pipe that serves a water closet shall be at least 3 in. (2) The *size* of every horizontal drainage pipe downstream of the third water closet *fixture drain* connection shall be at least 4 in. (3) The *size* of every *soil stack* that serves more than six water closets shall be at least 4 in. (4) The *size* of the discharge pipe serving a macerating toilet system shall be at least ¾ in.	2.4.9.2. Serving Water Closets	(1) Drainage pipes that serve~~s~~ a water closet shall be not less than *NPS* 3. (2) *Branch* and *building drains* downstream of the third water closet *fixture drain* connection shall be not less than *NPS* 4. (3) *Stacks* that serves more than six water closets shall be not less than *NPS* 4. (4) Discharge pipes serving a macerating toilet system shall be not less than *NPS* ¾.	(1) ~~The *size* of every drainage pipe~~Drainage pipes that serve~~s~~ a water closet shall be ~~at least~~not less than *NPS* 3~~ in~~. (2) ~~The *size* of every horizontal drainage pipe~~*Branch* and *building drains* downstream of the third water closet *fixture drain* connection shall be ~~at least~~not less than *NPS* 4~~ in~~. (3) ~~The *size* of every *soil stack*~~*Stacks* that serves more than six water closets shall be ~~at least~~not less than *NPS* 4~~ in~~. (4) ~~The *size* of the discharge pipe~~Discharge pipes serving a macerating toilet system shall be ~~at least ¾ in.~~not less than *NPS* ¾.	https://www.dropbox.com/s/i8utcyme0xrukv6/Proposed_Change_1229.pdf?dl=0
Soft Conversion	7.4.9.3. Size of Fixture Outlet Pipes	(1) Except as provided in Sentence (2), the *size* of every *fixture outlet pipe* shall conform to Table 7.4.9.3. (2) The part of the *fixture outlet pipe* that is common to three compartments of a sink shall be one *size* larger than the largest *fixture outlet pipe* of the compartments that it serves. (3) Where clothes washers do not drain to a laundry tray, the *trap* inlet shall be fitted with a vertical standpipe that is not less than 600 mm long measured from the *trap weir* and the top of the standpipe shall terminate above the *flood level rim* of the clothes washer it serves. (Table 7.4.9.3.)	2.4.9.3. Size of Fixture Outlet Pipes	(1) Except as provided in Sentence (2), the *nominal pipe size* of *fixture outlet pipes* shall conform to Table 7.4.9.3. (2) The part of the *fixture outlet pipe* that is common to three compartments of a sink shall be one *NPS* ~~*size*~~ larger than the largest *fixture outlet pipe* of the compartments that it serves. (3) Where clothes washers do not drain to a laundry tray, the *trap* inlet shall be not less than *NPS* 2 and be fitted with a vertical standpipe that is not less than 600 mm long measured from the *trap weir* and the top of the standpipe shall terminate above the *flood level rim* of the clothes washer it serves. (See Table 2.4.9.3. in the National PCF)	(1) Except as provided in Sentence (2), the *nominal pipe size* of ~~every~~ *fixture outlet* ~~*pipe*~~*pipes* shall conform to Table 7.4.9.3. (2) The part of the *fixture outlet pipe* that is common to three compartments of a sink shall be one *NPS* ~~*size*~~ larger than the largest *fixture outlet pipe* of the compartments that it serves. (3) Where clothes washers do not drain to a laundry tray, the *trap* inlet shall be not less than *NPS* 2 and be fitted with a vertical standpipe that is not less than 600 mm long measured from the *trap weir* and the top of the standpipe shall terminate above the *flood level rim* of the clothes washer it serves. (see the Tables for the changes)	https://www.dropbox.com/s/i8utcyme0xrukv6/Proposed_Change_1229.pdf?dl=0
Soft Conversion	7.4.9.4. Minimum Size of Building Drains and Sewers	(1) Every *sanitary building drain* and every *sanitary building sewer* shall be at least 4 in. in *size*. (2) Every *storm building drain* and every *storm building sewer* shall be at least 4 in. in *size*.	2.4.9.4. Size of Building Drain and Building Sewer	(1) Every *sanitary building drain* and every *sanitary building sewer* shall be not less than *NPS* 4. (2) Every *storm building drain* and every *storm building sewer* shall be not less than *NPS* 4.	(1) Every *sanitary building drain* and every *sanitary building sewer* shall be ~~at least~~not less than *NPS* 4 ~~in. in *size*~~. (2) Every *storm building drain* and every *storm building sewer* shall be ~~at least~~not less than *NPS* 4 ~~in. in *size*~~.	https://www.dropbox.com/s/i8utcyme0xrukv6/Proposed_Change_1229.pdf?dl=0
Soft Conversion	7.4.9.3. Size of Fixture Outlet Pipes	(3) Where clothes washers do not drain to a laundry tray, the *trap* inlet shall be fitted with a vertical standpipe that is not less than 600 mm long measured from the *trap weir* and the top of the standpipe shall	2.4.9.3. Size of Fixture Outlet Pipes	(3) Where clothes washers do not drain to a laundry tray, the *trap* inlet shall be not less than *NPS* 2 and be fitted with a vertical standpipe that is not less than 600 mm long measured from the *trap weir* and the	(3) Where clothes washers do not drain to a laundry tray, the *trap* inlet shall be not less than *NPS* 2 and be fitted with a vertical standpipe that is not less than 600 mm long measured from the *trap weir* and the	https://www.dropbox.com/s/edno2zg17hsyc14/Proposed_Change_990.pdf?dl=0

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		terminate above the *flood level rim* of the clothes washer it serves.		top of the standpipe shall terminate above the *flood level rim* of the clothes washer it serves.	top of the standpipe shall terminate above the *flood level rim* of the clothes washer it serves.	https://www.dropbox.com/s/2yrejfrk2wem6ci/Proposed_Change_1391.pdf?dl=0 https://www.dropbox.com/s/i8utcyme0xrukv6/Proposed_Change_1229.pdf?dl=0
Soft Conversion	7.4.10.2. Hydraulic Loads for Fixtures	(2) Except as provided in Sentence (1), the hydraulic load from a *fixture* that is not listed in Table 7.4.9.3. is the number of *fixture units* set forth in Table 7.4.10.2. for the *trap* of the *size* that serves the *fixture*.	2.4.10.2. Hydraulic Loads for Fixtures	(2) Except as provided in Sentence (1), the hydraulic load from a *fixture* that is not listed in Table 7.4.9.3. is the number of *fixture units* set forth in Table 7.4.10.2. for the *nominal pipe size* of the *trap* that serves the *fixture*.	(2) Except as provided in Sentence (1), the hydraulic load from a *fixture* that is not listed in Table 7.4.9.3. is the number of *fixture units* set forth in Table 7.4.10.2. for the ~~*trap*~~ *nominal pipe size* of the ~~*size*~~*trap* that serves the *fixture*.	https://www.dropbox.com/s/8tro7i090mbqzen/Proposed_Change_1230.pdf?dl=0
Soft Conversion	7.4.10.6. Hydraulic Loads to Soil or Waste Pipes	(1) Except as provided in Sentence (2), the hydraulic load that is drained to every *soil* or *waste stack* shall conform to Table 7.4.10.6. (2) Where the *nominally horizontal offset* in a *soil* or *waste stack* is 1 500 mm or more, the hydraulic load that is served by it shall conform to Table 7.4.10.8.	2.4.10.6. Hydraulic Loads to Sanitary Drainage Pipes	(1) Except as provided in Sentence (2), the hydraulic load that is drained to every *stack* shall conform to Table 7.4.10.6. (2) Where the *nominally horizontal offset* in a *stack* is 1 500 mm or more, the hydraulic load that is served by it shall conform to Table 7.4.10.8.	(1) Except as provided in Sentence (2), the hydraulic load that is drained to every ~~*soil or waste*~~ *stack* shall conform to Table 7.4.10.6. (2) Where the *nominally horizontal offset* in a ~~*soil or waste*~~ *stack* is 1 500 mm or more, the hydraulic load that is served by it shall conform to Table 7.4.10.8.	https://www.dropbox.com/s/8tro7i090mbqzen/Proposed_Change_1230.pdf?dl=0
Soft Conversion	7.4.10.9. Hydraulic Loads on Horizontal Storm Drains	(1) The hydraulic load that is drained to a horizontal *storm drainage pipe* shall conform to Table 7.4.10.9., based on the *size* and slope.	2.4.10.9. Hydraulic Loads on Storm or Combined Building Drains or Sewers	(1) The hydraulic load that is drained to a horizontal *storm drainage pipe* shall conform to Table 7.4.10.9., based on the *nominal pipe size* and slope.	(1) The hydraulic load that is drained to a horizontal *storm drainage pipe* shall conform to Table 7.4.10.9., based on the *nominal pipe* *size* and slope.	https://www.dropbox.com/s/8tro7i090mbqzen/Proposed_Change_1230.pdf?dl=0
Soft Conversion	7.4.10.10. Rain Leaders	(3) The hydraulic load that is drained to a rain *leader* shall conform to Table 7.4.10.10.	2.4.10.11. Hydraulic Loads on Leaders	(3) The hydraulic load that is drained to a rain *leader* shall conform to Table 7.4.10.10.	(3) The hydraulic load that is drained to a rain *leader* shall conform to Table 7.4.10.10.	https://www.dropbox.com/s/8tro7i090mbqzen/Proposed_Change_1230.pdf?dl=0
Soft Conversion	7.4.10.3. Hydraulic Loads from Fixtures with Continuous or Semi-Continuous Flow	(3) The hydraulic load from a *fixture* or equipment that produces a semi-continuous flow shall conform to Table 7.4.10.3.	2.4.10.12. Hydraulic Loads from Fixtures with a Semi-continuous Flow	(3) The hydraulic load from a *fixture* or equipment that produces a semi-continuous flow shall conform to Table 7.4.10.3.	(3) The hydraulic load from a *fixture* or equipment that produces a semi-continuous flow shall conform to Table 7.4.10.3.	https://www.dropbox.com/s/8tro7i090mbqzen/Proposed_Change_1230.pdf?dl=0
Soft Conversion	7.5.1.1. Venting for Traps	(3) A *trap* that serves a floor drain or *hub drain* need not be protected by a *vent pipe* separately where, (a) the *size* of the *trap* is not less than 3 in.,	2.5.1.1. Venting for Traps	(3) A *trap* that serves a floor drain or *hub drain* need not be protected by a *vent pipe* separately where, (a) the *nominal pipe size* of the *trap* is not less than *NPS* 3,	(3) A *trap* that serves a floor drain or *hub drain* need not be protected by a *vent pipe* separately where, (a) the *nominal pipe* *size* of the *trap* is not less than *NPS* 3~~ in.,~~,	https://www.dropbox.com/s/0d2o7nyr1f2h9gf/Proposed_Change_1251.pdf?dl=0

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		(b) the length of the *fixture drain* is not less than 450 mm, (c) the fall on the *fixture drain* does not exceed its *size*, and (d) the *trap* is connected to a horizontal drainage pipe that terminates at its upstream end in a 3 in. *stack*.		(b) the length of the *fixture drain* is not less than 450 mm, (c) the fall on the *fixture drain* does not exceed its *nominal pipe size*, and (d) the *trap* is connected to a horizontal drainage pipe that terminates at its upstream end in a 3 in. *stack*.	(b) the length of the *fixture drain* is not less than 450 mm, (c) the fall on the *fixture drain* does not exceed its *nominal pipe* *size*, and (d) the *trap* is connected to a horizontal drainage pipe that terminates at its upstream end in a 3 in. *stack*.	
Soft Conversion	7.5.2.1. Wet Venting	(1) A *soil* or *waste pipe* may serve as a *wet vent* provided that, … (e) *trap arms* and *fixture drains* connected to the *wet vent* do not exceed 2 in. in *size*, except for connections from floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c), … (i) where a *wet vent* extends through more than 1 *storey*, there is not more than one *nominally horizontal offset* in the *wet vent*, and, (i) the *offset* does not exceed 1 200 mm for pipes 2 in. or less in *size*, or (ii) the *offset* does not exceed 2 500 mm for pipes larger than 2 in. in *size*, (j) the wet vented portion is not reduced in *size* except for the portion that is upstream of floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c), …	2.5.2.1. Wet Venting	(1) A *sanitary drainage pipe* may serve as a *wet vent* provided that, … (e) *trap arms* and *fixture drains* connected to the *wet vent* do not exceed *NPS* 2, except for connections from floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c), … (i) where a *wet vent* extends through more than 1 *storey*, there is not more than one *nominally horizontal offset* in the *wet vent*, and, (i) the *offset* does not exceed 1 200 mm for pipes *NPS* 2 or less, or (ii) the *offset* does not exceed 2 500 mm for pipes larger than *NPS* 2, (j) the *nominal pipe size* of the wet vented portion is not reduced, ~~*in size*~~ except for the portion that is upstream of floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c), …	(1) A ~~*soil or waste*~~*sanitary drainage* *pipe* may serve as a *wet vent* provided that, … (e) *trap arms* and *fixture drains* connected to the *wet vent* do not exceed *NPS* 2 ~~*in. in size*~~, except for connections from floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c), … (i) where a *wet vent* extends through more than 1 *storey*, there is not more than one *nominally horizontal offset* in the *wet vent*, and, (i) the *offset* does not exceed 1 200 mm for pipes *NPS* 2 ~~*in.*~~ or less ~~*in size*~~, or (ii) the *offset* does not exceed 2 500 mm for pipes larger than *NPS* 2 ~~*in. in size*~~, (j) the *nominal pipe size* of the wet vented portion is not reduced, ~~*in size*~~ except for the portion that is upstream of floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c), …	https://www.dropbox.com/s/0d2o7nyr1f2h9gf/Proposed_Change_1251.pdf?dl=0
Soft Conversion	7.5.3.1. Circuit Venting	(2) *Fixtures* with *fixture outlet pipes* less than 2 in. in *size* shall be separately vented or separately circuit vented. (7) A *soil* or *waste pipe* may serve as an *additional circuit vent* in accordance with Sentence (6) provided that the *soil* or *waste pipe* is sized as a *wet vent* in conformance with Article 7.5.8.1. and is not less than 2 in. in *size*. (9) A circuit vented *branch*, including the *fixture drain* downstream of the *circuit vent* connection, shall be sized in accordance with Articles 7.4.10.7. and 7.4.10.8., except that it shall be not less than, (a) 2 in., where *traps* less than 2 in. in *size* are circuit vented, or (b) 3 in., where *traps* 2 in. in *size* or larger are circuit vented.	2.5.3.1. Circuit Venting	(2) *Fixtures* with *fixture outlet pipes* less than *NPS* 2 shall be separately vented or separately circuit vented. (7) A *sanitary drainage pipe* may is permitted to serve as an *additional circuit vent* in accordance with Sentence (6) provided that the *sanitary drainage pipe* is sized as a *wet vent* in conformance with Article 7.5.8.1. and is not less than *NPS* 2. (9) A circuit vented *branch*, including the *fixture drain* downstream of the *circuit vent* connection, shall be sized in accordance with Articles 7.4.10.7. and 7.4.10.8., except that it shall be not less than, (a) *NPS* 2, where *traps* less than *NPS* 2 are circuit vented, or (b) *NPS* 3, where *traps* of *NPS* 2 or larger are circuit vented.	(2) *Fixtures* with *fixture outlet pipes* less than *NPS* 2 ~~*in. in size*~~ shall be separately vented or separately circuit vented. (7) A ~~*soil or waste*~~*sanitary drainage* *pipe* may is permitted to serve as an *additional circuit vent* in accordance with Sentence (6) provided that the ~~*soil or waste*~~*sanitary drainage* *pipe* is sized as a *wet vent* in conformance with Article 7.5.8.1. and is not less than *NPS* 2 ~~*in. in size*~~. (9) A circuit vented *branch*, including the *fixture drain* downstream of the *circuit vent* connection, shall be sized in accordance with Articles 7.4.10.7. and 7.4.10.8., except that it shall be not less than, (a) *NPS* 2 ~~*in.,*~~ where *traps* less than *NPS* 2 ~~*in. in size*~~ are circuit vented, or	https://www.dropbox.com/s/0d2o7nyr1f2h9gf/Proposed_Change_1251.pdf?dl=0

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					(b) *NPS* 3 ~~in.~~, where *traps* of *NPS* 2 ~~in. in *size*~~ or larger are circuit vented.	
Soft Conversion	7.5.4.3. Yoke Vents	(1) Except as provided in Sentence (4), where a *soil* or *waste stack* receives the discharge from *fixtures* located on more than 11 *storeys*, a *yoke vent* shall be, (a) installed for each section of 5 *storeys* or part of them counted from the top down, (b) installed at or immediately above each *offset* or double *offset*, and (c) sized in accordance with Sentence 7.5.7.5.(1). (2) The *yoke vent* shall be connected to the *soil* or *waste stack* by means of a drainage fitting at or immediately below the lowest *soil* or *waste pipe* from the lowest *storey* of the sections described in Sentence (1). (3) The *yoke vent* shall connect to the *vent stack* at least 1 000 mm above the floor level of the lowest *storey* in the section described in Sentence (1). (4) A *yoke vent* need not be installed provided the *soil* or *waste stack* is interconnected with the *vent stack* in each *storey* of the section in which *fixtures* are located by means of a *vent pipe* equal in *size* to the *branch* or *fixture drain* or 2 in. in *size*, whichever is smaller.	2.5.4.3. Yoke Vents	(1) Except as provided in Sentence (4), where *stack* receives the discharge from *fixtures* located on more than 11 *storeys*, a *yoke vent* shall be installed, (a) for each section of 5 *storeys* or part thereof counted from the top down, (b) at or immediately above each *offset* or double *offset*, and (c) sized in accordance with Sentence 7.5.7.5.(1). (2) The *yoke vent* shall be connected to the *stack* by means of a drainage fitting at or immediately below the lowest *sanitary drainage pipe* from the lowest *storey* of the sections described in Sentence (1). (3) The *yoke vent* shall connect to the *vent stack* at least 1 000 mm above the floor level of the lowest *storey* in the section described in Sentence (1). (4) A *yoke vent* need not be installed provided the *stack* is interconnected with the *vent stack* in each *storey* of the section in which *fixtures* are located by means of a *vent pipe* equal in *nominal pipe size* to the *branch* or *fixture drain* or *NPS* 2, whichever is smaller.	(1) Except as provided in Sentence (4), where ~~a *soil* or *waste*~~ *stack* receives the discharge from *fixtures* located on more than 11 *storeys*, a *yoke vent* shall be~~,~~ ~~(a)~~ installed, (a) for each section of 5 *storeys* or part ~~of them~~thereof counted from the top down, (b) ~~installed~~ at or immediately above each *offset* or double *offset*, and (c) sized in accordance with Sentence 7.5.7.5.(1). (2) The *yoke vent* shall be connected to the ~~*soil* or *waste*~~ *stack* by means of a drainage fitting at or immediately below the lowest ~~*soil* or *waste*~~*sanitary drainage pipe* from the lowest *storey* of the sections described in Sentence (1). (3) The *yoke vent* shall connect to the *vent stack* at least 1 000 mm above the floor level of the lowest *storey* in the section described in Sentence (1). (4) A *yoke vent* need not be installed provided the ~~*soil* or *waste*~~ *stack* is interconnected with the *vent stack* in each *storey* of the section in which *fixtures* are located by means of a *vent pipe* equal in *nominal pipe size* to the *branch* or *fixture drain* or *NPS* 2 ~~in. in *size*~~, whichever is smaller.	https://www.dropbox.com/s/9wr07y1v2c04yca/Proposed_Change_1253.pdf?dl=0
Soft Conversion	7.5.4.5. Fixtures Draining into Vent Pipes	(1) The *trap arm* of a *fixture* that has a hydraulic load of not more than 1½ *fixture units* may be connected to the vertical section of a *circuit vent*, *additional circuit vent*, *offset relief vent* or *yoke vent*, provided that, (a) not more than two *fixtures* are connected to the *vent pipe*, (b) where two *fixtures* are connected to the *vent pipe*, the connection is by means of a double fitting, in accordance with Table 7.2.4.5., and (c) the section of the *vent pipe* that acts as a *wet vent* conforms to the requirements regarding *wet vents*.	2.5.4.5. Fixtures Draining into Vent Pipes	(1) The *trap arm* of a *fixture* that has a hydraulic load of not more than 1½ *fixture units* may be connected to the vertical section of a *circuit vent*, *additional circuit vent*, *offset relief vent* or *yoke vent*, provided, (a) not more than two *fixtures* are connected to the *vent pipe*, (b) where two *fixtures* are connected to the *vent pipe*, the connection is by means of a double fitting, in accordance with Table 7.2.4.5., and (c) the section of the *vent pipe* that acts as a *wet vent* conforms to the requirements regarding *wet vents* and is not less than *NPS* 2.	(1) The *trap arm* of a *fixture* that has a hydraulic load of not more than 1½ *fixture units* may be connected to the vertical section of a *circuit vent*, *additional circuit vent*, *offset relief vent* or *yoke vent*, provided ~~that~~, (a) not more than two *fixtures* are connected to the *vent pipe*, (b) where two *fixtures* are connected to the *vent pipe*, the connection is by means of a double fitting, in accordance with Table 7.2.4.5., and (c) the section of the *vent pipe* that acts as a *wet vent* conforms to the requirements regarding *wet vents*~~.~~ and is not less than *NPS* 2.	https://www.dropbox.com/s/9wr07y1v2c04yca/Proposed_Change_1253.pdf?dl=0
Soft Conversion	7.5.5.2. Venting of Interceptors	(3) Where a secondary receiver for oil is installed in conjunction with an oil *interceptor*, it shall be vented in accordance with the manufacturer's recommendations, and the *vent pipe* shall, (a) in no case be less than 1½ in. in *size*, (b) extend independently to *open air*, and	2.5.5.2. Venting of Oil Interceptors	(3) Where a secondary receiver for oil is installed in conjunction with an oil *interceptor*, it shall be vented in accordance with the manufacturer's recommendations, and the *vent pipe* shall, (a) in no case be less than *NPS* 1½, (b) extend independently to *open air*, and	(3) Where a secondary receiver for oil is installed in conjunction with an oil *interceptor*, it shall be vented in accordance with the manufacturer's recommendations, and the *vent pipe* shall, (a) in no case be less than ~~1½ in. in *size*,~~*NPS* 1½, (b) extend independently to *open air*, and	https://www.dropbox.com/s/7tcarsufbw7ncma/Proposed_Change_1254.pdf?dl=0

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		(c) terminate not less than 2 000 mm above ground. (4) The *vent pipes* referred to in Sentence (1) are permitted to be one *size* smaller than the largest connected drainage pipe but not less than 1¼ in. in *size*, or can be sized in accordance with the manufacturer's recommendations. (5) Every *vent pipe* that serves an oil or grease *interceptor* and is located outside a *building* shall be not less than 3 in. in *size* in areas where it may be subject to frost closure. (6) Every grease *interceptor* shall have a *vent pipe* that is not less than 1½ in. in *size* connected to the outlet pipe, that connects to the *plumbing venting system*. (7) A *vent pipe* shall be provided within 1 500 mm of the inlet to a grease *interceptor* complete with a *cleanout* to provide cleaning of the *vent pipe*. (8) Where an acid waste dilution tank is installed, it shall be provided with a *vent pipe* connected at the top of the tank and that is sized in accordance with Article 7.5.7.7.		(c) terminate not less than 2 000 mm above ground. (4) The *vent pipes* referred to in Sentence (1) are permitted to be one *NPS* smaller than the largest connected drainage pipe but not less than *NPS* 1¼, or can be sized in accordance with the manufacturer's recommendations. (5) Every *vent pipe* that serves an oil or grease *interceptor* and is located outside a *building* shall be not less than *NPS* 3 in areas where it may be subject to frost closure. (6) Every grease *interceptor* shall have a *vent pipe* that is not less than *NPS* 1½ connected to the outlet pipe, that connects to the *plumbing venting system*. (7) A *vent pipe* shall be provided within 1 500 mm of the inlet to a grease *interceptor* complete with a *cleanout* to provide cleaning of the *vent pipe*. (8) Where an acid waste dilution tank is installed, it shall be provided with a *vent pipe* connected at the top of the tank and that is sized in accordance with Article 7.5.7.7.	(c) terminate not less than 2 000 mm above ground. (4) The *vent pipes* referred to in Sentence (1) are permitted to be one ~~*size*~~*NPS* smaller than the largest connected drainage pipe but not less than ~~1¼ in. in *size*,~~*NPS* 1¼, or can be sized in accordance with the manufacturer's recommendations. (5) Every *vent pipe* that serves an oil or grease *interceptor* and is located outside a *building* shall be not less than *NPS* 3 ~~in. in *size*~~ in areas where it may be subject to frost closure. (6) Every grease *interceptor* shall have a *vent pipe* that is not less than *NPS* 1½ ~~in. in *size*~~ connected to the outlet pipe, that connects to the *plumbing venting system*. (7) A *vent pipe* shall be provided within 1 500 mm of the inlet to a grease *interceptor* complete with a *cleanout* to provide cleaning of the *vent pipe*. (8) Where an acid waste dilution tank is installed, it shall be provided with a *vent pipe* connected at the top of the tank and that is sized in accordance with Article 7.5.7.7.	
Soft Conversion	7.5.5.4. Fresh Air Inlets	(1) Where a *building trap* is installed, a *fresh air inlet* not less than 4 in. in *size* shall be connected upstream and within 1 200 mm of the *building trap* and downstream of any other connection.	2.5.5.4. Fresh Air Inlets	(1) Where a *building trap* is installed, a *fresh air inlet* not less than *NPS* 4 shall be connected upstream and within 1 200 mm of the *building trap* and downstream of any other connection.	(1) Where a *building trap* is installed, a *fresh air inlet* not less than *NPS* 4 ~~in. in *size*~~ shall be connected upstream and within 1 200 mm of the *building trap* and downstream of any other connection.	https://www.dropbox.com/s/7tcarsufbw7ncma/Proposed_Change_1254.pdf?dl=0
Soft Conversion	7.5.5.5. Provision for Future Installations	(2) Except as required in Sentence 7.5.7.7.(2), where a *plumbing system* is installed in a *building*, every *storey* in which *plumbing* is or may be installed, including the *basement* of the *building*, shall have extended into it or passing through it a *vent pipe* that is at least 1½ in. in *size* for the provision of future connections.	2.5.5.5. Provision for Future Installations	(2) Except as required in Sentence 7.5.7.7.(2), where a *plumbing system* is installed in a *building*, every *storey* in which *plumbing* is or may be installed, including the *basement* of the *building*, shall have extended into it or passing through it a *vent pipe* that is at least *NPS* 1½ for the provision of future connections.	(2) Except as required in Sentence 7.5.7.7.(2), where a *plumbing system* is installed in a *building*, every *storey* in which *plumbing* is or may be installed, including the *basement* of the *building*, shall have extended into it or passing through it a *vent pipe* that is at least *NPS* 1½ ~~in. in *size*~~ for the provision of future connections.	https://www.dropbox.com/s/7tcarsufbw7ncma/Proposed_Change_1254.pdf?dl=0
Piping and Transfer Systems	7.5.5.3. Venting of Corrosive Drain Piping and Dilution Tanks	(1) *Venting systems* for drain piping or dilution tanks conveying corrosive waste shall extend independently and terminate in *open air*.	2.5.5.3. Venting of Drain Piping and Tanks for Corrosive Waste	(1) *Venting systems* for drain piping, neutralizing tanks, or dilution tanks conveying corrosive waste shall extend independently and terminate in *open air*. (See Article 7.5.7.7. for sizing of these vents)	(1) *Venting systems* for drain piping, neutralizing tanks, or dilution tanks conveying corrosive waste shall extend independently and terminate in *open air*. (See Article 7.5.7.7. for sizing of these vents)	https://www.dropbox.com/s/d6su34pkwpv8pm1/Proposed_Change_993.pdf?dl=0
Soft Conversion	7.5.6.3. Location of Vent Pipes	(1) Except as provided in Sentences (2) and (3), a *vent pipe* that protects a *fixture trap* shall be located so that, (a) the *developed length* of the *trap arm* is not less than twice the *size* of the *fixture drain*, (b) the total fall of the *trap arm* is not greater than its inside diameter, and	2.5.6.3. Location of Vent Pipes	(1) Except as provided in Sentences (2) and (3), *vent pipes* that protects a *fixture trap* shall be located so that, (a) the *developed length* of the *trap arm* is not less than twice the *NPS* of the *fixture drain*, (b) the total fall of the *trap arm* is not greater than its inside diameter, and	(1) Except as provided in Sentences (2) and (3), ~~a~~ *vent* ~~*pipe*~~*pipes* that protects a *fixture trap* shall be located so that, (a) the *developed length* of the *trap arm* is not less than twice the ~~*size*~~*NPS* of the *fixture drain*, (b) the total fall of the *trap arm* is not greater than its inside diameter, and	https://www.dropbox.com/s/kzhi1rmmskhmulk/Proposed_Change_1255.pdf?dl=0

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		(c) the *trap arm* does not have a cumulative change in direction of more than 135°. (2) The *trap arm* of water closets, S-*trap standards* or any other *fixture* that also discharges vertically and depends on siphonic action for its proper functioning shall not have a cumulative change in direction of more than 225°. (3) A *vent pipe* that protects a water closet or any other *fixture* that also depends on siphonic action for its proper functioning shall be located so that the distance between the connections of the *fixture drain* to the *fixture* and the *vent pipe* shall not exceed, (a) 1 000 mm in the vertical plane, and (b) 3 m in the horizontal plane. (4) The maximum length and minimum slope of every *trap arm* shall conform to Table 7.5.6.3. (5) The *vent pipe* from a water closet or any other *fixture* that has an integral siphonic flushing action may be connected to the *vertical leg* of its drainage pipe.		(c) the *trap arm* does not have a cumulative change in direction of more than 135°. (2) The *trap arm* of water closets, S-*trap standards* or any other *fixture* that also discharges vertically and depends on siphonic action for its proper functioning shall not have a cumulative change in direction of more than 225°. (3) A *vent pipe* that protects a water closet or any other *fixture* that also depends on siphonic action for its proper functioning shall be located so that the distance between the connections of the *fixture drain* to the *fixture* and the *vent pipe* shall not exceed, (a) 1 000 mm in the vertical plane, and (b) 3 m in the horizontal plane. (4) The maximum length and minimum slope of every *trap arm* shall conform to Table 7.5.6.3. (5) The *vent pipe* from a water closet or any other *fixture* that has an integral siphonic flushing action may be connected to the *vertical leg* of its drainage pipe.	(c) the *trap arm* does not have a cumulative change in direction of more than 135°. (2) The *trap arm* of water closets, S-*trap standards* or any other *fixture* that also discharges vertically and depends on siphonic action for its proper functioning shall not have a cumulative change in direction of more than 225°. (3) A *vent pipe* that protects a water closet or any other *fixture* that also depends on siphonic action for its proper functioning shall be located so that the distance between the connections of the *fixture drain* to the *fixture* and the *vent pipe* shall not exceed, (a) 1 000 mm in the vertical plane, and (b) 3 m in the horizontal plane. (4) The maximum length and minimum slope of every *trap arm* shall conform to Table 7.5.6.3. (5) The *vent pipe* from a water closet or any other *fixture* that has an integral siphonic flushing action may be connected to the *vertical leg* of its drainage pipe.	
Soft Conversion	7.5.6.5. Terminals	(3) Where a *vent pipe* is installed as a result of additions or alterations to a *plumbing system* in an existing *building*, the *vent pipe* may be erected outside the *building*, provided that, (a) no single change of direction of the *vent pipe* exceeds 45°, (b) all parts of the *vent pipe* are *nominally vertical*, (c) the *vent pipe* is increased to not less than 3 in. in *size* before penetrating a wall or roof, and (d) where the *building* is 4 *storeys* or less in height, the *vent pipe* terminates above the roof of the *building*. (6) Where a *vent pipe* passes through a roof or an outside wall of a *building*, it shall be protected from frost closure by increasing its diameter at least one *size*, but not less than 3 in. in *size*, immediately before it penetrates the roof or the wall.	2.5.6.5. Terminals	(3) Where a *vent pipe* is installed as a result of additions or alterations to a *plumbing system* in an existing *building*, a *vent pipe* is permitted to be erected outside a *building*, provided that, (a) no single change in direction of the *vent pipe* exceeds 45°, (b) all parts of the *vent pipe* are *nominally vertical*, (c) in areas where the *vent pipe* may be subject to frost closure, it is increased to not less than *NPS* 3 before penetrating a wall or roof, and (d) where the *building* is 4 *storeys* or less in height, the *vent pipe* terminates above the roof of the *building*. (6) Where a *vent pipe* passes through a roof or an outside wall of a *building* and may be subject to frost closure, it shall be protected from frost closure by (a) increasing its diameter at least one *NPS*, but not less than *NPS* 3, immediately before it penetrates the roof or the wall, (b) insulating the pipe, or (c) protecting it in some other manner.	(3) Where a *vent pipe* is installed as a result of additions or alterations to a *plumbing system* in an existing *building*, ~~the~~a *vent pipe* ~~may~~is permitted to be erected outside ~~the~~a *building*, provided that, (a) no single change ~~of~~in direction of the *vent pipe* exceeds 45°, (b) all parts of the *vent pipe* are *nominally vertical*, (c) in areas where the *vent pipe* may be subject to frost closure, it is increased to not less than *NPS* 3 ~~in. in size~~ before penetrating a wall or roof, and (d) where the *building* is 4 *storeys* or less in height, the *vent pipe* terminates above the roof of the *building*. (6) Where a *vent pipe* passes through a roof or an outside wall of a *building* and may be subject to frost closure, it shall be protected from frost closure by (a) increasing its diameter at least one ~~size~~*NPS*, but not less than *NPS* 3 ~~in. in size~~, immediately before it penetrates the roof or the wall, (b) insulating the pipe, or (c) protecting it in some other manner.	https://www.dropbox.com/s/kzhi1rmmskhmulk/Proposed_Change_1255.pdf?dl=0

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Soft Conversion	7.5.7.1. General	(1) The *size* of every *vent pipe* shall conform to Table 7.5.7.1.	2.5.7.1. General	(1) The *nominal pipe size* of every *vent pipe* shall conform to Table 7.5.7.1.	(1) The *nominal pipe* *size* of every *vent pipe* shall conform to Table 7.5.7.1.	https://www.dropbox.com/s/e6et6w9j0tysns6/Proposed_Change_1256.pdf?dl=0 https://www.dropbox.com/s/gwbpx9t6b381h04/Proposed_Change_994.pdf?dl=0
Soft Conversion	7.5.7.2. Size Restriction	(1) The *size* of a *branch vent*, *stack vent*, *vent stack* or *header* shall be not less than the *size* of the *vent pipe* to which it is connected. (2) Every *sanitary building drain* shall terminate at its upstream end in a stack of at least 3 in. *size*. (3) A stack referred to in Sentence (2) shall be a *soil stack* if one is available and may be a *vent stack* or *waste stack* that provides at least 3 in. *stack vent* and that goes to *open air* above the roof, either directly or through a *header*.	2.5.7.2. Size Restriction	(1) The *nominal pipe size* of a *branch vent*, *stack vent*, *vent stack* or *header* shall be not less than the *nominal pipe size* of the *vent pipe* to which it is connected. (2) Every *sanitary building drain* shall terminate at its upstream end in a *stack* of at least *NPS* 3. (3) A stack referred to in Sentence (2) shall be a *soil stack* if one is available and may be a *vent stack* or *waste stack* that provides at least a *stack vent* of *NPS* 3 and that goes to *open air* above the roof, either directly or through a *header*.	(1) The *nominal pipe* *size* of a *branch vent*, *stack vent*, *vent stack* or *header* shall be not less than the *nominal pipe* *size* of the *vent pipe* to which it is connected. (2) Every *sanitary building drain* shall terminate at its upstream end in a *stack* of at least *NPS* 3 ~~*in. size*~~. (3) A stack referred to in Sentence (2) shall be a *soil stack* if one is available and may be a *vent stack* or *waste stack* that provides at least ~~3 in.~~a *stack vent* of *NPS* 3 and that goes to *open air* above the roof, either directly or through a *header*.	https://www.dropbox.com/s/e6et6w9j0tysns6/Proposed_Change_1256.pdf?dl=0 https://www.dropbox.com/s/gwbpx9t6b381h04/Proposed_Change_994.pdf?dl=0
Soft Conversion	7.5.7.3. Additional Circuit Vents and Relief Vents	(1) Except as provided in Article 7.5.7.1. and in Sentence 7.5.3.1.(7), the minimum *size* of an *additional circuit vent* or *relief vent* installed in conjunction with a *circuit vent* is permitted to be one *size* smaller than the required *size* of the *circuit vent*, but need not be larger than 2 in. (2) The *size* of the *soil* or *waste pipe* acting as a *relief vent* in accordance with Sentence 7.5.3.1.(4) shall be in conformance with Table 7.4.10.6., 7.4.10.7. or 7.5.8.1. or Article 7.5.7.1., whichever *size* is the largest considering the hydraulic load drained into the *soil* or *waste pipe*.	2.5.7.3. Additional Circuit Vents and Relief Vents	(1) Except as provided in Article 7.5.7.1. and in Sentence 7.5.3.1.(7), the minimum *nominal pipe size* of an *additional circuit vent* or *relief vent* installed in conjunction with a *circuit vent* is permitted to be one *NPS* ~~*size*~~ smaller than the required *nominal pipe size* of the *circuit vent*, but need not be larger than *NPS* 2. (2) The *nominal pipe size* of the *sanitary drainage pipe* acting as a *relief vent* in accordance with Sentence 7.5.3.1.(4) shall be in conformance with Table 7.4.10.6., 7.4.10.7. or 7.5.8.1. or Article 7.5.7.1., whichever *nominal pipe size* is the largest considering the hydraulic load drained into the *sanitary drainage pipe*.	(1) Except as provided in Article 7.5.7.1. and in Sentence 7.5.3.1.(7), the minimum *nominal pipe* *size* of an *additional circuit vent* or *relief vent* installed in conjunction with a *circuit vent* is permitted to be one *NPS* ~~*size*~~ smaller than the required *nominal pipe* *size* of the *circuit vent*, but need not be larger than *NPS* 2 ~~in~~. (2) The *nominal pipe* *size* of the ~~*soil or waste*~~*sanitary drainage pipe* acting as a *relief vent* in accordance with Sentence 7.5.3.1.(4) shall be in conformance with Table 7.4.10.6., 7.4.10.7. or 7.5.8.1. or Article 7.5.7.1., whichever *nominal pipe* *size* is the largest considering the hydraulic load drained into the ~~*soil or waste*~~*sanitary drainage pipe*.	https://www.dropbox.com/s/e6et6w9j0tysns6/Proposed_Change_1256.pdf?dl=0 https://www.dropbox.com/s/gwbpx9t6b381h04/Proposed_Change_994.pdf?dl=0
Soft Conversion	7.5.7.6. Vent Pipes for Manholes	(1) The minimum *size* of a *vent pipe* that serves a manhole within a *building* shall be 2 in.	2.5.7.6. Vent Pipes for Manholes	(1) The minimum *nominal pipe size* of a *vent pipe* that serves a manhole within a *building* shall be *NPS* 2.	(1) The minimum *nominal pipe* *size* of a *vent pipe* that serves a manhole within a *building* shall be *NPS* 2 ~~in~~.	https://www.dropbox.com/s/e6et6w9j0tysns6/Proposed_Change_1256.pdf?dl=0 https://www.dropbox.com/s/gwbpx9t6b381h04/Proposed_Change_994.pdf?dl=0
Soft Conversion	7.5.7.7. Vents for Sanitary Sewage Sumps or Tanks,	(1) Except as provided in Sentences (2) and (3), the minimum *size* of the *vent pipe* for a *sanitary sewage* sump or tank, or dilution tank shall be one *size*	2.5.7.7. Vents for Sewage Sumps, Neutralizing and	(1) Except as provided in Sentences (2) and (3), the minimum *nominal pipe size* of the *vent pipe* for a *sewage* sump or neutralizing~~,~~ or dilution tank shall be	(1) Except as provided in Sentences (2) and (3), the minimum *nominal pipe* *size* of the *vent pipe* for a ~~*sanitary*~~ *sewage* sump or ~~tank~~neutralizing~~,~~ or dilution tank shall be one *NPS* ~~*size*~~ smaller than the ~~*size*~~*NPS*	https://www.dropbox.com/s/e6et6w9j0tysns6/Proposed_Change_1256.pdf?dl=0

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	Dilution Tanks and Macerating Toilet Systems	smaller than the *size* of the largest *branch* or *fixture drain* draining to the sump or tank. (2) The *size* of every *vent pipe* for a *sanitary sewage* sump or tank, or dilution tank shall be not less than 2 in., but need not be greater than 4 in. (3) The *size* of every *vent pipe* for a macerating toilet system with a sump or tank shall be not less than 1 ½ in	Dilution Tanks, and Macerating Toilet Systems	one *NPS* ~~*size*~~ smaller than the *NPS* of the largest *branch* or *fixture drain* draining to the sump or tank. (2) The *nominal pipe size* of every *vent pipe* for a *sewage* sump or neutralizing~~,~~ or dilution tank shall be not less than *NPS* 2-but need not be greater than *NPS* 4. (3) The *nominal pipe size* of a *vent pipe* for a macerating toilet system with a sump or tank shall be not less than *NPS* 1 ½.	of the largest *branch* or *fixture drain* draining to the sump or tank. (2) The *nominal pipe size* of every *vent pipe* for a ~~*sanitary*~~ *sewage* sump or ~~tank~~neutralizing~~,~~ or dilution tank shall be not less than *NPS* 2~~ in.,~~ but need not be greater than *NPS* 4~~ in~~. (3) The *nominal pipe size* of ~~every~~a *vent pipe* for a macerating toilet system with a sump or tank shall be not less than *NPS* 1 ~~½ in.~~½.	https://www.dropbox.com/s/gwbpx9t6b381h04/Proposed_Change_994.pdf?dl=0
Soft Conversion	7.5.7.4. Offset Relief Vents	(1) Except as provided in Article 7.5.7.1., the minimum *size* of an *offset relief vent* is permitted to be one *size* smaller than the *size* of the *stack vent*.	2.5.7.4. Offset Relief Vents	(1) Except as provided in Article 7.5.7.1., the minimum *nominal pipe size* of an *offset relief vent* is permitted to be one *NPS* smaller than the *NPS* of the *stack vent*.	(1) Except as provided in Article 7.5.7.1., the minimum *nominal pipe size* of an *offset relief vent* is permitted to be one ~~*size*~~*NPS* smaller than the ~~*size*~~*NPS* of the *stack vent*.	https://www.dropbox.com/s/e6et6w9j0tysns6/Proposed_Change_1256.pdf?dl=0
Soft Conversion	7.5.7.5. Yoke Vents	(1) *Yoke vents* required by Sentence 7.5.4.3.(1) are permitted to be one *size* smaller than the *size* of the smallest pipe to which they are connected.	2.5.7.5. Yoke Vents	(1) *Yoke vents* required by Sentence 7.5.4.3.(1) are permitted to be one *NPS* smaller than the *NPS* of the smallest pipe to which they are connected.	(1) *Yoke vents* required by Sentence 7.5.4.3.(1) are permitted to be one ~~*size*~~*NPS* smaller than the ~~*size*~~*NPS* of the smallest pipe to which they are connected.	https://www.dropbox.com/s/e6et6w9j0tysns6/Proposed_Change_1256.pdf?dl=0
Soft Conversion	7.5.8.1. Hydraulic Loads Draining to Wet Vents	(1) The hydraulic load that drains to a *wet vent* shall conform to Table 7.5.8.1. (2) When determining the *size* of a *wet vent*, the hydraulic load from the most downstream *fixture* or symmetrically connected *fixtures* shall not be included.	2.5.8.1. Hydraulic Loads Draining to Wet Vents	(1) The hydraulic load that drains to a *wet vent* shall conform to Table 7.5.8.1. (2) When determining the *nominal pipe size* of a *wet vent*, the hydraulic load from the most downstream *fixture* or symmetrically connected *fixtures* shall not be included.	(1) The hydraulic load that drains to a *wet vent* shall conform to Table 7.5.8.1. (2) When determining the *nominal pipe* *size* of a *wet vent*, the hydraulic load from the most downstream *fixture* or symmetrically connected *fixtures* shall not be included.	https://www.dropbox.com/s/l5lfxthozrmposq/Proposed_Change_1.pdf?dl=0
Soft Conversion	7.5.8.2. Individual Vents and Dual Vents	(1) The *size* of *individual vents* and *dual vents* shall be determined using Table 7.5.7.1. according to the largest *trap* served.	2.5.8.2. Individual Vents and Dual Vents	(1) The *nominal pipe size* of *individual vents* and *dual vents* shall be determined using Table 7.5.7.1. based on ~~to~~ the largest *trap* served.	(1) The *nominal pipe* *size* of *individual vents* and *dual vents* shall be determined using Table 7.5.7.1. ~~according~~based on ~~to~~ the largest *trap* served.	https://www.dropbox.com/s/l5lfxthozrmposq/Proposed_Change_1.pdf?dl=0
Soft Conversion	7.5.8.3. Branch Vents, Headers, Continuous Vents and Circuit Vents	(1) *Branch vents*, *header*s, *circuit vents* and *continuous vents* shall be sized in accordance with Table 7.5.8.3., unless they are *individual vents* or *dual vents*. (2) For the purposes of Table 7.5.8.3., the length of a *branch vent* shall be its *developed length* from the most distant *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*. (3) For the purposes of Table 7.5.8.3., the length of a *header* shall be its *developed length* from the most distant *soil* or *waste pipe* connection to *open air*. (4) For the purposes of Table 7.5.8.3., the length of a *circuit vent* shall be its *developed length* from the horizontal *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*. (5) For the purposes of Table 7.5.8.3., the length of a *continuous vent* shall be its *developed length* from the	2.5.8.3. Branch Vents, Vent Headers, Continuous Vents and Circuit Vents	(1) *Branch vents*, *header*s, *circuit vents* and *continuous vents* shall be sized in accordance with Table 7.5.8.3., unless they are *individual vents* or *dual vents*. (2) For the purposes of Table 7.5.8.3., the length of a *branch vent* shall be its *developed length* from the most distant *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*. (3) For the purposes of Table 7.5.8.3., the length of a *header* shall be its *developed length* from the most distant *sanitary drainage pipe* connection to *open air*. (4) For the purposes of Table 7.5.8.3., the length of a *circuit vent* shall be its *developed length* from the horizontal *sanitary drainage pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*. (5) For the purposes of Table 7.5.8.3., the length of a *continuous vent* shall be its *developed length* from	(1) *Branch vents*, *header*s, *circuit vents* and *continuous vents* shall be sized in accordance with Table 7.5.8.3., unless they are *individual vents* or *dual vents*. (2) For the purposes of Table 7.5.8.3., the length of a *branch vent* shall be its *developed length* from the most distant *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*. (3) For the purposes of Table 7.5.8.3., the length of a *header* shall be its *developed length* from the most distant ~~*soil or waste*~~*sanitary drainage* *pipe* connection to *open air*. (4) For the purposes of Table 7.5.8.3., the length of a *circuit vent* shall be its *developed length* from the horizontal ~~*soil or waste*~~*sanitary drainage* *pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*.	https://www.dropbox.com/s/l5lfxthozrmposq/Proposed_Change_1.pdf?dl=0

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		vertical *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*.		the vertical *sanitary drainage pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*.	(5) For the purposes of Table 7.5.8.3., the length of a *continuous vent* shall be its *developed length* from the vertical ~~*soil or waste*~~*sanitary drainage pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*.	
Soft Conversion	7.5.8.4. Vent Stacks, or Stack Vents	(1) A *vent stack*, or *stack vent* shall be sized in accordance with Table 7.5.8.4. based on, (a) the length of the *vent stack* or *stack vent*, and (b) the total hydraulic load that is drained to the lowest section of *soil* or *waste stack* or stacks served by the *vent pipe*, plus any additional vent loads connected to the *vent stack* or *stack vent*. (2) For the purposes of Table 7.5.8.4., the length of a *stack vent* or *vent stack* shall be its *developed length* from its lower end to *open air*. (3) The minimum *size* of *vent stack* or *stack vent* shall be one-half the *size* of the *soil* or *waste stack* at its base. (4) A *stack vent* serving a *wet vent* stack that is over 4 *storeys* high shall extend the full *size* of the *wet vent* to *open air*. (5) Every *sanitary building drain* shall be provided with at least one *vent* that is not less than 3 in. in *size*.	2.5.8.4. Vent Stacks or Stack Vents	(1) A *vent stack*, or *stack vent* shall be sized in accordance with Table 7.5.8.4. based on, (a) the length of the *vent stack* or *stack vent*, and (b) the total hydraulic load that is drained to the lowest section of *stack* served by the *vent pipe*, plus any additional vent loads connected to the *vent stack* or *stack vent*. (2) For the purposes of Table 7.5.8.4., the length of a *stack vent* or *vent stack* shall be its *developed length* from its lower end to *open air*. (3) The minimum *nominal pipe size* of *vent stack* or *stack vent* shall be one-half the *NPS* of the *stack* at its base. (4) A *stack vent* serving a *wet vent* stack that is over 4 *storeys* high shall extend the full *size* of the *wet vent* to *open air*. (5) *Sanitary building drains* shall be provided with at least one *vent* that is not less than *NPS* 3.	(1) A *vent stack*, or *stack vent* shall be sized in accordance with Table 7.5.8.4. based on, (a) the length of the *vent stack* or *stack vent*, and (b) the total hydraulic load that is drained to the lowest section of ~~*soil or waste*~~ *stack* ~~or stacks~~ served by the *vent pipe*, plus any additional vent loads connected to the *vent stack* or *stack vent*. (2) For the purposes of Table 7.5.8.4., the length of a *stack vent* or *vent stack* shall be its *developed length* from its lower end to *open air*. (3) The minimum *nominal pipe size* of *vent stack* or *stack vent* shall be one-half the ~~*size*~~*NPS* of the ~~*soil or waste*~~ *stack* at its base. (4) A *stack vent* serving a *wet vent* stack that is over 4 *storeys* high shall extend the full *size* of the *wet vent* to *open air*. (5) ~~Every *sanitary*~~*Sanitary building* ~~*drain*~~*drains* shall be provided with at least one *vent* that is not less than ~~3 in. in *size*.~~*NPS* 3.	https://www.dropbox.com/s/l5lfxthozrmposq/Proposed_Change_1.pdf?dl=0
Soft Conversion	7.6.1.15. Mobile Home Water Service	(1) A *water service pipe* intended to serve a mobile home shall, (a) be not less than ¾ in. in *size*, …	2.6.1.10. Mobile Home Water Service	(1) A *water service pipe* intended to serve a mobile home shall, (a) be not less than *NPS* ¾, …	(1) A *water service pipe* intended to serve a mobile home shall, (a) be not less than ~~¾ in. in *size*,~~*NPS* ¾, …	https://www.dropbox.com/s/zeohwc4rqufzdqc/Proposed_Change_1258.pdf?dl=0
Soft Conversion	7.6.3.2. Hydraulic Load	(Tables 7.6.3.2.A and 7.6.3.2.D.)	2.6.3.2. Hydraulic Load	(Tables 2.6.3.2.-A and 2.6.3.2.-D.)	(see the Tables for the changes)	https://www.dropbox.com/s/zeohwc4rqufzdqc/Proposed_Change_1258.pdf?dl=0
Soft Conversion	7.6.3.4. Size	(1) Every *water service pipe* shall be sized according to the peak demand flow but shall not be less than ¾ in. in *size*. (2) Except as permitted in Sentence (3), the *size* of a supply pipe that serves a *fixture* or device shall conform to Table 7.6.3.2.A. (3) For *fixtures* listed in Table 7.6.3.2.A that have a permitted supply pipe *size* of ⅜ in., a connector not more than 750 mm long and not less than 6.3 mm	2.6.3.4. Size	(1) *Water service pipes* shall be sized according to the peak demand flow but shall not be less than *NPS* ¾. (2) Except as permitted in Sentence (3), the *nominal pipe size* of a supply pipe that serves a *fixture* or device shall conform to Table 7.6.3.2.A. (3) For *fixtures* listed in Table 7.6.3.2.A that are permitted to have an *NPS* ⅜ supply pipe, a connector not more than 750 mm long and not less than NPS ¼ may be used to supply water to the *fixture* or device.	(1) ~~Every *water*~~*Water service* ~~*pipe*~~*pipes* shall be sized according to the peak demand flow but shall not be less than ~~¾ in. in *size*.~~*NPS* ¾. (2) Except as permitted in Sentence (3), the *nominal pipe size* of a supply pipe that serves a *fixture* or device shall conform to Table 7.6.3.2.A. (3) For *fixtures* listed in Table 7.6.3.2.A that ~~have a~~are permitted to have an *NPS* ⅜ supply pipe ~~*size of* ⅜ in.,~~ a connector not more than 750 mm long and	https://www.dropbox.com/s/zeohwc4rqufzdqc/Proposed_Change_1258.pdf?dl=0

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		inside diameter may be used to supply water to the *fixture* or device. (4) No *water system* between the point of connection with the *water service pipe* or the water meter and the first branch that supplies a water heater that serves more than one *fixture* shall be less than ¾ in. in *size*. (5) Where both hot and cold water is supplied to *fixtures* in residential *buildings* containing more than one *dwelling unit*, the *water system* may be sized in accordance with Table 7.6.3.4. provided, (a) the hydraulic loads for maximum separate demands on *water distribution system* piping are not less than 100% of the total hydraulic load of the *fixture units* given in Tables 7.6.3.2.A., 7.6.3.2.B., 7.6.3.2.C. and 7.6.3.2.D. for *private use*, (b) the minimum water pressure at the entry to the *building* is 200 kPa, and (c) the total maximum length of the *water system* is 90 m. (6) Where both hot and cold water is supplied to *fixtures* in a *house* containing only one *dwelling unit*, the *water service pipe* is permitted to be a minimum of ¾ in. in *size* provided, (a) a minimum ¾ in. water supply piping located in the *basement* or lower level is extended to the base of every hot and cold *riser* that serves a maximum of one *bathroom group* and to the last water supply branch serving any *basement bathroom group*, *fixture* supply or hose bibb, and (b) the total hydraulic load is not more than 26 *fixture units*, using the values given in Table 7.6.3.2.A.		(4) No *water system* between the point of connection with the *water service pipe* or the water meter and the first water distribution pipe that supplies a water heater that serves more than one *fixture* shall be sized less than *NPS* ¾. (5) Where both hot and cold water is supplied to *fixtures* in residential *buildings* containing one or two *dwelling units* or row houses with separate *water service pipes*, the *water system* may be sized in accordance with Table 7.6.3.4., where (a) the hydraulic loads for maximum separate demands on *water distribution system* piping are not less than 100% of the total hydraulic load of the *fixture units* given in Table 7.6.3.2.A, 7.6.3.2.B, 7.6.3.2.C or 7.6.3.2.D for *private use*, (b) the minimum water pressure at the entry to the *building* is 200 kPa, and (c) the total maximum length of the *water system* is 90 m. (6) Where both hot and cold water is supplied to *fixtures* in a *house* containing only one *dwelling unit*, the *water service pipe* is permitted to be a minimum of *NPS* ¾ provided, (a) a minimum *NPS* ¾ water supply piping located in the *basement* or lower level is extended to the base of every hot and cold *riser* that serves a maximum of one *bathroom group* and to the last water supply branch serving any *basement bathroom group*, *fixture* supply or hose bibb, and (b) the total hydraulic load is not more than 26 *fixture units*, using the values given in Table 7.6.3.2.A.	not less than ~~6.3 mm inside diameter~~*NPS* ¼ may be used to supply water to the *fixture* or device. (4) No *water system* between the point of connection with the *water service pipe* or the water meter and the first ~~branch~~water distribution pipe that supplies a water heater that serves more than one *fixture* shall be sized less than ~~¾ in. in *size*.~~*NPS* ¾. (5) Where both hot and cold water is supplied to *fixtures* in residential *buildings* containing ~~more than~~ one or two *dwelling* ~~*unit*~~*units* or row houses with separate *water service pipes*, the *water system* may be sized in accordance with Table 7.6.3.4 ~~.~~(Please note the entire current Table 7.6.3.4. in OBC is proposed to be replaced by NPC 2020 Table 2.6.3.4. For the Table 2.6.3.4. content, please refer to National PCF) ~~provided,~~ where (a) the hydraulic loads for maximum separate demands on *water distribution system* piping are not less than 100% of the total hydraulic load of the *fixture units* given in ~~Tables~~Table 7.6.3.2.A~~.,~~, 7.6.3.2.B~~.,~~, 7.6.3.2.C~~. and~~ or 7.6.3.2.D~~.~~ for *private use*, (b) the minimum water pressure at the entry to the *building* is 200 kPa, and (c) the total maximum length of the *water system* is 90 m. (6) Where both hot and cold water is supplied to *fixtures* in a *house* containing only one *dwelling unit*, the *water service pipe* is permitted to be a minimum of ~~¾ in. in *size*~~*NPS* ¾ provided, (a) a minimum ~~¾ in.~~*NPS* ¾ water supply piping located in the *basement* or lower level is extended to the base of every hot and cold *riser* that serves a maximum of one *bathroom group* and to the last water supply branch serving any *basement bathroom group*, *fixture* supply or hose bibb, and (b) the total hydraulic load is not more than 26 *fixture units*, using the values given in Table 7.6.3.2.A.	
Other	7.6.2.4. Backflow from Fire Protection Systems	(2) Except as required in Sentence (4), *potable water system* connections to fire sprinkler and standpipe systems shall be protected against *backflow* caused by *back-siphonage* or *back pressure* in conformance with the following Clauses: (a) *Residential partial flow through fire sprinkler systems* in which the pipes and fittings are constructed of *potable water system* materials shall be protected by a dual *check valve backflow preventer* conforming to CSA	2.6.2.4. Backflow from Fire Protection Systems	(2) Except as required by Sentence (4), *potable water system* connections to fire sprinkler and standpipe systems shall be protected against *backflow* caused by *back-siphonage* or *back pressure* in conformance with Clauses (a) to (g), as applicable: (a) *residential partial flow-through fire sprinkler/standpipe systems* in which the pipes and fittings are constructed of *potable water system* materials shall be protected by a	(2) Except as required ~~in~~by Sentence (4), *potable water system* connections to fire sprinkler and standpipe systems shall be protected against *backflow* caused by *back-siphonage* or *back pressure* in conformance with ~~the following~~ Clauses~~:~~ (a) to (g), as applicable: (a) ~~*Residential*~~*residential partial flow-through fire sprinkler/standpipe systems* in which the pipes and fittings are constructed of *potable water system* materials shall be protected by a	https://www.dropbox.com/s/lv4krgec1swgydz/Proposed_Change_975.pdf?dl=0

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		B64.6.1, "Dual Check Valve Backflow Preventers for Fire Protection Systems (DuCF)", (b) *Class 1 fire sprinkler/standpipe systems* shall be protected by a single *check valve backflow preventer* conforming to CSA B64.9, "Single Check Valve Backflow Preventers for Fire Protection Systems (SCVAF)", provided that the systems do not use antifreeze or other additives of any kind and all pipes and fittings are constructed of *potable water system* materials, (c) *Class 1 fire sprinkler/standpipe systems* not covered by Clause (b) as well as *Class 2* and *Class 3 fire sprinkler/standpipe systems* shall be protected by a double *check valve backflow preventer* conforming to CSA B64.5.1, "Double Check Valve Backflow Preventers for Fire Protection Systems (DCVAF)", provided that the systems do not use antifreeze or other additives of any kind, (d) *Class 1, Class 2* or *Class 3 fire sprinkler/standpipe systems*, in which antifreeze or other additives are used, shall be protected by a reduced pressure principle *backflow preventer* conforming to CSA B64.4.1, "Reduced Pressure Principle Backflow Preventers for Fire Protection Systems (RPF)", installed on the portion of the system that uses the additives and the balance of the system shall be protected as required by Clause (b) or (c), (e) *Class 4* and *Class 5 fire sprinkler/standpipe systems* shall be protected by a reduced pressure principle *backflow preventer* conforming to CSA B64.4.1, "Reduced Pressure Principle Backflow Preventers for Fire Protection Systems (RPF)", (f) *Class 6 fire sprinkler/standpipe systems* shall be protected, (i) by a double *check valve backflow preventer* conforming to CSA B64.5.1, "Double Check Valve Backflow Preventers for Fire Protection Systems (DCVAF)", or (ii) where a severe hazard may be caused by *backflow*, by a reduced pressure principle *backflow preventer* conforming to CSA B64.4.1, "Reduced Pressure Principle		dual *check valve backflow preventer* conforming to (i) CSA B64.6, "Dual check valve (DuC) backflow preventers," or (ii) CSA B64.6.1, "Dual check valve backflow preventers for fire protection systems (DuCF)," (b) provided that the systems do not use antifreeze or other additives of any kind and that all pipes and fittings are constructed of *potable water system* materials, *Class 1 fire sprinkler/standpipe systems* shall be protected by a single or dual *check valve backflow preventer* conforming to (i) CSA B64.6, "Dual check valve (DuC) backflow preventers," or (ii) CSA B64.9, "Single check valve backflow preventers for fire protection systems (SCVAF)," (c) provided that the systems do not use antifreeze or other additives of any kind, *Class 1 fire sprinkler/standpipe systems* not covered by Clause (b) as well as *Class 2* and *Class 3 fire sprinkler/standpipe systems* shall be protected by a double *check valve backflow preventer* conforming to (i) CSA B64.5, "Double check valve (DCVA) backflow preventers," or (ii) CSA B64.5.1, "Double check valve backflow preventers for fire protection systems (DCVAF)," (d) *Class 1, Class 2* and *Class 3 fire sprinkler/standpipe systems* in which antifreeze or other additives are used shall be protected by a reduced pressure principle *backflow preventer* conforming to (i) CSA B64.4, "Reduced pressure principle (RP) backflow preventers," or (ii) CSA B64.4.1, "Reduced pressure principle backflow preventers for fire protection systems (RPF)," installed on the portion of the system that uses the additives and the balance of the system shall be protected as required by Clause (b) or (c), (e) *Class 4* and *Class 5 fire sprinkler/standpipe systems* shall be protected by a reduced	dual *check valve backflow preventer* conforming to ~~CSA B64.6.1, "Dual Check Valve Backflow Preventers for Fire Protection Systems (DuCF)",~~ (~~b) *Class 1 fire sprinkler/standpipe systems* shall be protected by a single *check valve backflow preventer* conforming to CSA B64.9, "Single Check Valve Backflow Preventers~~i) CSA B64.6, "Dual check valve (DuC) backflow preventers," or (ii) CSA B64.6.1, "Dual check valve backflow preventers for ~~Fire Protection Systems (SCVAF)",~~fire protection systems (DuCF)," (b) provided that the systems do not use antifreeze or other additives of any kind and that all pipes and fittings are constructed of *potable water system* materials, *Class 1 fire sprinkler/standpipe systems* shall be protected by a single or dual *check valve backflow preventer* conforming to ~~(c)~~(i) CSA B64.6, "Dual check valve (DuC) backflow preventers," or (ii) CSA B64.9, "Single check valve backflow preventers for fire protection systems (SCVAF)," (c) provided that the systems do not use antifreeze or other additives of any kind, *Class 1 fire sprinkler/standpipe systems* not covered by Clause (b) as well as *Class 2* and *Class 3 fire sprinkler/standpipe systems* shall be protected by a double *check valve backflow preventer* conforming to ~~CSA B64.5.1, "Double Check Valve Backflow Preventers for Fire Protection Systems (DCVAF)", provided that the systems do not use antifreeze or other additives of any kind,~~ (i) CSA B64.5, "Double check valve (DCVA) backflow preventers," or (ii) CSA B64.5.1, "Double check valve backflow preventers for fire protection systems (DCVAF)," (d) *Class 1, Class 2* ~~or~~and *Class 3 fire sprinkler/standpipe systems*~~,~~ in which antifreeze or other additives are used~~,~~ shall be protected by a reduced pressure principle *backflow preventer* conforming to	

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		Backflow Preventers for Fire Protection Systems (RPF)", and (g) *backflow preventers* on fire sprinkler and standpipe systems shall be selected and installed in conformance with Table 7.6.2.4.		pressure principle *backflow preventer* conforming to (i) CSA B64.4, "Reduced pressure principle (RP) backflow preventers," or (ii) CSA B64.4.1, "Reduced pressure principle backflow preventers for fire protection systems (RPF)," (f) *Class 6 fire sprinkler/standpipe systems* shall be protected by a double *check valve backflow preventer* conforming to (i) CSA B64.5, "Double check valve (DCVA) backflow preventers," or (ii) CSA B64.5.1, "Double check valve backflow preventers for fire protection systems (DCVAF)," or (g) where a potentially severe health hazard may be caused by *backflow*, *Class 6 fire sprinkler/standpipe systems* shall be protected by a reduced pressure principle *backflow preventer* conforming to (i) CSA B64.4, "Reduced pressure principle (RP) backflow preventers," or (ii) CSA B64.4.1, "Reduced pressure principle backflow preventers for fire protection systems (RPF)."	(i) CSA B64.4~~.1~~, "Reduced ~~Pressure Principle Backflow Preventers for Fire Protection Systems~~pressure principle (RP) backflow preventers," or (ii) CSA B64.4.1, "Reduced pressure principle backflow preventers for fire protection systems (RPF~~)",~~)," installed on the portion of the system that uses the additives and the balance of the system shall be protected as required by Clause (b) or (c), (e) *Class 4* and *Class 5 fire sprinkler/standpipe systems* shall be protected by a reduced pressure principle *backflow preventer* conforming to ~~CSA B64.4.1, "Reduced Pressure Principle Backflow Preventers for Fire Protection Systems (RPF)",~~ (i) CSA B64.4, "Reduced pressure principle (RP) backflow preventers," or (ii) CSA B64.4.1, "Reduced pressure principle backflow preventers for fire protection systems (RPF)." (f) *Class 6 fire sprinkler/standpipe systems* shall be protected~~,~~ ~~(i)~~ by a double *check valve backflow preventer* conforming to (i) CSA B64.5~~.1~~, "Double ~~Check Valve Backflow Preventers for Fire Protection Systems~~check valve (DCVA) backflow preventers," or (ii) CSA B64.5.1, "Double check valve backflow preventers for fire protection systems (DCVAF~~)",~~)," or (~~ii~~g) where a potentially severe health hazard may be caused by *backflow*, *Class 6 fire sprinkler/standpipe systems* shall be protected by a reduced pressure principle *backflow preventer* conforming to ~~CSA B64.4.1, "Reduced Pressure Principle Backflow Preventers for Fire Protection Systems (RPF)", and~~ (~~g~~i) CSA B64.4, "Reduced pressure principle (RP) backflow preventers ~~on~~," or (ii) CSA B64.4.1, "Reduced pressure principle backflow preventers for fire ~~sprinkler and standpipe~~protection systems ~~shall be selected and installed in conformance with Table 7.6.2.4.~~(RPF)."	

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Water-Use Efficiency	7.6.2.7. Separation of Water Supply Systems (new)	Reserved	2.6.2.5. Separation of Water Supply Systems	(1) Where a *private water supply system* or a non-*potable water system* is supplied by a public water supply system, the public water supply system shall be protected in accordance with Article 7.6.2.3.	(1) Where a *private water supply system* or a non-*potable water system* is supplied by a public water supply system, the public water supply system shall be protected in accordance with Article 7.6.2.3.	https://www.dropbox.com/s/aevtjxqse3n7knw/Proposed_Change_942.pdf?dl=0
Water-Use Efficiency	7.7.1.1. Non-Potable Connection	(1) Except as permitted by Sentences (2) and (3), a non-*potable water system* shall not be connected to a *potable water system*. (2) Make-up water may be supplied to the non-*potable water system* by, (a) a reduced pressure *backflow preventer*, or (b) an *air gap*. (3) Where a clothes washer is supplied by a *rainwater* system and a *potable water system*, the *potable water system* shall be protected by dual *check valve backflow preventers* conforming to CSA B64.6, "Dual Check Valve (DuC) Backflow Preventers" for, (a) area isolation, and (b) premise isolation.	2.7.1.1. General	(1) Except as permitted by Sentences (2) and (3), where a non-*potable water system* is supplied by a *potable water system*, the *potable water system* shall be protected in accordance with Article 7.6.2.3., and the non-*potable water system* shall not be connected to a *potable water system*. (2) Make-up water may be supplied to the non-*potable water system* by, (a) a reduced pressure *backflow preventer*, or (b) an *air gap*. (3) Where a clothes washer is supplied by a *rainwater* system and a *potable water system*, the *potable water system* shall be protected by dual *check valve backflow preventers* conforming to CSA B64.6, "Dual Check Valve (DuC) Backflow Preventers" for, (a) area isolation, and (b) premise isolation. (4) Non-*potable water systems* shall not be used to supply *fixtures* in health care facilities. (5) Where the static pressure at any *fixture* in a non-*potable water system* may exceed 550 kPa, a pressure-reducing valve shall be installed to limit the maximum static pressure at the *fixture* to 550 kPa.	(1) Except as permitted by Sentences (2) and (3), ~~a~~where a non-*potable water system* is supplied by a *potable water system*, the *potable water system* shall be protected in accordance with Article 7.6.2.3., and the non-*potable water system* shall not be connected to a *potable water system*. (2) Make-up water may be supplied to the non-*potable water system* by, (a) a reduced pressure *backflow preventer*, or (b) an *air gap*. (3) Where a clothes washer is supplied by a *rainwater* system and a *potable water system*, the *potable water system* shall be protected by dual *check valve backflow preventers* conforming to CSA B64.6, "Dual Check Valve (DuC) Backflow Preventers" for, (a) area isolation, and (b) premise isolation. (4) Non-*potable water systems* shall not be used to supply *fixtures* in health care facilities. (5) Where the static pressure at any *fixture* in a non-*potable water system* may exceed 550 kPa, a pressure-reducing valve shall be installed to limit the maximum static pressure at the *fixture* to 550 kPa.	https://www.dropbox.com/s/ljngorcp616avgr/Proposed_Change_940.pdf?dl=0 https://www.dropbox.com/s/khb9tng8fcco6tq/Proposed_Change_945.pdf?dl=0
Water-Use Efficiency	7.7.2.1. Markings Required	(1) Non-*potable* water piping shall be identified by markings that are permanent, distinct and easily recognized. (2) Non-*potable water system* for re-use purposes shall be marked in accordance with Section 12 of CAN/CSA-B128.1, "Design and Installation of Non-Potable Water Systems". (3) A sign containing the words NON-POTABLE WATER, DO NOT DRINK shall be in letters at least 25 mm high with a 5 mm stroke and posted immediately above a *fixture* that is permitted to receive non-*potable* water.	2.7.1.2. Identification and Marking	(1) Non-*potable* water piping shall be identified by markings that are permanent, distinct and easily recognized. (2) Non-*potable water system* for re-use purposes shall be identified and marked in accordance with Section 12 of CAN/CSA-B128.1, "Design and Installation of Non-Potable Water Systems". (3) A sign containing the words NON-POTABLE WATER, DO NOT DRINK shall be in letters at least 25 mm high with a 5 mm stroke and posted immediately above a *fixture* that is permitted to receive non-*potable* water.	(1) Non-*potable* water piping shall be identified by markings that are permanent, distinct and easily recognized. (2) Non-*potable water system* for re-use purposes shall be identified and marked in accordance with Section 12 of CAN/CSA-B128.1, "Design and Installation of Non-Potable Water Systems". (3) A sign containing the words NON-POTABLE WATER, DO NOT DRINK shall be in letters at least 25 mm high with a 5 mm stroke and posted immediately above a *fixture* that is permitted to receive non-*potable* water.	https://www.dropbox.com/s/ljngorcp616avgr/Proposed_Change_940.pdf?dl=0 https://www.dropbox.com/s/khb9tng8fcco6tq/Proposed_Change_945.pdf?dl=0
Water-Use Efficiency	7.7.3.1. Pipes	(1) Non-*potable* water piping shall not be located, (a) where food is prepared in a food processing plant, (b) above food-handling equipment, (c) above a non-pressurized *potable* water tank, or	2.7.1.3. Location of Pipes	(1) Non-*potable* water piping shall not be located directly above, (a) areas where food, drink or products that are intended for human consumption are prepared, handled, dispensed or stored,	(1) Non-*potable* water piping shall not be located~~.~~ directly above, (a) areas where food ~~is~~, drink or products that are intended for human consumption are prepared ~~in a food processing plant,~~ handled, dispensed or stored,	https://www.dropbox.com/s/ljngorcp616avgr/Proposed_Change_940.pdf?dl=0

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		(d) above a cover of a pressurized *potable* water tank.		(b) a non-pressurized or pressurized *potable* water tank, or (c) food-handling equipment.	(b) ~~above food-handling equipment,~~ ~~(c) above~~ a non-pressurized ~~*potable* water tank, or~~ ~~(d) above a cover of a~~or pressurized *potable* water tank~~.~~, or (c) food-handling equipment.	https://www.dropbox.com/s/khb9tng8fcco6tq/Proposed_Change_945.pdf?dl=0
Water-Use Efficiency	7.7.4.2. Non-Potable Rainwater Harvesting Systems (new)	N/A	2.7.2.1. General 2.7.2.3. Roof Design	(1) For the purposes of this Subsection, rainwater shall mean *storm sewage* runoff that is collected from a roof or the ground, but not from accessible patios and driveways. (2) For the purposes of this Subsection, a non-*potable* rainwater harvesting system shall mean a storage tank, a pump, pipes, fittings and other plumbing appurtenances used to collect and distribute rainwater, but shall not include a rain barrel not connected to a *plumbing system*. (3) Roofing components and conveyance systems in contact with rainwater that is supplied to a non-*potable* rainwater harvesting system shall be constructed of materials that will not introduce substances into the rainwater that could adversely affect its intended end use.	(1) For the purposes of this Subsection, rainwater shall mean *storm sewage* runoff that is collected from a roof or the ground, but not from accessible patios and driveways. (2) For the purposes of this Subsection, a non-*potable* rainwater harvesting system shall mean a storage tank, a pump, pipes, fittings and other plumbing appurtenances used to collect and distribute rainwater, but shall not include a rain barrel not connected to a *plumbing system*. (3) Roofing components and conveyance systems in contact with rainwater that is supplied to a non-*potable* rainwater harvesting system shall be constructed of materials that will not introduce substances into the rainwater that could adversely affect its intended end use.	https://www.dropbox.com/s/ljngorcp616avgr/Proposed_Change_940.pdf?dl=0 https://www.dropbox.com/s/khb9tng8fcco6tq/Proposed_Change_945.pdf?dl=0
Water-Use Efficiency	7.7.4.3. Non-Potable Rainwater Harvesting System Design (new)	N/A	2.7.2.4. Non-Potable Rainwater Harvesting System Design	(1) Non-*potable* rainwater harvesting systems and their connections shall be designed, fabricated and installed in accordance with this Subsection and good engineering practice. (2) Non-*potable* rainwater harvesting systems shall not collect water discharged from an evaporative heat rejection system. (3) Non-*potable* rainwater harvesting systems shall be provided with a means to treat the harvested rainwater in such a manner that the quality of the delivered non-*potable* water conforms to appropriate provincial or territorial requirements or, in the absence of such requirements, the systems shall conform to Sentence (4). (4) Except as provided in Sentence (3), non-*potable* rainwater harvesting systems shall be provided with (a) a water treatment system consisting of (i) a debris screen with a mesh size of not more than 6mm ahead of the storage tank inlet, (ii) a first-flush diversion system with a capacity of not less than 0.3 L/m2 of roof area ahead of the storage tank inlet,	(1) Non-*potable* rainwater harvesting systems and their connections shall be designed, fabricated and installed in accordance with this Subsection and good engineering practice. (2) Non-*potable* rainwater harvesting systems shall not collect water discharged from an evaporative heat rejection system. (3) Non-*potable* rainwater harvesting systems shall be provided with a means to treat the harvested rainwater in such a manner that the quality of the delivered non-*potable* water conforms to appropriate provincial or territorial requirements or, in the absence of such requirements, the systems shall conform to Sentence (4). (4) Except as provided in Sentence (3), non-*potable* rainwater harvesting systems shall be provided with (a) a water treatment system consisting of (i) a debris screen with a mesh size of not more than 6mm ahead of the storage tank inlet, (ii) a first-flush diversion system with a capacity of not less than 0.3 L/m2 of roof area ahead of the storage tank inlet,	https://www.dropbox.com/s/ljngorcp616avgr/Proposed_Change_940.pdf?dl=0 https://www.dropbox.com/s/khb9tng8fcco6tq/Proposed_Change_945.pdf?dl=0

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				(iii) a calming inlet or settling chamber ahead of the storage tank inlet, (iv) a device to prevent the entrainment of sediment into the pump, and (v) where the harvested rainwater is used for an indoor application, a filter with a mesh size of not more than 50 µm ahead of the storage tank inlet, or (b) a means to treat the harvested rainwater in such a manner that the delivered non-*potable* water contains not more than the maximum acceptable levels of contaminants stated in CSA B805/ICC 805, "Rainwater harvesting systems." (5) Where the static pressure at any *fixture* in a non-*potable* rainwater harvesting system may exceed 550 kPa, a pressure-reducing valve shall be installed to limit the maximum static pressure at the *fixture* to 550 kPa. (6) Storage tanks in non-*potable* rainwater harvesting systems shall be designed and installed in accordance with (a) CAN/CSA-B126.0, "General requirements and methods of testing for water cisterns," and (b) CAN/CSA-B126.1, "Installation of water cisterns." (7) Storage tanks in non-*potable* rainwater harvesting systems shall be equipped with an overflow that directs excess rainwater to (a) a public *storm sewer*, (b) a public *combined sewer*, (c) a *storm water* management system, or (d) a designated *storm water* disposal location. (8) Where the storage tank outlet is located below the level of the adjoining street, the storage tank overflow required by Sentence (7) shall (a) terminate with an indirect connection that is not located within the *building*, or (b) be equipped with a *backwater valve*. (9) Make-up water connections to non-*potable* rainwater harvesting systems shall (a) be equipped with a reduced pressure principle *backflow preventer*, or	(iii) a calming inlet or settling chamber ahead of the storage tank inlet, (iv) a device to prevent the entrainment of sediment into the pump, and (v) where the harvested rainwater is used for an indoor application, a filter with a mesh size of not more than 50 µm ahead of the storage tank inlet, or (b) a means to treat the harvested rainwater in such a manner that the delivered non-*potable* water contains not more than the maximum acceptable levels of contaminants stated in CSA B805/ICC 805, "Rainwater harvesting systems." (5) Where the static pressure at any *fixture* in a non-*potable* rainwater harvesting system may exceed 550 kPa, a pressure-reducing valve shall be installed to limit the maximum static pressure at the *fixture* to 550 kPa. (6) Storage tanks in non-*potable* rainwater harvesting systems shall be designed and installed in accordance with (a) CAN/CSA-B126.0, "General requirements and methods of testing for water cisterns," and (b) CAN/CSA-B126.1, "Installation of water cisterns." (7) Storage tanks in non-*potable* rainwater harvesting systems shall be equipped with an overflow that directs excess rainwater to (a) a public *storm sewer*, (b) a public *combined sewer*, (c) a *storm water* management system, or (d) a designated *storm water* disposal location. (8) Where the storage tank outlet is located below the level of the adjoining street, the storage tank overflow required by Sentence (7) shall (a) terminate with an indirect connection that is not located within the *building*, or (b) be equipped with a *backwater valve*. (9) Make-up water connections to non-*potable* rainwater harvesting systems shall (a) be equipped with a reduced pressure principle *backflow preventer*, or	

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				(b) have an *air gap*. (10) Where a *fixture* combines water from a non-*potable* rainwater harvesting system and *potable* water at the *fixture* supply fitting, the *potable water system* shall be protected by a *backflow preventer* as described in Sentence 7.6.2.3.(1).	(b) have an *air gap*. (10) Where a *fixture* combines water from a non-*potable* rainwater harvesting system and *potable* water at the *fixture* supply fitting, the *potable water system* shall be protected by a *backflow preventer* as described in Sentence 7.6.2.3.(1).	

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PART 9 HOUSING AND SMALL BUILDINGS

Subject	Current Ontario Code Subsection /Article	Current Ontario Code Provision(s)	Proposed National Code Subsection /Article	Proposed National Code Provision(s)	Proposed Ontario Code Provision(s)	Link(s) to the National PCF(s)
Insulating Concrete Forms (ICF)	9.3.1.1. General	(4) For flat insulating concrete form walls described in Clause 9.15.1.1.(1)(c) or 9.20.1.1.(1)(b), the concrete and reinforcing shall comply with Part 4 or, (a) the concrete shall conform to CSA A23.1, "Concrete Materials and Methods of Concrete Construction", with a maximum aggregate size of 19 mm, and (b) the reinforcing shall, (i) conform to CSA G30.18, "Carbon Steel Bars for Concrete Reinforcement", (ii) have a minimum specified yield strength of 400 MPa, and (iii) be lapped a minimum of 450 mm for 10M bars and 650 mm for 15M bars.	9.3.1.1 General	(4) For flat insulating concrete form walls not exceeding 2 *storeys* in *building height* and having a maximum floor to floor height of 3 m, in *buildings* of light-frame construction, the concrete and reinforcing shall comply with Part 4 or (a) the concrete shall conform to CSA A23.1, "Concrete materials and methods of concrete construction," with a maximum aggregate size of 19 mm, and (b) the reinforcing shall (i) conform to CSA G30.18, "Carbon steel bars for concrete reinforcement," (ii) have a minimum specified yield strength of 400 MPa, and (iii) be lapped a minimum of 450 mm for 10M bars and 650 mm for 15M bars (see also Articles 9.15.4.5. and 9.20.17.2 to 9.20.17.4.).	(4) For flat insulating concrete form walls ~~described~~not exceeding 2 *storeys* in ~~Clause 9.15.1.1.(1)(c) or 9.20.1.1.(1)(b),~~*building height* and having a maximum floor to floor height of 3 m, in *buildings* of light-frame construction, the concrete and reinforcing shall comply with Part 4 or~~,~~ (a) the concrete shall conform to CSA A23.1, "Concrete Materials and Methods of Concrete Construction", with a maximum aggregate size of 19 mm, and (b) the reinforcing shall, (i) conform to CSA G30.18, "Carbon Steel Bars for Concrete Reinforcement", (ii) have a minimum specified yield strength of 400 MPa, and (iii) be lapped a minimum of 450 mm for 10M bars and 650 mm for 15M bars~~.~~ (see also Articles 9.15.4.5. and 9.20.17.2 to 9.20.17.4.).	https://www.dropbox.com/s/981dpkfsxzyvco6/Proposed_Change_1600.pdf?dl=0
Insulating Concrete Forms (ICF)	9.15.1.1. General	(1) Except as provided in Articles 9.15.1.2. and 9.15.1.3., this Section applies to, (a) concrete or unit masonry *foundation* walls and concrete footings not subject to surcharge, (i) on stable *soils* with an *allowable bearing pressure* of 75 kPa or greater, and (ii) for *buildings* of wood frame or masonry construction, (b) wood frame *foundation* walls and wood or concrete footings not subject to surcharge, (i) on stable *soils* with an *allowable bearing pressure* of 75 kPa or greater, and (ii) for *buildings* of wood frame construction, and	9.15.1.1. General	(1) Except as provided in Articles 9.15.1.2. and 9.15.1.3., this Section applies to (a) concrete or unit masonry *foundation* walls and concrete footings not subject to surcharge (i) on stable *soils* with an allowable bearing pressure of 75 kPa or greater, and (ii) for *buildings* of wood-frame or masonry construction, (b) wood-frame *foundation* walls and wood or concrete footings not subject to surcharge (i) on stable *soils* with an allowable bearing pressure of 75 kPa or greater, and (ii) for *buildings* of wood-frame construction, and	(1) Except as provided in Articles 9.15.1.2. and 9.15.1.3., this Section applies to~~,~~ (a) concrete or unit masonry *foundation* walls and concrete footings not subject to surcharge~~,~~ (i) on stable *soils* with an allowable bearing pressure of 75 kPa or greater, and (ii) for *buildings* of wood~~-~~frame or masonry construction, (b) wood~~-~~frame *foundation* walls and wood or concrete footings not subject to surcharge~~,~~ (i) on stable *soils* with an allowable bearing pressure of 75 kPa or greater, and (ii) for *buildings* of wood~~-~~frame construction, and	https://www.dropbox.com/s/981dpkfsxzyvco6/Proposed_Change_1600.pdf?dl=0

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		(c) flat insulating concrete form *foundation* walls and concrete footings not subject to surcharge, (i) on stable *soils* with an *allowable bearing pressure* of 75 kPa or greater, and (ii) for *houses* of light frame or flat insulating concrete form construction that are not more than 2 *storeys* in *building height*, with a maximum floor to floor height of 3 m.		(c) flat insulating concrete form *foundation* walls and concrete footings not subject to surcharge (i) on stable *soils* with an allowable bearing pressure of 75 kPa or greater, and (ii) for *buildings* of light-frame or flat insulating concrete form construction that are not more than 2 *storeys* in *building height*, with a maximum floor-to-floor height of 3 m.	(c) flat insulating concrete form *foundation* walls and concrete footings not subject to surcharge~~,~~ (i) on stable *soils* with an allowable bearing pressure of 75 kPa or greater, and (ii) for ~~*houses*~~*buildings* of light-frame or flat insulating concrete form construction that are not more than 2 *storeys* in *building height*, with a maximum floor-to-floor height of 3 m.	
Insulating Concrete Forms (ICF)	9.20.1.1. General	(1) Except as provided in Article 9.20.1.2., this Section applies to, (a) unreinforced masonry and masonry veneer walls not in contact with the ground, where, (i) the height of the walls constructed on the *foundation* walls does not exceed 11 m, and (ii) the roof or floor assembly above the *first storey* is not of concrete construction, and (b) flat insulating concrete form walls not in contact with the ground that, (i) have a maximum floor to floor height of 3 m, (ii) are erected in *houses* not more than 2 *storeys* in *building height*, and (iii) are erected in locations where the seismic spectral response acceleration, $S_a(0.2)$, is not greater than 0.4.	9.20.1.1. General	(1) Except as provided in Article 9.20.1.2., this Section applies to (a) unreinforced masonry and masonry veneer walls not in contact with the ground, where (i) the height of the walls constructed on the foundation walls does not exceed 11 m, and (ii) the roof or floor assembly above the first storey is not of concrete construction, and (b) flat insulating concrete form walls not in contact with the ground that (i) have a maximum floor-to-floor height of 3 m, (ii) are erected in buildings not more than 2 storeys in building height, and (iii) are erected in locations where the seismic spectral response acceleration, $S_a(0.2)$, is not greater than 0.4.	(1) Except as provided in Article 9.20.1.2., this Section applies to~~,~~ (a) unreinforced masonry and masonry veneer walls not in contact with the ground, where~~,~~ (i) the height of the walls constructed on the foundation walls does not exceed 11 m, and (ii) the roof or floor assembly above the first storey is not of concrete construction, and (b) flat insulating concrete form walls not in contact with the ground that~~,~~ (i) have a maximum floor-to-floor height of 3 m, (ii) are erected in ~~*houses*~~buildings not more than 2 storeys in building height, and (iii) are erected in locations where the seismic spectral response acceleration, Sa(0.2), is not greater than 0.4.	https://www.dropbox.com/s/981dpkfsxzyvco6/Proposed_Change_1600.pdf?dl=0
Soft Conversion	9.4.1.1. General	(1) Subject to the application limitations defined elsewhere in this Part, structural members and their connections shall, (a) conform to requirements provided elsewhere in this Part, (b) be designed according to good engineering practice such as provided in the CWC, Engineering Guide for Wood Frame Construction", or (c) be designed according to Part 4 using the loads and deflection and vibration limits specified in, (i) this Part, or (ii) Part 4. (2) Where floor framing is designed in accordance	9.4.1.1. General	(1) Subject to the application limitations defined elsewhere in this Part, structural members and their connections shall (a) conform to requirements provided elsewhere in this Part, (b) be designed according to good engineering practice such as that provided in CWC 2014, "Engineering Guide for Wood Frame Construction", or (c) be designed according to Part 4 using the loads and deflection and vibration limits specified in (i) Part 9, or (ii) Part 4.	(1) Subject to the application limitations defined elsewhere in this Part, structural members and their connections shall~~,~~ (a) conform to requirements provided elsewhere in this Part, (b) be designed according to good engineering practice such as that provided in ~~the~~ CWC~~,~~ 2014, "Engineering Guide for Wood Frame Construction~~",~~", or (c) be designed according to Part 4 using the loads and deflection and vibration limits specified in~~,~~ (i) ~~this~~ Part 9, or (ii) Part 4. (2) Where floor framing is designed in accordance	https://www.dropbox.com/s/672ecqv9vs8tk89/Proposed_Change_1236.pdf?dl=0

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		with Clause (1)(b) or (c) and where supporting wall framing and fastenings, or footings, are designed according to Clause (1)(a), the specified *live load* on the floor according to Table 4.1.5.3. shall not exceed 2.4 kPa. (3) Location-specific information for structural design, including snow and wind loads and seismic spectral response accelerations, shall be determined according to MMAH Supplementary Standard SB-1, "Climatic and Seismic Data".		(2) Where floor framing is designed in accordance with Clause (1)(b) or (c), and where supporting wall framing and fastenings, or footings, are designed according to Clause (1)(a), the maximum specified live load on the floor according to Table 4.1.5.3. shall not exceed 2.4 kPa. (3) Location-specific information for structural design, including snow and wind loads and seismic spectral response accelerations, shall be determined according to Subsection 1.1.3.	with Clause (1)(b) or (c~~)~~), and where supporting wall framing and fastenings, or footings, are designed according to Clause (1)(a), the maximum specified live load on the floor according to Table 4.1.5.3. shall not exceed 2.4 kPa. (3) Location-specific information for structural design, including snow and wind loads and seismic spectral response accelerations, shall be determined according to MMAH Supplementary Standard SB-1, "Climatic and Seismic Data".	
Soft Conversion	9.4.2.1. Application	(1) This Subsection applies to light-frame construction whose wall, floor and roof planes are generally comprised of frames of small repetitive structural members, and where, (a) the roof and wall planes are clad, sheathed or braced on at least one side, (b) the small repetitive structural members are spaced not more than 610 mm o.c., (c) the clear span of any structural member does not exceed 12.20 m, (d) the maximum deflection of the structural roof members conforms to Article 9.4.3.1., (e) the maximum total roof area, notwithstanding any separation of adjoining *buildings* by *firewalls*, is 4 550 m^2, and (f) for flat roofs, there are no significant obstructions on the roof, such as parapet walls, spaced closer than the distance calculated by, $D_o = 10(H_o – 0.8\ S_s/\gamma)$ where, D_o = minimum distance between obstructions, m, H_o = height of the obstruction above the roof, m, S_s = ground snow load, kPa, and γ = unit weight of snow, kN/m^3.	9.4.2.1. Application	(1) This Subsection applies to light-frame constructions whose wall, floor and roof planes are generally comprised of frames of small repetitive structural members, and where (a) the roof and wall planes are clad, sheathed or braced on at least one side, (b) the small repetitive structural members are spaced not more than 600 mm o.c., (c) the clear span of any structural member does not exceed 12.2 m, (d) the maximum deflection of the structural roof members conforms to Article 9.4.3.1, (e) the maximum total roof area, notwithstanding any separation of adjoining buildings by firewalls, is 4 550 m^2, and (f) for flat roofs, there are no significant obstructions on the roof, such as parapet walls, spaced closer than the distance calculated by $Do = 10(Ho - 0.8Ss/\gamma)$ where Do = minimum distance between obstructions, m, Ho = height of the obstruction above the roof, m, Ss = ground snow load, kPa, and γ = specific weight of snow, kN/m^3.	(1) This Subsection applies to light-frame ~~construction~~constructions whose wall, floor and roof planes are generally comprised of frames of small repetitive structural members, and where~~,~~ (a) the roof and wall planes are clad, sheathed or braced on at least one side, (b) the small repetitive structural members are spaced not more than ~~610~~600 mm o.c., (c) the clear span of any structural member does not exceed 12.20 m, (d) the maximum deflection of the structural roof members conforms to Article 9.4.3.1, (e) the maximum total roof area, notwithstanding any separation of adjoining buildings by firewalls, is 4 550 m^2, and (f) for flat roofs, there are no significant obstructions on the roof, such as parapet walls, spaced closer than the distance calculated by, $Do = 10(Ho – 0.8\ S_s / \gamma)$ where~~,~~ Do = minimum distance between obstructions, m, Ho = height of the obstruction above the roof, m, Ss = ground snow load, kPa, and γ = ~~unit~~specific weight of snow, kN/m^3.	https://www.dropbox.com/s/672ecqv9vs8tk89/Proposed_Change_1236.pdf?dl=0

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Structural Design (Part 9)	9.4.2.1. Application	(1) This Subsection applies to light-frame construction whose wall, floor and roof planes are generally comprised of frames of small repetitive structural members, and where, (a) the roof and wall planes are clad, sheathed or braced on at least one side, (b) the small repetitive structural members are spaced not more than 610 mm o.c., (c) the clear span of any structural member does not exceed 12.20 m, (d) the maximum deflection of the structural roof members conforms to Article 9.4.3.1., (e) the maximum total roof area, notwithstanding any separation of adjoining *buildings* by *firewalls*, is 4 550 m^2, and (f) for flat roofs, there are no significant obstructions on the roof, such as parapet walls, spaced closer than the distance calculated by, $D_o = 10(H_o – 0.8\ S_s / \gamma)$ where, D_o = minimum distance between obstructions, m, H_o = height of the obstruction above the roof, m, S_s = ground snow load, kPa, and γ = unit weight of snow, kN/m^3.	9.4.2.1. Application	(1) This Subsection applies to light-frame constructions whose wall, floor and roof planes are generally comprised of frames of small repetitive structural members, and where (a) the roof and wall planes are clad, sheathed or braced on at least one side, (b) the small repetitive structural members are spaced not more than 600 mm o.c., (c) the clear span of any structural member does not exceed 12.2 m, (d) the maximum deflection of the structural roof members conforms to Article 9.4.3.1, (e) the maximum total roof area, notwithstanding any separation of adjoining buildings by firewalls, is 4 550 m^2, and (f) for flat roofs, there are no significant obstructions on the roof, such as parapet walls, spaced closer than the distance calculated by $Do = 10(Ho - 0.8Ss/\gamma)$ where Do = minimum distance between obstructions, m, Ho = height of the obstruction above the roof, m, Ss = ground snow load, kPa, and γ = specific weight of snow taken as 4.0 kN/m^3 or 0.43Ss + 2.2 kN/m^3, whichever is lesser.	(1) This Subsection applies to light-frame ~~construction~~constructions whose wall, floor and roof planes are generally comprised of frames of small repetitive structural members, and where~~,~~ (a) the roof and wall planes are clad, sheathed or braced on at least one side, (b) the small repetitive structural members are spaced not more than ~~610~~600 mm o.c., (c) the clear span of any structural member does not exceed 12.20 m, (d) the maximum deflection of the structural roof members conforms to Article 9.4.3.1~~,~~., (e) the maximum total roof area, notwithstanding any separation of adjoining buildings by firewalls, is 4 550 m^2, and (f) ~~–~~ for flat roofs, there are no significant obstructions on the roof, such as parapet walls, spaced closer than the distance calculated by, $Do = 10(Ho – 0.8\ S_s / \gamma)$ where, Do = minimum distance between obstructions, m, Ho = height of the obstruction above the roof, m, Ss = ground snow load, kPa, and γ = ~~unit~~specific weight of snow~~,~~ taken as 4.0 kN/m^3~~.~~ or 0.43Ss + 2.2 kN/m^3, whichever is lesser.	https://www.dropbox.com/s/vpdx3k3htvopyot/Proposed_Change_1280.pdf?dl=0
Snow Loads	9.4.2.2. Specified Snow Loads	(1) Except as provided in Sentences (2) and (3), specified snow loads shall be not less than those calculated using the following formula: $S = Cb \cdot Ss + Sr$ where, S = specified snow load, Cb = basic snow load roof factor, which is 0.45 where the entire width of a roof does not exceed 4.3 m and 0.55 for all other roofs, Ss = 1-in-50 year ground snow load in kPa, determined according to MMAH Supplementary Standard SB-1, “Climatic and Seismic Data”, and Sr = associated 1-in-50 year rain load in kPa, determined according to MMAH Supplementary Standard SB-1, “Climatic and Seismic Data”.	9.4.2.2. Specified Snow Loads	(1) Except as provided in Sentences (2), Sentence (3) and (4), specified snow loads shall be not less than those calculated using the following formula: $S = Cb\ Ss + Sr$ where S = specified snow load, Cb = basic snow load roof factor, which is 0.45 where the entire width of the roof does not exceed 4.3 m and 0.55 for all other roofs, Ss = 1-in-50-year ground snow load in kPa, determined according to Subsection 1.1.3., and Sr = associated 1-in-50-year rain load in kPa, determined according to Subsection 1.1.3. (4) Where the height of a roof step at the intersection of an upper level roof and a lower level roof is greater than 2 m, and the upper level roof has a slope	(1) Except as provided in Sentences (2~~,~~), Sentence (3) and (~~3~~4), specified snow loads shall be not less than those calculated using the following formula: $S = Cb$ ~~,~~ $Ss + Sr$ where~~,~~ S = specified snow load, Cb = basic snow load roof factor, which is 0.45 where the entire width of ~~a~~the roof does not exceed 4.3 m and 0.55 for all other roofs, Ss = 1-in-50~~-~~ year ground snow load in kPa, determined according to MMAH Supplementary Standard SB-1, “Climatic and Seismic Data”, ~~and~~ Sr = associated 1-in-50~~-~~ year rain load in kPa, determined according to MMAH Supplementary Standard SB-1, “Climatic and Seismic Data”.	https://www.dropbox.com/s/buamyxph6z52kq7/Proposed_Change_1290.pdf?dl=0

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				less than 1 in 6 and an area greater than 600 m 2 , the specified snow load on the lower level roof shall be (a) for distances from the roof step that are less than or equal to the drift length, x_d , calculated in accordance with Sentence (5), not less than 1.5 times the specified snow load, S, calculated using the formula in Sentence (1) with Cb equal to 0.55, and (b) for distances from the roof step that are greater than the drift length, xd, calculated in accordance with Sentence (5), as specified in Sentence (1). (5) For the purposes of Sentence (4), the drift length, xd, in m, shall be calculated as follows: $X_d = 5 (h – 0.55S_s / \gamma)$ where h = height of the roof step, in m, and γ = specific weight of snow as specified in Clause 9.4.2.1.(1)(f).	(4) Where the height of a roof step at the intersection of an upper level roof and a lower level roof is greater than 2 m, and the upper level roof has a slope less than 1 in 6 and an area greater than 600 m 2 , the specified snow load on the lower level roof shall be (a) for distances from the roof step that are less than or equal to the drift length, x_d , calculated in accordance with Sentence (5), not less than 1.5 times the specified snow load, S, calculated using the formula in Sentence (1) with Cb equal to 0.55, and (b) for distances from the roof step that are greater than the drift length, xd, calculated in accordance with Sentence (5), as specified in Sentence (1). (5) For the purposes of Sentence (4), the drift length, xd, in m, shall be calculated as follows: $X_d = 5 (h – 0.55S_s / \gamma)$ where h = height of the roof step, in m, and γ = specific weight of snow as specified in Clause 9.4.2.1.(1)(f).	
Referenced Documents	9.6.1.2. Material Standards for Glass	(1) Glass shall conform to, (a) CAN/CGSB-12.1-M, “Tempered or Laminated Safety Glass,” (b) CAN/CGSB-12.2-M, “Flat, Clear Sheet Glass”, (c) CAN/CGSB-12.3-M, “Flat, Clear Float Glass”, (d) CAN/CGSB-12.4-M, “Heat Absorbing Glass,” (e) CAN/CGSB-12.8, “Insulating Glass Units”, (f) CAN/CGSB-12.10-M, “Glass, Light and Heat Reflecting”, (g) CAN/CGSB-12.11-M, “Wired Safety Glass”, or (h) ASTM E2190, “Insulating Glass Unit Performance and Evaluation”.	9.6.1.2. Material Standards for Glass	(1) Glass shall conform to (a) CAN/CGSB-12.1, “Safety Glazing,” (b) CAN/CGSB-12.2-M, “Flat, Clear Sheet Glass,” (c) CAN/CGSB-12.3-M, “Flat, Clear Float Glass,” (d) CAN/CGSB-12.4-M, “Heat Absorbing Glass,” (e) CAN/CGSB-12.8, “Insulating glass units,” (f) CAN/CGSB-12.9, “Spandrel glass,” (g) CAN/CGSB-12.10-M, “Glass, Light and Heat Reflecting,” (h) CAN/CGSB-12.11-M, “Wired Safety Glass,” or (i) ASTM E2190, “Standard Specification for Insulating Glass Unit Performance and Evaluation.”	(1) Glass shall conform to~~,~~ (a) CAN/CGSB-12.1~~-M, “Tempered or Laminated~~ , “Safety ~~Glass,”~~ Glazing,” (b) CAN/CGSB-12.2-M, “Flat, Clear Sheet Glass~~”,~~ ,” (c) CAN/CGSB-12.3-M, “Flat, Clear Float Glass~~”,~~ ,” (d) CAN/CGSB-12.4-M, “Heat Absorbing Glass,” (e) CAN/CGSB-12.8, “Insulating ~~Glass~~ glass units,”~~Units”,~~ (f) CAN/CGSB-12.9, “Spandrel glass,” (g) CAN/CGSB-12.10-M, “Glass, Light and Heat Reflecting~~”,~~ ,” (~~g~~h) CAN/CGSB-12.11-M, “Wired Safety Glass~~”,~~ ,” or (~~h~~i) ASTM E2190, “Standard Specification for Insulating Glass Unit Performance and Evaluation~~”.~~ .”	https://www.dropbox.com/s/v31b2hpp4nwn3vj/Proposed_Change_1301.pdf?dl=0

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Safety Glazing	9.6.1.4. Types of Glass and Protection of Glass	(1) Glass sidelights greater than 500 mm wide that could be mistaken for doors, glass in storm doors and glass in sliding doors within or at every entrance to a *house* or an individual *dwelling unit* and in public areas shall be, (a) safety glass of the tempered or laminated type conforming to CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass", or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass". (2) Except as provided in Sentence (4), glass in entrance doors to *houses* or individual *dwelling units* and in public areas, other than the entrance doors described in Sentence (1), shall be safety glass or wired glass of the type described in Sentence (1) where the glass area exceeds 0.5 m2 and extends to less than 900 mm from the bottom of the door.	9.6.1.4. Types of Glass and Protection of Glass	(1) Glass sidelights greater than 500 mm wide that could be mistaken for doors, glass in storm doors and glass in sliding doors within or at every entrance to a *dwelling unit* and in public areas shall be (a) safety glazing of the tempered or laminated type conforming to CAN/CGSB-12.1, "Safety Glazing," or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass." (2) Except as provided in Sentence (4), glass in entrance doors to *dwelling units* and in public areas, other than the entrance doors described in Sentence (1), shall be safety glazing or wired glass of the type described in Sentence (1) where the glass area exceeds 0.5 m2 and extends to less than 900 mm from the bottom of the door.	(1) Glass sidelights greater than 500 mm wide that could be mistaken for doors, glass in storm doors and glass in sliding doors within or at every entrance to a ~~*house* or an individual~~ *dwelling unit* and in public areas shall be~~,~~ (a) safety ~~glass~~glazing of the tempered or laminated type conforming to CAN/CGSB-12.1~~-M, "Tempered or Laminated~~ ,"Safety ~~Glass",~~Glazing," or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass~~".~~," (2) Except as provided in Sentence (4), glass in entrance doors to~~ *houses* or individual~~ *dwelling units* and in public areas, other than the entrance doors described in Sentence (1), shall be safety ~~glass~~glazing or wired glass of the type described in Sentence (1) where the glass area exceeds 0.5 m2 and extends to less than 900 mm from the bottom of the door.	https://www.dropbox.com/s/k2ku3mdk6sdpny3/Proposed_Change_1472.pdf?dl=0
Safety Glazing	9.8.8.7. Glass in Guards	(1) Glass in *guards* shall be, (a) safety glass of the laminated or tempered type conforming to CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass", or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass".	9.8.8.7. Glass in Guards	(1) Glass in *guards* shall be (a) safety glazing of the laminated or tempered type conforming to CAN/CGSB-12.1, "Safety Glazing," or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass."	(1) Glass in *guards* shall be~~,~~ (a) safety ~~glass~~glazing of the laminated or tempered type conforming to CAN/CGSB-12.1~~-M, "Tempered or Laminated~~ ,"Safety ~~Glass",~~Glazing," or (b) wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass~~".~~,"	https://www.dropbox.com/s/k2ku3mdk6sdpny3/Proposed_Change_1472.pdf?dl=0
Safety Glazing	9.6.1.4. Types of Glass and Protection of Glass	(6) Glass, other than safety glass, shall not be used for a shower or bathtub enclosure.	9.6.1.4. Types of Glazing and Protection of Glazing	(6) Glazing used for a shower or bathtub enclosure shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing."	(6) ~~Glass, other than safety glass, shall not be~~Glazing used for a shower or bathtub enclosure~~.~~ shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing."	https://www.dropbox.com/s/vqcm3a3b1ffkn50/Proposed_Change_1447.pdf?dl=0
Windows, Doors and Skylights	9.7.6.1. Installation of Windows, Doors and Skylights	(1) The installation of windows, doors and skylights shall conform to CAN/CSA-A440.4, "Window, Door, and Skylight Installation", except that, (a) shims used to support windows, doors and skylights are permitted to be of treated plywood, and (b) protection from precipitation for walls incorporating windows or doors and for roofs incorporating skylights, and the interfaces of these walls with windows or doors and of roofs with skylights, shall conform to Section 9.27. … (3) Windows, doors and skylights shall be sealed to air barriers and *vapour barriers*.	9.7.6.1. Installation of Windows, Doors and Skylights	(1) The installation of windows, doors and skylights shall conform to CSA A440.4, "Window, door, and skylight installation," except that (a) shims used to support windows, doors and skylights are permitted to be made of treated plywood, and (b) protection from precipitation for walls incorporating windows or doors and for roofs incorporating skylights, and the interfaces of these walls with windows or doors and of roofs with skylights, shall also conform to Section 9.27. … (3) Windows, doors and skylights shall be sealed to air barriers.	(1) The installation of windows, doors and skylights shall conform to ~~CAN/~~CSA~~-~~ A440.4, "Window, ~~Door~~door, and ~~Skylight Installation",~~skylight installation," except that~~,~~ (a) shims used to support windows, doors and skylights are permitted to be made of treated plywood, and (b) protection from precipitation for walls incorporating windows or doors and for roofs incorporating skylights, and the interfaces of these walls with windows or doors and of roofs with skylights, shall also conform to Section 9.27. … (3) Windows, doors and skylights shall be sealed to air barriers~~ and *vapour barriers*~~.	https://www.dropbox.com/s/ytwv01umvfttgmo/Proposed_Change_1246.pdf?dl=0

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Stairs, Ramps, Handrails and Guards - Fall Protection	9.8.4.8. Open Risers (New)	N/A	9.8.4.9. Open Risers	(1) Except as provided in Sentence (2), stairs shall have no open risers. (2) Open risers are permitted in (a) interior and exterior stairs that serve a single *dwelling unit* or a house with a *secondary suite*, (b) fire escape stairs, (c) stairs that are principally used for maintenance, (d) stairs that serve *service rooms*, and (e) stairs that serve *industrial occupancies* other than *storage garages*.	(1) Except as provided in Sentence (2), stairs shall have no open risers. (2) Open risers are permitted in (a) interior and exterior stairs that serve a single *dwelling unit* or a house with a *secondary suite*, (b) fire escape stairs, (c) stairs that are principally used for maintenance, (d) stairs that serve *service rooms*, and (e) stairs that serve *industrial occupancies* other than *storage garages*.	https://www.dropbox.com/s/70li94p3bo6k7q2/Proposed_Change_339.pdf?dl=0
Stairs, Ramps, Handrails and Guards — Fall Protection	9.8.9.5. Treads	(1) Stair treads of lumber, plywood or O-2 grade OSB within *dwelling units* shall be not less than 25 mm actual thickness, except that if open risers are used and the distance between stringers exceeds 750 mm, the treads shall be not less than 38 mm actual thickness.	9.8.9.5. Treads	(1) Stair treads of lumber, plywood or OSB within *dwelling units* shall be not less than 25 mm actual thickness, except that, where open risers are permitted and the distance between stringers exceeds 750 mm, the treads shall be not less than 38 mm actual thickness.	(1) Stair treads of lumber, plywood or ~~O-2 grade~~ OSB within *dwelling units* shall be not less than 25 mm actual thickness, except that ~~if~~, where open risers are ~~used~~permitted and the distance between stringers exceeds 750 mm, the treads shall be not less than 38 mm actual thickness.	https://www.dropbox.com/s/70li94p3bo6k7q2/Proposed_Change_339.pdf?dl=0
Stairs, Ramps, Handrails and Guards	9.8.8.1. Required Guards	(5) Except as provided in Sentence (6), openable windows in *buildings* of *residential occupancy* shall be protected by, (a) a *guard* in accordance with this Subsection, or (b) a mechanism capable of controlling the free swinging or sliding of the openable part of the window so as to limit any clear unobstructed opening to a size that will prevent the passage of a sphere having a diameter more than 100 mm. (6) Windows need not be protected in accordance with Sentence (5), where, (a) the window serves a *dwelling unit* that is not located above another *suite*, (b) the only opening having greater dimensions than those allowed by Clause (5)(b) is a horizontal opening at the top of the window, (c) the top surface of the window sill is located more than 480 mm above the finished floor on one side of the window, or (d) the window is located in a room or space with the finished floor described in Clause (c) located less than 1 800 mm above the floor or ground on the other side of the window.	9.8.8.1. Required Guards	(4) Except as provided in Sentence (5), openable windows in *buildings* of *residential occupancy* shall be protected by (a) a *guard*, or (b) a mechanism that can only be released with the use of tools or special knowledge to control the free swinging or sliding operation of the openable part of the window so as to limit any clear unobstructed opening to not more than 100 mm measured either vertically or horizontally. (5) Windows need not be protected in accordance with Sentence (4), where the bottom edge of the openable portion of the window is located (a) more than 900 mm above the finished floor, or (b) less than 1 800 mm above the floor or ground on the other side of the window.	(~~5~~4) Except as provided in Sentence (~~6~~5), openable windows in *buildings* of *residential occupancy* shall be protected by~~,~~ (a) a *guard* ~~in accordance with this Subsection~~, or (b) a mechanism ~~capable~~that can only be released with the use of ~~controlling~~tools or special knowledge to control the free swinging or sliding operation of the openable part of the window so as to limit any clear unobstructed opening to ~~a size that will prevent the passage of a sphere having a diameter~~not more than 100 mm~~.~~ measured either vertically or horizontally. (~~6~~5) Windows need not be protected in accordance with Sentence (~~5~~4), where~~,~~ ~~(a)~~ the ~~window serves a *dwelling unit* that is not located above another *suite*,~~ ~~(b)~~ bottom edge of the ~~only opening having greater dimensions than those allowed by Clause (5)(b) is a horizontal opening at the top~~openable portion of the window~~,~~ is located ~~(c) the top surface of the window sill is located~~(a) more than ~~480~~900 mm above the finished floor~~ on one side of the window~~, or ~~(d) the window is located in a room or space with the finished floor described in Clause (c) located~~(b) less than 1 800 mm above the floor or ground on the other side of the window.	https://www.dropbox.com/s/sfyr806y7e8gsu2/Proposed_Change_1238.pdf?dl=0

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Stairs, Ramps, Handrails and Guards — Fall Protection	9.8.8.1. Required Guards	(1) Except as provided in Sentence (2), every surface to which access is provided, including but not limited to *flights*, ramps, exterior landings, porches, balconies, *mezzanines*, galleries and raised walkways, shall be protected by a *guard* on each side that is not protected by a wall for the length, where, (a) there is a difference in elevation of more than 600 mm between the walking surface and the adjacent surface, or (b) the adjacent surface within 1.2 m from the walking surface has a slope of more than 1 in 2.	9.8.8.1. Required Guards	(1) Except as provided in Sentence (2) and except at the leading edge at the top of a *flight*, every surface to which access is provided, including but not limited to *flights* of steps and ramps, exterior landings, porches, balconies, *mezzanines*, galleries and raised *walkways*, shall be protected by a *guard* on each side that is not protected by a wall for the length where the difference in elevation is more than 600 mm between the walking surface and the adjacent surface within 1.2m.	(1) Except as provided in Sentence (2~~),~~) and except at the leading edge at the top of a *flight*, every surface to which access is provided, including but not limited to *flights~~,~~* of steps and ramps, exterior landings, porches, balconies, *mezzanines*, galleries and raised *walkways*, shall be protected by a *guard* on each side that is not protected by a wall for the length~~,~~ where~~,~~ ~~(a) there is a~~ the difference in elevation ~~of~~is more than 600 mm between the walking surface and the adjacent surface~~, or~~ ~~(b) the adjacent surface~~ within 1.~~2 m from the walking surface has a slope of more than 1 in 2~~2m.	https://www.dropbox.com/s/2gzz6vv2exnewjf/Proposed_Change_1422.pdf?dl=0
Stairs, Ramps, Handrails and Guards — Loads (Handrails and Guards)	9.8.8.2. Loads on Guards	(1) Except as provided in Sentences (2), (4) and (5), *guards* shall be designed to resist the specified loads prescribed in Table 9.8.8.2.	9.8.8.2. Loads on Guards	(1) Except as provided in Sentences (1.1), (2), (4) and (5), *guards* shall be designed to resist the specified loads prescribed in Table 9.8.8.2. (1.1) The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed the limits required by Sentence 9.8.8.5.(1) when each of these elements is subjected to a specified *live load* of 0.1 kN applied in opposite directions in the in-plane direction of the *guard* so as to produce the most critical effect.	(1) Except as provided in Sentences (1.1), (2), (4) and (5), *guards* shall be designed to resist the specified loads prescribed in Table 9.8.8.2. (1.1) The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed the limits required by Sentence 9.8.8.5.(1) when each of these elements is subjected to a specified *live load* of 0.1 kN applied in opposite directions in the in-plane direction of the *guard* so as to produce the most critical effect.	https://www.dropbox.com/s/5k73jmee7b66g4m/Proposed_Change_1421.pdf?dl=0
Stairs, Ramps, Handrails and Guards	9.8.8.3. Height of Guards	(1) Except as provided in Sentences (2), (3), and (4), all *guards* shall be not less than 1 070 mm high. … (4) *Guards* for *flights*, except in required *exit* stairs, shall be not less than 900 mm high.	9.8.8.3. Height of Guards	(1) Except as provided in Sentences (2), (3) and (6) all *guards* shall be not less than 1 070 mm high. …	(1) Except as provided in Sentences (2), (3), (4) and (6), all *guards* shall be not less than 1 070 mm high. ~~…~~ ~~(4) *Guards* for *flights*, except in required *exit* stairs, shall be not less than 900 mm high.~~	https://www.dropbox.com/s/uff5ukxnsntkvfd/Proposed_Change_1235.pdf?dl=0
Stairs, Ramps, Handrails and Guards — Fall Protection	9.8.8.5. Openings in Guards	N/A	9.8.8.5. Openings in Guards	(2) Except for *guards* that serve *industrial occupancies*, the triangular openings formed by stair risers, stair treads and the bottom element of a required *guard* shall be of a size that prevents the passage of a 150 mm diam sphere.	(2) Except for *guards* that serve *industrial occupancies*, the triangular openings formed by stair risers, stair treads and the bottom element of a required *guard* shall be of a size that prevents the passage of a 150 mm diam sphere.	https://www.dropbox.com/s/9du4wiwy8octd6w/Proposed_Change_356.pdf?dl=0
Other — Housing and Small Buildings	9.9.6.4. Door Action	(5) *Exit* doors need not conform to Sentence (1) or (2), where, (a) the doors serve accessory *buildings* where life safety is not adversely affected, or (b) the doors serve *storage garages* or other accessory *buildings* serving a *house* or an individual *dwelling unit*.	9.9.6.4. Door Action	(5) *Exit* doors need not conform to Sentences (1) or (2), where (a) the doors serve accessory *buildings* where life safety is not adversely affected, (b) the doors serve *storage garages* or other accessory *buildings* serving not more than one *dwelling unit*, or (c) the doors (i) serve storage *suites* of not more than 28 m^2 in gross area that are in warehousing *buildings* of not more than one *storey*, and	(5) *Exit* doors need not conform to ~~Sentence~~Sentences (1) or (2), where~~,~~ (a) the doors serve accessory *buildings* where life safety is not adversely affected,~~ or~~ (b) the doors serve *storage garages* or other accessory *buildings* serving ~~a *house* or an individual~~not more than one *dwelling unit*, or (c) the doors (i) serve storage *suites* of not more than 28 m^2 in gross area that are in warehousing *buildings* of not more than one *storey*, and	https://www.dropbox.com/s/umvmo7tci9er55z/Proposed_Change_1002.pdf?dl=0

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				(ii) open directly to the exterior at ground level.	(ii) open directly to the exterior at ground level.	
Security Systems that Affect Egress	9.9.6.7. Door Latching, Locking and Opening Mechanisms	(3) Door release hardware on doors in a *means of egress* shall be installed not more than 1 200 mm above the finished floor.	9.9.6.7. Door Latching, Locking and Opening Mechanisms	(3) Door release hardware on doors in a *means of egress* shall be installed between 900 mm and 1 100 mm above the finished floor.	(3) Door release hardware on doors in a *means of egress* shall be installed ~~not more than~~between 900 mm and 1 ~~200~~100 mm above the finished floor.	https://www.dropbox.com/s/2yvg364bm7nq377/Proposed_Change_1310.pdf?dl=0
Home-Type Care Occupancies	9.10.2.1. Occupancy Classification	(Table 9.10.2.1 - Occupancy Classifications)	9.10.2.1. Occupancy Classification	(Table 9.10.2.1. - Occupancy Classifications)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/qdbc0papkx3z9ls/Proposed_Change_1320.pdf?dl=0
Home-Type Care Occupancies	9.10.2.2. Home-Type Care Occupancies (New)	Reserved	9.10.2.2. Home-Type Care Occupancies	(1) Children's custodial homes and convalescent homes for ambulatory occupants living as a single housekeeping unit in a *dwelling unit* with sleeping accommodation for not more than 10 persons are permitted to be classified as *residential occupancies* (Group C). (2) *Home-type care occupancies* with sleeping accommodation for not more than 10 persons shall (a) comply with the applicable requirements of Part 9 relating to detached houses, and (b) except as provided in Sentences (3) and (4), be (i) sprinklered in conformance with NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," and (ii) provided with a minimum 30-minute water supply for the sprinkler system. (3) A sprinkler system need not be provided in accordance with Sentence (2) where the *building* (a) is 1 *storey* in *building height*, without a *basement* or *mezzanine*, (b) has sleeping accommodation for not more than 4 residents receiving *care* on a *floor area* served by 2 *barrier-free means of egress* leading to an *exit* at ground level that is not more than 30 m from any point in the *floor area*, (c) in lieu of having *smoke alarms* installed as required in Subsection 9.10.19., has a residential fire warning system installed in conformance with CAN/ULC-S540,	(1) Children's custodial homes and convalescent homes for ambulatory occupants living as a single housekeeping unit in a *dwelling unit* with sleeping accommodation for not more than 10 persons are permitted to be classified as *residential occupancies* (Group C). (2) *Home-type care occupancies* with sleeping accommodation for not more than 10 persons shall (a) comply with the applicable requirements of Part 9 relating to detached houses, and (b) except as provided in Sentences (3) and (4), be (i) sprinklered in conformance with NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," and (ii) provided with a minimum 30-minute water supply for the sprinkler system. (3) A sprinkler system need not be provided in accordance with Sentence (2) where the *building* (a) is 1 *storey* in *building height*, without a *basement* or *mezzanine*, (b) has sleeping accommodation for not more than 4 residents receiving *care* on a *floor area* served by 2 *barrier-free means of egress* leading to an *exit* at ground level that is not more than 30 m from any point in the *floor area*, (c) in lieu of having *smoke alarms* installed as required in Subsection 9.10.19., has a residential fire warning system installed in conformance with CAN/ULC-S540,	https://www.dropbox.com/s/qdbc0papkx3z9ls/Proposed_Change_1320.pdf?dl=0

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				"Standard for Residential Fire and Life Safety Warning Systems: Installation, Inspection, Testing and Maintenance," (i) with *smoke detectors* in each sleeping room, in the kitchen, and in common spaces such as activity rooms, corridors and hallways, (ii) with *heat detectors* in each attached *storage garage*, *service room*, laundry room and storage room, (iii) capable of sounding audible signals in accordance with Articles 9.10.19.2. and 9.10.19.5. at a frequency not higher than 520 Hz, (iv) powered in accordance with Article 9.10.19.4., (v) equipped with a silencing device in accordance with Article 9.10.19.6., (vi) equipped with an annunciator panel with separate zone indication of the actuation of the alarm-initiating devices, and (vii) designed to notify the fire department in conformance with Sentence 3.2.4.8.(4) that an *alarm signal* has been initiated, (d) has emergency lighting in the common *means of egress* that complies with Sentences 9.9.12.3.(2) to (7), and (e) complies with Section 3.8. (4) A sprinkler system need not be provided in accordance with Sentence (2) where (a) the *building* is not more than 2 *storeys* in *building height*, (b) the *building* has sleeping accommodation for not more than 4 residents receiving *care* only on the *first storey*, (c) the *first storey* is served by 2 *barrier-free means of egress* leading to an *exit* at ground level that is not more than 30 m from any point in the *first storey*, (d) in lieu of having *smoke alarms* installed as required in Subsection 9.10.19., the *building* has a residential fire warning system installed in conformance with CAN/ULC-S540, "Standard for Residential Fire and Life Safety Warning	"Standard for Residential Fire and Life Safety Warning Systems: Installation, Inspection, Testing and Maintenance," (i) with *smoke detectors* in each sleeping room, in the kitchen, and in common spaces such as activity rooms, corridors and hallways, (ii) with *heat detectors* in each attached *storage garage*, *service room*, laundry room and storage room, (iii) capable of sounding audible signals in accordance with Articles 9.10.19.2. and 9.10.19.5. at a frequency not higher than 520 Hz, (iv) powered in accordance with Article 9.10.19.4., (v) equipped with a silencing device in accordance with Article 9.10.19.6., (vi) equipped with an annunciator panel with separate zone indication of the actuation of the alarm-initiating devices, and (vii) designed to notify the fire department in conformance with Sentence 3.2.4.8.(4) that an *alarm signal* has been initiated, (d) has emergency lighting in the common *means of egress* that complies with Sentences 9.9.12.3.(2) to (7), and (e) complies with Section 3.8. (4) A sprinkler system need not be provided in accordance with Sentence (2) where (a) the *building* is not more than 2 *storeys* in *building height*, (b) the *building* has sleeping accommodation for not more than 4 residents receiving *care* only on the *first storey*, (c) the *first storey* is served by 2 *barrier-free means of egress* leading to an *exit* at ground level that is not more than 30 m from any point in the *first storey*, (d) in lieu of having *smoke alarms* installed as required in Subsection 9.10.19., the *building* has a residential fire warning system installed in conformance with CAN/ULC-S540, "Standard for Residential Fire and Life Safety Warning	

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				Systems: Installation, Inspection, Testing and Maintenance," (i) with *smoke detectors* in each sleeping room, in the kitchen, and in common spaces such as activity rooms, corridors and hallways, (ii) with *heat detectors* in each attached *storage garage*, *service room*, laundry room and storage room, (iii) capable of sounding audible signals in accordance with Articles 9.10.19.2. and 9.10.19.5. at a frequency not higher than 520 Hz, (iv) powered in accordance with Article 9.10.19.4., (v) equipped with a silencing device in accordance with Article 9.10.19.6., (vi) equipped with an annunciator panel with separate zone indication of the actuation of the alarm-initiating devices, and (vii) designed to notify the fire department in conformance with Sentence 3.2.4.8.(4) that an *alarm signal* has been initiated, (e) all *floors* of the *building* have emergency lighting in the common *means of egress* that complies with Sentences 9.9.12.3.(2) to (7), (f) the *basement* is separated from the remainder of the *building* by a door that complies with Sentence 9.10.9.3.(2) and by a continuous smoke-tight barrier consisting of not less than 12.7 mm thick gypsum board installed on (i) both sides of the walls, and (ii) the underside of the floor-ceiling framing, (g) an air-handling system designed to shut down upon a signal from the residential fire warning system serves the *basement* and other *storeys*, and (h) the *first storey* complies with Section 3.8. (5) *Home-type care occupancies* with sleeping accommodation for more than 10 persons shall comply with the applicable requirements of Part 3 relating to *care occupancies*.	Systems: Installation, Inspection, Testing and Maintenance," (i) with *smoke detectors* in each sleeping room, in the kitchen, and in common spaces such as activity rooms, corridors and hallways, (ii) with *heat detectors* in each attached *storage garage*, *service room*, laundry room and storage room, (iii) capable of sounding audible signals in accordance with Articles 9.10.19.2. and 9.10.19.5. at a frequency not higher than 520 Hz, (iv) powered in accordance with Article 9.10.19.4., (v) equipped with a silencing device in accordance with Article 9.10.19.6., (vi) equipped with an annunciator panel with separate zone indication of the actuation of the alarm-initiating devices, and (vii) designed to notify the fire department in conformance with Sentence 3.2.4.8.(4) that an *alarm signal* has been initiated, (e) all *floors* of the *building* have emergency lighting in the common *means of egress* that complies with Sentences 9.9.12.3.(2) to (7), (f) the *basement* is separated from the remainder of the *building* by a door that complies with Sentence 9.10.9.3.(2) and by a continuous smoke-tight barrier consisting of not less than 12.7 mm thick gypsum board installed on (i) both sides of the walls, and (ii) the underside of the floor-ceiling framing, (g) an air-handling system designed to shut down upon a signal from the residential fire warning system serves the *basement* and other *storeys*, and (h) the *first storey* complies with Section 3.8. (5) *Home-type care occupancies* with sleeping accommodation for more than 10 persons shall comply with the applicable requirements of Part 3 relating to *care occupancies*.	

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Fire Resistance and Sound Transmission Tables	Supplementary Standard SB-3	(Table 2 - Fire and Sound Resistance of Floors, Ceilings and Roofs)	Table 9.10.3.1.B	(Table 9.10.3.1.B - Fire and Sound Resistance of Floors, Ceilings and Roofs)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/n68zaz7bgyha50h/Proposed_Change_1275.pdf?dl=0
Fire Resistance and Sound Transmission Tables	Supplementary Standard SB-3	(Table 1 - Fire and Sound Resistance of Walls)	Table 9.10.3.1.A	(Table 9.10.3.1.A - Fire and Sound Resistance of Walls)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/xhk6igbgcgqfv0w/Proposed_Change_1276.pdf?dl=0
Fire Resistance and Sound Transmission Tables	Supplementary Standard SB-3	(Table 1 - Fire and Sound Resistance of Walls)	Table 9.10.3.1.A	(Table 9.10.3.1.A - Fire and Sound Resistance of Walls)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/eda0yjtaqztwgnz/Proposed_Change_1277.pdf?dl=0
Fire Resistance and Sound Transmission Tables	Supplementary Standard SB-3	(Table 2 - Fire and Sound Resistance of Floors, Ceilings and Roofs)	Table 9.10.3.1.B	(Table 9.10.3.1.B - Fire and Sound Resistance of Floors, Ceilings and Roofs)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/nmz20yxw466mkan/Proposed_Change_1278.pdf?dl=0
Building Fire Safety	Supplementary Standard SB-3	(Table 1 - Fire and Sound Resistance of Walls)	Table 9.10.3.1.A	(Table 9.10.3.1.A - Fire and Sound Resistance of Walls)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/7v6az0x6qpu1usz/Proposed_Change_1496.pdf?dl=0
Penetrations	9.10.5.1. Permitted Openings in Wall and Ceiling Membranes	(2) A wall or ceiling membrane forming part of an assembly required to have a *fire-resistance rating* is permitted to be pierced by openings for electrical and similar service outlet boxes provided such outlet boxes are tightly fitted. (3) Where boxes referred to in Sentence (2) are located on both sides of walls required to provide a *fire-resistance rating*, they shall be offset where necessary to maintain the integrity of the *fire separation*.	9.10.5.1. Permitted Openings in Wall and Ceiling Membranes	(2) A wall or ceiling membrane forming part of an assembly required to have a *fire-resistance rating* is permitted to be pierced by openings for electrical and similar service outlet boxes, provided such outlet boxes and the penetrations conform to Article 9.10.9.8.	(2) A wall or ceiling membrane forming part of an assembly required to have a *fire-resistance rating* is permitted to be pierced by openings for electrical and similar service outlet boxes, provided such outlet boxes ~~are tightly fitted.~~ ~~(3) Where boxes referred to in Sentence (2) are located on both sides of walls required to provide a *fire-resistance rating*, they shall be offset~~ and ~~where necessary to maintain~~ the ~~integrity of the *fire separation*~~penetrations conform to Article 9.10.9.8.	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0
Penetrations	9.10.9.2. Continuous Barrier	(2) The continuity of a *fire separation* shall be maintained where it abuts another *fire separation*, a floor, a ceiling, a roof or an exterior wall assembly.	9.10.9.2. Continuous Barrier	(2) Except as permitted in Article 9.10.9.3., a wall or floor assembly required to be a smoke-tight barrier shall be constructed as a continuous barrier against the spread of smoke. (3) Except as provided in Sentence (6), the continuity of a *fire separation* where it abuts another *fire separation* or smoke-tight barrier, a floor, a ceiling, or a roof shall be maintained by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, “Standard Method of Fire Tests of Firestop Systems,” has an FT rating not less than the *fire-resistance rating* for the abutting *fire separation*. (4) Except as provided in Sentence (6), joints located in a horizontal plane between a floor and an exterior	(2) ~~The~~Except as permitted in Article 9.10.9.3., a wall or floor assembly required to be a smoke-tight barrier shall be constructed as a continuous barrier against the spread of smoke. (3) Except as provided in Sentence (6), the continuity of a *fire separation* ~~shall be maintained~~ where it abuts another *fire separation* or smoke-tight barrier, a floor, a ceiling, or a roof ~~or~~ shall be maintained by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, “Standard Method of Fire Tests of Firestop Systems,” has an FT rating not less than the *fire-resistance rating* for the abutting *fire separation*.	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0

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				wall shall be sealed by a *firestop* that, when subjected to the fire test method in ASTM E2307, "Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-storey Test Apparatus," has an F rating not less than the *fire-resistance rating* for the horizontal *fire separation*. (5) Except as provided in Sentence (6), all gypsum board joints in the assemblies described in Sentences (1) and (2) shall conform to CSA A82.31-M, "Gypsum Board Application," to maintain the integrity of the smoke-tight barrier over the entire surface. (6) Joints between ceilings and walls, between floors and walls, and between walls at corners need not comply with Sentences (3) to (5) where such joints consist of gypsum board that is attached to framing members and arranged so as to restrict the passage of flame and smoke through the joints.	(4) Except as provided in Sentence (6), joints located in a horizontal plane between a floor and an exterior wall ~~assembly.~~shall be sealed by a *firestop* that, when subjected to the fire test method in ASTM E2307, "Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-storey Test Apparatus," has an F rating not less than the *fire-resistance rating* for the horizontal *fire separation*. (5) Except as provided in Sentence (6), all gypsum board joints in the assemblies described in Sentences (1) and (2) shall conform to CSA A82.31-M, "Gypsum Board Application," to maintain the integrity of the smoke-tight barrier over the entire surface. (6) Joints between ceilings and walls, between floors and walls, and between walls at corners need not comply with Sentences (3) to (5) where such joints consist of gypsum board that is attached to framing members and arranged so as to restrict the passage of flame and smoke through the joints.	
Penetrations	9.10.9.3. Openings to be Protected with Closures	(1) Except as permitted in Articles 9.10.9.5. to 9.10.9.7., openings in required *fire separations* shall be protected with *closures* conforming to Subsection 9.10.13.	9.10.9.3. Openings to be Protected with Closures	(1) Except as permitted in Articles 9.10.9.5. to 9.10.9.7.A., openings in required *fire separations* shall be protected with *closures* conforming to Subsection 9.10.13.	(1) Except as permitted in Articles 9.10.9.5. to 9.10.9.7.A., openings in required *fire separations* shall be protected with *closures* conforming to Subsection 9.10.13.	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0
Penetrations	9.10.9.6. Penetration of Fire Separations	(1) Piping, tubing, ducts, *chimneys*, wiring, conduit, electrical outlet boxes and other similar service equipment that penetrate a required *fire separation* shall be tightly fitted or fire stopped to maintain the integrity of the separation. … (3) Except as provided in Sentences (4) to (12) and Article 9.10.9.7., pipes, ducts, electrical outlet boxes, totally enclosed raceways or other similar service equipment that partly or wholly penetrate an assembly required to have a *fire-resistance rating* shall be *noncombustible* unless the assembly has been tested incorporating such equipment. (4) Electrical wires or other similar wiring enclosed in *noncombustible* totally enclosed raceways are permitted to partly or wholly penetrate an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3). (5) Single conductor metal-sheathed cables with *combustible* jacketing that are more than 25 mm in	9.10.9.6. General Requirements for Penetrations of Fire Separations	(1) Except as required by Sentence (2) and Articles 9.10.9.7. and 9.10.9.7.A. and as permitted by Article 9.10.9.7.B., penetrations of a required *fire separation* or a membrane forming part of an assembly required to be a *fire separation* shall be (a) sealed by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the required *fire-resistance rating* for the *fire separation*, (b) tightly fitted or cast in place, provided the penetrating item is made of steel, ferrous, copper, concrete or masonry, or (c) sealed to maintain the integrity of the *fire separation*.	(1) ~~Piping, tubing, ducts, *chimneys*, wiring, conduit, electrical outlet boxes~~ Except as required by Sentence (2) and ~~other similar service equipment that penetrate~~ Articles 9.10.9.7. and 9.10.9.7.A. and as permitted by Article 9.10.9.7.B., penetrations of a required *fire separation* or a membrane forming part of an assembly required to be a *fire separation* shall be (a) sealed by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an F rating not less than the required *fire-resistance rating* for the *fire separation*, (b) tightly fitted or ~~fire stopped~~cast in place, provided the penetrating item is made of steel, ferrous, copper, concrete or masonry, or (c) sealed to maintain the integrity of the *fire separation*. ~~…~~	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0

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		overall diameter are permitted to penetrate a *fire separation* required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the cables are not grouped and are spaced a minimum of 300 mm apart. (6) Electrical wires or cables, single or grouped, with *combustible* insulation or jacketing that is not totally enclosed in raceways of *noncombustible* material, are permitted to partly or wholly penetrate an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the overall diameter of the wiring is not more than 25 mm. (7) *Combustible* totally enclosed raceways that are embedded in a concrete floor slab are permitted in an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), where the concrete provides at least 50 mm of cover between the raceway and the bottom of the slab. (8) *Combustible* outlet boxes are permitted in an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the opening through the membrane into the box does not exceed 160 cm². (9) *Combustible* water distribution piping is permitted to partly or wholly penetrate a *fire separation* that is required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the piping is protected with a *fire stop* in conformance with Sentence 3.1.9.4.(4). (10) *Combustible* sprinkler piping is permitted to penetrate a *fire separation* provided the *fire compartments* on each side of the *fire separation* are *sprinklered*. (11) Sprinklers are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* without having to meet the *fire stop* requirements of Sentence (1), provided the annular space created by the penetration of a fire sprinkler is covered by a metal escutcheon plate in accordance with NFPA 13, “Installation of Sprinkler Systems”. (12) *Combustible* piping for central vacuum systems is permitted to penetrate a *fire separation* provided			~~(3) Except as provided in Sentences (4) to (12) and Article 9.10.9.7., pipes, ducts, electrical outlet boxes, totally enclosed raceways or other similar service equipment that partly or wholly penetrate an assembly required to have a *fire-resistance rating* shall be *noncombustible* unless the assembly has been tested incorporating such equipment.~~ ~~(4) Electrical wires or other similar wiring enclosed in *noncombustible* totally enclosed raceways are permitted to partly or wholly penetrate an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3).~~ ~~(5) Single-conductor metal-sheathed cables with *combustible* jacketing that are more than 25 mm in overall diameter are permitted to penetrate a *fire separation* required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the cables are not grouped and are spaced a minimum of 300 mm apart.~~ ~~(6) Electrical wires or cables, single or grouped, with *combustible* insulation or jacketing that is not totally enclosed in raceways of *noncombustible* material, are permitted to partly or wholly penetrate an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the overall diameter of the wiring is not more than 25 mm.~~ ~~(7) *Combustible* totally enclosed raceways that are embedded in a concrete floor slab are permitted in an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), where the concrete provides at least 50 mm of cover between the raceway and the bottom of the slab.~~ ~~(8) *Combustible* outlet boxes are permitted in an assembly required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3), provided the opening through the membrane into the box does not exceed 160 cm².~~ ~~(9) *Combustible* water distribution piping is permitted to partly or wholly penetrate a *fire separation* that is required to have a *fire-resistance rating* without being incorporated in the assembly at the time of testing as required in Sentence (3),~~	

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		the installation conforms to the requirements that apply to *combustible* piping in Sentences 9.10.9.7.(2) to (6). (13) *Fire dampers* are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* without having to meet the *fire stop* requirements of Sentence (1), provided the *fire damper* is, (a) installed in conformance with NFPA 80, "Fire Doors and Other Opening Protectives," or (b) designed specifically with a *fire stop*.			~~provided the piping is protected with a *fire stop* in conformance with Sentence 3.1.9.4.(4).~~ ~~(10) *Combustible* sprinkler piping is permitted to penetrate a *fire separation* provided the *fire compartments* on each side of the *fire separation* are *sprinklered*.~~ ~~(11) Sprinklers are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire resistance rating* without having to meet the *fire stop* requirements of Sentence (1), provided the annular space created by the penetration of a fire sprinkler is covered by a metal escutcheon plate in accordance with NFPA 13, "Installation of Sprinkler Systems".~~ ~~(12) *Combustible* piping for central vacuum systems is permitted to penetrate a *fire separation* provided the installation conforms to the requirements that apply to *combustible* piping in Sentences 9.10.9.7.(2) to (6).~~ ~~(13) *Fire dampers* are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire resistance rating* without having to meet the *fire stop* requirements of Sentence (1), provided the *fire damper* is,~~ ~~(a) installed in conformance with NFPA 80, "Fire Doors and Other Opening Protectives," or~~ ~~(b) designed specifically with a *fire stop*.~~	
Penetrations	9.10.9.7. Combustible Piping	(1) Except as permitted in Sentences (2) to (6), *combustible* piping shall not be used where any part of a piping system partly or wholly penetrates a *fire separation* required to have a *fire-resistance rating* or penetrates a membrane that contributes to the required *fire-resistance rating* of an assembly. (2) *Combustible* piping not located in a vertical shaft is permitted to penetrate a *fire separation* required to have a *fire-resistance rating* or a membrane that forms part of an assembly required to have a *fire-resistance rating*, provided the piping is sealed at the penetration by a *fire stop* system that has an F rating not less than the *fire-resistance rating* required for the *fire separation*. (3) The rating referred to in Sentence (2) shall be based on CAN/ULC-S115, "Fire Tests of Firestop Systems", with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side. (4) *Combustible* drain piping is permitted to penetrate a horizontal *fire separation* or a membrane that	9.10.9.7. Piping Penetrations	(1) Except as provided in Sentences (2) and (5), piping for drain, waste, vent and central vacuum systems that is not located in a *vertical service space* is permitted to penetrate a *fire separation* required to have a *fire-resistance rating* or a membrane that forms part of an assembly required to have a *fire-resistance rating*, provided the penetration is protected in accordance with Clause 9.10.9.6.(1)(a) or (b). (2) Drain piping leading directly from a water closet through a concrete floor slab is permitted to penetrate a horizontal *fire separation* or a membrane that contributes to the required *fire-resistance rating* of a horizontal *fire separation*, provided (a) the piping is *noncombustible* and the penetration is protected in accordance with Sentence 9.10.9.6.(1), or (b) the piping is *combustible* and the penetration is sealed by a *firestop* conforming to Clause 9.10.9.6.(1)(a).	(1) Except as ~~permitted~~provided in Sentences (2) ~~to (6), *combustible*~~ and (5), piping ~~shall not be used where any part of a piping system partly or wholly penetrates a *fire separation* required to have a *fire resistance rating* or penetrates a membrane~~for drain, waste, vent and central vacuum systems that ~~contributes to the required *fire resistance rating* of an assembly.~~ ~~(2) *Combustible* piping~~is not located in a *vertical ~~shaft~~service space* is permitted to penetrate a *fire separation* required to have a *fire-resistance rating* or a membrane that forms part of an assembly required to have a *fire-resistance rating*, provided the ~~piping is sealed at the penetration by a *fire stop* system that has an F rating not less than the *fire resistance rating* required for the *fire separation*.~~ penetration is protected in accordance with Clause 9.10.9.6.(1)(a) ~~(3) The rating referred to in Sentence (2) shall be based on CAN/ULC-S115, "Fire Tests of Firestop Systems", with a pressure differential of 50 Pa~~	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0

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		contributes to the required *fire-resistance rating* of a horizontal *fire separation*, provided it leads directly from a *noncombustible* water closet through a concrete floor slab. (5) *Combustible* piping is permitted, (a) on one side of a vertical *fire separation* provided it is not located in a vertical shaft, and (b) to penetrate a vertical or horizontal *fire separation* when the *fire compartment* on each side of the *fire separation* is *sprinklered*. (6) In a *house* containing two *dwelling units*, *combustible* piping is permitted on one side of a horizontal *fire separation*.		(3) *Combustible* drain, waste and vent piping is permitted on one side of a vertical *fire separation*, provided it is not located in a vertical shaft. (4) In *buildings* containing 2 *dwelling units* only, *combustible* drain, waste and vent piping is permitted on one side of a horizontal *fire separation*. (5) Water distribution piping is permitted to partly or wholly penetrate a *fire separation* required to have a *fire-resistance rating*, provided (a) the piping is *noncombustible* and the penetration is protected in accordance with Sentence 9.10.9.6.(1), or (b) the piping is *combustible* and is not located in a vertical shaft, and the penetration is sealed by a *firestop* conforming to Clause 9.10.9.6.(1)(a).	~~between the exposed and unexposed sides, with the higher pressure on the exposed side.~~ ~~(4) *Combustible* drain piping~~or (b). (2) Drain piping leading directly from a water closet through a concrete floor slab is permitted to penetrate a horizontal *fire separation* or a membrane that contributes to the required *fire-resistance rating* of a horizontal *fire separation*, provided~~ it leads directly from a *noncombustible* water closet through a concrete floor slab.~~ ~~(5)~~ (a) the piping is *noncombustible* and the penetration is protected in accordance with Sentence 9.10.9.6.(1), or (b) the piping is *combustible* and the penetration is sealed by a *firestop* conforming to Clause 9.10.9.6.(1)(a). (3) *Combustible* drain, waste and vent piping is permitted~~,~~ ~~(a)~~ on one side of a vertical *fire separation*, provided it is not located in a vertical shaft~~, and~~. ~~(b) to penetrate a vertical or horizontal *fire separation* when the *fire compartment* on each side of the *fire separation* is *sprinklered*.~~ ~~(6~~(4) In ~~a *house*~~*buildings* containing ~~two~~2 *dwelling units* only, *combustible* drain, waste and vent piping is permitted on one side of a horizontal *fire separation*. (5) Water distribution piping is permitted to partly or wholly penetrate a *fire separation* required to have a *fire-resistance rating*, provided (a) the piping is *noncombustible* and the penetration is protected in accordance with Sentence 9.10.9.6.(1), or (b) the piping is *combustible* and is not located in a vertical shaft, and the penetration is sealed by a *firestop* conforming to Clause 9.10.9.6.(1)(a).	
Penetrations	9.10.9.7.A. Penetrations by Outlet Boxes or Service Equipment in Concealed Spaces (New)	N/A	9.10.9.7.A Penetrations by Outlet Boxes or Service Equipment in Concealed Spaces	(1) Except as provided in Sentences (2) to (5), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the *fire-resistance rating* of the *fire separation*.	(1) Except as provided in Sentences (2) to (5), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the *fire-resistance rating* of the *fire separation*.	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0

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				(2) Except as provided in Sentence 9.10.9.6.(2), *noncombustible* outlet boxes that penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* need not conform to Sentence (1), provided (a) they do not exceed (i) 0.016 m2 in area, and (ii) an aggregate area of 0.065 m^2 in any 9.3 m^2 of surface area, and (b) the annular space between the membrane and the *noncombustible* outlet boxes does not exceed 3 mm. (3) Except as provided in Sentence 9.10.9.6.(2), *combustible* outlet boxes that penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* need not conform to Sentence (1), provided (a) the outlet boxes are (i) separated from the remainder of the space within the assembly by an enclosure of not more than 0.3 m^2 in area made of *fire block* material conforming to Article 9.10.16.3., or (ii) located in a space within the assembly that is filled with preformed fibre insulation processed from rock or slag conforming to CAN/ULC-S702.1, "Standard for Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification," and having a mass per unit area of not less than 1.22 kg/m^2 of wall surface such that the exposed sides and back of the outlet box are encapsulated by the *noncombustible* insulation, and (b) the outlet boxes do not exceed an aggregate area of 0.016 m^2 in any individual enclosure as described in Subclause (a)(i) or any individual insulated space as described in Subclause (a)(ii). (4) *Noncombustible* outlet boxes conforming to Sentence (2) are permitted to be located on opposite sides of a vertical *fire separation* having a *fire-resistance rating* and need not conform to Sentence (1), provided they are (a) separated from each other by a horizontal distance of not less than 600 mm,	(2) Except as provided in Sentence 9.10.9.6.(2), *noncombustible* outlet boxes that penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* need not conform to Sentence (1), provided (a) they do not exceed (i) 0.016 m2 in area, and (ii) an aggregate area of 0.065 m^2 in any 9.3 m^2 of surface area, and (b) the annular space between the membrane and the *noncombustible* outlet boxes does not exceed 3 mm. (3) Except as provided in Sentence 9.10.9.6.(2), *combustible* outlet boxes that penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* need not conform to Sentence (1), provided (a) the outlet boxes are (i) separated from the remainder of the space within the assembly by an enclosure of not more than 0.3 m^2 in area made of *fire block* material conforming to Article 9.10.16.3., or (ii) located in a space within the assembly that is filled with preformed fibre insulation processed from rock or slag conforming to CAN/ULC-S702.1, "Standard for Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification," and having a mass per unit area of not less than 1.22 kg/m^2 of wall surface such that the exposed sides and back of the outlet box are encapsulated by the *noncombustible* insulation, and (b) the outlet boxes do not exceed an aggregate area of 0.016 m^2 in any individual enclosure as described in Subclause (a)(i) or any individual insulated space as described in Subclause (a)(ii). (4) *Noncombustible* outlet boxes conforming to Sentence (2) are permitted to be located on opposite sides of a vertical *fire separation* having a *fire-resistance rating* and need not conform to Sentence (1), provided they are (a) separated from each other by a horizontal distance of not less than 600 mm,	

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				(b) separated from each other and the remainder of the wall space by an enclosure conforming to Subclause (3)(a)(i), or (c) located in an insulated wall space in accordance with Subclause (3)(a)(ii). (5) *Combustible* outlet boxes conforming to Sentence (3) are permitted to be located on opposite sides of a vertical *fire separation* having a *fire-resistance rating* and need not conform to Sentence (1). (6) Service equipment is permitted to penetrate a horizontal *fire separation* conforming to Sentence 9.10.9.10.(2), provided the penetration is sealed by (a) a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the required *fire-resistance rating* for the *fire separation*, (b) a *firestop* conforming to Clause 9.10.9.6.(1)(a), where the service equipment is located entirely within the cavity of a wall assembly above and below the horizontal *fire separation* having a required *fire-resistance rating*, or (c) a *firestop* conforming to Clause 9.10.9.6.(1)(a), where the penetration is (i) contained within the concealed space of a floor or ceiling assembly having a *fire-resistance rating*, (ii) located above a ceiling membrane providing a horizontal *fire separation*, or (iii) contained within a *horizontal service space* conforming to Sentence 9.10.9.10.(2) that is directly above or below a floor or ceiling.	(b) separated from each other and the remainder of the wall space by an enclosure conforming to Subclause (3)(a)(i), or (c) located in an insulated wall space in accordance with Subclause (3)(a)(ii). (5) *Combustible* outlet boxes conforming to Sentence (3) are permitted to be located on opposite sides of a vertical *fire separation* having a *fire-resistance rating* and need not conform to Sentence (1). (6) Service equipment is permitted to penetrate a horizontal *fire separation* conforming to Sentence 9.10.9.10.(2), provided the penetration is sealed by (a) a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the required *fire-resistance rating* for the *fire separation*, (b) a *firestop* conforming to Clause 9.10.9.6.(1)(a), where the service equipment is located entirely within the cavity of a wall assembly above and below the horizontal *fire separation* having a required *fire-resistance rating*, or (c) a *firestop* conforming to Clause 9.10.9.6.(1)(a), where the penetration is (i) contained within the concealed space of a floor or ceiling assembly having a *fire-resistance rating*, (ii) located above a ceiling membrane providing a horizontal *fire separation*, or (iii) contained within a *horizontal service space* conforming to Sentence 9.10.9.10.(2) that is directly above or below a floor or ceiling.	
Penetrations	9.10.9.7.B Penetrations by Raceways, Sprinklers and Fire Dampers (New)	N/A	9.10.9.7.B Penetrations by Raceways, Sprinklers and Fire Dampers	(1) *Combustible* totally enclosed raceways that are embedded in a concrete floor slab are permitted in an assembly required to have a *fire-resistance rating*, provided the concrete cover between the raceway and the bottom of the slab is not less than 50 mm. (2) Totally enclosed raceways are permitted to penetrate a *fire separation*, provided they are sealed at the penetration by a *firestop* conforming to Clause 9.10.9.6.(1)(a). (3) Sprinkler piping is permitted to penetrate a *fire separation*, provided the *fire compartments* on each side of the *fire separation* are *sprinklered*.	(1) *Combustible* totally enclosed raceways that are embedded in a concrete floor slab are permitted in an assembly required to have a *fire-resistance rating*, provided the concrete cover between the raceway and the bottom of the slab is not less than 50 mm. (2) Totally enclosed raceways are permitted to penetrate a *fire separation*, provided they are sealed at the penetration by a *firestop* conforming to Clause 9.10.9.6.(1)(a). (3) Sprinkler piping is permitted to penetrate a *fire separation*, provided the *fire compartments* on each side of the *fire separation* are *sprinklered*.	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0

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				(4) Sprinklers are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* without having to meet the *firestop* requirements of Article 9.10.9.6. and Clause 9.10.9.7.A.(6)(a), provided the annular space created by the penetration of a fire sprinkler is covered by a metal escutcheon plate in accordance with NFPA 13, "Standard for the Installation of Sprinkler Systems." (5) *Fire dampers* are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* without having to meet the *firestop* requirements of Sentence 9.10.9.6.(1), provided the *fire damper* is (a) installed in conformance with NFPA 80, "Standard for Fire Doors and Other Opening Protectives," (b) specifically designed with a *firestop*, or (c) provided in conformance with Sentence 9.10.5.1.(3).	(4) Sprinklers are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* without having to meet the *firestop* requirements of Article 9.10.9.6. and Clause 9.10.9.7.A.(6)(a), provided the annular space created by the penetration of a fire sprinkler is covered by a metal escutcheon plate in accordance with NFPA 13, "Standard for the Installation of Sprinkler Systems." (5) *Fire dampers* are permitted to penetrate a *fire separation* or a membrane forming part of an assembly required to have a *fire-resistance rating* without having to meet the *firestop* requirements of Sentence 9.10.9.6.(1), provided the *fire damper* is (a) installed in conformance with NFPA 80, "Standard for Fire Doors and Other Opening Protectives," (b) specifically designed with a *firestop*, or (c) provided in conformance with Sentence 9.10.5.1.(3).	
Penetrations	9.10.16.4. Penetration of Fire Blocks	(1) Where *fire blocks* are pierced by pipes, ducts or other elements, the effectiveness of the *fire blocks* shall be maintained around such elements.	9.10.16.4. Penetration of Fire Blocks	(1) Where *fire blocks* are pierced by pipes, ducts or other elements, the effectiveness of the *fire blocks* shall be maintained around such elements.	(1) Where *fire blocks* are pierced by pipes, ducts or other elements, the effectiveness of the *fire blocks* shall be maintained around such elements.	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0
Penetrations	9.10.13.13. Fire Dampers	(1) Except as permitted in Sentences (2) to (5) and Sentence 9.10.5.1.(4), a duct that penetrates an assembly required to be a *fire separation* with a *fire-resistance rating* shall be equipped with a *fire damper* in conformance with Articles 3.1.8.4. and 3.1.8.9.	9.10.13.13. Fire Dampers	(1) Except as permitted by Sentences (2) to (5), 9.10.5.1.(4) and 9.10.9.7.B.(5), a duct that penetrates an assembly required to be a *fire separation* with a *fire-resistance rating* shall be equipped with a *fire damper* in conformance with Articles 3.1.8.4. and 3.1.8.9.	(1) Except as permitted ~~in~~by Sentences (2) to (5~~) and Sentence~~), 9.10.5.1.(4) and 9.10.9.7.B.(5), a duct that penetrates an assembly required to be a *fire separation* with a *fire-resistance rating* shall be equipped with a *fire damper* in conformance with Articles 3.1.8.4. and 3.1.8.9.	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0
Penetrations	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.	9.33.8.1. 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. (See Articles 3.1.5.16., 3.1.9.1. and 9.10.9.7., and Sentence 9.10.9.7.B.(3) for fire safety requirements.)	(1) Piping shall be made from materials designed to withstand the effects of temperatures and pressures that may occur in the system. (See Articles 3.1.5.16., 3.1.9.1. and 9.10.9.7., and Sentence 9.10.9.7.B.(3) for fire safety requirements.)	https://www.dropbox.com/s/ngkucu9qng32h05/Proposed_Change_1576.pdf?dl=0
Penetrations	9.10.9.7. Combustible Piping	(3) The rating referred to in Sentence (2) shall be based on CAN/ULC-S115, "Fire Tests of Firestop Systems", with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side.	9.10.9.7. Combustible Drain, Waste and Vent Piping	N/A	~~(3) The rating referred to in Sentence (2) shall be based on CAN/ULC-S115, "Fire Tests of Firestop Systems", with a pressure differential of 50 Pa between the exposed and unexposed sides, with the higher pressure on the exposed side.~~	https://www.dropbox.com/s/f0d6dkctvnevu7z/Proposed_Change_1501.pdf?dl=0
Technical Differences within the National Codes — Fire	9.10.9.15. Separation of Public Corridors	(1) Except as provided in Sentences (2) and (3), *public corridors* shall be separated from the remainder of the *building* by a *fire separation* having not less than a 45 min *fire-resistance rating*.	9.10.9.17. Separation of Public Corridors	(1) Except as otherwise required by this Part and provided in Sentences (2) to (4), *public corridors* shall be separated from the remainder of the *building* by a *fire separation* having not less than a 45 min *fire-resistance rating*.	(1) Except as otherwise required by this Part and provided in Sentences (2) ~~and (3~~to (4), *public corridors* shall be separated from the remainder of the *building* by a *fire separation* having not less than a 45 min *fire-resistance rating*.	https://www.dropbox.com/s/upab48vrfk8fy3o/Proposed_Change_1081.pdf?dl=0

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Protection and HSB				… (4) No *fire separation* is required in a sprinklered *floor area* between a *public corridor* and a space containing plumbing fixtures required by Article 3.7.4.2. and Section 9.31., provided (a) the space and the *public corridor* are separated from the remainder of the *storey* by a *fire separation* having a *fire-resistance rating* not less than that required between the *public corridor* and the remainder of the *storey*, and (b) the plumbing fixtures are not located within a *dwelling unit* or *suite*.	… (4) No *fire separation* is required in a sprinklered *floor area* between a *public corridor* and a space containing plumbing fixtures required by Article 3.7.4.2. and Section 9.31., provided (a) the space and the *public corridor* are separated from the remainder of the *storey* by a *fire separation* having a *fire-resistance rating* not less than that required between the *public corridor* and the remainder of the *storey*, and (b) the plumbing fixtures are not located within a *dwelling unit* or *suite*.	
Technical Differences within the National Codes — Fire Protection and HSB	9.10.10.6. Storage Rooms	(1) Rooms for the temporary storage of *combustible* refuse in all *occupancies* or for public storage in *residential occupancies* shall be separated from the remainder of the *building* by a *fire separation* having not less than a 1 h *fire-resistance rating*, except that a 45 min *fire separation* is permitted where the *fire-resistance rating* of the floor assembly is not required to exceed 45 min, or where such rooms are *sprinklered*.	9.10.10.6. Storage Rooms	(1) Rooms for the temporary storage of *combustible* refuse and materials for recycling in all *occupancies* or for public storage in *residential occupancies* shall be separated from the remainder of the *building* by a *fire separation* having not less than a 1 h *fire-resistance rating*, except that a *fire separation* with a *fire-resistance rating* of not less than 45 min is permitted where (a) the *fire-resistance rating* of the floor assembly is not required to exceed 45 min, or (b) the room is *sprinklered*.	(1) Rooms for the temporary storage of *combustible* refuse and materials for recycling in all *occupancies* or for public storage in *residential occupancies* shall be separated from the remainder of the *building* by a *fire separation* having not less than a 1 h *fire-resistance rating*, except that a ~~45 min~~ *fire separation* with a *fire-resistance rating* of not less than 45 min is permitted where (a) the *fire-resistance rating* of the floor assembly is not required to exceed 45 min, or ~~where such rooms are~~ (b) the room is *sprinklered*.	https://www.dropbox.com/s/xmh13e90ylhk9eg/Proposed_Change_1095.pdf?dl=0
Spatial Separation Between Buildings	9.10.14.1. Application	N/A	9.10.14.1. Application	(2) This Subsection does not apply to detached carports conforming to Section 9.35. that serve not more than one *dwelling unit* or a house with a *secondary suite*.	(2) This Subsection does not apply to detached carports conforming to Section 9.35. that serve not more than one *dwelling unit* or a house with a *secondary suite*.	https://www.dropbox.com/s/0ko6kgpj51bm33w/Proposed_Change_1140.pdf?dl=0
Spatial Separation of Houses	9.10.14.5. Construction of Exposing Building Face and Walls above Exposing Building Face	N/A	9.10.14.5. Construction of Exposing Building Face and Walls above Exposing Building Face	(5.1) The face of a roof soffit is permitted to project to the property line, where it faces a *public way*. (5.2) Where roof soffits project to less than 1.2 m from the property line, the centre line of a *public way*, or an imaginary line between two *buildings* or *fire compartments* on the same property, they shall (a) have no openings, and (b) be protected by (i) not less than 0.38 mm thick sheet steel, (ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use,” (iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board	(5.1) The face of a roof soffit is permitted to project to the property line, where it faces a *public way*. (5.2) Where roof soffits project to less than 1.2 m from the property line, the centre line of a *public way*, or an imaginary line between two *buildings* or *fire compartments* on the same property, they shall (a) have no openings, and (b) be protected by (i) not less than 0.38 mm thick sheet steel, (ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use,” (iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board	https://www.dropbox.com/s/g9qkip0uo05qi7z/Proposed_Change_1289.pdf?dl=0

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				installed according to CSA A82.31-M, "Gypsum Board Application," (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.	installed according to CSA A82.31-M, "Gypsum Board Application," (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.	
Spatial Separation Between Buildings	9.10.14.5. Construction of Exposing Building Face and Walls above Exposing Building Face	(3) Except as provided in Sentence (4), where a garage or accessory *building* serves a *house* or an individual *dwelling unit* in a *house* and is detached from the *house* and any other *building*, the *exposing building face*, (a) need not conform to the minimum required *fire-resistance rating* in Table 9.10.14.5., where the *limiting distance* is 0.6 m or more, (b) shall have a *fire-resistance rating* of not less than 45 min where the *limiting distance* is less than 0.6 m, and (c) need not conform to the type of cladding required in Table 9.10.14.5. regardless of the *limiting distance*.	9.10.14.5. Construction of Exposing Building Face and Walls above Exposing Building Face	(3) Except as provided in Sentence (4), where a garage or accessory *building* serves one *dwelling unit* only and is detached from any *building*, the *exposing building face* (a) need not conform to the minimum required *fire-resistance rating* stated in Table 9.10.14.5., where the *limiting distance* is 0.6 m or more, (b) shall have a *fire-resistance rating* of not less than 45 min, where the *limiting distance* is less than 0.6 m, and (c) need not conform to the type of cladding and type of construction required by Table 9.10.14.5., regardless of the *limiting distance*.	(3) Except as provided in Sentence (4), where a garage or accessory *building* serves ~~a *house* or an individual~~ one *dwelling unit* ~~in a *house*~~only and is detached from ~~the *house* and~~ any ~~other~~ *building*, the *exposing building face*~~,~~ (a) need not conform to the minimum required *fire-resistance rating* stated in Table 9.10.14.5., where the *limiting distance* is 0.6 m or more, (b) shall have a *fire-resistance rating* of not less than 45 min, where the *limiting distance* is less than 0.6 m, and (c) need not conform to the type of cladding and type of construction required ~~in~~by Table 9.10.14.5~~.~~, regardless of the *limiting distance*.	https://www.dropbox.com/s/5gk1j4ifwp422fr/Proposed_Change_1441.pdf?dl=0
Spatial Separation of Houses	9.10.15.2. Area and Location of Exposing Building Face	(1) The area of an *exposing building face* shall be, (a) taken as the exterior wall area facing in one direction on any side of a *house*, and (b) calculated as, (i) the total area measured from the finished ground level to the uppermost ceiling, (ii) the area for each *fire compartment* where a *house* is divided into *fire compartments* by *fire separations* with *fire-resistance ratings* not less than 45 min, or (iii) where Table 9.10.15.4. is used to determine maximum area of glazed openings, the area of any number of individual vertical portions of the wall measured from the finished ground level to the uppermost ceiling.	9.10.15.2. Area and Location of Exposing Building Face	(1) The area of an *exposing building face* shall be (a) taken as the exterior wall area facing in one direction on any side of a *building*, and (b) calculated as (i) the total area measured from the finished ground level to the uppermost ceiling, (ii) the area for each *fire compartment*, where a *building* is divided into *fire compartments* by *fire separations* with *fire-resistance ratings* not less than 45 min, or (iii) where Table 9.10.15.4. is used to determine the maximum aggregate area of glazed openings, the area of any number of individual portions of the *exposing building face*.	(1) The area of an *exposing building face* shall be~~,~~ (a) taken as the exterior wall area facing in one direction on any side of a ~~*house*~~*building*, and (b) calculated as~~,~~ (i) the total area measured from the finished ground level to the uppermost ceiling, (ii) the area for each *fire compartment*, where a ~~*house*~~*building* is divided into *fire compartments* by *fire separations* with *fire-resistance ratings* not less than 45 min, or (iii) where Table 9.10.15.4. is used to determine the maximum aggregate area of glazed openings, the area of any number of individual ~~vertical~~ portions of the ~~wall measured from the finished ground level to the uppermost ceiling.~~*exposing building face.*	https://www.dropbox.com/s/mwlnd9pguy7dw57/Proposed_Chang.pdf?dl=0
Spatial Separation of Houses	9.10.15.4. Glazed Openings in Exposing Building Face	(2) Where the limits on the area of glazed openings are determined for individual portions of the exterior wall, as described in Subclause 9.10.15.2.(1)(b)(iii), the maximum aggregate area of glazed openings for any portion shall not exceed the values in the row of Table 9.10.15.4. for the total area of the entire	9.10.15.4. Glazed Openings in Exposing Building Face	(2) Where the limits on the area of glazed openings are determined for individual portions of the *exposing building face*, as described in Subclause 9.10.15.2.(1)(b)(iii), the maximum aggregate area of glazed openings for any portion shall be determined using the values in Table 9.10.15.4. corresponding to	(2) Where the limits on the area of glazed openings are determined for individual portions of the ~~exterior wall~~*exposing building face*, as described in Subclause 9.10.15.2.(1)(b)(iii), the maximum aggregate area of glazed openings for any portion shall ~~not exceed~~be	https://www.dropbox.com/s/mwlnd9pguy7dw57/Proposed_Chang.pdf?dl=0

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		exposing building face based on the *limiting distance* of the individual portion.		(a) the maximum total area of *exposing building face*, which is equal to the sum of all portions of the *exposing building face*, and (b) the *limiting distance* of each portion.	determined using the values in ~~the row of~~ Table 9.10.15.4. ~~for~~corresponding to (a) the maximum total area of ~~the entire~~ *exposing building face* ~~based on~~, which is equal to the sum of all portions of the *exposing building face*, and (b) the *limiting distance* of ~~the individual~~each portion.	
Spatial Separation Between Houses	9.10.15.4. Glazed Openings in Exposing Building Face	(1) Except as provided in Sentences (3) to (5), the maximum area of glazed openings in an *exposing building face* shall, (a) conform to Table 9.10.15.4., (b) conform to Subsection 3.2.3. as if the glazed openings were *unprotected openings*, or (c) where the *limiting distance* is not less than 1.2 m, be equal to or less than the *limiting distance* squared.	9.10.15.4. Glazed Openings in Exposing Building Face	(1) Except as provided in Sentences (3) to (5), the maximum aggregate area of glazed openings in an *exposing building face* shall (a) conform to Table 9.10.15.4., (b) conform to Subsection 3.2.3., or (c) where the *limiting distance* is not less than 1.2 m, be equal to or less than the *limiting distance* squared. … (3.1) The maximum aggregate area of glazed openings in an *exposing building face* is permitted to be up to twice the area determined in accordance with Sentence (1), where (a) the glazed openings consist of glass blocks, as described in Article 9.10.13.7., or (b) the *building* is *sprinklered*, provided all rooms, including closets, bathrooms and attached garages, that are adjacent to the *exposing building face* and that have glazed openings are *sprinklered*, notwithstanding any exemptions in the sprinkler standards referenced in Article 3.2.5.13.	(1) Except as provided in Sentences (3) to (5), the maximum aggregate area of glazed openings in an *exposing building face* shall~~,~~ (a) conform to Table 9.10.15.4., (b) conform to Subsection 3.2.3~~. as if the glazed openings were *unprotected openings*,~~., or (c) where the *limiting distance* is not less than 1.2 m, be equal to or less than the *limiting distance* squared. … (3.1) The maximum aggregate area of glazed openings in an *exposing building face* is permitted to be up to twice the area determined in accordance with Sentence (1), where (a) the glazed openings consist of glass blocks, as described in Article 9.10.13.7., or (b) the *building* is *sprinklered*, provided all rooms, including closets, bathrooms and attached garages, that are adjacent to the *exposing building face* and that have glazed openings are *sprinklered*, notwithstanding any exemptions in the sprinkler standards referenced in Article 3.2.5.13.	https://www.dropbox.com/s/l8p0kk5moozgdpu/Proposed_Change_1239.pdf?dl=0
Spatial Separation of Houses	9.10.15.5. Construction of Exposing Building Face of Houses	N/A	9.10.15.5. Construction of Exposing Building Face of Houses	(5.1) The face of a roof soffit is permitted to project to the property line, where it faces a *public way*. (5.2) Where roof soffits project to less than 1.2 m from the property line, the centre line of a *public way*, or an imaginary line between two *buildings* or *fire compartments* on the same property, they shall (a) have no openings, and (b) be protected by (i) not less than 0.38 mm thick sheet steel, (ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use,”	(5.1) The face of a roof soffit is permitted to project to the property line, where it faces a *public way*. (5.2) Where roof soffits project to less than 1.2 m from the property line, the centre line of a *public way*, or an imaginary line between two *buildings* or *fire compartments* on the same property, they shall (a) have no openings, and (b) be protected by (i) not less than 0.38 mm thick sheet steel, (ii) unvented aluminum conforming to CAN/CGSB-93.2-M, “Prefinished Aluminum Siding, Soffits, and Fascia, for Residential Use,”	https://www.dropbox.com/s/sh208gpxa286gwz/Proposed_Change_1308.pdf?dl=0

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				(iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board installed according to CSA A82.31-M, "Gypsum Board Application," (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.	(iii) not less than 12.7 mm thick gypsum soffit board or gypsum ceiling board installed according to CSA A82.31-M, "Gypsum Board Application," (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.	
Fire Alarm and Detection Systems	9.10.19.4. Power Supply	(3) *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors*, (a) are capable of independently sounding audible signals within the individual *suites*, (b) except as provided by Sentence (4), are installed in conformance with CAN/ULC-S524, "Installation of Fire Alarm Systems", and (c) form part of the fire alarm system.	9.10.19.4. Power Supply	(3) *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors* (a) are capable of independently sounding audible signals with a sound pressure level between 75 dBA and 110 dBA within the individual *suites*, (b) except as permitted in Sentence (4), are installed in conformance with CAN/ULC-S524, "Standard for Installation of Fire Alarm Systems," and (c) form part of the fire alarm system.	(3) *Suites* of *residential occupancy* are permitted to be equipped with *smoke detectors* in lieu of *smoke alarms*, provided the *smoke detectors*~~,~~ (a) are capable of independently sounding audible signals with a sound pressure level between 75 dBA and 110 dBA within the individual *suites*, (b) except as ~~provided by~~permitted in Sentence (4), are installed in conformance with CAN/ULC-S524, "Standard for Installation of Fire Alarm Systems~~",~~" and (c) form part of the fire alarm system.	https://www.dropbox.com/s/tjq8qfjtctxkpzo/Proposed_Change_1325.pdf?dl=0
Fire Alarm and Detection Systems	9.10.19.5. Interconnection of Smoke Alarms	(1) Where more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be wired so that the activation of one alarm will cause all alarms within the *dwelling unit* to sound.	9.10.19.5. Interconnection of Smoke Alarms	(1) Where more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be interconnected so that the activation of one alarm causes all alarms within the *dwelling unit* to sound. (2) *Smoke alarms* in a house with a *secondary suite* shall be wirelessly interconnected or interconnected by hard-wiring so that the activation of any one *smoke alarm* causes all *smoke alarms* within the house with a *secondary suite* to sound.	(1) Where more than one *smoke alarm* is required in a *dwelling unit*, the *smoke alarms* shall be ~~wired~~interconnected so that the activation of one alarm ~~will cause~~causes all alarms within the *dwelling unit* to sound. (2) *Smoke alarms* in a house with a *secondary suite* shall be wirelessly interconnected or interconnected by hard-wiring so that the activation of any one *smoke alarm* causes all *smoke alarms* within the house with a *secondary suite* to sound.	https://www.dropbox.com/s/gdrsvod35bjo6t7/Proposed_Change_1324.pdf?dl=0
Protection near Cooktops and Ovens	9.10.22.3. Protection Around Cooktops	(1) Except as provided in Sentences (2) and (3), *combustible* wall framing, finishes or cabinets within 450 mm of the area where the *cooktop* is to be located shall be protected above the level of the heating elements or burners by material providing fire resistance not less than that of a 9.5 mm thickness of gypsum board.	9.10.22.3. Protection around Cooktops	(1) Except as provided in Sentences (2) and (3), *combustible* wall framing, finishes or cabinets within 450 mm of the area where the *cooktop* is to be located shall be protected above the level of the heating elements or burners by (a) gypsum board not less than 9.5 mm thick, or (b) any material providing a *fire-resistance rating* of not less than 10 min and a *flame-spread rating* of not more than 25.	(1) Except as provided in Sentences (2) and (3), *combustible* wall framing, finishes or cabinets within 450 mm of the area where the *cooktop* is to be located shall be protected above the level of the heating elements or burners by (a) gypsum board not less than 9.5 mm thick, or (b) any material providing a *fire-~~-~~resistance* ~~not less than that~~*rating* of ~~a 9.5 mm thickness~~not less than 10 min and a *flame-spread rating* of ~~gypsum board~~not more than 25.	https://www.dropbox.com/s/olxqtn9cehngxxr/Proposed_Change_1247.pdf?dl=0
Structural Design (Part 9)	9.15.3.4. Basic Footing Widths and Areas	(2) Where the supported joist span exceeds 4.9 m in *buildings* with light wood frame walls, floors and roofs, footing widths shall be determined according to,	9.15.3.4. Basic Footing Widths and Areas	(2) Where the supported joist span exceeds 4.9 m in *buildings* with light wood-frame walls, floors and roofs, strip footing widths shall be determined according to	(2) Where the supported joist span exceeds 4.9 m in *buildings* with light wood~~-~~-frame walls, floors and roofs, strip footing widths shall be determined according to~~,~~	https://www.dropbox.com/s/hqvm6abmc8ew9ax/Proposed_Change_1490.pdf?dl=0

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		(a) Section 4.2., or (b) the following formula: W = w • [Σ sjs / (*storeys* • 4.9)] where, W = minimum footing width, w = minimum width of footings supporting joists not exceeding 4.9 m, as defined by Table 9.15.3.4., Σ sjs = the sum of the supported joist spans on each *storey* whose load is transferred to the footing, and *storeys* = number of *storeys* supported by the footing.		(a) Section 4.2., or (b) the following formula W = w x Σ sjs/ (*storeys* x 4.9) where W = minimum footing width, w = minimum width of footings supporting joists not exceeding 4.9 m, as defined by Table 9.15.3.4., Σ sjs = sum of the supported joist spans on each *storey* bearing on an exterior wall whose load is transferred to the footing, or sum of half of the supported joist spans on each *storey* bearing on both sides of an interior wall whose load is transferred to the footing, and *storeys* = number of *storeys* supported by the footing.	(a) Section 4.2., or (b) the following formula~~:~~ W = w ~~•~~ ~~[~~x Σ sjs~~-~~/ (*storeys* ~~•~~x 4.9~~)]~~) where~~,~~ W = minimum footing width, w = minimum width of footings supporting joists not exceeding 4.9 m, as defined by Table 9.15.3.4., Σ sjs = ~~the~~ sum of the supported joist spans on each *storey* bearing on an exterior wall whose load is transferred to the footing, or sum of half of the supported joist spans on each *storey* bearing on both sides of an interior wall whose load is transferred to the footing, and *storeys* = number of *storeys* supported by the footing.	
Insulating Concrete Forms (ICF)	9.15.4.1. Permanent Form Material	(1) Insulating concrete form units shall be manufactured of polystyrene conforming to the performance requirements of CAN/ULC-S701.1, “Thermal Insulation, Polystyrene Boards”, for Type 2, 3 or 4 polystyrene.	9.15.4.1. Flat Wall Insulating Concrete Form Units	(1) Flat wall insulating concrete form units shall conform to CAN/ULC-S717.1, “Standard for Flat Wall Insulating Concrete Form (ICF) Units – Material Properties.”	(1) ~~Insulating~~ Flat wall insulating concrete form units shall~~ be manufactured of polystyrene conforming~~ conform to ~~the performance requirements of~~ CAN/ULC-~~S701~~S717.1, “~~Thermal Insulation, Polystyrene Boards”,~~Standard for ~~Type 2, 3 or 4 polystyrene.~~Flat Wall Insulating Concrete Form (ICF) Units – Material Properties.”	https://www.dropbox.com/s/8pfoxn0k37u0g1x/Proposed_Change_1598.pdf?dl=0
Insulating Concrete Forms (ICF)	9.15.4.2. Foundation Wall Thickness and Required Lateral Support	(1) Except as required in Sentence (2), the thickness of *foundation* walls made of unreinforced concrete block or solid concrete and subject to lateral earth pressure shall conform to Table 9.15.4.2.A. for walls not exceeding 3.0 m in unsupported height. (2) The thickness of concrete in flat insulating concrete form *foundation* walls shall be not less than the greater of, (a) 140 mm, or (b) the thickness of the concrete in the wall above. (3) *Foundation* walls made of flat insulating concrete form units shall be laterally supported at the top and at the bottom.	9.15.4.2. Foundation Wall Thickness and Required Lateral Support	(1) Except as required in Sentence (2), the thickness of *foundation* walls made of unreinforced concrete block, concrete core in flat wall insulating concrete forms or solid concrete and subject to lateral earth pressure shall conform to Table 9.15.4.2.-A for walls not exceeding 3.0 m in unsupported height. (2) The concrete core in flat insulating concrete form *foundation* walls shall be not less than the greater of (a) 150 mm , or (b) the thickness of the concrete in the wall above.	(1) Except as required in Sentence (2), the thickness of *foundation* walls made of unreinforced concrete block, concrete core in flat wall insulating concrete forms or solid concrete and subject to lateral earth pressure shall conform to Table 9.15.4.2~~.~~ -A~~.~~ for walls not exceeding 3.0 m in unsupported height. (2) The ~~thickness of~~ concrete core in flat insulating concrete form *foundation* walls shall be not less than the greater of~~,~~ (a) ~~140~~150 mm , or (b) the thickness of the concrete in the wall above. ~~(3) *Foundation* walls made of flat insulating concrete form units shall be laterally supported at the top and at the bottom.~~	https://www.dropbox.com/s/vd6hi6jjaeapm07/Proposed_Change_1601.pdf?dl=0
Insulating Concrete Forms (ICF)	9.15.4.5. Reinforcement for Flat Insulating Concrete Form	(2) Vertical wall reinforcement in flat insulating concrete form *foundation* walls shall, (a) conform to, (i) Table 9.15.4.5.A. for 140 mm walls,	9.15.4.5. Reinforcement for Flat Insulating Concrete Form	(2) Vertical reinforcement in flat insulating concrete form *foundation* walls shall be (a) provided in accordance with (i) Table 9.15.4.5.-A for 150 mm walls,	(2) Vertical ~~wall~~ reinforcement in flat insulating concrete form *foundation* walls shall~~,~~ be (a) ~~conform to,~~ provided in accordance with (i) Table 9.15.4.5~~.~~ -A~~.~~ for ~~140~~150 mm walls,	https://www.dropbox.com/s/vd6hi6jjaeapm07/Proposed_Change_1601.pdf?dl=0

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	Foundation Walls	(ii) Table 9.15.4.5.B. for 190 mm walls, and (iii) Table 9.15.4.5.C. for 240 mm walls, (b) be located in the inside half of the wall section with a minimum cover of 30 mm from the inside face of the concrete wall, and (c) where interrupted by wall openings, be placed not more than 600 mm from each side of the openings.	Foundation Walls	(ii) Table 9.15.4.5.-B for 190 mm walls, and (iii) Table 9.15.4.5.-C for 240 mm walls, (b) located in the inside half of the wall section with a minimum cover of 30 mm from the inside face of the concrete wall, and (c) where interrupted by wall openings, placed not more than 600 mm from each side of the openings.	(ii) Table 9.15.4.5~~.~~ -B~~.~~ for 190 mm walls, and (iii) Table 9.15.4.5~~.~~ -C~~.~~ for 240 mm walls, (b) ~~be~~ located in the inside half of the wall section with a minimum cover of 30 mm from the inside face of the concrete wall, and (c) where interrupted by wall openings, ~~be~~ placed not more than 600 mm from each side of the openings.	
Insulating Concrete Forms (ICF)	9.15.4.3. Foundation Walls Considered to be Laterally Supported at the Top	(2) *Foundation* walls shall be considered to be laterally supported at the top if, (a) such walls support solid masonry superstructure, (b) the floor joists are embedded in the top of the *foundation* walls, or (c) the floor system is anchored to the top of the *foundation* walls with anchor bolts, in which case the joists may run either parallel or perpendicular to the *foundation* walls.	9.15.4.3. Foundation Walls Considered to be Laterally Supported at the Top	(2) *Foundation* walls shall be considered to be laterally supported at the top if (a) such walls support a *solid masonry* superstructure or flat insulating concrete form wall, (b) the floor joists are embedded in the top of the *foundation* walls, (c) the floor system is anchored to the top of the *foundation* walls with anchor bolts, in which case the joists may run either parallel or perpendicular to the *foundation* walls, or (d) they extend from the footing to no more than 300 mm above the finished ground level and are backfilled on both sides such that the difference in elevation between the finished ground levels on either side of the wall is no more than 150 mm.	(2) *Foundation* walls shall be considered to be laterally supported at the top if~~,~~ (a) such walls support a *solid masonry* superstructure~~,~~ or flat insulating concrete form wall, (b) the floor joists are embedded in the top of the *foundation* walls,~~ or~~ (c) the floor system is anchored to the top of the *foundation* walls with anchor bolts, in which case the joists may run either parallel or perpendicular to the *foundation* walls~~.~~, or (d) they extend from the footing to no more than 300 mm above the finished ground level and are backfilled on both sides such that the difference in elevation between the finished ground levels on either side of the wall is no more than 150 mm.	https://www.dropbox.com/s/ayzz5fg7sa39a51/Proposed_Change_1.pdf?dl=0
Insulating Concrete Forms (ICF)	9.15.4.4. Foundation Walls Considered to be Laterally Supported at the Bottom	(1) Flat insulating concrete form *foundation* walls shall be considered to be laterally supported at the bottom where the *foundation* wall, (a) supports backfill not more than 1.2 m in height, (b) is supported at the footing by a shear key and is supported at the top by the ground floor framing, or (c) is dowelled to the footing with not less than 15M bars spaced not more than 1.2 m o.c.	9.15.4.4. Foundation Walls Considered to be Laterally Supported at the Bottom	(1) Flat insulating concrete form *foundation* walls shall be considered to be laterally supported at the bottom where the *foundation* wall (a) supports backfill not more than 1.2 m in height, (b) is supported at the footing by a shear key and at the top by the ground floor framing, or (c) is doweled to the footing with not less than (i) 15M bars spaced not more than 1.2 m o.c., or (ii) 10M bars spaced not more than 600 mm o.c.	(1) Flat insulating concrete form *foundation* walls shall be considered to be laterally supported at the bottom where the *foundation* wall~~,~~ (a) supports backfill not more than 1.2 m in height, (b) is supported at the footing by a shear key and ~~is supported~~ at the top by the ground floor framing, or (c) is ~~dowelled~~doweled to the footing with not less than (i) 15M bars spaced not more than 1.2 m o.c.~~,~~ or (ii) 10M bars spaced not more than 600 mm o.c.	https://www.dropbox.com/s/5x343lac2kf4mb6/Propose.pdf?dl=0
Structural Design (Part 9)	9.20.9.5. Ties for Masonry Veneer	(1) Masonry veneer 70 mm or more in thickness and resting on a bearing support shall be tied to masonry back-up or to wood framing members with straps that are, (a) corrosion-resistant,	9.20.9.5. Ties for Masonry Veneer	(1) Masonry veneer 75 mm or more in thickness and resting on a bearing support shall be tied to masonry backing or to wood framing members with straps that are (a) corrosion-resistant,	(1) Masonry veneer ~~70~~75 mm or more in thickness and resting on a bearing support shall be tied to masonry ~~back up~~backing or to wood framing members with straps that are~~,~~ (a) corrosion-resistant,	https://www.dropbox.com/s/ooanuds6mtvouws/Proposed_Change_1463.pdf?dl=0

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		(b) not less than 0.76 mm thick, (c) not less than 22 mm wide, (d) shaped to provide a key with the mortar, and (e) spaced in accordance with Table 9.20.9.5. (2) The straps described in Sentence (1) that are fastened to the wood framing members shall be, (a) bent at a right angle within 6 mm from the fastener, and (b) fastened with corrosion resistant 3.18 mm diam screws or spiral nails having a wood penetration of not less than 30 mm.		(b) not less than 0.76 mm thick, (c) not less than 22 mm wide, (d) shaped to provide a key with the mortar, (d.1) pre-bent during manufacture to a right angle within 6 mm of the fastener hole, (d.2) fastened with (i) corrosion-resistant wood screws conforming to Sentence 9.23.3.1.(3) that have a minimum diameter of 4.16 mm (No. 8) and a wood penetration of not less than 38 mm, or (ii) corrosion-resistant common spiral nails conforming to Sentence 9.23.3.1.(1) that are not less than 76 mm long and have a wood penetration of not less than 63 mm, and (e) spaced in accordance with Table 9.20.9.5. (2) Where hot-dipped, zinc-coated straps are used to meet the requirements of Sentence (1), they shall be pre-bent and pre-drilled or pre-punched prior to hot-dip, zinc-coated galvanizing.	(b) not less than 0.76 mm thick, (c) not less than 22 mm wide, (d) shaped to provide a key with the mortar, (d.1) pre-bent during manufacture to a right angle within 6 mm of the fastener hole, (d.2) fastened with (i) corrosion-resistant wood screws conforming to Sentence 9.23.3.1.(3) that have a minimum diameter of 4.16 mm (No. 8) and a wood penetration of not less than 38 mm, or (ii) corrosion-resistant common spiral nails conforming to Sentence 9.23.3.1.(1) that are not less than 76 mm long and have a wood penetration of not less than 63 mm, and (e) spaced in accordance with Table 9.20.9.5. (2) ~~The~~Where hot-dipped, zinc-coated straps ~~described in Sentence (1) that~~ are ~~fastened~~used to meet the ~~wood framing members~~requirements of Sentence (1), they shall be~~,~~ ~~(a)~~ pre-bent ~~at a right angle within 6 mm from the fastener,~~ and ~~(b) fastened with corrosion resistant 3.18 mm diam screws~~pre-drilled or ~~spiral nails having a wood penetration of not less than 30 mm.~~pre-punched prior to hot-dip, zinc-coated galvanizing.	
Structural Design (Part 9)	9.20.16.1. Corrosion Resistance of Connectors	(Table 9.20.16.1. - Minimum Requirements for Galvanizing)	9.20.16.1. Corrosion Resistance of Connectors	(Table 9.20.16.1 - Minimum Requirements for Galvanizing)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/ooanuds6mtvouws/Proposed_Change_1463.pdf?dl=0
Structural Design (Part 9)	9.23.2.3.A Connections to Preservative-Treated Wood (New)	N/A	9.23.2.3.A Connections to Preservative-Treated Wood	(1) Except as provided in Sentence (3), connectors in contact with preservative-treated wood shall be made of (a) hot-dipped, zinc-coated galvanized steel with a coating weight not less than Z550 conforming to ASTM A653/A653M, “Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process,” (b) a material that provides an equivalent level of corrosion protection to that provided by the material described in Clause (a), or (c) stainless steel.	(1) Except as provided in Sentence (3), connectors in contact with preservative-treated wood shall be made of (a) hot-dipped, zinc-coated galvanized steel with a coating weight not less than Z550 conforming to ASTM A653/A653M, “Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process,” (b) a material that provides an equivalent level of corrosion protection to that provided by the material described in Clause (a), or (c) stainless steel.	https://www.dropbox.com/s/a486eaerzvlnr42/Proposed_Change_1512.pdf?dl=0

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				(2) Fasteners used to attach the connectors referred to in Sentence (1) shall be made of galvanized steel coated with zinc in accordance with ASTM A153/A153M, “Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware,” or with a material that provides an equivalent level of performance and is compatible with the connector. (3) Connectors and fasteners that are in contact with wood that has been treated with a disodium octaborate tetrahydrate (SBX (DOT)) or zinc borate preservative and is installed in a dry interior environment are permitted to be made of uncoated carbon steel.	(2) Fasteners used to attach the connectors referred to in Sentence (1) shall be made of galvanized steel coated with zinc in accordance with ASTM A153/A153M, “Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware,” or with a material that provides an equivalent level of performance and is compatible with the connector. (3) Connectors and fasteners that are in contact with wood that has been treated with a disodium octaborate tetrahydrate (SBX (DOT)) or zinc borate preservative and is installed in a dry interior environment are permitted to be made of uncoated carbon steel.	
Structural Design (Part 9)	9.23.3. Fasteners and Connectors	…	9.23.3. Fasteners and Connectors	…	Only the title of the Article is proposed to be changed.	https://www.dropbox.com/s/iy09uu591gkqh6d/Proposed_Change_1469.pdf?dl=0
Structural Design (Part 9)	9.23.3.4. Nailing of Framing	(Table 9.23.3.4. - Nailing for Framing)	9.23.3.4. Nailing of Framing	(Table 9.23.3.4. - Nailing for Framing)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/awthfvn3rcbmz1a/Proposed_Change_1303.pdf?dl=0
Structural Design (Part 9)	9.23.12.A. Braced Wall Panels in Braced Wall Bands (New)	N/A	9.23.13.5 Braced Wall Panels in Braced Wall Bands	(3) Portions of the perimeter of a single open or enclosed space need not comply with Sentence (1), where (a) the roof of the space projects not more than (i) 3.5 m from the face of the framing of the nearest parallel *braced wall band*, and (ii) the perpendicular plan dimension, (b) that portion of the perimeter structure does not support a floor, (c) the roof of the space is (i) integral with the roof of the rest of the *building* with framing members not more than 400 mm o.c. where roof sheathing edges are not supported on blocking and not more than 600 mm o.c. where roof sheathing edges are supported on blocking securely fastened between framing members, or (ii) constructed with roof framing not more than 400 mm o.c. where roof sheathing edges are not supported on blocking and not more than 600 mm o.c. where roof sheathing edges are supported on blocking securely fastened between framing members, and fastened to the wall framing	(3) Portions of the perimeter of a single open or enclosed space need not comply with Sentence (1), where (a) the roof of the space projects not more than (i) 3.5 m from the face of the framing of the nearest parallel *braced wall band*, and (ii) the perpendicular plan dimension, (b) that portion of the perimeter structure does not support a floor, (c) the roof of the space is (i) integral with the roof of the rest of the *building* with framing members not more than 400 mm o.c. where roof sheathing edges are not supported on blocking and not more than 600 mm o.c. where roof sheathing edges are supported on blocking securely fastened between framing members, or (ii) constructed with roof framing not more than 400 mm o.c. where roof sheathing edges are not supported on blocking and not more than 600 mm o.c. where roof sheathing edges are supported on blocking securely fastened between framing members, and fastened to the wall framing	https://www.dropbox.com/s/awthfvn3rcbmz1a/Proposed_Change_1303.pdf?dl=0

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				(see Table 9.23.3.4. and Article 9.23.9.1. for balloon framing), and (d) the end-joists or end-rafters for the roof of the space are fastened to a 3-ply, 38 mm × 140 mm built-up column or a 5-ply, 38 mm × 89 mm built-up column that is integral with the wall framing.	(see Table 9.23.3.4. and Article 9.23.9.1. for balloon framing), and (d) the end-joists or end-rafters for the roof of the space are fastened to a 3-ply, 38 mm × 140 mm built-up column or a 5-ply, 38 mm × 89 mm built-up column that is integral with the wall framing.	
Structural Design (Part 9)	9.23.6.1. Anchorage of Building Frames	(1) *Building* frames shall be anchored to the *foundation* unless a structural analysis of wind and earth pressures shows anchorage is not required.	9.23.6.1. Anchorage of Building Frames	(1) Except as required by Sentence 9.23.6.3.(1), *building* frames shall be anchored to the *foundation* unless a structural analysis that considers wind and earthquake loads and lateral earth pressures shows that anchorage is not required.	(1) ~~*Building*~~Except as required by Sentence 9.23.6.3.(1), *building* frames shall be anchored to the *foundation* unless a structural analysis ~~of~~that considers wind and earthquake loads and lateral earth pressures shows that anchorage is not required.	https://www.dropbox.com/s/9hrzbxp68fs29x7/Proposed_Change_1399.pdf?dl=0
Structural Design (Part 9)	9.23.13.8. Ridge Support	(4) When the roof slope is 1 in 3 or more, ridge support need not be provided when the lower ends of the rafters are adequately tied to prevent outward movement. … (6) Ceiling joists referred to in Sentence (5) shall be fastened together with at least one more nail per joist splice than required for the rafter to joist connection shown in Table 9.23.13.8. (7) Members referred to in Sentence (6) are permitted to be fastened together either directly or through a gusset plate.	9.23.14.8. Ridge Support	(4) Where the roof slope is 1 in 3 or steeper, ridge support need not be provided when the lower ends of the rafters are adequately tied to prevent outward movement. … (5.1) Except as permitted in Sentence (5.2), ceiling joists referred to in Sentence (5) shall be tied to the base of every rafter. (5.2) Where ceiling joists referred to in Sentence (5) are raised above the base of the rafters, the connections between the rafters and the ceiling joists shall be designed in accordance with Clause 9.4.1.1.(1)(b) or (c). (6) Ceiling joists referred to in Sentence (5) that are spliced to make a continuous joist shall be fastened together at each splice with at least one more nail than required for the rafter-to-joist connection shown in Table 9.23.13.8. (7) Members referred to in Sentences (5.1) and (6) are permitted to be fastened together either directly or through a gusset plate.	(4) ~~When~~Where the roof slope is 1 in 3 or ~~more~~steeper, ridge support need not be provided when the lower ends of the rafters are adequately tied to prevent outward movement. … (5.1) Except as permitted in Sentence (5.2), ceiling joists referred to in Sentence (5) shall be tied to the base of every rafter. (5.2) Where ceiling joists referred to in Sentence (5) are raised above the base of the rafters, the connections between the rafters and the ceiling joists shall be designed in accordance with Clause 9.4.1.1.(1)(b) or (c). (6) Ceiling joists referred to in Sentence (5) that are spliced to make a continuous joist shall be fastened together at each splice with at least one more nail ~~per joist splice~~ than required for the rafter-~~-~~to-~~-~~joist connection shown in Table 9.23.13.8. (7) Members referred to in ~~Sentence (~~Sentences (5.1) and (6)~~-~~ are permitted to be fastened together either directly or through a gusset plate.	https://www.dropbox.com/s/j2yk5k1mvpdaenh/Proposed_Change_1281.pdf?dl=0
Structural Design (Part 9)	9.23.13.11. Wood Roof Trusses	(1) Roof trusses that are not designed in accordance with Part 4 shall, (a) be capable of supporting a total ceiling load (*dead load* plus *live load*) of 0.35 kPa plus two and two-thirds times the specified live roof load for 24 h, and (b) not exceed the deflections shown in Table 9.23.13.11. when loaded with the ceiling load plus one and one-third times the specified roof snow load for 1 h. …	9.23.14.11. Roof Trusses	(1) Wood roof trusses shall be designed in accordance with good engineering practice such as that described in TPIC 2019, "Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses." … (3) All member bracing shall be installed as per the truss design drawings, and continuous lateral bracing shall be adequately anchored to the roof and ceiling diaphragms at intervals no greater than 6.10 m o.c.	(1) ~~Roof~~Wood roof trusses ~~that are not~~shall be designed in~~ accordance with Part 4 shall,~~ ~~(a) be capable of supporting a total ceiling load (*dead load* plus *live load*) of 0.35 kPa plus two and two-thirds times the specified live roof load for 24 h, and~~ ~~(b) not exceed the deflections shown in Table 9.23.13.11. when loaded with the ceiling load plus one and one-third times the specified roof snow load for 1 h.~~ ~~…~~	https://www.dropbox.com/s/z7l8vs4ucvcso2z/Proposed_Change_1462.pdf?dl=0

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		(3) Where the length of compression web members in roof trusses described in Sentence (1) exceeds 1.83 m, such web members shall be provided with continuous bracing to prevent buckling. (4) Bracing required in Sentence (3) shall consist of not less than 19 mm by 89 mm lumber nailed at right angles to the web members near their centres with at least two 63 mm nails for each member. (5) Where the ability of a truss design to satisfy the requirements of Sentence (1) is demonstrated by testing, it shall consist of a full scale load test carried out in conformance with CSA S307-M, "Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings". (6) Where the ability of a truss design to satisfy the requirements of Sentence (1) is demonstrated by analysis, it shall be carried out in accordance with good engineering practice such as described in TPIC, "Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses".			~~(3) Where the length of compression web members in roof trusses described in Sentence (1) exceeds 1.83 m, such web members shall be provided with continuous bracing to prevent buckling.~~ ~~(4) Bracing required in Sentence (3) shall consist of not less than 19 mm by 89 mm lumber nailed at right angles to the web members near their centres with at least two 63 mm nails for each member.~~ ~~(5) Where the ability of a truss design to satisfy the requirements of Sentence (1) is demonstrated by testing, it shall consist of a full scale load test carried out in conformance with CSA S307-M, "Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings".~~ ~~(6) Where the ability of a truss design to satisfy the requirements of Sentence (1) is demonstrated by analysis, it shall be carried out in~~ accordance with good engineering practice such as that described in TPIC 2019, "Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses~~".~~." … (3) All member bracing shall be installed as per the truss design drawings, and continuous lateral bracing shall be adequately anchored to the roof and ceiling diaphragms at intervals no greater than 6.10 m o.c.	
Basements	9.25.2.3. Installation of Thermal Insulation	(4) Insulation on the interior of *foundation* walls enclosing a crawl space shall be applied so that there is not less than a 50 mm clearance above the crawl space floor if the insulation is of a type that may be damaged by water.	9.25.2.3. Installation of Thermal Insulation	(4) Insulation shall be installed over the full height of *foundation* walls enclosing a *basement* or heated crawl space.	(4) Insulation ~~on~~shall be installed over the ~~interior~~full height of *foundation* walls enclosing a *basement* or heated crawl space~~ shall be applied so that there is not less than a 50 mm clearance above the crawl space floor if the insulation is of a type that may be damaged by water.~~.	https://www.dropbox.com/s/qm405vnti0tskm5/Proposed_Change_1555.pdf?dl=0
Basements	9.25.4.2. Vapour Barrier Materials	N/A	9.25.4.2. Vapour Barrier Materials	(4.1) Membrane-type *vapour barriers* other than polyethylene that are susceptible to deterioration under prolonged exposure to direct ultraviolet radiation shall (a) be covered, or (b) only be installed in locations that are not exposed to direct ultraviolet radiation after the completion of construction.	(4.1) Membrane-type *vapour barriers* other than polyethylene that are susceptible to deterioration under prolonged exposure to direct ultraviolet radiation shall (a) be covered, or (b) only be installed in locations that are not exposed to direct ultraviolet radiation after the completion of construction.	https://www.dropbox.com/s/yea6shypau194s5/Proposed_Change_1350.pdf?dl=0
Basements	9.25.4.2. Vapour Barrier Materials	(1) *Vapour barriers* shall have a permeance not greater than 60 ng/(Pa·s·m2), measured in accordance with ASTM E96 / E96M, "Water Vapor	9.25.4.2. Vapour Barrier Materials	(1) Except as provided in Sentence (1.1), *vapour barriers* shall have a permeance not greater than 60 ng/(Pa×s×m2) measured in accordance with ASTM E96/E96M, "Standard Test Methods for Water Vapor	(1) ~~*Vapour*~~ Except as provided in Sentence (1.1), *vapour barriers* shall have a permeance not greater than 60 ng/(Pa~~·~~×s~~·~~×m2~~),~~) measured in accordance with ASTM E96~~-~~/E96M, "Standard Test Methods	https://www.dropbox.com/s/uwgpfzj6x7gg3lc/Proposed_Change_1352.pdf?dl=0

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		Transmission of Materials", using the desiccant method (dry cup).		Transmission of Materials," using the desiccant method (dry cup). (1.1) Thermally insulated *foundation* wall assemblies are permitted to be constructed with variable-permeance *vapour barriers* having a permeance not greater than 60 ng/(Pa×s×m^2) using the desiccant method (dry cup) and greater than 300 ng/(Pa×s×m^2) using the water method (wet cup) measured in accordance with ASTM E96/E96M, "Standard Test Methods for Water Vapor Transmission of Materials.")	for Water Vapor Transmission of Materials~~",~~," using the desiccant method (dry cup). (1.1) Thermally insulated *foundation* wall assemblies are permitted to be constructed with variable-permeance *vapour barriers* having a permeance not greater than 60 ng/(Pa×s×m^2) using the desiccant method (dry cup) and greater than 300 ng/(Pa×s×m^2) using the water method (wet cup) measured in accordance with ASTM E96/E96M, "Standard Test Methods for Water Vapor Transmission of Materials.")	
Roofing, Dampproofing and Waterproofing Standards	9.26.1.3. Alternate Installation Methods	(1) Methods described in CAN3-A123.51-M, "Asphalt Shingle Application on Roof Slopes 1:3 and Steeper", or CAN3-A123.52-M, "Asphalt Shingle Application on Roof Slopes 1:6 to Less than 1:3", are permitted to be used for asphalt shingle applications not described in this Section.	9.26.1.2. Alternative Installation Methods	(1) Methods described in CAN3-A123.51, "Asphalt shingle application on roof slopes 1:6 and steeper," are permitted to be used for the installation of asphalt shingles in lieu of the methods described in this Section.	(1) Methods described in CAN3-A123.51~~-M~~, "Asphalt Shingle Application on ~~Roof Slopes 1:3 and Steeper", or CAN3-A123.52-M, "Asphalt Shingle Application on Roof Slopes~~roof slopes 1:6 ~~to Less than 1:3",~~and steeper," are permitted to be used for the installation of asphalt ~~shingle applications not~~shingles in lieu of the methods described in this Section.	https://www.dropbox.com/s/1isk3t2n1xvidnl/Proposed_Change_1291.pdf?dl=0
Roofing, Dampproofing and Waterproofing Standards	9.26.2.1. Material Standards	(Table 9.26.2.1.B. - Roofing Materials)	9.26.2.1. Material Standards	(Table 9.26.2.1.B - Roofing Materials)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/d74j0vt0gawv79c/Proposed_Change_1302.pdf?dl=0 https://www.dropbox.com/s/nt8xzwvc5ivf4yi/Proposed_Change_1305.pdf?dl=0
Building Envelope - General	9.27.1.1. General	(1) Where lumber, wood shingles, shakes, fibre-cement shingles, planks and sheets, plywood, OSB, waferboard, hardboard, vinyl, aluminum and steel, including trim and soffits, are installed as cladding on wood frame walls exposed to precipitation, the cladding assembly shall comply with, (a) Subsections 9.27.2. to 9.27.12., or (b) Part 5.	9.27.1.1. General	(1) Where lumber, wood shingles, shakes, fibre-cement shingles, planks and sheets, plywood, OSB, waferboard, hardboard, vinyl, insulated vinyl, polypropylene, aluminum or steel, including trim and soffits, are installed as cladding on wood-frame walls or above-ground flat insulating concrete form walls exposed to precipitation, the cladding assembly shall comply with (a) Subsections 9.27.2. to 9.27.12A., or (b) Part 5.	(1) Where lumber, wood shingles, shakes, fibre-cement shingles, planks and sheets, plywood, OSB, waferboard, hardboard, vinyl, insulated vinyl, polypropylene, aluminum ~~and~~or steel, including~~ trim and soffits, are installed as cladding on wood-frame walls exposed to precipitation, the cladding assembly shall comply with,~~ trim and soffits, are installed as cladding on wood-frame walls or above-ground flat insulating concrete form walls exposed to precipitation, the cladding assembly shall comply with (a) Subsections 9.27.2. to 9.27.~~12~~12A., or (b) Part 5.	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0

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Building Envelope - General	9.27.5.1. Attachment	(2) Vertical lumber and stucco lath or reinforcing are permitted to be attached to sheathing only where the sheathing consists of not less than, (a) 14.3 mm lumber, (b) 12.5 mm plywood, or (c) 12.5 mm OSB or waferboard.	9.27.5.1. Attachment	(2) Vertical lumber, stucco lath or reinforcing, vertically applied vinyl siding, vertically applied insulated vinyl siding, and polypropylene siding are permitted to be attached to sheathing only where the sheathing consists of not less than (a) 14.3 mm lumber, (b) 12.5 mm plywood or waferboard, or (c) 11 mm OSB.	(2) Vertical lumber ~~and,~~ stucco lath or reinforcing, vertically applied vinyl siding, vertically applied insulated vinyl siding, and polypropylene siding are permitted to be attached to sheathing only where the sheathing consists of not less than~~,~~ (a) 14.3 mm lumber, (b) 12.5 mm plywood~~, or~~ ~~(c) 12.5 mm OSB~~ or waferboard~~.~~, or (c) 11 mm OSB.	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Building Envelope - General	9.27.5.4. Size and Spacing of Fasteners	(Table 9.27.5.4. - Attachment of Cladding)	9.27.5.4. Size and Spacing of Fasteners	(Table 9.27.5.4. - Attachment of Cladding)	(Refer to the National PCF for changes to the tables).	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Building Envelope - General	9.27.5.6. Expansion and Contraction	N/A	9.27.5.6. Expansion and Contraction	(2) Fasteners for vinyl siding, insulated vinyl siding and polypropylene siding shall be installed in the centre of the slots of the nail hem.	(2) Fasteners for vinyl siding, insulated vinyl siding and polypropylene siding shall be installed in the centre of the slots of the nail hem.	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Building Envelope - General	9.27.5.7. Penetration of Fasteners	(2) Fasteners for cladding other than that described in Sentence (1) shall penetrate through the nail-holding base or not less than 25 mm into the framing.	9.27.5.7. Penetration of Fasteners	(2) Fasteners for vinyl cladding, insulated vinyl cladding and polypropylene cladding shall penetrate through the nail-holding base or not less than 32 mm into the framing. (3) Fasteners for cladding other than that described in Sentences (1) and (2) shall penetrate through the nail-holding base or not less than 25 mm into the framing.	(2) Fasteners for vinyl cladding, insulated vinyl cladding and polypropylene cladding shall penetrate through the nail-holding base or not less than 32 mm into the framing. (3) Fasteners for cladding other than that described in ~~Sentence~~Sentences (1) and (2) shall penetrate through the nail-holding base or not less than 25 mm into the framing.	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Building Envelope - General	9.27.12. Vinyl Siding, Insulated Vinyl Siding and Vinyl Soffits	…	9.27.12. Vinyl Siding , Insulated Vinyl Siding and Vinyl Soffits	…	Only the title of the Article is proposed to be changed.	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Building Envelope - General	9.27.12.1. Material Standard	(1) Vinyl siding, including flashing and trim accessories, shall conform to CAN/CGSB-41.24, “Rigid Vinyl Siding, Soffits and Fascia”.	9.27.12.1. Material Standards	(1) Vinyl siding shall conform to ASTM D3679, “Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding.” (2) Insulated vinyl siding shall conform to ASTM D7793, “Standard Specification for Insulated Vinyl Siding.” (3) Rigid vinyl soffits shall conform to ASTM D4477, “Standard Specification for Rigid (Unplasticized) Poly(Vinyl Chloride) (PVC) Soffit.” (4) Where vinyl siding, insulated vinyl siding or rigid vinyl soffits are required to have a *flame-spread rating*, the rating shall be determined in accordance with CAN/ULC-S102.2, “Standard Method of Test	(1) Vinyl siding~~, including flashing and trim accessories,~~ shall conform to ~~CAN/CGSB-41.24,~~ ~~“~~ASTM D3679, “Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding~~, Soffits~~.” (2) Insulated vinyl siding shall conform to ASTM D7793, “Standard Specification for Insulated Vinyl Siding.” (3) Rigid vinyl soffits shall conform to ASTM D4477, “Standard Specification for Rigid (Unplasticized) Poly(Vinyl Chloride) (PVC) Soffit.” (4) Where vinyl siding, insulated vinyl siding or rigid vinyl soffits are required to have a *flame-spread*	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0

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				for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies."	*rating*, the rating shall be determined in accordance with CAN/ULC-S102.2, "Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and ~~Fascia".~~Assemblies."	
Building Envelope - General	9.27.12.2. Attachment	(1) The attachment of vinyl siding shall conform to the requirements in Subsection 9.27.5. for metal siding.	9.27.12.2. Attachment	(1) The attachment of vinyl siding and insulated vinyl siding shall conform to the requirements in Subsection 9.27.5.	(1) The attachment of vinyl siding and insulated vinyl siding shall conform to the requirements in Subsection 9.27.5.~~ for metal siding.~~	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Building Envelope - General	9.27.12A.1. Material Standard (New)	N/A	9.27.13.1. Material Standard	(1) Polypropylene siding shall conform to ASTM D7254, "Standard Specification for Polypropylene (PP) Siding." (2) Where polypropylene siding is required to have a *flame-spread rating*, the rating shall be determined in accordance with CAN/ULC-S102.2, "Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies."	(1) Polypropylene siding shall conform to ASTM D7254, "Standard Specification for Polypropylene (PP) Siding." (2) Where polypropylene siding is required to have a *flame-spread rating*, the rating shall be determined in accordance with CAN/ULC-S102.2, "Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies."	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Building Envelope - General	9.27.12A.2. Attachment	N/A	9.27.13.2. Attachment	(1) The attachment of polypropylene siding shall conform to the requirements in Subsection 9.27.5.	(1) The attachment of polypropylene siding shall conform to the requirements in Subsection 9.27.5.	https://www.dropbox.com/s/7thye0zb8y2ipwa/Proposed_Change_1296.pdf?dl=0
Insulating Concrete Forms (ICF)	9.27.1.1. General	(1) Where lumber, wood shingles, shakes, fibre-cement shingles, planks and sheets, plywood, OSB, waferboard, hardboard, vinyl, aluminum and steel, including trim and soffits, are installed as cladding on wood frame walls exposed to precipitation, the cladding assembly shall comply with, (a) Subsections 9.27.2. to 9.27.12., or (b) Part 5. (2) Where stucco is installed as cladding on wood frame or masonry walls exposed to precipitation, the cladding assembly shall comply with, (a) Subsections 9.27.2. to 9.27.4., and Section 9.28., or (b) Part 5. (3) Where masonry serves as cladding on wood frame or masonry walls exposed to precipitation, the cladding assembly shall comply with, (a) Subsections 9.27.2. to 9.27.4., and Section 9.20., or (b) Part 5. …	9.27.1.1. General	(1) Where lumber, wood shingles, shakes, fibre-cement shingles, planks and sheets, plywood, OSB, waferboard, hardboard, vinyl, insulated vinyl, polypropylene, aluminum or steel, including trim and soffits, are installed as cladding on wood-frame walls or above-ground flat insulating concrete form walls exposed to precipitation, the cladding assembly shall comply with (a) Subsections 9.27.2. to 9.27.12A., or (b) Part 5. (2) Where stucco is installed as cladding on wood-frame walls, above-ground flat insulating concrete form walls or masonry walls exposed to precipitation, the cladding assembly shall comply with (a) Subsections 9.27.2. to 9.27.5., and Section 9.28., or (b) Part 5. (3) Where masonry serves as cladding on wood-frame walls, above-ground flat insulating concrete form walls or masonry walls exposed to precipitation, the cladding assembly shall comply with (a) Subsections 9.27.2. to 9.27.4., and Section 9.20., except for masonry veneer, which	(1) Where lumber, wood shingles, shakes, fibre-cement shingles, planks and sheets, plywood, OSB, waferboard, hardboard, vinyl, insulated vinyl, polypropylene, aluminum ~~and~~or steel, including~~ trim and soffits, are installed as cladding on wood frame walls exposed to precipitation, the cladding assembly shall comply with,~~ trim and soffits, are installed as cladding on wood-frame walls or above-ground flat insulating concrete form walls exposed to precipitation, the cladding assembly shall comply with (a) Subsections 9.27.2. to 9.27.~~12~~12A., or (b) Part 5. (2) Where stucco is installed as cladding on wood ~~frame~~ frame walls, above-ground flat insulating concrete form walls or masonry walls exposed to precipitation, the cladding assembly shall comply with~~,~~ (a) Subsections 9.27.2. to 9.27.~~4~~5., and Section 9.28., or (b) Part 5. (3) Where masonry serves as cladding on wood ~~frame~~ frame walls, above-ground flat insulating	https://www.dropbox.com/s/ljgtpv55q2j6trs/Propose.pdf?dl=0

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		(5) Where an exterior insulation finish system is installed as cladding on wood-frame, masonry, cold-formed steel stud or cast-in-place concrete walls exposed to precipitation, the cladding assembly shall comply with, (a) Subsections 9.25.5., 9.27.2. to 9.27.4. and 9.27.13., or (b) Part 5. (6) Where cladding materials or systems other than those described in Sentences (1) to (5) are installed, or where these are installed on substrates other than those identified in Sentences (1) to (5), the cladding materials or systems and their installation shall comply with Part 5.		shall be attached to above-ground flat insulating concrete form walls in accordance with Sentence 9.27.5.4.(2), or (b) Part 5. … (5) Where an exterior insulation finish system is installed as cladding on wood-frame, masonry, cold-formed steel stud, above-ground flat insulating concrete form or cast-in-place concrete walls exposed to precipitation, the cladding assembly shall comply with (a) Subsections 9.25.5., 9.27.2. to 9.27.4., and 9.27.14., or (b) Part 5.	concrete form walls or masonry walls exposed to precipitation, the cladding assembly shall comply with~~,~~ (a) Subsections 9.27.2. to 9.27.4., and Section 9.20., ~~or~~ except for masonry veneer, which shall be attached to above-ground flat insulating concrete form walls in accordance with Sentence 9.27.5.4.(2), or (b) Part 5. … (5) Where an exterior insulation finish system is installed as cladding on wood-frame, masonry, cold-formed steel stud, above-ground flat insulating concrete form or cast-in-place concrete walls exposed to precipitation, the cladding assembly shall comply with~~,~~ (a) Subsections 9.25.5., 9.27.2. to 9.27.4~~.~~,, and 9.27.~~13~~14., or (b) Part 5. ~~(6) Where cladding materials or systems other than those described in Sentences (1) to (5) are installed, or where these are installed on substrates other than those identified in Sentences (1) to (5), the cladding materials or systems and their installation shall comply with Part 5.~~	
Insulating Concrete Forms (ICF)	9.27.5.1. Attachment	(1) Except as permitted in Sentences (2) to (4), cladding shall be fastened to the framing members or furring members, or to blocking between the framing members.	9.27.5.1. Attachment	(1) Except as permitted by Sentences (2) to (5) , cladding shall be fastened to the framing members or furring members, or to blocking between the framing members. … (5) Cladding, trim and furring members are permitted to be attached to the web fastening strips of flat wall insulating concrete form units using screws in accordance with Sentence 9.27.5.4.(2).	(1) Except as permitted ~~in~~by Sentences (2) to (~~4),~~ 5) , cladding shall be fastened to the framing members or furring members, or to blocking between the framing members. … (5) Cladding, trim and furring members are permitted to be attached to the web fastening strips of flat wall insulating concrete form units using screws in accordance with Sentence 9.27.5.4.(2).	https://www.dropbox.com/s/4xij5l82y83nqhv/Proposed_Change_1612.pdf?dl=0
Insulating Concrete Forms (ICF)	9.27.5.4. Size and Spacing of Fasteners	(1) Nail or staple size and spacing for the attachment of cladding and trim shall conform to Table 9.27.5.4.	9.27.5.4. Size and Spacing of Fasteners	(1) Nail or staple size and spacing for the attachment of cladding and trim to wood framing, furring members or blocking shall conform to Table 9.27.5.4.-A. (2) Screw size, number and spacing for the attachment of cladding, trim and furring members to the web fastening strips of flat wall insulating concrete form (ICF) units shall conform to Table 9.27.5.4.-B where the 1-in-50 hourly wind pressure (HWP) is less than or equal to 0.60 kPa.	(1) Nail or staple size and spacing for the attachment of cladding and trim to wood framing, furring members or blocking shall conform to Table 9.27.5.4~~.~~.-A. (2) Screw size, number and spacing for the attachment of cladding, trim and furring members to the web fastening strips of flat wall insulating concrete form (ICF) units shall conform to Table 9.27.5.4.-B where the 1-in-50 hourly wind pressure (HWP) is less than or equal to 0.60 kPa.	https://www.dropbox.com/s/4xij5l82y83nqhv/Proposed_Change_1612.pdf?dl=0

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Building Envelope - General	9.27.9.1. Material Standards	(1) Factory-finished hardboard cladding shall conform to CAN/CGSB-11.5M, “Hardboard, Precoated, Factory-Finished, for Exterior Cladding”. (2) Hardboard cladding that is not factory finished shall conform to Types 1, 2 or 5 in CAN/CGSB-11.3-M, “Hardboard”	9.27.9.1. Material Standards	(1) Hardboard cladding shall conform to ANSI A135.6, “Engineered Wood Siding.”	(1) ~~Factory-finished hardboard~~Hardboard cladding shall conform to ~~CAN/CGSB-11.5M, “Hardboard, Precoated, Factory-Finished, for Exterior Cladding”.~~ ANSI ~~(2) Hardboard cladding that is not factory finished shall conform to Types 1, 2 or 5 in CAN/CGSB-11.3-M, “Hardboard”~~A135.6, “Engineered Wood Siding.”	https://www.dropbox.com/s/k033i306qxo78v1/Proposed_Change_1295.pdf?dl=0
Building Envelope - General	9.27.9.2. Thickness	(1) Type 1 or 2 hardboard cladding shall be not less than, (a) 6.0 mm thick when applied over sheathing that provides continuous support, and (b) 7.5 mm thick when applied to furring or framing members not more than 406 mm o.c. (2) Type 5 hardboard cladding shall be not less than 9.0 mm thick when applied over sheathing that provides continuous support or over furring or framing members spaced not more than 406 mm o.c.	9.27.9.2. Thickness	(1) Hardboard cladding shall be not less than (a) 9.5 mm thick when applied over sheathing that provides continuous support or over furring or framing members not more than 400 mm o.c., or (b) 11.1 mm thick when applied over furring or framing members not more than 600 mm o.c.	(1) ~~Type 1 or 2 hardboard~~Hardboard cladding shall be not less than~~,~~ (a) ~~6.0~~9.5 mm thick when applied over sheathing that provides continuous support~~, and~~ ~~(b) 7.5 mm thick when applied to~~ or over furring or framing members not more than ~~406~~400 mm o.c~~.~~ ~~(2) Type 5 hardboard cladding shall be not less than 9.0 mm thick when applied over sheathing that provides continuous support~~., or (b) 11.1 mm thick when applied over furring or framing members ~~spaced~~ not more than ~~406~~600 mm o.c.	https://www.dropbox.com/s/k033i306qxo78v1/Proposed_Change_1295.pdf?dl=0
Referenced Documents	9.27.11.1. Material Standards	(1) Horizontal and vertical strip steel siding, including flashing and trim accessories, shall conform to CAN/CGSB-93.4, “Galvanized Steel and Aluminum-Zinc Alloy Coated Steel Siding, Soffits and Fascia, Prefinished, Residential”. (2) Steel sheet cladding shall have a minimum thickness of 0.3 mm and conform to CAN/CGSB-93.3-M, “Prefinished Galvanized and Aluminum-Zinc Alloy Steel Sheet for Residential Use”.	9.27.11.1. Material Standards	(1) Steel sheet cladding, including horizontal and vertical strip steel siding, flashing and trim accessories, shall have a minimum thickness of 0.33 mm and conform to CSSBI 23M, “Standard for Residential Steel Cladding.”	(1) ~~Horizontal~~ Steel sheet cladding, including horizontal and vertical strip steel siding, ~~including~~ flashing and trim accessories, shall ~~conform to CAN/CGSB-93.4, “Galvanized Steel and Aluminum-Zinc Alloy Coated Steel Siding, Soffits and Fascia, Prefinished, Residential”.~~ ~~(2) Steel sheet cladding shall~~ have a minimum thickness of 0.~~3~~33 mm and conform to ~~CAN/CGSB-93.3-M, “Prefinished Galvanized and Aluminum-Zinc Alloy Steel Sheet~~CSSBI 23M, “Standard for Residential ~~Use”.~~Steel Cladding.”	https://www.dropbox.com/s/vtjp071vxiw4t8p/Proposed_Change_1099.pdf?dl=0
Insulating Concrete Forms (ICF)	9.29.5.1. Application	(2) Gypsum board applications not described in this Subsection shall conform to CSA A82.31-M, “Gypsum Board Application”.	9.29.5.1. Application	(2) Except as provided in Sentence (3), gypsum board applications not described in this Subsection shall conform to CSA A82.31-M, “Gypsum Board Application.” (3) The application of gypsum board to flat insulating concrete form (ICF) walls shall conform to ASTM C840, “Standard Specification for Application and Finishing of Gypsum Board.”	~~(2) Gypsum~~(2) Except as provided in Sentence (3), gypsum board applications not described in this Subsection shall conform to CSA A82.31-M, “Gypsum Board Application~~”.~~.” (3) The application of gypsum board to flat insulating concrete form (ICF) walls shall conform to ASTM C840, “Standard Specification for Application and Finishing of Gypsum Board.”	https://www.dropbox.com/s/edcmjtxodom18bo/Proposed_Change_1613.pdf?dl=0
Ventilation (Part 9)	9.32.1.4. Venting of Laundry-Drying Equipment	(3) Where collective venting of multiple installations of laundry-drying equipment is used, the ventilation system shall,	9.32.1.3. Venting of Laundry-Drying Equipment	(3) Where collective venting of multiple installations of laundry-drying equipment is used, the ventilation system shall	(3) Where collective venting of multiple installations of laundry-drying equipment is used, the ventilation system shall~~,~~	https://www.dropbox.com/s/io10tkcj225m1st/Proposed_Change_1306.pdf?dl=0

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		(a) be connected to a common *exhaust duct* that is vented by one central exhaust fan and incorporates one central lint trap, (b) include an interlock to activate the central exhaust fan when laundry-drying equipment is in use, and (c) where required by Article 9.32.3.8., be provided with make-up air.		(a) be connected to a common *exhaust duct* that is vented by one central exhaust fan, (b) include an interlock to activate the central exhaust fan when laundry-drying equipment is in use, and (c) where required by Article 9.32.3.8., be provided with make-up air.	(a) be connected to a common *exhaust duct* that is vented by one central exhaust fan ~~and incorporates one central lint trap,~~ . (b) include an interlock to activate the central exhaust fan when laundry-drying equipment is in use, and (c) where required by Article 9.32.3.8., be provided with make-up air.	
Ventilation (Part 9) — Laundry Venting	9.32.3.12. Outdoor Intake and Exhaust Openings	(4) The distance separating air intakes from *building* envelope penetrations that are potential sources of contaminants, such as *gas vents* or oil fill pipes, shall be not less than 900 mm.	9.32.3.13. Outdoor Intake and Exhaust Openings	(4) The distance separating air intakes for mechanical ventilation from exhaust outlets that are potential sources of contaminants, such as *gas vents* or oil fill pipes, shall be not less than 1 800 mm. (4.1) Except as provided in Sentences (4.2) and (4.3), exhaust outlets that discharge air containing moisture, such as bathroom ventilation and clothes dryer exhaust outlets, shall be located at least 1 800 mm from air intakes and vented soffits. (4.2) Where an exhaust outlet referred to in Sentence (4.1) is located within a soffit, the soffit shall either be unvented, or if vented, the full depth of the soffit shall be blocked for a distance of 1 800 mm on each side of the exhaust outlet. (4.3) Where an exhaust outlet referred to in Sentence (4.1) is located in a side wall less than 1 800 mm from a soffit, a section of the soffit above the exhaust outlet shall be unvented, or if vented, the full depth of the soffit shall be blocked in accordance with the widths stipulated in Table 9.32.3.13.-A, centred over the location of the outlet.	(4) The distance separating air intakes for mechanical ventilation from ~~*building* envelope penetrations~~exhaust outlets that are potential sources of contaminants, such as *gas vents* or oil fill pipes, shall be not less than ~~900~~1 800 mm. (4.1) Except as provided in Sentences (4.2) and (4.3), exhaust outlets that discharge air containing moisture, such as bathroom ventilation and clothes dryer exhaust outlets, shall be located at least 1 800 mm from air intakes and vented soffits. (4.2) Where an exhaust outlet referred to in Sentence (4.1) is located within a soffit, the soffit shall either be unvented, or if vented, the full depth of the soffit shall be blocked for a distance of 1 800 mm on each side of the exhaust outlet. (4.3) Where an exhaust outlet referred to in Sentence (4.1) is located in a side wall less than 1 800 mm from a soffit, a section of the soffit above the exhaust outlet shall be unvented, or if vented, the full depth of the soffit shall be blocked in accordance with the widths stipulated in Table 9.32.3.13.-A, centred over the location of the outlet.	https://www.dropbox.com/s/gkg8x7kchzc1mh7/Proposed_Change_1468.pdf?dl=0

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ENERGY EFFICIENCY-RELATED CHANGES

- Part 12 Resource Conservation and Environmental Integrity
- National Energy Code for Buildings
- Section 9.36 Energy Efficiency

PART 12 RESOURCE CONSERVATION AND ENVIRONMENTAL INTEGRITY

- In addition to the revisions below, any requirements that are expired, will be removed (e.g. 12.2.1.1.).
- The National Energy Code of Canada for Buildings 2017 can be viewed at its record in the NRC Publications Archive by clicking here.
- Current Supplementary Standard SB-10 is provided here for comparison.
- Current Supplementary Standard SB-12 is provided here for comparison.

Subject	Ontario Code Article	Current Ontario Code Provision(s)	Proposed Changes to the Code Provision(s)	Proposed Ontario Code Provision(s)
Energy Efficiency Design	12.2.1.2. Energy Efficiency Design ~~After December 31, 2016~~	**(2)** Except as provided in Sentences (3) and (4), the energy efficiency of all *buildings* shall, (a) energy efficiency levels required by Sentence 12.2.1.1.(2), or be designed to exceed by not less than 13% the (b) conform to Division 1 and Division 3 or 5 of MMA Supplementary Standard SB-10, "Energy Efficiency Requirements". **(3)** Except as provided in Sentence (4), the energy efficiency of a *building* or part of a *building* of *residential occupancy* that is within the scope of Part 9 and is intended for occupancy on a continuing basis during the winter months shall, (a) be designed to exceed by not less than 15% the energy efficiency levels required by Sentence 12.2.1.1.(3), or (b) conform to Chapters 1 and 3 of MMA Supplementary Standard SB-12, "Energy Efficiency for Housing".	**(2)** Except as provided in Sentences (3) and (4), the energy efficiency of all *buildings* shall, ~~(a) energy efficiency levels required by Sentence 12.2.1.1.(2), or be designed to exceed by not less than 13% the~~ ~~(b) conform to Division 1 and Division 3 or 5 of MMA Supplementary Standard SB-10, "Energy Efficiency Requirements".~~ comply with 2020 NECB as amended. (2020 NECB has not been released - See 2017 NECB and the proposed changes, as amended, to 2017 NECB which will form the 2020 NECB) **(3)** Except as provided in Sentence (4), the energy efficiency of a *building* or part of a *building* of *residential occupancy* that is within the scope of Part 9 and is intended for occupancy on a continuing basis during the winter months shall,	**(2)** Except as provided in Sentences (3) and (4), the energy efficiency of all *buildings* shall comply with 2020 NECB as amended. (2020 NECB has not been released - See 2017 NECB and the proposed changes, as amended, to 2017 NECB which will form the 2020 NECB). **(3)** Except as provided in Sentence (4), the energy efficiency of a *building* or part of a *building* of *residential occupancy* that is within the scope of Part 9 and is intended for occupancy on a continuing basis during the winter months shall comply with Section 9.36. as amended. (See Section 9.36. proposed for Ontario's Building Code, as SB-12 will be discontinued).

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			~~(a) be designed to exceed by not less than 15% the energy efficiency levels required by Sentence 12.2.1.1.(3), or~~ ~~(b) conform to Chapters 1 and 3 of MMA Supplementary Standard SB-12, "Energy Efficiency for Housing".~~ comply with Section 9.36. as amended. (See Section 9.36. proposed for Ontario's Building Code, as SB-12 will be discontinued).	
Carbon Dioxide Equivalents	12.2.2.1. Carbon Dioxide Equivalents	**(1)** Except as provided in Sentence (2), all *buildings* shall be designed to conform to the CO_2e emission requirements set out in MMA Supplementary Standard SB-10, "Energy Efficiency Requirements".	**(1)** Except as provided in Sentence (2), all *buildings* shall be designed to conform to the CO_2e emission requirements set out in ~~MMA Supplementary Standard SB-10, "Energy Efficiency Requirements".~~ this Part. (SB-10 will be discontinued related article will be relocated in Part 12- See Table 1.1.2.2. in Chapter 1 of Division 3 in Supplementary Standard SB-10)	**(1)** Except as provided in Sentence (2), all *buildings* shall be designed to conform to the CO_2e emission requirements set out in this Part. (SB-10 will be discontinued related article will be relocated in Part 12- See Table 1.1.2.2. in Chapter 1 of Division 3 in Supplementary Standard SB-10).
Peak Electric Demand	12.2.3.1. Peak Electric Demand	**(1)** Except as provided in Sentence (2), all *buildings* shall be designed to conform to the peak electric demand requirements set out in MMA Supplementary Standard SB-10, "Energy Efficiency Requirements".	**(1)** Except as provided in Sentence (2), all *buildings* shall be designed to conform to the peak electric demand requirements ~~set out in MMA Supplementary Standard SB-10, "Energy Efficiency Requirements".~~ by not exceeding the level achieved by complying with Parts 1 to 7 of the 2020 NECB as amended. (2020 NECB has not been released yet - See 2017 NECB and the proposed changes as amended to 2017 NECB which will form the 2020 NECB).	**(1)** Except as provided in Sentence (2), all *buildings* shall be designed to conform to the peak electric demand requirements by not exceeding the level achieved by complying with Parts 1 to 7 of the 2020 NECB as amended. (2020 NECB has not been released yet - See 2017 NECB and the proposed changes as amended to 2017 NECB which will form the 2020 NECB).

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PROPOSED CHANGES TO THE 2017 NATIONAL ENERGY CODE FOR BUILDINGS

- It has been proposed that Ontario adapts 2020 NECB (which is the 2017 edition of the NECB and the changes that are listed below).
- 2017 NECB is similar to current Ontario requirements based on 2015 NECB with modifications introduced through Supplementary Standard SB-10 Division 3.
- Current Supplementary Standard SB-10 is provided here for comparison.
- The National Energy Code of Canada for Buildings 2017 can be viewed at its record in the NRC Publications Archive by clicking here.
    - In this copy the changes from 2015 edition to 2017 edition of NECB have been identified with vertical sidelines where a provision had been revised/added
- Changes introduced through 2020 NECB Code over 2017 edition are listed here including a link to the original National Proposed Change Forms (PCFs) which provide detailed background information and rational for the proposed changes:
    - Where the proposed change is further modified by Ontario, the changes are shown in blue.
    - The change is for Tier 1 of the NECB to be selected, and all other tiers excluded.
- It has been proposed that the energy requirements are based on only 2020 NECB with the intention of eventually eliminating SB-10. Please see OBC Part 12 changes for consequential changes and elimination of ASHRAE 90.1 compliance path.
- The list below is intended to be read in conjunction with 2017 NECB.

Subject	National Energy Code 2017 Subsection / Article	National Energy Code for Buildings 2017 Provision(s)	National Energy Code 2020 Subsection /Article	National Energy Code for Buildings 2020 Provision(s)	Proposed Changes to the National Energy Code Provision(s)	National Link to the PCF
Other	Div.A 1.1.1.1. Application of this Code	(1) Except as provided in Sentence (2), this Code applies to the design and construction of all new *buildings* described in Sentence 1.3.3.2.(1) of Division A of the NBC and to *additions*. (2) This Code does not apply to *farm buildings*.	Div.A 1.1.1.1. Application of this Code	(1) Except as provided in Sentence (3), this Code applies to the design and construction of all new *buildings* described in Sentence 1.3.3.2.(1) of Division A of the NBC and to *additions*. (2) This Code applies to subsequent alterations to and within *buildings* originally constructed in accordance with this Code. (3) This Code does not apply to *farm buildings*.	(1) Except as provided in Sentence (~~2~~3), this Code applies to the design and construction of all new *buildings* described in Sentence 1.3.3.2.(1) of Division A of the NBC and to *additions*. (2) This Code applies to subsequent alterations to and within *buildings* originally constructed in accordance with this Code. (3) This Code does not apply to *farm buildings*.	https://www.dropbox.com/s/40e08z0d7w8u5s2/Proposed_Change_1409.pdf?dl=0
Performance Compliance - Other	Div.A 1.3.3.1. Application of Parts 1 to 8	(1) Parts 1 to 8 of Division B apply to all *buildings* covered in this Code. (See Article 1.1.1.1.)	Div.A 1.3.3.1. Application of Parts 1 to 9~~8~~ .	(1) Parts 1 to 9 of Division B apply to all *buildings* covered in this Code. (See Article 1.1.1.1.)	(1) Parts 1 to ~~8~~9 of Division B apply to all *buildings* covered in this Code. (See Article 1.1.1.1.)	https://www.dropbox.com/s/d1mz9qblsg41uuy/Proposed_Change_1527.pdf?dl=0
Performance Compliance - Other	Div.A 1.4.1.1. Non-defined Terms	(3) Where acceptable solutions are referred to in this Code, they shall be the provisions stated in Parts 3 to 8 of Division B.	Div.A 1.4.1.1. Non-defined Terms	(3) Where acceptable solutions are referred to in this Code, they shall be the provisions stated in Parts 3 to 9 of Division B.	(3) Where acceptable solutions are referred to in this Code, they shall be the provisions stated in Parts 3 to ~~8~~9 of Division B.	https://www.dropbox.com/s/d1mz9qblsg41uuy/Proposed_Change_1527.pdf?dl=0

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Referenced Documents	1.3.1.2. Applicable Editions	(Table 1.3.1.2. - Documents Referenced in the National Energy Code of Canada for Buildings 2017)	1.3.1.2. Applicable Editions	(Table 1.3.1.2. - Documents Referenced in the National Energy Code of Canada for Buildings 2020)	Updates to Referenced Documents	https://www.dropbox.com/s/nvkp51be7mg1vjk/Proposed_Change_1640.pdf?dl=0
Performance Compliance - Other	1.1.2.1. Prescriptive, Trade-off or Performance Compliance	(1) *Buildings* shall comply with (a) the prescriptive or trade-off requirements stated in Parts 3 to 7, or (b) the performance requirements stated in Part 8.	1.1.2.1. Prescriptive, Trade-off or Performance Compliance	(1) *Buildings* shall comply with (a) the prescriptive or trade-off requirements stated in Parts 3 to 7, (b) the performance requirements stated in Part 8, or (c) the tiered performance requirements stated in Part 9.	(1) *Buildings* shall comply with (a) the prescriptive or trade-off requirements stated in Parts 3 to 7, ~~or~~ (b) the performance requirements stated in Part 8, or (c) the tiered performance requirements stated in Part 9.	https://www.dropbox.com/s/d1mz9qblsg41uuy/Proposed_Change_1527.pdf?dl=0
Building Envelope - General	3.1.1.5. Thermal Characteristics of Building Assemblies	(5) The thermal characteristics of *building* assemblies other than *fenestration* and doors shall be determined from (a) calculations carried out in accordance with Article 3.1.1.7., or (b) laboratory tests performed in accordance with ASTM C 1363, "Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus", using an indoor air temperature of 21 ± 1°C and an outdoor air temperature of –18 ± 1°C.	3.1.1.5. Thermal Characteristics of Building Assemblies	(5) The thermal characteristics of *building* assemblies other than *fenestration* and doors shall be determined from (a) calculations carried out using the procedures described in (i) the ASHRAE Handbook – Fundamentals, or (ii) ISO 14683, Thermal Bridges in Building Construction-Linear Thermal Transmittance – Simplified Methods and Default Values," (b) two- or three-dimensional thermal modelling, or (c) laboratory tests performed in accordance with ASTM C 1363, "Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus", using an indoor air temperature of 21 ± 1°C and an outdoor air temperature of –18 ± 1°C.	(5) The thermal characteristics of *building* assemblies other than *fenestration* and doors shall be determined from (a) calculations carried out ~~in accordance with Article 3.1.1.7., or~~using the procedures described in ~~(b~~(i) the ASHRAE Handbook – Fundamentals, or (ii) ISO 14683, Thermal Bridges in Building Construction-Linear Thermal Transmittance – Simplified Methods and Default Values," (b) two- or three-dimensional thermal modelling, or (c) laboratory tests performed in accordance with ASTM C 1363, "Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus", using an indoor air temperature of 21 ± 1°C and an outdoor air temperature of –18 ± 1°C.	https://www.dropbox.com/s/m2wdczg0kf1hsgo/Proposed_Change_958.pdf?dl=0
Building Envelope - General	3.1.1.7. Calculation of Overall Thermal Transmittance	(1) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., the thermal bridging effect of closely spaced repetitive structural members, such as studs and joists, and of ancillary members, such as lintels, sills and plates, shall be accounted for as described in Article 1.1.4.2. (2) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., the thermal bridging effect of major structural members, such as columns and	3.1.1.7. Calculation of Overall Thermal Transmittance	(1) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., the effect of thermal bridging shall be accounted for as described in Article 1.1.4.2. shall be considered for (a) closely spaced repetitive structural members, such as studs and joists, and ancillary members, such as lintels, sills and plates, (b) major structural elements that penetrate or intersect the *building envelope*,	(1) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., the effect of thermal bridging ~~effect of closely spaced repetitive structural members,~~shall be accounted for as described in Article 1.1.4.2. shall be considered for (a) closely spaced repetitive structural members, such as studs and joists, and ~~of~~ ancillary members, such as lintels, sills and plates, ~~shall be accounted for as described in Article 1.1.4.2.~~	https://www.dropbox.com/s/m2wdczg0kf1hsgo/Proposed_Change_958.pdf?dl=0

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		spandrel beams, that are parallel to the plane of the *building envelope* and partly penetrate that *building envelope* assembly need not be taken into account, provided they do not increase the *overall thermal transmittance* at the projected area of the member to more than twice that permitted in Section 3.2. (3) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., pipes, ducts, equipment with through-the-wall venting, packaged terminal air conditioners or heat pumps, shelf angles, anchors and ties and associated fasteners, and other minor structural members that must completely penetrate the *building envelope* to perform their intended function need not be taken into account. (4) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., major structural penetrations, such as balcony slabs, beams, girders, columns, and ornamentation or appendages that must completely penetrate the *building envelope* to perform their intended function need not be taken into account, provided that the sum of the cross-sectional areas at such major structural penetrations is limited to a maximum of 2% of the above-ground *building envelope* area. (5) Where a component of the *building envelope* is protected by an enclosed unconditioned space, such as a sun porch, enclosed veranda or vestibule, the unconditioned enclosure may be considered to have an *overall thermal transmittance* of 6.25 W/(m2·K). (6) For the purposes of this Article, roof assemblies shall be considered to include all related structural framing. (7) For the purposes of this Article, wall assemblies inclined less than 60° from the horizontal shall be considered as roof assemblies, and roof assemblies inclined 60° or more from the horizontal shall be considered as wall assemblies. (8) For the purposes of this Article, wall assemblies shall be considered to include all related structural framing and perimeter areas of intersecting interior walls but shall not include the perimeter areas where floor or roof slabs interrupt the wall's construction.		(c) the junctions between the following *building envelope* materials, components, and assemblies: (i) glazing assemblies, (ii) spandrels, (iii) parapets, (iv) roof-to-wall junctions, (v) corners, and, (vi) edges of walls or floors, and (d) secondary structural members. (2) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., pipes, ducts, equipment with through-the-wall venting, packaged terminal air conditioners or heat pumps need not be taken into account. (3) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., fasteners need not be taken into account. (4) Where a component of the *building envelope* is protected by an enclosed unconditioned space, such as a sun porch, enclosed veranda or vestibule, the unconditioned enclosure may be considered to have an *overall thermal transmittance* of 6.25 W/(m2·K). (5) For the purposes of this Article, roof assemblies shall be considered to include all related structural framing. (6) For the purposes of this Article, wall assemblies inclined less than 60° from the horizontal shall be considered as roof assemblies, and roof assemblies inclined 60° or more from the horizontal shall be considered as wall assemblies. (7) For the purposes of this Article, wall assemblies shall be considered to include all related structural framing and perimeter areas of intersecting interior walls. (8) For the purposes of this Article, floor assemblies shall be considered to include all related structural framing.	(b) major structural elements that penetrate or intersect the *building envelope*, (c) the junctions between the following *building envelope* materials, components, and assemblies: (i) glazing assemblies, (ii) spandrels, (iii) parapets, (iv) roof-to-wall junctions, (v) corners, and, (vi) edges of walls or floors, and (d) secondary structural members. (2) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., ~~the thermal bridging effect of major structural members, such as columns and~~pipes, ducts, equipment with through-the-wall venting, packaged terminal air ~~spandrel beams, that are parallel to the plane of the *building envelope* and partly penetrate that *building envelope* assembly~~conditioners or heat pumps need not be taken into account~~, provided they do not increase the *overall thermal transmittance* at the projected area of the member to more than twice that permitted in Section 3.2~~. (3) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., ~~pipes, ducts, equipment with through-the-wall venting, packaged terminal air~~fasteners need not be taken into account. ~~conditioners or heat pumps, shelf angles, anchors and ties and associated fasteners, and other minor structural members that must completely penetrate the *building envelope* to perform their intended function need not be taken into account.~~ ~~(4) In calculating the *overall thermal transmittance* of assemblies for purposes of comparison with the provisions in Section 3.2., major structural penetrations, such as balcony slabs, beams, girders, columns, and ornamentation or appendages that must completely penetrate the *building envelope* to perform their intended function need not be taken into account, provided that the sum of the cross-~~	

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		(9) For the purposes of this Article, floor assemblies shall be considered to include all related structural framing.			~~sectional areas at such major structural penetrations is limited to a maximum of 2% of the above-ground *building envelope* area.~~ ~~(5~~(4) Where a component of the *building envelope* is protected by an enclosed unconditioned space, such as a sun porch, enclosed veranda or vestibule, the unconditioned enclosure may be considered to have an *overall thermal transmittance* of 6.25 W/(m2·K). (~~6~~5) For the purposes of this Article, roof assemblies shall be considered to include all related structural framing. (~~7~~6) For the purposes of this Article, wall assemblies inclined less than 60° from the horizontal shall be considered as roof assemblies, and roof assemblies inclined 60° or more from the horizontal shall be considered as wall assemblies. (~~8~~7) For the purposes of this Article, wall assemblies shall be considered to include all related structural framing and perimeter areas of intersecting interior walls ~~but shall not include the perimeter areas where~~, ~~floor or roof slabs interrupt the wall's construction.~~ ~~(9~~(8) For the purposes of this Article, floor assemblies shall be considered to include all related structural framing.	
Building Envelope - General	3.2.1.2. Continuity of Insulation	(1) Except as provided in Sentences (2) to (6), interior *building* components that intersect with components of the *building envelope* and major structural members that partly penetrate the *building envelope* shall not break the continuity of the insulation and shall not increase the *overall thermal transmittance* at their projected area to more than that permitted in Section 3.2. (2) Where an interior wall penetrates an exterior wall or insulated roof or ceiling and breaks the continuity of the *building envelope*, it shall be insulated (a) on both of its sides inward or outward from the *building envelope* for a distance equal to 4 times the uninsulated thickness of the penetrating wall, and (b) to an *overall thermal transmittance* no more than that required for the exterior wall. (3) Where an ornamentation or appendage other than a balcony slab or canopy slab penetrates an exterior	3.2.1.2. Continuity of Insulation	(1) Where mechanical ducts and chases or electrical system components, such as pipes, ducts, conduits, cabinets, panels, or recessed heaters, are placed within and parallel to the *building envelope*, the *overall thermal transmittance* of the *building envelope* at the projected area of the mechanical or electrical system components shall not be increased. (2) Joints between components of the *building envelope*, such as expansion or construction joints or joints between walls and doors or *fenestration*, shall be insulated in a manner that provides continuity across such joints.	~~(1) Except as provided in Sentences (2) to (6), interior *building* components that intersect with components of the *building envelope* and major structural members that partly penetrate the *building envelope* shall not break the continuity of the insulation and shall not increase the *overall thermal transmittance* at their projected area to more than that permitted in Section 3.2.~~ ~~(2) Where an interior wall penetrates an exterior wall or insulated roof or ceiling and breaks the continuity of the *building envelope*, it shall be insulated~~ ~~(a) on both of its sides inward or outward from the *building envelope* for a distance equal to 4 times the uninsulated thickness of the penetrating wall, and~~ ~~(b) to an *overall thermal transmittance* no more than that required for the exterior wall.~~ ~~(3) Where an ornamentation or appendage other than a balcony slab or canopy slab penetrates an exterior~~	https://www.dropbox.com/s/m2wdczg0kf1hsgo/Proposed_Change_958.pdf?dl=0

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		wall and breaks the continuity of the *building envelope*, it shall be insulated (a) on both of its sides inward or outward from the *building envelope* for a distance equal to 4 times the thickness of the penetrated wall, and (b) to an *overall thermal transmittance* no more than that required for the exterior wall. (4) Where *building envelope* assemblies in the same plane intersect but their respective expanses of insulation do not, one of the two expanses of insulation shall be extended beyond the intersecting assembly for a distance equal to at least 4 times the distance separating the two expanses of insulation. (5) Where mechanical ducts and chases or electrical system components, such as pipes, ducts, conduits, cabinets, panels, or recessed heaters, are placed within and parallel to the *building envelope*, the *overall thermal transmittance* of the *building envelope* at the projected area of the mechanical or electrical system components shall not be increased. (6) Except as provided in Sentence (4), joints between components of the *building envelope*, such as expansion or construction joints or joints between walls and doors or *fenestration*, shall be insulated in a manner that provides continuity across such joints.		wall and breaks the continuity of the *building envelope*, it shall be insulated (a) on both of its sides inward or outward from the *building envelope* for a distance equal to 4 times the thickness of the penetrated wall, and (b) to an *overall thermal transmittance* no more than that required for the exterior wall. (4) Where *building envelope* assemblies in the same plane intersect but their respective expanses of insulation do not, one of the two expanses of insulation shall be extended beyond the intersecting assembly for a distance equal to at least 4 times the distance separating the two expanses of insulation. (5(1) Where mechanical ducts and chases or electrical system components, such as pipes, ducts, conduits, cabinets, panels, or recessed heaters, are placed within and parallel to the *building envelope*, the *overall thermal transmittance* of the *building envelope* at the projected area of the mechanical or electrical system components shall not be increased. (6) Except as provided in Sentence (4), joints(2) Joints between components of the *building envelope*, such as expansion or construction joints or joints between walls and doors or *fenestration*, shall be insulated in a manner that provides continuity across such joints.	
Building Envelope - General	3.2.1.4. Allowable Fenestration and Door Area	(2) The total *skylight* area shall be less than 5% of the gross roof area as determined in Article 3.1.1.6.	3.2.1.4. Allowable Fenestration and Door Area	(2) The total *skylight* area shall be less than 2% of the gross roof area as determined in Article 3.1.1.6.	(2) The total *skylight* area shall be less than 52% of the gross roof area as determined in Article 3.1.1.6.	https://www.dropbox.com/s/cesr2dkcg3oiy0s/Proposed_Change_962.pdf?dl=0
Building Envelope - General	3.2.2.2. Thermal Characteristics of Above-ground Opaque Building Assemblies	(Table 3.2.2.2. - Overall Thermal Transmittance of Above-ground Opaque Building Assemblies)	3.2.2.2. Thermal Characteristics of Above-ground Opaque Building Assemblies	(Table 3.2.2.2. - Overall Thermal Transmittance of Above-ground Opaque Building Assemblies)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/nhobeiemafnk83g/Proposed_Change_959.pdf?dl=0 https://www.dropbox.com/s/pcf2ga1xolnjyat/Proposed_Change_1537.pdf?dl=0
Fenestration	3.2.2.3. Thermal Characteristics of Fenestration	(1) For the purposes of this Article, use of the term "*fenestration*" does not include doors, which are covered in Article 3.2.2.4.	3.2.2.3. Thermal Characteristics of Fenestration	(1) For the purposes of this Article, use of the term "*fenestration*" does not include doors, which are covered in Article 3.2.2.4.	(1) For the purposes of this Article, use of the term "*fenestration*" does not include doors, which are covered in Article 3.2.2.4.	https://www.dropbox.com/s/b9720zcdkibzi6d/Proposed_Change_960.pdf?dl=0

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		(2) Except as provided in Sentences (3), (4) and 3.2.1.3.(1), the *overall thermal transmittance* of *fenestration*, shall be not more than that shown in Table 3.2.2.3. for the applicable heating-degree-day category taken at 18°C, as determined in accordance with Article 3.1.1.5. (3) Except as provided in Sentences (4) and 3.2.1.3.(1), the *overall thermal transmittance* of *fenestration* in semi-heated *buildings*, as defined in Sentence 1.2.1.2.(2), shall be not more than that shown in Table 3.2.2.3. for the applicable heating-degree-day category taken at 15°C, as determined in accordance with Article 3.1.1.5. (4) *Skylights* whose *overall thermal transmittance* exceeds the values shown in Table 3.2.2.3. are permitted, provided that (a) the total area of such *skylights* does not exceed 2% of the gross roof area calculated in accordance with Article 3.1.1.6., and (b) the *overall thermal transmittance* of such *skylights* is not more than 3.4 W/(m2·K). (Table 3.2.2.3. - Overall Thermal Transmittance of Fenestration)		(2) Except as provided in Sentences (3), (4) and 3.2.1.3.(1), the *overall thermal transmittance* of *fenestration*, shall be not more than that shown in Table 3.2.2.3. for the applicable heating-degree-day category taken at 18°C, as determined in accordance with Article 3.1.1.5. (3) Except as provided in Sentences (4) and 3.2.1.3.(1), the *overall thermal transmittance* of *fenestration* in semi-heated *buildings*, as defined in Sentence 1.2.1.2.(2), shall be not more than that shown in Table 3.2.2.3. for the applicable heating-degree-day category taken at 15°C, as determined in accordance with Article 3.1.1.5. (Table 3.2.2.3. - Overall Thermal Transmittance of Fenestration)	(2) Except as provided in Sentences (3), (4) and 3.2.1.3.(1), the *overall thermal transmittance* of *fenestration*, shall be not more than that shown in Table 3.2.2.3. for the applicable heating-degree-day category taken at 18°C, as determined in accordance with Article 3.1.1.5. (3) Except as provided in Sentences (4) and 3.2.1.3.(1), the *overall thermal transmittance* of *fen estration* in semi-heated *buildings*, as defined in Sentence 1.2.1.2.(2), shall be not more than that shown in Table 3.2.2.3. for the applicable heating-degree-day category taken at 15°C, as determined in accordance with Article 3.1.1.5. ~~(4) *Skylights* whose *overall thermal transmittance* exceeds the values shown in Table 3.2.2.3. are permitted, provided that~~ ~~(a) the total area of such *skylights* does not exceed 2% of the gross roof area calculated in accordance with Article 3.1.1.6., and~~ ~~(b) the *overall thermal transmittance* of such *skylights* is not more than 3.4 W/(m2·K).~~ See the National PCFs for the changes in the tables	https://www.dropbox.com/s/cesr2dkcg3oiy0s/Proposed_Change_962.pdf?dl=0 https://www.dropbox.com/s/16ln25p9grbhzh3/Proposed_Change_1536.pdf?dl=0
Fenestration	3.2.2.4. Thermal Characteristics of Doors and Access Hatches	(Table 3.2.2.4. - Overall Thermal Transmittance of Doors)	3.2.2.4. Thermal Characteristics of Doors and Access Hatches	(Table 3.2.2.4. - Overall Thermal Transmittance of Doors)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/b9720zcdkibzi6d/Proposed_Change_960.pdf?dl=0 https://www.dropbox.com/s/gfir6rn9d6m3fd0/Proposed_Change_1536%20%281%29.pdf?dl=0
Air Leakage	3.2.4.1. General	(1) The *building envelope* shall be designed and constructed with a continuous air barrier system comprised of *air barrier assemblies* to control air leakage into and out of the *conditioned space*.	3.2.4.1. General	(1) The *building envelope* shall be designed and constructed with a continuous air barrier system comprised of *air barrier assemblies* to control air leakage into and out of the *conditioned space*, by (a) testing in accordance with Article 3.2.4.2., or (b) complying with Article 3.2.4.3. to 3.2.4.5.	(1) The *building envelope* shall be designed and constructed with a continuous air barrier system comprised of *air barrier assemblies* to control air leakage into and out of the *conditioned space~~.~~*, by (a) testing in accordance with Article 3.2.4.2., or (b) complying with Article 3.2.4.3. to 3.2.4.5.	https://www.dropbox.com/s/cdz7yx58di55w52/Proposed_Change_1414.pdf?dl=0
Air Leakage	N/A	N/A	3.2.4.2. Air Barrier System	(1) Except as provided in Article 3.2.4.3, the air barrier system shall have a normalized air leakage	(1) Except as provided in Article 3.2.4.3, the air barrier system shall have a normalized air leakage	https://www.dropbox.com/s/cdz7yx58di55w5

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				rate not greater than 1.50 L/(s.m^2) when tested in accordance with ASTM E 3158, “Standard Test Method for Measuring the Air Leakage Rate of a Large or Multi-zone Building,” at a pressure differential of 75 Pa, using the following criteria: (a) the *building* shall be prepared in accordance with the building envelope test described in the standard, (b) the air leakage test shall be conducted under both pressurized and depressurized conditions, and (c) the air leakage area used to determine the normalized air leakage rate shall include all the surfaces separating *conditioned space* from unconditioned space. (2) The air leakage rates measured in accordance with Sentence (1) shall be averaged.	rate not greater than 1.50 L/(s.m^2) when tested in accordance with ASTM E 3158, “Standard Test Method for Measuring the Air Leakage Rate of a Large or Multi-zone Building,” at a pressure differential of 75 Pa, using the following criteria: (a) the *building* shall be prepared in accordance with the building envelope test described in the standard, (b) the air leakage test shall be conducted under both pressurized and depressurized conditions, and (c) the air leakage area used to determine the normalized air leakage rate shall include all the surfaces separating *conditioned space* from unconditioned space. (2) The air leakage rates measured in accordance with Sentence (1) shall be averaged.	2/Proposed_Change_1414.pdf?dl=0
Air Leakage	3.2.4.2. Opaque Building Assemblies	(1) All *opaque building assemblies* that act as environmental separators shall include an *air barrier assembly* conforming to Sentence (2) or (3). (2) Except as provided in Sentence (3), *air barrier assemblies* shall (a) conform to CAN/ULC-S742, "Air Barrier Assemblies – Specification", and (b) have an air leakage rate no greater than 0.2 L/(s.m^2) at a pressure differential of 75 Pa. (3) *Air barrier assemblies* are permitted to be tested in accordance with ASTM E 2357, "Determining Air Leakage of Air Barrier Assemblies", to meet the air leakage requirement stated in Sentence (2), provided (a) the *building* is erected in an area where the 1-in-50 hourly wind pressures do not exceed 0.65 kPa, and (b) the *air barrier assembly* is installed on the warm side of the thermal insulation of the *opaque building assembly*.	3.2.4.32. Opaque Building Assemblies	(1) All *opaque building assemblies* that act as environmental separators shall include an *air barrier assembly* conforming to Sentence (2) or (3). (2) *Air barrier assemblies* shall (a) conform to CAN/ULC-S742, "Air Barrier Assemblies – Specification", and (b) have an air leakage rate no greater 0.2 L/(s.m^2) at a pressure differential of 75 Pa. (3) *Air barrier assemblies* shall (a) be designed, evaluated, and constructed in the *building* to provide the principal resistance to air leakage, (b) be designed using the 1-in-50 hourly wind pressure for the location where the *building* is erected, (c) have an air leakage rate no greater than 0.2 L/(s.m^2) at a pressure differential of 75 Pa, and (d) have at least one air barrier material intended to provide the primary resistance to air leakage that meets the requirements of CAN/ULC-S741, “Air Barrier Materials - Specification.”	(1) All *opaque building assemblies* that act as environmental separators shall include an *air barrier assembly* conforming to Sentence (2) or (3). ~~(2) Except as provided in Sentence (3), *air*~~(2) *Air barrier assemblies* shall (a) conform to CAN/ULC-S742, "Air Barrier Assemblies – Specification", and (b) have an air leakage rate no greater ~~than~~ 0.2 L/(s.m^2) at a pressure differential of 75 Pa. ~~(3) *Air barrier assemblies* are permitted to be tested in accordance with ASTM E 2357, "Determining Air Leakage of Air Barrier Assemblies", to meet the air leakage requirement stated in Sentence (2), provided~~ (3) *Air barrier assemblies* shall (a) be designed, evaluated, and constructed in the *building* ~~is erected in an area~~ to provide the principal resistance to air leakage, (b) be designed using~~where~~ the 1-in-50 hourly wind ~~pressures do not exceed 0.65 kPa, and~~ ~~(b)~~pressure for the location where the *building* is erected, (c) have an air leakage rate no greater than 0.2 L/(s.m^2) at a pressure differential of 75 Pa, and (d) have at least one air barrier ~~*assembly* is installed on the warm side of~~ material intended to provide the ~~thermal insulation~~	https://www.dropbox.com/s/cdz7yx58di55w52/Proposed_Change_1414.pdf?dl=0

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					~~of~~primary resistance to air leakage that meets the ~~*opaque building assembly.*~~requirements of CAN/ULC-S741, “Air Barrier Materials - Specification.”	
Air Leakage	3.2.4.4. Doors	(1) Except as provided in Sentences (2) and (3), doors that act as environmental separators shall have an air leakage rate not greater than 0.50 L/(s.m^2) when tested in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa. (2) Revolving doors and automatic commercial sliding doors, including their respective fixed sections, as well as overhead doors that act as environmental separators shall have an air leakage rate not greater than 5.0 L/(s.m^2) when tested as a complete assembly in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa. (3) Main entry exterior doors that act as environmental separators are permitted to have an air leakage rate not greater than 5.0 L/(s.m^2) when tested as a complete assembly in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa, provided that the total area of such doors does not exceed 2% of the gross wall area calculated in accordance with Article 3.1.1.6. (4) Loading docks that interface with truck boxes shall have weather seals that seal the truck box to the *building*.	3.2.4.5~~4~~. Doors	(1) Except as provided in Sentences (2) and (3), doors that act as environmental separators shall have an air leakage rate not greater than 0.50 L/(s.m^2) when tested in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa. (2) Revolving doors and automatic commercial sliding doors, including their respective fixed sections that act as environmental separators shall have an air leakage rate not greater than 5.0 L/(s.m^2) when tested as a complete assembly in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa. (3) Overhead doors that act as environmental separators shall have an air leakage rate not greater than 2.0 L/(s.m^2) when tested as a complete assembly at a pressure differential of 75 Pa in accordance with (a) ANSI/DASMA 105, “Test Method for Thermal Transmittance and Air Infiltration of Garage Doors,” or (b) ASTM E 283, “Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.” (4) Main entry exterior doors that act as environmental separators are permitted to have an air leakage rate not greater than 5.0 L/(s.m^2) when tested as a complete assembly in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa, provided that the total area of such doors does not exceed 2% of the gross wall area calculated in accordance with Article 3.1.1.6.	(1) Except as provided in Sentences (2) and (3), doors that act as environmental separators shall have an air leakage rate not greater than 0.50 L/(s.m^2) when tested in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa. (2) Revolving doors and automatic commercial sliding doors, including their respective fixed sections~~, as well as overhead doors~~ that act as environmental separators shall have an air leakage rate not greater than 5.0 L/(s.m^2) when tested as a complete assembly in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa. ~~(3~~(3) Overhead doors that act as environmental separators shall have an air leakage rate not greater than 2.0 L/(s.m^2) when tested as a complete assembly at a pressure differential of 75 Pa in accordance with (a) ANSI/DASMA 105, “Test Method for Thermal Transmittance and Air Infiltration of Garage Doors,” or (b) ASTM E 283, “Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.” (4) Main entry exterior doors that act as environmental separators are permitted to have an air leakage rate not greater than 5.0 L/(s.m^2) when tested as a complete assembly in accordance with ASTM E 283, "Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen", at a pressure differential of 75 Pa, provided that the total area of such doors does not exceed 2% of the gross wall area calculated in accordance with Article 3.1.1.6.	https://www.dropbox.com/s/cdz7yx58di55w52/Proposed_Change_1414.pdf?dl=0

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				(5) Loading docks that interface with truck boxes shall have weather seals that seal the truck box to the *building*.	(45) Loading docks that interface with truck boxes shall have weather seals that seal the truck box to the *building*.	
Air Leakage	3.2.4.5. Fireplace Doors	(1) Fireplaces shall be equipped with doors, or enclosures to restrict air movement through the chimney when the fireplace is not in use.	3.2.4.65. Fireplace Doors	(1) Fireplaces shall be equipped with doors, enclosures or devices to restrict air movement through the chimney when the fireplace is not in use.	(1) Fireplaces shall be equipped with doors, ~~or~~ enclosures or devices to restrict air movement through the chimney when the fireplace is not in use.	https://www.dropbox.com/s/cdz7yx58di55w52/Proposed_Change_1414.pdf?dl=0
Interior Lighting Power	4.2.1.5. Calculation of Interior Lighting Power Allowance Using the Building Area Method	(Table 4.2.1.5.- Lighting Power Density by Building Type for Use with the Building Area Method)	4.2.1.5. Calculation of Interior Lighting Power Allowance Using the Building Area Method	(Table 4.2.1.5.- Lighting Power Density by Building Type for Use with the Building Area Method)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/tujlexqc775fbkl/Proposed_Change_934.pdf?dl=0 https://www.dropbox.com/s/2kxym5oqn92zbud/Proposed_Change_1456.pdf?dl=0
Interior Lighting Power	4.2.1.6. Calculation of Interior Lighting Power Allowance Using the Space-by-Space Method	(Table 4.2.1.6. - Lighting Power Density Using the Space-by-Space Method and Minimum Lighting Control Requirements)	4.2.1.6. Calculation of Interior Lighting Power Allowance Using the Space-by-Space Method	(Table 4.2.1.6. - Lighting Power Density Using the Space-by-Space Method and Minimum Lighting Control Requirements)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/tujlexqc775fbkl/Proposed_Change_934.pdf?dl=0
Heating, Ventilating and Air-conditioning Systems - Ot	4.2.2.6. Special Applications	(1) The following lighting applications shall be controlled separately from the *general lighting* in all spaces: (a) display or accent lighting, (b) lighting in display and merchandising cases, (c) lighting for non-visual applications, such as plant growth and food warming, and (d) lighting equipment that is for sale or for demonstrations in lighting education. (2) Except as provided in Sentence (4) regarding bathroom lighting and except for switched receptacles used for lighting that are controlled by captive key systems, all lighting and all switched receptacles used for lighting in guest rooms and *suites* in commercial temporary lodgings shall be automatically controlled so that their power supply turns off within 20 min of the space being unoccupied.	4.2.2.6. Special Applications	(1) The following lighting applications shall be controlled separately from the *general lighting* in all spaces: (a) display or accent lighting, (b) lighting in display and merchandising cases, (c) lighting for non-visual applications, such as plant growth and food warming, and (d) lighting equipment that is for sale or for demonstrations in lighting education. (2) Except for switched receptacles used for lighting that are controlled by captive key systems,for night lighting in bathrooms that does not exceed 2 W, all lighting and all switched receptacles used for lighting in guest rooms and *suites* in commercial temporary lodgings shall be controlled so that their power supply turns off within 20 min of the space being unoccupied.	(1) The following lighting applications shall be controlled separately from the *general lighting* in all spaces: (a) display or accent lighting, (b) lighting in display and merchandising cases, (c) lighting for non-visual applications, such as plant growth and food warming, and (d) lighting equipment that is for sale or for demonstrations in lighting education. (2) Except ~~as provided in Sentence (4) regarding bathroom lighting and except~~ for switched receptacles used for lighting that are controlled by captive key systems,for night lighting in bathrooms that does not exceed 2 W, all lighting and all switched receptacles used for lighting in guest rooms and *suites* in commercial temporary lodgings shall be controlled so that their power supply turns off within 20 min of the space being unoccupied.	https://www.dropbox.com/s/mhtgd3fqj39h5cr/Proposed_Change_965.pdf?dl=0

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		(3) Hotel *suites* shall have control devices meeting the requirements of Sentence (2), at the entrance to each room. (4) Except for night lighting in bathrooms that does not exceed 5 W, bathroom lighting in guest rooms and *suites* in commercial temporary lodgings shall be controlled by a separate device that automatically turns off such lighting within 20 min of the space being unoccupied. (5) All supplemental task lighting, including permanently installed undershelf or undercabinet lighting, shall be controlled by a device that is (a) integral to the luminaires, or (b) wall-mounted in a readily accessible location from which the occupant can see the controlled lighting.		(3) Where captive key systems are used to meet the requirements of Sentence (2), they shall be located at the entrance to each guest room and *suite.* (4) All supplemental task lighting, including permanently installed undershelf or undercabinet lighting, shall be controlled by a device that is (a) integral to the luminaires, or (b) wall-mounted in a readily accessible location from which the occupant can see the controlled lighting.	~~shall be automatically controlled so that their power supply turns off within 20 min of the space being unoccupied.~~ (3) ~~Hotel *suites* shall have control devices meeting~~Where captive key systems are used to meet the requirements of Sentence (2), they shall be located at the entrance to each ~~room.~~ ~~(4) Except for night lighting in bathrooms that does not exceed 5 W, bathroom lighting in~~ guest ~~rooms~~room and ~~*suites* in commercial temporary lodgings shall be controlled by a separate device that automatically turns off such lighting within 20 min of the space being unoccupied.~~*suite.* (~~5~~4) All supplemental task lighting, including permanently installed undershelf or undercabinet lighting, shall be controlled by a device that is (a) integral to the luminaires, or (b) wall-mounted in a readily accessible location from which the occupant can see the controlled lighting.	
Exterior Lighting Power	4.2.3.1. Exterior Lighting	(1) *Exterior lighting* allowances shall be based on the lighting zone in which the *building* is located, as determined from Table 4.2.3.1.-A. (2) The basic site allowance to be applied in the calculation of maximum connected *exterior* *lighting* power in Sentences (3) and (4) shall not exceed the limits specified in Table 4.2.3.1.-B for the applicable lighting zone. (3) Except as provided in Sentence (5), the connected *exterior lighting* power for each specific *building* exterior application listed in Table 4.2.3.1.-C that is to be illuminated shall not be greater than the individual allowance for that application taken from Table 4.2.3.1.-C for the applicable lighting zone plus any unused power applied from the basic site allowance listed in Table 4.2.3.1.-B. (4) Except as provided in Sentence (5), the connected *exterior lighting* power for all general *building* exterior applications not listed in Table 4.2.3.1.-C that are to be illuminated shall not be greater than the sum of the individual allowances for these applications provided in Table 4.2.3.1.-D for the applicable lighting zone plus any remaining basic site allowance not used in compliance with Sentence (3). (5) The following *exterior lighting* applications need not comply with Sentences (1) to (4) where the lighting is equipped with an independent control	4.2.3.1. Exterior Lighting	(1) *Exterior lighting* allowances shall be based on the lighting zone in which the *building* is located, as determined from Table 4.2.3.1.-A. (2) The basic site allowance to be applied in the calculation of maximum connected *exterior* *lighting* power in Sentences (3) to (5) shall not exceed the limits specified in Table 4.2.3.1.-B for the applicable lighting zone. (3) Except as provided in (6), the connected *exterior lighting* power for each specific *building* exterior application listed in Table 4.2.3.1.-C that is to be illuminated shall not be greater than the individual allowance for that application taken from Table 4.2.3.1.-C for the applicable lighting zone plus any unused power applied from the basic site allowance listed in Table 4.2.3.1.-B. (4) Except as provided in (6), the connected *exterior lighting* power for all general *building* exterior applications not listed in Table 4.2.3.1.-C that are to be illuminated shall not be greater than the sum of the individual allowances for these applications provided in Table 4.2.3.1.-D for the applicable lighting zone plus any remaining basic site allowance not used in compliance with Sentence (3). (5) Except as provided in Sentence (6), the connected *exterior lighting* power for all *building* exterior applications not listed in Table 4.2.3.1.-D that are to	(1) *Exterior lighting* allowances shall be based on the lighting zone in which the *building* is located, as determined from Table 4.2.3.1.-A. (2) The basic site allowance to be applied in the calculation of maximum connected *exterior* *lighting* power in Sentences (3) ~~and (4~~to (5) shall not exceed the limits specified in Table 4.2.3.1.-B for the applicable lighting zone. (3) Except as provided in ~~Sentence (5~~(6), the connected *exterior lighting* power for each specific *building* exterior application listed in Table 4.2.3.1.-C that is to be illuminated shall not be greater than the individual allowance for that application taken from Table 4.2.3.1.-C for the applicable lighting zone plus any unused power applied from the basic site allowance listed in Table 4.2.3.1.-B. (4) Except as provided in ~~Sentence (5~~(6), the connected *exterior lighting* power for all general *building* exterior applications not listed in Table 4.2.3.1.-C that are to be illuminated shall not be greater than the sum of the individual allowances for these applications provided in Table 4.2.3.1.-D for the applicable lighting zone plus any remaining basic site allowance not used in compliance with Sentence (3). (5) Except as provided in Sentence (6), the connected *exterior lighting* power for all *building* exterior	https://www.dropbox.com/s/j5c64bfl2yto5ei/Proposed_Change_934.pdf?dl=0 https://www.dropbox.com/s/0wyyipdu287dvtn/Proposed_Change_1458.pdf?dl=0

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		device that complies with the requirements of Subsection 4.2.4.: (a) specialized signal, directional, and marker lighting associated with transportation, (b) lighting for advertising and directional signage, (c) lighting integral to equipment or instrumentation and installed by its manufacturer, (d) lighting for theatrical purposes, including performance, stage, film and video production, (e) lighting for athletic activity areas, (f) temporary lighting, (g) lighting for industrial production, material handling, transportation sites, and associated storage areas for industrial sites, (h) lighting for theme elements in theme/amusement parks, and (i) lighting used to highlight features of art objects, public monuments and designated national or provincial historic sites. (Table 4.2.3.1.-B - Basic Site Allowances for Exterior Lighting) (Table 4.2.3.1.-C - Lighting Power Allowances for Specific Building Exterior Applications) (Table 4.2.3.1.-D - Lighting Power Allowances for General Building Exterior Applications)		be illuminated shall not be greater than the sum of the individual allowances for these applications provided in Table 4.2.3.1.-E for the applicable lighting zone plus any remaining basic site allowance not used in compliance with Sentences (3) and (4). (5) The following *exterior lighting* applications need not comply with Sentences (1) to (5) where the lighting is equipped with an independent control device that complies with the requirements of Subsection 4.2.4.: (a) specialized signal, directional, and marker lighting associated with transportation, (b) lighting for advertising and directional signage, (c) lighting integral to equipment or instrumentation and installed by its manufacturer, (d) lighting for theatrical purposes, including performance, stage, film and video production, (e) lighting for athletic activity areas, (f) temporary lighting, (g) lighting for industrial production, material handling, transportation sites, and associated storage areas for industrial sites, (h) lighting for theme elements in theme/amusement parks, and (i) lighting used to highlight features of art objects, public monuments and designated national or provincial historic sites. (Table 4.2.3.1.-B - Basic Site Allowances for Exterior Lighting) (Table 4.2.3.1.-C - Lighting Power Allowances for Specific Building Exterior Applications) (Table 4.2.3.1.-D - Lighting Power Allowances for General Building Exterior Applications) (Table 4.2.3.1.-E - Lighting Power Allowances for Building Exterior Applications Not Covered in Article 4.2.3.1.)	applications not listed in Table 4.2.3.1.-D that are to be illuminated shall not be greater than the sum of the individual allowances for these applications provided in Table 4.2.3.1.-E for the applicable lighting zone plus any remaining basic site allowance not used in compliance with Sentences (3) and (4). (5) The following *exterior lighting* applications need not comply with Sentences (1) to (45) where the lighting is equipped with an independent control device that complies with the requirements of Subsection 4.2.4.: (a) specialized signal, directional, and marker lighting associated with transportation, (b) lighting for advertising and directional signage, (c) lighting integral to equipment or instrumentation and installed by its manufacturer, (d) lighting for theatrical purposes, including performance, stage, film and video production, (e) lighting for athletic activity areas, (f) temporary lighting, (g) lighting for industrial production, material handling, transportation sites, and associated storage areas for industrial sites, (h) lighting for theme elements in theme/amusement parks, and (i) lighting used to highlight features of art objects, public monuments and designated national or provincial historic sites. See the National PCFs for the changes in the tables	
Interior Lighting Power	4.3.2.7. Determination of Factor for Daylight Harvesting	(Table 4.3.2.7.-B - Daylight-Dependent Control Factor for Electric Lighting, $C_{EL,ctrl,i}$)	4.3.2.7. Determination of Factor for Daylight Harvesting	(Table 4.3.2.7.-B - Daylight-Dependent Control Factor for Electric Lighting, $C_{EL,ctrl,i}$)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/hhhrfimqpbk0bsn/Proposed_Change_948.pdf?dl=0

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Interior Lighting Power	4.3.2.10. Determination of Factors for Occupancy Control and Personal Control	(Table 4.3.2.10.-B - Factor to Account for Occupancy-Sensing Mechanism, $C_{occ,ctrl,i}$)	4.3.2.10. Determination of Factors for Occupancy Control and Personal Control	(Table [4.3.2.10.] 4.3.2.10.-B - Factor to Account for Occupancy-Sensing Mechanism, $C_{occ,ctrl,i}$)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/hhhrfimqpbk0bsn/Proposed_Change_948.pdf?dl=0
Interior Lighting Controls	4.3.2.8. Determination of the Daylight Supply Factor for Sidelighting	(Table 4.3.2.8. - Raw Daylight Supply Factors for Rough Opening in Primary Sidelighted Area, $C_{DL,sup,raw,i}$)	4.3.2.8. Determination of the Daylight Supply Factor for Sidelighting	(Table 4.3.2.8. - Raw Daylight Supply Factors for Rough Opening in Primary Sidelighted Area, $C_{DL,sup,raw,i}$)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/rdltx7y3zgunh88/Proposed_Change_972.pdf?dl=0
HVAC Trade-off-Path	5.1.1.3. Compliance	(1) Except as provided in Sentence (2), compliance with this Part shall be achieved by following (a) the prescriptive path described in Section 5.2., (b) the trade-off path described in Section 5.3., or (c) the performance path described in Section 5.4.	5.1.1.3. Compliance	(1) Except as provided in Sentence (2), compliance with this Part shall be achieved by following (a) the prescriptive path described in Section 5.2., or (b) the performance path described in Section 5.4.	(1) Except as provided in Sentence (2), compliance with this Part shall be achieved by following (a) the prescriptive path described in Section 5.2., or (b) the ~~trade-off path described in Section 5.3., or (c) the~~ performance path described in Section 5.4.	https://www.dropbox.com/s/r564gogkvahpype/Proposed_Change_1460.pdf?dl=0
Piping and Duct Insulation	5.2.2.5. Duct and Plenum Insulation	(1) Except as provided in Sentences (3) to (6), all air-handling ducts, *plenums* and run-outs forming part of a heating, ventilating, or air-conditioning system shall be thermally insulated in accordance with Table 5.2.2.5. (2) The insulation thickness used to determine compliance with Table 5.2.2.5. shall be the thickness of the insulation after installation. (3) *Exhaust ducts*, *return ducts* and *plenums* located within *conditioned space* need not comply with Sentence (1). (4) Ducts and *plenums* located within *conditioned space* in a *dwelling unit* and serving only that *dwelling unit* need not comply with Sentence (1). …	5.2.2.5. Duct and Plenum Insulation	(1) Except as provided in Sentences (3) to (7), all air-handling ducts, *plenums* and run-outs forming part of a heating, ventilating, or air-conditioning system shall be thermally insulated in accordance with Table 5.2.2.5. (2) The insulation thickness used to determine compliance with Table 5.2.2.5. shall be the thickness of the insulation after installation. (3) *Exhaust ducts*, *return ducts* and *plenums* located within *conditioned space* need not comply with Sentence (1). (4) *Supply ducts* and *plenums* located within the *conditioned space* they serve need not comply with Sentence (1). (5) Ducts and *plenums* located within *conditioned space* in a *dwelling unit* and serving only that *dwelling unit* need not comply with Sentence (1). …	(1) Except as provided in Sentences (3) to (~~6~~7), all air-handling ducts, *plenums* and run-outs forming part of a heating, ventilating, or air-conditioning system shall be thermally insulated in accordance with Table 5.2.2.5. (2) The insulation thickness used to determine compliance with Table 5.2.2.5. shall be the thickness of the insulation after installation. (3) *Exhaust ducts*, *return ducts* and *plenums* located within *conditioned space* need not comply with Sentence (1). ~~(4~~(4) *Supply ducts* and *plenums* located within the *conditioned space* they serve need not comply with Sentence (1). (5) Ducts and *plenums* located within *conditioned space* in a *dwelling unit* and serving only that *dwelling unit* need not comply with Sentence (1). …	https://www.dropbox.com/s/d15osjfz5c31p37/Proposed_Change_1438.pdf?dl=0
Heating, Ventilating and Air-conditioning Systems - Other	5.2.3.4. Demand Control Ventilation Systems	(1) Enclosed semi-heated spaces or *conditioned spaces* where fuel-powered vehicles or mobile fuel-powered equipment or appliances are intermittently used shall be provided with sensors and demand control ventilation systems capable of limiting the expected air contaminants to acceptable levels by (a) staging the ventilation fans, or	5.2.3.4. Demand Control Ventilation Systems	(1) Enclosed semi-heated spaces or *conditioned spaces* where fuel-powered vehicles or mobile fuel-powered equipment or appliances are intermittently used shall be provided with sensors and demand control ventilation systems capable of limiting the expected air contaminants to acceptable levels by (a) staging the ventilation fans, or	(1) Enclosed semi-heated spaces or *conditioned spaces* where fuel-powered vehicles or mobile fuel-powered equipment or appliances are intermittently used shall be provided with sensors and demand control ventilation systems capable of limiting the expected air contaminants to acceptable levels by (a) staging the ventilation fans, or	https://www.dropbox.com/s/v9a5cd6gg5w1uig/Proposed_Change_949.pdf?dl=0

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		(b) modulating the outdoor airflow rates.		(b) modulating the outdoor airflow rates. (2) Commercial kitchen ventilation systems whose design exhaust fan airflow rate meets or exceeds the values shown in Table 5.2.3.4. for the applicable heating-degree day category shall be equipped with a demand control ventilation system, including necessary sensors and controls, that is capable of reducing the design exhaust and make-up airflow rates by at least 50% in response to appliance operation. (Table 5.2.3.4. - Demand Control Ventilation Threshold for Commercial Kitchen Ventilation Systems)	(b) modulating the outdoor airflow rates. (2) Commercial kitchen ventilation systems whose design exhaust fan airflow rate meets or exceeds the values shown in Table 5.2.3.4. for the applicable heating-degree day category shall be equipped with a demand control ventilation system, including necessary sensors and controls, that is capable of reducing the design exhaust and make-up airflow rates by at least 50% in response to appliance operation. (See the National PCF for Table 5.2.3.4. - Demand Control Ventilation Threshold for Commercial Kitchen Ventilation Systems)	
Piping and Duct Insulation	5.2.5.3. Piping Insulation	N/A	5.2.5.3. Piping Insulation	(9) Manufactured insulation thicknesses shall not be altered.	(9) Manufactured insulation thicknesses shall not be altered.	https://www.dropbox.com/s/4bebaaqj4elzhi4/Proposed_Change_1436.pdf?dl=0
Heating, Ventilating and Air-conditioning Systems - Other	5.2.8.9. Control of Space Temperature by Reheating or Recooling	(4) HVAC systems that are designed to reduce the air supplied to each *temperature-control zone* to no more than 2 L/s per m^2 of *floor surface area* of the *temperature-control zone* before reheating, recooling or mixing of supply air takes place need not comply with Sentences (1) to (3).	5.2.8.9. Control of Space Temperature by Reheating or Recooling	(4) HVAC systems need not comply with Sentences (1) to (3) if they are designed to reduce the supply airflow rate to each *temperature-control zone* to no more than the greater of (a) 30% of the design flow rate, and (b) the airflow rate required to comply with the ventilation requirements for that zone.	(4) HVAC systems ~~that~~ need not comply with Sentences (1) to (3) if they are designed to reduce the ~~air supplied~~supply airflow rate to each *temperature-control zone* to no more than ~~2 L/s per m^2~~the greater of ~~*floor surface area*~~ (a) 30% of the ~~*temperature-control*~~ design flow rate, and (b) the airflow rate required to comply with the ventilation requirements for that zone ~~before reheating, recooling or mixing of supply air takes place need not comply with Sentences (1) to (3).~~.	https://www.dropbox.com/s/w0vw897qnkpzrp0/Proposed_Change_1549.pdf?dl=0
Heating, Ventilating and Air-conditioning Systems - Other	5.2.10.1. Energy Recovery Systems	(1) Except as provided in Sentence (3), where an exhaust air system's design supply fan airflow rate meets or exceeds the applicable values listed in Table 5.2.10.1.-A or 5.2.10.1.-B, which depend on the ventilation system's continuous or non-continuous operation and the percentage of outdoor air it uses at design airflow conditions, as well as the climate zone of the *building* location, it shall be equipped with an energy recovery system. (2) Heat recovered in accordance with Sentence (1) shall be used in *building* systems. (3) Specialized exhaust systems, such as those used to exhaust smoke, grease-laden vapours, toxic flammable paint or corrosive fumes or dust, need not comply with Sentence (1).	5.2.10.1. ~~Heat~~Energy-Recovery Systems	(1) Except as provided in Sentence (3), when an exhaust air system's design supply fan airflow rate meets or exceeds the applicable values listed in Table 5.2.10.1.-A or 5.2.10.1.-B, which depend on the ventilation system's continuous or noncontinuous operation and the percentage of outdoor air it uses at design airflow conditions, as well as the climate zone of the building location, it shall be equipped with an energy recovery system. (2) Heat recovered in accordance with Sentence (1) shall be used in *building* systems. (3) Specialized exhaust systems, such as those used to exhaust smoke, grease-laden vapours, or toxic,	(1) Except as provided in Sentence (3), ~~where~~when an exhaust air system's design supply fan airflow rate meets or exceeds the applicable values listed in Table 5.2.10.1.-A or 5.2.10.1.-B, which depend on the ventilation system's continuous or ~~non-continuous~~noncontinuous operation and the percentage of outdoor air it uses at design airflow conditions, as well as the climate zone of the building location, it shall be equipped with an energy recovery system. (2) Heat recovered in accordance with Sentence (1) shall be used in *building* systems. (3) Specialized exhaust systems, such as those used to exhaust smoke, grease-laden vapours, or toxic,	https://www.dropbox.com/s/i3nvl2kp6sm9wlm/Proposed_Change_930.pdf?dl=0

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		… (5) At airflow rates not less than the system design capacity, the energy recovery effectiveness of an energy recovery apparatus referred to in Sentence (1) shall be determined in conformance with the test method described in (a) AHRI 1061 (SI), “Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment,” (b) CAN/CSA-C439, “Rating the Performance of Heat/Energy-Recovery Ventilators,” or (c) ANSI/ASHRAE 84, “Air-to-Air Heat/Energy Exchangers.” (6) Energy recovery systems shall include bypass or control measures so their operation does not cause the HVAC system’s supply air temperature to overshoot the set-point. (Table 5.2.10.1.-A - Supply Fan Airflow Rate Threshold Values at which an Energy Recovery System is Required for the Exhaust Air System: NON-CONTINUOUSLY OPERATING VENTILATION SYSTEMS) (Table 5.2.10.1.-B - Supply Fan Airflow Rate Threshold Values at which an Energy Recovery System is Required for the Exhaust Air System: CONTINUOUSLY OPERATING VENTILATION SYSTEMS)		flammable, paint, or corrosive fumes or dust, need not comply with Sentence (1). … (5) At airflow rates not less than the system design capacity, the energy -recovery effectiveness of an energy-recovery apparatus referred to in Sentence (1) shall be determined in conformance with (a) AHRI 1061 (SI), "Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment", (b) CAN/CSA-439-09, “Rating the Performance of Heat/Energy-Recovery Ventilators,” or (c) ASHRAE 84-2008, “Air-to-Air Heat/Energy Exchangers.” (6) Energy recovery systems shall include bypass or control measures, so their operation does not cause the HVAC system’s supply air temperature to overshoot the set-point. (Table 5.2.10.1.-A - Supply Fan Airflow Rate Threshold Values at which an Energy Recovery System is Required for the Exhaust Air System: NON-CONTINUOUSLY OPERATING VENTILATION SYSTEMS) (Table 5.2.10.1.-B - Supply Fan Airflow Rate Threshold Values at which an Energy Recovery System is Required for the Exhaust Air System: CONTINUOUSLY OPERATING VENTILATION SYSTEMS)	flammable, paint, or corrosive fumes or dust, need not comply with Sentence (1). … (5) At airflow rates not less than the system design capacity, the energy -recovery effectiveness of an energy-recovery apparatus referred to in Sentence (1) shall be determined in conformance with ~~the test method described in~~ (a) AHRI 1061 (SI), ~~“~~"Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment~~,”~~", (b) CAN/CSA-~~C439~~439-09, “Rating the Performance of Heat/Energy-Recovery Ventilators,” or (c) ~~ANSI/~~ASHRAE 84-2008, “Air-to-Air Heat/Energy Exchangers.” (6) Energy recovery systems shall include bypass or control measures, so their operation does not cause the HVAC system’s supply air temperature to overshoot the set-point. See the National PCFs for the changes in the tables	
HVAC Equipment Efficiency Table	5.2.12.1. Unitary and Packaged HVAC Equipment	(Table 5.2.12.1. - Unitary and Packaged HVAC Equipment Performance Requirements)	5.2.12.1. Unitary and Packaged HVAC Equipment	(Table 5.2.12.1.-A - Performance Requirements for Air-Cooled Unitary Air Conditioners and Heat Pumps – Electrically Operated) (Table 5.2.12.1.-B - Performance Requirements for Single-Package Vertical Air Conditioners (SPVAC) and Heat Pumps (SPVHP)) (Table 5.2.12.1.-C - Performance Requirements for Water-Cooled and Evaporatively Cooled Unitary Air Conditioners – Electrically Operated) (Table 5.2.12.1.-D - Performance Requirements for Condensing Units) (Table 5.2.12.1.-E - Performance Requirements for Water-Source Unitary Heat Pumps) (Table 5.2.12.1.-F - Performance Requirements for Direct-Expansion Ground-Source Heat Pumps – Electrically Operated)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/xoxlmap2xhdfs6k/Proposed_Change_1.pdf?dl=0

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				(Table 5.2.12.1.-G - Performance Requirements for Packaged Terminal Air Conditioners (PTAC) and Heat Pumps (PTHP), and Room Air Conditioners and Heat Pumps) (Table 5.2.12.1.-H - Performance Requirements for Computer Room Air Conditioners) (Table 5.2.12.1.-I - Performance Requirements for Variable Refrigerant Flow Systems) (Table 5.2.12.1.-J - Performance Requirements for Direct-Expansion Dedicated Outdoor Air Systems) (Table 5.2.12.1.-K - Performance Requirements for Packaged Water Chillers) (Table 5.2.12.1.-L - Performance Requirements for Heat Pumps and Heat Recovery Chiller Packages) (Table 5.2.12.1.-M - Performance Requirements for Heat Pumps and Heat Recovery Chiller Packages Based on Leaving Water Temperature) (Table 5.2.12.1.-N - Performance Requirements for Boilers) (Table 5.2.12.1.-O - Performance Requirements for Warm-Air Furnaces, Combination Warm-Air Furnace/Airconditioning Units, Duct Furnaces and Unit Heaters) (Table 5.2.12.1.-P - Performance Requirements for Other Fuel-Burning Equipment and Appliances)		
HVAC Equipment Efficiency Table	5.2.12.2. Heat Rejection Equipment	(Table 5.2.12.2. - Heat Rejection Equipment Performance Requirements)	5.2.12.2. Heat Rejection Equipment	(Table 5.2.12.2. - Heat Rejection Equipment Performance Requirements)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/xoxlmap2xhdfs6k/Proposed_Change_1.pdf?dl=0
HVAC Trade-off-Path	Subsection 5.3. Trade-off Path	(Subsection 5.3. Trade-off Path)	Subsection 5.3. Reserved	(Subsection 5.3. Reserved)	The entire Subsection 5.3. is removed and changed to Reserved	https://www.dropbox.com/s/r564gogkvahpype/Proposed_Change_1460.pdf?dl=0
HVAC Trade-off-Path	6.1.1.3. Compliance	(1) Except as provided in Sentence (2), compliance with this Part shall be achieved by following (a) the prescriptive path described in Section 6.2., (b) the trade-off path described in Section 6.3., or (c) the performance path described in Section 6.4.	6.1.1.3. Compliance	(1) Except as provided in Sentence (2), compliance with this Part shall be achieved by following (a) the prescriptive path described in Section 6.2., or (b) the performance path described in Section 6.4.	(1) Except as provided in Sentence (2), compliance with this Part shall be achieved by following (a) the prescriptive path described in Section 6.2., or (b) the ~~trade-off path described in Section 6.3., or (c) the~~ performance path described in Section 6.4.	https://www.dropbox.com/s/r564gogkvahpype/Proposed_Change_1460.pdf?dl=0
Service Water Heating Equipment Efficiency Table	6.2.2.1. Equipment Efficiency	(Table 6.2.2.1. - Service Water Heating Equipment Performance Standards)	6.2.2.1. Equipment Efficiency	(Table 6.2.2.1. - Service Water Heating Equipment Performance Standards)	See the National PCFs for the changes in the tables	https://www.dropbox.com/s/8xd1j670xg6elhq/Proposed_Change_1630.pdf?dl=0

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Piping and Duct Insulation	6.2.3.1. Insulation	N/A	6.2.3.1. Insulation	(8) Manufactured insulation thicknesses shall not be altered.	(8) Manufactured insulation thicknesses shall not be altered.	https://www.dropbox.com/s/cvmrxjya9b32t87/Proposed_Change_1435.pdf?dl=0
HVAC Trade-off-Path	Subsection 6.3. Trade-off Path	(Subsection 6.3. Trade-off Path)	Subsection 6.3. Reserved	(Subsection 6.3. Reserved)	The entire Subsection 6.3. is removed and changed to Reserved	https://www.dropbox.com/s/r564gogkvahpype/Proposed_Change_1460.pdf?dl=0
HVAC Trade-off-Path	8.1.1.1. Scope	(1) Compliance with this Code is permitted to be achieved by applying the provisions of this Part in lieu of (a) the prescriptive requirements in Sections 3.2., 4.2., 5.2., 6.2. and 7.2., or (b) the trade-off provisions in Sections 3.3., 4.3., 5.3. and 6.3.	8.1.1.1. Scope	(1) Compliance with this Code is permitted to be achieved by applying the provisions of this Part in lieu of (a) the prescriptive requirements in Sections 3.2., 4.2., 5.2., 6.2. and 7.2., or (b) the trade-off provisions in Sections 3.3. and 4.3.	(1) Compliance with this Code is permitted to be achieved by applying the provisions of this Part in lieu of (a) the prescriptive requirements in Sections 3.2., 4.2., 5.2., 6.2. and 7.2., or (b) the trade-off provisions in Sections 3.3~~., 4.3., 5.3~~. and ~~6~~4.3.	https://www.dropbox.com/s/r564gogkvahpype/Proposed_Change_1460.pdf?dl=0
Air Leakage	8.4.2.9. Air Leakage	(1) The energy model calculations shall account for air leakage through the *building envelope*.	8.4.2.9. Air Leakage	(1) The energy model calculations shall account for air leakage through the *building envelope*. (2) The air leakage rate of the *building envelope* shall be adjusted using the following equation: $I_{AGW} = C \times I_{75Pa} \times \frac{S}{A_{AGW}}$ where I_{AGW} = adjusted air leakage rate of the *building envelope* at a typical pressure differential of 5 Pa and relative to the area of the aboveground walls, in L/(s·m^2), C = (5 Pa / 75 Pa)^n, where n = flow exponent, which shall be 0.60, if no whole *building* test result is available, or the calculated value, if whole *building* testing is carried out in accordance with Article 3.2.4.2. and a series of tests are conducted at different differential pressures, I_{75Pa} = assumed or measured normalized air leakage rate of the *building envelope* at a pressure differential of 75 Pa, in L/(s·m^2), where the measured air leakage rate at a pressure differential of 75 Pa is calculated as I_{75Pa} = Q/S, where Q = volume of air flowing through the *building envelope* when subjected to a pressure differential of 75 Pa, determined in accordance with ASTM E 779, “Standard Test Method for Determining Air Leakage Rate by Fan Pressurization,” in L/s, and S = total area of the *building envelope*, as	(1) The energy model calculations shall account for air leakage through the *building envelope*. (2) The air leakage rate of the *building envelope* shall be adjusted using the following equation: $I_{AGW} = C \times I_{75Pa} \times \frac{S}{A_{AGW}}$ where I_{AGW} = adjusted air leakage rate of the *building envelope* at a typical pressure differential of 5 Pa and relative to the area of the aboveground walls, in L/(s·m^2), C = (5 Pa / 75 Pa)^n, where n = flow exponent, which shall be 0.60, if no whole *building* test result is available, or the calculated value, if whole *building* testing is carried out in accordance with Article 3.2.4.2. and a series of tests are conducted at different differential pressures, I_{75Pa} = assumed or measured normalized air leakage rate of the *building envelope* at a pressure differential of 75 Pa, in L/(s·m^2), where the measured air leakage rate at a pressure differential of 75 Pa is calculated as I_{75Pa} = Q/S, where Q = volume of air flowing through the *building envelope* when subjected to a pressure differential of 75 Pa, determined in accordance with ASTM E 779, “Standard Test Method for Determining Air Leakage Rate by Fan Pressurization,” in L/s, and S = total area of the *building envelope*, as	https://www.dropbox.com/s/ui837qrynv3dt1u/Proposed_Change_1414.pdf?dl=0

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				determined per Sentence 3.2.4.2.(1), in m^2, and A_{AGW} = total area of above-ground walls, in m^2.	determined per Sentence 3.2.4.2.(1), in m^2, and A_{AGW} = total area of above-ground walls, in m^2.	
Air Leakage	8.4.3.3. Building Envelope Components	(3) Air leakage shall be set to a constant value of 0.25 L/(s.m^2) of total gross above-ground wall and roof areas.	8.4.3.3. Building Envelope Components	(3) The normalized air leakage rate shall be assumed to be (a) 1.50 L/(s·m^2) at a pressure differential of 75 Pa and adjusted to an air leakage through the above-ground wall area at a typical operating pressure differential, as described in Sentence 8.4.2.9.(2), or (b) If an air leakage rate is determined in accordance with Article 3.2.4.2., the normalized leakage rate at a pressure differential of 75 Pa and the flow exponent from that test may be used in Sentence 8.4.2.9.(2) to obtain the air leakage rate at a typical operating pressure differential, and applied to above-ground wall areas in the proposed *building* energy model.	(3) ~~Air~~The normalized air leakage rate shall be ~~set~~assumed to be (a ~~constant value of 0.25~~) 1.50 L/(s·m^2) ~~of total gross~~at a pressure differential of 75 Pa and adjusted to an air leakage through the above-ground wall ~~and roof~~area at a typical operating pressure differential, as described in Sentence 8.4.2.9.(2), or (b) If an air leakage rate is determined in accordance with Article 3.2.4.2., the normalized leakage rate at a pressure differential of 75 Pa and the flow exponent from that test may be used in Sentence 8.4.2.9.(2) to obtain the air leakage rate at a typical operating pressure differential, and applied to above-ground wall areas in the proposed *building* energy model.	https://www.dropbox.com/s/ui837qrynv3dt1u/Proposed_Change_1414.pdf?dl=0
Air Leakage	8.4.4.3. Building Envelope Components	(6) Air leakage rates shall be modeled as being identical to those determined for the proposed *building* in Sentence 8.4.3.3.(3).	8.4.4.3. Building Envelope Components	(6) The air leakage rate shall be equal to the default value described in Clause 8.4.3.3.(3)(a).	(6) ~~Air~~The air leakage ~~rates~~rate shall be ~~modeled as being identical~~equal to ~~those determined for~~ the ~~proposed~~ ~~*building*~~default value described in ~~Sentence~~Clause 8.4.3.3.(3)(a).	https://www.dropbox.com/s/ui837qrynv3dt1u/Proposed_Change_1414.pdf?dl=0
Heating, Ventilating and Air-conditioning Systems - Other	8.4.4.18. Supply Air Systems	(4) Except as provided in Sentence (6), HVAC system - 6 of Table 8.4.4.7.-B shall be modeled with (a) a supply air temperature that is constant at 13°C, (b) a supply fan that has a static pressure of 1 000 Pa and a combined fan-motor efficiency of 55%, (c) a return fan that has a static pressure of 250 Pa and a combined fan-motor efficiency of 30%, and (d) for each *thermal block*, a minimum supply airflow rate of (i) 2 L/s per m^2 when the schedule indicates the *thermal block* is occupied, or (ii) 0 L/s per m^2 otherwise.	8.4.4.18. Supply Air Systems	(4) Except as provided in Sentence (6), HVAC system - 6 of Table 8.4.4.7.-B shall be modeled with (a) a default supply air temperature of 13°C, with the supply air temperature reset in accordance with Article 5.2.8.9., (b) a supply fan that has a static pressure of 1 000 Pa and a combined fan-motor efficiency of 55%, and (c) a return fan that has a static pressure of 250 Pa and a combined fan-motor efficiency of 30%.	(4) Except as provided in Sentence (6), HVAC system - 6 of Table 8.4.4.7.-B shall be modeled with (a) a default supply air temperature ~~that is constant at~~of 13°C, with the supply air temperature reset in accordance with Article 5.2.8.9., (b) a supply fan that has a static pressure of 1 000 Pa and a combined fan-motor efficiency of 55%, and (c) a return fan that has a static pressure of 250 Pa and a combined fan-motor efficiency of 30~~%, and~~ ~~(d) for each *thermal block*, a minimum supply airflow rate of~~ ~~(i) 2 L/s per m^2 when the schedule indicates the *thermal block* is occupied, or~~ ~~(ii) 0 L/s per m^2 otherwise.~~%.	https://www.dropbox.com/s/ugr2bs33uo0h0lq/Proposed_Change_1549.pdf?dl=0

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Performance Compliance - Other	8.4.4.19. Heat-Recovery System	(1) Where Subsection 5.2.10. applies to a proposed *building*'s HVAC system, the reference *building*'s HVAC systems for the corresponding *thermal blocks* shall use a heat-recovery system that complies with Subsection 5.2.10. and Sentences (2) and (3).	8.4.4.19. ~~Heat~~ Energy - Recovery System	(1) Where Subsection 5.2.10. applies to a reference *building*'s HVAC system that system shall be modeled with energy recovery capabilities that system shall be modeled with energy recovery capabilities that comply Subsection 5.2.10. and Sentences (2) and (3).	(1) Where Subsection 5.2.10. applies to a ~~proposed *building*'s HVAC system, the~~ reference *building*'s ~~HVAC systems for the corresponding *thermal blocks*~~ HVAC system that system shall ~~use a heat~~ be modeled with energy recovery ~~system that complies with~~ capabilities that system shall be modeled with energy recovery capabilities that comply Subsection 5.2.10. and Sentences (2) and (3).	https://www.dropbox.com/s/55z1myh263zkkfn/Proposed_Change_970.pdf?dl=0
Performance Compliance - Other	N/A	N/A	9.1.1.1. - Scope	(1) Compliance with this Code is permitted to be achieved by applying the provisions of this Part in lieu of (a) the prescriptive requirements in Sections 3.2., 4.2., 5.2., 6.2. and 7.2., or (b) the trade-off provisions in Sections 3.3., 4.3., 5.3. and 6.3.	(1) Compliance with this Code is permitted to be achieved by applying the provisions of this Part in lieu of (a) the prescriptive requirements in Sections 3.2., 4.2., 5.2., 6.2. and 7.2., or (b) the trade-off provisions in Sections 3.3., 4.3., 5.3. and 6.3. (See the proposed Part 9 below)	https://www.dropbox.com/s/d1mz9qblsg41uuy/Proposed_Change_1527.pdf?dl=0
Performance Compliance - Other	N/A	N/A	9.1.1.2. Application	(1) Except as provided in Sentence (2), this Part applies only to *buildings* (a) whose *occupancy* is known, and (b) for which sufficient information is known about their components, materials and assemblies that are covered by the scope of this Code. (2) Where insufficient information is known about the *building* components, materials and assemblies, the applicable prescriptive requirements in Sections 3.2., 4.2., 5.2., 6.2. and 7.2. shall apply. (3) If, during construction, the design is found to be altered from the one used in the original performance assessment, the *building* shall be reassessed for compliance with this Part.(4) Except as provided in Sentence (5), the procedures stated in this Part shall be applied to a single *building* at a time. (5) Where the structure is divided by *firewalls* into multiple *buildings*, the whole structure is permitted to be treated as one *building*.	(1) Except as provided in Sentence (2), this Part applies only to *buildings* (a) whose *occupancy* is known, and (b) for which sufficient information is known about their components, materials and assemblies that are covered by the scope of this Code. (2) Where insufficient information is known about the *building* components, materials and assemblies, the applicable prescriptive requirements in Sections 3.2., 4.2., 5.2., 6.2. and 7.2. shall apply. (3) If, during construction, the design is found to be altered from the one used in the original performance assessment, the *building* shall be reassessed for compliance with this Part.(4) Except as provided in Sentence (5), the procedures stated in this Part shall be applied to a single *building* at a time. (5) Where the structure is divided by *firewalls* into multiple *buildings*, the whole structure is permitted to be treated as one *building*.	https://www.dropbox.com/s/d1mz9qblsg41uuy/Proposed_Change_1527.pdf?dl=0
Performance Compliance - Other	N/A	N/A	9.1.2.1. Compliance	(1) Compliance with this Part shall be achieved by designing and constructing *buildings* in accordance with one of Energy Performance Tiers 1 to 4 specified in Table 9.1.2.1., each of which corresponds to. (a) the *annual energy consumption* of the proposed *building*, expressed as a percentage *building energy target*, or	(1) Compliance with this Part shall be achieved by designing and constructing *buildings* in accordance with ~~one of~~ Energy Performance Tier~~s~~ 1 ~~to 4~~ specified in Table 9.1.2.1., ~~each of~~ which corresponds to. (a) the *annual energy consumption* of the proposed *building*, expressed as a percentage *building energy target*, or	https://www.dropbox.com/s/d1mz9qblsg41uuy/Proposed_Change_1527.pdf?dl=0

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<td>(b) the percentage improvement of the annual energy consumption of the proposed building relative to the building energy target of the reference building, expressed as percent improvement.

(2) Compliance with one of Energy Tiers 1 to 4 specified in Table 9.1.2.1. shall be determined by modeling the proposed and reference buildings in accordance with Part 8 to establish the annual energy consumption of the proposed buildings and the building energy target of the reference buildings then

(a) dividing the annual energy consumption of the proposed building by the building energy target of the reference building to derive the percent building energy target, or

(b) subtracting the annual energy consumption of the proposed building from the building energy target of the reference building and dividing the result by the building energy target of the reference building to derive the percent improvement.

(Table 9.1.2.1. - Energy Performance Tiers)</td>
<td>(b) the percentage improvement of the annual energy consumption of the proposed building relative to the building energy target of the reference building, expressed as percent improvement.

(2) Compliance with ~~one of~~ Energy Tier~~s~~ 1 ~~to 4~~ specified in Table 9.1.2.1. shall be determined by modeling the proposed and reference buildings in accordance with Part 8 to establish the annual energy consumption of the proposed buildings and the building energy target of the reference buildings then

(a) dividing the annual energy consumption of the proposed building by the building energy target of the reference building to derive the percent building energy target, or

(b) subtracting the annual energy consumption of the proposed building from the building energy target of the reference building and dividing the result by the building energy target of the reference building to derive the percent improvement.

(See the revised Table 9.1.2.1. - Energy Performance Tiers below)</td>
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<td></td><td></td><td></td><td></td>
<td>Table 9.1.2.1. Energy Performance Tiers
Forming Part of Sentences 9.1.2.1.(1) and (2)

<table>
<tr><th>Energy Performance Tier</th><th>Percent building energy target (1)</th><th>Percent improvement (1)</th></tr>
<tr><td>1</td><td>≤ 100 %</td><td>≥ 0 %</td></tr>
<tr><td>~~2~~</td><td>~~≤ 75 %~~</td><td>~~≥ 25 %~~</td></tr>
<tr><td>~~3~~</td><td>~~≤ 50 %~~</td><td>~~≥ 50 %~~</td></tr>
<tr><td>~~4~~</td><td>~~≤ 40 %~~</td><td>~~≥ 60 %~~</td></tr>
</table>

Note to Table [9.1.2.1.]:
(1) See Sentence (2). Relative to 2020 NECB baseline requirements.</td>
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SECTION 9.36. ENERGY EFFICIENCY

- It has been proposed that SB-12 is being replaced by Section 9.36. Energy Efficiency of the National Building Code (NBC).
- Please also see Ontario's Building Code's Part 12 for consequential changes
- Below is the entire Section 9.36 of the National Building Code including intended changes introduced through the 2020 National Building Code.
- Where the 2015 NBC Section 9.36 is changed, related National Proposed Change Forms (PCFs) are provided via hyperlinks. Any further proposed changes to the PCFs (Ontario specific) are shown in blue. These proposed modifications to the PCFs are below:
  - Tier 3 of the NBC Tier System is proposed to be selected, and all other tiers excluded,
  - For prescriptive approaches, 20 points is assigned for the proposed Tier 3,
  - In the cases of performance method, air tightness values for reference and proposed houses are set as equal, if the air tightness test is not carried out.
- In addition, any changes introduced to 9.36 through 2020 NECB edition is identified by a yellow shaded (background) row in the table and the related National Proposed Change Forms (PCF) are attached.
- When reviewing PCFs, please scroll down and review the latest version of the change which is written under "Revised Proposed Change Following Public Review".
- The current version of the Ontario Building Code already contains Sections 9.36 to 9.40. The adoption of the National Building Code's Section 9.36 will require renumbering of some Sections in Part 9.
- The current Supplementary Standard SB-12 is available for comparison by clicking here.

Proposed Ontario Code Sentence Number	Proposed Ontario Code Article/ Title	Proposed Ontario Code Provision	Link to the National PCF(s)
9.36.1. General			
9.36.1.1.(1)	9.36.1.1. Scope	(1) This Section is concerned with the energy used by *buildings* as a result of (a) the design and construction of the *building* envelope, and (b) the design and construction or specification of systems and equipment for (i) heating, ventilating or air-conditioning, and (ii) service water heating.	N/A
9.36.1.2.(1)	9.36.1.2. Definitions	(1) For the purpose of this Section, the term "common space" shall mean all spaces required to be *conditioned spaces* in accordance with the requirements of the Code that are not within a *suite* but shall not include crawl spaces and *vertical service spaces*.	N/A
9.36.1.2.(2)	9.36.1.2. Definitions	(2) For the purpose of this Section, the term "overall thermal transmittance," or U-value, shall mean the rate, in W/(m^2×K), at which heat is transferred through a *building* assembly that is subject to temperature differences.	N/A

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9.36.1.2.(3)	9.36.1.2. Definitions	(3) For the purpose of this Section, the term "effective thermal resistance," or RSI value, shall mean the inverse of the overall thermal transmittance of an assembly, in (m^2×K)/W.	N/A
9.36.1.2.(4)	9.36.1.2. Definitions	(4) For the purpose of this Section, the term "fenestration" shall mean all *building* envelope assemblies, including their frames, that transfer visible light, such as windows, clerestories, skylights, translucent wall panels, glass block assemblies, transoms, sidelights, sliding, overhead or swinging glass doors, and glazed inserts in doors, etc.	N/A
9.36.1.2.(5)	9.36.1.2. Definitions	(5) For the purpose of this Section, the term "annual energy consumption" shall mean the annual sum of service water heating and space-conditioning energy consumption of the proposed house design, as calculated in accordance with Article 9.36.5.4. or 9.36.7.3. as applicable.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.1.2.(6)	9.36.1.2. Definitions	(6) For the purpose of this Section, the term "house energy target" shall mean the annual energy consumption of the reference house, as calculated in accordance with Article 9.36.5.4. or 9.36.7.3. as applicable.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.1.2.(7)	9.36.1.2. Definitions	(7) For the purpose of this Section, the term "principal ventilation rate" shall mean the normal operating exhaust capacity of the principal ventilation fan as required by Article 9.32.3.3.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.1.2.(8)	9.36.1.2. Definitions	(8) For the purpose of this Section, the term "volume of conditioned space" shall refer to the volume measured at the interior surfaces of exterior walls, ceilings and floors of a house or building.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.1.3.(1)	9.36.1.3. Compliance and Application	(1) Except as provided in Sentences (2) to (5), *buildings* shall comply with (a) the prescriptive or trade-off requirements in Subsections 9.36.2. to 9.36.4. or the performance requirements in Subsection 9.36.5., and (b) the tiered prescriptive requirements in Subsection 9.36.6. or the tiered performance requirements in Subsection 9.36.7. **(Revised February 7th, 2022)**	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0 and https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.1.3.(2)	9.36.1.3. Compliance and Application	(2) Subsections 9.36.2. to 9.36.4. apply to (a) *buildings* of *residential occupancy* to which Part 9 applies, (b) *buildings* containing *business and personal services*, *mercantile* or *low-hazard industrial occupancies* to which Part 9 applies whose combined total *floor area* does not exceed 300 m^2, excluding parking garages that serve *residential occupancies*, and (c) *buildings* containing a mix of the *residential* and non-*residential occupancies* described in Clauses (a) and (b).	N/A

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9.36.1.3.(3)	9.36.1.3. Compliance and Application	(3) Subsection 9.36.5. and 9.36.7. ~~applies~~ apply only to (a) houses with or without a *secondary suite*, and (b) *buildings* containing only *dwelling units* and common spaces whose total *floor area* does not exceed 20% of the total *floor area* of the *building*.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.1.3.(4)	9.36.1.3. Compliance and Application	(4) Subsection 9.36.6. applies only to buildings of residential occupancy to which Part 9 applies.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.1.3.(45)	9.36.1.3. Compliance and Application	(5) *Buildings* containing non-*residential occupancies* whose combined total *floor area* exceeds 300 m2 or *medium-hazard industrial occupancies* shall comply with the NECB.	N/A
9.36.1.3.(56)	9.36.1.3. Compliance and Application	(6) *Buildings* or portions of *buildings* that are not required to be *conditioned spaces* are exempted from the requirements of this Section.	N/A
9.36.2. Building Envelope			
9.36.2.1.(1)	9.36.2.1. Scope and Application	(1) Except as provided in Sentence (2), this Subsection is concerned with the loss of energy due to heat transfer and air leakage through materials, components and assemblies, including their interfaces, forming part of the *building* envelope where it separates *conditioned space* from unconditioned space, the exterior air or the ground.	N/A
9.36.2.1.(2)	9.36.2.1. Scope and Application	(2) The requirements of this Subsection also apply to components of a *building* envelope assembly that separate a *conditioned space* from an adjoining *storage garage*, even if the *storage garage* is intended to be heated.	N/A
9.36.2.1.(3)	9.36.2.1. Scope and Application	(3) Except for skylight shafts addressed in Sentence 9.36.2.6.(4), for the purpose of this Subsection, wall assemblies inclined less than 60° from the horizontal shall be considered as roof assemblies, and roof assemblies inclined 60° or more from the horizontal shall be considered as wall assemblies.	N/A
9.36.2.1.(4)	9.36.2.1. Scope and Application	(4) The properties, performance and installation of windows, doors and skylights shall also conform to Section 9.7.	N/A

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9.36.2.1.(5)	9.36.2.1. Scope and Application	(5) The properties, location and installation of thermal insulation, *air barrier systems*, *vapour barriers*, and materials with low air or vapour permeance shall also conform to Section 9.25.	N/A
9.36.2.2.(1)	9.36.2.2. Determination of Thermal Characteristics of Materials, Components and Assemblies	(1) The thermal characteristics of materials shall be determined by calculation or by testing in accordance with the applicable product standards listed in the Code or, in the absence of such standards or where such standards do not address the determination of thermal resistance, in accordance with (a) ASTM C177, "Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus," or (b) ASTM C518, "Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus."	N/A
9.36.2.2.(2)	9.36.2.2. Determination of Thermal Characteristics of Materials, Components and Assemblies	(2) Calculations and tests performed in accordance with Sentence (1) shall be carried out at an average temperature of 24±2°C and under a temperature differential of 22±2°C.	N/A
9.36.2.2.(3)	9.36.2.2. Determination of Thermal Characteristics of Materials, Components and Assemblies	(3) The thermal characteristics of windows, doors and skylights shall be determined by calculation or testing in accordance with (a) CSA A440.2/A440.3, "Fenestration energy performance/User guide to CSA A440.2:19, Fenestration energy performance," for the reference sizes listed therein, or (b) NFRC 100, "Procedure for Determining Fenestration Product U-factors," and NFRC 200, "Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence," for the reference sizes listed therein.	N/A
9.36.2.2.(4)	9.36.2.2. Determination of Thermal Characteristics of Materials, Components and Assemblies	(4) The effective thermal resistance of opaque *building* assemblies shall be determined from (a) calculations conforming to Article 9.36.2.4., or (b) laboratory tests performed in accordance with ASTM C1363, "Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus," using an indoor air temperature of 21±1°C and an outdoor air temperature of –18±1°C.	N/A
9.36.2.2.(5)	9.36.2.2. Determination of Thermal Characteristics of Materials, Components and Assemblies	(5) The thermal characteristics of log walls shall be determined by calculation in accordance with Section 305 of ICC 400, "Standard on the Design and Construction of Log Structures."	N/A
9.36.2.3.(1)	9.36.2.3. Calculation of Ceiling, Wall, Fenestration and Door Areas	(1) The gross ceiling or roof area shall be calculated as the sum of the interior surface areas of insulated ceiling and/or roof assemblies and of skylight openings.	N/A

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9.36.2.3.(2)	9.36.2.3. Calculation of Ceiling, Wall, Fenestration and Door Areas	(2) Except as permitted by Sentence (3), the gross wall area shall be calculated as the sum of the interior surface areas of all exterior *building* envelope assemblies above the finished ground level that are inclined 60° or more from the horizontal, including (a) *rim joists*, (b) fenestration and opaque portions of doors, (c) insulated walls extending from finished ground level to the interior side of the insulated ceiling and/or roof assembly, and (d) the exposed areas of below-ground *building* envelope assemblies, where fenestration or doors are located below the plane of the adjacent finished ground.	N/A
9.36.2.3.(3)	9.36.2.3. Calculation of Ceiling, Wall, Fenestration and Door Areas	(3) Where a *building* of *residential occupancy* contains more than 2 *dwelling units*, the gross wall area enclosing *conditioned space* shall be permitted to include the interior surface areas of walls that enclose a *suite*, measured from the top surface of the lowest floor to the underside of the highest ceiling in the *suite*.	N/A
9.36.2.3.(4)	9.36.2.3. Calculation of Ceiling, Wall, Fenestration and Door Areas	(4) Fenestration and door areas shall be the actual sizes of windows, doors and skylights including all related frame and sash members.	N/A
9.36.2.3.(5)	9.36.2.3. Calculation of Ceiling, Wall, Fenestration and Door Areas	(5) The fenestration area made of flat panes that are not all in the same plane or curved panes shall be measured along the surface of the glass.	N/A
9.36.2.4.(1)	9.36.2.4. Calculation of Effective Thermal Resistance of Assemblies	(1) In calculating the effective thermal resistance of assemblies for the purpose of comparison with the requirements of Articles 9.36.2.6. and 9.36.2.8., the thermal bridging effect of closely spaced, repetitive structural members, such as studs and joists, and of ancillary members, such as lintels, sills and plates, shall be accounted for.	N/A
9.36.2.4.(2)	9.36.2.4. Calculation of Effective Thermal Resistance of Assemblies	(2) Minor penetrations through assemblies, such as pipes, ducts, equipment with through-the-wall venting, packaged terminal air conditioners or heat pumps, shelf angles, anchors and ties and associated fasteners, and minor structural members that must partially or completely penetrate the *building* envelope to perform their intended function need not be taken into account in the calculation of the effective thermal resistance of that assembly.	N/A
9.36.2.4.(3)	9.36.2.4. Calculation of Effective Thermal Resistance of Assemblies	(3) Major structural penetrations, such as balcony and canopy slabs, beams, columns and ornamentation or appendages that must completely penetrate the *building* envelope to perform their intended function, need not be taken into account in the calculation of the effective thermal resistance of the penetrated assembly, provided (a) the insulation is installed tight against the outline of the penetration, and (b) the sum of the areas of all such major structural penetrations is limited to a maximum of 2% of the gross wall area calculated as described in Sentence 9.36.2.3.(2).	N/A

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9.36.2.4.(4)	9.36.2.4. Calculation of Effective Thermal Resistance of Assemblies	(4) Where a component of the *building* envelope is protected by an enclosed unconditioned space, such as a sun porch, enclosed veranda, vestibule or attached garage, the required effective thermal resistance of the *building* envelope component between the *building* and the unconditioned enclosure is permitted to be reduced by 0.16 (m^2×K)/W.	N/A
9.36.2.5.(1)	9.36.2.5. Continuity of Insulation	(1) Except as provided in Sentences (2) to (10) and in Sentence 9.36.2.4.(3) regarding balcony and canopy slabs, and except for clearances around components required for fire safety reasons, interior *building* components that meet *building* envelope components and major structural members that partly penetrate the *building* envelope shall not break the continuity of the insulation and shall not decrease the effective thermal resistance at their projected area to less than that required in Articles 9.36.2.6. and 9.36.2.8.	N/A
9.36.2.5.(2)	9.36.2.5. Continuity of Insulation	(2) Where an interior wall, *foundation* wall, *firewall, party wall* or structural element penetrates an exterior wall or insulated roof or ceiling and breaks the continuity of the plane of insulation, the penetrating element shall be insulated (a) on both of its sides, inward or outward from the *building* envelope, for a distance equal to 4 times its uninsulated thickness to an effective thermal resistance not less than that required for exterior walls as stated in Table 9.36.2.6.-A or 9.36.2.6.-B, (b) within the plane of insulation of the penetrated element to an effective thermal resistance not less than 60% of that required for the penetrated element, or (c) within itself to an effective thermal resistance not less than that required for the penetrated element.	N/A
9.36.2.5.(3)	9.36.2.5. Continuity of Insulation	(3) Where a masonry fireplace or flue penetrates an exterior wall and breaks the continuity of the plane of insulation, it shall be insulated within the plane of insulation of the wall or within itself to an effective thermal resistance not less than 55% of that required for the exterior wall as stated in Table 9.36.2.6.-A or 9.36.2.6.-B.	N/A
9.36.2.5.(4)	9.36.2.5. Continuity of Insulation	(4) Where an ornamentation or appendage penetrates an exterior wall and breaks the continuity of the plane of insulation, the penetrating element shall be insulated (a) on both of its sides, inward or outward from the *building* envelope, for a distance equal to 4 times the insulated thickness of the exterior wall to an effective thermal resistance not less than that required for the wall as stated in Table 9.36.2.6.-A or 9.36.2.6.-B, (b) within the plane of insulation of the wall to an effective thermal resistance not less than 55% of that required for the exterior wall, or (c) within the penetrating element to an effective thermal resistance not less than that required for the exterior wall.	N/A
9.36.2.5.(5)	9.36.2.5. Continuity of Insulation	(5) Except as provided in Sentences (9) and (10), where two planes of insulation are separated by a *building* envelope assembly and cannot be physically joined, one of the planes of insulation shall be extended for a distance equal to at least 4 times the thickness of the assembly separating the two planes.	N/A
9.36.2.5.(6)	9.36.2.5. Continuity of Insulation	(6) Except as provided in Sentence (7) and Article 9.36.2.11., where mechanical, plumbing or electrical system components, such as pipes, ducts, conduits, cabinets, chases, panels or recessed heaters, are placed within and parallel to a wall assembly required to be insulated, the effective thermal resistance of that wall at the projected area of the system component shall be not less than that required by Tables 9.36.2.6.-A, 9.36.2.6.-B, 9.36.2.8.-A and 9.36.2.8.-B	https://www.dropbox.com/s/gx746tdtw923991/Proposed_Change_1292.pdf?dl=0

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9.36.2.5.(7)	9.36.2.5. Continuity of Insulation	(7) The effective thermal resistance of a wall at the projected areas of plumbing and electrical system components, such as plumbing vent pipes, conduits, and electrical outlet and switch boxes, need not comply with Sentence (6), provided (a) the effective thermal resistance at the projected area of the system component is not less than 60% of that required in Articles 9.36.2.6.and 9.36.2.8., and (b) the insulation is continuous on the cold side behind the system component.	https://www.dropbox.com/s/gx746tdtw923991/Proposed_Change_1292.pdf?dl=0
9.36.2.5.(8)	9.36.2.5. Continuity of Insulation	(8) Except as permitted by Article 9.36.2.11., where mechanical ducts, plumbing pipes, conduits for electrical services or communication cables are placed within the insulated portion of a floor or ceiling assembly, the effective thermal resistance of the assembly at the projected area of the ducts, pipes, conduits or cables shall be not less than 2.78 (m^2×K)/W.	N/A
9.36.2.5.(9)	9.36.2.5. Continuity of Insulation	(9) Joints and junctions between walls and other *building* envelope components shall be insulated in a manner that provides an effective thermal resistance that is no less than the lower of the minimum values required for the respective adjoining components.	N/A
9.36.2.5.(10)	9.36.2.5. Continuity of Insulation	(10) Sentence (1) does not apply where the continuity of the insulation is interrupted (a) between the insulation in the *foundation* wall and that of the floor slab, (b) by an integral perimeter footing of a slab-on-grade (see Sentences 9.25.2.3.(5) and 9.36.2.8.(8)), or (c) at the horizontal portion of a *foundation* wall that supports masonry veneer and is insulated on the exterior.	N/A
9.36.2.6.(1)	9.36.2.6. Thermal Characteristics of Above-ground Opaque Building Assemblies	(1) Except as provided in Sentences (2) and 9.36.2.8.(3) and Articles 9.36.2.5. and 9.36.2.11., the effective thermal resistance of above-ground opaque *building* assemblies or portions thereof shall be not less than that shown for the applicable heating-degree day category in (a) Table 9.36.2.6.-A, where the ventilation system does not include heat-recovery equipment, or (b) Table 9.36.2.6.-B, where the ventilation system includes heat-recovery equipment conforming to Article 9.36.3.9.	N/A
9.36.2.6.(2)	9.36.2.6. Thermal Characteristics of Above-ground Opaque Building Assemblies	(2) The effective thermal resistance of *rim joists* shall be not less than that required for above-ground walls in Table 9.36.2.6.-A or 9.36.2.6.-B, as applicable.	N/A
9.36.2.6.(3)	9.36.2.6. Thermal Characteristics of Above-ground Opaque Building Assemblies	(3) A reduction in the effective thermal resistance of ceiling assemblies in attics under sloped roofs is permitted for a length no greater than 1 200 mm but only to the extent imposed by the roof slope and minimum venting clearance, provided the nominal thermal resistance of the insulation directly above the exterior wall is not less than 3.52 (m^2×K)/W.	N/A

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9.36.2.6.(4)	9.36.2.6. Thermal Characteristics of Above-ground Opaque Building Assemblies	(4) Except for tubular daylighting devices, the minimum effective thermal resistance values for walls stated in Tables 9.36.2.6.-A and 9.36.2.6.-B shall also apply to shafts for skylights.	N/A
9.36.2.7.(1)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(1) Except as provided in Sentences (2) to (8) and Article 9.36.2.11., fenestration and doors shall have an overall thermal transmittance (U-value) not greater than, or an Energy Rating not less than, the values listed in Table 9.36.2.7.-A for the applicable heating-degree day category.	N/A
9.36.2.7.(2)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(2) Skylights shall have an overall thermal transmittance not greater than the values listed in Table 9.36.2.7.-B for the applicable heating-degree day category.	N/A
9.36.2.7.(3)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(3) Except for site-assembled or site-glazed factory-made fenestration products, curtain wall construction, and site-built windows and glazed doors that are tested in accordance with Sentence 9.36.2.2.(3), site-built windows and glazed doors need not comply with Sentence (1), provided they are constructed in accordance with one of the options presented in Table 9.36.2.7.-C for the applicable climate zone.	N/A
9.36.2.7.(4)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(4) Glass block assemblies separating *conditioned space* from unconditioned space or the exterior shall have (a) an overall thermal transmittance of not more than 2.9 W/(m^2×K), and (b) a total aggregate area of not more than 1.85 m2.	N/A
9.36.2.7.(5)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(5) One door separating a *conditioned space* from an unconditioned space or the exterior is permitted to have an overall thermal transmittance up to 2.6 W/(m^2×K).	N/A
9.36.2.7.(6)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(6) Storm windows and doors need not comply with Sentence (1).	N/A
9.36.2.7.(7)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(7) Vehicular access doors separating a *conditioned space* from an unconditioned space or the exterior shall have a nominal thermal resistance of not less than 1.1 (m^2×K)/W.	N/A

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9.36.2.7.(8)	9.36.2.7. Thermal Characteristics of Fenestration, Doors and Skylights	(8) Access hatches separating a *conditioned space* from an unconditioned space shall be insulated to a nominal thermal resistance of not less than 2.6 (m^2×K)/W.	N/A
9.36.2.8.(1)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(1) Except as provided in Sentence (2) and Article 9.36.2.5., the effective thermal resistance of *building* assemblies that are below-*grade* or in contact with the ground shall be not less than that shown for the applicable heating-degree day category in (a) Table 9.36.2.8.-A, where the ventilation system does not include heat-recovery equipment, or (b) Table 9.36.2.8.-B, where the ventilation system includes heat-recovery equipment conforming to Article 9.36.3.9.	N/A
9.36.2.8.(2)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(2) Where an entire floor assembly falls into two of the categories listed in Tables 9.36.2.8.-A and 9.36.2.8.-B, the more stringent value shall apply.	N/A
9.36.2.8.(3)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(3) Where the top of a section of *foundation* wall is on average less than 600 mm above the adjoining ground level, the above-ground portion of that section of wall shall be insulated to the effective thermal resistance required in Table 9.36.2.8.-A or 9.36.2.8.-B.	N/A
9.36.2.8.(4)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(4) Unheated floors-on-ground that are above the frost line and have no embedded heating pipes, cables or ducts shall be insulated to the effective thermal resistance required in Table 9.36.2.8.-A or 9.36.2.8.-B (a) on the exterior of the *foundation* wall down to the footing, or (b) on the interior of the *foundation* wall and, as applicable, (i) beneath the slab for a distance not less than 1.2 m horizontally or vertically down from its perimeter with a thermal break along the edge of the slab that meets at least 50% of the required thermal resistance, (ii) on top of the slab for a distance not less than 1.2 m horizontally from its perimeter, or (iii) within the wooden sleepers below the floor for a distance not less than 1.2 m horizontally from its perimeter.	N/A
9.36.2.8.(5)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(5) Except as provided in Sentence (6), floors-on-ground with embedded heating ducts, cables or pipes shall be insulated to the effective thermal resistance required in Table 9.36.2.8.-A or 9.36.2.8.-B under their full bottom surface including the edges.	N/A
9.36.2.8.(6)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(6) Where only a portion of a floor-on-ground has embedded heating ducts, cables or pipes, that heated portion shall be insulated to the effective thermal resistance required in Table 9.36.2.8.-A or 9.36.2.8.-B under its full bottom surface to 1.2 m beyond its perimeter including exterior edges if applicable.	N/A

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9.36.2.8.(7)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(7) In addition to the requirements stated in Sentences (5) and (6), heated floors-on-ground shall be insulated to the effective thermal resistance required in Table 9.36.2.8.-A or 9.36.2.8.-B vertically (a) around their perimeter, or (b) on the outside of the *foundation* wall, extending down to the level of the bottom of the floor.	N/A
9.36.2.8.(8)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(8) Floors on permafrost shall be insulated to the effective thermal resistance required in Table 9.36.2.8.-A or 9.36.2.8.-B under the entire slab and around all edges, and under the integral perimeter footing.	N/A
9.36.2.8.(9)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(9) Slabs-on-grade with an integral perimeter footing shall (a) be insulated to the effective thermal resistance required in Table 9.36.2.8.-A or 9.36.2.8.-B under the entire slab and around all edges, but not under the integral perimeter footing, and (b) be constructed with skirt insulation having the same effective thermal resistance as the insulation installed under the slab.	N/A
9.36.2.8.(10)	9.36.2.8. Thermal Characteristics of Building Assemblies Below-Grade or in Contact with the Ground	(10) Junctions between below-*grade* assemblies shall be protected from the ingress of *soil* gas in conformance with Subsection 9.25.3.	N/A
9.36.2.9.(1)	9.36.2.9. Airtightness	(1) The leakage of air into and out of *conditioned spaces* shall be controlled by constructing (a) a continuous *air barrier system* in accordance with Sentences (2) to (6), Subsection 9.25.3. and Article 9.36.2.10., (b) a continuous *air barrier system* in accordance with Sentences (2) to (6) and Subsection 9.25.3. and a *building* assembly having an air leakage rate not greater than 0.20 L/(s×m^2) (Type A4) when tested in accordance with CAN/ULC-S742, “Standard for Air Barrier Assemblies – Specification,” at a pressure differential of 75 Pa, or (c) a continuous *air barrier system* in accordance with Sentences (2) to (6) and Subsection 9.25.3. and a *building* assembly having an air leakage rate not greater than 0.20 L/(s×m2) when tested in accordance with ASTM E2357, “Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies,” where (i) the *building* will not be subjected to sustained wind loads calculated based on a 1-in-50 hourly wind pressure that exceed 0.65 kPa, and (ii) the air barrier assembly is installed on the warm side of the thermal insulation of the opaque *building* assembly.	N/A
9.36.2.9.(2)	9.36.2.9. Airtightness	(2) An *air barrier system* installed to meet the requirements of Sentence (1) shall be continuous (a) across construction, control and expansion joints, (b) across junctions between different *building* materials and assemblies, and (c) around penetrations through all *building* assemblies.	N/A

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9.36.2.9.(3)	9.36.2.9. Airtightness	(3) Windows, doors and skylights and their components shall comply with the minimum air leakage requirements stated in (a) AAMA/WDMA/CSA 101/I.S.2/A440, "North American Fenestration Standard/Specification for windows, doors, and skylights" (Harmonized Standard), and (b) CSA A440S1, "Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440-17, North American Fenestration Standard/Specification for windows, doors, and skylights."	N/A
9.36.2.9.(4)	9.36.2.9. Airtightness	(4) Vehicular access doors that separate heated garages from unconditioned spaces or the exterior shall be weather stripped around their perimeter to prevent air leakage.	N/A
9.36.2.9.(5)	9.36.2.9. Airtightness	(5) Fireplaces shall be equipped with doors, enclosures or devices to restrict air movement through the *chimney* when the fireplace is not in use.	N/A
9.36.2.9.(6)	9.36.2.9. Airtightness	(6) Where the airtight material used in the *air barrier system* is installed toward the exterior of the *building* envelope, its location and properties shall conform to Subsection 9.25.5.	N/A
9.36.2.10.(1)	9.36.2.10. Construction of Air Barrier Details	(1) Materials intended to provide the principal resistance to air leakage shall conform to CAN/ULC-S741, "Standard for Air Barrier Materials – Specification."	N/A
9.36.2.10.(2)	9.36.2.10. Construction of Air Barrier Details	(2) Materials referred to in Sentence (1) shall be (a) compatible with adjoining materials, and (b) free of holes and cracks.	N/A
9.36.2.10.(3)	9.36.2.10. Construction of Air Barrier Details	(3) Where the *air barrier system* consists of rigid panel-type material, all joints shall be sealed.	N/A
9.36.2.10.(4)	9.36.2.10. Construction of Air Barrier Details	(4) Where the *air barrier system* consists of timber logs, all joints shall be sealed to resist airflow through gaps between logs that have shifted due to in-service conditions such as shrinkage and settling.	N/A

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9.36.2.10.(5)	9.36.2.10. Construction of Air Barrier Details	(5) Where the *air barrier system* consists of flexible sheet material, all joints shall be (a) lapped not less than 50 mm, (b) sealed, and (c) structurally supported.	N/A
9.36.2.10.(6)	9.36.2.10. Construction of Air Barrier Details	(6) Sealant material used for the purpose of creating a continuous *air barrier system* shall (a) be a non-hardening type, or (b) conform to (i) Subsection 9.27.4., (ii) CAN/ULC-S710.1, "Standard for Bead-Applied One Component Polyurethane Air Sealant Foam, Part 1: Material Specification," or (iii) CAN/ULC-S711.1, "Standard for Bead-Applied Two Component Polyurethane Air Sealant Foam, Part 1: Material Specification."	N/A
9.36.2.10.(7)	9.36.2.10. Construction of Air Barrier Details	(7) Except as provided in Sentence 9.36.~~6~~7.8.(1), buildings to which this Subsection applies shall be constructed airtight in accordance with Sentences (8) to (18).	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.2.10.(~~7~~8)	9.36.2.10. Construction of Air Barrier Details	(8) Penetrations by electrical wiring, outlets, switches or recessed light fixtures through the plane of airtightness shall be constructed airtight (a) where the component is designed to provide a seal against air leakage, by sealing the component to the air barrier material, or (b) where the component is not designed to provide a seal against air leakage, by covering the component with an air barrier material and sealing it to the adjacent air barrier material.	N/A
9.36.2.10.(~~8~~9)	9.36.2.10. Construction of Air Barrier Details	(9) The joints between the *foundation* wall and the sill plate, between the sill plate and *rim joist*, between the *rim joist* and the subfloor material, and between the subfloor material and the bottom plate of the wall above shall be constructed airtight by (a) sealing all joints and junctions between the structural components, or (b) covering the structural components with an air barrier material and sealing it to the adjacent air barrier material.	N/A
9.36.2.10.(~~9~~10)	9.36.2.10. Construction of Air Barrier Details	(10) The interfaces between windows, doors and skylights and wall/ceiling assemblies shall be constructed airtight by sealing all joints and junctions between the air barrier material in the wall and the window, door or skylight frame.	N/A
9.36.2.10.(~~10~~11)	9.36.2.10. Construction of Air Barrier Details	(11) Cantilevered floors and floors over unheated spaces or over the exterior shall be constructed airtight by one of the following methods or a combination thereof: (a) sealing all joints and junctions between the structural components, or (b) covering the structural components with an air barrier material and sealing it to the adjacent air barrier material.	N/A

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9.36.2.10.(~~11~~12)	9.36.2.10. Construction of Air Barrier Details	(12) Interior walls that meet exterior walls or ceilings whose plane of airtightness is on the interior of the *building* envelope and knee walls that separate *conditioned space* from unconditioned space shall be constructed airtight by (a) sealing all junctions between the structural components, (b) covering the structural components with an air barrier material and sealing it to the adjacent air barrier material, or (c) maintaining the continuity of the *air barrier system* above or through the interior wall or below or through the knee wall, as applicable.	N/A
9.36.2.10.(~~12~~13)	9.36.2.10. Construction of Air Barrier Details	(13) Steel-lined *chimneys* that penetrate the *building* envelope shall be constructed airtight by blocking the void between required clearances for metal *chimneys* and surrounding construction with sheet metal and sealant capable of withstanding high temperatures.	N/A
9.36.2.10.(~~13~~14)	9.36.2.10. Construction of Air Barrier Details	(14) *Masonry or concrete chimneys* that penetrate the *building* envelope shall be constructed airtight by mechanically fastening a metal flange or steel stud that extends not less than 75 mm out from the *chimney* and sealing the air barrier material to it with a sealant capable of withstanding high temperatures.	N/A
9.36.2.10.(~~14~~15)	9.36.2.10. Construction of Air Barrier Details	(15) Ducts that penetrate the *building* envelope shall be constructed airtight by sealing the penetration through the *building* envelope.	N/A
9.36.2.10.(~~15~~16)	9.36.2.10. Construction of Air Barrier Details	(16) Plumbing vent stack pipes that penetrate the *building* envelope shall be constructed airtight by (a) sealing the air barrier material to the vent stack pipe with a compatible sealant or sheathing tape, or (b) installing a rubber gasket or prefabricated roof flashing at the penetration of the plane of airtightness then sealing it and mechanically fastening it to the top plate.	N/A
9.36.2.10.(~~16~~17)	9.36.2.10. Construction of Air Barrier Details	(17) Where a *party wall* meets the plane of airtightness, that junction shall be constructed airtight by sealing any voids within the *party wall* at the perimeter to the adjacent air barrier material and by (a) sealing all junctions between the structural components, or (b) covering the structural components with an air barrier material and sealing it to the adjacent air barrier material.	N/A
9.36.2.10.(~~17~~18)	9.36.2.10. Construction of Air Barrier Details	(18) Where the concrete in a flat insulating concrete form wall acts as the air barrier, the continuity of the plane of airtightness shall be maintained between the concrete and adjacent air barrier materials.	N/A

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9.36.2.11.(1)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(1) Subject to the limitations stated in Sentences (6) to (8), the trade-off options described in Sentences (2) to (4) apply only to above-ground *building* envelope components and assemblies, or portions thereof, of a single *building*.	N/A
9.36.2.11.(2)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(2) The effective thermal resistance of one or more above-ground opaque *building* envelope assemblies is permitted to be less than that required in Article 9.36.2.6., provided (a) the total areas of all proposed and reference assemblies are equal, (b) the effective thermal resistance of one or more other proposed above-ground opaque *building* envelope assembly areas is increased to more than that required by Article 9.36.2.6., and (c) the sum of the areas of all traded above-ground opaque *building* envelope assemblies divided by their respective effective thermal resistance is less than or equal to what it would be if all assemblies complied with Article 9.36.2.6.	N/A
9.36.2.11.(3)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(3) The effective thermal resistance of one or more windows, as calculated in accordance with Sentence (5), is permitted to be less than that required in Article 9.36.2.7., provided (a) the total areas of all traded windows are equal, (b) the traded windows are located in the same orientation, (c) the effective thermal resistance of one or more other windows is increased to more than that required by Article 9.36.2.7., and (d) the sum of the areas of all traded windows divided by their respective effective thermal resistance is less than or equal to what it would be if all windows complied with Article 9.36.2.7.	N/A
9.36.2.11.(4)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(4) The effective thermal resistance of one or more portions of floor insulation or ceiling insulation in attics under sloped roofs in *buildings* that are one *storey* in *building height* is permitted to be less than that required in Article 9.36.2.6., provided (a) the total area of fenestration, excluding skylights, and doors does not exceed 15% of the above-ground gross wall area as calculated in accordance with Article 9.36.2.3., (b) the floor-to-ceiling height measured from the top of the subfloor to the underside of the finished ceiling of the *storey* does not exceed 2.34 m, (c) the distance measured from the top of the subfloor to the underside of the bottom chord of the truss or joist of the roof is not more than 2.39 m, and (d) the difference between the sum of the proposed areas of ceilings or floors divided by their respective proposed effective thermal resistance and the sum of the reference areas of ceilings or floors divided by their respective thermal resistance required in Article 9.36.2.6. is not more than the difference between 17% fenestration and door area and the proposed fenestration and door areas divided by the required effective thermal resistance values for windows and doors in Article 9.36.2.7.	N/A
9.36.2.11.(5)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(5) The effective thermal resistance of windows shall be determined as RSI = 1/U.	https://www.dropbox.com/s/ehoj137nt08za0f/Proposed_Change_1293.pdf?dl=0

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9.36.2.11.(6)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(6) The reduction in effective thermal resistance of above-ground opaque *building* envelope assemblies permitted by Sentences (2) and (4) shall result in an RSI value that is not less than (a) 55% of that required in Article 9.36.2.6. for above-ground walls and joist-type roofs, and (b) 60% of that required in Article 9.36.2.6. for other opaque assemblies.	N/A
9.36.2.11.(7)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(7) The effective thermal resistances of above-ground opaque assemblies with embedded heating cables, pipes or membranes are not permitted to be traded.	N/A
9.36.2.11.(8)	9.36.2.11. Trade-off Options for Above-ground Building Envelope Components and Assemblies	(8) The effective thermal resistances of doors and access hatches described in Sentences 9.36.2.7.(3) to (7) are not permitted to be traded.	N/A
9.36.3. HVAC Requirements			
9.36.3.1.(1)	9.36.3.1. Scope and Application	(1) This Subsection is concerned with the efficient use of energy by systems and equipment used for heating, ventilating and air-conditioning (HVAC).	N/A
9.36.3.1.(2)	9.36.3.1. Scope and Application	(2) Where HVAC systems, equipment or techniques other than those described in this Subsection are used, the *building* shall be designed and constructed in accordance with the energy efficiency requirements of the NECB.	N/A
9.36.3.2.(1)	9.36.3.2. Equipment and Ducts	(1) HVAC systems shall be sized in accordance with good practice as described in Sections 9.32. and 9.33.	N/A
9.36.3.2.(2)	9.36.3.2. Equipment and Ducts	(2) Ducts shall be designed and installed in accordance with Sections 9.32. and 9.33.	N/A

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9.36.3.2.(3)	9.36.3.2. Equipment and Ducts	(3) Except for *exhaust ducts* leading directly to the exterior, ducts and *plenums* carrying conditioned air and located outside the plane of insulation shall (a) except as provided in Sentence (4), have all joints sealed against air infiltration and exfiltration with (i) sealants or gaskets made from liquids, mastics or heat-applied materials, (ii) mastic with embedded fabric, or (iii) foil-faced butyl tape, and (b) except as provided in Sentence (5), be insulated to the same level as required in Subsection 9.36.2. for exterior above-ground walls.	N/A
9.36.3.2.(4)	9.36.3.2. Equipment and Ducts	(4) Fabric-backed tape with rubber adhesives shall not be used as a primary sealant to meet the requirements of Clause (3)(a).	N/A
9.36.3.2.(5)	9.36.3.2. Equipment and Ducts	(5) The underside of rectangular ducts installed under an insulated floor over an unconditioned space is permitted to be insulated to a lower level than required in Sentence (3) but not to less than 2.11 (m^2×K)/W, provided both sides of such ducts are insulated to a compensating higher thermal resistance so that the resulting heat loss does not exceed that of ducts complying with Sentence (3).	N/A
9.36.3.3.(1)	9.36.3.3. Air Intake and Outlet Dampers	(1) Except as provided in Sentences (3) and (4), every duct or opening intended to discharge air to the outdoors shall be equipped with (a) a motorized damper, or (b) a gravity- or spring-operated backflow damper.	N/A
9.36.3.3.(2	9.36.3.3. Air Intake and Outlet Dampers	(2) Except as provided in Sentences (3) and (4) and except in locations with fewer than 3500 heating degree-days as listed in ~~Appendix C~~ Supplementary Standard SB-1, every outdoor air intake duct or opening shall be equipped with a motorized damper that remains in the "open" position if the damper fails.	N/A
9.36.3.3.(3)	9.36.3.3. Air Intake and Outlet Dampers	(3) Where other regulations are in effect that do not permit dampers, air intakes and outlets need not comply with Sentences (1) and (2).	N/A
9.36.3.3.(4)	9.36.3.3. Air Intake and Outlet Dampers	(4) Air intakes and outlets serving HVAC systems that are required to operate continuously need not comply with Sentences (1) and (2).	N/A

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9.36.3.4.(1)	9.36.3.4. Piping for Heating and Cooling Systems	(1) Piping for heating and cooling systems shall be designed and installed in accordance with Subsection 6.2.9.	N/A
9.36.3.4.(2)	9.36.3.4. Piping for Heating and Cooling Systems	(2) Except for high-temperature refrigerant piping, all piping forming part of a heating or air-conditioning system shall be located (a) inside the plane of insulation, or (b) within or outside the plane of insulation, provided the piping is insulated to a thermal resistance not less than that required in Subsection 9.36.2. for exterior above-ground walls.	N/A
9.36.3.5.(1)	9.36.3.5. Equipment for Heating and Air-conditioning Systems	(1) Equipment for heating and air-conditioning systems shall be located (a) inside the plane of insulation, or (b) outdoors or in an unconditioned space, provided the equipment is designated by the manufacturer for such installation.	N/A
9.36.3.6.(1)	9.36.3.6. Temperature Controls	(1) Except for manually fuelled solid-fuel-fired *appliances*, the supply of heating and cooling energy to each *dwelling unit*, *suite* or common space shall be controlled by thermostatic controls that activate the appropriate supply when the temperature in a *conditioned space* fluctuates ±0.5°C from the set-point temperature for that space.	N/A
9.36.3.6.(2)	9.36.3.6. Temperature Controls	(2) Where heating and cooling systems are controlled by separate thermostatic controls, means shall be provided to prevent these controls from simultaneously calling for heating and cooling.	N/A
9.36.3.6.(3)	9.36.3.6. Temperature Controls	(3) Space temperature control devices used to control unitary electric resistance *space heaters* shall conform to CAN/CSA-C828, "Performance requirements for thermostats used with individual room electric space heating devices."	N/A
9.36.3.6.(4)	9.36.3.6. Temperature Controls	(4) Controls required by Sentence (1) shall be designed such that lowering the set-point temperature on the thermostat for the heating system will not cause cooling energy to be expended to reach the lowered setting, and raising the set-point temperature on the thermostat for the cooling system will not cause heating energy to be expended to reach the raised setting.	N/A
9.36.3.6.(5)	9.36.3.6. Temperature Controls	(5) Automatic devices or manually operated dampers, valves or switches shall be provided, as appropriate for the heating system used, to allow the heating of each zone to be adjusted.	N/A

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9.36.3.6.(6)	9.36.3.6. Temperature Controls	(6) Heat pumps equipped with supplementary heaters shall incorporate controls to prevent supplementary heater operation when the heating load can be met by the heat pump alone, except during defrost cycles.	N/A
9.36.3.6.(7)	9.36.3.6. Temperature Controls	(7) Heat pumps with a programmable thermostat shall be equipped with setback controls that will temporarily suppress electrical back-up or adaptive anticipation of the recovery point, in order to prevent the activation of supplementary heat during the heat pump's recovery.	N/A
9.36.3.7.(1)	9.36.3.7. Humidification	(1) Where an HVAC system is equipped with a means for adding moisture to maintain specific humidity levels, an automatic humidity control device shall be provided.	N/A
9.36.3.8.(1)	9.36.3.8. Heat Recovery from Dehumidification in Spaces with an Indoor Pool or Hot Tub	(1) Except as provided in Sentences (2) and (3), spaces containing an indoor pool or hot tub shall be equipped with air exhaust systems conforming to Sentence (4) at design conditions. (See also Article 9.25.4.2.)	N/A
9.36.3.8.(2)	9.36.3.8. Heat Recovery from Dehumidification in Spaces with an Indoor Pool or Hot Tub	(2) Spaces containing an indoor pool need not comply with Sentence (1), provided a stationary mechanical or desiccant dehumidification system is installed that provides at least 80% of the dehumidification that would result from compliance with Sentence (1).	N/A
9.36.3.8.(3)	9.36.3.8. Heat Recovery from Dehumidification in Spaces with an Indoor Pool or Hot Tub	(3) Spaces containing an indoor pool or hot tub having a total water surface area of less than 10 m^2 need not comply with Sentence (1), provided they are equipped with a cover having a nominal thermal resistance not less than 2.1 (m^2×K)/W.	N/A
9.36.3.8.(4)	9.36.3.8. Heat Recovery from Dehumidification in Spaces with an Indoor Pool or Hot Tub	(4) Heat-recovery systems used to meet the requirements of Sentence (1) shall (a) be capable of recovering at least 40% of the sensible heat from exhausted air when tested in accordance with AHRI 1060 (I-P), "Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment,", or (b) have a sensible-heat-recovery efficiency complying with Sentence 9.36.3.9.(3) when tested in accordance with CAN/CSA-C439, "Standard laboratory methods of test for rating the performance of heat/energy-recovery ventilators."	N/A

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9.36.3.8.(5)	9.36.3.8. Heat Recovery from Dehumidification in Spaces with an Indoor Pool or Hot Tub	(5) The sensible heat, in kW, referred to in Clause (4)(a), which is the sensible heat content of the total quantity of exhausted air, shall be calculated as follows: Sensible Heat = 0.00123 x Q x (Te – To) where Te = temperature of exhausted air before heat recovery, in °C, To = outdoor 2.5% January design temperature as listed in ~~Appendix C~~ Supplementary Standard SB-1, in °C, and Q = rated capacity of exhaust system at normal temperature of exhausted air, in L/s.	N/A
9.36.3.9.(1)	9.36.3.9. Heat Recovery from Ventilation Systems	(1) This Article applies where a self-contained mechanical ventilation system is installed whose principal exhaust component is equipped with heat-recovery capability.	N/A
9.36.3.9.(2)	9.36.3.9. Heat Recovery from Ventilation Systems	(2) Where an integrated mechanical system (IMS) with a heat-recovery ventilator provides the principal exhaust ventilation, the IMS shall (a) be tested in accordance with CSA P.10, "Performance of Integrated Mechanical Systems for Residential Heating and Ventilation," and (b) have a minimum overall thermal performance factor conforming to Table 9.36.3.10.	N/A
9.36.3.9.(3)	9.36.3.9. Heat Recovery from Ventilation Systems	(3) When tested in conformance with the low-temperature thermal and ventilation test methods described in CAN/CSA-C439, "Standard laboratory methods of test for rating the performance of heat/energy-recovery ventilators," heat-recovery ventilators described in Sentence (1) shall have a sensible heat-recovery efficiency of (a) at least 60% at an outside air test temperature of 0°C for locations with a 2.5% January design temperature greater than or equal to –10°C, and (b) at least 60% at an outside air test temperature of 0°C and at least 55% at an outside air test temperature of –25°C for locations with a 2.5% January design temperature less than –10°C.	N/A
9.36.3.9.(4)	9.36.3.9. Heat Recovery from Ventilation Systems	(4) The requirements of Sentence (3) shall be met using a principal ventilation rate not less than that required in Section 9.32.	N/A
9.36.3.10.(1)	9.36.3.10. Equipment Efficiency	(1) HVAC equipment and components shall comply with the performance requirements stated in Table 9.36.3.10. (Please see the National PCF for the table for energy efficiency values)	https://www.dropbox.com/s/htnza06tb0d8r0h/Proposed_Change_1596.pdf?dl=0
9.36.3.10.(2)	9.36.3.10. Equipment Efficiency	(2) Natural gas and propane fireplaces shall be (a) direct-vent (sealed), and (b) pilot-on-demand, interrupted or intermittent ignition systems without a standing pilot light.	N/A

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9.36.3.10.(3)	9.36.3.10. Equipment Efficiency	(3) The heat source component of combined space- and service water heating systems that are not within the scope of CAN/CSA-P.9, "Test method for determining the performance of combined space and water heating systems (combos)," shall meet the performance requirements stated in Table 9.36.3.10. for the applicable equipment type.	N/A
9.36.3.11.(1)	9.36.3.11. Solar Thermal Systems	(1) Space-heating systems that use solar thermal technology shall conform to the manufacturer's design requirements and installation procedures.	N/A
9.36.3.11.(2)	9.36.3.11. Solar Thermal Systems	(2) Service water heating systems that use solar thermal technology shall be installed in accordance with ~~the~~ ~~NPC~~ Part 7.	N/A
9.36.3.11.(3)	9.36.3.11. Solar Thermal Systems	(3) Hot water storage tanks associated with the systems referred to in Sentence (2) shall be installed in a *conditioned space*.	N/A
9.36.4. Service Water Heating Systems			
9.36.4.1.(1)	9.36.4.1. Scope and Application	(1) This Subsection is concerned with the efficient use of energy by systems used to heat service water for household use as well as for indoor pools and hot tubs.	N/A
9.36.4.1.(2)	9.36.4.1. Scope and Application	(2) Where service water heating equipment or techniques other than those described in this Subsection are used, the *building* shall be designed and constructed in accordance with the energy efficiency requirements of the NECB.	N/A
9.36.4.2.(1)	9.36.4.2. Equipment Efficiency	(1) *Service water heaters*, *boilers*, pool heaters and storage tanks shall comply with the performance requirements stated in Table 9.36.4.2.	https://www.dropbox.com/s/hn3pmhbc5teqbqy/Proposed_.pdf?dl=0
9.36.4.2.(2)	9.36.4.2. Equipment Efficiency	(2) Hot service water storage tanks not listed in Table 9.36.4.2. shall be covered with insulation having a minimum thermal resistance of 1.8 (m^2×K)/W.	https://www.dropbox.com/s/hn3pmhbc5teqbqy/Proposed_.pdf?dl=0

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9.36.4.2.(3)	9.36.4.2. Equipment Efficiency	(3) Except for components that are required to be installed outdoors, service water heating equipment shall be installed in a *conditioned space*.	N/A
9.36.4.3.(1)	9.36.4.3. Solar Domestic Hot Water Systems	(1) Service water heating systems that use solar thermal technology shall conform to the manufacturer's design requirements and installation procedures.	N/A
9.36.4.3.(2)	9.36.4.3. Solar Domestic Hot Water Systems	(2) Service water heating systems that use solar thermal technology shall be installed in accordance with the NPC.	N/A
9.36.4.3.(3)	9.36.4.3. Solar Domestic Hot Water Systems	(3) Hot water storage tanks associated with the systems referred to in Sentence (2) shall be installed in a *conditioned space*.	N/A
9.36.4.4.(1)	9.36.4.4. Piping	(1) The first 2 m of outlet piping downstream and of inlet piping upstream leading from a storage tank or heating vessel shall be covered with piping insulation that is at least 12 mm thick.	N/A
9.36.4.4.(2)	9.36.4.4. Piping	(2) All piping forming part of a continuously operating recirculating service water heating system shall be covered with piping insulation that is at least 12 mm thick.	N/A
9.36.4.4.(3)	9.36.4.4. Piping	(3) Where piping forming part of the service water heating system is located outside the *building* envelope or in an unconditioned space, it shall be insulated to a thermal resistance not less than the effective thermal resistance required for the exterior above-ground walls.	N/A
9.36.4.5.(1)	9.36.4.5. Controls	(1) Service water heating systems with storage tanks shall be equipped with automatic temperature controls capable of adjustment between the minimum and maximum temperature settings permitted for the intended use.	N/A
9.36.4.6.(1)	9.36.4.6. Indoor Swimming Pool Equipment Controls	(1) Heaters for indoor swimming pools shall be equipped with (a) a thermostat, and (b) a readily accessible and clearly labeled device that allows the heater to be shut off without adjusting the thermostat setting.	N/A

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9.36.4.6.(2)	9.36.4.6. Indoor Swimming Pool Equipment Controls	(2) Pumps and heaters for indoor swimming pools shall be equipped with time switches or other types of controls that can be set to automatically turn off the pumps and heaters when their operation is not required.	N/A
9.36.5. Energy Performance Compliance			
9.36.5.1.(1)	9.36.5.1. Scope and Application	(1) This Subsection is concerned with modeling the energy performance of components, systems and assemblies, including heat gains from internal loads described in Sentence 9.36.5.4.(4), that are addressed in the scope of the prescriptive requirements in Subsections 9.36.2. to 9.36.4. and that are installed in *buildings* described in Sentence 9.36.1.3.(3).	N/A
9.36.5.1.(2)	9.36.5.1. Scope and Application	(2) Internal loads other than those described in Sentence 9.36.5.4.(4) shall be excluded from the performance compliance calculations as they relate to (a) the lighting of unconditioned spaces, (b) exterior lighting, and (c) the ventilation of unconditioned spaces.	N/A
9.36.5.2.(1)	9.36.5.2. Definitions	(1) For the purpose of this Subsection, the term “reference house” shall mean a hypothetical replica of the proposed house design using the same energy sources for the same functions and having the same environmental requirements, *occupancy*, climatic data and operating schedules, but made to comply with all applicable prescriptive requirements of Subsections 9.36.2. to 9.36.4.	N/A
9.36.5.2.(2)	9.36.5.2. Definitions	(2) For the purpose of this Subsection, the term “proposed house” shall mean a modelled replica of the actual house under consideration, in which some elements covered in Subsections 9.36.2. to 9.36.4. are specific to the actual house, while other elements not covered in those Subsections, but that are necessary for the calculation of the annual energy consumption, are assigned default values.	https://www.dropbox.com/s/7l4r4oioqy73mdk/Proposed_Change_1608.pdf?dl=0
9.36.5.2.(3)	9.36.5.2. Definitions	(3) For the purpose of this Subsection, the term “annual energy consumption” shall mean the annual sum of service water heating and space-conditioning energy consumption of the proposed house design, as calculated in accordance with this Subsection.	N/A
9.36.5.2.(4)	9.36.5.2. Definitions	(4) For the purpose of this Subsection, the term “house energy target” shall mean the annual energy consumption of the reference house, as calculated in accordance with this Subsection.	N/A
9.36.5.2.(5)	9.36.5.2. Definitions	(5) For the purpose of this Subsection, the term “principal ventilation rate” shall mean the normal operating exhaust capacity of the principal ventilation fan as required by Article 9.32.3.4.	N/A

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9.36.5.3.(1)	9.36.5.3. Compliance	(1) The performance compliance calculations shall determine the annual energy consumption of the proposed house and the house energy target of a reference house in accordance with (a) this Subsection, or (b) the EnerGuide Rating System, version 15, and Sentence (2).	https://www.dropbox.com/s/7i6s9tj0vdcgmlv/Proposed_Change_1620.pdf?dl=0
9.36.5.3.(2)	9.36.5.3. Compliance	(2) The annual energy consumption of the proposed house shall not exceed the house energy target of the reference house.	N/A
9.36.5.3.(3)	9.36.5.3. Compliance	(3) In establishing the house energy target, *building* components, systems and assemblies shall be accounted for in accordance with the prescriptive requirements of Subsections 9.36.2. to 9.36.4. for the climate zone under consideration.	N/A
9.36.5.3.(4)	9.36.5.3. Compliance	(4) In establishing the annual energy consumption, *building* components, systems and assemblies that are addressed in the scope of the prescriptive requirements of Subsections 9.36.2. to 9.36.4. shall be accounted for the climate zone under consideration.	N/A
9.36.5.3.(5)	9.36.5.3. Compliance	(5) Where the construction techniques or *building* components, systems or assemblies used are more energy-efficient than those prescribed by the prescriptive requirements, the performance compliance calculations are permitted to take this increased performance level into account in the determination of the annual energy consumption, provided it can be quantified and is not dependent on occupant interaction.	N/A
9.36.5.3.(6)	9.36.5.3. Compliance	(6) Both the proposed and reference houses shall be modeled using the same climatic data, *soil* conditions, operating schedules in Article 9.36.5.4. and temperature set-points.	N/A
9.36.5.4.(1)	9.36.5.4. Calculation Methods	(1) Except as provided in Sentence (2), the energy model calculations shall account for the annual energy consumption of systems and equipment required for (a) space heating, (b) ventilation, (c) service water heating, and (d) where installed, space cooling.	N/A
9.36.5.4.(2)	9.36.5.4. Calculation Methods	(2) Redundant or back-up equipment for the systems and equipment listed in Sentence (1) is permitted to be excluded from the energy model, provided it is equipped with controls and is not required to meet the space-conditioning load of the house.	N/A

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9.36.5.4.(3)	9.36.5.4. Calculation Methods	(3) The schedules used in the energy model shall (a) be based on a time interval not greater than one hour, where the energy model evaluates the performance of the house over hourly intervals, or (b) be applied in an hourly-bin model then averaged, where the energy model does not evaluate the performance of the house over hourly intervals.	N/A
9.36.5.4.(4)	9.36.5.4. Calculation Methods	(4) The energy model calculations shall account for the loads due to heat gains from occupants, lighting and miscellaneous equipment, which shall be fixed for every day of the year, by (a) following the schedule provided in Table 9.36.5.4., and (b) increasing the loads for each hour by 3.58 W per square metre of floor area in common spaces, if applicable.	https://www.dropbox.com/s/7l4r4oioqy73mdk/Proposed_Change_1608.pdf?dl=0
9.36.5.4.(5)	9.36.5.4. Calculation Methods	(5) The energy model calculations shall account for the following space-heating temperature set-points: (a) in all living spaces above the *basement*, (b) 19°C in *basements* and common spaces, and (c) 15°C in crawl spaces intended to be *conditioned spaces*.	https://www.dropbox.com/s/7l4r4oioqy73mdk/Proposed_Change_1608.pdf?dl=0
9.36.5.4.(6)	9.36.5.4. Calculation Methods	(6) The energy model calculations shall account for a space-cooling temperature set-point of 25°C in all *conditioned spaces* served by the cooling system.	N/A
9.36.5.4.(7)	9.36.5.4. Calculation Methods	(7) The energy model calculations shall account for a thermostatic control that responds to fluctuations of ±0.5°C from the temperature set-point.	N/A
9.36.5.4.(8)	9.36.5.4. Calculation Methods	(8) If a computer program is used to carry out the compliance calculations, the calculation methods employed in the energy model shall (a) be used for both the reference and proposed houses, and (b) be tested in accordance with ANSI/ASHRAE 140, “Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs,” with variations in the computer program from the range recommended	N/A
9.36.5.4.(9)	9.36.5.4. Calculation Methods	(9) The proposed and reference houses shall both be modeled using the same approach and assumptions, except where *building* components or energy efficiency features are permitted by this Subsection to be different.	N/A
9.36.5.4.(10)	9.36.5.4. Calculation Methods	(10) The energy model calculations shall account for the effect of airtightness in accordance with Sentence 9.36.5.10.(10) or (11), as applicable.	N/A

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9.36.5.4.(11)	9.36.5.4. Calculation Methods	(11) The energy model calculations shall account for heat transfer through elements separating *conditioned space* from unconditioned space, the exterior or the ground.	N/A
9.36.5.5.(1)	9.36.5.5. Climatic Data	(1) To calculate the effect of heating and cooling consumption, the energy model calculations shall be performed using climatic data measured at time intervals no greater than one hour for one year (8 760 hours) based on the average of at least 10 years of measured data collected at the weather station nearest to the region in which the proposed house is located.	N/A
9.36.5.5.(2)	9.36.5.5. Climatic Data	(2) For urban regions with several climatic data sets and for locations for which climatic data are not available, the energy model calculations shall be performed using climatic data that best represent the climate at the *building* site.	N/A
9.36.5.5.(3)	9.36.5.5. Climatic Data	(3) The energy model calculations shall account for ground reflectance by (a) increasing ground reflectance due to snow cover in a ratio of 30% without snow cover and 70% with snow cover, or (b) taking into account changes in ground reflectance throughout the heating season.	N/A
9.36.5.6.(1)	9.36.5.6. Building Envelope Calculations	(1) For each hour of the year, the energy model calculations shall account for heat transfer through wall assemblies, roof-ceiling assemblies, including attics where applicable, and exposed floor assemblies due to the thermal characteristics of the particular assembly and thermal bridging.	N/A
9.36.5.6.(2)	9.36.5.6. Building Envelope Calculations	(2) The following *building* envelope assemblies and components shall be addressed in the energy model calculations: (a) above-ground walls and roof-ceiling assemblies, (b) floors and walls in contact with the ground, and (c) doors, windows and skylights.	N/A
9.36.5.6.(3)	9.36.5.6. Building Envelope Calculations	(3) For each wall assembly, fenestration component, roof-ceiling assembly and exposed floor assembly, the energy model calculations shall account for (a) the area of the interior side of the insulated surface, (b) emissivity, and (c) the effective thermal resistance or overall thermal transmittance, as applicable.	N/A
9.36.5.6.(4)	9.36.5.6. Building Envelope Calculations	(4) The energy model calculations shall account for the effect that each assembly in contact with the ground has on below-*grade* heat transfer due to (a) the geometry of the *foundation*, (b) *soil* conditions, and (c) the configuration of the insulation.	N/A

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9.36.5.6.(5)	9.36.5.6. Building Envelope Calculations	(5) The energy model calculations shall account for heat transfer through fenestration separating *conditioned spaces* from the outdoors, including skylights, while accounting for both temperature difference and transmission of solar radiation based on (a) orientation as a function of azimuth and tilt of the surface, (b) area of frame opening and glazed area, (c) overall thermal transmittance, and (d) solar heat gain coefficient.	N/A
9.36.5.6.(6)	9.36.5.6. Building Envelope Calculations	(6) Where the energy model calculations account for the effect of thermal mass, the contents of the house shall be excluded.	N/A
9.36.5.6.(7)	9.36.5.6. Building Envelope Calculations	(7) The energy model calculations shall account for the presence of thermally active walls, floors and ceilings with embedded conditioning systems that form part of the *building* envelope.	N/A
9.36.5.6.(8)	9.36.5.6. Building Envelope Calculations	(8) Where skylights are installed in the roof, the gross roof area shall be determined in accordance with Sentence 9.36.2.3.(1).	N/A
9.36.5.6.(9)	9.36.5.6. Building Envelope Calculations	(9) Skylights shall be considered to have no shading.	N/A
9.36.5.6.(10)	9.36.5.6. Building Envelope Calculations	(10) The energy model calculations shall account for the effects of exterior permanent and fixed shading only on solar heat gain from fenestration.	N/A
9.36.5.6.(11)	9.36.5.6. Building Envelope Calculations	(11) The ratio of fenestration area to opaque area of doors shall be the same for the proposed and reference houses.	N/A
9.36.5.7.(1)	9.36.5.7. HVAC System Calculations	(1) The energy model calculations shall account for the energy consumption of each heating, ventilating and, where installed, cooling system for each hour of the year.	N/A

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9.36.5.7.(2)	9.36.5.7. HVAC System Calculations	(2) Each heating system and, where installed, cooling system shall be accounted for separately in the energy model calculations.	N/A
9.36.5.7.(3)	9.36.5.7. HVAC System Calculations	(3) *Conditioned spaces* in both the reference and proposed houses shall be modeled as being (a) heated, where only heating systems are provided in the proposed house, (b) cooled, where only cooling systems are provided in the proposed house, or (c) heated and cooled, where complete heating and cooling systems are provided in the proposed house.	N/A
9.36.5.7.(4)	9.36.5.7. HVAC System Calculations	(4) The performance requirements stated in Table 9.36.3.10. shall be used in the energy model calculations.	N/A
9.36.5.7.(5)	9.36.5.7. HVAC System Calculations	(5) Where duct and piping losses are accounted for in the energy model calculations, they shall be included for both the proposed and reference houses and calculated the same way for both houses.	N/A
9.36.5.7.(6)	9.36.5.7. HVAC System Calculations	(6) The same time periods shall be used in the simulation of the operation of the ventilation system for both the proposed and reference houses.	N/A
9.36.5.7.(7)	9.36.5.7. HVAC System Calculations	(7) During the heating season, any solar and internal heat gains that cause an increase in space temperature beyond 5.5°C above the setpoint shall be (a) excluded from the energy model calculations, or (b) calculated as being vented from the house.	N/A
9.36.5.7.(8)	9.36.5.7. HVAC System Calculations	(8) The energy model calculations shall account for the part-load performance of equipment, including electrical consumption.	N/A
9.36.5.7.(9)	9.36.5.7. HVAC System Calculations	(9) The energy model calculations shall account for the heat-recovery efficiency of heat-recovery ventilators using a minimum of 2 data test points derived from testing in accordance with Clause 9.36.3.9.(3)(a) or (b), as applicable.	N/A

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9.36.5.8.(1)	9.36.5.8. Service Water Heating System Calculations	(1) The energy model calculations shall account for the energy consumption of all service water heating systems.	N/A
9.36.5.8.(2)	9.36.5.8. Service Water Heating System Calculations	(2) The performance requirements stated in Table 9.36.4.2. shall be used in the energy model calculations.	N/A
9.36.5.8.(3)	9.36.5.8. Service Water Heating System Calculations	(3) Where piping or standby losses are accounted for in the energy model calculations, they shall be included for both the proposed and reference houses, including their effect on space heating and cooling, and calculated the same way for both houses.	N/A
9.36.5.8.(4)	9.36.5.8. Service Water Heating System Calculations	(4) The energy model calculations shall use a supply cold water temperature, in °C, that is (a) equal to –0.002 (HDD) + 20.3, where HDD < 7 999, (b) equal to 4.3, where HDD ≥ 8 000, or (c) determined based on the ground and air temperatures in the climatic data file.	N/A
9.36.5.8.(5)	9.36.5.8. Service Water Heating System Calculations	(5) Except as provided in Sentence (8), the energy model calculations shall use a service water delivery temperature of 55°C.	https://www.dropbox.com/s/7l4r4oioqy73mdk/Proposed_Change_1608.pdf?dl=0
9.36.5.8.(6)	9.36.5.8. Service Water Heating System Calculations	(6) For service hot water usage other than for showering, the energy model calculations shall take into account the service water heating use schedule presented in Table 9.36.5.8. using a load of (a) 97 L/ day for houses without a *secondary suite*, or (b) 65 L/day for each *dwelling unit* in residential *buildings* with two or more *dwelling units*.	https://www.dropbox.com/s/7l4r4oioqy73mdk/Proposed_Change_1608.pdf?dl=0
9.36.5.8.(7)	9.36.5.8. Service Water Heating System Calculations	(7) The energy model calculations shall take into account daily service hot water usage for showering (a) at 7 a.m. for 15 mins for houses without a *secondary suite*, or (b) at 7 a.m. for 10 mins for each *dwelling unit* in residential *buildings* with two or more *dwelling units*.	N/A
9.36.5.8.(8)	9.36.5.8. Service Water Heating System Calculations	(8) The energy model shall set the service water delivery temperature for showering to 41°C at the shower head, with a flow rate of 7.6 L/min.	N/A

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9.36.5.9.(1)	9.36.5.9. General Requirements for Modeling the Proposed House	(1) Except where permitted by Articles 9.36.5.10. to 9.36.5.12., the energy model calculations for the proposed house shall be consistent with the proposed construction specifications for that house with regard to (a) fenestration and opaque *building* envelope assembly type, effective thermal resistance and areas, (b) HVAC system types and capacities, and (c) service water heating system types and capacities.	N/A
9.36.5.10.(1)	9.36.5.10. Modeling Building Envelope of Proposed House	(1) Except as provided in Sentences (2) and (3), the energy model calculations for the proposed house shall be consistent with the proposed construction specifications for that house with regard to (a) the area of the above-ground portion of *foundation* walls, (b) the effective thermal resistance of above-ground walls, ceilings below attics, roof assemblies and *rim joists*, (c) the maximum overall thermal transmittance of doors, as calculated in accordance with Sentence 9.36.2.2.(3), (d) the effective thermal resistance of below-ground walls and slabs-on-ground, (e) exterior walls, roof-ceiling assembly, doors, walls, exposed floors, and floors in contact with the ground, (f) distribution, orientation and area of fenestration and doors, as calculated in accordance with Article 9.36.2.3., (g) solar heat gain coefficient and overall thermal transmittance of fenestration, as calculated in accordance with Sentence 9.36.2.2.(3), (h) configuration of insulation in assemblies in contact with the ground, and (i) effective thermal resistance of *foundation* walls.	N/A
9.36.5.10.(2)	9.36.5.10. Modeling Building Envelope of Proposed House	(2) Except for penetrations, slab-on-ground edge insulation and assemblies with embedded heating pipes, where a *building* envelope component or assembly covers less than 2% of the total area of the assembly type to which it belongs, its thermal characteristics are not required to be calculated as belonging to a distinct assembly, provided the area of the component or assembly is included in an adjacent assembly having the same orientation.	N/A
9.36.5.10.(3)	9.36.5.10. Modeling Building Envelope of Proposed House	(3) *Building* envelope assemblies with the same thermal characteristics and orientation are not required to be calculated as distinct assemblies, provided their area is included in an adjacent assembly.	N/A
9.36.5.10.(4)	9.36.5.10. Modeling Building Envelope of Proposed House	(4) *Building* envelope assemblies and components separating *conditioned space* from enclosed unconditioned space shall have a solar heat gain coefficient equal to 0.	N/A
9.36.5.10.(5)	9.36.5.10. Modeling Building Envelope of Proposed House	(5) Except as stated in Sentence 9.36.5.6.(9), the energy model calculations for the proposed house shall account for the effects of exterior permanent and fixed shading devices, including fins, overhangs, and light shelves, on solar heat gain.	N/A

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9.36.5.10.(6)	9.36.5.10. Modeling Building Envelope of Proposed House	(6) Where thermal mass is included in the energy model calculations for the proposed house, it shall be set as (a) the specified mass up to the inside edge of insulation in exterior walls, the mass of interior walls, the mass up to the centre-line of *party walls*, and the mass of floors, as applicable, (b) the specified mass of the *building* envelope assembly, where the energy model calculations include a transient analysis of thermal transfer of the entire *building* envelope assembly, or (c) a default value of 0.060 MJ/m2×°C.	N/A
9.36.5.10.(7)	9.36.5.10. Modeling Building Envelope of Proposed House	(7) Exterior walls, roofs and exposed floors shall have a solar absorptance of 0.4.	N/A
9.36.5.10.(8)	9.36.5.10. Modeling Building Envelope of Proposed House	(8) The orientation of the *foundation* of the proposed house as constructed shall be within 22.5° of the orientation used in the energy model calculations.	N/A
9.36.5.10.(9)	9.36.5.10. Modeling Building Envelope of Proposed House	(9) The airtightness used in the energy model calculations for the proposed house shall be ~~a) 3.2 air changes per hour at 50 Pa pressure differential with a pressure exponent of 0.67, where the construction complies with Section 9.25.,~~ ~~b) 2.5 air changes per hour at 50 Pa pressure differential with a pressure exponent of 0.67, where it can be shown that the air barrier system is constructed in accordance with Subsection 9.25.3. and Articles 9.36.2.9. and 9.36.2.10., or~~ (a) the same as the reference house if airtightness test is not conducted (~~b~~b) the airtightness is determined in accordance with Sentence 9.36.8.3.(1) expressed as (i) the number of air changes per hour at 50 Pa pressure differential with a pressure exponent determined through a multi-point test, and (ii) the equivalent leakage area.	https://www.dropbox.com/s/r7f743ddjpaoyqt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.5.10.(10)	9.36.5.10. Modeling Building Envelope of Proposed House	(10) For compliance with Clause (9)(c), a design airtightness value shall be assigned for use in the energy model until the actual airtightness has been measured.	https://www.dropbox.com/s/r7f743ddjpaoyqt/nbc15_divb_09.36._001610.pdf?dl=0

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9.36.5.10.(11)	9.36.5.10. Modeling Building Envelope of Proposed House	~~(11) Where measured airtightness is used in the energy model calculations, it shall be determined in accordance with CAN/CGSB-149.10, "Determination of the airtightness of building envelopes by the fan depressurization method,"~~ ~~a) as written, or~~ ~~b) excluding Clause 6.1.6, which allows intentional openings for mechanical equipment to be left unsealed.~~	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.5.10.(12)	9.36.5.10. Modeling Building Envelope of Proposed House	~~(12) Where airtightness is determined in accordance with Sentence (11) using air changes per hour, the result obtained at an air pressure differential of 50 Pa shall be used in the energy model calculations.~~	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.5.10.(13)	9.36.5.10. Modeling Building Envelope of Proposed House	~~(13) Where airtightness is determined in accordance with Clause (11)(b), its rate shall be adjusted in the energy model calculations to account for air leakage through mechanical equipment.~~	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.5.11.(1)	9.36.5.11. Modeling HVAC System of Proposed House	(1) Where multiple HVAC systems serve a single space, the energy model calculations for the proposed house shall call each system in the order of priority established by the system control in the proposed house.	N/A
9.36.5.11.(2)	9.36.5.11. Modeling HVAC System of Proposed House	(2) Where a heat pump is included in the proposed house, the energy model calculations shall include (a) the effect of the source temperature on the heat pump's efficiency, and (b) the temperature at which the heat pump shuts down.	N/A
9.36.5.11.(3)	9.36.5.11. Modeling HVAC System of Proposed House	(3) Permanent supplementary heating systems that are operated by a thermostat or automatic control shall be included in the energy model calculations for the proposed house.	N/A
9.36.5.11.(4)	9.36.5.11. Modeling HVAC System of Proposed House	(4) The performance characteristics of the heat-recovery ventilation system of the proposed house shall be as specified at not less than the principal ventilation rate required for a system designed in accordance with Section 9.32.	N/A
9.36.5.11.(5)	9.36.5.11. Modeling HVAC System of Proposed House	(5) The ventilation system shall be modeled as operating 8 hours a day at the principal ventilation rate.	N/A

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9.36.5.11.(6)	9.36.5.11. Modeling HVAC System of Proposed House	(6) The energy model calculations shall determine the required principal ventilation rate, in L/s, in accordance with Article 9.32.3.4. based on the number of bedrooms in the proposed house.	N/A
9.36.5.11.(7)	9.36.5.11. Modeling HVAC System of Proposed House	(7) The energy model calculations may include duct and piping losses, taking into account the properties of the specified duct and piping insulation of the proposed house.	N/A
9.36.5.11.(8)	9.36.5.11. Modeling HVAC System of Proposed House	(8) The energy model calculations shall include a heating system and, where installed, a cooling system sized according to the specifications for the proposed house.	N/A
9.36.5.11.(9)	9.36.5.11. Modeling HVAC System of Proposed House	(9) The energy model calculations shall include the effect of part-load performance of equipment using (a) the same modeled part-load performance data used for the reference house as per Clause 9.36.5.15.(6)(a), (b) the default part-load performance characteristics stated in Clause 9.36.5.15.(6)(b), or (c) measured data for the specified equipment.	N/A
9.36.5.11.(10)	9.36.5.11. Modeling HVAC System of Proposed House	(10) Where a heat-recovery ventilator is installed in the proposed house, the energy model calculations shall only account for the recovery of sensible heat using the efficiency ratings in Sentence 9.36.3.9.(3).	N/A
9.36.5.11.(11)	9.36.5.11. Modeling HVAC System of Proposed House	(11) Except as provided in Sentence (12), where a forced-air system is installed in the proposed house, the energy model calculations shall assume the circulation fan operates when the heating, cooling or principal ventilation system is operating.	N/A
9.36.5.11.(12)	9.36.5.11. Modeling HVAC System of Proposed House	(12) Where a forced-air system is installed in the proposed house and where the principal ventilation system in the proposed house is a separate, fully ducted ventilation system, the energy model calculations shall assume the circulation fan operates only when the heating or cooling system is operating.	N/A
9.36.5.11.(13)	9.36.5.11. Modeling HVAC System of Proposed House	(13) Where the proposed house contains multiple HVAC systems, the circulation fan power shall be the sum of the circulation fan power capacity of each system.	N/A

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9.36.5.11.(14)	9.36.5.11. Modeling HVAC System of Proposed House	(14) The ventilation fan power consumption shall be modeled (a) as being 2.32 W/L/s for each ventilation fan on the exhaust side and, where applicable, on the supply side, or (b) as specified, where a heat-recovery ventilator is used.	N/A
9.36.5.11.(15)	9.36.5.11. Modeling HVAC System of Proposed House	(15) Where a forced-air system is installed in the proposed house, the energy model calculations shall determine the flow rate, in L/s, of the circulation fan in the reference house by multiplying the capacity, in W, of the heating system in the proposed house by (a) 0.0604 for heat pumps, and (b) 0.0251 for all other types of heating systems.	N/A
9.36.5.11.(16)	9.36.5.11. Modeling HVAC System of Proposed House	(16) Where a forced-air system is installed in the proposed house, the energy model calculations shall determine the minimum electricity requirement, in W, of the circulation fan by multiplying the flow rate, in L/s, of the circulation fan in the reference house, determined in accordance with Sentence (15), by a factor of 2.30.	N/A
9.36.5.11.(17)	9.36.5.11. Modeling HVAC System of Proposed House	(17) Where a forced-air system is installed in the proposed house, the flow rate of the circulation fan shall be modeled as being the larger of (a) the flow rate of the circulation fan of the reference house, determined in accordance with Sentence (15), or (b) the flow rate of the circulation fan for the forced-air system specified in the design for the proposed house.	N/A
9.36.5.11.(18)	9.36.5.11. Modeling HVAC System of Proposed House	(18) Except as provided in Sentence (19), where a forced-air system is installed in the proposed house, the power capacity of the circulation fan shall be modeled as specified in the design for the proposed house.	N/A
9.36.5.11.(19)	9.36.5.11. Modeling HVAC System of Proposed House	(19) Where the design for the proposed house specifies a forced-air system with a circulation fan flow rate that is lower than the flow rate of the circulation fan in the reference house, as determined in accordance with Sentence (15), the electricity capacity, in W, of the circulation fan shall be modeled as being the larger of (a) the electricity capacity specified for the circulation fan in the proposed forced-air system, or (b) the minimum circulation fan electricity capacity determined in accordance with Sentence (16).	N/A
9.36.5.11.(20)	9.36.5.11. Modeling HVAC System of Proposed House	(20) For natural gas-, oil-, propane- and wood-burning heating systems, the energy model calculations shall set the auxiliary electricity requirements, including that of combustion fans, to those specified for the proposed house.	N/A

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9.36.5.12.(1)	9.36.5.12. Modeling Service Water Heating System of Proposed House	(1) The service water heating system used in the energy model calculations shall be sized as specified in the design for the proposed house.	N/A
9.36.5.12.(2)	9.36.5.12. Modeling Service Water Heating System of Proposed House	(2) The energy model calculations may include (a) piping losses, and (b) drain-water heat recovery, provided (i) the calculation of the heat recovered is based on the performance of the drain-water heat-recovery unit specified, as determined in accordance with CSA B55.1, "Test method for measuring efficiency and pressure loss of drain water heat recovery units," using a drain-water inlet temperature of 35°C, and (ii) where there are one or two above-ground showers, all of them are served by the drain-water heat-recovery unit, and where there are more than two above-ground showers, at least two of them are served by the drain-water heat-recovery unit.	https://www.dropbox.com/s/7l4r4oioqy73mdk/Proposed_Change_1608.pdf?dl=0
9.36.5.13.(1)	9.36.5.13. General Requirements for Modeling the Reference House	(1) Except as provided in Sentence (2) and Articles 9.36.5.14. to 9.36.5.16., the energy model calculations for the reference house shall be consistent with the prescriptive requirements of Subsections 9.36.2. to 9.36.4. with regard to (a) fenestration and opaque *building* envelope assembly types and areas, (b) HVAC system types and capacities, and (c) service water heating system types and capacities.	N/A
9.36.5.13.(2)	9.36.5.13. General Requirements for Modeling the Reference House	(2) The energy model calculations for the reference house shall include the same values as those used for the proposed house with regard to (a) *floor area*, (b) heated volume, and (c) number and types of rooms.	N/A
9.36.5.14.(1)	9.36.5.14. Modeling Building Envelope of Reference House	(1) The energy model calculations for the reference house shall include the same values as those used for the proposed house with regard to (a) the gross area of above-ground portion of *foundation* walls, (b) *soil* conditions, (c) the orientation of the *foundation*, and (d) the ratio of fenestration area to opaque area of doors.	N/A
9.36.5.14.(2)	9.36.5.14. Modeling Building Envelope of Reference House	(2) The energy model calculations for the reference house shall use the following set values: (a) 0.060 MJ/m2×°C for thermal mass, (b) a solar absorptance of 0.4 for the exterior walls, roofs and exposed floors, (c) 0.26 for the solar heat gain coefficient of fenestration, and (d) ~~2.5~~3.0 air changes per hour for detached and 3.5 air changes per hour for attached at 50 Pa pressure differential for airtightness, ~~d) an airtightness of~~	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0

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		~~i) 3.0 air changes per hour at 50 Pa pressure differential for attached zones where airtightness used for the proposed house is determined in accordance with Sentence 9.36.8.3.(1) using the unguarded method, or~~ ~~ii) 2.5 air changes per hour at 50 Pa pressure differential otherwise, and~~ (e) the pressure exponent used for the proposed house where this value is less than 0.67, otherwise, 0.67.	
9.36.5.14.(3)	9.36.5.14. Modeling Building Envelope of Reference House	(3) The effective thermal resistance and overall thermal transmittance values, as applicable, used in the energy model calculations for the reference house shall be determined for the applicable heating degree-day zone in accordance with (a) Table 9.36.2.6.-A for walls, ceilings below attics, roof assemblies and *rim joists*, (b) Table 9.36.2.7.-A for doors, and (c) Table 9.36.2.8.-A for below-*grade* walls and slabs-on-ground.	N/A
9.36.5.14.(4)	9.36.5.14. Modeling Building Envelope of Reference House	(4) Except as provided in Sentences (5) and (6), the exterior walls, roof-ceiling assembly, doors, walls, exposed floors, and floors of the reference house that are in contact with the ground shall have the same area as those of the proposed house.	N/A
9.36.5.14.(5)	9.36.5.14. Modeling Building Envelope of Reference House	(5) The area and orientation of fenestration and doors of the reference house shall be modeled as being equally distributed on all sides of the house.	N/A
9.36.5.14.(6)	9.36.5.14. Modeling Building Envelope of Reference House	(6) The gross wall area and the area of fenestration and doors of the reference house shall be determined in accordance with Article 9.36.2.3.	N/A
9.36.5.14.(7)	9.36.5.14. Modeling Building Envelope of Reference House	(7) Windows and other glazed components in the reference house shall have a maximum overall thermal transmittance as required in Table 9.36.2.7.-A for the applicable heating degree-day category.	N/A
9.36.5.14.(8)	9.36.5.14. Modeling Building Envelope of Reference House	(8) The configuration of insulation in assemblies of the reference house that are in contact with the ground shall be modeled as conforming to Article 9.36.2.8.	N/A
9.36.5.14.(9)	9.36.5.14. Modeling Building Envelope of Reference House	(9) *Foundation* walls shall be modeled using the applicable effective thermal resistance values in Table 9.36.2.8.-A and as conforming to Sentence 9.36.2.8.(2).	N/A

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9.36.5.14.(10)	9.36.5.14. Modeling Building Envelope of Reference House	(10) The fenestration and door area to gross wall area ratio (FDWR) of the reference house shall be (a) for houses containing 1 or 2 *dwelling units*, (i) as per the proposed house, where its FDWR is between 17% and 22%, (ii) 17%, where the FDWR of the proposed house is less than 17%, or (iii) 22%, where the FDWR of the proposed house is greater than 22%, and (b) for *buildings* of *residential occupancy* containing more than 2 *dwelling units*, (i) the FDWR determined in Clause (a) for the areas determined in accordance with Sentence 9.36.2.3.(2) and, where the FDWR determined in accordance with the calculation in Sentence 9.36.2.3.(3) only does not exceed 40%, or (ii) 40% of the gross wall area enclosing *conditioned space* where the area of fenestration and doors is greater than 40% of the gross wall area enclosing *conditioned space* determined in accordance with Sentence 9.36.2.3.(2).	N/A
9.36.5.15.(1)	9.36.5.15. Modeling HVAC System of Reference House	(1) Where multiple HVAC systems serve a single space, the energy model calculations for the reference house shall use the same order of priority as that used for the proposed house. (See Sentence 9.36.5.11.(1).)	N/A
9.36.5.15.(2)	9.36.5.15. Modeling HVAC System of Reference House	(2) The energy model calculations for the reference house shall include the same features as those used for the proposed house with regard to (a) the principal heating and cooling energy sources, which are gas, electricity, oil, propane, wood or a heat pump, (b) the primary and secondary energy sources, which are gas, electricity, oil, propane, wood or a heat pump, and (c) the ventilation rate (see Sentence 9.36.5.11.(6)).	N/A
9.36.5.15.(3)	9.36.5.15. Modeling HVAC System of Reference House	(3) Except as required in Sentence 9.36.3.8.(1), the reference house shall be modeled without a heat-recovery ventilator.	N/A
9.36.5.15.(4)	9.36.5.15. Modeling HVAC System of Reference House	(4) The ventilation system shall be modeled as operating 8 hours a day.	N/A
9.36.5.15.(5)	9.36.5.15. Modeling HVAC System of Reference House	(5) The heating system and, where installed, the cooling system shall be sized in accordance with Article 9.33.5.1. with regard to total heat output capacity and nominal cooling capacity.	N/A

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9.36.5.15.(6)	9.36.5.15. Modeling HVAC System of Reference House	(6) The part-load performance of HVAC equipment in the reference house shall be calculated using (a) modeled part-load performance characteristics, where applicable, or (b) the performance values for each type of system multiplied by an adjustment factor from Table 9.36.5.15.-A, 9.36.5.15.-B or 9.36.5.15.-C as follows: (i) for *furnaces*, by multiplying the *furnace* steady-state efficiency by the adjustment factor given in Table 9.36.5.15.-A, (ii) for heat pumps and air conditioners, by multiplying the heat pump steady-state coefficient of performance by the adjustment factor given in Table 9.36.5.15.-B, and (iii) for *boilers*, combination space-heating and service water heating systems, and integrated mechanical systems, by multiplying the net-full-load heating efficiency by the adjustment factor given in Table 9.36.5.15.-C.	N/A
9.36.5.15.(7)	9.36.5.15. Modeling HVAC System of Reference House	(7) The performance of the HVAC equipment in the reference house shall be modeled (a) as conforming to Table 9.36.3.10. for the corresponding type, fuel source and capacity of equipment in the proposed house, or (b) where the HVAC equipment for the proposed house is not addressed in Table 9.36.3.10., as a gas warm-air *furnace* with a minimum performance rating of 92% annual fuel utilization efficiency.	N/A
9.36.5.15.(8)	9.36.5.15. Modeling HVAC System of Reference House	(8) Where a heat-recovery ventilator is installed in the reference house, the energy model calculations shall only account for the recovery of sensible heat using the efficiency ratings in Sentence 9.36.3.9.(3).	N/A
9.36.5.15.(9)	9.36.5.15. Modeling HVAC System of Reference House	(9) The energy model calculations shall assume all ventilation and circulation fans required to be modeled in the reference house are equipped with permanent-split capacitor (PSC) motors.	N/A
9.36.5.15.(10)	9.36.5.15. Modeling HVAC System of Reference House	(10) Where a forced-air system is installed in the reference house, the energy model calculations shall assume the circulation fan operates when the heating, cooling or principal ventilation system is called for.	N/A
9.36.5.15.(11)	9.36.5.15. Modeling HVAC System of Reference House	(11) Where the reference house contains multiple HVAC systems, the circulation fan power shall be the sum of the circulation fan power capacity of each system.	N/A
9.36.5.15.(12)	9.36.5.15. Modeling HVAC System of Reference House	(12) The principal ventilation flow rate, in L/s, prescribed in Section 9.32. shall be multiplied by 2.32 W/L/s to determine the ventilation fan power capacity, in W, to be used in the energy model calculations for each fan on the exhaust side and, where applicable, on the supply side.	N/A

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9.36.5.15.(13)	9.36.5.15. Modeling HVAC System of Reference House	(13) Where a heat-recovery ventilator is required in the reference house in accordance with Article 9.36.3.8., the ventilation flow rate, in L/s, in the zone served by the pool or hot tub shall be multiplied by 4.18 W/L/s to determine the heat-recovery ventilator power, in W, to be used in the energy model calculations.	N/A
9.36.5.15.(14)	9.36.5.15. Modeling HVAC System of Reference House	(14) Where a forced-air system is installed in the reference house, the system's capacity, in W, shall be multiplied by one of the following factors to determine the circulation fan flow rate, in L/s: (a) 0.0604 for heat pumps, and (b) 0.0251 for all other types of heating systems.	N/A
9.36.5.15.(15)	9.36.5.15. Modeling HVAC System of Reference House	(15) Where a forced-air system is installed in the reference house, the circulation fan flow rate, in L/s, shall be multiplied by 2.30 W/L/s to determine the circulation fan power capacity, in W.	N/A
9.36.5.15.(16)	9.36.5.15. Modeling HVAC System of Reference House	(16) For natural gas-, oil-, propane- and wood-burning heating systems, the energy model calculations shall set the auxiliary electricity capacity, including that of combustion fans, to 208 W during operation.	N/A
9.36.5.16.(1)	9.36.5.16. Modeling Service Water Heating System of Reference House	(1) The energy source of the reference house's service water heating system, which is gas, electricity, oil, propane, wood or a heat pump, shall be the same as that for the system in the proposed house.	N/A
9.36.5.16.(2)	9.36.5.16. Modeling Service Water Heating System of Reference House	(2) The service water heating system in the reference house shall be sized in accordance with Subsection 9.31.6. with regard to output capacity.	N/A
9.36.5.16.(3)	9.36.5.16. Modeling Service Water Heating System of Reference House	(3) Except as required by Table 9.36.5.16., the performance of the service water heating equipment in the reference house shall be modeled as conforming to Table 9.36.4.2. for the energy source, capacity and type of service water heating equipment in the proposed house.	N/A
9.36.6. Tiered Energy Performance Compliance – Prescriptive Path			
9.36.6.1.(1)	9.36.6.1. Scope	(1) This Subsection is concerned with the energy performance improvement of the building through the implementation of energy conservation measures.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.2.(1)	9.36.6.2. Compliance	(1) Compliance with this Subsection shall be achieved by	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0

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<table>
<tr><td></td><td></td><td>(a) designing and constructing buildings to which this Subsection applies in accordance with one or more of the energy conservation measures prescribed in Articles 9.36.6.4. to 9.36.6.10. to accumulate the minimum sum of energy conservation points required to attain Energy Performance Tier 3 as specified in Table 9.36.6.2., and
(b) complying with Subsections 9.36.2. to 9.36.4., except where these requirements are specifically permitted by this Subsection to be waived.</td><td></td></tr>
<tr><td></td><td></td><td>TABLE 9.36.6.2. ENERGY PERFORMANCE TIERS
<table><tr><th>Energy Performance Tier</th><th>Minimum Sum of Energy Conservation Points</th></tr><tr><td>~~1~~</td><td>~~–~~</td></tr><tr><td>~~2~~</td><td>~~10~~</td></tr><tr><td>3</td><td>~~Reserved~~ 20</td></tr><tr><td>~~4~~</td><td>~~Reserved~~</td></tr><tr><td>~~5~~</td><td>~~Reserved~~</td></tr></table></td><td></td></tr>
<tr><td>9.36.6.3.(1)</td><td>9.36.6.3. Definitions</td><td>Reserved</td><td>https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0</td></tr>
<tr><td>9.36.6.4.(1)</td><td>9.36.6.4. Building Envelope - General</td><td>(1) The building envelope shall be designed and constructed in accordance with Articles 9.36.2.1. to 9.36.2.5. and this Subsection.</td><td>https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0</td></tr>
<tr><td>9.36.6.5.(1)</td><td>9.36.6.5. Energy Conservation Measures for Above-Ground Opaque Building Assemblies</td><td>(1) Except as permitted by Articles 9.36.2.5. and 9.36.2.11., and Sentence 9.36.2.6.(3)., the effective thermal resistance of aboveground opaque building assemblies or portions thereof shall be not less than that shown for the applicable heating degree-days of the building location in Table 9.36.2.6.-B.</td><td>https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0</td></tr>
<tr><td>9.36.6.5.(2)</td><td>9.36.6.5. Energy Conservation Measures for Above-Ground Opaque Building Assemblies</td><td>(2) Above-ground walls that comply with one of the energy conservation measures prescribed in Table 9.36.6.5. shall be credited with the corresponding energy conservation points stipulated therein.</td><td>https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0</td></tr>
<tr><td>9.36.6.5.(3)</td><td>9.36.6.5. Energy Conservation Measures for Above-Ground Opaque Building Assemblies</td><td>(3) The effective thermal resistance of rim joists shall be not less than that of the above-ground walls.</td><td>https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0</td></tr>
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9.36.6.5.(4)	9.36.6.5. Energy Conservation Measures for Above-Ground Opaque Building Assemblies	(4) Where the top of a section of foundation wall is on average greater than or equal to 600 mm above the adjoining ground level, the effective thermal resistance of the above-ground portion of that section of wall shall be not less than that of the above-ground walls.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.5.(5)	9.36.6.5. Energy Conservation Measures for Above-Ground Opaque Building Assemblies	(5) Except for tubular daylighting devices, the effective thermal resistance of skylight shafts shall be not less than that of the above-ground walls.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.5.(6)	9.36.6.5. Energy Conservation Measures for Above-Ground Opaque Building Assemblies	(6) Except as provided in Sentence (7), where above-ground walls are constructed using two or more wall assemblies with different calculated effective thermal resistances, the above-ground wall assembly with the lowest effective thermal resistance value shall be used to determine the applicable energy conservation points from Table 9.36.6.5.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.5.(7)	9.36.6.5. Energy Conservation Measures for Above-Ground Opaque Building Assemblies	(7) The effective thermal resistance of one or more of the above-ground wall assemblies referred to in Sentence (5) is permitted to be less than that required to meet an energy conservation measure target listed in Table 9.36.6.5. for the wall or walls to be credited with the energy conservation points listed for that target, provided (a) the effective thermal resistance of one or more of the other aboveground wall assemblies is increased to more than the energy conservation measure target listed in Table 9.36.6.5. to account for the wall assemblies that do not meet the target, and (b) the sum of the results of each individual above-ground wall assembly area divided by its respective effective thermal resistance is less than or equal to the total area of all above-ground wall assemblies divided by the effective thermal resistance target listed in Table 9.36.6.5. that is to be credited.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.6.(1)	9.36.6.6. Energy Conservation Measures for Fenestration and Doors	(1) Except as provided in Sentences (2), (3) and (4), fenestration and doors that comply with one of the energy conservation measures prescribed in Table 9.36.6.6. shall be credited with the corresponding energy conservation points stipulated therein, provided all fenestration and doors comply with that energy conservation measure.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.6.(2)	9.36.6.6. Energy Conservation Measures for Fenestration and Doors	(2) Where the individual doors or windows have more than one overall thermal transmittance values (U-values), an average U-value is permitted to be used to determine the applicable energy conservation points from Table 9.36.6.6., provided the requirements of Sentence (3) are met.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.6.(3)	9.36.6.6. Energy Conservation Measures for Fenestration and Doors	(3) The U-value of one or more doors or fenestration is permitted to be greater than that required in Table 9.36.6.6., provided (a) the traded doors and fenestration are located in the same orientation, (b) the U-value of one or more of the other doors and fenestration is decreased to less than the energy conservation measure target in Table 9.36.6.6. to account for the doors and windows that do not meet the target, and (c) the sum of each individual door or fenestration area multiplied by its respective U-value is less than or equal to the total area of all fenestration and doors multiplied by the U-value target in Table 9.36.6.6. that is to be credited.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0

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9.36.6.6.(4)	9.36.6.6. Energy Conservation Measures for Fenestration and Doors	(4) Where the fenestration and doors make up not more than 17% of the total aboveground wall area, including openings, in a given orientation, the fenestration and doors in that orientation need not comply with Sentence (1) and are not subject to the provisions of Sentences (2) and (3), provided they meet or exceed the minimum Energy Rating stated in Table 9.36.6.6. that is to be credited.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.7.(1)	9.36.6.7. Energy Conservation Measures for Opaque Building Assemblies Below-Grade or in Contact with the Ground	(1) Opaque *building* assemblies below-grade or in contact with the ground shall be designed and constructed in accordance with Sentences 9.36.2.8.(2) to (10) and this Article.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.7.(2)	9.36.6.7. Energy Conservation Measures for Opaque Building Assemblies Below-Grade or in Contact with the Ground	(2) Except as permitted by Article 9.36.2.5., the effective thermal resistance of *foundation* walls shall be not less than that shown for the applicable heating degree-days of the *building* location in Table 9.36.2.8.-B.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.7.(3)	9.36.6.7. Energy Conservation Measures for Opaque Building Assemblies Below-Grade or in Contact with the Ground	(3) *Foundation* walls that comply with one of the energy conservation measures prescribed in Table 9.36.6.7. shall be credited with the corresponding energy conservation points stipulated therein.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.7.(4)	9.36.6.7. Energy Conservation Measures for Opaque Building Assemblies Below-Grade or in Contact with the Ground	(4) Where *foundation* walls are constructed with more than one effective thermal resistance (RSI) values, the energy conservation points associated with the lowest effective RSI value of any of these walls shall be credited.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.8.(1)	9.36.6.8. Energy Conservation Measures Relating to Airtightness	(1) *Buildings* to which this Subsection applies shall be designed and constructed airtight in accordance with Articles 9.36.2.9., Sentences and 9.36.2.10.(1) to (7) and this Article. (a) Articles 9.36.2.9. and 9.36.2.10., or (b) Article 9.36.2.9. and Sentences 9.36.2.10.(1) to (7) and shall, where airtightness testing is carried out in accordance with Subsection 9.36.8., comply with an Airtightness Level listed in Table 9.36.8.4.-A or 9.36.8.4.-B	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.8.(2)	9.36.6.8. Energy Conservation Measures Relating to Airtightness	(2) *Buildings* that comply with an Airtightness Level determined in accordance with Clause (1)(b) shall be credited with the corresponding energy conservation points stipulated in Table 9.36.6.8.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.9.(1)	9.36.6.9. Energy Conservation Measures for HVAC Systems	(1) HVAC systems, equipment and installations shall be designed and constructed in accordance with Articles 9.36.3.2. to 9.36.3.8. and this Article.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0

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9.36.6.9.(2)	9.36.6.9. Energy Conservation Measures for HVAC Systems	(2) Where HVAC systems, equipment or techniques other than those described in this Article and Articles 9.36.3.2. to 9.36.3.8. are used, the building shall be designed and constructed in accordance with the NECB.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.9.(3)	9.36.6.9. Energy Conservation Measures for HVAC Systems	(3) Ventilation systems serving buildings to which this Subsection applies shall be equipped with a heat-recovery ventilator conforming to Article 9.36.3.9.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.9.(4)	9.36.6.9. Energy Conservation Measures for HVAC Systems	(4) Heat-recovery ventilators that comply with one of the energy conservation measures prescribed in Table 9.36.6.9. shall be credited with the corresponding energy conservation points stipulated therein.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.10.(1)	9.36.6.10. Energy Conservation Measures for Service Water Heating Equipment	(1) Service water heating equipment and components shall be designed and constructed in accordance with Subsection 9.36.4. and this Article.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.10.(2)	9.36.6.10. Energy Conservation Measures for Service Water Heating Equipment	(2) Where service water heating equipment or techniques other than those described in Subsection 9.36.4. and this Article are used, the building shall be designed and constructed in accordance with the NECB.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.10.(3)	9.36.6.10. Energy Conservation Measures for Service Water Heating Equipment	(3) Service water heating equipment that complies with one of the energy conservation measures prescribed in Table 9.36.6.10. shall be credited with the corresponding energy conservation points stipulated therein.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.11.(1)	9.36.6.11. Energy Conservation Points for Building Volume	(1) *Buildings* to which this Subsection applies that contain more than one dwelling unit, each of which contains not more than 230 m^3 of conditioned space measured at the interior surfaces of the walls, ceilings and floors enclosing the suite, are permitted to be credited with ten energy conservation points.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.6.11.(2)	9.36.6.11. Energy Conservation Points for Building Volume	(2) *Buildings* to which this Subsection applies that contain not more than 390 m^3 of conditioned space, measured at the interior surfaces of exterior walls, ceilings and floors, are permitted to be credited with energy conservation points determined in accordance with Table 9.36.6.11.	https://www.dropbox.com/s/pg5zymdtmvbq0r6/nbc15_divb_09.36.01.03._001611.pdf?dl=0
9.36.7. Tiered Energy Performance Compliance — Performance Path			

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9.36.7.1.(1)	9.36.7.1. Scope and Application	(1) This Subsection is concerned with determining compliance with energy performance tier 3 through modeling of the energy performance of components, systems and assemblies that are installed in buildings and houses with or without a *secondary suite*, described in Sentence 9.36.1.3.(3)	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.1.(2)	9.36.7.1. Scope and Application	(2) For the purpose of this Subsection, the term house shall mean all houses, with or without a *secondary suite*, that (a) have heating, ventilation and air-conditioning (HVAC) systems that serve only the house, a *secondary suite*, or both, (b) have service water heating systems that serve only the house, a *secondary suite*, or both, and (c) do not have common spaces intended for occupancy with other dwelling units and houses, except for a *secondary suite*.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.2.(1)	9.36.7.2. Compliance	(1) The energy performance of buildings or houses when calculated according to Article 9.36.7.3. shall conform to the criteria indicated in Table 9.36.7.2. such that (a) the 'percent heat loss reduction' target has been met or exceeded, and (b) one of the following conditions has been satisfied (i) the 'percent improvement' target has been met or exceeded, or (ii) the 'percent house energy target' target has not been exceeded.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0

TABLE 9.36.7.2. ENERGY PERFORMANCE TIERS FOR BUILDINGS OR HOUSES FORMING PART OF SENTENCE 9.36.7.2.(1)

			Applicable Energy Performance Tier				
Volume V_T	**Target Metrics**		~~**1**~~	~~**2**~~	**3**	~~**4**~~	~~**5**~~
> 300 m^3 and where volume is not determined	Percent Heat Loss Reduction[1]		~~n/a~~	~~≥ 5%~~	≥ 10%	~~≥ 20%~~	~~≥ 40%~~
	or	Percent Improvement [2]	~~≥ 0%~~	~~≥ 10%~~	≥ 20%	~~≥ 40%~~	~~≥ 70%~~
		Percent House Energy Target [3]	~~≤ 100%~~	~~≤ 90%~~	≤ 80%	~~≤ 60%~~	~~≤ 30%~~
≤ 300 m^3	Percent Heat Loss Reduction [1]		~~n/a~~	~~≥ 0%~~	≥ 5%	~~≥ 15%~~	~~≥ 25%~~
	or	Percent Improvement [2]	~~≥ 0%~~	~~≥ 0%~~	≥ 10%	~~≥ 30%~~	~~≥ 60%~~
		Percent House Energy Target [3]	~~≤ 100%~~	~~≤ 100%~~	≤ 90%	~~≤ 70%~~	~~≤ 40%~~

Notes to Table [9.36.7.2.]:

(1) See Sentence9.36.7.3.(5)

(2) See Sentence9.36.7.3.(6)

(3) See Sentence9.36.7.3.(7)

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9.36.7.2.(2)	9.36.7.2. Compliance	(2) The peak cooling load for the proposed house shall not be greater than the peak cooling load for the reference house (See Sentence 9.36.7.3.(3)).	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.2.(3)	9.36.7.2. Compliance	(3) The representative volume of conditioned space, V_T, used for determining the target energy performance shall be the total volume of conditioned space within the building or house, expressed in m^3.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.3.(1)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(1) Except where otherwise stated in this article, the proposed and reference houses shall be modeled in accordance with Subsection 9.36.5. to determine (a) the annual energy consumption of the proposed house and the house energy target of the reference house, (b) the annual gross space heat loss of the proposed and reference house, (See Sentence (4)), and. (c) the peak cooling load of the proposed and reference house. (See Sentence (3))	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.3.(2)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(2) ~~Except for tier 1,~~ where space heating is provided by a heat pump in the proposed house, the reference house shall be modelled using (a) equipment of the same type as the secondary or back-up system in the proposed house, which complies with the efficiency requirements of Article 9.36.3.10., or (b) electric resistance heating where no back-up is provided in the proposed house.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.3.(3)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(3) Where cooling systems are not installed in the proposed house, both the proposed and reference houses shall have additional models using appropriately sized space-cooling equipment serving all conditioned spaces to determine the peak cooling load.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.3.(4)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(4) The annual gross space heat loss shall be calculated as the sum of the cumulative heat loss from interior to exterior, via: (a) conduction across opaque and transparent elements of the envelope, (b) infiltration and exfiltration, and (c) mechanical ventilation.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.3.(5)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(5) The 'percent heat loss reduction' shall be calculated by subtracting the annual gross space heat loss of the proposed house from the annual gross space heat loss of the reference house and dividing the result by the annual gross space heat loss of the reference house.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.3.(6)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(6) The 'percent improvement' shall be calculated by subtracting the annual energy consumption of the proposed house from the house energy target of the reference house and dividing the result by the house energy target of the reference house.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0

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9.36.7.3.(7)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(7) The 'percent house energy target' shall be calculated by dividing the annual energy consumption of the proposed house by the house energy target of the reference house.	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.7.3.(8)	9.36.7.3. Energy Performance Improvement Compliance Calculations	(8) The airtightness value used in the energy model for the proposed house shall be use either (a) the appropriate airtightness value set out in Clause 9.36.5.10.(9)(a), or (b) where an airtightness test is to be conducted (i) a design airtightness, until the airtightness has been measured in accordance with Sentence 9.36.8.3.(1), and (ii) once the actual airtightness has been measured, the airtightness value set out in Sentence 9.36.5.10.(9).	https://www.dropbox.com/s/lkss64g6rfelryi/nbc15_divb_09.36.01.03._001617.pdf?dl=0
9.36.8. Measuring Airtightness			
9.36.8.1.(1)	9.36.8.1. Scope and Application	(1) This Subsection is concerned with: (a) determining the airtightness of *buildings* and *dwelling units* and parts thereof: (i) for use in the energy model calculations described in Subsection 9.36.5., or (ii) for input to the determination of Airtightness Levels described in Clause (1)[b], and (b) determining an Airtightness Level for the building or dwelling unit for compliance with tiered performance specified in Subsection 9.36.7. or Article 9.36.6.8.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.8.2.(1)	9.36.8.2. Definitions	(1) For the purposes of this Subsection, the following terms shall have the meanings stated herein: (a) "zone" means a *conditioned space* or part thereof having a sufficiently large opening onto the location where the airtightness testing equipment is installed to provide enough airflow such that the entire zone is at the same pressure, (b) "attached zone" means a zone whose boundary area is fully or partially in contact with an adjacent zone or zones, (c) "ACH_{50}" refers to the air changes per hour at a reference pressure of 50 Pa, (d) "NLA_{10}" refers to the normalized leakage area at a reference pressure of 10 Pa, and (e) "NLR_{50}" refers to the normalized leakage rate at a reference pressure of 50 Pa.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.8.3.(1)	9.36.8.3. Determination of Airtightness	(1) Where airtightness is to be used as input to the energy model calculations, it shall be determined through a multi-point depressurization test carried out in accordance with CAN/CGSB-149.10, "Determination of the Airtightness of Building Envelopes by the Fan Depressurization Method," using the following parameters described therein: (a) as-operated, and (b) guarded or unguarded.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.8.3.(2)	9.36.8.3. Determination of Airtightness	(2) Except as provided in Sentence (3), where airtightness is to be used to demonstrate compliance with an Airtightness Level listed in Table 9.36.8.3.-A or -B, it shall be determined through a single-point, two-point or multipoint depressurization test carried out in accordance with CAN/CGSB-149.10, "Determination of the Airtightness of Building Envelopes by the Fan Depressurization Method," using the following parameters described therein: (a) as-operated, and (b) guarded or unguarded, as applicable.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0

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9.36.8.3.(3)	9.36.8.3. Determination of Airtightness	(3) Determining NLA_{10} using a single-point test is not permitted.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.8.4.(1)	9.36.8.4. Determination of Airtightness Level	(1) Compliance with an Airtightness Level listed in Table 9.36.8.4.-A or -B shall be determined in accordance with this Article using the value of ACH_{50}, NLA_{10}, or NLR_{50} determined in accordance with Sentence 9.36.8.3.(2).	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.8.4.(2)	9.36.8.4. Determination of Airtightness Level	(2) For the purposes of Sentences (3) and (4), the Airtightness Level for *buildings* or *dwelling units* containing more than one zone shall be the lowest Airtightness Level achieved for the zones therein.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.8.4.(3)	9.36.8.4. Determination of Airtightness Level	(3) Except as provided in Sentence (4), the Airtightness Level for zones and attached zones shall be determined by complying with one of the corresponding airtightness values stipulated in Table 9.36.8.4.-A.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0
9.36.8.4.(4)	9.36.8.4. Determination of Airtightness Level	(4) Where the unguarded method is used to determine the airtightness of an attached zone, the Airtightness Level shall be determined by complying with one of the corresponding airtightness values stipulated in Table 9.36.8.4.-B, provided the zone is tested independently.	https://www.dropbox.com/s/r7f743ddjpaoygt/nbc15_divb_09.36._001610.pdf?dl=0

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