

BY-LAW NO. 12997

**A By-law to amend Building By-law No. 12511
Regarding 2021 Housekeeping and Miscellaneous Amendments**

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

1. This By-law amends the indicated provisions of Building By-law 12511.
2. In Book I, Division A, Article 1.4.1.2., Council:
 - (a) strikes out:

“**Journeyman plumber** means a person, other than an *apprentice*, who holds a certificate issued pursuant to the provisions of the Industry Training Authority Act of British Columbia authorizing the person to engage in the plumbing trade.”;
 - (b) adds in correct alphabetical order:

“**Journeyperson plumber** means a person, other than an *apprentice*, who holds a certificate issued pursuant to the provisions of the Industry Training Authority Act of British Columbia authorizing the person to engage in the plumbing trade.”;
 - (c) strikes out:

“**Designated Structural Engineer (Struct. Eng.)** means a person who is registered or licensed to practice as a professional engineer under the Engineers and Geoscientists Act of British Columbia, and a person who is designated by the Association of Professional Engineers and Geoscientists of British Columbia as a Designated Structural Engineer.”,

and substitutes:

“**Designated Structural Engineer (Struct. Eng.)** means a person who is registered or licensed to practice as a professional engineer under the Engineers and Geoscientists Regulations pursuant to the Professional Governance Act of British Columbia, and a person who is designated by the Association of Professional Engineers and Geoscientists of British Columbia as a Designated Structural Engineer.”; and
 - (d) strikes out:

“**Registered professional** means

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

and substitutes:

“Registered professional means

- a person who is registered or licensed to practise as an architect under the Architects Act, or
- a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Regulations pursuant to the Professional Governance Act of British Columbia.”

3. In Book I, Division A, Article 2.1.1.1., Council strikes out Sentence (1) and substitutes:

“1) This Part applies to all *buildings* covered in this By-law except for *existing buildings*. (See Article 1.1.1.1.) ”.

4. In Book I, Division A, Sentence 3.2.1.1.(1), Council strikes out the line associated with functional statement [F30] and substitutes:

“F30 To minimize the risk of injury to persons as a result of tripping, slipping, falling, contact, assault, drowning or collision.”.

5. In Book I, Division B, Article 1.3.1.2., in Table 1.3.1.2. after the row associated with “TWC 1995”, Council adds the following new row:

“

UL	ANSI/CAN/UL 2524 - 2019	Standard For Safety In-building 2-Way Emergency Radio Communication Enhancement Systems	3.2.5.20.(4) A-3.2.5.20.
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”.

6. In Book I, Division B, Article 3.1.2.8., Council strikes out “(See also Article 3.3.2.17.)”.

7. In Book I, Division B, Article 3.1.2.8., Council strikes out Table 3.1.2.8. and substitutes:

“

Table 3.1.2.8.

Major Occupancy Classification and Fire Safety Requirements for Child Care Facilities

Forming part of Sentence 3.1.2.5.(3)

Age of Children (months)	Number of Children	Major Occupancy Permitted	Sprinklers	Fire Alarm	Smoke Detection and CO Alarms ⁽²⁾	Fire Separation from Remainder of Building	Emergency Lighting
< 30	> 8	A2	Building	Required	Required	2 h	Required
	3 – 8	C	<i>Suite Only</i>	Required	Required	2 h	Required
		C ⁽¹⁾	<i>Suite Only</i>	Not Required	Required	No	Required
≥ 30	> 8	A2	Building	Required	Required	1 h	Required
	3 – 8	C	<i>Suite Only</i>	Required	Required	1 h	Required
		C ⁽¹⁾	Not Required	Not Required	Required	No	Required

Notes to Table 3.1.2.8.:

⁽¹⁾ Applies to residential *buildings* with no more than 2 principal *dwelling units* or *row houses*

⁽²⁾ Smoke detection shall include smoke detectors where the building is provided with a fire alarm system, and smoke alarms where required by Article 3.2.4.20.

”.

8. In Book I, Division B, Article 3.1.3.6., Council strikes out Clause (6)(g) and substitutes:

“g) the penetrations between the horizontal *fire separation* in Clause (d) shall be FT rated,”.

9. In Book I, Division B, Article 3.2.1., Council strikes out Article 3.2.1.7. and substitutes:

“3.2.1.7. Fire Containment in Combustible Buildings

- 1) All Group C *major occupancies* in a *building of combustible construction* greater than 2 *storeys* in *building height* shall be separated from all other *major occupancies* except as prohibited in Article 3.1.3.2. and except as permitted in Sentences (2) and (3), by a *fire separation* with at least a 2 h *fire-resistance rating* constructed of
 - a) concrete,
 - b) masonry, or
 - c) in a *sprinklered building, encapsulated mass timber construction* complying with Subsection 3.1.18.
- 2) The *fire-resistance rating* required in Sentence (1) is permitted to be 1.5 h for a *storage garage*.

- 3) The *fire separation* of every *exit*, elevator and vertical service shaft that penetrates a concrete, masonry, or encapsulated mass timber construction floor assembly as required in Sentence (1) shall be separated from the remainder of the *building* by a *fire separation* having a *fire-resistance rating* determined by Sentences (1) or (2) for
 - a) the floor assembly above the *storey*, or
 - b) the floor assembly below the *storey*, if there is no floor assembly above.
- 4) Where a *building* of *combustible construction* or *encapsulated mass timber construction* greater than 2 *storeys* in *building height* contains an *occupancy* other than Group C or Group D on the second or third *storey* that is required to be constructed in accordance with Sentences 3.2.2.48EMTC.(4), 3.2.2.50.(5), 3.2.2.57EMTC.(3), or 3.2.2.58.(4), the *building* shall
 - a) be *sprinklered*,
 - b) be divided into at least two horizontal *fire compartments* on each *storey* containing a *major occupancy* other than Group C or Group D which
 - i) are not more than 1000 m² in area, and
 - ii) are constructed as *fire separations* with at least a 2 h *fire-resistance rating* or of *encapsulated mass timber construction*,
 - c) have *exit* stairs serving *storeys* above the third *storey* constructed as *fire separations* with at least a 2 h *fire-resistance rating* on levels containing a Group A or Group E major occupancy constructed in accordance with Sentences 3.2.2.48EMTC.(4), 3.2.2.50.(5), 3.2.2.57EMTC.(3), or 3.2.2.58.(4), and
 - d) have each *fire compartment* required by Clause (b) served by at least one *exit* stair.

(See Note A-3.2.1.7.(4))”.

10. In Book I, Division B, Article 3.2.4.8., Council strikes out Sentence 3.2.4.8.(8) and substitutes:

- “8) If a fire alarm system is required in a *building* of *residential occupancy* containing *row housing* or residential blocks where the egress of the *dwelling units* conforms to Sentence 3.3.4.4.(3) or Clause 9.9.9.1.(1)(b), and the *building* is no more than 4 *storeys* above the adjacent ground or storage garage, the *building* shall be provided with
- a) a single electrically supervised fire alarm system for the entire *building*,
 - b) at least one sprinkler zone for each block of *row housing* or each residential block,
 - c) a *sprinkler system* which is monitored by the fire alarm system and an off-site monitoring service,
 - d) a strobe light located outside the principal entrance of each *dwelling unit* and connected to an internal smoke alarm within the *dwelling unit*, and
 - e) an exterior audible signal activated by the fire alarm system.”.

11. In Book I, Division B, Article 3.2.4.11., Council strikes out Clause 3.2.4.11.(1)(h) and substitutes:

- “h) each *floor area* in front of the elevator or elevators.”.

12. In Book I, Division B, Article 3.2.4.19., in Sentence 3.2.4.19.(6), Council strikes out “Sentence 3.8.2.12.(5)” and substitutes “Sentences 3.8.2.12.(5) and 3.8.5.7.(4)”.
13. In Book I, Division B, Article 3.2.4.22., Council:
- (a) strikes out Sentence (5) and substitutes the following:
- “**5**) Except where a radio antenna system conforming to Sentence 3.2.5.20.(1) is installed, emergency telephones shall be installed and located in each *floor area* near *exit* stair shafts for the 2-way communication system referred to in Clause (1)(a).”; and
- (b) strikes out Sentence (11).
14. In Book I, Division B, Article 3.2.5.3., Council:
- (a) in Sentence 3.2.5.3.(1), strikes out “On” and substitutes “Except as permitted by Sentence (2), on”; and
- (b) adds the following new Sentence in the correct numerical order:
- “**2**) A *building* of residential occupancy not more than 4 *storeys* in *building height* need not be provided with direct access from the *floor areas* immediately below, provided
- a) the slope of the roof is less than 1 in 4,
- b) there is no common patio, balcony, or deck area, and
- c) *dwelling units* are provided with direct stair access from *floor areas* immediately below.”.
15. In Book I, Division B, Council strikes out Article 3.2.5.5., and substitutes:
- “3.2.5.5. Location of Access Routes and Paths of Travel**
(See Note A-3.2.5.5.)
- 1)** Except as provided by Sentences (2) and (3), access routes required by Article 3.2.5.4. shall be located so that
- a) the principal entrance is no less than 3 m and no more than 15 m from the closest portion of the access route, measured horizontally along the path of travel from the access route to the principal entrance (see Note A-3.2.5.5.(2)(a).), and
- b) every access opening required by Articles 3.2.5.1. and 3.2.5.2. are located not less than 3 m and not more than 15 m from the closest portion of the access route, measured horizontally to the face of the *building*.
(See Note A-3.2.5.5.(1).)
- 2)** Paths of travel for firefighters shall not be more than 45 m to the principal *suite* entry for
- a) a *building* or portion of a *building*, of *residential occupancy* containing *dwelling units* with *means of egress* conforming with Article 3.3.4.4. provided directly to the exterior at adjacent grade, or

- b) non-residential portions of a *building*, which are cut off from and have no internal access to the remainder of the *building*. (See Note A-3.2.5.5.(3)(b).)
- 3) The path of travel for firefighters to the main entry of a *dwelling unit* permitted by Clause (2)(a) may be increased to
- a) 65 m where
 - i) *dwelling units* are separated from adjacent *floor areas* by a *fire separation* with at least 1 h *fire-resistance rating*,
 - ii) the *building sprinkler system* is designed to the NFPA 13, except that the *sprinkler system* may be designed to the hydraulic design criteria and sprinkler coverage requirements of NFPA 13R where the building would otherwise be permitted to be NFPA 13D,
 - iii) a strobe light is installed outside the principal entrance of the *dwelling unit*, and is connected to an internal *smoke alarm* within the *dwelling unit*,
 - iv) *sprinkler systems* are monitored by a fire alarm system or residential fire warning system and by an off-site monitoring service,
 - v) lighting and emergency lighting is provided along the path of travel for firefighters with a minimum illumination level of 1 lx, and average illumination of not less than 10 lx, and
 - vi) the *building* is provided with a fire alarm system and graphic annunciator,
 - b) 90 m where
 - i) the requirements of Subclauses (a)(i) to (a)(vi) are met,
 - ii) no principal *dwelling unit* or its *ancillary residential unit* is located above another *dwelling unit*,
 - iii) a 64 mm diameter fire department hose connection is located adjacent to the path of travel for firefighters located not more than 45 m measured from the hose connection to the principal entrance of each of the dwelling units,
 - iv) the location of the fire department hose connections required by Subclause (c)(ii) is indicated on the fire alarm system graphic annunciator, and
 - v) the *building* is *sprinklered* to NFPA 13.
- 4) The access route from the hydrant location to the *building* location or the principal entrance of the *building* as described in Sentences (5) and (6), shall be no more than 90 m. (See Note A-3.2.5.5.(4).)
- 5) Where the access route runs continuously across the face of a *building*, the length of the access route shall be measured by measuring the shortest distance between a line drawn perpendicular to the access route and through the hydrant and a line drawn perpendicular to the access route and through the principal entrance of the *building*. (See Note A-3.2.5.5.(5).)
- 6) Where the access route terminates before the principal entrance of a *building*, the length of the access route shall be measured by measuring from a line drawn perpendicular to the access route and through the hydrant straight along the access route to its terminus and thereafter along the actual path of travel to the principal entrance. (See Note A-3.2.5.5.(6).)

16. In Article 3.2.5.20 of Book I, Division B, Council:

- (a) strikes out Sentence (2) and substitutes:
 - “2)** A radio antenna system shall not be required for
 - a) government *buildings* requiring security against transfer of signals inside and outside of *buildings*,
 - b) where, in the opinion of the *Chief Building Official*, in consultation with the Fire Chief, radio signals compromise the intended use of the *building*, and
 - c) *buildings of residential occupancy* only with no more than two principal *dwelling units.*”; and
 - (b) adds the following new Sentence in the correct numerical order:
 - “4)** A radio antenna system shall comply with ANSI/CAN/UL 2524 “Standard For Safety In-building 2-Way Emergency Radio Communication Enhancement Systems.””.
17. In Book I, Division B, Article 3.2.6.4., Council:
- (a) strikes out Sentence (5) and substitutes:
 - “5)** The automatic emergency recall provided in accordance with Sentence (1) shall be activated by *smoke detectors* installed in
 - a) each *floor area* in front of the elevator(s),
 - b) the elevator hoistway,
 - c) the elevator machine room, or
 - d) any room containing elevator control equipment.”; and
 - (b) adds the following new Sentence in the correct numerical order:
 - “8)** *Smoke detectors* installed in an elevator lobby to comply with Clause 3.2.6.4.(5)(a) shall be located such that the detector is not more than its rated detection distance from the elevator doors that it serves.”.
18. In Book I, Division B, Article 3.2.7.9., Council strikes out Clause (1)(a) and substitutes:
- “a) every elevator serving *storeys* above the *first storey* in a *building* that is more than 18 m high measured between *grade* and the floor level of the top *storey* other than a *building* complying with Sentence 3.2.6.1.(2), and every elevator for firefighters in conformance with Sentence (2),”.
19. In Book I, Division B, Article 3.3.1.3., Council strikes out Sentence (12) and substitutes:
- “12)** Except as permitted by this Section and by Sentence 3.4.2.1.(2), at the point where a doorway referred to in Sentence (11) opens onto a *public corridor* or exterior passageway, it shall be possible to go in opposite directions to each of 2 separate *exits.*”.
20. In Book I, Division B, Article 3.4.6.6., Council strikes out Sentence (7) and substitutes:

- “7) Except for *guards* conforming to Article 3.3.5.10., *guards* shall be designed so that no member, attachment or opening located between 140 mm and 900 mm above the level being protected by the *guard* facilitates climbing. (See Note A-9.8.8.6.(1).)”.
21. In Book I, Division B, Article 3.4.6.16., Council strikes out Clause (4)(k) and substitutes:
- “k) where they are installed on doors providing emergency crossover access to *floor areas* from *exit* stairs directly into a public corridor, or publicly accessed *floor area acceptable* to the *Chief Building Official*, and in accordance with Sentence 3.4.6.18.(2),
- 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, and
 - ii) a legible sign with the words “re-entry door unlocked by fire alarm” written in letters at least 25 mm high with a stroke of at least 5 mm is permanently mounted on the door on the *exit* stair side.”.
22. In Book I, Division B, Article 3.4.6.18, Council strikes out Sentence (2) and substitutes:
- “2) Doors referred to in Sentence (1) are permitted to be equipped with electromagnetic locks, provided they open directly into a public corridor or publicly accessed *floor area acceptable* to the *Chief Building Official*, and comply with Sentences 3.4.6.16.(4) and (5).”.
23. In Book I, Division B, Article 3.8.2.1., Council strikes out Clause (1)(f) and substitutes:
- “f) a portion of the *storey* next above or below the *accessible storey* in a *suite* of not more than two *storeys*, provided the portion of the *storey* next above or below the *accessible storey*
- i) is less than 600 m² in *floor area*,
 - ii) contains only facilities that are also contained on the *accessible storey*, and
 - iii) does not contain an *assembly major occupancy* with an area more than 100 m², and
 - iv) is not served by a passenger-elevating device connecting the *storey* next above or below the *accessible storey* (See Note A-3.8.2.1.(1)(f) and (g).), and”.
24. In Book I, Division B, Council strikes out Article 3.8.5.5., and substitutes:
- “3.8.5.5. Adaptable Dwelling Unit Bathrooms**
(See Note A-3.8.5.5.)
- 1) One bathroom in an *adaptable dwelling unit* that includes a floor level exceeding 40 m² shall

- a) have a washbasin.
 - b) have a toilet,
 - c) have either a bathtub, shower, or be configured to accommodate the future installation of a low barrier shower and shall be constructed with
 - i) the addition of structural reinforcement of framed construction to accommodate the subsequent change in load, or the removal or reduction of the capacity of structural elements to facilitate the future installation of a low barrier shower,
 - ii) pre-plumbing of a drain connection the greatest extent permitted by this Code of to facilitate the future installation of a low barrier shower where it passes through a concrete floor or floor topping, or
 - iii) alternative measures to the satisfaction of the *Chief Building Official* where it can be demonstrated that the future installation of a low barrier shower can be installed without substantial changes to the *building* structure or layout, and
 - d) be arranged so as to provide a minimum clear floor space of 750 mm by 1200 mm in front of a washbasin, toilet, bathtub or shower required by Clause (c),
 - e) be located on
 - i) the principal floor exceeding 40 m² contain living space with level access to an entry at the adjacent ground level, or
 - ii) a floor provided with features that in the opinion of the *Chief Building Official* can readily be modified to facilitate future use by persons with limited mobility (see Note A-3.8.5.5.(1)).
- 2) Walls adjacent to the water closet and bathtub or shower shall accommodate the future installation of grab bars conforming to
- a) Clauses 3.8.3.11.(1)(e) and (f) for water closets, and
 - b) Clause 3.8.3.16.(1)(f) for showers or 3.8.3.17.(1)(f) for bathtubs. (See Note A-3.8.5.5.(2).)
- 3) All bath and shower controls in *adaptable dwelling units* shall be
- i) easily accessible from an open floor space or offset which does not require entry into the shower to operate, and
 - ii) equipped with lever-type controls or hardware that does not require a tight grasp or twisting action of the wrist.
- 4) All washbasins in *adaptable dwelling units* shall be equipped with lever-type faucets or hardware that does not require a tight grasp or twisting action of the wrist.”.

25. In Book I, Division B, Council strikes out Article 3.8.5.7., and substitutes:

“3.8.5.7. Controls, Switches, Outlets and Signalling Devices

- 1) Controls and switches in an *adaptable dwelling unit* intended for regular occupant use, including electrical, telephone, cable and data outlets shall be mounted 455 mm to 1 200 mm above the floor, except where
 - a) in the opinion of the *Chief Building Official*, a different height is necessary to accommodate appliances or equipment, or
 - b) otherwise required for safety or other regulatory enactments.
- 2) Controls for the operation of *building* services or safety devices, electrical switches, thermostats and intercoms in a *adaptable dwelling unit* shall be located no more than 1 200 mm above the finished floor, except where, in the

opinion of the *Chief Building Official*, a different height is necessary for safety reasons.

- 3) At least one electrical receptacle shall be provided in the vicinity of the stair required by Sentence 3.8.5.4.(3).
- 4) Except as permitted by Sentence (5), each *adaptable dwelling unit* shall be provided with special outlet boxes and cover plates as described in Sentence 3.2.4.19.(6). (See also Sentence 3.2.4.19.(7).)
- 5) Where a building is provided with an addressable fire alarm system, a special outlet box described in Sentence (4) is not required provided that
 - a) the dwelling unit has been designed with fire alarm signaling devices located in accordance with Clause 3.2.4.19.(6)(c), and
 - b) the fire alarm system and the signaling devices in clause (a) can accommodate the future replacement of audible signaling devices with combination audible visual signaling devices.”.

26. In Book I, Division B, Article 3.10.1.1., in Table 3.10.1.1., Council:

- (a) adds the following new rows in the correct numerical order:

“

3.1.2.8. Child Care Facilities	
(1)	(b) [F02,F03,F05-OS1.2,OS1.3] Applies to sprinklers.
	[F11-OS1.5] Applies to fire alarm.
	[F11-OS1.5] Applies to smoke and CO alarm.
	[F03, F10-OS1.5] Applies to fire separations from the remainder of the building.
	[F10-OS1.5] Applies to emergency lighting.

”; and

- (b) strikes out the rows for Sentence (2) of Article 3.3.5.3. and substitutes:

“

(2)	[F06-OS1.5,OS1.2] Applies to the separation of entrances to <i>basements</i> and to rooms containing <i>building services</i> from the remainder of the <i>building</i> .
	[F06-OP1.2] Applies to the separation of entrances from the remainder of the <i>building</i> .
	[F05-OS1.5] [F06-OS1.2,OS1.5] Applies to the separation of <i>exits</i> from the remainder of the <i>building</i> .
	[F06-OP1.2] Applies to the separation of <i>exits</i> from the remainder of the <i>building</i> .

”.

27. In the Notes to Part 3 in Book I, Division B, in Note A-3.2.5.20., Council strikes out “INTERCONNECTION” in the heading and substitutes “CONNECTION”.

28. In the Notes to Part 3 in Book I, Division B, in Note A-3.8.3.1.(2), Council:

- (a) strikes out “**Accessibility**” in the title and substitutes “**Accessibility**”; and
- (b) strikes out “Articles 3.8.1.1. to 3.8.2.3.” and substitutes “Articles 3.8.2.1. to 3.8.2.3.”.

29. In the Notes to Part 3 in Book I, Division B, Council adds the following new Note in the correct numerical order:

A-3.8.3.1.(2)(d) The provision for providing reinforcement in wall assemblies adjacent to the toilet and bathtub is intended to assist with future installation of grab bars adjacent to toilets and bathtubs. It is often difficult to add this reinforcement in walls after construction is complete. Therefore solid reinforcement must be installed in the walls adjacent to toilets and bathtubs. The requirements of 3.8.3.11.(1)(e), 3.8.3.16.(1)(f) and 3.8.3.17.(1)(f) may serve as good practice (see note A-3.8.5.5).”

30. In the Notes to Part 3 in Book I, Division B, Council adds the following new Note in the correct numerical order:

A-3.8.3.1.(2)(i) The provision for providing a 750 mm by 1 200 mm clear space in the washroom is to allow direct entry into the washroom and reverse exiting without the need for a 1 500 mm turning circle. Washroom fixtures should be located so as to permit side or end-on transfer from a wheelchair without undue difficulty. The location of bathtub or shower controls should be offset or otherwise located so as to facilitate easy reach from an open floor space. Ideally, the entire space in front of a tub or should be clear of obstructions (see also CSA-B651, Section 6.5)

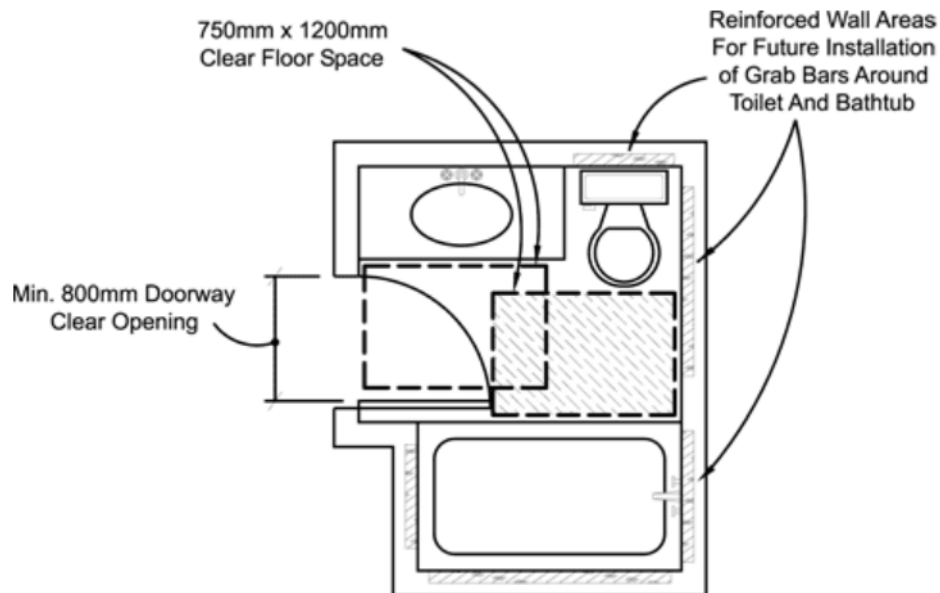


Figure A-3.8.3.1.(2)(i)-A
Signs indicating accessible facilities

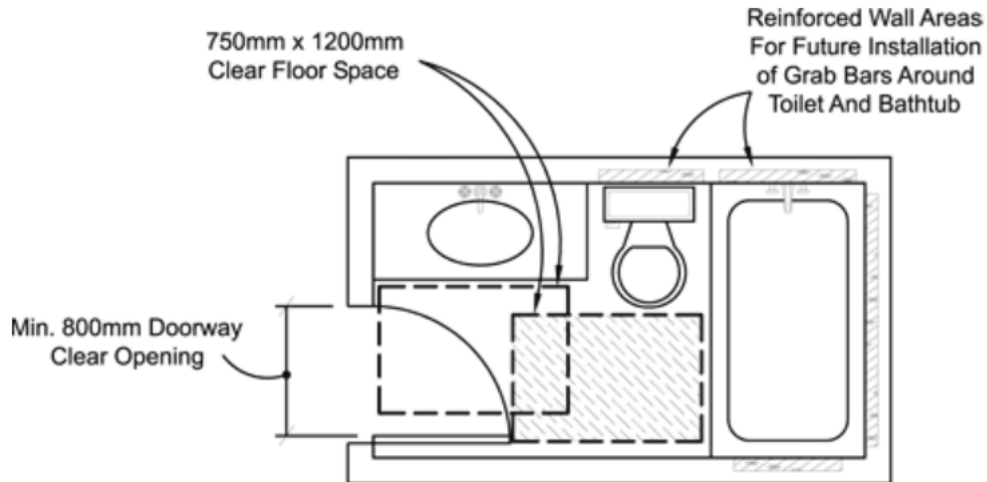


Figure A-3.8.3.1.(2)(i)-B
Signs indicating accessible facilities

31. In the Notes to Part 3 in Book I, Division B, Council adds the following new Note in the correct numerical order:

“A-3.8.5.5.(1) Location of Adaptable Dwelling Unit Bathrooms. One of the fundamental objectives of the Adaptable Dwelling Unit provisions is to allow for the future installation of a three piece bathroom on the principal floor of each unit with features facilitating use for a persons with a range of abilities. Consequently, the requirements of Article 3.8.5.5.(1) are intended to ensure that sufficient space is allocated at the outset so that the principal floor of the dwelling unit can accommodate a future three piece bathroom and space for the effective use of its fixtures that allows for the flexible use of the living space most readily providing access to the exterior for persons with varying degrees of mobility.

In the event that the specific design constraints of the ground floor does not allow for the effective inclusion of a bathroom, the Chief Building Official may permit the allocation of space for the piece washroom on another floor. Similarly, a minimum 40 m² floor area has been established to account for the decreasing efficiency in space use and impact on livability in smaller units.

Chief Building Official’s Interim Position on the design of spaces for the future accommodation of low barrier showers (October 20, 2020):

1. That the triggering requirement for the adaptable bathroom would be based upon an assessment of the size of the livable floor space of a suite on a floor by floor basis, meaning that:
 - (a) at least one adaptable bathroom in each suite is required where any livable floor space exceeds 40 sq. m.,
 - (b) the determination of livable floor space is based upon that portion of the floor area of a given storey of the building which is intended for daily use containing kitchen, living, or dining facilities,

- (c) that the adaptable washroom should be provided on the principal living space with ground floor access, on a floor area that is 40 sq. m. or more in order to perform its intended function, and
 - (d) the current extent of the adaptable bathroom requirements for 3.8.5.5. require either a 3 piece bathroom set, or a sink and toilet plus suitable provision for future installation of a low barrier shower.
2. The underlying general intent of the adaptable bathroom provisions of 3.8.5.5. are to require a dedicated bathroom space ready for future adaptation to accommodate an occupant whose may have physical needs have changes such that they differ from what the present arrangement can accommodate at a minimal cost to the owner.
 3. Where an owner opts to forego a 3 piece bathroom, a proposal for a two piece adaptable washroom generally complying with Article 3.8.5.5. shall include the following:
 - (a) a washbasin and toilet
 - (b) the pre-allocation of a dedicated space for the installation of a low barrier shower which:
 - i. is a dedicated separate space that is not currently a part of the 2 piece bathroom, (such as a 3'X3' / 3'X 4' / 3'X5' / 5'x2.5' bathtub size),
 - ii. may include storage space or similar non-essential space,
 - iii. may not include the current washer and dryer location, service rooms or spaces,
 - iv. shall have suitable structural support to accommodate the future installation of the low barrier shower and surrounds, and
 - v. where the floor is concrete or has a concrete topping, it shall be constructed to accommodate for the future installation of the shower that does not require extensive demolition or cutting of the concrete.
 - (c) a minimum clear floor space of 750mm X 1200mm for maneuvering shall be provided in front of the washbasin, toilet, and the dedicated bathtub / shower space.
 - i. The clear floor space is to be designed to allow sufficient maneuvering room for the occupant to readily transition to and from the future low barrier shower from dedicated separate space without unusual effort.
 - ii. The minimum clear floor space may not overlapping the sink, toilet, or the dedicated space for the lower barrier shower
 - (d) The washroom fixtures shall not be overlap nor shall they overlap the dedicated space.
 - (e) Preplumbing shall be required to support the future installation of a low barrier shower:
 - i. with domestic cold and hot water,
 - ii. with a drain intended for the future installation of a low barrier shower, and
 - iii. without requiring extensive or costly modification to a facilitate the future installation of the low barrier shower.
 - (f) The design drawings shall indicate the location and extents of the dedicated space for the low barrier shower, and indicate the location of all pre-plumbing roughed-in at the dedicated separate space on the initial permit application drawings.”.

32. In the Notes to Part 3 in Book I, Division B, in Note A-3.8.5.5.(3), Council strikes out “**A-3.8.5.5.(3)**” and substitutes “**A-3.8.5.5.(2)**”.
33. In Book I, Division B, Table 6.10.1.1., in the rows under 6.2.1.1., Council strikes out “(a) to (c) and (e) to (i) [F40,41,F50,F51,F54,F63-OH1.1]” and substitutes “(a) to (c) and (e) to (j) [F40,F41,F50,F51,F52,F54,F63-OH1.1]”.
34. In the Notes to Part 6 in Book I, Division B, in Note A-6.2.1.1., Council strikes out ““Recognition, Evaluation and Control of Legionella in Building Water Systems” (American Industrial Hygiene Association, 2015).” and substitutes ““Recognition, Evaluation and Control of *Legionella* in Building Water Systems (Second Edition)” (American Industrial Hygiene Association, 2020).”.
35. In Book I, Division B, Article 9.6.1.4., Council strikes out Sentence (1) and substitutes:

“9.6.1.4. Types of Glass and Protection of Glass

- 1) Glass sidelights and windows located within 915 mm of doors, and greater than 500 mm wide, 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 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.””.
36. In Book I, Division B, Council strikes out Article 9.10.11.2. and substitutes:

“9.10.11.2. Firewalls Not Required

- 1) A *party wall* on a property line of a *building of residential occupancy* need not be constructed as a *firewall*, provided it is constructed as a *fire separation* having not less than a 1 h *fire-resistance rating*, where the *party wall* separates
- a) two principal *dwelling units* where there is no *dwelling unit* above another principal *dwelling unit* and its associated *ancillary residential units*.
 - b) **deleted**,
 - c) **deleted**.
- 2) **Reserved.**
- 3) The wall described in Sentence (1) shall provide continuous protection from the top of the footings to the underside of the roof deck.
- 4) Any space between the top of the wall described in Sentence (1) and the roof deck shall be tightly filled with mineral wool or *noncombustible* material.”.
37. In Book I, Division B, Article 9.10.20.3., Council:
- (a) strikes out Sentence (1) and substitutes:

“1) Except as permitted by Sentence (8), access for fire department vehicles and fire fighters path of travel shall be provided to each

principal entrance of a *building* in accordance with Articles 3.2.5.4., 3.2.5.5. and 3.2.5.6. (See Notes A-9.10.20.3.(1) and A-3.2.5.6.(1).)”;

(b) strikes out Sentence (3) and substitutes:

“**3)** Despite the provisions of Sentence (1), an unobstructed path of travel for firefighters shall be provided to an *ancillary residential building* and the path of travel shall

- a) lead continuously from the *street* to the *lane*,
- b) have a travel distance of no more than 45 m from the *street* to the principal entrance of the *ancillary residential building*,
- c) be at least 900 mm wide,
- d) have an overhead clearance of at least 2 m, and
- e) consist of concrete, asphalt, or similar material.”;

(c) strikes out Sentence (7) and substitutes:

“**7)** Two adjacent parcels may have a single shared path of travel for firefighters over the common property line and the adjacent specified area to access both, provided

- a) each parcel contains or is designed to contain an *ancillary residential building*,
- b) each parcel is subject to a covenant registered on title which prohibits construction upon or obstruction of the common property line and of a specified area adjacent to the property line, and
- c) the path of travel meets the requirements of Sentences (3), (4) and (5).”; and

(d) strikes out Sentence (8) and substitutes:

“**8)** In a residential *building* within the scope of Division A, Article 1.3.3.3., containing not more than 2 principal *dwelling units*, access routes are permitted to be located so that the path of travel for firefighters to the principal entrance of each *dwelling unit* or ancillary *floor area* is no less than

- a) 45 m,
- b) 65 m where
 - i) the *building* is provided with *sprinklers* designed in accordance with NFPA 13, except that the *sprinkler system* may be designed to the hydraulic design criteria and sprinkler coverage requirements of NFPA 13R where the building would otherwise be permitted to be NFPA 13D,
 - ii) despite the requirements of Subclause (b)(i) a fire department connection is not required,
 - iii) the *sprinkler system* is connected to internal smoke alarms within the *dwelling unit*, provided with an exterior audible alarm, and off-site monitoring, and
 - iv) a strobe light is installed outside the principal entrance of the *dwelling unit*, and is connected to an internal *smoke alarm* within the *dwelling unit*, or
- c) 90 m where

- i) no principal *dwelling unit* or its *ancillary residential unit* is located above another *dwelling unit*,
- ii) the *building sprinkler system* is designed to the NFPA 13,
- iii) despite the requirements of Subclause (c)(ii) a fire department connection is not required,
- iv) the *sprinkler system* is connected to internal smoke alarms within the dwelling unit, provided with an exterior audible alarm, and off-site monitoring,
- v) a strobe light is installed outside the principal entrance of the *dwelling unit*, and is connected to an internal *smoke alarm* within the *dwelling unit*,
- vi) an access path of at least 1.2 m wide is provided from each principal *dwelling unit* entry to the street, and
- vii) lighting and emergency lighting is provided along the path of travel for firefighters with a minimum illumination level of 1 lx, and average illumination of not less than 10 lx.”.

38. In the Notes to Part 9 in Book I, Division B, in Note A-9.37.2.15, Council adds the following new paragraph to the end of the note:

“This ‘deemed to comply’ approach replaces the large variety of assemblies that could otherwise be constructed in conformance with Articles 9.10.8.11. and 9.11.1.1. (or their Part 3 and Part 5 equivalents). Where an owner provides assemblies constructed in accordance with the normal residential suite separation requirements, it can readily be seen that the intent of the provisions of 9.37.2.15. have been satisfied.”.

39. In Book I, Division B, Article 10.2.2.6.. Council strikes out Table 10.2.2.6. and substitutes:

“

Table 10.2.2.6.
Minimum Effective Thermal Resistance of Assemblies in Buildings of Group C Major Occupancy

Forming part of Sentences 10.2.2.6.(1)

Building Assembly	Assembly Minimum RSI Value (m²K/W)
Attic Space ⁽¹⁾	8.5
Roof Joist Assemblies for residential <i>buildings</i> with not more than 2 principal <i>dwelling units</i> (Cathedral Ceilings/Flat Roofs)	4.3
Roof Assemblies for residential <i>buildings</i> in excess of 2 principal <i>dwelling units</i> (Cathedral Ceilings / Flat Roofs)	5.28
Walls (including frame crawl space walls) ⁽²⁾	3.85
Foundation Walls	3.85
Box and Rim Joists	3.85
Concrete or Masonry Walls (other than foundation walls)	3.85
Suspended Floors (framed)	4.2

Suspended Floors (concrete slab)	4.2
Concrete Slabs on Ground at, above, or below grade (insulation under all slab area and around edge of slab)	2.5
Radiant Heating Suspended Floor Assembly Over Heated Area (insulation between heated floor and heated area below) ⁽³⁾	2.5
Concrete Balconies, Eyebrows, and Exposed Slab Edge (wrapped or using manufacturer thermal break in structure)	0.42

Notes to Table 10.2.2.6.:

⁽¹⁾The thermal resistance rating of attic space insulation may be reduced to value required for frame walls for a distance of 1200 mm from the exterior wall. A minimum nominal RSI of 3.52 m²K/W is required above the top plate in the attic space .

⁽²⁾ Headers and lintels: cavities between structural members are to be fully insulated, except where a framing plan provided by the builder, architect, designer, or engineer indicates that full-depth solid headers are structurally required.

⁽³⁾ Not applicable when heating elements or piping are located within a concrete topping on a suspended floor assembly or within an internally heated suspended slab.

40. In Book 1, Division B, Article 10.2.2.7., Council strikes out Sentence (3) and substitutes:

“3) The thermal transmittance of factory-assembled fenestration products within the scope of existing certification programs shall be indicated by labels applied to the products at the manufacturing location. The thermal transmittance of fenestration products that are site-assembled, imported, or otherwise outside the scope of existing certification programs shall be suitably documented.

(See Note A-10.2.2.7.(3).)”.

41. In Book I, Division B, Clause 10.2.2.17.(3)(e), Council strikes out “Table 9.32.3.3.A” and substitutes “Table 9.32.3.5.”.

42. In Book I, Division B, Council strikes out Article 10.2.2.20. and substitutes:

“10.2.2.20. Passive House Planning Package (PHPP), EnerGuide, or Other Energy Documentation

- 1) In a *building* required to comply with this Article, at the time of *permit* application, and at the time of final inspection, the owner shall provide to the *Chief Building Official* *acceptable* documentation, in the form of
 - a) a PHPP file from a Certified Passive House Consultant or Designer,
 - b) an EnerGuide Rating System Audit, or
 - c) equivalent energy modelling documentation *acceptable* to the *Chief Building Official*.
- 2) In a *building* required to comply with this article, at the time of mid-construction inspection, the owner shall provide to the *Chief Building Official* *acceptable* documentation, in the form of
 - a) a mid-construction checklist, and
 - b) a blower door test result that achieves an *acceptable* level of performance.

- 3) In a *building* required to comply with this Article, that contains more than 325 m² of *conditioned* space, and does not consist of more than one principal *dwelling unit*, the owner shall provide a calculation utilizing the EnerGuide rating system to demonstrate that the proposed home has a greenhouse gas (GHG) footprint that is no more than two (2) metric tonnes annually (see Note A-10.2.2.20.(3)).”.
43. In the Notes to Part 10 in Book I, Division B, in Note A-10.2.2.7., Council:
- (a) strikes out the words “**General Requirements for Labels On Factory-Glazed Products**” and substitutes “**General Requirements for Labels On Factory-Assembled Fenestration Products**”;
 - (b) strikes out the words “Compliance is demonstrated by means of verifier labels, affixed to factory-glazed products” and substitutes “Compliance is demonstrated by means of verifier labels, affixed to factory-assembled fenestration products”;
 - (c) strikes out the words “• site glazed windows, doors,” and substitutes “• site–assembled windows, doors,”; and
 - (d) strikes out the words “• factory glazed curtainwalls and window wall assemblies.” and substitutes “• factory-assembled curtainwalls and window wall assemblies.”.
44. In the Notes to Part 10 in Book I, Division B, Council adds the following new note in the correct numerical order:
- “A-10.2.2.20.(3) Modelling Guidelines for Large Homes.** For a building required to comply with the greenhouse gas (GHG) limit, the total annual GHG footprint shall be calculated using approved modelling software and modelling criteria provided in the “Modelling Guidelines for Large Homes.” ”.
45. In Book I, Division B, Article 11.2.1.4., Council:
- (a) in Sentence (1), adds “solely” after “an *alteration* or *addition* to a”;
 - (b) in Table 11.2.1.4.(1)-A:
 - i) in Table note (3), strikes out “9.10.14” and substitutes “9.10.14”, and
 - ii) in Table note (6), strikes out “flow chart #2”, and substitutes “flow chart #3”;
 - (c) in Table 11.2.1.4.(1)-B:
 - i) in Table note (3), strikes out “Exits” and substitutes “*Exits*”, and
 - ii) in Table note (7), strikes out “flow chart #2”, and substitutes “flow chart #3”;

- (d) in Table 11.2.1.4.(1)-C, in Table note (6), strikes out “flow chart #2”, and substitutes “flow chart #3”; and
- (e) in Table 11.2.1.4.(2):
 - i) in the title, strikes out “Clause 11.2.1.2.9d)” and substitutes “Clause 11.2.1.2.(9)(d))”, and
 - ii) adds “Forming part of Sentence 11.2.1.4.(2)” under the title.
- 46. In Book I, Division B, Article 11.3.1.2., in Sentence (5), Council adds “or *means of egress*” after “Where the *exits*”.
- 47. In Book I, Division B, Subsection 11.3.5., Council adds “and Means of Egress” after “Alternative for Exits” in the heading.
- 48. In Book I, Division B, Article 11.3.5.1., Council strikes out Sentence (1) and substitutes:

“1) Except as permitted in Articles 11.3.5.2. through 11.3.5.4. and in Subsection 11.3.6., every *floor area* or other space shall be served with *exits* in conformance with Section 3.4.”.
- 49. In Book I, Division B, Article 11.3.5.4., Council:
 - (a) adds “in a Means of Egress” after “Existing Stairs” in the heading; and
 - (b) in sentence (1), strikes out “Existing egress stairs with rectangular treads in straight flights, other than those serving seating areas” and substitutes “Existing stairs in an *exit* or a *means of egress* with rectangular treads in straight flights, other than those serving seating areas”.
- 50. In Book I, Division B, Article 11.4.3.1., Council strikes out Table 11.4.3.1., and substitutes the following

“

Table 11.4.3.1.
Fire Safety Requirements for Ancillary Residential Suite Conversions
 Forming Part of Article 11.4.3.1.

Item	Item Details	Alternative Compliance Measure
Spatial Separation	Existing windows and doors	Original openings may remain and new openings to conform to Part 9
	New windows in existing openings	Where new windows are provided in existing openings required to be protected by Subsections 3.2.3. or 9.10.14., existing openings may be protected in conformance with Article 11.3.3.4.

Fire Containment within a Principal Dwelling Unit	Separation between a principal <i>dwelling unit</i> and its contained <i>ancillary residential units</i>	Existing lath and plaster in good condition or 13 mm gypsum wall board on wood studs at maximum 450 mm on centre may be used where the interior wall finish is in place prior to the construction of an <i>ancillary residential suite</i> . New walls are to be 16 mm (5/8") type 'X' GWB or 12.5 mm (1/2") Type 'C' GWB on wood or steel studs at maximum 600 mm on centre. the stud cavity is to be filled with minimum 90 mm (3 1/2") mineral wool insulation. Caulk joints where floor and ceiling meet wall GWB. Use resilient acoustic channels where possible.
	Ducts common to both units through <i>suite</i> separations	<i>Fire dampers</i> not required if sheet metal ducting extends a minimum of 1800 mm (6'-0") beyond the suite separation and the opening is firecaulked. Acoustic insulation is to be used within the common duct extending a minimum of 1500 mm (60") from either side of the suite separation.
	Plumbing and sprinkler plastic piping that penetrate <i>fire separations</i>	Shall be tightly fitted, cast in place, or caulked as per product listing.
	<i>Suite</i> entry doors between the principal <i>dwelling unit</i> and its contained <i>ancillary residential unit</i>	Existing solid core doors and frames with or without wired glass in good condition. Doors to be provided with positive latching hardware and self-closing devices.
Resistance to Forced Entry	Solid Blocking	Solid blocking may be omitted for doors described in Sentence 9.7.5.2.(9) where the interior wall finish adjacent the door is in place prior to the construction of an <i>ancillary residential unit</i> .
Exits	Egress from each <i>dwelling unit</i>	In combination with the Egress Windows requirement of Sentence 9.9.10.1., at least one conforming <i>exit</i> is required from the principal dwelling and one from the <i>ancillary residential suite</i> .
	Windows and doors adjacent to <i>exits</i>	No requirements where the <i>suite</i> is <i>sprinklered</i> , provided with a <i>closure</i> or provided with intervening construction extending out by at least 600 mm.
Fire Department Access	Access Path	Existing path designated for fire department is permitted to be minimum 860 mm
	<i>Exits</i>	≤150

<i>Flame Spread Rating</i>	Remainder of <i>building</i>	No requirement
Sprinklers		Sprinklers are not required provided the value of the alteration is less than or equal to 50% of the replacement ⁽¹⁾ value of the <i>existing building</i> .
Heating Systems	Furnace room enclosure	No separation required but provide proper combustion air and required clearances from all equipment ⁽²⁾
<i>Smoke Alarms</i>	Entire <i>building</i>	Interconnected <i>smoke alarms</i> to be intalled on each storey including basements, in each sleeping room and in a location between the sleeping room and the remainder of the storey and if the sleeping room is served by a hallway, the smoke alarm to be located in the hallway. Installed by permanent connections to an electrical circuit in conformance with Subsection 9.10.19. Division B. Provided with battery backup and manual silencing devices which will silence the alarm in conformance with Article 9.10.19.6. of Division B. Carbon Monoxide detectors to be provided in accordance with the 9.32.4.2. ⁽³⁾
Stairs and Handrails	Entire <i>building</i>	Existing stairs to comply with Section 9.8, excepting the following dimensions: tread depth 235-355 mm, rise 125-200 mm and run 210-355 mm, unless considered to present an <i>unsafe condition</i> as determined by the <i>Chief Building Official</i> . All existing stairs to have at least one handrail in conformance with Subsection 9.8.7
Guardrail Protection	Entire <i>building</i>	Existing <i>guards</i> may be retained provided they are structurally sound, non-climbable and ≥900 mm high.
Existing Headroom	Entire <i>building</i>	May be reduced to 1 950 mm over 80% of the <i>suite</i> area and all egress routes. The minimum clear height under the remaining <i>suite floor area</i> shall be not less than 1 850 mm, except <i>public corridors</i> and <i>exits</i> which shall be not less than 2 000 mm.
	Doorways Opening Sizes	Other than, <i>exit</i> doors, and doors serving <i>public corridors</i> and <i>exit</i> corridors that serve principle <i>dwelling units</i> in a <i>building</i> contained an <i>ancillary residential units</i> , doorway openings shall be designed to accommodate swing-type and folding doors not less than 1 980 mm high, except doorway openings within an <i>ancillary</i>

		<i>residential unit</i> which may be reduced to not less than 1 890 mm high.
<i>Unsafe Conditions</i>	Entire <i>building</i>	Any condition within or around the <i>building</i> which could cause undue hazard or risk to persons to be corrected as directed by the <i>Chief Building Official</i> .
Sound Separation	Between the principal <i>dwelling unit</i> and its contained <i>ancillary residential unit</i>	Not required where the interior wall finish is in place prior to the construction of an ancillary residential suite. Fill cavity spaces of <i>suite</i> separation with mineral wool in walls and floor assemblies of new construction.

Notes to Table 11.4.3.1.:

⁽¹⁾ See Note A-11.2.1.4.(3)(a).

⁽²⁾ The Gas Code places restrictions on locating gas furnaces adjacent to sleeping rooms or bathrooms.

⁽³⁾ See Note A-11.4.3.1.(1) Interconnected Smoke Alarms and Carbon Monoxide Detectors

51. In Book I, Division B, Article 11.5.1.1., in Table 11.5.1.1., Council strikes out the row for Sentence 10, and substitutes:

“

10	Spatial Separation Subsection 3.2.3.; The area of <i>unprotected opening</i> shall not exceed the limits in Tables 3.2.3.1.A to 3.2.3.1.-E	The area of existing <i>unprotected opening</i> is not limited provided: (a) the <i>limiting distance</i> is a minimum 1 m, (b) the <i>building</i> has a supervised <i>sprinkler system</i> in conformance with Article 3.2.4.9, and (c) the <i>sprinkler system</i> is designed to notify the fire department in conformance with Article 3.2.4.7.
	Spatial Separation Subsection 9.10.14.; Subsection 9.10.15. The area of <i>unprotected opening</i> in an unsprinklered <i>building</i> shall not exceed the limits in Tables 9.10.14.4.-A or 9.10.15.4.	The area of existing <i>unprotected opening</i> on a <i>building face</i> is not limited provided: (a) the existing <i>unprotected openings</i> on that face are protected with close spaced sprinklers per clause 3.2.3.13.(5), and (b) the close spaced sprinklers shall be designed to notify the fire department in conformance with Sentence 3.2.4.7.

”

52. In Book I, Division B, Article 11.6.2.1., Council:

- (a) in Clause 11.6.2.1(1)(b), strikes out “3.8.3.19.(1)(d) or (e)” and substitutes “11.3.7.1.(1)(d) or (e)”; and

(b) in Clause 11.6.2.1(1)(i), strikes out “Article 3.8.3.19.(1)(d) or (e)” and substitutes “Sentence 11.3.7.1.(1)”.

53. In Book I, Division B, Article 11.7.1.3., Council strikes out:

“11.7.1.3. Residential Buildings of 4 Storeys or More, Commercial Buildings, and Mixed-Use Residential Buildings”,

and substitutes:

“11.7.1.3. Residential Buildings of 4 Storeys or More, and Commercial Buildings (including Hotels and Motels)”.

54. In Note A-11.2.1.2. of Division B, under the Heading “**ADDITION PROJECTS** (Flow Chart No. 3)”, Council strikes out the first paragraph and substitutes:

“Horizontal Addition – Horizontal additions include both “minor” and “major” horizontal additions. A minor horizontal addition is any expansion of a floor area beyond the extents of the existing floor area in which it is located by not more than 25 per cent of the existing building area, or by not more than 500 m² in aggregate floor area. A major horizontal addition is any expansion of a floor area beyond the extents of the existing floor area that exceeds the limits permitted by a minor horizontal addition. Any construction that creates new floor area, by infillings existing roof, or deck areas, or is creates new superimposed floor area over existing building structure or floor area is not considered a horizontal addition.”.

55. In Book I, Division B, Appendix C, Council strikes out Table C-3 and substitutes:

“

Table C-3
Seismic Design Data for Selected Locations in Vancouver

Location	Seismic Data							PGA	PGV
	S _a (0.2)	S _a (0.5)	S _a (1.0)	S _a (2.0)	S _a (5.0)	S _a (10.0)			
Burnaby (General) ⁽¹⁾	0.673	0.386	0.236	0.076	0.027	0.333	0.500	0.768	
North Vancouver ⁽¹⁾	0.699	0.399	0.243	0.077	0.027	0.345	0.518	0.794	
Richmond ⁽¹⁾	0.885	0.787	0.443	0.266	0.083	0.029	0.383	0.578	
Vancouver (City Hall)	0.848	0.751	0.425	0.257	0.080	0.029	0.369	0.553	
Vancouver (Granville & 41 Ave)	0.863	0.765	0.432	0.261	0.081	0.029	0.375	0.563	

Notes to Table C-3:

(1) Data for regions immediately adjoining Vancouver provided here for context.

”

56. In Books I and II, Division C, Schedule of Fees, in PART A – BUILDING, item 2(o), Council strikes out “with mitigating features”.

57. In Book II, Division A, Sentence 1.2.3.1.(1), Council:
- (a) in Clause (a):
 - i) strikes out “tradesman’s” and substitutes “trades”, and
 - ii) strikes out “plumber” and substitutes “*journeyperson plumber*”; and
 - (b) in Clause (b), strikes out “journeyman” and substitutes “person”.
58. In Book II, Division A, Article 1.4.1.2., Council strikes out the definition for *Cooling tower* and substitutes:

“**Cooling tower** means a direct (open circuit) cooling tower, indirect (closed circuit) cooling tower, evaporative condenser, adiabatic cooler which recirculates non-evaporated water, or fluid cooler that is part of a recirculated *water system* incorporated into a building’s cooling, industrial process, refrigeration, or energy production system, and may comprise one or more cooling tower cells.”.

59. In Book II, Division A, Article 1.4.1.2., Council:
- (a) strikes out:

“**Journeyman plumber** means a person, other than an *apprentice*, who holds a certificate issued pursuant to the provisions of the Industry Training Authority Act of British Columbia authorizing the person to engage in the plumbing trade.”; and
 - (b) adds in correct alphabetical order:

“**Journeyperson plumber** means a person, other than an *apprentice*, who holds a certificate issued pursuant to the provisions of the Industry Training Authority Act of British Columbia authorizing the person to engage in the plumbing trade.”.

60. In Book II, Division A, Article 1.4.1.2., in the definition of Plumbing Contractor, Council strikes out “plumber” wherever it appears and substitutes “*journeyperson plumber*”.
61. In Book II, Division B, Article 1.3.1.2., Council adds a new row to Table 1.3.1.2. in the correct alphabetical order, as follows:

“

ASHRAE	Guideline 12-2020	Managing the Risk of Legionellosis Associated with Building Water Systems	A-2.2.11.6
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”

62. In Book II, Division B, Part 2, Council strikes out “manhole” wherever it appears and substitutes “maintenance hole”.
63. In Book II, Division B, Council strikes out Sentence 2.2.1.7.(3) and substitutes:

“3) The owner of a *cooling tower* or a *decorative water feature* shall ensure that the laboratory conducting *Legionella pneumophila* testing for the *cooling tower* or *decorative water feature* has agreed to give immediate notice to the owner, the *Chief Building Official*, and the local medical health officer if the result exceeds a standard set out in Table 2.2.11.6. or 2.2.11.7. that requires such notice to be given.”.

64. In Book II, Division B, Council adds a new Article 2.2.1.8. in the correct numerical order as follows:

“2.2.1.8. Maintenance Logs

- 1) When a maintenance log is required by Book II (Plumbing Systems) of this By-law, it shall include
 - a) the address and location of the equipment, device, apparatus, or system,
 - b) the *operating permit* number assigned to the equipment, device, apparatus, or system,
 - c) emergency contact information and the name and contact information of the owner of the equipment, device, apparatus, or system,
 - d) the location of any safety data sheets,
 - e) the location of the operating manual for the equipment, device, apparatus, or system and, as applicable, the location of the water management plan,
 - f) except when included with the operating manual, a single line schematic plan of the equipment, device, apparatus, or system, reflective of the current configuration, and including water sampling locations,
 - g) details of any changes or alterations made to the equipment, device, apparatus, or system at any time,
 - h) a record of inspections and any maintenance performed within the last 24 months,
 - i) a record of operational disruptions within the last 24 months and the corrective actions taken,
 - j) if water treatment chemicals are used, a record of the chemical treatments applied and dosages within the last 24 months,
 - k) a record of all water quality results from analyses performed within the last 24 months, and
 - l) if *Legionella pneumophila* tests are conducted, the name of the person and company collecting the sample and the name of the company conducting the laboratory test.
- 2) A maintenance log described in Sentence (1) shall be
 - a) kept on site with the corresponding equipment, device, apparatus, or system,
 - b) maintained in an electronic or paper-based format, and
 - c) made available on such request to the *Chief Building Official*.”.

65. In Book II, Division B, Clause 2.2.10.6.(7)(a), Council strikes out “Group B within Table 3.1.2.1. of Division B of Book I (General) of this By-law, or” and substitutes “Group B *occupancy* by Part 3 of Division B of Book I (General) of this By-law, or”.

66. In Book II, Division B, Sentence 2.2.10.17.(1), Council:
- (a) strikes out Clause (1)(a) and substitutes:
 - “a) an *operating permit* shall be obtained, and the owner of the water treatment device or apparatus shall comply with the requirements of this Sentence,”;
 - (b) in Clause (1)(b), strikes out “, and” and substitutes “,” at the end of the clause;
 - (c) in Clause (1)(c), strikes out “.” and substitutes “, and” at the end of the clause; and
 - (d) adds a new Clause (1)(d) in the correct alphabetical order as follows:
 - “d) a maintenance log conforming to Article 2.2.1.8. shall be maintained for each water treatment device or apparatus.”.
67. In Book II, Division B, Sentence 2.2.10.17.(2), Council strikes out “Clauses (1)(a), (b) and (c)” and substitutes “Clauses (1)(a), (b), (c), and (d)”.
68. In Book II, Division B, Clause 2.2.11.4.(1)(f), Council strikes out “ponds, waterways,”.
69. In Book II, Division B, Council strikes out Clause 2.2.11.4.(2)(a) and substitutes:
 - “a) an *operating permit* shall be obtained, and the owner of the *once through cooling equipment* shall comply with the requirements of this Sentence,”.
70. In Book II, Division B, Article 2.2.11.6., Council strikes out “(See Article 6.3.2.15. of Division B of Book I (General) of this By-law.)” and substitutes “(See Note A-2.2.11.6. and Article 6.3.2.15. of Division B of Book I (General) of this By-law.)”.
71. In Book II, Division B, Council strikes out Sentence 2.2.11.6.(1) and substitutes:
 - “**1**) An *operating permit* shall be obtained for the installation of a *cooling tower*, or the retention of an existing *cooling tower*, and the owner of the *cooling tower* shall comply with the requirements of this Article.”.
72. In Book II, Division B, Council strikes out Sentences 2.2.11.6.(5) and (6) and substitutes:
 - “**5**) A maintenance log conforming to Article 2.2.1.8. shall be maintained for each *cooling tower* and, if a laboratory result fails to meet a standard defined in Table 2.2.11.6., the maintenance log shall also include a description of the extent of the deviation from the standard, the corrective action taken, a record of any required notification, and the outcome of the corrective action, including all applicable dates and times.
 - 6**) Deleted.”.

73. In Book II, Division B, Article 2.2.11.6., in Table 2.2.11.6., Council strikes out the column “Required Response” and substitutes:

“

Required Response
1. Within 24 hours, give notice to the <i>Chief Building Official</i> and a) shut down the <i>cooling tower</i> system and perform offline cleaning and disinfection, or b) perform online remedial treatment ⁽²⁾ and within 7 days shut down the <i>cooling tower</i> system and perform offline cleaning and disinfection; and 2. No less than 48 hours and no more than 5 days after cleaning and disinfection, perform a <i>Legionella pneumophila</i> culture test ⁽¹⁾ .
1. Immediately, give notice ⁽⁴⁾ to the <i>Chief Building Official</i> , the medical health officer and the <i>owner</i> ; 2. Immediately, the laboratory ⁽³⁾ shall also give notice ⁽⁴⁾ to the owner of the <i>cooling tower</i> , the <i>Chief Building Official</i> and the medical health officer; 3. Immediately, implement measures that will eliminate water dispersion by aerosol from the affected <i>cooling tower</i> system and then perform offline cleaning and disinfection of the system before putting the system back into service; and 4. No less than 48 hours and no more than 5 days after cleaning and disinfection, perform a <i>Legionella pneumophila</i> culture test ⁽¹⁾ .

”

74. In the Notes to Part 2 in Book II, Division B, Council adds, in correct numerical order, a new Note as follows:

“A-2.2.11.6. Cooling tower start-up and shut-down. It is not the intention that the undefined terms “start-up” and “shut down” within Clause (4)(a), Clause (7)(c), Clause (9)(b) or Sentence (10) be interpreted to include a brief shutdown for the purposes of physical cleaning, system maintenance or inspection, or a “Standby (wet)” mode of *cooling tower* operation as defined by ASHRAE Guideline 12-2020. Operating a *cooling tower* in a “Standby (wet)” mode should include maintaining the water treatment program and circulating water to control biological growth, as described in ASHRAE Guideline 12-2020.”.

75. In Book II, Division B, Council strikes out Sentence 2.2.11.7.(1) and substitutes:

“1) Except for a *decorative water feature* in a *building* used exclusively for *residential occupancy* containing no more than 4 principal *dwelling units*, an *operating permit* shall be obtained for the installation of a *decorative water feature*, or the retention of an existing *decorative water feature*, and the owner of the *decorative water feature* shall comply with the requirements of this Article.”.

76. In Book II, Division B, Council strikes out Clause 2.2.11.7.(2)(b) and substitutes:

“b) an advisory that the *decorative water feature* is not intended for human access, located around the perimeter of, or near an obvious access point to,

the *decorative water feature*, using graphical symbols or words written in letters at least 100 mm high.”.

77. In Book II, Division B, Council strikes out Sentences 2.2.11.7.(5) and (6) and substitutes:

“**5)** A maintenance log conforming to Article 2.2.1.8. shall be maintained for each *decorative water feature* and, if a laboratory result fails to meet a standard defined in Table 2.2.11.7., the maintenance log shall also include a description of the extent of the deviation from the standard, the corrective action taken, a record of any required notification, and the outcome of the corrective action, including all applicable dates and times.

6) Deleted.”.

78. In Book II, Division B, Article 2.2.11.7., in Table 2.2.11.7., Council strikes out the column “Required Response” and substitutes:

“

Required Response
1. Within 24 hours, give notice to the <i>Chief Building Official</i> , shut down the <i>decorative water feature</i> and perform offline cleaning and disinfection; and 2. No less than 48 hours and no more than 5 days after cleaning and disinfection, perform a <i>Legionella pneumophila</i> culture test ⁽¹⁾ .
1. Immediately, give notice ⁽³⁾ to the <i>Chief Building Official</i> , the medical health officer and the <i>owner</i> ; 2. Immediately, the laboratory ⁽²⁾ shall also give notice ⁽³⁾ to the owner of the <i>decorative water feature</i> , the <i>Chief Building Official</i> and the medical health officer; 3. Immediately, implement measures that will eliminate water dispersion by aerosol from the affected <i>decorative water feature</i> and then perform offline cleaning and disinfection of the system before putting the feature back into service; and 4. No less than 48 hours and no more than 5 days after cleaning and disinfection, perform a <i>Legionella pneumophila</i> culture test ⁽¹⁾ .

”

79. In Book II, Division B, Sentence 2.6.1.12.(1), Council strikes out “of” and substitutes “not lower than”.

80. In Book II, Division B, Council strikes out Sentence 2.7.4.1.(1) and substitutes:
 “**1)** An *operating permit* shall be obtained, and the owner of the *alternate water source system* shall comply with the requirements of this Subsection.”.

81. In Book II, Division B, Article 2.7.4.1., in Table 2.7.4.1., Council strikes out the column “Required Response” and substitutes:

“

Required Response
1. Immediately, supply the <i>alternate water source system</i> with <i>potable</i> water only; 2. Within 24 hours, give notice to the <i>Chief Building Official</i> and the <i>owner</i> ; and 3. Within 5 days, but no less than 48 hours after any cleaning or disinfection, perform an <i>E. coli test</i> ⁽¹⁾ and, if the water quality standard for <i>Legionella pneumophila</i> had been exceeded, a <i>Legionella pneumophila</i> culture test ⁽¹⁾ .

”

82. In Book II, Division B, Article 2.7.4.1., Council adds the following new Sentences in the correct numerical order:

- “8) A maintenance log shall be maintained in accordance with Sentence 2.7.8.2.(3).
- 9) An *alternate water source system* commissioned after January 1, 2019 shall comply with the requirements of Article 2.7.5.2.”.

83. In Book II, Division B, Council strikes out Sentence 2.7.5.3.(1) and substitutes:

- “1) An *operating permit* shall be obtained, and the owner of the *alternate water source system* shall comply with the requirements of this Subsection.”.

84. In Book II, Division B, Article 2.7.7.3., in Table 2.7.7.3., Council strikes out the column “Required Response” and substitutes:

“

Required Response
Take the appropriate corrective action as set out in the operating manual.
1. Immediately, supply the <i>alternate water source system</i> with <i>potable</i> water only; 2. Within 24 hours, give notice to the <i>Chief Building Official</i> and the <i>owner</i> ; 3. Take the appropriate corrective action as set out in the operating manual; and 4. Within 5 days, but no less than 48 hours after any cleaning or disinfection, perform an <i>E. coli test</i> ⁽¹⁾ and, if the water quality standard for <i>Legionella pneumophila</i> had been exceeded, a <i>Legionella pneumophila</i> culture test ⁽¹⁾ .

”

85. In Book II, Division B, in Sentence 2.7.8.1.(1), Council strikes out “stamped” and substitutes “sealed”.

86. In Book II, Division B, Article 2.7.8.1., Council adds a new Sentence (2):

“2) The operating manual described in Sentence (1) shall be made available on such request to the *Chief Building Official*.”

87. In Book II, Division B, Council strikes out Sentence 2.7.8.2.(3) and substitutes:

“3) A maintenance log conforming to Article 2.2.1.8. shall be maintained, and shall also include

- a) the documentation required by Sentence 2.7.7.1.(3), and
- b) if a water quality test fails to meet a standard defined in Table 2.7.7.1., a description of the extent of the deviation from the standard, the corrective action taken, a record of any required notification, and the outcome of the corrective action, including all applicable dates and times.”.

88. In Book II, Division B, Council strikes out Article 2.7.8.3.

89. In Book II, Division B, Article 2.8.1.1., in Table 2.8.1.1., Council:

(a) in 2.2.10.17. Water Treatment Systems, adds a new fourth row to the rows for Sentence (1) as follows:

“

	[F40,F41,F43,F46,F70,F80,F81,F82-OS3.4,OH2.1,OH2.2,OH2.3,OH2.4,OH5,OP5,OE1.2]
--	---

”;

(b) in 2.2.10.17. Water Treatment Systems, adds a new fourth row to the rows for Sentence (2) as follows:

“

	[F40,F41,F43,F46,F70,F80,F81,F82-OS3.4,OH2.1,OH2.2,OH2.3,OH2.4,OH5,OP5,OE1.2]
--	---

”; and

(c) strikes out the entire entry for 2.7.8.3. Request for Operating Manual or Maintenance Log.

90. In Book II, Division C, Council strikes out Articles 1.6.9.3., 1.6.9.4., and 1.6.9.5., and substitutes:

“1.6.9.3. Application Requirements for New Operating Permits and Renewals

- 1) To obtain or renew an *operating permit*, the owner of the equipment, device, apparatus, or system, or their authorized representative, shall file an application in writing in the form prescribed by the *Chief Building Official*.
- 2) The application for a new *operating permit* or the renewal of an *operating permit* shall be accompanied by the *operating permit* fees and any documentation required by the *Chief Building Official* to verify that the requirements of this By-law are being met.

- 3) Except as provided in Sentence (4), *operating permits* are valid for a one year period, and shall be renewed on an annual basis.
- 4) *Operating permits for once through cooling equipment* will be valid for a period deemed appropriate by the *Chief Building Official* or *City Engineer*, and if valid for a one year period, shall be renewed on an annual basis.

1.6.9.4. Conditions on Operating Permits

- 1) The *Chief Building Official* may impose conditions on *operating permits* including, but not limited to, conditions regarding
 - a) notifications and notices,
 - b) safety,
 - c) health,
 - d) design requirements,
 - e) *construction* requirements,
 - f) timing of *construction*,
 - g) deadlines for completion of *construction*,
 - h) reviews and inspections,
 - i) responsibilities of the owner of the equipment, device, apparatus, or system, the *constructor*, the *registered professional* and the *certified professional*,
 - j) compliance with this By-law and other enactments,
 - k) use and *occupancy*, and
 - l) temporary *buildings* and *occupancies*.

1.6.9.5. Operating Permit Fees

- 1) *Operating permit* fees are as set out in the Schedule of Fees at the end of this Part.”.

91. In Book I, Division B, Council strikes out Article 10.2.2.5. and substitutes:

“10.2.2.5. Building Energy and Emissions Performance

- 1) Except as permitted by Sentence (4), for a *building* required to conform with this Article, energy modelling shall conform to
 - a) the applicable requirements of Part 8 of the NECB, and
 - b) the City of Vancouver Energy Modelling Guidelines.
- 2) Except as permitted in Sentences (3), (4) or (5), a *building* designed with this Article shall demonstrate the performance values of the proposed building comply with the limits in Table 10.2.2.5.A.
- 3) Compliance with the GHGI limits in Table 10.2.2.5.A is not required where a *building* can demonstrate the performance values of the proposed *building* comply with the TEUI and TEDI limits in Table 10.2.2.5.B.
- 4) *Buildings* and *major occupancies* designed and constructed to conform to the certification criteria for the Passive House Standard, are deemed to comply with this Article provided the design’s energy model is
 - a) version 9 or newer of the Passive House Planning Package, and
 - b) prepared by a Certified Passive House Designer, or Certified Passive House Consultant.

- 5) Compliance with the TEUI and TEDI limits in Table 10.2.2.5.A is not required where a building is connected to a Low Carbon Energy System, and can demonstrate the performance values of the proposed building comply with the limits in Table 10.2.2.5.C.

Table 10.2.2.5.A
Maximum Energy Use and Emissions Intensities
 Forming part of Sentence 10.2.2.5.(2)

Occupancy Classification⁽¹⁾	Total Energy Use Intensity (kWh/m²a)	Thermal Energy Demand Intensity (kWh/m²a)	Greenhouse Gas Intensity (kgCO₂e/m²a)
Group C occupancies in buildings up to 6 Storeys, except Hotel and Motel	110	25	5.5
Group C occupancies in buildings over 6 Storeys, except Hotel and Motel	120	30	6
Hotel and Motel occupancies	140	20	8
Group D and E occupancies, except Office	120	20	3
Office occupancies	100	20	3

Notes to Table 10.2.2.5.A.:

⁽¹⁾ For *buildings* containing multiple *occupancies*, refer to the procedures on mixed-use buildings in Section 5 of the CoV Energy Modelling Guidelines.

Table 10.2.2.5.B
Maximum Energy Use and Emissions Intensities
 Forming part of Sentence 10.2.2.5.(3)

Occupancy Classification	Total Energy Use Intensity (kWh/m²a)	Thermal Energy Demand Intensity (kWh/m²a)	Greenhouse Gas Intensity (kgCO₂e/m²a)
Group C occupancies	100	15	N/A

Table 10.2.2.5.C
Maximum Energy Use and Emissions Intensities
For Buildings Connected to a *Low Carbon Energy System*
 Forming part of Sentence 10.2.2.5.(4)

Occupancy Classification	Total Energy Use Intensity (kWh/m²a)	Thermal Energy Demand Intensity (kWh/m²a)	Greenhouse Gas Intensity (kgCO₂e/m²a)
Group C occupancies in buildings up to 6 Storeys, except Hotel and Motel	110	25	5.5
Group C occupancies in buildings over 6 Storeys, except Hotel and Motel	130	40	6
Hotel and Motel occupancies	170	30	8
Office occupancies	130	30	3
Business and Personal Services or Mercantile Occupancies, except Office	170	30	3

92. In Book II, Division C, Article 1.6.9.3., Council:

(a) strikes out Sentence (1) and substitutes the following:

“1) To obtain or renew an *operating permit*, the owner of the equipment, device, apparatus, or system, or their authorized representative, shall file an application in writing in the form prescribed by the *Chief Building Official*.”;

(b) renumbers Articles 1.6.9.4. and 1.6.9.5. as Articles 1.6.9.5. and 1.6.9.6., respectively; and

(c) adds a new Article 1.6.9.4. as follows:

“1.6.9.4. Owner Must be Certified

1) The owner of the equipment, device, apparatus, or system, or their authorized representative, must be certified under the Environmental Operators Certification Program, except that this requirement does not apply to *once through cooling equipment*.”.

93. In Book I, Division B, Council strikes out Article 10.2.2.5. and substitutes:

“10.2.2.5. Building Energy and Emissions Performance

- 1) Except as permitted by Sentence (4), for a *building* required to conform with this Article, energy modelling shall conform to
 - a) the applicable requirements of Part 8 of the NECB, and
 - b) the City of Vancouver Energy Modelling Guidelines.
- 2) Except as permitted in Sentences (3), (4) or (5), a *building* designed with this Article shall demonstrate the performance values of the proposed building comply with the limits in Table 10.2.2.5.A1.
- 3) Compliance with the GHGI limits in Table 10.2.2.5.A1 is not required where a *building* can demonstrate the performance values of the proposed *building* comply with the TEUI and TEDI limits in Table 10.2.2.5.B.
- 4) Buildings and major occupancies designed and constructed to conform to the certification criteria for the Passive House Standard, are deemed to comply with this Article provided the design’s energy model is
 - a) version 9 or newer of the Passive House Planning Package, and
 - b) prepared by a Certified Passive House Designer, or Certified Passive House Consultant.
(See Note A-10.2.2.5.(4).)
- 5) Compliance with the TEUI and TEDI limits in Table 10.2.2.5.A1 is not required where a building is connected to a Low Carbon Energy System, and can demonstrate the performance values of the proposed building comply with the limits in Table 10.2.2.5.C.

**Table 10.2.2.5.A1
Maximum Energy Use and Emissions Intensities
Forming part of Sentence 10.2.2.5.(2)**

Occupancy Classification⁽¹⁾	Total Energy Use Intensity (kWh/m²a)	Thermal Energy Demand Intensity (kWh/m²a)	Greenhouse Gas Intensity (kgCO₂e/m²a)
Group C occupancies complying with 10.2.1.5.(2)(a)(i)	See Table 10.2.2.5.A2	20	3
Group C occupancies in buildings up to 6 Storeys, except Hotel and Motel	110	25	5.5
Group C occupancies in buildings over 6 Storeys, except Hotel and Motel	120	30	6
Hotel and Motel occupancies	140	20	8

Group D and E occupancies, except Office	120	20	3
Office occupancies	100	20	3

Notes to Table 10.2.2.5.A1.:

⁽¹⁾ For *buildings* containing multiple occupancies, refer to the procedures on mixed-use buildings in Section 5 of the CoV Energy Modelling Guidelines.

Table 10.2.2.5.A2
Mechanical Energy Use Intensity in Buildings under 4 Storeys for Group C Major Occupancies except Hotel and Motel
 Forming part of Sentence 10.2.2.5.(2)

Conditioned Floor Area	Mechanical Energy Use Intensity (MEUI) (kWh/m ² a)
≤ 50 m ²	125
≤ 75 m ²	108
≤ 120 m ²	78
≤ 165 m ²	58
≤ 210 m ²	48
> 210 m ²	45

Table 10.2.2.5.B
Maximum Energy Use and Emissions Intensities
 Forming part of Sentence 10.2.2.5.(3)

Occupancy Classification	Total Energy Use Intensity (kWh/m ² a)	Thermal Energy Demand Intensity (kWh/m ² a)	Greenhouse Gas Intensity (kgCO ₂ e/m ² a)
Group C occupancies	100	15	N/A

Table 10.2.2.5.C
Maximum Energy Use and Emissions Intensities
For Buildings Connected to a Low Carbon Energy System
 Forming part of Sentence 10.2.2.5.(4)

Occupancy Classification	Total Energy Use Intensity (kWh/m ² a)	Thermal Energy Demand Intensity (kWh/m ² a)	Greenhouse Gas Intensity (kgCO ₂ e/m ² a)
Group C occupancies in buildings up to 6 Storeys, except Hotel and Motel	110	25	5.5

Group C <i>occupancies in buildings over 6 Storeys, except Hotel and Motel</i>	130	40	6
Hotel and Motel <i>occupancies</i>	170	30	8
Office <i>occupancies</i>	130	30	3
Business and Personal Services or Mercantile <i>Occupancies, except Office</i>	170	30	3

94. In Book I, Division B, Article 10.2.2.17., Council strikes out Clause 3(a) and substitutes the following:

“10.2.2.17. Domestic Heat Recovery Ventilators

- 1) In a *building* required to comply with this Article, each dwelling unit shall be served by a heat recovery ventilator located in
 - a) each dwelling *unit*, or
 - b) a commonly accessible location if serving multiple *dwelling units*.

- 2) In a *building* required to comply with this Article, components of mechanical ventilation systems not specifically described in this Subsection shall be designed, constructed and installed in accordance with good engineering practice and as described in the ASHRAE Handbooks and Standards, HRAI Digest, TECA Ventilation Guideline, Hydronics Institute Manuals or the SMACNA manuals.

- 3) In a *building* required to comply with this Article, a heat recovery ventilator (HRV) shall
 - a) be sized to run at its rated speed for continuous operation while achieving the performance requirements of Table 10.2.2.17. as designed and tested in conformance with CAN/CSA-C439:

Table 10.2.2.17.
Heat Recovery Ventilator Performance Requirements
Forming a part of Sentence 10.2.2.17.(3)

<i>Building's Conditioned Space (m²)</i>	<i>Sensible Heat Recovery Efficiency (SRE) at 0°C</i>
≤ 110 m ²	65%
> 110 m ²	75%

- b) be designed and tested to meet the CSA International Standard CAN/CSA-F326-M91, “Residential Mechanical Ventilation Systems”,

- c) be installed and commissioned by persons trained by the Thermal Environmental Comfort Association (TECA) or the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) or equivalent,
 - d) supply outdoor air directly to the principal living area, to each bedroom, and to any *floor area* without a bedroom, including similar rooms within *ancillary residential units*, directly or indirectly, through a central recirculation system with a continuously operating fan,
 - e) be designed to run continuously to comply with the minimum ventilation rates of Table 9.32.3.5. of Division B,
 - f) not be connected to kitchen and bathroom exhaust fans,
 - g) except for mechanical ducts cast into concrete structure, have exterior connected supply-air ducts and exhaust ducts insulated to not less than RSI 0.75 (R 4.25) and shall have an effective vapour barrier,
 - h) have balanced HRV supply and exhaust air flows within plus or minus 20% of the actual normal operating exhaust capacity,
 - i) be labelled with tested supply and exhaust air flows for high and low settings, measured in CFM, and
 - j) be located in a fully serviceable space that can be readily accessed for replacement or maintenance, and
 - i) designed and installed to operate with an acceptable level of weather and freeze protection if not within a *conditioned space*, and
 - ii) in a *building* containing not more than two primary *dwelling units* and their contained *ancillary residential units*, be within a *conditioned space* and provided with direct access from at least one of the *dwelling units* that it serves.
- 4) In a *building* required to comply with this Article, the HRV system contractor or installer shall provide a completed Mechanical Ventilation Checklist to the *Chief Building Official*.
- 5) In a *building* required to comply with this Article, a contractor trained in the installation of energy recovery ventilators (ERV) may install an ERV in lieu of a heat recovery ventilator (HRV).”.

95. In Book I, Division B, Council strikes out Article 10.2.2.20. and substitutes:

“10.2.2.20. Passive House Planning Package (PHPP), EnerGuide, or Other Energy Documentation

- 1) In a *building* required to comply with this Article, at the time of *permit* application, and at the time of final inspection, the owner shall provide to the *Chief Building Official* *acceptable* documentation, in the form of
 - a) a PHPP file from a Certified Passive House Consultant or Designer,
 - b) an EnerGuide Rating System Audit, or
 - c) equivalent energy modelling documentation *acceptable* to the *Chief Building Official*.
- 2) In a *building* required to comply with this article, at the time of mid-construction inspection, the owner shall provide to the *Chief Building Official* *acceptable* documentation, in the form of
 - a) a mid-construction checklist, and
 - b) a blower door test result that achieves an *acceptable* level of performance.

3) In a *building* required to comply with this Article, that contains more than 325 m² of *conditioned* space, and does not consist of more than one principal *dwelling unit*, the owner shall provide a calculation utilizing the EnerGuide rating system to demonstrate that the proposed home has a greenhouse gas (GHG) footprint that is no more than two (2) metric tonnes annually (see Note A-10.2.2.20.(3)).”.

96. In Book I, Division B, Article 11.2.1.4., in Table A-11.2.1.4.(2), Council adds “Forming part of Sentence 11.2.1.4.(2)” under the title.

97. In Books I and II, Division C, Schedule of Fees, Council strikes out PART C- OPERATING PERMITS and substitutes the following:

“PART C — OPERATING PERMITS

Every applicant for an OPERATING PERMIT shall, at the time of application for a new OPERATING PERMIT or renewal of an OPERATING PERMIT, pay to the City the fee set out hereunder:

For the first OPERATING PERMIT relating to equipment or systems in a BUILDING	\$250.00
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For each additional OPERATING PERMIT relating to equipment or systems in the same BUILDING	\$100.00
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98. A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.

99. This By-law is to come into force and take effect on June 1, 2021, except that:

- (a) section 91 comes into force and takes effect immediately after section 9 of By-law No. 12512 comes into force and takes effect on June 1, 2021;
- (b) section 92 comes into force and takes effect immediately after section 56 of By-law No. 12717 comes into force and takes effect on January 1, 2022;
- (c) sections 93, 94, 95, and 96 come into force and take effect immediately after sections 25, 32, 35, and 38 of By-law No. 12692 come into force and take effect on January 1, 2022; and

- (d) section 97 comes into force and takes effect immediately after section 57 of By-law No. 12717 and PART C – OPERATING PERMITS in By-law No. 12825 come into force and take effect on January 1, 2022.

ENACTED by Council this 19th day of May, 2021

Signed _____ “Kennedy Stewart”
Mayor

Signed _____ “Katrina Leckovic”
City Clerk