

Appendix C - RTS11490

A By-law to amend the Building By-law No. 10908 Regarding miscellaneous Housekeeping amendments and Sustainability & Energy Efficiency 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 No. 10908.
2. In Book I, Division A, Part 1, Sentence 1.4.1.2.(1), Council:
 - (a) in the definition of “*Designated flood plain*”, in clause (a) between "area shown" and "crosshatched", adds "shaded or"; and
 - (b) in the definition of “*Floor construction level requirements*”, in subclauses (i) and (ii), between "shown" and "crosshatched", adds "shaded or".
3. In Book I, Division B, Part 1, Article 1.3.1.2., Council amends Table 1.3.1.2 by adding the following items:

CCBFC	NRCC 38732	National Farm Building Code of Canada 1995	1.1.1.1.(4)
CCBFC	NRCC 54435-2011	National Energy Code of Canada for Buildings 2011	10.2.1.1.(1)

4. In Book I, Division B, Part 1, in Article 1.3.1.2., Council amends Table 1.3.1.2 by repealing the following item:

CSA	C22.1-09	Canadian Electrical Code, Part I	3.3.6.2.(4) 3.6.1.2.(1) 3.6.2.1.(6) 3.6.2.7.(1) 6.2.1.4.(1) 9.31.6.2.(2) 9.33.5.2.(1) 9.34.1.1.(1)
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and substituting the following:

CSA	C22.1-15	Canadian Electrical Code, Part I	3.3.6.2.(4) 3.6.1.2.(1) 3.6.2.1.(6) 3.6.2.7.(1) 6.2.1.4.(1) 9.31.6.2.(2) 9.33.5.2.(1) 9.34.1.1.(1)
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5. In Division B, Part 3, Sentence 3.1.2.5.(3), Council amends Table 3.1.2.5. as follows:

- (a) repeals the last two rows of the table; and
- (b) adds the following:

≥30	≤ 8 and more than 2	C ⁽⁴⁾	Yes ⁽⁵⁾	Yes	Yes ⁽³⁾	1 h	Yes
<30	≤ 8 and more than 2	C ⁽⁴⁾	Yes ⁽⁵⁾	Yes	Yes ⁽³⁾	2 h	Yes
≥30	> 8	A2	Yes	Yes	Yes ⁽³⁾	1h	Yes
<30	> 8	A2	Yes	Yes	Yes ⁽³⁾	2 h	Yes

- 6. In Division B, Part 3, in Sentence 3.1.2.5.(3), following Sentence 3.1.2.5.(3)(c) Council adds the following:

“(d) Unsprinklered temporary child care facilities shall be provided with two means of egress directly to grade.”

- 7. In Division B, Part 3, Sentence 3.1.3.4.(1), Council:

- (a) in Clause 3.1.3.4.(1)(c)”, strikes out “3.2.4.11.”, substitutes “3.2.4.12.”; and
- (b) in Clause 3.1.3.4.(1)(d)”, strikes out “3.2.4.20.”, substitutes “3.2.4.21.”.

- 8. In Division B, Part 3, Clause 3.2.1.1.(3)(b), Council strikes out “visually”.

- 9. In Division B, Part 3, in 3.2.2.50.(3)(c) Council strikes out "3.1.5.3.(3)" and substitutes "3.1.5.5.(3)".

- 10. In Book I, Division B, Part 3, in Article 3.2.3.13., Council:

- (a) in Sentence 3.2.3.13.(2) at the beginning of the Sentence strikes out the words “If an” and substitutes “If any”; and
- (b) in Sentence 3.2.3.13.(2) following the words “exterior single means of egress” Council strikes out “which”.

- 11. In Book I, Division B, Part 3, in Sentence 3.2.3.13.(5), Council:

- (a) Council repeals Clause 3.2.3.13.(5)(d) and substitutes the following:

“have sprinklers located between 150 mm and 300 mm horizontally from the interior face of the opening at ceiling level and not more than 3.6 m vertically above the floor immediately below”;

- (b) In Clause 3.2.3.13.(5)(f), strikes out “an orifice size of 12.7 mm and”; and
- (c) In Clause 3.2.3.13.(5)(i), strikes out “permitted to be openable” and substitutes “provided”.

12. In Book I, Division B, Part 3, Subclause 3.2.4.9.(2) before the words “in each”, Council adds “*smoke detectors, heat detectors, manual stations and waterflow detecting devices*”.
13. In Book I, Division B, Part 3, Sentence 3.2.4.1.(1), Council strikes out the words “Sentences (2) and (3)” and substitutes the following “Sentences (2), (3), (5), (6) and (7)”.
14. In Book I, Division B, Part 3, Sentence 3.2.5.5.(3), Council:
 - (a) in Clause 3.2.5.5.(3)(b), after the words “secondary suite” adds “or lock-off suite, ”;
 - (b) amends Subclause 3.2.5.5.(3)(b)(i), by striking out “13R” and substituting “13R or 13,”; and
 - (c) repeals Clause 3.2.5.5.(3)(c) and substitutes:
 - “c) 65 m from the access route to the entrance door of each dwelling unit, where the dwelling unit may contain a secondary suite or the dwelling unit has not more than one dwelling unit on top, if
 - i) the requirements of Subclauses (b)(i) to (b)(vii) are met,
 - ii) a 64 mm diameter fire department hose connection is located adjacent to the path of travel for fire fighters located not more than 45 m measured from the hose connection to the principal entrance of each of the dwelling units, and
 - iii) the location of the fire department hose connections required by Subclause (c)(ii) above is indicated on the fire alarm system graphic annunciator,
 - iv) the building is sprinklered to NFPA 13, and”.
15. In Book I, Division B, Part 3, Article 3.2.5.9., at the end of Article 3.2.5.9. Council adds the following:
 - (a) In Sentence 3.2.5.9.(1), strikes out “(7)” and substitutes “(8)”;
 - (b) Strikes out Clause 3.2.5.9.(7)(b), and substitutes the following:
 - “b) the hose connection shall be available to reach all portions of the *floor area* with 30 m of hose plus 9 m of hose stream distance.”.
 - (c) Strikes out clause 3.2.5.9.(7)(a) and substitutes the following:
 - “a) a 64 mm diameter fire department hose connection is located adjacent to the path of travel for firefighter’s and is connected to a fire department connection in conformance with 3.2.5.15., and”
 - (d) At the end of Article 3.2.5.9. adds the following sentence:

- “8) A standpipe system may be omitted from *dwelling units* where
- a) the *building* is of *residential occupancy* throughout,
 - b) the path of travel may not exceed 15 m from the principal entrance of *suite* to the *fire department access route*,
 - c) egress from each *suite* complies with Sentence 3.3.4.4.(3)., and
 - d) the travel distance from any point on the *floor area* to the primary entrance of each *suite* does not exceed 30 m.”.

16. In Book I, Division B, Part 3, Sentence 3.2.5.12.(3), Council strikes out Clause 3.2.5.12.(3)(a) and substitutes the following:

“a) in a *building* of *residential occupancy* throughout containing a *one family dwelling* or *two family dwelling* with or without *secondary suites*, where

- i) each *dwelling unit* and its respective *secondary suite* has its own sprinkler water supply, and
- ii) a one tank-type water closet is supplied with water from the sprinkler head which is located farthest from the main water supply; or”.

17. In Book I, Division B, Part 3, Clause 3.2.5.12.(3)(c), after Subclause 3.2.5.12.(3)(iii), Council adds “iv) each rowhouse has access to two open sides,” and renumbers the following subclauses in numerical sequence.

18. In Book I, Division B, Part 3, Article 3.2.5.12., Council:

- (a) In Sentence 3.2.5.12.(9), strikes out “residential”; and
- (b) At the end of Article 3.2.5.12., adds the following:

“11) Notwithstanding the requirements of the standards referenced by Sentence (3) regarding the installation of automatic *sprinkler systems*, sprinklers shall be provided in any storage garage attached to a building of residential occupancy where a fire separation is not provided between the storage garage and adjacent floor areas.”.

19. In Book I, Division B, Part 3, Article 3.2.5.15., Council:

- (a) At the end of Sentence 3.2.5.15.(1) strikes out “and shall be unobstructed” and substitutes “, have unobstructed access and be visible from the *street*”; and
- (b) At the end of Sentence 3.2.5.15.(2) strikes out “and shall be unobstructed” and substitutes “, have unobstructed access and be visible from the *street*”.

20. In Book I, Division B, Part 3, Article 3.2.7.10., following the words “Electrical conductors”, Council adds “in buildings required to conform to Subsection 3.2.6. or Sentence 3.2.7.9.(1),”.

21. In Book I, Division B, Part 3, Sentence 3.3.1.1.(5) Council strikes out Sentence (5) and substitutes:

“5) Each *suite* other than a residential *suite*, located at ground level and having direct access to the *street*, shall be separated from adjoining *suites* by a *fire separation* having a *fire resistance rating* not less than 2 h.”.

22. In Book I, Division B, Part 3, Clause 3.3.1.19.(8)(a), Council strikes out “and” and substitutes “or”.
23. In Book I, Division B, Part 3, Sentence 3.3.4.2.(1), following the words “*suites of residential occupancy*” Council adds the words “including *secondary suites* and *lock-off suites*”.

24. In Book I, Division B, Part 3, Article 3.3.7.3., Council strikes out Sentence (1) and substitutes:

“1) All entrance and exterior doors to dwelling units, doors between dwelling units and attached garages, and doors which provide direct or indirect access from storage garages to dwelling units shall conform to Subsections 9.6.1 and 9.7.3.”.

25. In Book I, Division B, Part 3, Sentence 3.3.7.4.(1), Council strikes out “Article 9.6.6.2.” and substitutes “Sentence 9.6.1.4.(1)”.
26. In Book I, Division B, Part 3, Article 3.3.7.7., at the end of Sentence 3.3.7.7.(2), Council adds “see Appendix A”.
27. In Book I, Division B, Part 3, Article 3.8.3.4., following Sentence 3.8.3.4.(2) Council adds the following:
- “3)** This Subsection does not apply to existing buildings except for spaces created by
- a) an addition,
 - b) the reconstruction of an existing space, and
 - c) the conversion of an existing space into a secondary suite or lock-off unit.”.
28. In Book I, Division B, Part 5, Sentence 5.1.2.2.(1), after the words “Part 5”, Council adds “ with respect to Section 5.4, 5.5, and 5.6”.
29. In Book I, Division B, Part 6, Article 6.2.2.7., Council:

(a) In Sentence 6.2.2.7.(3) after the words “ecology unit” adds “or *acceptable* equipment complying with Sentence (5),”; and

(b) At the end of Article 6.2.2.7., adds the following:

“5) Equipment provided in compliance with Sentence 6.2.2.7.(3) shall

a) Provide grease removal equivalent to 99.97% of grease entering the equipment, and

b) be of continuously welded 1.5 mm thick carbon steel or 1.1 mm stainless steel or

i) prevent the leakage of flame, smoke, or grease from the equipment at normal or abnormal temperatures,

- ii) limits the temperature rise to no more than 97°C above room temperature to adjacent combustible materials, and
 - iii) limits the exhaust air at the outlet of the exhaust to not more than 138°C.”.
30. In Book I, Division B, Part 8, Article 8.1.1.1., Council:
- (a) In Sentence 8.1.1.1.(2), strikes out "the construction of buildings" and substitutes "construction *projects*"; and
 - (b) In Sentence 8.1.1.1.(3) , strikes out "*buildings*" and substitutes "*projects*".
31. In Book I, Division B, Part 8, Article 8.1.3.3., Council:
- (a) In Sentence 8.1.3.3.(1), strikes out "*buildings*" and substitutes with "*projects*"; and
 - (b) In Sentence 8.1.3.3.(3), strikes out "*buildings*" and substitutes with "*projects*".
32. In Book I, Division B, Part 8, Sentence 8.1.4.1.(1), Council strikes out "*buildings*" and substitutes with "*projects*".
33. In Book I, Division B, Part 8, in Article 8.1.4.2., Council:
- (a) In Sentence 8.1.4.2.(1), strikes out "Program" and substitutes with "Plan"; and
 - (b) In Sentence 8.1.4.2.(2), strikes out "Program" and substitutes with "Plan"
34. In Book I, Division B, Part 8, Clause 8.2.1.1.(2)(b), Council strikes out "building located more than 2 m from a sidewalk" and substitutes with "*project*"
35. In Book I, Division B, Part 8, Sentence 8.2.1.5.(1), Council:
- (a) Strikes out "construction" and substitutes "project"; and
 - (b) Strikes out "when workers are not present on the site".
36. In Book I, Division B, Part 8, Sentence 8.2.3.1.(1), Council strikes out "construction" and substitutes "project".
37. In Book I, Division B, Part 8, in Article 8.2.3.6., following the heading “Maintenance of Public Ways”, Council adds "and City Property".
38. In Book I, Division B, Part 8, in Article 8.2.4.1., Council:
- (a) In Sentence 8.2.4.1.(1), strikes out "construction" and substitutes "project"; and
 - (b) In Clause 8.2.4.1.(1)(b), Council strikes out "traffic" and substitutes "vehicle & pedestrian traffic".

39. In Book I, Division B, Part 8, in Subsection 8.2.6., Council:
- (a) In Sentence 8.2.6.1.(1) strikes out "*buildings*" and substitute with "*projects*";
 - (b) In Sentence 8.2.6.3.(1) strikes out "construction site" and substitutes "*project*";
 - (c) In Sentence 8.2.6.4.(5) strikes out "construction site" and substitutes "*project*";
 - (d) In Clause 8.2.6.14.(2)(a) strikes out "site" and substitutes "*project*"; and
 - (e) In Sentence 8.2.6.17.(1) strikes out "construction site" and substitutes "*project*".
40. In Book I, Division B, Part 9, Article 9.8.8.1., Council:
- (a) In Sentence 9.8.8.1.(5), strikes out "Openable" and substitutes "Except as provided in Sentence (6), openable"; and
 - (b) Repeals Sentence (6) and substitutes the following:
"6) Windows need not be protected in accordance with Sentence (5), where
 - a) the windows serves a dwelling unit that is not located above another suite,
 - b) Reserved.
 - c) openings greater than 100 by 380 mm are
 - i) located more than 900 mm above the finished floor on one side of the window, and
 - ii) construction below the opening does not facilitate climbing.
 - d) the window is designed such that
 - i) the only opening greater than 100 mm by 380 mm is a horizontal opening at the top of the window,
 - ii) the opening is at least 450 mm above the window sill, and
 - iii) the window sill is located more than 450 mm above the finished floor on one side of the window, or
 - e) the window is located in a room or space with the finished floor described in Clause 9.8.8.1.(6)(d) located less than 1 800 mm above the floor or ground on the other side of the window.(See A-9.8.8.1.(5) in Appendix A.)"
41. In Book I, Division B, Part 9, Article 9.9.4.4. Council strikes out Sentence 9.9.4.4.(1) and substitutes the following:
- "1) Unprotected openings in exterior walls of the *building* shall be protected with wired glass in fixed steel frames, glass block conforming to Articles 9.10.13.5. and 9.10.13.7., or protection complying with the requirements of Sentence 3.2.3.13.(5), where
- a) an unenclosed exterior *exit* stair or ramp provides the only *means of egress* from a *suite* or *secondary suite* and is exposed to fire from unprotected openings in the exterior walls of

i) another fire compartment,
ii) <another dwelling unit, and>
b) <unprotected openings> in the exterior walls of the building are within 3 m horizontally and less than 10 m below or less than 5 m above the exit stair or ramp.”

42. In Book I, Division B, Part 9, Sentence 9.9.4.6.(1), Council:

- (a) in Clause 9.9.4.6.(1)(a) strikes out “or”;
- (b) at the end of Clause 9.9.4.6.(1)(b) adds “or”; and
- (c) at the end of Sentence 9.9.4.6.(1) adds “c) protection complying with the requirements of Sentence 3.2.3.13.(5)”.

43. In Book I, Division B, Part 9, Article 9.10.14.5., Council:

- (a) in Subclause 9.10.14.5.(7)(b)(i), Council strikes out "one dwelling unit" and substitutes "one-family dwelling or two-family dwelling,";
- (b) In Book I, Division B, Part 9, Subclause 9.10.14.5.(7)(b)(ii), Council strikes out "one dwelling unit" and substitutes "one-family dwelling or two-family dwelling,"; and
- (c) Strikes out Sentence 9.10.14.5.(14) and substitutes the following:

“14) Where a *residential building* is *sprinklered*, and Table 9.10.14.5.A requires *noncombustible construction*, the *exposing building faces* may use a wood stud wall assembly having a 1 hour *fire-resistance rating* provided the *limiting distance* is at least 1.0 m, the wall assembly is of *noncombustible construction* throughout excepting structural elements and sheathing.”

44. In Book I, Division B, Part 9, Sentence 9.10.15.5.(13), Council strikes out Clause 9.10.15.5.(13)(b) and substitutes the following:

“b) the wall assembly is of *non-combustible* construction throughout excepting structural elements and sheathing, and”

45. In Book I, Division B, Part 9, Clause 9.32.3.7.(1)(a), Council strikes out "Standard" and substitutes "Procedure".

46. In Book I, Division B, Part 9, Subclause 9.10.15., Council repeals Article 9.10.15.1. and substitutes the following:

“9.10.15.1. Application

1) This Subsection applies to

- a) *buildings* containing only *dwelling units* with no *dwelling unit* above another dwelling unit except as described in (b) or (c),
- b) *one-family dwellings with secondary suite*,

- c) *two-family dwellings* having no *dwelling unit* above another *dwelling unit* except *secondary suite* within the principal *dwelling unit*,
- d) *laneway houses*, and
- e) accessory *buildings* that serve a *building* described in Clause (a).”

47. In Book I, Division B, Part 9, Sentence 9.27.8.5.(1), Council strikes out "caulked" and substitutes "sealed".

48. In Book I, Division B, Part 9, Sentence 9.34.1.1.(2), Council strikes out Clause 9.34.1.1.(2)(c) and substitutes the following:

“Except as permitted by Sentence 11.4.3.1.(5), a single panel board may supply electrical loads of the principal dwelling and the secondary suite, provided that it is located within the building in a common area accessible to all occupants of the building.”

49. In Book I, Division B, Part 9, Clause 9.37.3.1.(1)(a), Council strikes out “Table 11.4.3.1.” and substitutes “Sentence 9.10.9.14(1)”.

50. In Book I, Division B, Part 9, Sentence 9.37.4.1.(3), Council repeals Clause (a) and substitutes “a) a fire separation complying with Sentence 9.10.9.14.(1), and”.

51. In Book I, Division B, Part 10, Sentence 10.2.1.1.(1), Council:

- (a) In Subclause 10.2.1.1.(1)(a)(iv), strikes out the words “1 per cent” and substitutes the words “2 per cent”;
- (b) In Subclause 10.2.1.1.(1)(a)(ii), strikes out “, and”; and
- (c) At the end of Clause 10.2.1.1.(1)(a), adds the following:
 - v) need not comply with the Fenestration Orientation provisions of ASHRAE 90.1, Article 5.5.4.5.”
 - vi) need not be provided with Automatic Receptacle Control, per ASHRAE 90.1, Article 8.4.2., and
 - “vii) if designed in accordance with lighting control per ASHRAE 90.1 Article 9.4.1.3.(b), the maximum period of no activity is reduced from 30 min to 20 min.

52. In Book I, Division B, Part 10, Clause 10.2.1.1.(1)(b), Council:

(a) Strikes out Subclause 10.2.1.1.(1)(b)(vi) and substitutes the following:

“vi) with a Skylight Solar Heat Gain Coefficient without curb, or with curb and glass, which does not exceed an assembly maximum of 0.49, where the ratio of the aggregate skylight area to roof area is less than or equal to 2.0 per cent,”

- (b) Strikes out Subclause 10.2.1.1.(1)(b)(vii) and substitutes the following:
 “vii) with a Skylight Solar Heat Gain Coefficient without curb, or with curb and glass, which does not exceed an assembly maximum of 0.39, where the ratio of the aggregate skylight area to roof area is greater than 2.0 per cent and less than or equal to 5.0 per cent,”; and
- (c) Strikes out Subclause 10.2.1.1.(1)(b)(viii) and substitutes the following:
 “viii) with a Skylight Solar Heat Gain Coefficient with curb and plastic which does not exceed an assembly maximum of 0.77, where the ratio of the aggregate skylight area to roof area is less than or equal to 2.0 per cent, and”.

53. In Book I, Division B, Part 10, Sentence 10.2.1.1.(2), Council:

- (a) strikes out the row “Concrete or Masonry Walls (other than foundation walls)” and substitutes the following:

Concrete or Masonry Walls (other than foundation walls) - Effective rating	3.85
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; and

- (b) at the end of Table 10.2.1.1. adds the following:

Fenestration and Doors other than one and two family dwellings	1.80
Skylights other than one and two family dwellings	2.90

54. In Book I, Division B, Part 10, Article 10.2.2.2., at the end of Article 10.2.2.2. Council adds the following:

“3) Exterior doors assemblies that include doors swinging on a vertical axis, installed singly or in pairs, sidelites or transoms, shall be provided with labeling demonstrating a overall thermal transmittance (U-value) of not more than 1.80 W/(m²·K) by an *acceptable* certification body.”

55. In In Book I, Division B, Part 10, Article 10.2.2.12., Council strikes out Sentence 10.2.2.12.(2). and substitutes the following:

“2) A *dwelling unit* shall have a maximum of 3.5 air changes per hour, for homes under 112 square metres have a Normalized Leakage Area (NLA) of 2.10 or lower; or be sealed according to good engineering practice as described in Appendix A.”

56. In Book I, Division B, Part 10, Subsection 10.2.3., Council:

- (a) Repeals Article 10.2.3.1. and substitutes the following:

“10.2.3.1. Electric Vehicle Charging for Buildings (See Appendix A)

1) The electrical installations, including the service capacity of the installation, the number and distribution of circuits and receptacles, shall meet the requirements of the “Electrical Safety Regulation.”

2) Except as provided by Sentence (3), each storage garage or carport in one-family dwellings, two-family dwellings, one-family dwellings or two family dwellings with secondary suites or lock-off units, and laneway houses shall be provided with an electrical outlet, a receptacle or electric vehicle supply equipment where applicable, supplied by a branch circuit rated not less than 40 A at the nominal voltage of 208 V or 240 V as applicable and labelled to identify its intended use with the electric vehicle supply equipment.

3) Where the requirements of Sentence (2) would cause the dwelling unit calculated load to exceed 200 A, the installation of a 40 A branch circuit shall be permitted to be omitted provided that a minimum nominal trade size of 21 raceway supplied with pull string leading from the dwelling unit panelboard to an electrical outlet box is installed in the storage garage or carport and is labelled to identify its intended use with the electric vehicle supply equipment.

4) Each one of 20 per cent of all parking stalls used by owners or occupiers of dwelling units in a multi-family building or the multi-family component of a mixed use building that includes three or more dwelling units shall be provided with an electrical outlet, a receptacle or electric vehicle supply equipment where applicable, for the use of electric vehicle charging.

5) Each one of 10 per cent of all parking stalls used by owners or occupiers of a commercial building, including the commercial component of a mixed use building shall be provided with an electrical outlet, a receptacle or electric vehicle supply equipment where applicable, for the use of electric vehicle charging.

6) The electrical outlet, receptacle or supply equipment described in Sentences (4) and (5) shall be supplied by a branch circuit rated not less than 40 A at the nominal voltage of 208 V or 240 V as applicable.”; and

(b) in Article 10.2.3.2, Council repeals Sentence 10.2.3.2.(1) and substitutes the following:

“1) In a multi-family building or the multi-family component of a mixed use building, with three or more dwelling units, an electrical room shall be designed with sufficient space for the future installation of electrical equipment necessary to support electric vehicle charging in all residential parking stalls.”

57. In Book I, Division B, Part 11, 11.2.1.2.(2) Council strikes out Clause 11.2.1.2.(2)(a) and substitutes “a) upgraded to an *acceptable* level as defined in the existing building upgrade mechanism model in Division B Appendix A (See Appendix Note A-11.2.1.2.), excepting that existing lighting exceeding the Lighting Power Density of ASHRAE 90.1 -

2007 shall be removed within existing spaces of a suite within the scope of a *project*,
or”

58. In Book I, Division B, Part 11, Sentence 11.2.1.2.(3), Council:
- (a) Strikes out “except for a change of *major occupancy* to a *small suite*,”; and
 - (b) At the beginning of Sentence 11.2.1.2.(3), Council adds “Except as required by Sentence (9) and changes of *major occupancy* in a *small suite*,”
59. In Book I, Division B, Part 11, Clause 11.2.1.2.(3)(a), Council strikes out “” and substitutes “November 1, 1999”.
60. In Book I, Division B, Part 11, Clause 11.2.1.2.(9)(a), following the words “ASHRAE 90.1-2007” Council adds the words “or as deemed *acceptable* to the *Chief Building Official*”.
61. In Book I, Division B, Part 11, Sentence 11.2.1.2.(8), Council strikes out “E4” and substitutes “E3”.
62. In Book I, Division B, Part 11, Subsection 11.3.2., Council:
- (a) in Sentence 11.3.2.1.(1), replaces “first and second storey”, with “*first storey* and *second storey*”;
 - (b) in Sentence 11.3.2.2.(1), replaces “first and second storey”, with “*first storey* and *second storey*”; and
 - (c) in Clause 11.3.2.3.(1)(b), replaces “first and second storey”, with “*first storey* and *second storey*”.
63. In Book I, Division B, Part 11, Sentence 11.4.2.2.(9), Council strikes out “pull station” and substitutes “manual station”.
64. In Book I, Division B, Part 11, Article 11.4.3.1., in Table 11.4.3.1. under the Row “Sprinklers” and Subrow “Two family dwelling with a secondary suite or lock-off unit in one or both of the primary suites” Council strikes out “family dwelling” and substitutes “dwelling unit and its secondary suite”.
65. In Book I, Division B, Part 11, Article 11.4.3.1., Council strikes out Sentence 11.4.3.1.(5), and substitutes the following:
- “Where a single existing panel board is located in a common area within the building accessible to all occupants of the building, this panel board may supply electrical loads for both the principal dwelling and the *secondary suite* or *lock-off unit*.”
66. In Book I, Division B, Part 11, Article 11.5.1.1., in Table 11.5.1.1., row no. 13, 3rd column, Council strikes out “single family homes” and substitutes “*one-family dwelling*”.

67. In Division B, Part 11, Subsection 11.6.1., Council strikes out Article 11.6.2.1. to 11.6.4., and substitutes the following:

“11.6.1. Application

11.6.1.1. Application

- 1) The alternative acceptable solutions in this Section apply to
 - a) *arts and culture indoor events* in *existing buildings*,
 - b) *temporary buildings*,
 - c) special event facilities in *existing* or *temporary buildings*, and
 - d) temporary emergency shelters in *existing buildings*.
- 2) Subject to the provisions of Article 1.6.7.3. of Division C, "temporary" in this Section means
 - a) in relation to special event facilities, no more than two months,
 - b) in relation to *temporary buildings*, no more than one year, and
 - c) in relation to emergency shelters, no more than one year.

11.6.1.2. Alternative Acceptable Solutions

- 1) Section 11.3. may be applied to existing conditions, except as defined in Subsections 11.6.2. and 11.6.3.
- 2) The alternative *acceptable* solutions in Section 11.5 may be applied to existing conditions in a *heritage* building, except as defined in Subsections 11.6.2. and 11.6.3.
- 3) The alternative *acceptable* solutions provided in Table 11.6.3.1. apply to *existing buildings* used for *arts and culture indoor events* and do not apply to new work, which must conform to the requirements for new *construction* in other Parts of this By-law.
- 4) The alternative acceptable solutions provided in Table 11.6.4.1. apply to existing buildings used as temporary special event facilities and temporary emergency shelters and to temporary buildings and do not apply to new work, which must conform to the requirements for new construction in other Parts of this By-law.

11.6.2. Arts and Culture Indoor Event

11.6.2.1. Alternative Acceptable Solutions

- 1) Where the *occupancy* of an *existing building* or portion of an *existing building* is classified as Group D offices, Group E retail, Group F Division 2 production or rehearsal studio, wholesale, warehouse, or factory, or Group F Division 2 artist studio without living accommodations, the *major occupancy* may be changed to a temporary Group A Division 2 major occupancy for an *arts and culture indoor event* if
 - a) the maximum *occupant load* is no more than 250 persons,
 - b) the arts and culture indoor event is located in the *first storey* or the *storey* below the *first storey* and has at least one *exit* that conforms to Clauses 3.8.3.19.(1)(d) or (e),
 - c) emergency lighting is provided
 - (i) inside washrooms or, in the case of a single toilet room, immediately outside the entrance door and visible under the closed toilet room door, and

- (ii) in locations leading from the *arts and culture indoor event* to the *street* as described in Sentence 3.2.7.3.(1)
 - d) portable fire extinguishers are installed in accordance with the Fire By-law, with at least one extinguisher at the main entrance and at each egress door leading from the *arts and culture indoor event floor area*,
 - e) an *approved* fire emergency procedures and security plan with approved maximum occupant load is posted beside each portable extinguisher at the main entrance and at each egress door leading from the *arts and culture indoor event*,
 - f) the *building* is equipped with a fire alarm system, or *supervisory staff* are designated to monitor egress and *exit* doors and to carry out an emergency evacuation in accordance with *approved* fire emergency procedure, and
 - g) the *storey* below the *first storey* used for an *arts and culture indoor event* is equipped with a *sprinkler system*,
 - (h) the *arts and culture indoor event* has at least one *accessible* entrance; and
 - (i) the *arts and culture indoor event* has a *means of egress* in accordance with Article 3.8.3.19.
- 2) The floor of a *building* used for an *arts and culture indoor event* shall be
- a) constructed of concrete supported by solid ground without suspended slab, or
 - b) certified by a *registered professional*, after a structural review, to be safe for *assembly occupancy* and designed to a minimum specified uniformly distributed *live load* of 4.8 kPa.
- 3) Cooking which generates grease-laden vapour is not permitted at an *arts and culture indoor event*, unless commercial cooking and ventilation equipment, installed under permit and conforming with Article 6.2.2.7., is used.
- 4) An *approved* maximum *occupant load* from the Vancouver Fire and Rescue Services, and a Vancouver Police Department security assessment shall be obtained for *arts and culture indoor events* in accordance with Table 11.6.2.1.
- 5) The number of *exits*, designated *supervisory staff*, and *exit* signs for *arts and culture indoor events* shall be provided in accordance with Table 11.6.2.1.

Table 11.6.2.1.
Requirements for Arts and Culture Indoor Events
 Forming part of Article 11.6.2.1.

<i>Occupant Load</i> for Event	<i>Occupant Load</i> Approval Required ⁽¹⁾⁽¹⁾	Minimum number of <i>Exits</i> Required	<i>Exit</i> Signage Required	<i>Supervisory Staff</i> at Egress/ <i>Exit</i> Door Required ⁽²⁾	VPD Security Assessment Required ⁽⁵⁾
≤ 60 people for private SOL ⁽³⁾ or dry event ⁽⁴⁾	Yes	1	No	1	No
≤ 60 people for public SOL	Yes	1	No	1	Yes
61-250 people for private SOL ⁽³⁾ dry event ⁽⁴⁾ or public SOL ⁽³⁾	Yes	2	Yes	2	Yes

Notes to Table 11.6.2.1.:

(1) Vancouver Fire and Rescue Services will assess and approve the maximum temporary occupant load for arts and culture indoor events.

(2) Supervisory staff is required to monitor all egress/exit doors. One supervisory staff must be provided at each required exit door at all times.

(3) SOL means Special Occasion License issued by the British Columbia Liquor Control and Licensing Branch.

(4) Dry event means an event at which there is no liquor service.

(5) VPD means Vancouver Police Department.

11.6.3. Special Event Facilities, Emergency Shelters and Temporary Buildings

11.6.3.1. Alternative Acceptable Solutions

- 1) Table 11.6.3.1. provides alternative acceptable solutions for
 - a) temporary use of buildings as special events facilities and emergency shelters, and
 - b) temporary buildings.

Table 11.6.3.1.

Alternate Acceptable Solutions for Temporary Special Events Facilities, Emergency Shelters and Temporary Buildings

No.	By-law Requirement Division B	Alternate Acceptable Solution
1	Flame Resistance 3.1.6.5.	Fabric tent material may conform to a) NFPA 701, "Standard Methods of Fire Tests for Flame Propagation of Textiles and Films", 2004 edition, or b) Certification of Registered Flame Resistant Product certified by the California Department of Forestry and Fire Protection, Office of the State Fire Marshall.
2	Fire Separation under Tiers of Seats 3.3.2.2.	A <i>fire separation</i> between the space and the seats is not required provided a) the only occupied space beneath the bleacher seating is used as a pedestrian walkway for access to the bleacher seating, b) the occupied space is not used for storage, signage must be posted in the space beneath the bleacher seating that reads "No Storage Permitted in This Area", and c) cleanup crews must clean up debris from the space beneath the bleacher seating at the end of each day.
3	Handrails 3.4.6.5.	Handrail extensions for temporary <i>buildings</i> may extend vertically downward not less than 300 mm beyond the top and bottom of the stairway.
4	Guards 3.4.6.6.	Openings greater than 100 mm may be permitted in <i>guards</i> where a) the <i>guard</i> serves stairs that are used only by staff or work force volunteers, and b) a triangular space created by the stair tread, stair rise, and the underside of the <i>guard</i> , provided the opening will not permit the passage of a sphere greater than 200 mm, in egress stairs that serve bleacher seating. Member, attachment or openings located between 140 mm and 900 mm above the level being protected by the <i>guard</i> may be permitted where a) the <i>guard</i> serves stairs that are used only by staff or work force volunteers, and b) rosettes in the vertical posts of scaffolding type bleachers have been installed
5	Treads and Risers 3.4.6.8.	In locations where it is not practical for persons with disabilities to work, stairs with no public access, may have a) runs of not less than 250 mm between successive steps, b) risers between successive treads not less than 125 mm and not more than 190 mm, and c) open risers.

6	Direction of Door Swing 3.4.6.12. Door Release Hardware 3.4.6.16.	Tent <i>exit</i> doors may be equipped with fabric flaps, tie straps, zippers, or VELCRO brand or equivalent hook and loop fasteners in lieu of doors that swing on a vertical axis provided a) a minimum of two <i>exit</i> doors are provided for each tent, b) the <i>occupant load</i> of the tent does not exceed 60, and c) security personnel are trained for emergency evacuation procedures, and remain in the vicinity of the <i>exit</i> at all times. Temporary sliding gates may be used as <i>exit</i> doors provided a) gates are left open during normal operating hours and always manned by security personnel, b) gates are closed during non-operating hours, and locked with chains and a padlock, c) operational procedures are in place to ensure that the chains and padlock are removed during operating hours, and d) security personnel are trained for emergency evacuation procedures.
7	Environment Separation Part 5	Part 5 does not apply.

11.6.3.2. Additional Requirements for Emergency Shelters

- 1) Notwithstanding the provisions of this By-law, a temporary emergency shelter is permitted in an *existing building*, except that there shall be
- a) no cooking in the *building*, other than food re-heated by microwave,
 - b) no less than one staff for each 20 shelter spaces on duty at all times,
 - c) no more than one shelter bed for every 3.7 m² of *floor area* or, if bunk beds are provided, no more than two shelter beds for every 3.7 m² of floor area,
 - d) aisles no less than 900 mm wide on both sides of every shelter bed,
 - e) at least 2 *means of egress*,
 - f) *exit* signs on all *exit* doors,
 - g) additional directional *exit* signs, in any circumstance where *exit* signs over *exit* doors are not visible from any location in the shelter,
 - h) *exit* signs which comply with Subsection 3.4.5.,
 - i) *smoke alarms* conforming to Article 3.2.4.20. installed throughout the entire *building*,
 - j) at least one water closet for every 20 shelter spaces,
 - k) at least one lavatory for every 5 water closets, and
 - l) all staff shall have training in first aid and emergency evacuations.”.

68. In Book I, Division C, Part 1, Article 1.4.1.5., at the end of Article 1.4.1.5. Council adds the following:

“5) The *owner* shall ensure that all underground storage tanks on the subject property that are intended for the storage of heating oil but have not been used with the previous 2 years be removed and any associated contamination be remediated to the applicable standards as prescribed in the Contaminated Sites Regulation. All work must be completed in accordance with the requirements of the Vancouver Fire By-law”

69. In Book I, Division C, Part 1, Sentence 1.5.4.6.(1), Council strikes out Clause 1.5.4.6.(1)(1) and substitutes the following:

“a) by mailing the order by registered mail and by regular mail to the owner at the owner’s address as it appears on the records of the Assessment Authority of British Columbia, and posting the order on the premises which are the subject of the order.”

70. In Book I, Division C, Part 2, Article 2.2.9.1.(1), in Clause 2.2.9.1.(1)(b) Council strikes out “[date of enactment of the by-law]” and substitutes “July 29, 1999”.

71. In Book I, Appendix A, before A-3.4.1.1.(1), Council adds the following:

“A-3.3.7.7.(2) Security for Storage Garage

The requirements of Sentence 3.3.7.7.(2) are intended to provide improved visibility into or out of a stair tower or vestibule, which might otherwise occlude the line of sight of building occupants as a result of intervening construction. Glazing is to be provided that would provide the maximum practical improvement to visibility to improve occupant safety. The term ‘stair tower’ used in this Sentence is intended to apply to vertical stair enclosures connecting more than one floor or containing superimposed flights of stairs which could conceal persons”.

72. In Book I, Division B, Appendix A, following Appendix A-10.2.2.12.(2)., Council adds the following:

“A-10.2.3.1 Electric Vehicle Charging for Buildings

The Canadian Electrical Code, Part I contains the requirements of electric vehicle charging systems, the requirements of Rule 86-300(2) and (3) recognize the use of load management technologies via the manual transfer or automated control in a branch circuit that supplies the electric vehicle supply equipment load and other load. This Rule requires where the electric vehicle supply equipment load and other load are installed that only one can be operated at any one time, the branch circuit must be based on the calculated demand in accordance with Section 8.

All references to the electrical installation including receptacle, supply equipment and rating of voltage and ampere in Article 10.2.3.1 are intended to align with the requirements of SAE AC Level 2 charging requirements, whether in applying load managed solutions or separate branch circuits for each charging point. In addition to the requirements of Article 10.2.3.1, it is important to note that the installation of electric vehicle charging systems and electric vehicle supply equipment must meet the requirements of the Canadian Electrical Code, Part I and the manufacturer’s instruction.”

73. In Book I, Division B, Appendix A, A-11.2.1.2., Figure A-11.2.1.2-A1, in the “Repair/Small suite” column; under the “Energy” heading, Council strikes out “E1” and substitutes “E1/E2”.

74. In Book I, Division B, Appendix A, A-11.2.1.2, Table 11.2.1.2.B, under the row “Design Level ‘S3’”, Council strikes out the row and substitutes the following:

S3	The building structure shall be upgraded to an acceptable level in order to provide a minimum level of property and life safety to unreinforced masonry or other buildings	Entire Building – Bolting floor and roof structure to bearing walls and strengthening of floor and roof diaphragms as required to safely distribute lateral forces to bearing walls (i.e., Bolts Plus)
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	having less than 30 percent of the current required seismic resistance. Falling hazards that may impact adjacent properties and over <i>public ways</i> must be addressed.	All falling hazards such as cornices, parapets and awnings located above a <i>public way</i> , shared exits and sidewalks must be restrained to resist forces due to a seismic event.
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75. In Book I, Division B, Appendix A, A-11.2.1.2, Table 11.2.1.2.B, under the row “Design Level ‘N3’”, Council strikes out the row and substitutes the following:

“

N3	Building exits and to acceptable open space to be reviewed to ensure safety from overhead falling hazards.	Entire Building Exits - Restrain interior partition walls. Restrain all ceiling supporting frames, T-bars assemblies, ceiling gypsum wall boards, all overhead mechanical equipment and services, overhead electrical equipment and services. Restrain falling hazards from cladding, veneer, parapets, canopies and ornaments over exit and extended to 5 m on either side of exit.
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”

76. In Book I, Division B, Appendix A, A-11.2.1.2, Table 11.2.1.2.B, under the row “Design Level ‘N4’”, Council strikes out the row and substitutes the following:

“

N4	Entire Building and to acceptable open space to be reviewed to ensure safety from overhead falling hazards.	Entire Building Exits - Restrain interior partition walls. Restrain all ceiling supporting frames, T-bars assemblies, ceiling gypsum wall boards, all overhead mechanical equipment and services, overhead electrical equipment and services. Restrain falling hazards from cladding, veneer, parapets, canopies and ornaments attached to the exterior of the building.
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77. In Book I, Division B, Appendix A, A-11.2.1.2, Table 11.2.1.2.C, under note 1(c), Council strikes 24 months row “Design Level ‘N3’”, Council strikes out the row and substitutes the following:

78. In Book I, Division B, Appendix A, A-11.2.1.2., “REHABILITATION PROJECT TYPE (Flow Chart No. 1)”, Council:

- a) repeals the Subheading “Repair” and its associated text and substitutes the following:

“**Repair** - Repair pertains to a limited scope of interior or exterior renovation work to replace existing building components with functionally equivalent components. Repair work may not include work that increases the usable floor area of a building, creates an interconnected floor space, supports an addition or change of use, or the consolidation of more than one existing suite into a single tenant space. If the renovation includes other categories of work or project types such as a change of major occupancy classification or an addition, then the most restrictive upgrade levels from all project types would be applied. For Repairs, an E1 level of energy upgrade shall be applied.”

- b) following the Subheading “Repair” and its associated text and adds the following:

“**Small Suite** - The upgrade trigger Small Suite pertains to limited renovation work within a small suite as defined in Division A, Article 1.4.1.2. Small Suite work may include reconfiguration of the interior space of the suite, but may not include work on more than level (storey or mezzanine), interconnected floor spaces, exterior renovations, or the consolidation of more than one existing suite into a single new tenant space. If the renovation includes other categories of work or project types such as a change of major occupancy classification or an addition, then the most restrictive upgrade levels from all project types would be applied. For Small suite renovations, an E2 level of energy upgrade shall be applied.”; and

- c) repeals the Subheading “Major Renovations and it associated text and substitutes the following:

“**Major Renovation** - Major renovations means work which may include (singly or in combination): Interior re-configuration of multiple tenant spaces, interconnected floor spaces, exterior alterations, or alterations that create more than one new tenant space. However, where such renovation includes a change of major occupancy classification or a new mezzanine, this work would not be considered as a major renovation. New mezzanines are considered to be additions. If the renovation includes other categories of work or project types such as a change of major occupancy classification or an addition (mezzanine) then the most restrictive upgrade levels from all project types would be applied.”

79. In Book I, Division B, Appendix A, A-11.2.1.2., “**CHANGE OF MAJOR OCCUPANCY CLASSIFICATION PROJECTS (Flow Chart No. 2)**”, Council:

- a) Repeals the Subheading “Change of Major Occupancy Classification” and it associated text and substitutes the following:

“**Change of Major Occupancy Classification** – Change of major occupancy classification means a change of use within a building, a suite, or its constituent floor areas where the proposed use is outside of the defined uses of the existing major occupancy classification permitted for the building, the suite, or its constituent floor areas.”; and

- b) Repeals the Subheading “Change of Major Occupancy Classification” and it associated text and substitutes the following:

“**Small Suite Change of Major Occupancy Classification** – Small suite change of major occupancy classification means a change of use within a small suite, or its constituent floor areas where the occupant load for the entire suite does not exceed 60 persons and the small suite is limited to a Group A, Division 2, Group D, Group E, Group F, Division 2 (wholesale showroom), or Group F, Division 3 major occupancy.”

80. In Book I, Division B, Appendix A, A-11.2.1.2., “**ADDITION PROJECTS (Flow Chart No. 3)**”, Council:

- a) Repeals the Subheading “Horizontal Addition” and its associated text and substitutes the following:

“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 in which it is located by more than 25 per cent of the existing building area, or by more than 500 m² in aggregate floor area. Any construction creates new floor area that in-fills existing roof or deck areas, or is superimposed over existing building structure or floor area is not considered a horizontal addition.”; and

- b) Repeals the Subheading “Vertical Addition” and its associated text and substitutes the following:

“Vertical Addition – Vertical additions include both “minor” and “major” vertical additions. A minor vertical addition is the addition of new floor area (storey or mezzanine) that in-fills existing roof or deck areas, or is superimposed over existing building structure or floor area, with an aggregate floor area increase of not more than 25 per cent of the building area, or by not more than 500 m² in aggregate building area. A major vertical addition is an addition that increases the aggregate floor areas or mezzanine area increase of not more than 25 per cent of the existing building area or increases the total aggregate floor area by more than 500 m².”

81. In Book I, Division B, Appendix A, A-11.2.1.2., “**PROCEDURE FOR USING THE UPGRADE MECHANISM MODEL**”, under the subheading Step 3, Council strikes out the 3rd paragraph and substitutes the following:

“The alternative acceptable solution for energy efficiency requires that the determined E design upgrade level is used to enter Table A-11.2.1.2.C to obtain a solution. The solution column in Table A-11.2.1.2.C provides the L level to enter Table A-11.2.1.2.D. Within the L Level row of Table A-11.2.1.2.D the user is provided with various Section rows under the Section column. Each Section row provides one or more alternative acceptable solutions under the Alternative Acceptable Solution Options column. Each alternative acceptable solution is identified as a separate numeric solution. There are one or more alternative acceptable solutions for each Section row. The “Select 1-L*” solution in Table A-11.2.1.2.C means that only one (1) of the alternative solutions in the Alternative Acceptable Solution Options column in Table A-11.2.1.2.D are required to meet the objective. It is up to the user to determine which Section(s) in the Section column and corresponding alternative acceptable solution in the Alternative Acceptable Solution Options column is (are) used to satisfy the objective. Within any 5 year period, when an alternative acceptable solution has been used previously within the project area, then that option is not permitted to be used as an alternative acceptable solution.”

82. In Book I, Division B, Appendix A, in A-11.2.1.2., in the notes to Table 11.2.1.2.C, Council strikes out the 1st paragraph and substitutes the following:
- “(1) The solution column in Table A-11.2.1.2.C provides the solution that will satisfy the objective. The solution column in Table A-11.2.1.2.C provides an L level to enter Table A-11.2.1.2.D. Within the L Level row the user is provided with various Section rows under the Section column. Each Section row provides one or more alternative acceptable solutions under the Alternative Acceptable Solutions Options column. Each alternative acceptable solution is identified as a separate numeric solution. There are one or more alternative acceptable solutions for each Section row. The “Select 1-L*” solution in Table A-11.2.1.2.C means that only one (1) of the alternative solutions in the Alternative Acceptable Solutions Options column in Table A-11.2.1.2.D are required to meet the objective. It is up to the user to determine which Section(s) in the Section column and corresponding alternative acceptable solution in the Alternative Acceptable Solution Option column is (are) used to satisfy the objective. Within any 5 year period, when an alternative acceptable solutions has been used previously within the project area, then that option is not permitted to be used as an alternative acceptable solution.”
83. In Book I, Division B, Appendix A, A-11.2.1.2., in Table 11.2.1.2.D, under the L2 level row, at the end of the Lighting sub-row, Council adds the following :
- “**8**) Reduce total Skylight Fenestration/Glazing Area to 5% of gross roof area (per 5.5.4.2.2. of ASHRAE 90.1 - 2010)”
84. In Book I, Division B, Appendix A, A-11.2.1.2., Council:
- (a) in Table 11.2.1.2.D, under the L3 level row, in the Envelope sub-row, adds a new row as follows: “**6**) Inspect and remediate all floor/crawl space equipment and services including ductwork, plumbing, insulation, penetrations, dampers, valves, coils, pans and drains.”
 - (b) in Table 11.2.1.2.D, under the L3 level row, in the Lighting sub-row, at the end of line 2) adds “of the building”; and
 - (c) in Table 11.2.1.2.D, under the L3 level row, in the Lighting sub-row, at the end of line 3) adds “of the suite”;
85. In Book I, Division B, Appendix A, A-11.2.1.2., in Table 11.2.1.2.D, under the L3 level row, in the Lighting sub-row, Council strikes out “**2**) Provide day lighting by skylight (per 5.5.4.2.3 of ASHRAE 90.1 - 2010)” and renumbers the following items in numerical sequence.
86. 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.
87. This By-law is to come into force and take effect on the day of enactment.

ENACTED by Council this day of , 2016

Mayor

City Clerk