

2019 VBBL State of the By-law

Recent updates and future changes

Kevin Lau P. Eng.,CP, Acting Manager, Building Policy

Nov 4, 2021



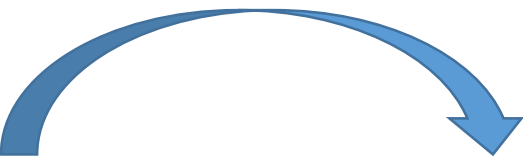
**ARCHITECTURAL
INSTITUTE OF
BRITISH COLUMBIA**



**ENGINEERS &
GEOSCIENTISTS**
BRITISH COLUMBIA

Interim Updates

- > Updates to VBBL up to June 01, 2021 are on Queen's Printer (<http://www.bccodes.ca/>)



BY-LAW NO. 12683

A By-law to amend Building By-law No. 12511
Regarding BC Building Code Amendments and Various Housekeeping 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. 12511.
2. In Article 1.4:
 - a) In Section 1.4.1.2, strike out:
 - "c) and
 - and
 - cons
 - cons
 - b) In Section 1.4.1.2, strike out:
 - "Anc
 - "w
 - "is
 - "is
 - c) strike out:
 - "Row
 - sub

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

BRITISH COLUMBIA British Columbia Codes

Crown Publications | BC Codes | BC Gazette | BC Laws

BC Building Code

BC Fire Code

BC Plumbing Code

City of Vancouver By-laws

System Requirements

Price List

Errata & Revisions

Archived Errata & Revisions

Letters of Assurance

Register for Notifications

FAQ

City of Vancouver By-laws

The Vancouver Building By-law 2019 is based on the British Columbia Building Code 2018 and includes the unique to Vancouver By-law provisions regulating the design and construction of buildings in the City of Vancouver, British Columbia.

Book I (General) addresses the minimum standard for buildings in Vancouver and shares the same broad objectives as the Provincial regulations, with additional provisions for:

- Occupant safety and health
- Accessibility for persons with disabilities
- Fire protection of buildings and facilities
- Energy conservation and GHG reduction
- Alterations to existing buildings

Book II (Plumbing Systems) addresses the minimum standard for building plumbing systems in Vancouver and shares the same broad objectives as the Provincial regulations, with additional provisions for:

Now Available

BUILDING ACCESSIBILITY HANDBOOK 2020
Illustrated Commentary on Accessibility Requirements
British Columbia Building Code 2018

Office of Planning and Communications Network

Customer Service

Tel: 250 387-6409
Toll Free: 1 800 663-6105
Fax: 250 387-1120
bccodes@gov.bc.ca

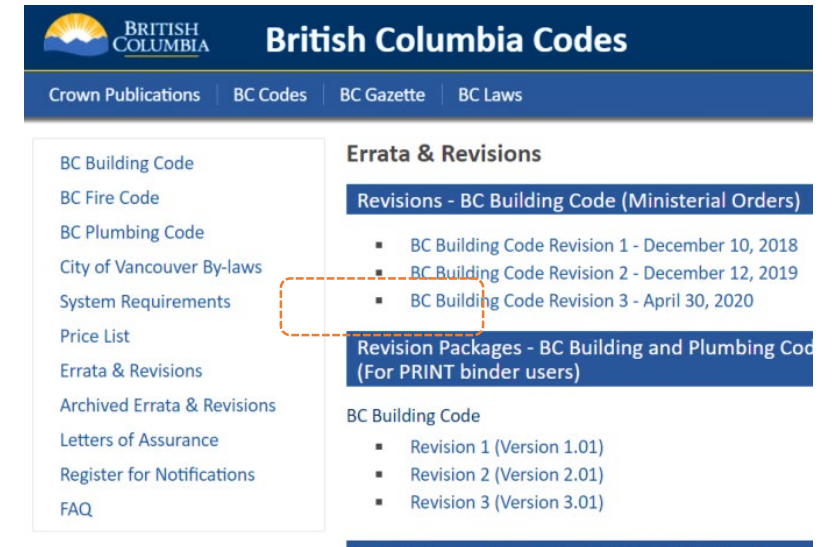
Consolidated Updates

> All amendments effective as of July 1, 2021.

Amendment	Subject	
12512	Energy and Water Efficiency	Rev. 0
12609/12630	Housekeeping & Fees	
12683	BCBC Revs 2 & 3	Rev. 1
12692	1-3 Storey Energy Efficiency (to July 2020)	
12694	EV Charging	
12715/12752	Encapsulated Mass Timber	
12717	Legionella Protection & Non-Potable Water Use	Rev. 2
12997	Housekeeping & FD Access Path	

Quick Refresh of Rev. 1 - Key Items

- > 2018 BCBC Rev. 2 & 3 incorporated
- > EMTC Construction Provisions
 - UTV: No exposed wood in residential suites
- > Energy Efficiency updates
 - Minor revisions to exterior space/seat heating and building alteration language
- > Addressing assignment
 - laneway houses may assigned a suite number subordinate to the principal residence



British Columbia Codes

Crown Publications | BC Codes | BC Gazette | BC Laws

BC Building Code
BC Fire Code
BC Plumbing Code
City of Vancouver By-laws
System Requirements
Price List
Errata & Revisions
Archived Errata & Revisions
Letters of Assurance
Register for Notifications
FAQ

Errata & Revisions

Revisions - BC Building Code (Ministerial Orders)

- BC Building Code Revision 1 - December 10, 2018
- BC Building Code Revision 2 - December 12, 2019
- BC Building Code Revision 3 - April 30, 2020

Revision Packages - BC Building and Plumbing Code (For PRINT binder users)

BC Building Code

- Revision 1 (Version 1.01)
- Revision 2 (Version 2.01)
- Revision 3 (Version 3.01)



Quick Refresh of Rev. 1 - Key Items

> Water Efficiency & Legionella Prevention

– Changes predominantly in

- Book I (General) - Division B, Part 6
- Book II (Plumbing Systems)

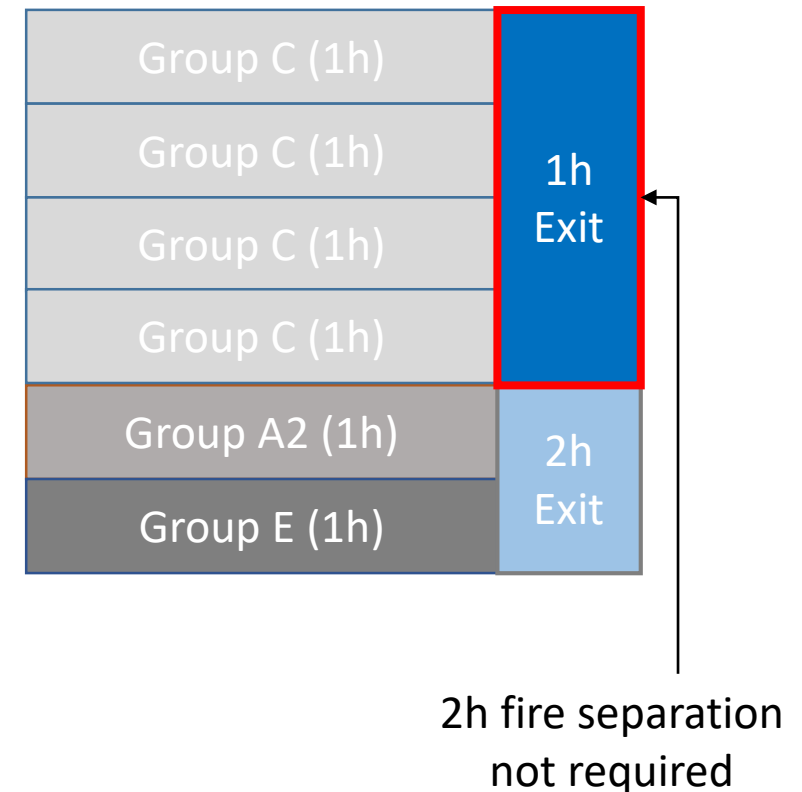
– Changes address:

- Fixture Efficiency
- Legionella prevention
- Nonpotable water use
- Operating permits required for water treatment

June 2021 Updates (Bylaw #12997)

Clarify EMTC allowances (3.2.1.7.)

- > Clarify that EMTC is to meet the Subsection 3.1.18. construction requirements (this is consistent with the now removed 3.2.1.7.(5) requirements)
- > Reduced fire separation of stair requirements to only required 2 h on level containing a Group A2 or 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)



June 2021 Updates (Bylaw #12997)

Revision 2 – Key items

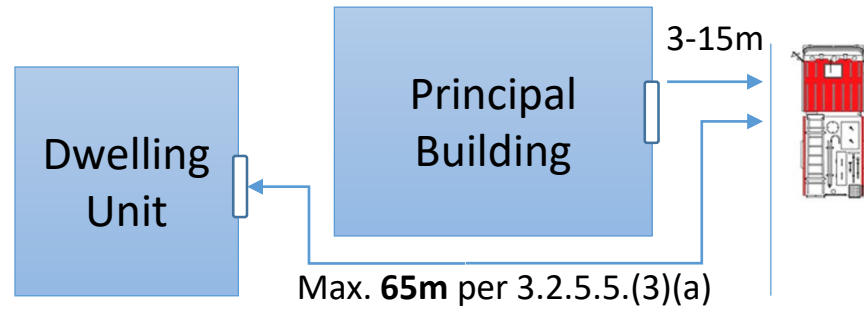
- > Fire Department Access Path
- > Greater clarity for Enhanced accessibility and Adaptability

June 2021 Updates (Bylaw #12997)

Fire Department Access Path (3.2.5.5.)

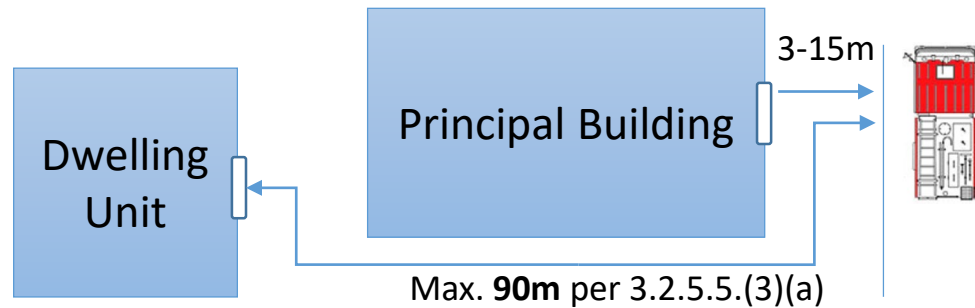
- > Reorganized slightly to shorten the language
- > Clarified the intent for a fire alarm system for an extended FD access path (beyond 45 m)
- > Extended travel distances 18% to 33%
- > Added new Part 9 conditions for extended FD access

June 2021 Updates (Bylaw #12997)



Building must have:

- 1 h F/S to D/U's
- Monitored NFPA 13 Sprk. (usually)
- Strobe light at D/U entry
- EM lighting along path
- FA system w/ graphic annunc.



In addition to the above:

- No stacked principal DU's
- 64 Hose Connections adj. to FD path

June 2021 Updates (Bylaw #12997)

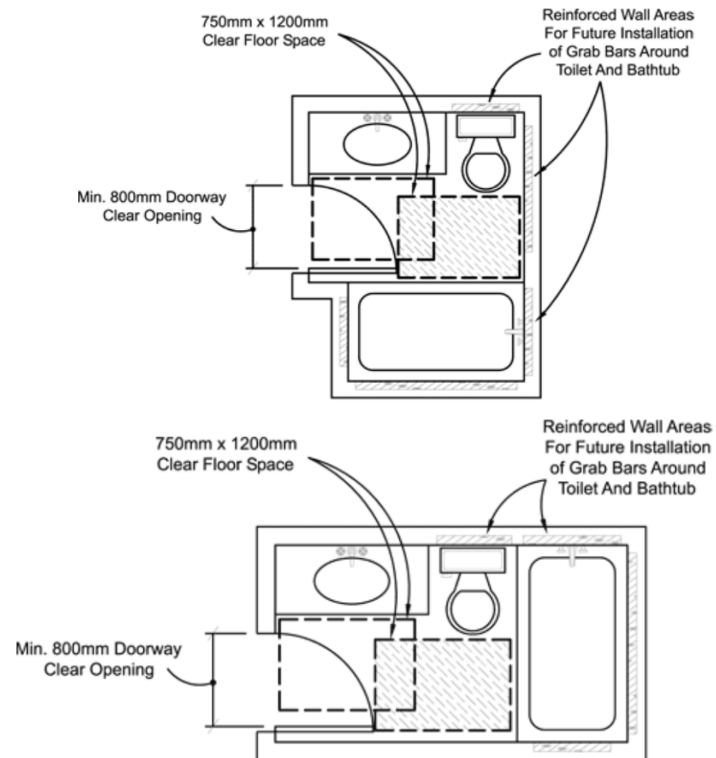
> General extended travel distance comparison Part 3 vs 9

Max. TD	3.2.5.5. Requirements	9.10.20.3. Requirements
45 m	No additional requirements	<ul style="list-style-type: none">• Two paths of travel
65 m	<ul style="list-style-type: none">• 1 h F/S to D/U's• Monitored NFPA 13 Sprk. (usually)• Strobe light at D/U entry• EM lighting along path• FA system w/ graphic annunc.	<ul style="list-style-type: none">• Two paths of travel• NFPA 13R (usually), without FDC• Monitoring by alarm device (but not requiring ULC listed station)• Strobe light outside principal entry
90 m	<ul style="list-style-type: none">• 1 h F/S to D/U's• Monitored NFPA 13 Sprk.• Strobe light at D/U entry• EM lighting along FD path• FA system w/ graphic annunc.• No stacked principal DU's• 64 Hose Connections adj. to FD path	<ul style="list-style-type: none">• Two paths of travel• No stacked duplex• NFPA 13R (usually), without FDC• Monitoring by alarm device (but not requiring ULC listed station)• Strobe light outside principal entry• 1.2 m access path with permanent path lighting

June 2021 Updates (Bylaw #12997)

Enhanced Accessibility

> Some clarifying notes and diagrams from 2007 return



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).

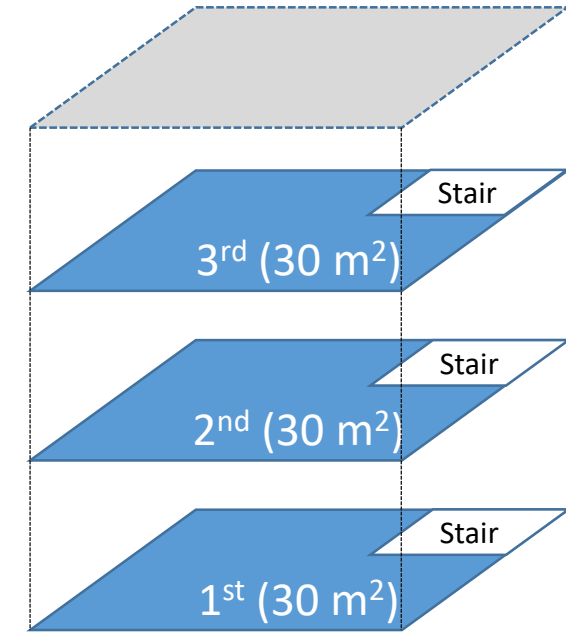
A-3.8.3.1.(2)(i) The provision for providing a 750 mm by 1 200 mm clear space in the washroom is to allow direct entry into the washroom and reverse exiting without the need for a 1 500 mm turning circle. Washroom fixtures should be located so as to permit side or end-on transfer from a wheelchair without 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)

June 2021 Updates (Bylaw #12997)

Adaptable Bathroom Application (3.8.5.5.)

> Clarification of the intended bathroom requirements

- An adaptable bathroom is required if the dwelling unit includes a floor level exceeding 40 m².
- This is considered the minimum space necessary to be able to include the adaptable bathroom facilities.
- Floor Level means the occupy able floor area (generally excludes stairs and exterior walls)
- Bathroom located on the floor best suited for it. (by virtue of space and/or accessibility)



No Level > 40 m²
Suite does not require
adaptable washroom

June 2021 Updates (Bylaw #12997)

Adaptable Bathroom Provisions (3.8.5.5.)

- > Genericized the Requirements
 - Clarify unclear provisions
 - Recognize prior language was overly prescriptive
 - Many solutions available to industry, try to avoid preventing legitimate options
- > Notes in A-3.8.5.5.(2) added that provide a plain language explanation of what the CBO would permit for future low barrier showers

January 2022 Updates

What's coming

1. Revisions to Upgrade requirements

- Preview at: <https://council.vancouver.ca/20211014/documents/phea4draftbylawBUILDING.pdf>

2. Energy Efficiency Changes

- Preview at: <https://vancouver.ca/home-property-development/large-building-energy-requirements-forms-checklists.aspx>

A photograph of a long, straight asphalt road stretching towards the horizon under a clear blue sky. A large white arrow is painted on the road, pointing directly forward. In the foreground, the word "FUTURE" is painted in large, white, stylized capital letters across the width of the road. The background shows some dry vegetation and a distant horizon line.

FUTURE

Upgrade Trigger Model revision (2 year Pilot)

Summary:

- > Objective – facilitate tenant improvement work by reducing the time and cost
- > Summary of Changes:
 - Small Suite scope of work for renovations (rehabilitation) expanded to 100 persons
 - Minor Renovation now includes:
 - Subdivision of a suite
 - Relocation of a shared demising walls
 - Relaxation of upgrades for change of major occupancy for certain uses



Upgrade Trigger Model revision (2 year Pilot)

As presented to Council:

OPPORTUNITY	STRATEGY	IMPACT
A. Align project definitions in the VBBL with the scope of work being undertaken, reducing upgrade requirements and project complexity	1. Treat subdividing a suite into two or more suites as a minor renovation, as opposed to a major renovation	45 applications per year Up to 17 weeks saved per application
	2. Relax small suite definition to allow for occupant limits of 100 persons from 60 persons	
B. Reduce the permitting and licensing times, application complexity and start-up costs for new business changing between specific uses and/or occupancies	1. Exempt low risk changes of use from the requirement to submit a Development Permit as a means of reducing the permitting backlog and expediting the issuance of business licenses	135 applications per year Up to 20 weeks saved per application
	2. Waive change of occupancy upgrade requirements when changing between low risk occupancy types as a means of reducing the permitting backlog and expediting the issuance of business licenses.	40 applications per year 8 weeks saved per application
	3. Increase the threshold for meeting parking minimums from 200 m ² to 300 m ² .	Enabling change to support B.1 and B.2

3,785 processing weeks saved while supporting new and existing businesses through the COVID-19 recovery

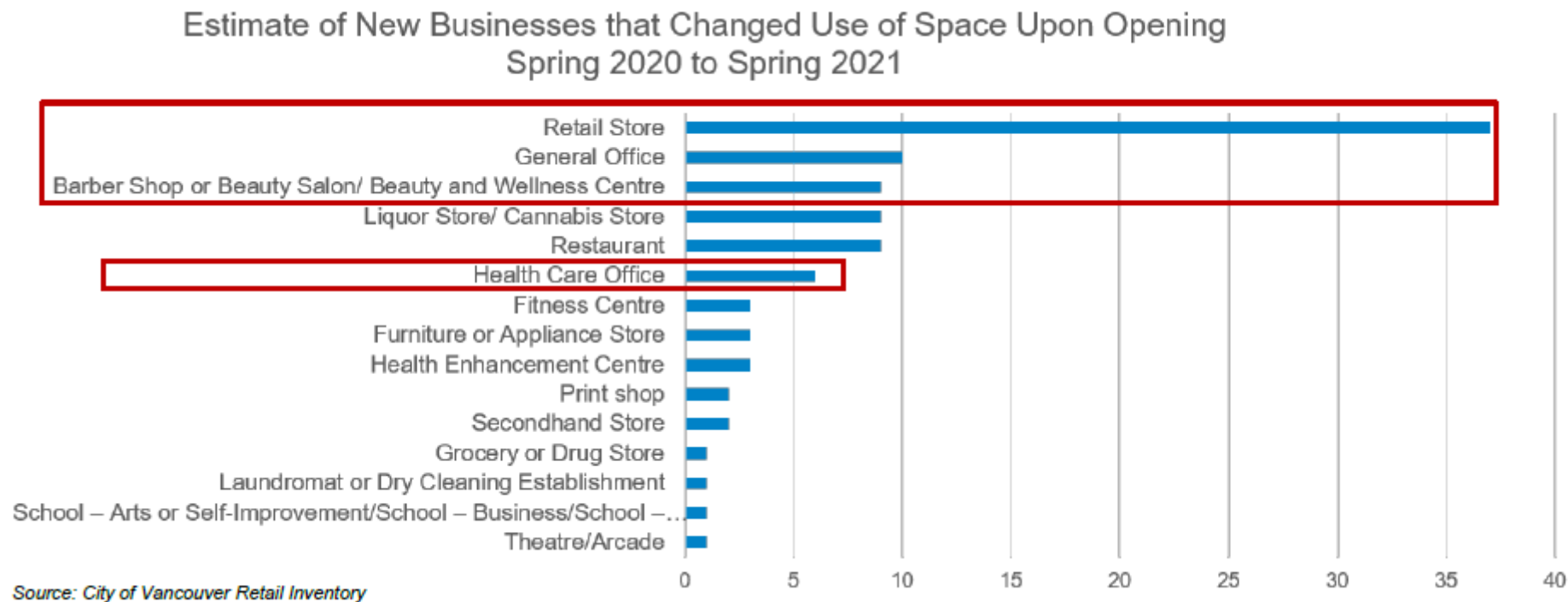
Upgrade Trigger Model revision (2 year Pilot)

Criteria for selection of opportunities

- > Largest impact on backlogs and fastest to analyze for risk and impact
 - Selection of the specific uses was based on the frequency of application and perceived lower hazards of those uses
 - 300 m² limit based on prioritization of small projects, and alignment with concurrent Zoning & Development and Parking By-law changes
 - Reducing the conditionality of these uses under 4.8.14.5.
 - Reducing accessory parking space requirements
 - No A2 occupancies were considered due the complexities associated with this kind of major occupancy class

Upgrade Trigger Model revision (2 year Pilot)

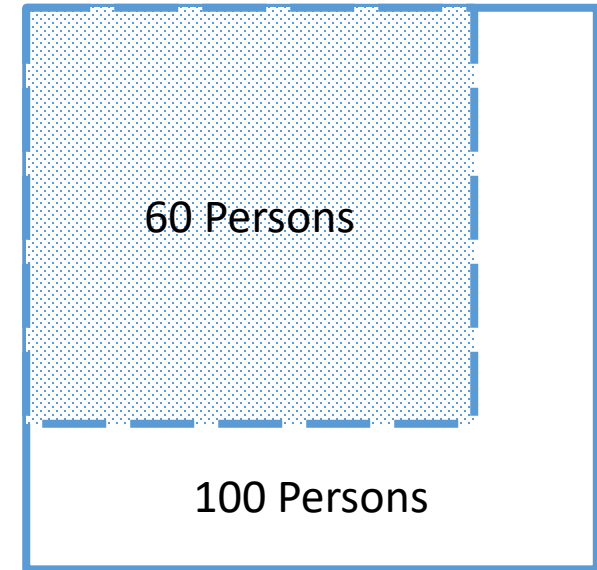
A significant proportion of the use changes occur within these categories



Upgrade Trigger Model revision (2 year Pilot)

Small Suite - Scope of Work

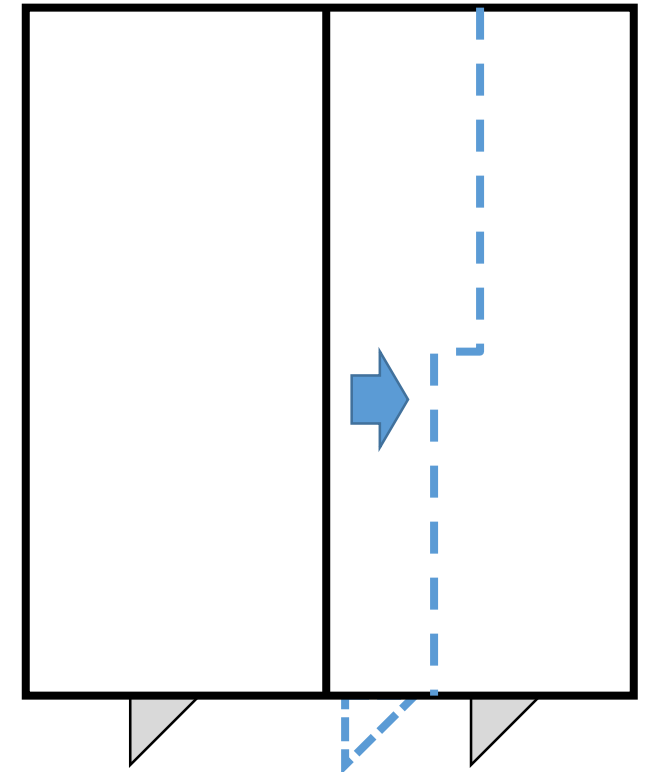
- > Addresses the rehabilitation scope work only.
 - Increase the allowance from 60 to 100 persons
 - Does not change the definition in Division A
- > Note: the defined term “*Small Suite*” is still referenced without change for changes of major occupancy



Upgrade Trigger Model revision (2 year Pilot)

Minor Renovations – Relocating Demising Walls

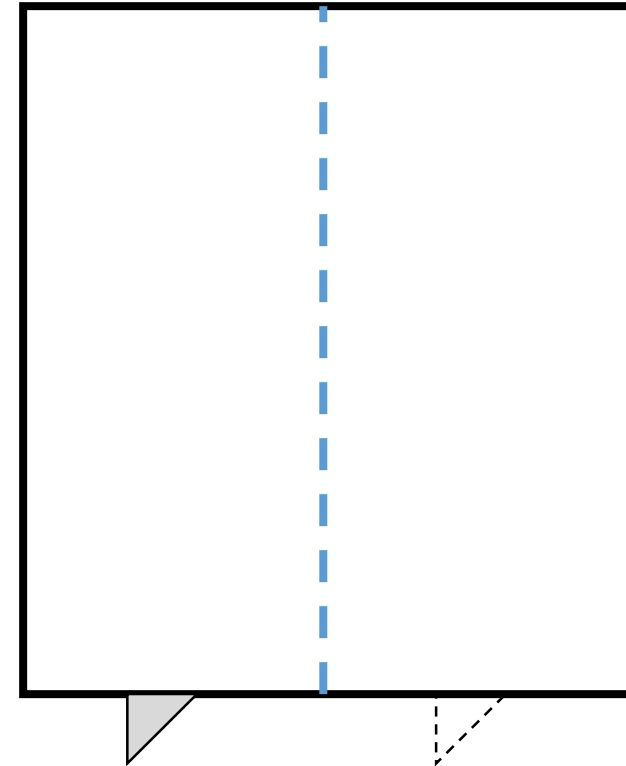
- > Relocating the wall between adjacent suites is not considered a Major Renovation
 - No substantial change warranting major upgrades
- > Must still ensure the spaces meeting the requirements of the VBBL
 - e.g.: OL >60 requires 2 means of egress
 - Sprinklers may need to be added or relocated due to the new physical arrangement.



Upgrade Trigger Model revision (2 year Pilot)

Minor Renovations – Subdividing Suites

- > Adding a demising wall within an existing suites is not considered a Major Renovation
 - No substantial change warranting major upgrades
- > Must still ensure the consequential spaces meeting the requirements of the VBBL
 - e.g.: OL >60 requires 2 means of egress
 - Sprinklers may need to be added or relocated due to the new physical arrangement.



Upgrade Trigger Model revision (2 year Pilot)

Restricted Change of Occupancy

- > Upgrade triggers for certain changes of occupancy are waived
 - Limited by
 - Use
 - Suite area
 - Relative hazard
- > Follow the normal process for determining upgrade requirements
 - Other upgrade requirements triggered by other categories of work may still apply
(e.g.: rehabilitation, additions, etc.)

Upgrade Trigger Model revision (2 year Pilot)

Restricted Change of Occupancy

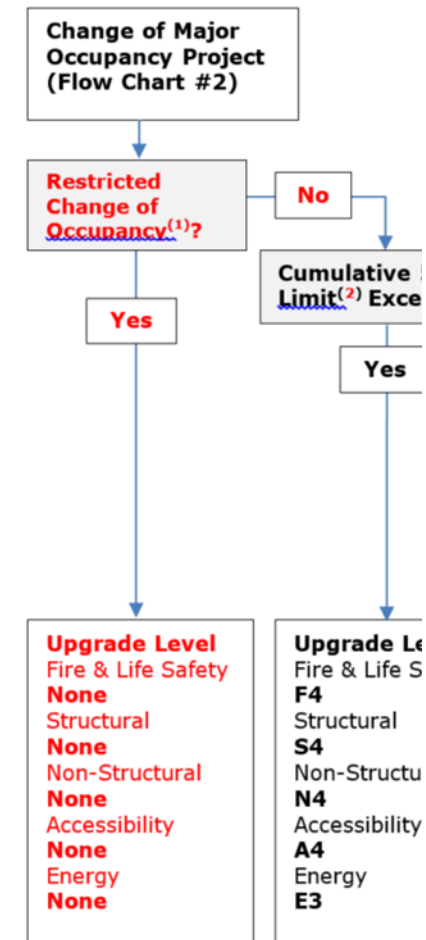
- > The waiver to change of major occupancy only applies to specific uses.

Table 11.2.1.2.-B Maximum Aggregate Suite Area Forming part of sentence 11.2.1.2.(10)			
Major Occupancy	Suite Use	Aggregate Suite Area	
		≤200 m ²	201 to 300 m ²
Group D	Administrative & Business Offices	Y	Y
	Barber and Hairdressing Shop	Y	Y
	Beauty Salon		
	Health Care Offices (non-surgical, non-sedation)	Y	Y ⁽¹⁾
Group E	General Retail (Non-hazardous materials)	Y ⁽¹⁾	N ⁽²⁾
Notes to Table 11.2.1.2.-B. (1) Provided the Hazard Index of the space is not increased (see Table A-11.2.1.2.D) (2) Except as acceptable to the Chief Building Official			

Upgrade Trigger Model revision (2 year Pilot)

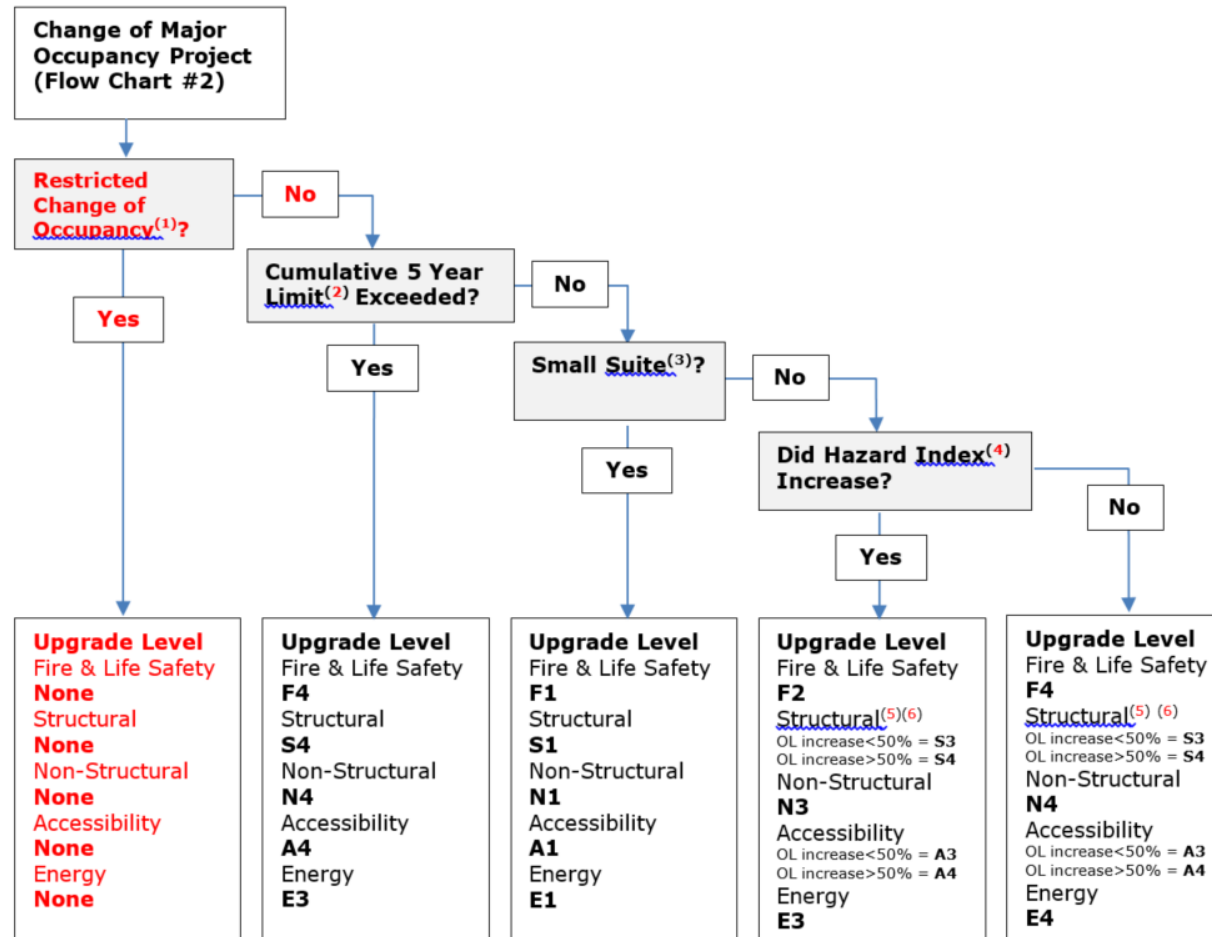
Restricted Change of Occupancy

- > A new column has been added into Flowchart #2 to incorporate the new waiver
- > This is tied to the provision of 11.2.1.2 (10)



Upgrade Trigger Model revision (2 year Pilot)

FLOW CHART NO. 2



Notes to Flow Chart No. 2:

⁽¹⁾ Restricted Change of Occupancy (see Article 11.2.1.2.(10) and note A-11.2.1.2.(10))

⁽²⁾ The cumulative 5 year limit is triggered when there is a change of major occupancy in an existing building and the aggregate area of the change in major occupancy including the current work within any 5 year period is greater than 50% of the building area (as defined in Article 1.4.1.2. of Division A) in a building of not more than one storey, or the aggregate area of the change in major occupancy within any 5 year period is greater than 100% of the building area (as defined in Article 1.4.1.2. of Division A) in a building of more than one storey.

⁽³⁾ For small suites, the small suite must be separated on the suite side of the suite separation with at least two layers of gypsum wall board (GWB). Where only one layer exists, then an additional layer of GWB must be added to the suite side only. The additional layer of GWB may be any type of GWB with a minimum thickness of 13 mm.

⁽⁴⁾ The Hazard Index may be determined by the Hazard Index Table A-11.2.1.2.-D. or other methodology as deemed acceptable to the Chief Building Official.

⁽⁵⁾ Occupant load (OL) increase is based on the proposed occupant load for the entire building versus the current occupant load for the entire building. The OL change may be assessed in a comparative manner by considering only those areas undergoing a change of major occupancy, where the occupant load of the remainder of the building cannot otherwise reasonably be assessed. Occupant loads are to be determined by the acceptable solutions in Subsection 3.1.17. of Division B.

⁽⁶⁾ Where there is a change of major occupancy and the structural load paths or structural design criteria are altered then it must be demonstrated that the existing building has the structural capacity to carry the increase in load or the building shall be structurally upgraded to carry the increase in live load.

Upgrade Trigger Model revision (2 year Pilot)

Restricted Change of Occupancy

- > For each use, the relative hazard of the proposed use may need to be assessed.
- > This is required only for suites changing to Group E, or suites over 200 m²

Table 11.2.1.2.-B Maximum Aggregate Suite Area Forming part of sentence 11.2.1.2.(10)			
Major Occupancy	Suite Use	Aggregate Suite Area	
		≤200 m ²	201 to 300 m ²
Group D	Administrative & Business Offices	Y	Y
	Barber and Hairdressing Shop	Y	Y
	Beauty Salon	Y	Y
	Health Care Offices (non-surgical, non-sedation)	Y	Y ⁽¹⁾
Group E	General Retail (Non-hazardous materials)	Y ⁽¹⁾	N ⁽²⁾
Notes to Table 11.2.1.2.-B.:			
⁽¹⁾ Provided the Hazard Index of the space is not increased (see Table A-11.2.1.2.D)			
⁽²⁾ Except as acceptable to the Chief Building Official			

Upgrade Trigger Model revision (2 year Pilot)

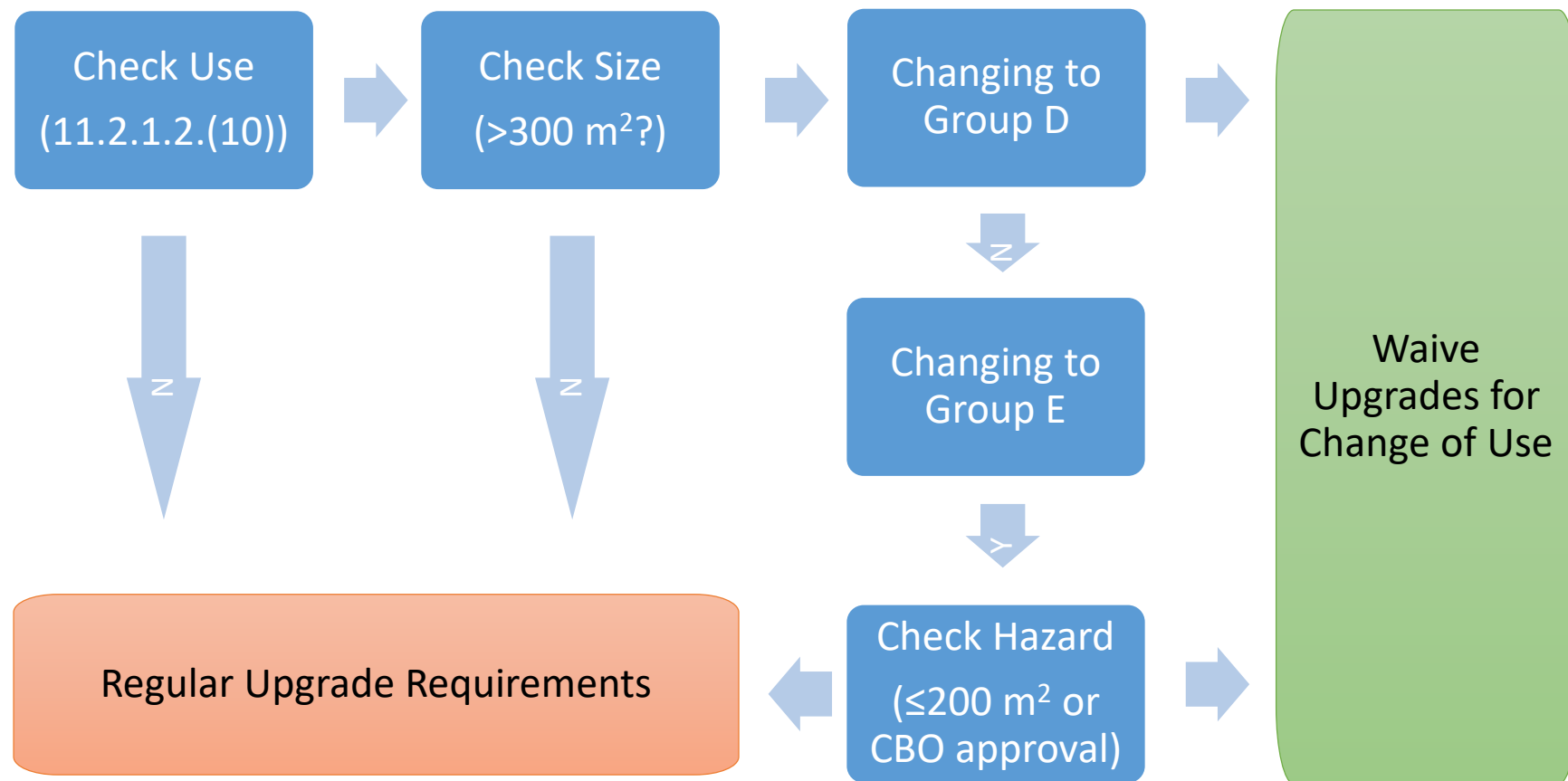
Restricted Change of Occupancy

- > To assess relative hazard, we can use the hazard index table A-11.2.1.2-D.
- > The existing Index Table has been updated to include a new ≤ 200 m² category which reflects the often reduced hazard of smaller tenant spaces

Group D		
Building Use	Hazard Index (<i>Building Area</i> ⁽¹⁾)	
	≤ 200 m ²	≥ 200 m ²
Advertising and Sales Offices	3	3
Automatic Bank Deposit	3	4
Barber/Hairdresser Shops	3	4
Beauty Parlours	3	4
Branch Banks	3	4
Car Rental Premises	3	3

Upgrade Trigger Model revision (2 year Pilot)

General Procedural Flowchart



2022 Energy and Emissions

- > The City of Vancouver (CoV) remains committed to promoting sustainable and energy efficient buildings.
- > Reminder of 2 tonnes GHG cap for large homes implemented in 2021 (up from 3 tonnes in 2019/2020)



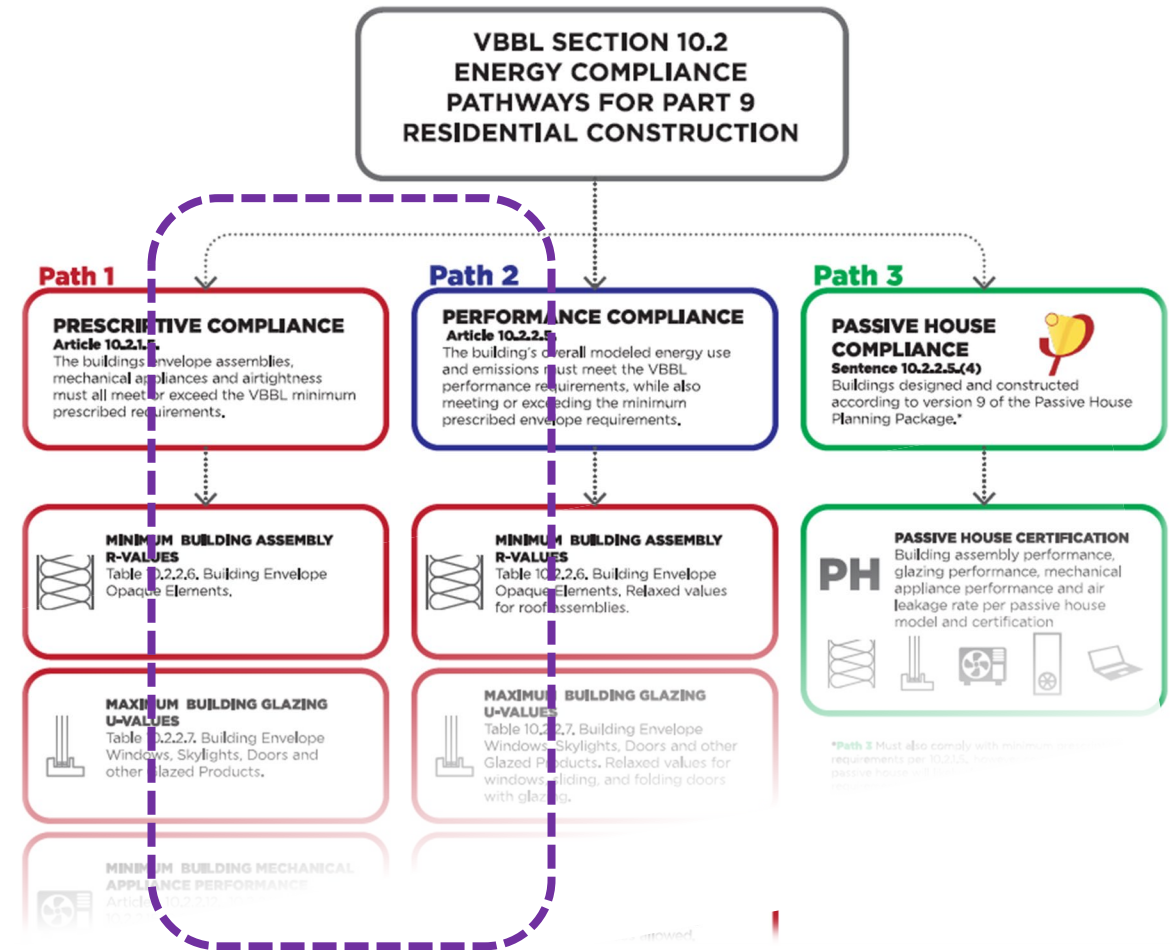
2022 Energy and Emissions

Harmonized requirements

- Small residential buildings of 1 to 3 storeys (including houses) are now grouped together and share similar requirements

Added Flexibility

- Added a Performance path for compliance for smaller buildings.
- Leverage benefits of efficient mechanical systems



General Energy Efficiency & Emissions changes

- > Prescriptive requirements will increase in a number of areas
 - Insulation and window performance
 - Heat Recovery Ventilator efficiency
 - Airtightness
- > Solar ready requirements removed
 - Outdated and lacking flexibility

Policy Notes: Secured Rental Projects

Secured Rental Policy (rev. Nov 2019)

- > Includes green building objectives to encourage the development of near zero emission buildings.
- > Rezoning applications under this policy are to employ zero emissions heating and hot water systems in the building
 - Achieve a GHGI of 3 kg/m² or less.
 - For more information see:
[Green Buildings Policy for Rezoning – Process and Requirements Bulletin](#)

Policy Notes: Commercial Oven Fire Suppression

- > At issue: is that NFPA 96 requires appliances to be protected, but reference standards provide no guidance
- > Minimum requirement:
 - Not required if directly vented, or if no hood is provided
 - If a hood is provided, then suppression must be provided as required by NFPA 96

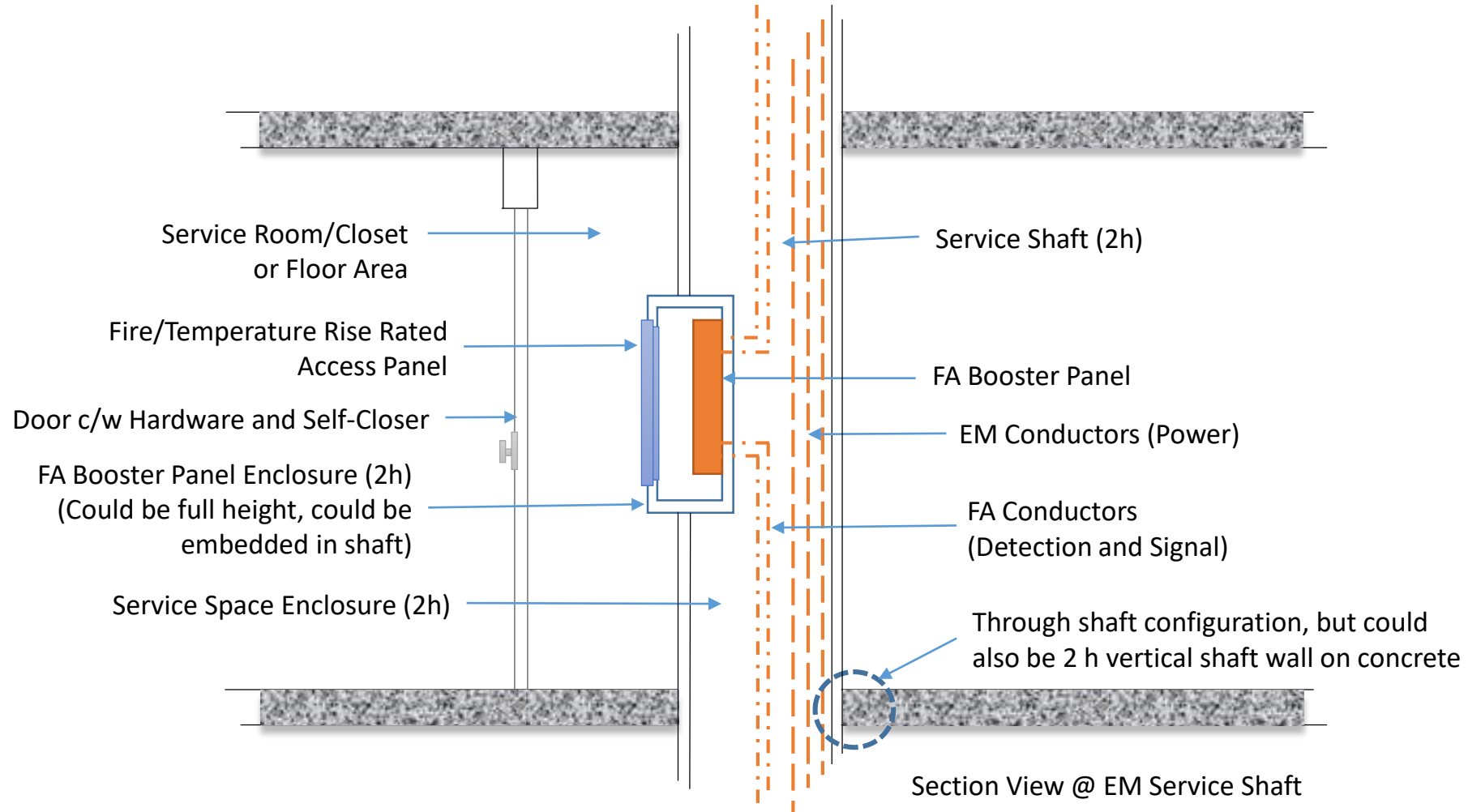


Policy Notes: Equipment in Service Spaces

- > At issue: Can equipment requiring occasional maintenance or testing forming part of the proper function of the Emergency systems be located in the shaft enclosure?
- > Design for emergency service circuit integrity is required by Articles 3.2.7.9. and 3.2.7.10.
 - Maintain operation of emergency power services for 2 h
 - Protection of conductors are relatively well addressed, in notes A-3.2.7.10.(1) of the VBBL
- > The shaft is typically considered a *service space*. This is only intended to contain service facilities such as duct, cables, pipes, etc.
- > Building Group's Position - Equipment serving the EM circuits need to be separated from the service shaft.
 - Recognizing that the correct function of the emergency circuits may be dependent upon the state of the equipment, additional protection for the equipment may be required beyond enclosure in a service room to maintain circuit integrity

Electrical Panel and Equipment in Service Spaces

EM Conductor Shaft Construction for Circuit Integrity (Conceptual)



Thank you!

> Comments?



"You're not allowed to use the sprinkler system to keep your audience awake."