

## **Vancouver Island Strata Owners Association Presentation Notes November 3, 2019**

### **Slide 1. Introductions**

### **Slide 2. Why do fire inspections?**

Owners responsibility to comply with the BC Fire & Building Codes.

The three “E’s” of fire prevention.

Performing an assessment of your building.

What the fire inspector should be looking for.

Self assessment training.

BC Building Code

#### **1.2.1.2. Responsibility of Owner**

1) Unless otherwise specified in this Code, the owner of a building shall be the person responsible for carrying out the provisions of this Code in relation to that building.

2) The owner of a building is in no way relieved of full responsibility for complying with this Code by the authority having jurisdiction

- a) granting a building permit,
- b) approving drawings or specifications, or
- c) carrying out inspections.

Usually the BCBC dictates when they need to be installed but the BCFC dictates the maintenance requirements.

### **Slide 3 BC Fire Code Division C**

#### **2.2.1.1. Responsibility**

1) Unless otherwise specified, the owner or the owner’s authorized agent shall be responsible for carrying out the provisions of this Code.

The FC is considered a maintenance document and dictates the maintenance requirements for portable fire extinguishers, smoke alarms, fire alarm systems, sprinkler systems etc.

### **2.2.1.2. Records**

- 1) Where this Code requires that tests, inspections, maintenance or operational procedures be performed on a fire safety system, records shall be made and the original or a copy shall be retained at the premises for examination by the authority having jurisdiction.
- 2) The initial verification or test reports for each system shall be retained throughout the life of the systems.
- 3) Records of tests, inspections, maintenance or operational procedures undertaken after the initial tests referred to in Sentence (2) shall be retained so that at least the current and the immediately preceding records are available.
- 4) Notwithstanding the conditions stated in Sentence (3), no record shall be destroyed within two years of having been prepared.

### **Slide 4 BC Fire Service Act**

Municipal duty to inspect hotels and public buildings

26. (1) Each municipal council shall provide for a regular system of inspection of hotels and public buildings in the municipality.

(2) A municipal council may authorize persons, in addition to the local assistant, to exercise within the municipality some or all of the powers under sections 21 to 23.

hotel" includes

- (a) an apartment house;
- (b) a residential condominium building that has
  - (i) 2 or more levels of strata lots as defined in the Condominium Act, and,
  - (ii) one or more corridors that are common property as defined in the Condominium Act, and
- (c) a boarding house, lodging house, club or any other building, except a private dwelling, where lodging is provided;

### **Slide 5 Changes to Legislation**

The government is planning to replace the Fire Services Act with the Fire Safety Act. Of significant difference is that it will apply Province wide not just in Municipalities. Local governments will be required to have a compliance monitoring system that will replace the requirement for municipalities to perform a regular system of inspection. You may find that your local government may be charging fees for services and may also accept building owners to perform self-assessments of their property.

### **Slide 6 The 3 E's of Fire Prevention**

Engineering – Design and build structures that are safe from fire. Use the best building practices to resist fire or prevent loss from fire.

Education – Teaches people how to prevent fires and what to do in the event of a fire. Also provides information about the fire safety systems in the building.

Enforcement – Enforce fire codes. While buildings are being designed and built, ensure that the work is done within required fire codes. Once construction is completed, fire and life safety codes should be followed and enforced.

## **Slide 7 Outside the building**

### Address

The address should be posted on a sign with a minimum of 4 inch letters and be visible when traveling in any direction.

It should also be reflective so it can be seen easily in the dark.

The address should be mounted high enough to avoid snow in the winter or weeds during the summer.

The address should not be obscured by bushes, flowers or branches.

Many jurisdictions have a Street Address Bylaw which requires the address to be conspicuously located near the front entrance to the building. The bylaw may also require a duplicate address be posted near the street if the building address is concealed or not clearly visible from the street.

### Fire Dept Access

Modern fire apparatus is large and needs room to maneuver. An important part of the outside the building fire safety self-assessment is to see if any changes have taken place since the last fire safety assessment. Are fire access roads and lanes identified with adequate signs?

The Fire hydrants should be visible, not blocked or overgrown by vegetation in the summer or snow in the winter and be readily available for use by the fire department.

### Hydrant

Ready access to a water supply is crucial for effective firefighting. The Fire hydrants closest to the building should be visible, not blocked or overgrown by vegetation in the summer or snow in the winter and be readily available for use by the fire department. Parking in front of a fire hydrant is never allowed.

Exterior exits must be kept in good repair.

Utilities connections should be visible, and the seals should not be broken.

Check dryer vents for lint accumulation. Never use plastic accordion type vent hoses.

## **Slide 8 Inside the Building**

Adequate exiting, early detection, and fire separations are the most important fire safety measure in a building.

### **Slide 8 Exiting**

Two of the most important elements of Fire Prevention are early detection of the fire and adequate exiting. Together they are designed to notify the occupants in the early stage of the fire and provide a safe and reliable means to escape.

Keep exits clear and unobstructed.

Exit signs

BC Building Code 2018.

3.4.5. Exit Signs

3.4.5.1. Exit Signs

- 1) Every exit door shall have an exit sign placed over or adjacent to it if the exit serves
  - a) a building more than 2 storeys in building height,
  - b) a building having an occupant load of more than 150, or
  - c) a room or floor area that has a fire escape as part of a required means of egress.
- 2) Every exit sign shall
  - a) be visible on approach to the exit,
  - b) consist of a green and white or lightly tinted graphical symbol

### **Slide 9 Exit signs & Emergency lighting**

An integral part of exiting is emergency lighting.

Emergency lighting is required in routes providing access to exit - corridors used by the public - and areas where the public congregate.

BC Fire Code 6.5.

- 2) Self-contained emergency lighting unit equipment shall be tested
  - a) at intervals not greater than one month to ensure that the emergency lights will function upon failure of the primary power supply, and
  - b) at intervals not greater than 12 months to ensure that the unit will provide emergency lighting for a duration equal to the design criterion under simulated power failure conditions.
- 3) After completion of the test required in Clause (2)(b), the charging conditions for voltage and current and the recovery period shall be tested to ensure that the charging system is functioning in accordance with the manufacturer's specifications.

## **Slide 10 Emergency Lights & Exit signs**

Monthly test by holding the button for 30 seconds and checking to see that the battery terminals are free of corrosion, lubricated, and that the surface of the battery is clean and dry.

Annual test must be done by a qualified person. The annual test involves draining and recharging the batteries, verifying charge voltage, checking recovery time, alignment of heads, and provide inspection tag.

## **Slide 11 Early Detection of a fire.**

### Smoke Alarms

Smoke alarms are required in all dwelling units in BC. They are required on each floor level in a dwelling unit and in each sleeping area. New regulations require smoke alarms to be installed in each bedroom as well.

Smoke alarms are stand alone units that emit an alarm in the immediate area when they detect smoke but do not activate a fire alarm system. Smoke alarms can be hard wired, hard wired with battery backup, voice activated, interconnected, and should be inspected regularly and the batteries should be changed twice per year or as directed by the manufacturer.

## **Slides 12 & 13 Fire Alarm Systems**

### BC Building Code

#### 3.2.4.1. Determination of Requirement for a Fire Alarm System

- 1.) Except as permitted in Sentences (2) and (3), a fire alarm system shall be installed in buildings in which an automatic sprinkler system is required by this Part
- 2) Buildings in which a sprinkler system is installed in accordance with NFPA 13D, "Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," need not comply with Sentence (1).
- 3) Buildings that contain fewer than 9 sprinklers conforming to Sentence 3.2.5.12.(4) need not comply with Sentence (1).
- 4) Except as permitted by Sentences (5) to (7) and Sentence 3.2.4.2.(4), a fire alarm system shall be installed in a building that is not sprinklered throughout and that contains
  - a) a contained use area,
  - b) an impeded egress zone,
  - c) more than 3 storeys, including the storeys below the first storey,
  - d) a total occupant load more than 300, other than in open air seating areas,
  - e) an occupant load more than 150 above or below the first storey, other than in open air seating areas,
  - f) a school, college, or child care facility, including a daycare facility for children with an occupant load more than 40,

- g) a licensed beverage establishment or a licensed restaurant, with an occupant load more than 150,
  - h) a medium-hazard industrial occupancy or a low-hazard industrial occupancy with an occupant load more than 75 above or below the first storey,
  - i) a residential occupancy with sleeping accommodation for more than 10 persons,
  - j) a high-hazard industrial occupancy with an occupant load more than 25, or
- 5) Where each dwelling unit in an apartment building that is not sprinklered has direct access to an exterior exit facility leading to ground level, a fire alarm system is not required if
- a) not more than 4 dwelling units share a common means of egress, or
  - b) the building is not more than 3 storeys in building height.
- 6) A fire alarm system is not required in a hotel or motel 3 storeys or less in building height that is contained in a building that is not sprinklered provided each suite has direct access to an exterior exit facility leading to ground level.
- 7) A fire alarm system is not required in a storage garage conforming to Article 3.2.2.88. that is contained in a building that is not sprinklered provided there are no other occupancies in the building.

#### 3.2.4.2. Continuity of Fire Alarm System

- 1) Except as permitted by Sentence (6), change end if there are openings through a firewall, other than those for piping, tubing, wiring and totally enclosed noncombustible raceways, the requirements in this Subsection shall apply to the floor areas on both sides of the firewall as if they were in the same building.
- 2) Except as permitted by Sentence (4), if a building contains more than one major occupancy and a fire alarm system is required, a single system shall serve all occupancies.
- 3) Except as permitted by Sentence (4), if a fire alarm system is required in any portion of a building, it shall be installed throughout the building.
- 4) Except as required by Sentence (5), the requirements in this Subsection are permitted to be applied to each portion of a building not more than 3 storeys in building height, in which a vertical fire separation having a fire-resistance rating not less than 1 h separates the portion from the remainder of the building as if it were a separate building, provided there are no openings through the fire separation, other than those for piping, tubing, wiring and totally enclosed noncombustible raceways.
- 5) The permission in Sentence (4) to consider separated portions of a building as separate buildings does not apply to service rooms and storage rooms.
- 6) Buildings interconnected by walkways permitted in Articles 3.2.3.19. and 3.2.3.20. or by vestibules provided in conformance with Article 3.2.6.3. shall be treated as separate buildings for the purpose of fire alarm installation required by this Subsection

#### 3.2.4.3. Types of Fire Alarm Systems

- 1) A fire alarm system shall be
  - a) a single-stage system in a Group F, Division 1 occupancy,
  - b) except as permitted in Clause (c), a 2-stage system in a Group B occupancy,

- c) a single- or 2-stage system in a Group B, Division 3 occupancy where the building is 3 storeys or less in building height, and
- d) a single- or 2-stage system in all other cases.

## **Slides 14 & 15 Fire Separations**

Fire separations are structural elements made in accordance to building code requirements that prevent the spread of fire for a given period of time. Fire separations are provided in buildings to limit the spread of fire and the premature collapse of the building under fire conditions.

Rooms, areas and suites in buildings are usually separated into fire compartments. These compartments contain the fire and reduce fire spread allowing people to escape. They also contain the fire until the fire department arrives and extinguishes the fire.

Think of a fire compartment like a box. Most multi-tenant buildings have many fire compartments (boxes), which are situated side by side and on top of each other. Generally, each fire compartment has walls, a floor and a ceiling. The walls are fire separations that limit the spread of fire horizontally from one fire compartment to an adjoining fire compartment. The top and bottom of each fire compartment are floor ceiling assemblies that separate one storey from another. The floor and ceiling assemblies limit the spread of fire vertically from one fire compartment or from one floor in the building to another.

Suites in commercial buildings must also be fire separated from other suites. This is usually accomplished by a continuous layer of drywall and suite doors that automatically close and positively latch after each use. In most cases even suites used for the same purpose must be fire separated from each other. For example, if there are two small retail shops operating independently in the building, each shop must be fire separated from the other. An exception to this is that most building and fire codes do not require Business and Personal Service occupancies such as a doctor's office and a lawyers office to be fire separated from each other.

In cases where the building is fully sprinklered the fire separation may not be required but this should be referred to a fire prevention specialist or building inspector.

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### **Slide 16 Portable fire extinguishers.**

Most jurisdictions and Fire Codes require the installation of portable fire extinguishers in all buildings except dwelling units. A dwelling unit is defined as a room or suite of rooms used as a domicile by one or more people and usually contains living, cooking, sleeping and sanitary facilities. So an individual suite in an apartment building, one side of a duplex or a single family dwelling are all examples of dwelling units.

The BC Fire Code deals with the selection, installation, inspection, testing and maintenance of portable fire extinguishers in accordance with NFPA 10. Portable fire extinguishers cannot be sold or installed unless they meet the appropriate ULC Standard and have a minimum of a 2 "A" rating.

#### Fire Extinguishers:

- Are required in every building except a private dwelling but private dwellings are well advised to install an extinguisher even though it is not a code requirement.
- Portable extinguishers must be selected and installed in conformance with NFPA 10 and ULC standards for portable fire extinguishers.
- There should be at least one 2 A rated portable fire extinguisher per floor.
- The maximum travel distance to a Class A fire extinguisher in un-sprinklered buildings is 75 feet
- The travel distance can be doubled to 150 feet in sprinklered buildings

What this means is that at least one Class "A" rated portable extinguisher is required on each floor regardless of travel distance. The extinguisher can be a simple "A" class extinguisher like a pressurized water extinguisher, or it can be an ABC Multi-purpose dry chemical extinguisher as long the label indicates a minimum of a 2 "A" rating.

- They must be fully charged and kept in a designated location
- They must be visible and easily accessible preferably near an exit or along the normal path of travel to an exit
- They must be conspicuously located where they are readily available for immediate use in the event of a fire
- They must not be obstructed from view but in large rooms this may be unavoidable so signs may be used to indicate the location of the extinguisher
- Extinguishers must be secured on a hanger or in wall cabinets designed for that purpose
- If the extinguisher is installed where it may be subject to physical damage it must be protected from potential harm
- The maximum height of the top of the extinguisher should be no more than five feet above the floor
- The bottom of the extinguisher should be no less than four inches above the floor.

## Slide 17 Fire Safety Plans

A Fire Safety Plan is a detailed document designed to deal with all aspects of fire safety relating to a specific building or property. The document is intended to be a reference manual outlining the fire safety practices being routinely used.

Fire Safety Plans are required by the fire code and are action plans intended to ensure:

- emergency responders are notified of a fire emergency,
- emergency responders will not be delayed in carrying out their duties,
- that designated supervisory staff are appointed and organized to respond to fire emergencies, and
- instructions, including schematic diagrams, describing the type, location and operation of building fire emergency systems will be established.

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