

Ontario Building Code (OBC)

1. Sprinklers
2. Standpipes
3. Fire Alarms
4. Entrances

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1. Sprinklers

i) Sprinkler Systems Requirements

- if your building classification tells you that it is required, then:

3.2.2.18. Automatic Sprinkler System Required

(1) If an automatic sprinkler system is required by Articles 3.2.2.20. to 3.2.2.83., the system shall conform to the requirements of Articles 3.2.4.7., 3.2.4.8., 3.2.4.9. and 3.2.5.13.

ii) Implications

- standpipe system with fire department connections may be required.
- connection of the sprinkler system to a fire alarm system (one or two stage).

iii) Exceptions

- sprinkler systems do make construction assemblies easier to design.

3.2.2.17. Sprinklers in Lieu of Roof Rating

(1) The requirements in Articles 3.2.2.20. to 3.2.2.83. for roof assemblies to have a fire-resistance rating are permitted to be waived provided,

(a) the building is sprinklered,

(b) the sprinkler system in Clause (a) is electrically supervised in conformance with Sentence 3.2.4.9.(2), and

(c) the operation of the sprinkler system in Clause (a) will cause a signal to be transmitted to the fire department in conformance with Sentence 3.2.4.7.(4).

1. Sprinklers

- Article 3.2.5.13. explains the various instances where the type of system can be altered.
- Article 3.2.5.14. covers the use of combustible sprinkler piping (plastic).
- Article 3.2.5.15. covers sprinklers required in some service spaces. Read this provision carefully, especially the

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2. Standpipes

i) Description

- standpipe systems are connected to municipal water sources typically.
- feeds the sprinkler systems.
- feeds the fire hose cabinets.
- provides water supply to external fire fighting devices via the exterior fire department connection.

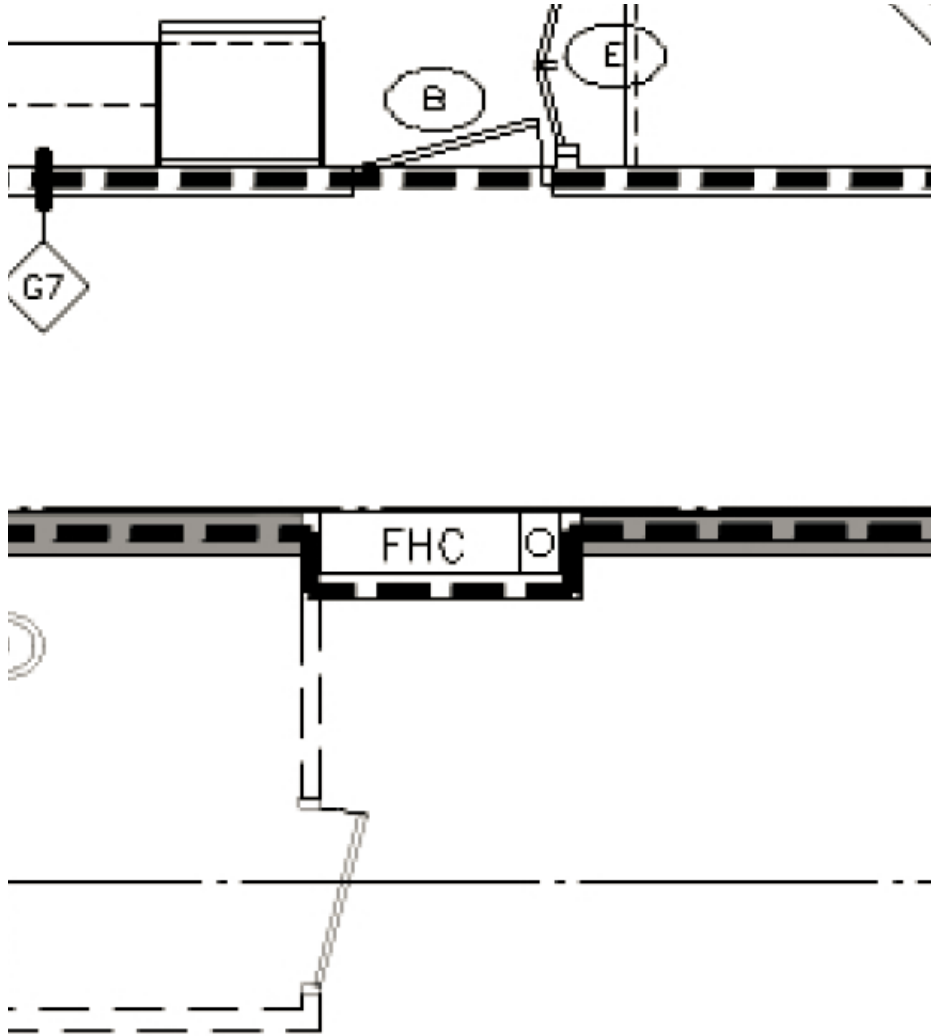
ii) Conditions for their Required Use (Section 3.2.9)

- based on height (3.2.9.1.(1))
- based on area (Table 3.2.9.1)

iii) If Your Design Needs One

- check the requirements for basement and rooftop installation
- fire hose cabinets will be required on every floor (Article 3.2.9.4.)
- the pipe will need to be in a fire rated enclosure from top to bottom.

2. Standpipes



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3. Fire Alarms

i) Design Implications

- in terms of space planning, the only implication will be with regards to the location of annunciator panels, according to Sentence 3.2.4.9.(1).

3.2.4.9. Annunciator and Zone Indication

(1) Except as permitted in Sentences (3) to (5), an annunciator shall be installed in close proximity to a building entrance that faces a street or an access route for fire department vehicles that complies with Sentence 3.2.5.5.(1).

ii) Detectors

- overall, these are referred to as “Fire Detectors”.
- classified into smoke detectors, heat detectors.
- provisions for their placement are in Articles 3.2.4.10. and 3.2.4.11.
- these are connected to a fire alarm system.
- “Smoke Alarms” are stand-alone battery-operated devices. Totally different.

iii) Where are Fire Detectors Shown?

- reflected ceiling plans

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4. Entrances

- i) Review: Barrier-free requirement.
- ii) Entrance vs. Exit: Or both?
- iii) Vestibules: Fire-fighting equipment needed.
- iv) Entrance Doors: Types.
- v) Drafting: Pertinent information.

4. Entrances

i) Review: Barrier-free Requirement

3.8.1.2. Entrances

(1) In addition to the *barrier-free* entrances required by Sentence (2), the number of *barrier-free* entrances in a *building* referred to in Sentence 3.8.1.1.(1) shall be no fewer than those as specified in Table 3.8.1.2. and shall lead from,

- (a) the outdoors at sidewalk level, or
- (b) a ramp that conforms to Article 3.8.3.4. and leads from a sidewalk.

(2) A *suite of assembly occupancy, business and personal services occupancy or mercantile occupancy* that is located in the *first storey* of a *building* or in a *storey* to which a *barrier-free* path of travel is provided, and that is separated from the remainder of the *building*, so that there is no access to the remainder of the *building*, shall have at least one *barrier-free* entrance.

- 3.8.3.2 (3):

Column 1 Number of pedestrian entrances into building	Column 2 Minimum number of pedestrian entrances required to be barrier- free
1 to 3	1
more than 3 to 5	2
more than 5	not less than 50 per cent

4. Entrances

ii) Entrance vs. Exit: Or both?

- Tactile nature.
- Design Aesthetic.
- Location:
- Entrance Doors: Types.

4. Entrances

iii) Vestibules: Fire-fighting equipment needed

- Exterior Siamese Connectors

3.2.5.16. Fire Department Connections

(1) The fire department connection for a standpipe system shall be located so that the distance from the fire department connection to a hydrant is not more than 45 m and is unobstructed.

(2) The fire department connection for an automatic sprinkler system shall be located so that the distance from the fire department connection to a hydrant is not more than 45 m and is unobstructed.

(3) The fire department connections required in Sentences (1) and (2) shall be,
(a) located on the outside of a *building* adjacent to a *street* or an access route, not less than 300 mm and not more than 900 mm above ground level, and
(b) provided with two 65 mm hose connections with female swivel hose couplings.

4. Entrances

iii) Vestibules: Fire-fighting equipment needed

- Annunciator Panels

3.2.4.8. Annunciator and Zone Indication

(1) Except as permitted in Sentences (3) to (5), an annunciator shall be installed in close proximity to a *building* entrance that faces a *street* or an access route for fire department vehicles that complies with Sentence 3.2.5.5.(1).

4. Entrances

iv) Entrance Doors: Types

- Solid-core
- Glazed panels
- Combination of both
- Revolving doors
- Sliding doors
- Materials: Metal only

4. Entrances

v) Drafting: Pertinent Information

- Plans: Door swing out – exit or not.
- Plans: Vestibule (entrance) grate.
- Plans: Annunciator Panel location, labeled with room to view.
- Plans: Door tags
- Plans: Barrier-free clearances
- Elevations: Door swing/slide indicator (standard drafting practice).
- Elevations: Door tags