

Township of Leeds and the Thousand Islands

# Division B Part 3 Fire Protection, Occupant Safety and Accessibility Changes

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**Fire Prevention** 

Mass Timber

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Safety within Floor Areas

Exits

**Barrier Free** 

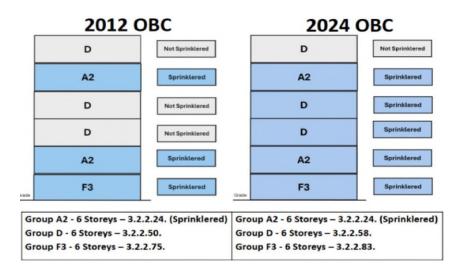
# **Division B Part 3 – Fire Prevention**

#### 3.1.5.1 Combustible Cladding on Exterior Walls - Removed the 6-storey restriction.

- Revised Sentence (1) Combustible cladding and combustible components are permitted in an exterior wall assembly of a building required to be non-combustible construction provided,
   (a) the building is
  - (i) not more than 3 storeys in building height, or
  - (ii) not more than 6 storeys in building height if sprinklered Sprinklered throughout

# **3.1.13.1. Interior Finishes, Furnishings and Decorative Materials** – new sentence related to the OFC and NFCC for interior finishes

 New Sentence (1) except as otherwise provided in this subsection, interior finishes, furnishings and decorative materials shall conform to (a) the Fire Code made under the Fire Protection and Prevention Act or (b) the National Fire Code of Canada in the absence of regulations in the OFC



#### 3.2.2.18 Automatic Sprinkler System Required – requires lower floors to be sprinklered

• New Sentence (2) If a storey in a building or a floor area is required to have an automatic sprinkler system installed throughout in accordance with one or more of Articles 3.2.2.20. to 3.2.2.92. or Section 3.3., the automatic sprinkler system shall also be installed throughout all lower storeys in the building.

# **3.2.2.20 - 3.2.2.92 Building Size and Construction Relative to Occupancy -** renumbered to align with NBC and require sprinklers:

- 3.2.2.21. Group A1, 1 Storey, Limited Area, Sprinklered
- 3.2.2.22. Group A1, 1 Storey, Sprinklered No roof rating
- 3.2.2.29. Group A3, Any Height, Any Area, **Sprinklered** No longer includes reference to trade shows
- 3.2.2.38. to 3.2.2.41 Group B2, removed B3 and added to New 3.2.2.42.to 3.2.2.46 for B3 Occupancies
- Group C occupancies shifted down from 3.2.2.42 to 3.2.2.47 through 3.2.2.55E
- 3.2.2.56. Group D, Any Height, Any Area Now requires sprinkler protection (formerly 3.2.2.49)
- 3.2.2.60. Group D, Up to 6 Storeys, Sprinklered, Combustible now outlined for combustible and non-combustible
- 3.2.2.79. Group F2, Up to 4 storeys, **Sprinklered** (was 3.2.2.70)

- 3.2.2.82. Group F3, Any Height, Any Area, **Sprinklered** (was 3.2.2.73)
- New 3.2.2.78. F2, up to 3 storeys

**3.2.4.1. Determination of Requirement for a Fire Alarm System -** Fire alarm required in all sprinklered buildings

- New Sentence (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 installed. (must meet electrical supervision and monitoring)
- Exceptions:
  - New Sentence (2) Buildings in which a sprinkler system is installed in accordance with NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes," need not comply with Sentence (1).
  - New Sentence (3) Buildings that contain fewer than 9 sprinklers conforming to Sentence 3.2.5.12.(4) need not comply with Sentence (1).

#### 3.2.4.16. Manual Stations - Sentence (1) required at every exit as opposed to every required exit.

#### **3.2.4.18. Audibility of Alarm Systems –** sleeping room low frequency signal

• New Sentence (6) Audible signal devices in sleeping rooms in a building of residential or care occupancy shall emit a low frequency signal

#### 3.2.4.20. Smoke Alarms - visual signalling component added

- Sentence (10) Suites of residential occupancy are permitted to be equipped with <u>smoke detectors</u> in lieu of smoke alarms, provided the smoke detectors
  - a) are capable of independently sounding audible signals with a sound pressure level between 75 dBA and 110 dBA within the individual suites,
  - b) except as permitted by Sentence (11), are installed in conformance with CAN/ULC-S524, "Standard for the Installation of Fire Alarm Systems," and verified in conformance with CAN/ULC-S537, "Standard for the Verification of Fire Alarm Systems," and
  - c) form part of the fire alarm system, and
  - d) **are equipped with visual signalling components** (NFPA 72 for light, color, pulse and 175 cd in sleeping rooms).

#### 3.2.5.1. Access to Above Grade Storeys – revised height above floor for firefighting access

• Revised Sentence (2) An opening for access shall a) have a sill no higher than 1 070 900 mm above the inside floor

#### 3.2.5.8. Standpipe Systems (formerly 3.2.9.) Reduced area

 Revised Sentence (1) F2, 1 storey with a building area over <u>1500m<sup>2</sup></u> requires a standpipe (previously was a building area of 2000m<sup>2</sup>)

#### **3.2.5.10.** Hose Connections – clarified locations for hose connections, permitted in exits

- Sentence (1) shall be located in exits (NFPA 14)
- Sentence (2) not required within a floor area (previously 38mm required in each storey)
- Sentence (3) shall be provided with sufficient clearance to permit the use of a standard fire department hose key
- Sentence (4) Except (5), hose connections shall be 64mm in diameter (previously more than 25m or area more than 4000m2)
- Sentence (5) 64mm hose connections not required in unsprinklered buildings under 25m high (grade to ceiling of top storey)

Category	2024	2012
Standpipe exemption for 1 storey F2 buildings	Max 1500m2	Max 2000m2
Water pressure at topmost hose connection	690 kPa (3.2.5.9)	450 kPa
Hose connection location	Must be in exit	Exit or floor area
Hose Stations	Required if unsprinklered. Within 5m of exits	Required within 3m of exits
Fire pumps (3.2.5.18)	NFPA 20 for all pumps	NFPA 20 if pressure >280kPa
Distilleries	38mm Hose stations supplied by sprinkler piping	

#### 3.2.5.11. Hose Stations - revised provisions

- Sentence (1) and (2) Unsprinklered buildings shall have <u>38mm diameter</u> hose installed within every unsprinklered floor area
- Sentence (3) Hose stations shall be located within 5m of exits and at other locations to ensure full coverage of subject floor area
- New Sentence (6) Sprinklered building (or part of building) containing a distillery are permitted to have small (38mm) hose stations supplied from interior sprinkler piping.
- New Sentence (7) Hose station provided in grain handling/storage facilities risk of dust explosions

   fog and fine spray nozzles (instead of solid stream of water) shall be used to prevent combustible dusts from being suspended.

#### 3.2.5.12. Automatic Sprinkler Systems – extended to include row houses

• Sentence (3) The application of NFPA 13D, "Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.

	2024 OBC – changes and additions to sentence 3
NFPA 13D	<ul> <li>Group C that contains more than two dwelling units, provided:</li> <li>No dwelling unit above another dwelling unit (except secondary suites)</li> <li>All suites separated by a continuous vertical fire separation from top of footing to underside of roof deck with 1h FRR</li> <li>Each dwelling unit has its own sprinkler water supply</li> <li>A passive purge sprinkler design is used as described</li> <li>If sprinkler system is installed to reduce required limiting distance, all rooms including closets, bathrooms and attached garages that adjoin the exposed building face are sprinklered</li> </ul>

• New sentence (9) except as permitted in subsection 3.2.8., closely spaced sprinklers and associated draft stops need not be installed around floor openings in conformance with NFPA 13.

### **Division B Part 3 – Mass Timber**

There are changes to the Ontario Building Code for encapsulated mass timber in sections 3.1.6, 3.2.2.7 and 3.2.2.93. these can be found under the following reference

3.1.6.4(7), (8), & (9) 3.1.6.6 3.1.6.9 (1), (4) & (5) 3.2.2.7 (4) 3.2.2.93 (1) to (7)

# **Division B Part 3 – Lighting and Emergency Power**

### 3.2.7.1. Minimum Lighting Requirements – new minimum lighting requirements

- New Sentence (4) The minimum level of illumination over the entire length of escalators and moving walks shall be not less than 100 lx at tread level of the treads and walking surfaces.
- New Sentence (5) Except as provided in Sentence (6) and except for light switches and internally illuminated controls, the minimum level of illumination at controls required by Article 3.8.1.5. shall be not less than 100 lx.
- New Sentence (6), Where visual information is provided at controls referred to in Sentence (5), the minimum level of illumination at the controls shall be not less than 200 lx, except where the visual information is internally illuminated.
- New Sentence (7) Except for internally illuminated signs, the minimum level of illumination at signs displaying visual information required by Clauses 3.4.6.10.(5)(b) and 3.4.6.16.(5)(g), Sentence 3.4.6.18.(3), Clause 3.4.6.18.(4)(a) and Articles 3.4.6.19. and 3.8.3.1. shall be not less than 200 lx:
  - Each side of horizontal exit, indicating door swing
  - "Emergency Exit Unlocked By Fire Alarm" on exit door
  - "Re-entry Door Unlocked BY Fire Alarm" on exit door
  - Exit/Access Doors
  - Floor Numbering Signs/Exit Stair Shaft Identification AND Accessibility Signs

### 3.2.7.3. Emergency Lighting – new locations where emergency lighting is required

- Emergency lighting (min. 10 lx at floor/tread level) required in:
- New Sentence (1)(m) locations where doors are equipped with an electromagnetic lock [3.4.6.16.(5)(k)]
- New Sentence (1)(n) universal washrooms (3.8.3.12) and required universal shower rooms (3.8.3.13)

# **3.2.8.1 Application of Interconnected Floor Spaces -** Group B3 can now have interconnected floor space

• **Revised Sentence (3)** A floor area containing sleeping rooms in a building of Group B, Division 2 or 3 major occupancy shall not be constructed as part of an interconnected floor space

**3.2.8.3 Sprinklers New Article** – cylinder requirements removed. All interconnected floor spaces to be sprinklered

- New Sentence (1) A building with an interconnected space shall be sprinklered throughout
- New Sentence (2) Except for large openings as defined in NFPA13, closely spaced sprinklers and draft stops shall be installed around the opening

# **Division B Part 3 – Interconnected Floor Spaces**

**3.2.8.2 Exceptions to Special Protection** – mezzanines over 500m2 must meet vertical separation (except A1 and 3 as noted) **Revised Sentence (1)** – A mezzanine need not terminate at a vertical fire separation nor be protected in conformance with the requirements of articles 3.2.8.3. to <del>3.2.8.11</del>. 3.2.8.8. provided the mezzanine:

- 1. Serves a Group A, Div. 1 occupancy
- 2. Serves a Group A, Div. 3 occupancy in a building not more than 2 storeys in building height, or
- 3. Serves a Group A, C, D, E or F occupancy and the mezzanine conforms to Sentence 3.2.1.1.(3) or (8),
  - i. Is 500m2 or less in area, and
  - ii. Conforms to Sentence 3.2.1.1.(3) or (4) (requirements for storey vs mezzanine)

# **3.2.8.4 Vestibules** – New Article pressurized vestibules protecting exits have new smoke control requirements

- New Sentence (1) Exits opening into an interconnected floor space shall be protected at each opening in the interconnected floor space by a vestibule:
  - With doorways min. 1.8m apart
  - That is separated by a non-rated fire separation
  - Designed to limit the passage of smoke so the exit stair shaft does not contain more than 1% by volume of contaminated air from the fire floor
- New Sentence (2) A exit opening into an interconnected floor space shall conform to Sentence 3.4.3.2.(6) (cumulative exits)
- New Sentence (3) If an elevator hoistway opens into an interconnected floor space and into storeys above the interconnected floor space, either the elevator doors opening into the interconnected floor space or the elevator doors opening into the storey above the interconnected floor space shall be protected by vestibules conforming to Sentence (1)

#### 3.2.8.5 Protected Floor Space

- New Sentence (1) A protected floor space used to meet the requirements of 3.4.3.2.(6)(b) shall:
  - (a) Be separated from the interconnected space with a fire separation with a fire resistance rating not less than required for the floor
  - (b) Have all openings in the vertical fire separation between the protected floor space and the adjacent interconnected space with protected with vestibules, and
  - (c) Be designed so that it is not necessary to enter the interconnected space to reach an exit.

# New definition - "Protected floor space" means that part of a floor area protected from the effects of fire and used as part of a means of egress from an interconnected floor space

#### 3.2.8.6 Draft Stops - required at the edge of interconnected opening

• New Sentence (1) A draft stop shall be provided at each floor level within an interconnected floor space, immediately adjacent to and surrounding the opening, and shall be not less than 500 mm deep measured from ceiling level down to the underside of the draft stop.

#### **3.4.3.2. Exit Width** – exit width for exit stairs that serve IFS must be cumulative

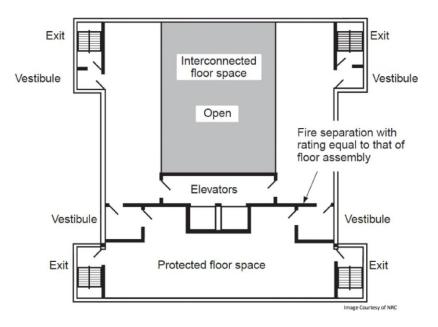
- Sentence (6) The required exit width for exit stairs that serve interconnected floor space designed in accordance with Articles 3.2.8.3. to 3.2.8.8. shall be cumulative, unless
  - (a) the stairs provide not less than 0.3 m2 of area of treads and landings for each occupant of the interconnected floor space, or
  - (b) protected floor spaces conforming to Article 3.2.8.5. are provided at each floor level and the protected floor space on a floor level has not less than 0.5 m2 of space for each occupant of that floor level of the interconnected floor space.

#### 3.2.8.7 Mechanical Exhaust System New Article

- New Sentence (1) A mechanical system is required to remove air from the interconnected floor space at a rate of 4 air changes per hour
- New Sentence (2) The mechanical exhaust system shall be actuated by a switch located on the storey containing the firefighting entrance, near the annunciator for the fire alarm system

#### 3.2.8.8 Combustible Content Limits – New Article

 New Sentence (1) - Combustible contents excluding interior finishes in parts of the floor area where the ceiling exceeds 8m above the floor are limited to not more than 16g of combustible material for each cubic metre of volume of the interconnected floor space



### **Division B Part 3 – Mezzanine Exiting and Egress**

**3.4.2.2 Means of Egress from Mezzanines -** new means of egress table rather than 3.3.1.5.A and 3.3.1.5.B

Occupancy of Space	Max. Area, m2	Distance Limits, m	Occupancy of Space	Max. Area, m2	Distance Limits, m
Assembly	150	15	Mercantile	150	15
Residential	100	15	F2 Industrial	150	10
Business/Personal	200	25	F3 Low Hazard Industrial	200	15

 Revised Sentence (1) – Except as permitted provided by Sentence (2) to (4) and (3) the space above a mezzanine shall be provided with exits on the same basis as required for floor areas by this section served by means of egress leading to exits accessible at the mezzanine level on the same basis as floor areas

The general rule: mezzanine is served by a means of egress leading to exits accessible at the mezzanine level on the same basis as floor areas:

- Served by minimum 2 enclosed exit stairs (fire separated),
- Enclosed exit stairs meet all appliable exit provisions in Section 3.4. (e.g. distance between exits),
- Exits leads to a safe space outside the building (exterior open space that is protected from fire exposure
- New Sentence (2) The means of egress from a mezzanine need not conform to Sentence (1) provided:

a. The mezzanine is not required to terminate at a vertical fire separation as permitted in 3.2.8.2.(1)

b. The occupant load is not more than 60

- c. The area of the mezzanine does not exceed area limits in Table 3.4.2.2., and
- d. the distance limits stated in table 3.4.2.2. measured along the path of travel are not exceeded from any point on the mezzanine to:
  - (i) an egress door serving the space that the mezzanine overlooks if the space is served by a single egress door or
  - (ii) the egress stairway leading to an access to exit in the space below if that space is required to be served by 2 or more egress doorways in conformance with 3.3.1.5.(1).
- Revised Sentence (3) At least half of the required means of egress from a mezzanine shall comply with Sentence (1) if the mezzanine is not required to terminate at a fire separation as permitted by Sentence 3.2.8.2.(1)

# **Division B Part 3 – Safety Within Floor Areas**

**3.3.1.5. Egress in a floor area unsprinklered Modified Table – A –** table aligns with 3.4.2.2.

Occupancy		2024		2012	
	Suite Area	Travel Distance	Suite Area	Travel Distance	
Group A	150m2	15m	150m2	15m	
Group C	100m2	15m	150m2	25m	
Group D	200m2	25m	200m2	25m	
Group E	150m2	15m	200m2	25m	
Group F2	150m2	10m	200m2	25m	
Group F3	200m2	15m	200m2	25m	

#### 3.4.3.2 Exit Width - New Tables

- New Sentence (8) the min. widths of exits shall conform to Tables 3.4.3.2.-A and 3.4.3.2.-B
  - As per Tables 3.4.3.2.-A and B the exit width for doorways has increased from 790 mm to 850mm for all doorways including doorways not serving patient or residents sleeping rooms, all other exit widths for stairs, ramps, exit corridors and passageways remain the same

#### 3.4.6.5 Handrails - graspable area increased

 Revised Sentence (5) - The maximum outside diameter size of a graspable handrail has been increased from 43 mm to 50 mm for circular handrails, and the maximum cross section perimeter of a non-circular handrail is increased from 125 mm to 160 mm

### **Division B Part 3 – Exits**

#### 3.4.6.16 Door Release Hardware

- **Revised Sentence (2)(3)** Requires that the door release hardware in an assembly occupancy shall:
  - Extend across not less than one-half of the width of the door,
  - Release the latch, and allow the door to swing wide open in the direction of travel
- Revised (5)(g)(h) Where electromagnetic locks are used, permanently mounted visual and tactile information signs required on doors indicating EMERGENCY EXIT UNLOCKED BY FIRE ALARM (previous requirement to provide a legible sign with lettering that is min. 25mm high with a 5mm stroke)
- New (I) Where electromagnetic locks are installed on doors providing emergency crossover access to floor areas from exit stairs:
  - The device will release on operation of a manual pull station located on the wall on the exit stair side <u>not more than 600mm from the door</u>

- <u>Provide a visual and tactile information sign</u> permanently mounted on the door on the exit side "RE-ENTRY DOOR UNLOCKED BY FIRE ALARM"
- Revised Sentence (7) Door release hardware shall be installed between 900 mm and 1100 mm above the finished floor (previous requirement sentence (8) to be installed at 1200mm above the floor)

**3.6.2.8.** - 2 hr fire separation around service rooms containing generators used for life safety systems (previously 1 hour)

## **Division B Part 3 – Barrier Free**

3.8.1.2 Barrier Free Entrances – all pedestrian entrances required to be accessible

 Revised Sentence (1) - The previous ratio of pedestrian entrances into a building required to be barrier free is removed, and except for rapid transit stations that require only one barrier free entrance, and for service entrances, ALL pedestrian entrances are required to be barrier free and connect to a barrier free exterior path of travel

#### **3.8.2.1** Exempt from Barrier Free path of travel requirements – new exemptions

- New subclauses (I) and (m) added to where a barrier free path of travel is not required throughout the entrance storey and any normally occupied floor areas and rooftop amenity:
  - I. Within a parking level with no barrier free parking spaces
  - m. To the floor level above or below the entrance level in buildings no more than 2 storeys in building height or in 2 storey suites, <u>unless</u> the floor level above or below:
    - i. Is served by a passenger elevator, a platform equipped passenger elevating device, and escalator, or an inclined moving walk,
    - i. Is 600m2 or more in floor area
    - ii. Contains facilities that are not contained on the entrance level, but that are integral to the principal function of the entrance level or,
    - iii. Contains an assembly occupancy of more than 100m2 in floor area

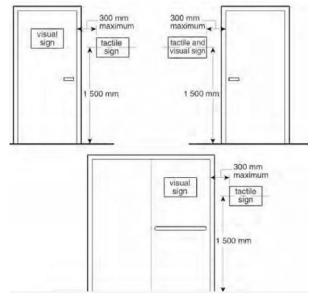
# **3.8.2.2 Barrier Free Paths of Travel to Building Entrances, Exterior Passenger Loading Zones, and Access to Parking Areas**

- Revised Sentence (1) To provide a direct barrier free path of travel is required to a public thoroughfare in addition to where designated parking or an exterior passenger loading zone are provided
- New Sentence (4) In storage garages barrier free path of travel is required between each level with barrier free parking and all other parts of the building that are served by the storage garage

#### **3.8.3.1 Accessibility Signs -** additional signage areas and requirement for tactical signs

- **Revised Sentence (1)** In addition to previous requirements for signage at barrier free entrances, ramps, and exterior passenger loading zones, additional signs shall be provided:
  - Barrier free washrooms, showers, elevators, parking spaces and assistive listening devices or adaptive tech
  - Directional signs are to be provided with visual information
  - Signs installed at or near doors shall be both tactical and visual
  - Visual and Tactile information to comply with CSA B651 Accessible design for the built environment
- New Sentence (5) clarifies that directional signs are to be provided with visual information.
  - New Sentence (7) New requirements for Tactical signs to:
    - Incorporate both braille and tactile characters

- Be installed on the wall closest to the latch side or on the nearest wall in the right side of the door where there is no wall on the latch side, and
- Be centered 1500mm above the floor with the edge of the sign not more than 300mm from the door (previous requirement to mount the sign between 1200-1500mm above the floor)



#### 3.8.3.2 Exterior walks

• Revised Sentence (1)(e) – have not less than 1600mm 1100mm wide surface with a different texture to that surrounding it, where the line of travel is level and even with adjacent walking surfaces

#### 3.8.3.3 Doorways and Doors

- **Revised Sentence (1)** All doorways in a barrier free path or travel are required to be min 850mm (reduced from 860mm for consistency)
- **Revised Sentence (4)** Every pedestrian entrance door is required to be provided with a power door operator regardless of occupancy (previously exempted group F)
- New Sentence (4.1) New requirements for doors with self-closing devices in a barrier free path
  of travel including interior doors of vestibules, entrance doors to suites or rooms served by a public
  corridor or a corridor used by the public shall have a power door operator

#### 3.8.3.4 Barrier Free Ramps – Revised sentences

- Sentence (1)(a) The min. width of barrier free ramps between handrails is increased to 1000mm from 900mm and,
- Sentence (1)(c) The level area at the top and bottom is increased to 1700x1700mm from 1670x1670mm
- Sentence (1)(g) Clarification that a ramp be provided with a 50mm curb OR a horizontal rail or other barrier that extends to 50mm of the top of the ramp

#### **3.8.3.5 Passenger Elevating Devices -** New clear floor area and entry door or gate requirements

- Revised Sentence (1) Passenger elevators in addition to complying with CSA B355 "Lifts for Persons with Physical Disabilities, must also now include:
  - Clear floor space of 1500mm long x 1000mm wide
  - Entry Doors or Gates with

- a clear width of 850mm in the open position if on the short side of the elevator or
- 1100mm in the open position if on either end of the long side of the elevator

#### 3.8.3.13 Showers and Bathtubs - New requirements

- New Sentence (4)(5) Provides that at each location where showers are provided for customers, the public or common use areas for employees, at least one universal dressing and shower room shall be provided and shall:
  - Be located in a barrier free path of travel
  - Have a door capable of being locked from the inside and released from the outside
  - Have a lavatory and mirror as per 3.8.3.11. (Barrier free)
  - Have a barrier free shower in conformance with sentence 3.8.3.132
  - Have a bench at least 1830mm long x 760mm wide and between 480-520mm high
  - Have a transfer space on the long side of the bench 900mm wide by 1830mm long
  - Have a coat hook max. 1200mm above the floor on a side wall with max 50mm projection

#### 3.8.3.14 Service Counters (3.8.3.14.): New Article with minimum dimensions

- Where a service counter is provided a section of the counter shall:
  - Be not less than 800mm long centred over a knee space that is not less than 800mm wide, 685mm high and 485mm deep
  - Have a surface that is not more than 856mm above the floor

#### 3.8.3.16. A Water Bottle Filling Stations – New Article

- At each location where water bottle filling stations are provided at least one shall be equipped with controls that activate automatically or comply with 3.8.1.5.(1)(c). Water bottle stations shall:
  - Be located in a barrier free path of travel
  - Have a clear space of 800mm x 1350mm in front
  - Have a knee space where there is frontal access
  - Be operable at a height of not more than 1200mm above the floor
  - Be equipped with automatic controls or as per 3.8.1.5.(1)

