

ELEVATORS AND FIRE SERVICE

CODE CHANGES in British Columbia

Presenter:

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Gunn Consultants Inc.

- Professional engineering team specialized in elevators and escalators
- Independent; no ties to any supplier
- Elevator System Design
- Project Management
- Represent owner in unbiased, pragmatic manner:
 - Condition Assessment
 - Maintenance Review
 - Repairs and Modernizations
 - Equipment Specifications and Maintenance Agreements



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Agenda

- *Regulatory Requirement (B44-2007 Safety Code)*
- *Fire Service*
- *Recall Switch Locations*
- *Pit Drains*
- *Standby Power*
- *Firefighters Elevators*
- *Further Topics for Discussion?*
- *Questions*



Regulatory Requirements

Regulatory Body: BC Safety Authority
Governing Law: Safety Standards Act
Regulation: Elevating Devices Safety Regulation

Code:

- B44-2007 Safety Code for Elevator & Escalators
- B44.2-2007 Maintenance requirements and Intevals
- Safety Orders, Directives, Bulletins, etc...

Fire Service

- Fire Service called “Firefighters Emergency Operation” in the elevator code
- Not the same as a “Firefighters Elevator” as per building code
- Fire service has two “phases”:
 - Phase 1 – Recall of elevators in response to fire alarm or manual switch
 - Phase 2 – Firefighters control elevator from inside cab
- When is Fire Service Required?
 - Previously required if “high” buildings only
 - Effective Feb 2011, elevators in ALL buildings require Fire Service
 - Both Low Rise AND High Rise buildings

Elevator Recall Switch Locations

- Switches to recall elevators are required at TWO locations
 - **Location 1** – Main elevator lobby, one per elevator group. Required in ALL buildings.
 - **Location 2** – Central Alarm Control Facility, or the Annunciator Panel – i.e. the firefighters response point. This is required in high buildings only.

Auto Elevator Recall Initiation

- **Recall of elevators initiated by:**
 1. Smoke detector at ALL elevator lobbies, i.e. NOT by general fire alarm.....Rationale?
 2. Smoke detector at MAIN lobby (where alternate floor recall is required)
 3. Smoke/heat detectors in hoistway, pits and machine room

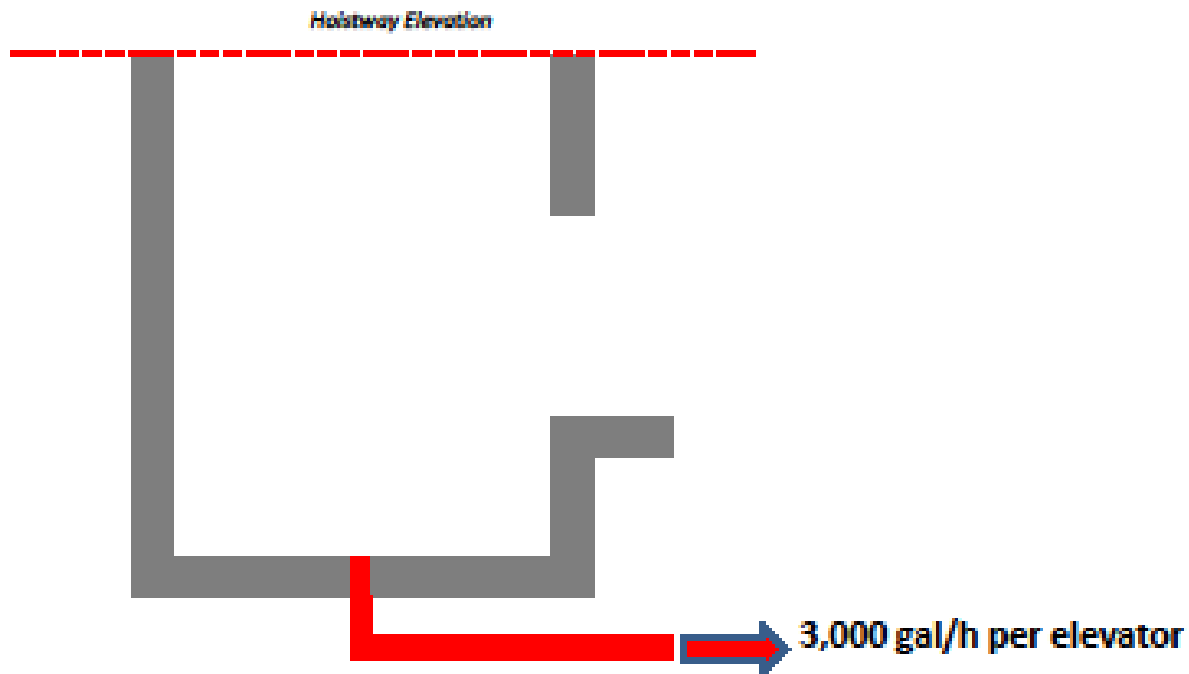
Pit Drains

- When are they required.....?
 - Pit drains mandatory by elevator code for elevators with Firefighters Emergency operation (aka “Fire Service”)
 - With the Feb 2011 code change to require fire service for ALL elevators, pit drains are now required for ALL elevators
- Pit Drain Requirements
 - Capacity of 3,000 gal/h per elevator
 - Must meet plumbing code, with backflow prevention

Pit Drains, Cont'd

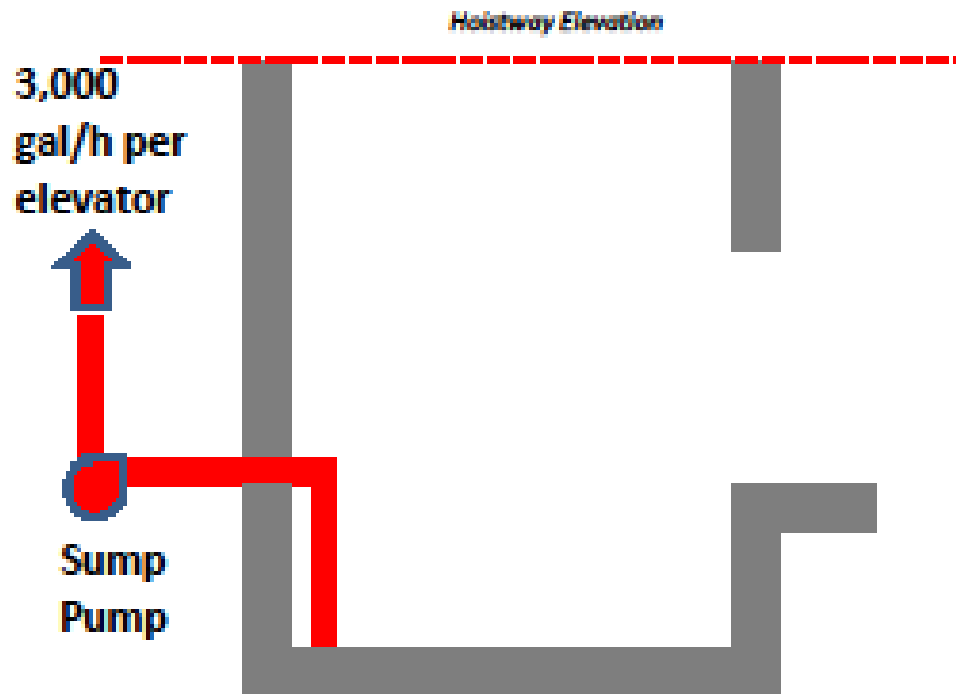
- Options / Alternatives

- Alternative #1** - drain in pit floor



Pit Drains, Cont'd

- **Alternative #2** – Sump Pump Outside Pit
 - Sum pump cannot be located in pit or machine room

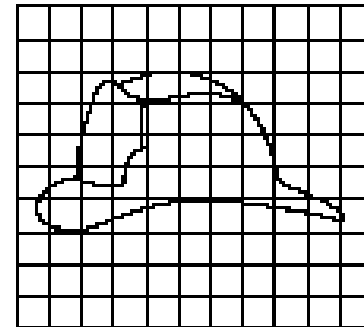


Standby Power

- **When Required?** Connection to standby power generator required in “high” buildings only
- **Which Elevators?** In high buildings, ALL elevators serving floors above the main entry level must be connected.
- **What if NOT connected?** If no connection to generator and normal power fails, elevators stop and potentially trap passenger.....unless battery lowering feature is included.

Firefighters Elevators

- A designated “Firefighters Elevator” is required by the building code.
- Typically One FF elevator per building
- Key Requirements:
 - Equipped with Firefighters Emergency operation, aka Fire Service
 - Connection to standby power
 - Electrical feeders protected with 2 hr rating
 - Minimum 1500 lbs capacity
 - Fire hat symbol in hall door frame



Further Topics for Discussion?

- *Safety Zone*
- *Entrance Protection, Exposed Elevators*
- *Single Bottom Elevator Cylinders*

Thank you.

Questions?

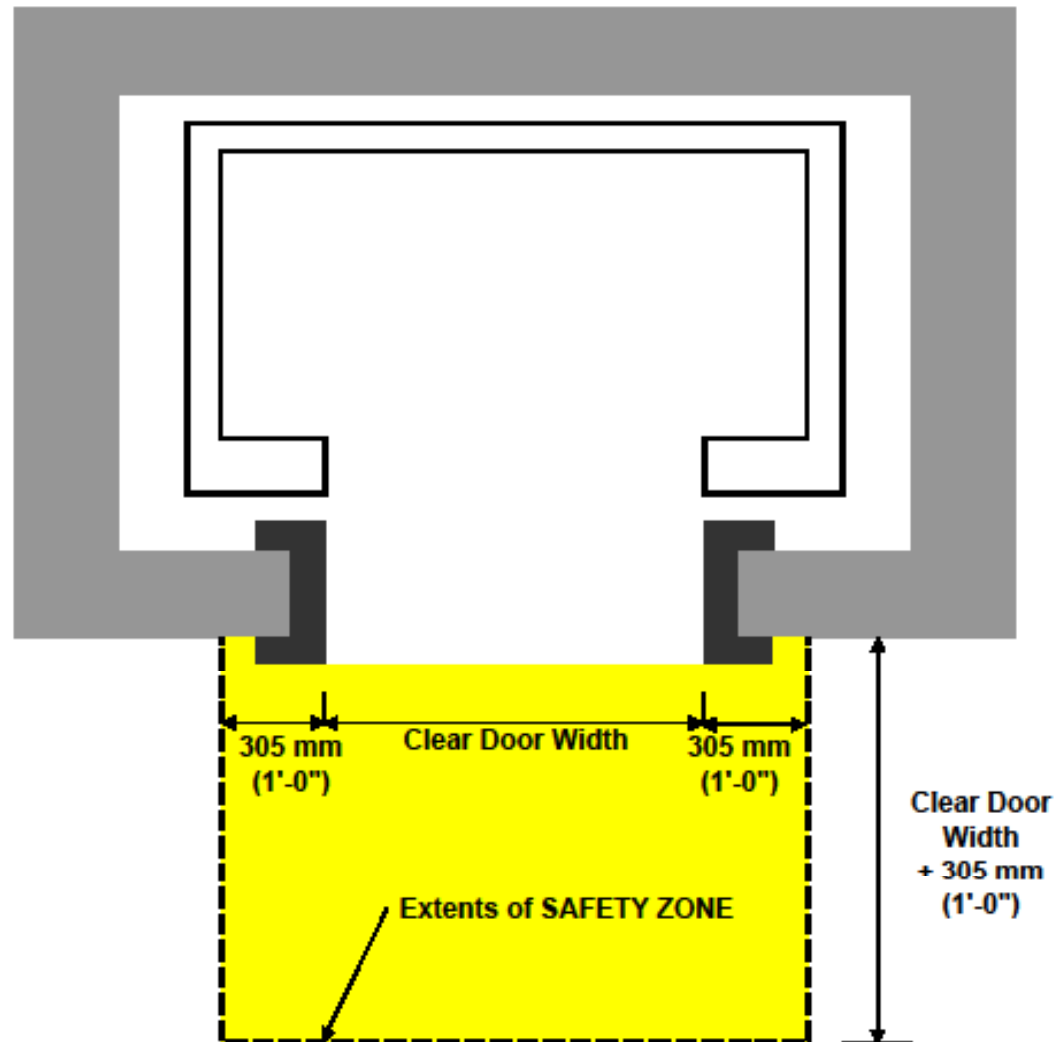


Safety Zone

- Provincial elevator safety regulations require clear space in front of elevator doors

- Not mentioned in Elevator Safety Code

- Not mentioned in Building Code



Entrance Protection, Exposed Elevators

- Provincial elevator safety regulations require space in front of elevator doors
- Not mentioned in Elevator Safety Code
- Not mentioned in Building Code

