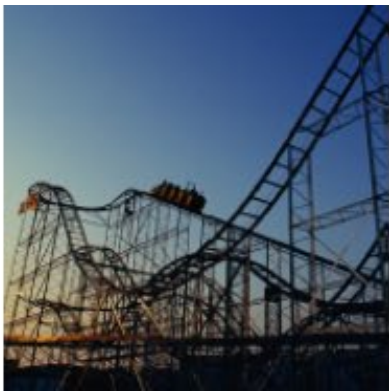




FIREFIGHTER'S EMERGENCY OPERATION FOR ELEVATORS

65TH OMFPOA ANNUAL SYMPOSIUM - 2023



Course Agenda

- 1: **F.E.O** -When required?

- 2: **Phase 1 – Recall operation**
What is it/ how it works

- 3: **Phase 2 - Emergency in Car Operation**
What is it/ how it works

- 4: Questions ?

-



Firefighter's Emergency Operation (F.E.O.)

2.27.3 Firefighters' Emergency Operation:

1) When required?

Firefighters' Emergency Operation shall apply to **all automatic elevators** except where the hoistway or a portion thereof is not required to be fire-resistive construction (see [2.1.1.1](#)), the rise does not exceed 2 000 mm (80 in.), and the hoistway does not penetrate a floor.

Phase 1- Emergency Recall Operation

Two types :

**1: Emergency recall Operation
(Manual recall)**



**2: Emergency recall Operation by Fire Alarm
Device (Auto recall)**



Phase 1- Emergency Recall Operation (Manual Recall)

A three-position key-operated switch that will not change position without a deliberate action by the user, shall be

(a) provided only at the designated level for each single elevator or for each group of elevators.

(b) labeled “FIRE RECALL” and its positions marked “RESET,” “OFF,” and “ON” (in that order), with the “OFF” position as the center position

(c) located in the lobby within sight of the elevator or all elevators in that group and shall be readily accessible



Phase 1- Emergency Recall Operation (Manual Recall)

- The switch(es) shall be rotated clockwise to go from the “**RESET**” position (designated level switch only), to the “**OFF**” position to the “**ON**” position. Keys shall be **removable only in the “OFF” and “ON” positions.**

Only the fire recall switch(es) or fire alarm initiating device located at floors that are served by the elevator, in the hoistway, in an elevator machine room, in a control space, or in a control room shall initiate Phase I Emergency Recall Operation.



Phase 1- Emergency Recall Operation (Manual Recall)

When a fire recall switch is in the “ON position, all cars controlled by the switch shall operate as follows:

- (a)** A car traveling toward the designated level shall continue nonstop to the designated level and power-operated doors shall open and remain open.
- (b)** A car traveling away from the designated level shall reverse at or before the next available landing without opening its doors and proceed to the designated level.
- (c)** A car standing at a landing other than the designated level shall proceed to the designated level if the doors are closed. If doors are open, doors shall close and elevator proceed to the designated level.

(Door reopening devices for power-operated doors that are sensitive to smoke or flame shall be rendered inoperative without delay)



Phase 1- Emergency Recall Operation by Fire Alarm Initiating Devices (Auto Recall)

In jurisdictions enforcing the NBCC, **smoke** detectors, or **heat** detectors in environments not suitable for smoke detectors (fire alarm initiating devices), or **FAID's** used to initiate **Phase I** Emergency Recall Operation shall be installed in conformance with the requirements of the NBCC and shall be located

- (a) at each elevator lobby served by the elevator
- (b) in the associated elevator machine room, a machinery space containing a motor controller or driving machine, a control space, or a control room
- (c) in the elevator hoistway, when sprinklers are located in those hoistways

NOTE:

Smoke and heat detectors (fire alarm initiating devices) are referred to as “fire detectors” in the NBCC. Pull stations are NOT deemed to be fire detectors.



Phase 1- Emergency Recall Operation by Fire Alarm Initiating Devices (Auto Recall)

Phase I Emergency Recall Operation to the designated level shall conform to the following:

(a) The activation of a fire alarm initiating device (FAIDS) at any floor, other than at the designated level, shall cause all elevators that serve that lobby, and any associated elevator of a group automatic operation, to be returned nonstop to the designated level.

(b) The activation of a **FAID** in **machine room /control room /hoistway** shall cause all elevators having any equipment located in that room or space, and any associated elevators of a group automatic operation, to be returned nonstop to the designated level. If the machine room is located at the designated level, the elevator(s) shall be returned nonstop to the alternate level.

If that initiating device(s) installed at or below the lowest landing of recall shall cause the car to be sent to the upper recall level.



Phase 1- Emergency Recall Operation by Fire Alarm Initiating Devices (Auto Recall)

IN CAR FIRE HAT – TO FLASH OR NOT TO FLASH

When Phase I Emergency Recall Operation is initiated by a fire alarm initiating device (FAIDS) for any of the following locations, the visual signal shall illuminate intermittently only in a car(s) with equipment in that location:

- (a) machine room
- (b) machinery space containing a motor controller or driving machine
- (c) control room
- (d) control space
- (e) hoistway

NOTE: FIRE HATS : SOLID = GOOD TO GO

FLASHING= USE AT OWN RISK

NO HAT = NO GO



Phase 2- Emergency In Car Operation

A three-position (“OFF,” “HOLD,” and “ON,” in that order) key-operated switch that will not change position without a deliberate action by the user shall be labeled

“FIRE OPERATION,” provided in an operating panel in each car, and be readily accessible.

The key shall only be removable in the “OFF” or “HOLD” position.

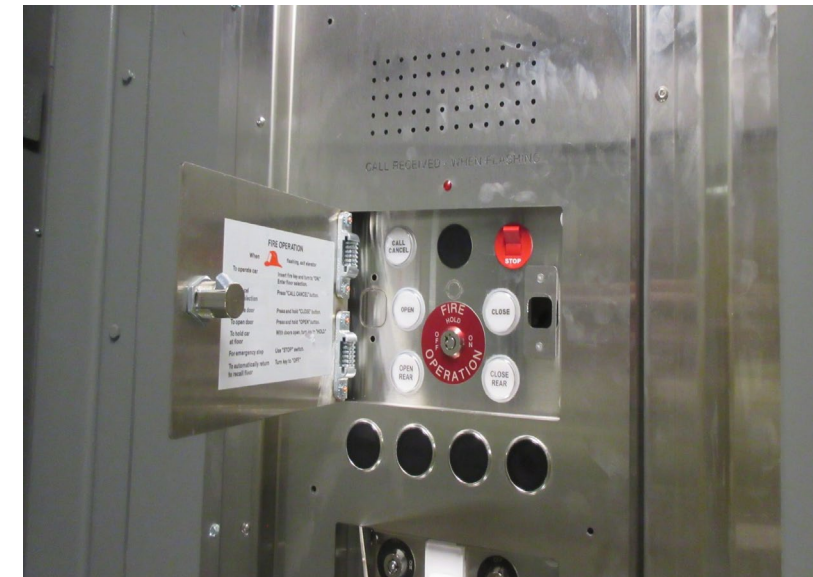
When the “FIRE OPERATION” switch is in the “ON” position, the elevator shall be on Phase II Emergency In-Car Operation, for use by emergency personnel only, and the elevator shall operate as follows:

(a) The elevator shall be operable only by a person in the car.

(b) Floor Selection Means

- In the car , ALL floor selection means shall function
- Position indicators and car-direction indicators where provided, shall remain operative

(c) At the fire command center, position indicators and car-direction indicators, where provided, shall remain operative



Phase 2- Emergency In Car Operation

(d) At the designated level

- the car shall not respond to hall calls
- hall call-registered lights, where provided, shall remain inoperative,
- position indicators and car-direction indicators, where provided, shall remain operative

(e) At all landings, except at the designated level

- the car shall not respond to hall calls
- hall call-registered lights, where provided, shall remain inoperative
- position indicators, car-direction indicators, and hall lanterns, where provided, shall remain inoperative



Phase 2- Emergency In Car Operation

HOLD POSITION

For elevators with power-operated doors, when the car is at a landing, with the doors open, and the “FIRE OPERATION” switch is in the “HOLD” position, the car shall remain at the landing with the doors open. The door close buttons shall be inoperative, and car calls shall not be registered.



Phase 2- Emergency In Car Operation

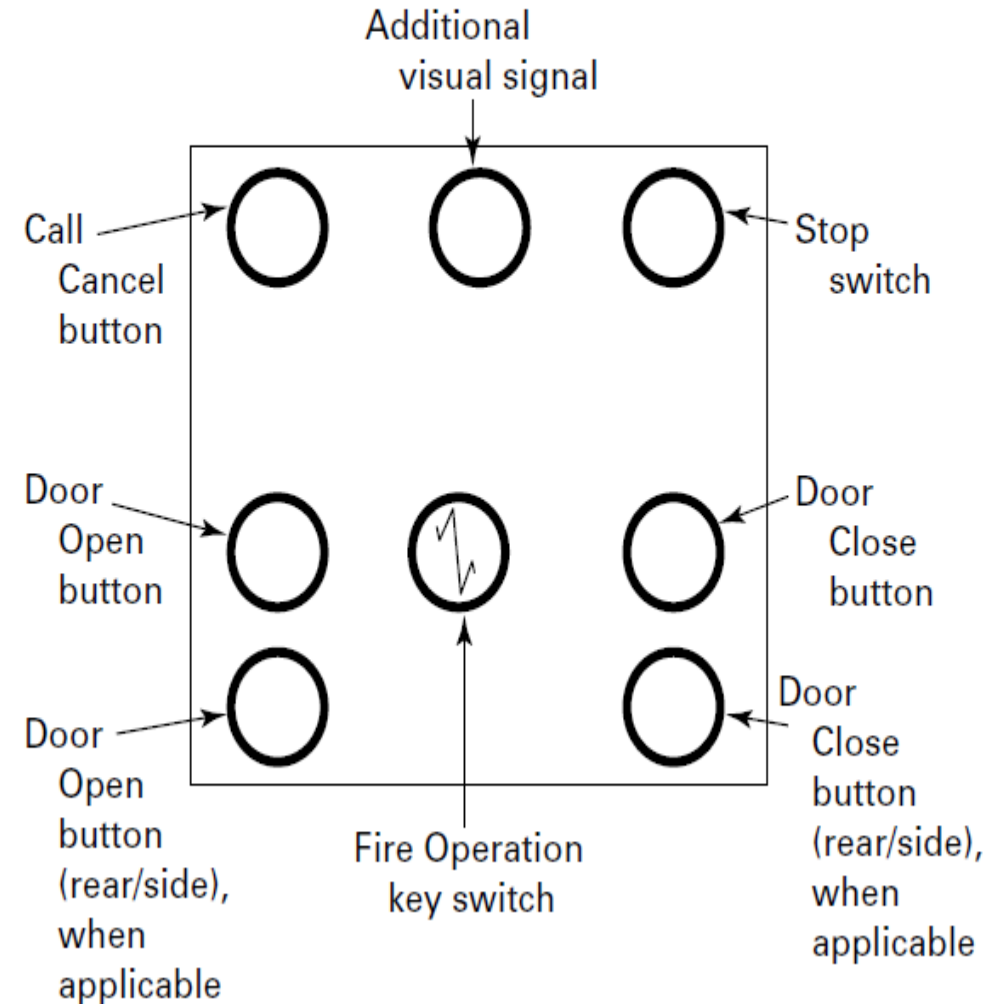
DOOR OPERATIONS

The opening of power-operated doors shall be controlled only by a continuous-pressure door open button. If the button is released prior to the doors reaching the normal open position, the doors shall automatically reclose.

CALL CANCEL

Every car shall be provided with a button labeled "CALL CANCEL," located as required in [2.27.3.3.7](#), that shall be effective during Phase II Emergency In-Car Operation. When activated, all registered calls shall be canceled and a traveling car shall stop at or before the next available landing.

Figure 2.27.3.3.7 Panel Layout



FIREFIGHTER'S EMERGENCY OPERATION FOR ELEVATORS

What's new in CSA B44-19 Code ? F.E.O related

2.27.3.1.6 When a fire recall switch is in the "ON" position, all cars controlled by the switch shall operate as follows:

(c) When provided, the **in-car stop switch** , or the **emergency stop switch** in the car, **shall not be made ineffective.**

