

- (q) The car top emergency exit shall remain in the closed position except when passing through same.
- (r) Before performing repairs from top-of-car, with the car at or above the top landing, place a ladder in car under top emergency exit to provide means of exiting from car top.

## **8.2 Pit Safety**

### *8.2.1 General*

- (a) Many serious injuries occur every year, entering and exiting pits. Every employee must be aware of the hazards before entering a pit. Some of the more common hazards are:
  - (1) Inadequate refuge space
  - (2) Inadequate lighting
  - (3) Improper access
  - (4) Tripping hazards
  - (5) Unsafe or lack of pit ladders
  - (6) Moisture/water/oil
  - (7) Moving equipment

Take appropriate steps to minimize these hazards and any others that are identified.

- (b) Before entering a pit, familiarize yourself with the position of the car and counterweights for the car being worked on as well as any other cars/counterweights in the vicinity.
- (c) Control of the car shall be obtained prior to entry into the pit.
- (d) If notified by the building owner or representative that the pit and/or hoistway has been classified as a permit required confined space (this notification could be verbal or the pit/hoistway may be labeled), immediately notify your Superintendent /Manager for further instructions. In either case, DO NOT enter the pit/hoistway until consulting your Superintendent/Manager and receiving authorization.

### *8.2.2 Elevator Pit Access/Egress Procedure*

**NOTE:** These procedures do not apply to walk-in pits. See Section 8.2.3 for Walk-in Pit procedures.

### *8.2.2.1 Accessing Pits*

- (a) When the movement of the elevator is required, the following procedure shall be followed in lieu of the Lockout/Tagout procedure in Section 7.
- (b) Lockout/Tagout procedures are required if movement of the elevator is not needed to complete the work being performed. (See Section 7.)
- (c) Before entering the pit, notify the building manager/owner that you will be servicing the elevator. Tag the elevator out of service by placing a sign on the controller stating “ELEVATOR IS UNDER THE CONTROL OF A SERVICE PERSON - DO NOT OPERATE.”
- (d) Install barricades if the hoistway door is going to be open more than 5 in. (125 mm) while performing your work. (See Section 4.4)
- (e) When a hoistway access switch is provided capture the elevator at the lower access landing and activate the “Access-Enable” to disable operating devices located at the car-operating panel. Verify elevator is not on automatic by registering multiple **car** calls. With the hoistway door(s) held in the half-open position, activate hoistway access switch to run the car up until toe guard clears opening. Stay clear of moving car.
- (f) When a hoistway access switch is not provided, capture the elevator and place two car calls to upper floors to establish an up demand. As the elevator moves away from the landing, open the hoistway door with a hoistway door unlocking device key to insure interlock stops the elevator.

**CAUTION:** When using hoistway door unlocking device keys be aware of pinch hazard when the hoistway door opens under power.

- (g) If hoistway access switches or hoistway door unlocking devices are not provided follow your company safety procedures for accessing the hoistway.

- (h) Before accessing the elevator pit, place a door wedge tool in the sill to ensure that the hoistway door(s) will not shut, turn the pit light on and place the pit stop switch in the "STOP" position.
- (i) Insert access key. Try to move elevator in both directions. It should not move. Remove key from switch.
- (j) Where an access ladder exposes a person to a fall hazard of 6 ft (1.8 m) or greater; and
  - (1) The ladder is further than 29.5 in. (750 mm) from the interior edge of the door frame; or
  - (2) The ladder or handhold extends less than 42 in. (1067 mm) above the access landing,
  - (3) The clearance between the ladder rungs and side wall is less than 4.5 in., a hazard assessment shall be conducted to identify the necessary safety precautions.
- (k) If the pit does not have a pit stop switch, the lockout/tagout procedure is to be implemented before entering the elevator pit. (See Section 7.)
- (l) Standing outside the hoistway, remove door wedge tool and close the hoistway door. Enter a hall call and wait 10 seconds to verify the elevator will not run and to verify that the pit stop switch is working. When working on a multiple bank of elevators wait for a minimum of 20 seconds to verify the elevator you are working on will not run.
- (m) Once verification of the pit stop switch operation is complete, open the hoistway door, place a door wedge tool back into the sill, do a mental job hazard assessment and locate a safe refuge space. Do not enter areas marked with Red and White strips. Carefully enter the pit. Close doors to about 6" and use door wedge to block.
- (n) In deep pits a second stop switch is typically installed 4 ft above the pit floor. After descending the pit ladder place the lower pit stop switch in the "STOP" position. The second

stop switch must be tested and verified by two independent means. Methods may vary across organizations.

- (o) If operation of the elevator is necessary:
  - (1) The car is only to be operated on inspection operation from either the car top with top-of-car inspection operation or inside the car with in-car inspection operation, if provided, by a qualified elevator person. The person operating the car and the person in the pit shall establish and maintain two-way communications.
  - (2) Install pipe stands.
  - (3) Remove the door wedge tool and allow the hoistway door to close.
  - (4) Place the upper pit stop switch in the "RUN" position.
  - (5) Stand on the pit floor and be prepared to stop the movement of the elevator with the pit stop switch.

**CAUTION:**

- (p) Never stand on the pit ladder when the pit stop switch at the access landing is in the "RUN" position, unless two pit stop switches are provided and the lower switch is in the "STOP" position.
- (q) When work is to be done on the hydraulic system, the car shall be landed on pipe stands, hydraulic pressure relieved and appropriate lockout/tagout procedures implemented. (See Section 7.)
- (r) When in multiple hoistways, **never place any part of your body in the runway of an adjacent operational elevator.**

*8.2.2.2 Exiting Pits*

- (a) Verify lower pit stop switch, where provided, is in the "STOP" position.
- (b) Verify pit stop switch at access door is in the "STOP" position.
- (c) Place lower pit stop switch in the "RUN" position.

- (d) Remove pipe stands.
- (e) Slowly open hoistway door and place a door wedge tool into the sill. Exit the pit.
- (f) Turn the pit light off.
- (g) Place the pit stop switch at access door in the “RUN” position.
- (h) When a hoistway access switch is provided, with the hoistway door(s) in the open position, activate hoistway access switch to run the car down. Stay clear of moving car. Deactivate the means to disable operating devices.
- (i) Remove door wedge tool and close hoistway door.
- (j) Place the car back into service.

### *8.2.3 Walk-in Pits*

**NOTE:** See Section 8.2.2 for pit access procedure through lowest hoistway door

#### *8.2.3.1 General guidance*

- (a) Every walk-in pit is different. Therefore it is difficult to make one set of requirements that applies to all situations. For each situation that may be encountered, site specific requirements and procedures shall be established. Formulated requirements and procedures will depend on the height of the pit (7 ft. [2.1 m] or more of overhead clearance) and the guarding or location of related components such as; tapes, governors, counterweights, traveling cables, etc.
- (b) Always wear a hard hat in walk-in pits where cars are operating.

#### *8.2.3.2 General Rules that apply to the majority of walk-in pits.*

- (a) For walk-in pits where there is no risk of being stuck by the car or related equipment:

- (1) With elevators operating, it is generally safe to enter the pit to perform brief visual inspections, to walk from one pit to another to make observations, or to retrieve dropped items at the front side of the hoistway (e.g. keys, money, jewelry, small tools, etc.).
- (2) For brief work activities such as minor adjustments or adding oil to buffers, the unit to be serviced must have two circuits tested and verified that the elevator will not run to ensure sufficient safe control.
- (3) For repair work, the unit shall be locked and tagged out.
- (b) When working on elevated buffer stands (more than 6 ft. [1.8 m] off the pit floor) fall protection (guardrails or Personal Fall Protection) is required.

#### *8.2.4 Safety precautions when working in pits:*

- (a) Locate a safe refuge area and be prepared to enter same at a moment's notice.
- (b) Ensure that all portable lights and tools are connected through a Ground Fault (GFCI).
- (c) Take care to protect all lighting from damage.
- (d) Do not work in a pit with standing water.
- (e) Never "jump" into a pit – always use the access ladder or a portable ladder.
- (f) Always check your shoes for oil/grease prior to climbing.
- (g) Use both hands when using ladders entering or exiting the pit.
- (h) Be aware of moving equipment (i.e., counterweights, pumps, motors, belts, and sheaves) and ensure that clothing and hands can't get caught in them.