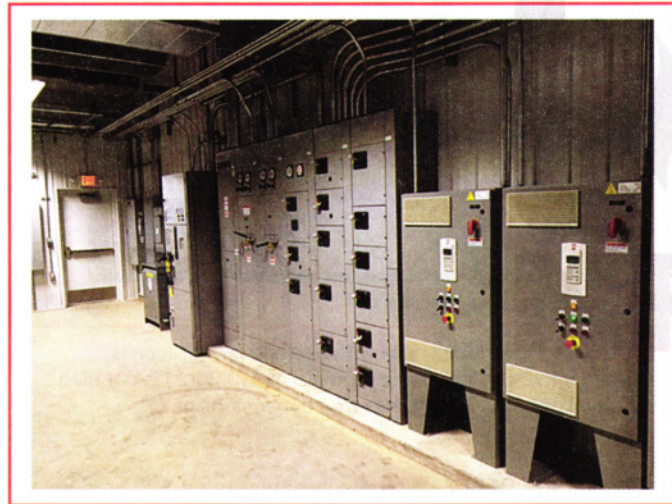


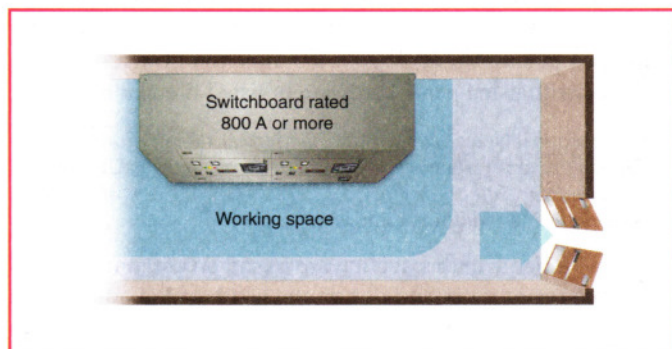
Not every electrical installation is in an equipment room. Where electrical installations are in a room, personnel doors that are up to 25 feet from the working space are required to have listed panic hardware or listed fire exit hardware, and they must open in the direction of egress from the area. The requirement for listed panic hardware is independent of the need for two exits from the working space. Exhibit 110.22 shows an exit with panic hardware.

Door-opening hardware must not require the turning of a doorknob or similar action that could preclude quick exit from the area in the event of an emergency. This requirement allows an injured worker to exit from the equipment room without having to turn knobs or pull doors open. Exhibit 110.23 illustrates egress doors in relation to the working space around equipment with listed panic hardware that open in the direction of egress.

**(D) Illumination.** Illumination shall be provided for all working spaces about service equipment, switchboards, switchgear, enclosed panelboards, or motor control centers installed indoors. Control by automatic means shall not be permitted to control all illumination within the working space. Additional lighting outlets shall not be required where the work space is illuminated by an adjacent light source or as permitted by 210.70(A)(1), Exception No. 1, for switched receptacles.



**EXHIBIT 110.22** An installation of large equipment showing one of the required exits.



**EXHIBIT 110.23** Egress doors from required working space with listed panic hardware that open in the direction of egress.

Automatic lighting control through devices such as timers, occupancy sensors, and similar devices are not prohibited, but a manual means to bypass the automatic control is required.

**(E) Dedicated Equipment Space.** All service equipment, switchboards, switchgear, panelboards, and motor control centers shall be located in dedicated spaces and protected from damage.

*Exception: Control equipment that by its very nature or because of other rules of the Code must be adjacent to or within sight of its operating machinery shall be permitted in those locations.*

**(1) Indoor.** Indoor installations shall comply with 110.26(E)(1)(a) through (E)(1)(d).

(a) *Dedicated Electrical Space.* The space equal to the width and depth of the equipment and extending from the floor to a height of 1.8 m (6 ft) above the equipment or to the structural ceiling, whichever is lower, shall be dedicated to the electrical installation. No piping, ducts, leak protection apparatus, or other equipment foreign to the electrical installation shall be located in this zone.

*Exception: Suspended ceilings with removable panels shall be permitted within the 1.8 m (6 ft) zone.*

(b) *Foreign Systems.* The area above the dedicated space required by 110.26(E)(1)(a) shall be permitted to contain foreign systems, provided protection is installed to avoid damage to the electrical equipment from condensation, leaks, or breaks in such foreign systems.

(c) *Sprinkler Protection.* Sprinkler protection shall be permitted for the dedicated space where the piping complies with this section.

(d) *Suspended Ceilings.* A dropped, suspended, or similar ceiling that does not add strength to the building structure shall not be considered a structural ceiling.

This requirement applies only to switchboards, panelboards, switchgear, or motor control centers. The dedicated electrical space extends the footprint of the equipment from the floor to a height of 6 feet above the height of the equipment or to the structural ceiling (whichever is lower). The dedicated space is required to be clear of piping, ducts, leak protection apparatus, or equipment foreign to the electrical installation. Plumbing, heating, ventilation, and air-conditioning piping, ducts, and equipment must be installed outside this space. Busways, conduits, raceways, and cables are permitted to enter equipment through this zone.

Foreign systems installed directly above the dedicated space reserved for electrical equipment are required to include protective equipment that ensures that occurrences such as leaks, condensation, and even breaks do not damage the electrical equipment located below.

Sprinkler protection is permitted for the dedicated space. The sprinkler or other suppression system piping must comply with 110.26(E)(1).

A dropped, suspended, or similar ceiling is permitted to be located directly in the dedicated space, because they are not considered structural ceilings. Building structural members are also permitted in this space.