

481—60.12(135C) Electrical requirement.**60.12(1) General electrical requirements.**

a. All materials, including equipment, conductors, controls, and signaling devices, shall be installed to provide a complete electrical system with the necessary characteristics and capacity to supply the electrical facilities shown in the specifications or indicated on the plans. All materials shall be listed as complying with available standards of Underwriters Laboratories, Inc., or other similarly established standards. (III)

b. Electrical systems and equipment shall meet the minimum requirements of the National Electrical Code. (III)

c. Drop cords, extension cords, or any type of flexible cord shall not be used as a substitute for fixed or hard wiring. Surge protectors may be used for computers and related devices, facsimile, photocopying and scanning machines, and other consumer electronic devices in a resident's room and other locations in a facility provided the surge protector is of metal construction and approved by Underwriters Laboratories, Inc., or other similarly recognized laboratories. Only fixed supplementary electric heating shall be installed. (III)

d. Electrical metallic tubing or rigid heavy wall conduit shall be used throughout the interior of the facility. In areas used for patient care, the grounding terminals of all receptacles and all non-current-carrying conductive surfaces of fixed electrical equipment likely to become energized that are subject to personal contact, shall be grounded by a green insulated copper conductor. The grounding conductor shall be sized in accordance with the requirements of the 1990 "National Electrical Code" and installed in electrical metallic tubing with the branch-circuit conductors supplying these receptacles or fixed equipment. (III) (Exception 4)

60.12(2) Panel boards. Panel boards serving lighting and appliance circuits shall be located on the same floor as the circuits they serve. (Exceptions 4 and 5) All circuits shall be identified on the panel door. (III) This requirement does not apply to emergency system circuits which can be centrally located. (Exception 4)

60.12(3) Lighting. All spaces occupied by people, machinery, and equipment within buildings, approaches thereto, and parking lots shall have electric lighting. (III)

a. All rooms in resident-occupied areas shall have general lighting switched at the entrance to each room. (III)

b. Reading lamps shall be provided in each resident's room. (III)

c. Night lights shall be provided in corridors, at stairways, attendant's stations, residents' bedrooms, and hazardous areas with no less than 1 foot-candle throughout the area at all times. (III)

d. At least one recessed light fixture for night lighting installed no higher than 18 inches above the floor shall be switched at the entrance to each resident's room. (III) (Exception 4)

e. Light fixtures shall be so equipped to prevent glare and to prevent hazards to the residents. (III)

60.12(4) Receptacles (Convenience outlet locations).

a. Each resident room shall have grounding-type receptacles.

b. Receptacles shall be located as follows: one on each side of the head of each bed; one for television, where used and one on another wall. For parallel adjacent beds, only one receptacle is required between the beds. (III) (Exception 3)

c. Receptacles for general and emergency use shall be installed a maximum of 50 feet apart in all corridors and within 25 feet of ends of corridors. (III) (Exception 4)

d. All receptacles within 6 feet of sinks or lavatories and those installed outside the building shall be protected by a local ground fault circuit interrupter. (III)

60.12(5) Call system.

a. Where the facility has a call system installed, the system shall be electrical and all calls shall register at the operational center. (III)

b. Calling systems which provide two-way voice communication shall be equipped with an indicating light at each calling station, and the lights shall remain lighted as long as the voice circuit is operating. (III)

60.12(6) Emergency electric service.

a. Emergency electric on-site engine generator service shall be provided in any facility to provide electricity during an interruption of the normal electric supply that could affect the resident care or safety of the occupants. (Exceptions 1 and 4)

b. In facilities less than 16 beds an emergency battery source of electricity shall be provided in accordance with Section 517-40 of the National Electric Code. (III)

c. The required emergency generating set, including the prime mover, shall not be powered solely by natural gas or cooled solely by domestic water. (III) (Exception 4)

d. The emergency generator set shall be of sufficient capacity to supply all lighting and power load demands of the emergency system and shall be located on the premises. (III)

e. Emergency electric service shall be provided to the distribution system for lighting as follows:

(1) Exit ways and all necessary ways of approach thereto, including exit signs and exit direction signs, exterior of exits, exit doorways, stairways, and corridors, (III)

(2) Egress as required in NFPA Standard 101, (III)

(3) Dining and recreation rooms, (III)

(4) Attendant's station, (III)

(5) Generator set location, switch-gear location and boiler room, (III)

(6) Elevator, where required for emergency. (III)

f. Emergency electric service shall be provided to the distribution system for equipment essential to life safety and for the protection of important equipment or vital materials as follows:

(1) Call board; (III)

(2) Alarm system, including fire alarm actuated at manual stations; water flow alarm devices or sprinkler systems, where electrically operated; fire detection and smoke-detecting systems; paging or speaker systems intended for issuing instructions during emergency conditions; and alarms required for nonflammable medical gas systems, where installed; (III)

(3) Sewage and sump lift pump, where installed; (III)

(4) All required duplex receptacles in resident corridors; (III)

(5) One elevator; (III) (Exception 4)

(6) Equipment, such as burners and pumps, necessary for operation of one or more boilers and their necessary auxiliaries and controls required for heating and sterilization; (III) and

(7) Equipment necessary for maintaining telephone service. (III)

g. Emergency electric service shall be provided to the distribution system for heating as follows:

(1) Where electricity is the only source of power normally used for space heating, the emergency service shall provide for heating of resident rooms or an area of approximately 30 square feet per bed within the facility to accommodate all of the residents for the duration of the emergency; (III)

(2) Emergency heating shall not be required where the facility is supplied by at least two service feeders, each supplied by separate sources from an integrated transmission distribution system, each capable of supplying required service, and each so routed, connected and protected that a fault any place between the utility energy source and the facility shall not cause an interruption of more than one of the electric service feeders. (III)

h. The emergency electrical system shall be brought to full voltage and frequency and connected within 10 seconds through one or more primary automatic transfer switches. Power to pumps and burners may be brought to full power through the use of manual switches. (III)

i. Receptacles connected to the emergency system shall be distinctively marked for identification. (III)

j. Storage battery-powered lights, provided to augment the emergency lighting or for continuity of lighting during the interim of transfer switches, shall not be used as a substitute for the requirements of a generator. (III)