
GROUND FAULT CIRCUIT INTERRUPTER

IR E-2

References:

Title 24, California Code of Regulations (CCR), Part 1, California Electrical Code (CEC)
2004 CEC, Sections 210.8 (B), 406.3 (G), 406.4 (E), and 4406.8
2007 and 2010 CEC, Sections 210.8(B), 406.4, and 406.8
Title 24 CCR, Part 2, California Building Code (CBC)
2007 and 2010 CBC, Section 117B.6.5.2

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Discipline: Fire and Life Safety

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA which includes State of California public elementary and secondary schools (grade K-12, community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IRs. Only IRs listed in the document at <http://www.dgs.ca.gov/dsa/Resources/IRManual.aspx> at the time of plan submittal to DSA are considered applicable.

Purpose: Purpose: This Interpretation of Regulations (IR) clarifies code requirements based on Recognized Standards for Ground-Fault Circuit-Interrupter Protection for School Campuses.

General: The California Electrical Code (CEC) Section 210.8 *Ground-Fault Circuit-Interrupter Protection (GFCI) for Personnel* requires that personnel be protected from electrical shock via the Ground-Fault Circuit-Interrupter device. In keeping with the intent of this section, GFCI protection shall be required in all Public School construction (K-12 and community colleges) in locations as required by recognized standards, regardless of type of occupancy and as noted below.

1. Interpretation:

1.1 Locations: All 125-volt, single-phase, 15- and 20-ampere receptacles, installed in the locations specified in (1), (2), (3) and (4) below, shall have ground-fault circuit-interrupter protection for the protection of personnel:

- (1) Bathrooms
- (2) Rooftops

Exception: Receptacles that are not readily accessible and are supplied from a dedicated branch circuit for electric snow-melting or deicing equipment shall be permitted to be installed in accordance with the applicable provisions of CEC Article 426.

- (3) Kitchens
- (4) Regardless of the occupancy, within 6 feet of sinks or any other water sources, and other locations with proximity or exposure to water intrusion or weather conditions.

These areas include but are not limited to:

- a. Classrooms
- b. Teacher Work Rooms
- c. Auto, Metal or Print Shops
- d. Science Labs

- e. Teacher Lounges
- f. Janitor's Closets
- g. Art and Pottery Shops/Classes

- h. Laundry areas
- i. Home Economics classrooms
- j. Infant care areas/classrooms
- k. Any area where similar hazards exist

1.2 Mounting:

- 1.2.1** Receptacle mounting height requirements shall be similar to that stated in CEC Section 210.52 (C) 5 for all countertops in California public schools. Receptacles shall be located above, but not more than 20 inches (500 mm) above, the countertop.

Exception: Receptacle outlets rendered not readily accessible by

- appliances fastened in place,
- appliance garages, or
- appliances occupying dedicated space

See CEC, Section 406 (Section 1117B.6.5.2 in the 2007 CBC) for determining the general requirements for electrical receptacles in the above locations. ←

- 1.2.2** Receptacles shall never be mounted in a face up position in counter tops or other areas where exposure to water or weather is likely (see CEC 406(E)).

- 1.2.3** For exterior locations see CEC Section 406.8.

2. Modifications:

- 2.1** Receptacles and receptacle face plates shall not be altered in any manner that would void the UL Listing. Use of broken, altered or modified receptacles, face plates or other materials associated with the receptacles is strictly prohibited.