



City of San Dimas

Building and Safety Division

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Requirements for Re-Wiring a Single-Family Dwelling

The following is a list of the 2022 California Electrical Code requirements for residential wiring. This handout is intended to serve only as a guide, and it may not include all the requirements contained in the CEC. It is the responsibility of the contractor, owner or person in charge of the project to be familiar with all the code requirements, state laws and local ordinances.

General Requirements

- Provide 3 copies of the floor plan (first floor, second floor, basement and garage where applicable) showing the location of all new lighting and receptacles. Ensure to label AFCI and GFCI to all receptacles and devices that require such protection.
- All splices must be in a junction box with a cover. Boxes shall be accessible, not covered by drywall or wall coverings.
- Non-metallic cable aka (romex) must be secured in place or stapled at intervals not exceeding 4 ½ feet and within 12 inches of every box or panel. CEC334.30
- Romex that is installed within a 6-foot radius of the attic access opening and subject to potential physical damage shall be protected.
- All bored holes in wood must be 1 ¼ inches from the nearest edge of wood members. If this is not possible, approved nail plates must be installed. CEC300.4(A)(1)
- Smoke detectors shall be installed in the following locations:
 - In each sleeping room.
 - Outside each separate sleeping area in the immediate vicinity of the bedroom.
 - On each additional story of the dwelling, including basements and habitable attics.
 - Alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.
 - Alarms shall be placed 3 feet minimum horizontally from air conditioning vents.
 - Detectors must be hardwired, interconnected and AFCI protected.
- Carbon monoxide shall be installed in the following locations:
 - Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
 - On every occupiable level of a dwelling unit, including basements.
 - Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom
 - Detectors must be hardwired, interconnected and AFCI protected.
- Garbage disposals, trash compactors and dishwashers generally are required to be on dedicated circuits.
- The laundry circuit must be on a dedicated 20-ampere circuit and no other outlets except those in the laundry room. CEC210.11(C)(2)
- A minimum of one 20-ampere dedicated circuit shall be installed for the garage space. CEC. CEC210.11(C)(4)

General Requirements for Receptacles

- In living areas such as living rooms, bedrooms, dining rooms, family rooms, etc., a receptacle shall be located within 6 feet of door openings. Other receptacles shall be spaced at intervals not greater than 12 feet. CEC210.52(A)(1) and (2)
- In damp or wet locations all outdoor receptacles 120 volt or 250 volts are required be equipped with an approved enclosure that is weatherproof. CEC406.9(A) & (B)
- At least one outdoor receptacle outlet is required at the front and back of the house. Such receptacles cannot be more than 6 ½ feet above the ground. CEC210.52(E)(1)
- Balconies, decks and porches that are accessible from inside the dwelling unit shall have at least one receptacle outlet installed. CEC210.52(E)(1)
- All 125 volt, 15-amp and 20-amp receptacles shall be listed tamper resistant. CEC406.12
- A minimum two 20-ampere small-appliance branch circuits required above kitchen countertops, islands, peninsulas, etc. CEC 210.52(B)(3)
- The location of countertop receptacles shall be as follows: A receptacle outlet shall be installed at each wall counter space that is 12 inches or wider. Receptacle outlets shall be installed so that no point along the wall line is more than 24 inches measured horizontally from a receptacle outlet in that space. CEC 210.52C(1)
- The number of receptacles required for kitchen island and peninsular will be determined by a calculation provided on section 210.52C(2) of the CEC based on square footage. The location of the receptacles shall be located not more than 12 inches below the countertop or work surface and the countertop surface shall not extend more than 6 inches beyond its base. (See sample)
- In bathrooms, at least one receptacle shall be installed within 36 inches of each basin (sink). The receptacle outlet shall be located on a wall that is adjacent to the basin location. A dedicated 20-ampere circuit shall be provided to supply the bathroom receptacle outlets. Such circuits shall have no other outlets. CEC210.11(C)(3)

GFCI Requirements for Receptacles

- Ground-fault circuit-interrupter (GFCI) protection for receptacles is required in the following locations:
 - Bathrooms. CEC210.8(A)(1)
 - Dwelling garages and accessory buildings. CEC210.8(A)(2)
 - All outdoor locations. CEC210.8(A)(3)
 - Crawlspace (at or below grade level). CEC210.8(A)(4)
 - Unfinished basements or any portion thereof. CEC210.8(A)(5)
 - Kitchens that serve countertop surfaces, whether located on walls above counters or on islands and peninsulas. CEC210.8(A)(6)
 - Serving countertop surfaces and located within 6 feet of the outside edge of a wet bar sink. CEC210.8(A)(7)
 - Bathtubs where receptacles are within 6 ft. of edge of tub or shower compartments. CEC210.8(A)(9)
 - Laundry areas. CEC210.8(A)(10)
 - Attics, Basements and boathouses. CEC 210.8(A)(4,5 and 8)

ARC-FAULT Circuit Protection

- All 120-volt, single phase, 15- and 20-amp branch circuits supplying outlets or devices installed in dwelling unit kitchen, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, laundry areas, recreation rooms, closets, hallways or similar rooms or areas shall be protected by a listed arc fault circuit interrupter combination type. CEC210.12(A)

- In any areas specified in CEC210.12(A), where branch circuit wiring is replaced, or extended 6ft or more in length, the circuit shall be AFCI protected.

General Provisions for Lighting Outlets

- Lighting shall comply with the following
 - Lighting is required to comply with the California Energy code section 150.0(k). All installed luminaires shall be high-efficacy.
 - Recessed downlight luminaires must be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; and
 - Have a label that certifies the luminaire is airtight with air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283.
 - Be sealed with a gasket or caulk between the luminaire housing and ceiling, and shall have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk; and
 - For luminaires with hardwired ballasts or drivers, allow ballast or driver maintenance and replacement to be readily accessible to building occupants from below the ceiling without requiring the cutting of holes in the ceiling; and shall not contain screw base sockets.

Sample Plan Detail

