

## RESIDENTIAL KITCHEN ALTERATION REQUIREMENTS

This handout provides general requirements for residential kitchen remodels and is based on the 2022 California Residential Code (CRC), 2022 California Electrical Code (CEC), 2022 California Plumbing Code (CPC), 2022 California Mechanical Code (CMC), 2022 California Energy Efficiency Standards (CEES), California Green Building Standards Code (CGBSC) and the California Civil Code. This is a general informational handout only and is not to be considered all-inclusive. In all cases, the appropriate code(s) shall govern.

### ELECTRICAL REQUIREMENTS

Countertop receptacles shall meet all of the following requirements: (CEC 210.8, 210.52, 406.12)

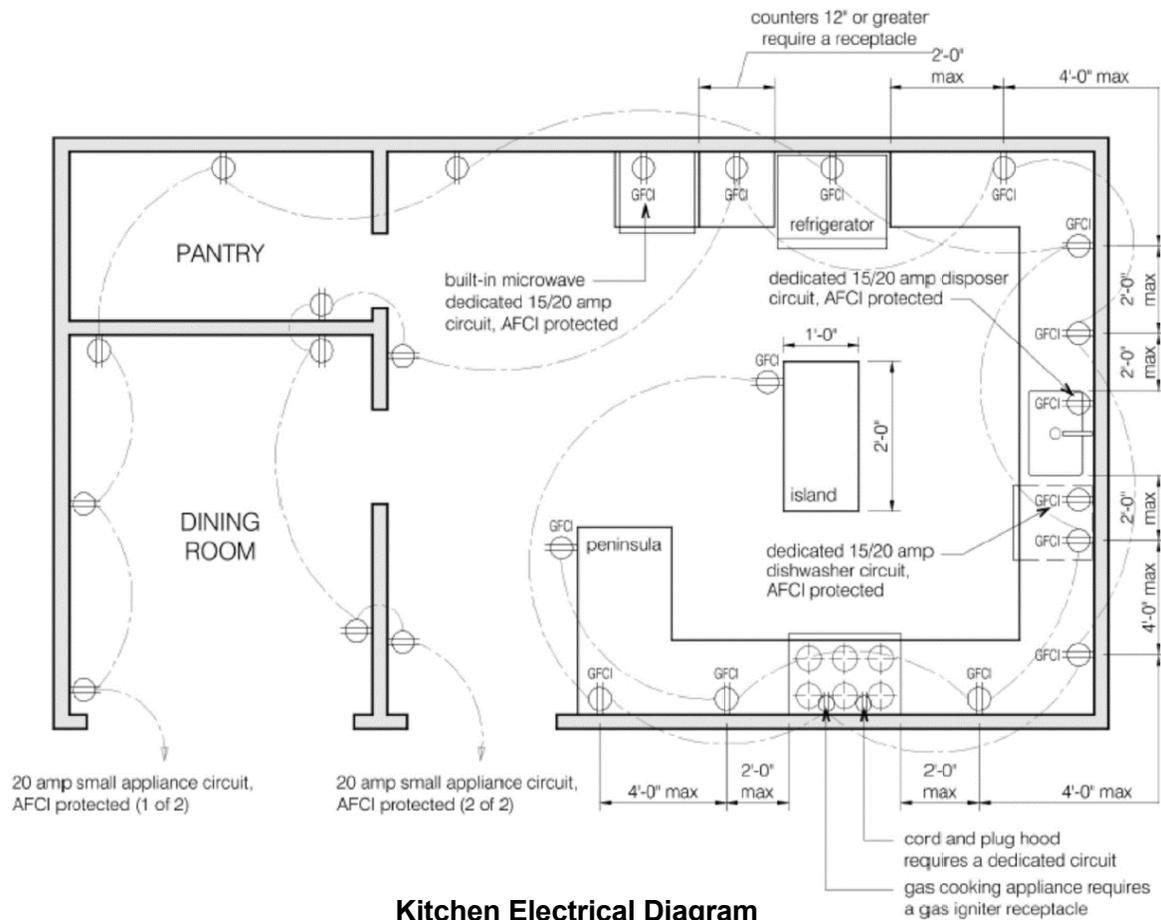
- All receptacles shall be GFCI protected and tamper-resistant (TR) & AFCI.
- Receptacles shall be provided at all countertop areas with a minimum dimension of 12 inches.
- Be located so that no point is more than 24 inches from a receptacle outlet measured horizontally along the wall.
- Receptacles shall be located no more than 20 inches above countertop.
- Islands/peninsulas shall have at least one receptacle outlet provided for the first 0.84 m<sup>2</sup> (9 ft<sup>2</sup>), or fraction thereof, of the countertop or work surface. A receptacle outlet shall be provided for every additional 1.7 m<sup>2</sup>(18 ft<sup>2</sup>), or fraction thereof, of the countertop or work surface, mounted not more than 12 inches below the countertop and where the countertop does not extend more than 6 inches beyond its base.

Kitchen receptacles shall be supplied by circuits meeting all of the following requirements: (CEC 210.11, 210.52, 422.16)

- Countertop receptacles shall be supplied by a minimum of two 20-amp branch circuits.
- A dedicated circuit is required for cord and plug connected range exhaust hoods. Separate circuits may be required for the garbage disposal, dishwasher and built-in microwave based on the manufacturer's requirements and the motor rating.
- Any new receptacles added in the dining area, breakfast room, pantry, or similar area shall be supplied by a 20-amp circuit, the countertop circuits may be used to supply these areas.
- The existing electrical panel may need to be upgraded, or a sub-panel added, if the requirements above cannot be accommodated.

Exhaust systems shall be provided for residential kitchens per the CMC, CGBSC and CEES. All exhaust systems shall exhaust to the outside of the structure and be protected with a back flow device.

- Exhaust systems that are operated intermittently shall have the capacity of 100 cfm/hr.
- Exhaust systems that are operated continuously shall have the capacity of 25 cfm/hr.



## **WATER EFFICIENT PLUMBING FIXTURES (California Civil Code 1101.4(a) and CGBSC 4.303)**

The California Civil Code requires that all existing non-compliant plumbing fixtures (based on water efficiency) throughout the house be upgraded whenever a building permit is issued for remodeling improvements. Residential buildings constructed after January 1, 1994 are exempt from this requirement. The following table shows the fixtures that are compliant and what is required if fixtures need to be replaced:

- Water Closet (Toilet): 1.28 gallons/flush
- Showerhead: 1.8 gallons/minute at 80psi
- Faucet – Bathroom: 1.2 gallons/minute at 60 psi
- Faucet – Kitchen: 1.8 gallons/minute at 60 psi (average)

## **LIGHTING EFFICIENCY (CEES 150.0(k)(1)(c))**

All Recessed downlight luminaires in ceilings shall not contain screw base lamp socket, have a label that certifies the luminaire is airtight with a leakage less than 2.0 cfm, be sealed with a gasket or caulk between the luminaire housing and ceiling, meet the clearance and installation requirements of CEC code section 410.116.

## HIGH EFFICIENCY LIGHTING REQUIREMENTS

The following table defines the requirements for high efficiency lighting (alteration or addition greater than 300 sq. ft.- forms not required):

Lamp Power Rating Minimum Lamp Efficiency:

- 5 watts or less 30 lumens per watt
- Over 5 watts to 15 watts 45 lumens per watt
- over 15 watts to 40 watts 60 lumens per watt
- over 40 watts 90 lumens per watt

The **CF2R-LTG-01-E form** will be supplied with any scope of work containing lighting.

Luminaires installed in a ceiling penetrating into an unconditioned attic must meet these requirements:

- They must be listed for zero clearance insulation cover (IC) by UL or other testing/rating laboratories recognized by the International Code Council. This enables insulation to be packed in direct contact with the luminaires.
- The luminaires must have a label certify airtight (AT) construction. Airtight construction means that leakage through the luminaires will not exceed 2.0 cfm when exposed to a 75 Pa pressure difference, when tested in accordance with ASTM E283.
- The luminaires must be sealed with a gasket or caulk between the housing and the ceiling.

## SAFETY GLAZING

Safety glazing is required at hazardous locations. Each pane of glazing installed within a hazardous location shall be provided with the manufacturer's designation specifying the type of glass and the safety glazing standard with which it complies. CRC R308.1 R308.4

- Glazing in fixed or operable panels of doors.
- Glazing in a panel adjacent where the nearest edge is within a 24-inch arc of a door on the closed position.
- Glazing in enclosures or walls facing a bathtub, shower, saunas and similar components where the bottom edge is within 60 inches above the walking surface.

## SMOKE AND CARBON MONOXIDE ALARMS (CRC 314.3, CRC 315.1)

**Smoke alarms** shall be installed on the ceiling or wall (between 4" and 12" of the ceiling) in all sleeping rooms, each area/hallway adjacent to sleeping rooms, each story of the building, and in any basement. Smoke alarms shall be replaced 10 years after the date of manufacture listed on the alarm (if no date is listed the alarm shall be replaced). Newly installed smoke alarms shall have a 10-year battery. Always consult the manufacturer's installation instructions.

**Carbon monoxide alarms** shall be installed on the ceiling or wall (above the door header) in each area/hallway adjacent to sleeping rooms, each story of the building, and any basement. Carbon monoxide alarms are not required if there is no fuel- burning appliances and where the garage is detached from the house. Always consult the manufacturer's installation instructions.

**Residential Smoke and Carbon Monoxide Detector (Typical Locations)**

