# Residential Kitchen Renovations

County of Orange

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## INTRODUCTION

Kitchen additions, alterations or renovations require Building permits. The following information can be used as a guideline for the minimum requirements for a kitchen renovation project. Additions, alterations or renovations require compliance with the following:

- 2010 California Residential Code (CRC)
- 2010 California Plumbing Code (CPC)
- 2010 California Mechanical Code (CMC)
- 2010 California Electric Code (CEC)
- 2010 California Energy Code (CEnC)
- 2008 California Green Building Standards Code (CGBSC)

A kitchen renovation includes, but is not limited to, the removal and/or relocation of base cabinets, countertops, sinks, dishwasher, garbage disposal, installed appliances, changes to the lighting, removal and replacement of any wallboard, modifications to the structural elements of the dwelling and changes to the electrical, mechanical and plumbing systems. Removal and replacement of the base cabinets and countertop will require compliance with the electrical outlet location requirements of the code.

The following details the minimum requirements for the kitchen electrical, mechanical, and plumbing systems:

## ELECTRICAL

- All kitchen countertop outlets shall be GFCI protected. [CEC 210.8(A)(6)]
- Receptacles shall be listed as tamper resistant.
- 12” or wider countertops require an outlet. [CEC 210.52(C)(1)]
- Outlets are required within 24” of any location along the countertop. [CEC 210.52(C)(1)]
- Kitchen outlets positioned a maximum 20” above countertop. [CEC 210.52(C)(5)]
- Appliance garage outlets are not counted as a required countertop outlet. [CEC 210.52(C)(5)]
- Appliances and sinks break up the countertop run, requirement each side to comply individually.
- [CEC 210.52 (C)]
- The electrical outlet requirements include islands, peninsulas, kitchen desktops, wet bars, and serving bars. A large window across the back of a sink or lack of a backsplash does not exempt the countertop from the outlet requirements. These outlets may be in a drop front cabinet face, under cabinet plug strip, pop up or tombstone-type receptacle. [CEC 210.52(C)(2),(3),(4)]
- Two small appliance outlet circuits, 20 amps each, are required for kitchens. Circuits shall be balanced and have no other outlets. (CEC 210.52(B)(1),(2)]
- Individual dedicated circuits are required for all major appliances. [210.11(C)(1) & 422.10(A)]
- Garbage disposal cord and plug connected 18” to 36” long. [CEC 422.16(B)(1)]
- Dishwasher cord 36” to 48” long. Romex installed with a plug is not an approved flexible cord. [CEC 422.16(B)(2)]
- Minimum 15 amp circuit for the dishwasher and a 15 amp circuit for the disposal [CEC 210.23(A)]
- If using a split outlet (two circuits on the same yoke) for dishwasher/disposal, provide a listed handle tie at the two circuit breakers at the panel. [CEC 210.7(B)]
- Residential Kitchen Lighting is required to meet the energy efficiency standards. This requires 50% of kitchen lighting **wattage** to be high efficacy luminaries. [CEnC 150(K)8]
- IC (direct contact) and AT (air tight) rated cans are required for recessed lighting if installed in an insulated ceiling. For occupancies with a horizontal (floor/ceiling assembly) rated separation, the recessed fixtures shall be protected to the rating of the separation (1 hour) or be listed for the required protection. This generally applies to residential condominium construction where units are above or below other units.
- [CEnC 150(K)12]
- Fluorescent recessed lighting, when used to comply with the lighting requirements, must be of a pin base type design. **Incandescent screw type base is not approved**.
- Incandescent and fluorescent lighting must be on separate switches. [CEnC 150(K)7]

- Kitchen renovations (projects over $1,000) will require the smoke and carbon monoxide alarms for the dwelling to meet the current code. [CRC R314 & R315]
    - Smoke alarms are required in all sleeping rooms, outside each sleeping area in the immediate vicinity of the bedrooms, on each floor level including basements and habitable attics, but not including crawl spaces and uninhabitable attics.
    - Carbon Monoxide alarms are required in dwelling units and sleeping units when fuel-burning appliances are installed and/or dwelling units have attached garages. Either condition requires alarms.
    - When more than one alarm of either type is required to be installed within an individual dwelling unit, the alarm devices shall be interconnected in such a manner that activation of one alarm will activate all the other alarms.
    - In existing conditions, alarms may be battery operated when the repairs or alterations do not result in the removal of the wall and ceiling finishes or there is no access by means of an attic, basement or crawlspace.
    - Multipurpose alarms that combine both a smoke alarm and carbon monoxide alarm shall comply with all applicable standards of both CRC Sections R314 and R315 and be listed by the Office of the State Fire Marshal.

**MECHANICAL**

- A ducted residential exhaust hood is required. A metal, smooth interior surface duct required on vent hood or down draft exhaust vent. Aluminum flex duct not approved. Provide back draft damper [CMC 504.2]
- Minimum 30” vertical clearance to combustibles from cook top surface. [CMC 504.2]
- Kitchen local exhaust ventilation requires a minimum rate of 100cfm meeting the requirements of ASHRA 62.2. This includes a maximum sound rating of 3 sone @ 100cfm.

**PLUMBING**

- A gas test is required on piping modifications (10 psi for 15 minutes). A maximum 15 psi gauge is required for the gas test. A lower gas pressure test may be performed when using a recording test gauge per Section 1214.3 of the CPC.
- Gas lines that run under a slab shall run through an approved, vented, gas tight conduit. [CPC 1211.1.6]
- An accessible shutoff valve shall be installed outside each appliance and ahead of the union connected thereto and in addition to any valve on the appliance [CPC 1212.5]
- Provide maximum 6-ft- long listed gas flexible connector and shut off to freestanding range. [CPC 215.5]
- A listed air gap is required for the dishwasher drain. [CPC 807.4]
- The maximum flow rate standards for the sink faucets are 2.2 GPM. [CPC 402.1.2]

**SMOKE ALARMS & CARBON MONOXIDE ALARMS**:

In single family residences and multi-family residences (townhomes, condominiums, and apartments), installation of smoke alarms and carbon monoxide alarms is required prior to the final inspection as follows:

**Smoke Alarms:** When the value of the work exceeds $1,000, smoke alarms approved and listed by the State Fire Marshal must be installed, if they do not already exist, in each sleeping room, outside each separate sleeping area, in the immediate vicinity of the bedrooms, and on each additional story of the dwelling. In existing buildings, alarms may be solely battery operated where alterations or repairs do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes. Where more than one smoke alarm is required to be installed, the alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit, except where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes. The alarms shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. Refer to CRC Section R314.

**Carbon Monoxide Alarms**: When the value of the work exceeds $1,000, an approved and listed carbon monoxide alarm shall be installed if they do not already exist in existing dwellings or sleeping units that have attached garages or fuel-burning appliances as follows: outside each separate dwelling unit sleeping area in the immediate vicinity of bedrooms and on every level of dwelling unit, including basement. In existing dwelling units a carbon monoxide alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes or there is no access by means of attic, basement or crawl space. Where more than one carbon monoxide alarm is required to be

installed, the alarms shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit, except where repairs do not result in the removal of wall and ceiling finishes, there is no access by means of attic, basement or crawl space, and no previous method for interconnection existed. See CRC Section R315 for additional information.