



RESIDENTIAL KITCHEN REMODEL

Following is a list of the general requirements based on the 2022 California Residential Code (CRC), California Electrical Code (CEC), California Plumbing Code (CPC), California Mechanical Code (CMC), California Energy Code (CEnC), California Green Building Standards Codes (CGBSC).

PLAN SUBMITTAL REQUIREMENTS

COVER SHEET

1. Project Information: address, # of bedroom and bathroom, total square footage.
2. Scope of Work

FLOOR PLANS

1. Label all areas: bedroom, bathroom, living room, kitchen, garage, covered patio, etc.
2. Location of the project area (i.e. location of kitchen proposed to be remodeled).
3. Window and Door: clearly note existing, altered, and new.
4. Lighting, Receptables, Switches, and Exhaust Fan: show type and location.
5. Provide Clearances and Dimensions at:
 - Kitchen Exhaust Duct termination clearance from property line and any openings into the building.
 - Plumbing Vent Clearance from property line, any openings into the building and air intakes.
6. Smoke Detectors and Carbon Monoxide – provide plans per **IB-18 Smoke Detector and Carbon Monoxide**.
7. Water Conserving Plumbing Fixture [Senate Bill 407] - provide plans and details that show how the dwelling until will comply. For alterations and improvements to residential properties, all noncompliant plumbing fixtures required to be replaced with water-conserving plumbing fixtures for an issuance of a certificate of final completion and occupancy for final permit approval by the local building division.

Type of Fixtures	Maximum Flow Requirements	Reference Codes
Kitchen Faucets	1.8 GPM at 60 psi	CPC 420.2.1
Lavatory Faucets	1.2 GPM at 60 psi	CPC 407.2
Single Showerhead	1.8 GPM at 80 psi	CPC 408.2.1
Multiple Showerheads	1.8 GPM at 80 psi (combined or*)	CPC 408.2.2
Water Closets	1.28 gallons per flush	CPC 411.2

* The shower shall be designed to allow only one shower outlet to be in operation at a time.
GPM – gallon per minute psi – pound force per square inch

INSPECTION

A minimum of two inspections are required for kitchen remodels as needed based on scope of work:

- **Required:** A rough framing, plumbing, mechanical, and electrical inspection should be scheduled after the framing is ready to cover, plumbing installed and under pressure or leak test, mechanical installed and vented to exterior of building, electrical wiring and boxes are installed but before any devices are connected.
- **Optional:** Insulation and Gypsum board if required.
- **Required:** The final inspection should be scheduled after all the work is completed and smoke/carbon monoxide alarms have been installed/verified per IB-18.



GENERAL AND PLUMBING REQUIREMENTS

1. The hot water control shall be installed on the left side.
2. Minimum 12"x12" access panel is required when a slip joint p-trap waste & overflow is provided [CPC 402.10].
3. Plumbing vent termination on roof shall be not less than 10 feet from or not less than 3 feet above an openable window, door, opening, air intake, or vent shaft [CPC 906.1].
4. Piping Insulation [CPC 609.12.2, CEnC 120.3(a)3.B].
 - The first 8 feet of hot and cold outlet piping, including piping between a storage tank and a heat trap, for a nonrecirculating storage system [CEnC 120.3(a)3.B].
 - How Water Pipe Insulation Thickness – shall have a minimum wall thickness of not less than the diameter of the pipe for a pipe up to 2 inches in diameter and minimum 2 inches for a pipe of 2 inches or more in diameter [CPC 609.12.2].
 - Cold Water Pipe Insulation Thickness – shall have a minimum wall thickness of 0.75" for a pipe up to 1.5 inches and 1 inch for a pipe of 1.5 inches or more in diameter [CEnC Table 120.3-A].
 - Exception: piping that penetrates framing members shall not be required to have pipe insulation for the distances of the framing penetrations.
5. Insulation exposed during construction shall be insulated according to below requirements:

Single Family Standard Building Design [CEnC Table 150.1-A]			Climate Zone
			3
Roofs/ Ceilings	With air handlers or ducts	Below Roof Deck Insulation	NR
		Ceiling Insulation	R-30
		Radiant Barrier	REQ
	With no air handlers and ducts	Ceiling Insulation	R-30
		Radiant Barrier	REQ
Wall	Exterior	R-21	
	Interior	R-13	
Floors	Raised	R-19	
	Concrete Raised	R-0	

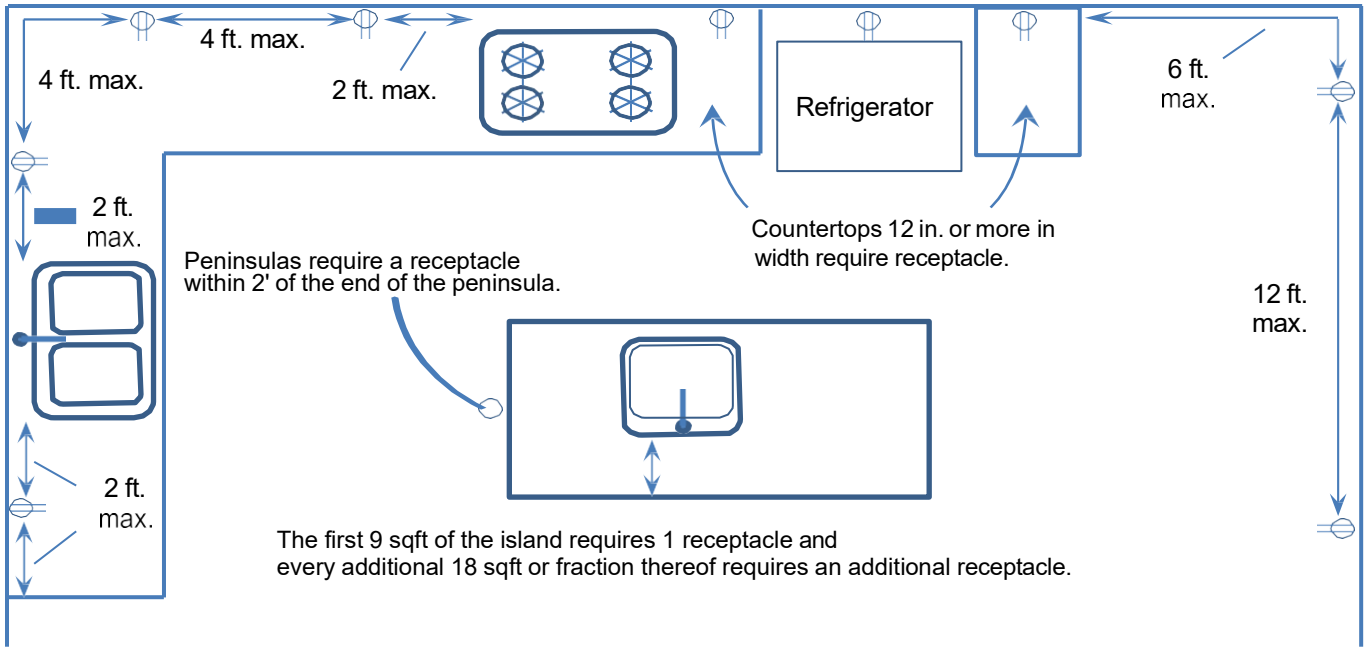
FRAMING PENETRATIONS AND EXPOSURE DURING THE KITCHEN REMODEL PROJECT

1. Plumbing Penetrating Framing Members – plastic and copper or copper alloy piping penetrating framing members to within 1 inch of the exposed framing shall be protected by steel nail plates not less than No. 18 gauge (0.0478 inches) in thickness. The steel nail plate shall extend along the framing member not less than 1½ inches beyond the outside diameter of the pipe or tubing [CPC 312.9].
2. Wiring Penetrating Framing Members – where there is no objection because of weakening the building structure, in both exposed and concealed locations, cables or raceways shall be permitted to be laid in notches in wood studs, joists, rafters, or other wood members where the cable or raceway at those points is protected against nails or screws by a steel plate at least 1/16 thick, and appropriate length and width, installed to cover the area of the wiring. The steel plate shall be installed before the building finish is applied [CEC Article 300.4(2)].
3. Dry-Rot Damage – any framing member that is damaged by dry rot that affects the minimum required depth or width of the framing member shall be replaced. Engineering and calculations may be required based on the extent of damage or if sistering is proposed.
4. All accessible joints, penetrations, and other openings in the building envelope near the area of work shall be caulked, gasketed, weather stripped, or otherwise sealed to limit infiltration and exfiltration [CEnC 110.7].



ELECTRICAL AND ENERGY REQUIREMENTS

Review **IB-05 Residential Electrical** and prepare plans accordingly. See below for an example floor plan.



MECHANICAL AND ENERGY REQUIREMENTS

1. Provide a local mechanical exhaust system in the kitchen in accordance with CEnC §150.0(o)1G. Specify the capture efficiency (CE) rating or minimum air flow rate for the kitchen range hood per CEnC Table 150.0-G based on the dwelling unit floor area.

Table 150.0-G Kitchen Range Hood Airflow Rates (CFM) and ASTM E3087 Capture Efficiency (CE) Ratings According to Dwelling Unit Floor Area and Kitchen Range Fuel Type.

Dwelling Unit Floor Area (ft ²)	Hood Over Electric Range	Hood Over Natural Gas Range
> 1,500	50% CE or 110 cfm	70% CE or 180 cfm
> 1,000 – 1,500	50% CE or 110 Cfm	80% CE or 250 cfm
750 – 1,000	55% CE or 130 cfm	85% CE or 280 cfm
< 750	65% CE or 160 cfm	85% CE or 280 cfm

2. Exhaust must terminate to outdoor area through an approved duct with a back draft damper.
3. Terminate the duct a minimum of 3 feet from the property line and any openings into the building and 10 feet from any forced air inlet.