

CITY OF MILPITAS

Building & Safety Division
455 E. Calaveras Blvd.
Milpitas, CA 95035
408-586-3240
www.ci.milpitas.ca.gov



RESIDENTIAL KITCHEN REMODEL

1. PERMIT INFORMATION:

- The remodeling of an existing kitchen requires a Permit. A Combination permit can be obtained that includes building, electrical, mechanical and plumbing permits all in one.
- A Permit may be issued only to a State of California Licensed Contractor with the proper license classification or the Homeowner.
- If the work is performed by the Homeowner personally or by his/her workers, and an inspection indicates the work cannot be completed satisfactorily, then a licensed contractor must perform the work.
- If the Homeowner hires workers, State Law requires the Homeowner to obtain Worker's Compensation Insurance. Proof of this insurance is required prior to inspection.

2. INSTALLATION REQUIREMENTS:

- Building Codes:** All work must comply with the 2016 California Residential Code (CRC) or 2016 California Building Code, 2016 California Electrical Code (CEC), 2016 California Mechanical Code (CMC), 2016 California Plumbing Code (CPC), 2016 California Energy Code, 2016 California Green Building Code and 2016 Milpitas Municipal Code (MMC).
- On-line permits can only be obtained for kitchen remodels that do not include any modifications to the existing wall and/or ceiling framing.**
- See the "*Design Guidelines for Residential Kitchen Remodel*" handout for sample plans for the remodeling of a kitchen.
- NOTE:** Please save all fixture boxes for the inspector to verify the GPM. See "Fixtures" below and the "*Water Conserving Certificate of Compliance*" for additional information.
- Before saw cutting or breaking a slab-on-grade, verify if it is a post tension slab. Cutting a tendon in these slabs can be very dangerous and expensive to repair.
- Drawings must be submitted and approved if any changes will be made to the existing framing and the permit obtained in person from the Permit Center, Building & Safety Department, 455 E. Calaveras Blvd. The drawings required may include:
 - Floor plan: Indicate walls, windows (size and type), and door sizes. Show adjoining rooms and label the use of each room. Show location of all cabinets (upper and lower) and plumbing fixtures and show their dimensions.
 - Ceiling plan: If needed to show ceiling heights, electrical and mechanical installed in the ceiling.
 - Structural: If any walls are being removed or relocated, show existing framing that shows the walls were not bearing, or if they were, how the support is being replaced.

- Electrical, mechanical & plumbing: Show electrical receptacles, electrical fixtures with switching, and ventilation. May be included on the floor plan.
- Details and Notes: Provide all details and notes required to explain the work.
- All drawings must be signed by the person preparing them.

3. **ROOM REQUIREMENTS:**

- Kitchen ceiling height shall not be less than 7'-0" (CRC R305.1).
- A self-closing, tight fitting, solid-wood door 1-3/8" thick, or a 20-minute fire-rated door, is required between a kitchen and the garage (CRC R302.5.1).

4. **ELECTRICAL REQUIREMENTS** – Installation of any new or replacement of any existing electrical shall comply with the following. **NOTE: All kitchen remodels must include upgrading the existing receptacles to have GFCI protection if not already existing.**

- Listed or labeled equipment shall be installed in accordance with the manufacturer's requirements [CEC 110.3(B)]. Lighting controls and equipment shall be installed in accordance with the manufacturer's instructions (CEnC 150.0(k)2)
- New lighting or receptacles may not overload existing circuits or panels (CEC 210.23).
- If new circuits or additional loads are being added, including adding new outlets, and the service is less than 100 amps, the service panel must be upgraded to a minimum 100 amps [CEC 230.79(C)].
- Branch circuit conductors supplying ranges, ovens and other cooking appliances shall have an ampacity rating of not less than the maximum load served. For ranges 8¾ kW or more rating, the minimum branch-circuit rating shall be 40 amperes per CEC Section 210.19(A)(3). A minimum 40-ampere rating would be No. 8 type TW copper or No. 6 Type TW aluminum. [CEC T310.15(B)16]
- A Separate 20 amp circuits for the garbage disposal and the dishwasher is required.
- All 15-20 amp circuits supplying outlets or devices in the kitchen must have Arc-fault circuit-interrupter protection (CEC 210.12).**

Receptacles:

- A receptacle outlet shall be installed at each wall countertop 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 210.52(C)(1)].
- Receptacle outlets shall be located above, but not more than 20 inches above the countertop and not in a face-up position on the countertop. Receptacle outlets rendered not readily accessible by appliances fastened in place shall not be considered as these required outlets. [CEC 210.52(C)(5)].
- Outlet boxes shall be installed so the front edge of the box, plaster ring, extension ring, or listed extender will not be set back of the finished surface more than ¼". Installation of new counter backsplash or other wall finishes may require the extension of existing boxes. (CEC 314.20)

- At least one receptacle is required at island and peninsular countertops with a long dimension of at least 24 inches and a short dimension of at least 12 inches. [CEC 210.52(C)(2) and (3)].
- Receptacles shall be protected with GFCI per CEC Section 210.8(A)(6). Refrigeration equipment is exempt from the GFCI requirements. 210.52(B) exception #2 shall be permitted to be supplied from individual branch circuit.
- All 120 volt, 15 and 20 amp receptacles shall be listed tamper-resistant. [CEC 406.12]

Lighting:

- Note kitchen lighting include adjacent spaces that are not separately switched, such as nooks and dining areas. Also note lighting inside cabinets have a separate lighting power allotment. (CEnC 150.0(k)2)L)
- All Installed luminaires shall be high-efficacy in accordance with Table 150.0-A. (CEnC 150.0(k)1)A)
- Each electrical box with a blank cover or where no light fixture, surface-mounted ceiling fan or other electrical equipment has been installed, is counted as 180 watts of low-efficacy lighting power. (CEnC 150.0(k)1)
- Fixtures recessed into ceilings shall be listed for zero clearance insulation contact (IC), have a label that certifies that the fixture is airtight with air leakage less than 2.0 CFM at 75 Pascal's (AT), 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 (CEnC 150.0(k)1)C).
- A list of High efficacy lighting certified as meeting the requirements of the Energy Code is available at www.appliances.energy.ca.gov.
- All lighting must have readily accessible manual controls, allowing occupants easy control of lighting in the space. (CEnC 150.0(k)2)
- High-efficacy lighting must be switched separately from low-efficacy lighting. Additionally, each lighting layer that serves a unique function should operate independently. (CEnC 150.0(k)2)
- Lighting that is integral to ceiling fans must be separately switched from the exhaust fan. (CEnC 150.0(k)2B).

5. ENERGY REQUIREMENTS:

- Title 24 Energy Compliance Reports:** All new lighting requires completion of Lighting-Single Family Dwellings form CF2R-LTG-01-E. The form shall be filled out and presented to the Building Inspector at time of final inspection.

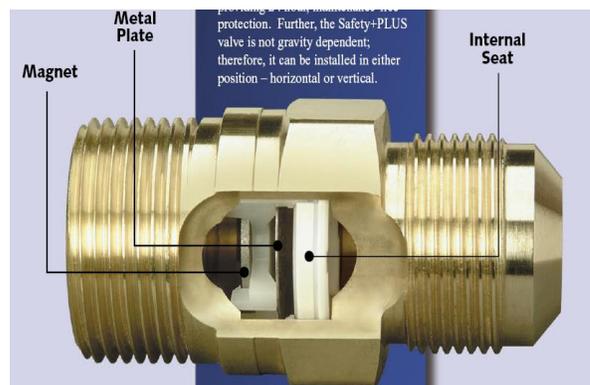
6. PLUMBING REQUIREMENTS:

- Kitchen faucets shall have a maximum flow rate not to exceed 1.8 gallons per minute at 60 psi. Residential kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction. (CGBC 4.303)
- New gas piping must be installed back to the meter or calculations must be provided to show the existing piping is adequately sized.

- ❑ It is the responsibility of the installer to verify that the new or existing gas supply is correctly sized before installation. Refer to the separate handout “Gas Piping” for additional information.
- ❑ Listed flexible gas connectors in compliance with CSAZ21.24, Standard for Connectors for Gas Appliances. The connector shall be used in accordance with the terms of their listing that are completely in the same room as the appliance. [NFPA 54:9.6.1(3)] Connectors must be located completely in the same room as the appliance. The listed metal connector for a gas range or oven installation shall be sized to appliance demand (established by manufacturer) and shall be a maximum of 6 feet long. (CPC Section 1212.0)
- ❑ An approved Excess Flow Gas Shut-off Device (non-motion sensitive) shall be installed at the gas fuel appliance outlet when replacing any existing gas fuel appliance or when installing any new gas fuel appliance. The Excess Flow Device shall be installed between the shutoff valve and the connector. (MMC II-170-2.00)



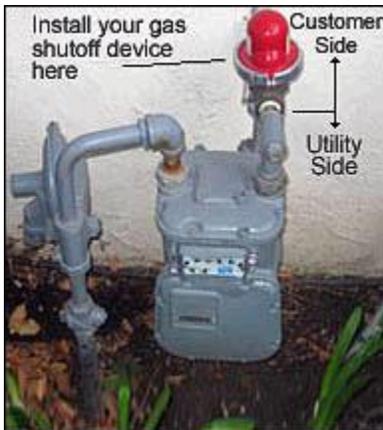
Close up view of an excess flow device:



- ❑ An approved Seismic Gas Shut-off Device (motion sensitive) *or* an approved Excess Flow Gas Shut-off Device (non-motion sensitive) shall be installed downstream of the gas utility meter (after PG&E service tee), but upstream of any appliances, where the gas line serves any new building (commercial, industrial or residential) or when providing alteration or addition to the existing gas fuel line. (MMC II-170-2.00)



"California Valve"



- ❑ Automatic Gas Shut-off Devices shall be installed by a contractor licensed in the appropriate classification by the State of California and in accordance with the manufacturer's instructions.
- ❑ Seismic Gas Shut-off Devices (motion sensitive) must be mounted rigidly to the exterior of the building or structure containing the fuel gas piping. This requirement need not apply if the Building and Safety Department determines that the Seismic Gas Shut-off Device (motion sensitive) has been tested and listed for an alternate method of installation.
- ❑ Both Seismic Gas Shut-off Devices (motion sensitive) and Excess Flow Gas Shut-off Devices (non-motion sensitive) must be certified by the Office of State Architect and be listed by an approved listing and testing agency such as IAS, IAPMO, UL or the Office of State Architect.
- ❑ For the list of earthquake sensitive automatic gas-shut-off valve certifications, see the list available on <http://www.dgs.ca.gov/dsa/Programs/programCert/gasshutoff.aspx> or click on the link http://www.documents.dgs.ca.gov/dsa/gas_shutoff/ESVGasValveCert.pdf

- Both Seismic Gas Shut-off Devices (motion sensitive) and Excess Flow Gas Shut-off Devices (non-motion sensitive) must have a thirty (30) year warranty which warrants that the valve or device is free from defects and will continue to operate properly for thirty (30) years from the date of installation.
- Where Automatic Gas Shut-off Devices are installed voluntarily or as required by code, they shall be maintained for the life of the building or structure or be replaced with a valve or device complying with the requirements of this section.

7. MECHANICAL REQUIREMENTS:

- Household cooking appliances shall have a vertical clearance above the cooking top of not less than thirty (30) inches to combustible material or metal cabinets. A minimum clearance of twenty-four (24) inches is permitted when one of the following is installed: (CMC 921.3.2)
 - The underside of the combustible material or metal cabinet above the cooking top is protected with not less than one-fourth of inch insulating millboard covered with sheet metal not less than 0.0122 inch thick.
 - A metal ventilating hood of sheet metal not less than 0.0122 inch thick is installed above the cooking top with a clearance of not less than one fourth of inch between the hood and the underside of the combustible material or metal cabinet, and the hood is at least as wide as the appliance and is centered over the appliance.
 - A listed cooking appliance or microwave oven is installed over a listed cooking appliance and will conform to the terms of the upper appliance's listing and the manufacturer's instructions. [NFPA 54: 10.15.1.2]
- Kitchen hood ventilation can be met with either a ducted range hood, a ceiling or wall mounted exhaust fan, or ducted ventilation system that provides at least 5 air changes of the kitchen volume per hour. A minimum intermittent ventilation airflow rate of 100 cfm and a maximum of 3.0 sone rates are required for kitchen exhaust fan per CEnC.Sec.150(o) & ASHREA 62.2.
- Microwave must be listed for installation over range.
- Exhaust ducts shall terminate outside the building and shall be equipped with a back-draft damper per CMC Section 504.1. Ducts shall terminate 3 feet from property line and 3 feet from openings into building.

8. SMOKE ALARMS, CARBON MONOXIDE ALARMS & SPARK ARRESTERS:

- In single family and multi-family residences (including townhomes, condominiums and apartments), installation of smoke alarms, carbon monoxide alarms and spark arresters is required prior to the final inspection as follows: (CRC R314 & R315 and CBC 907.2.11)

Smoke Alarms listed in accordance with UL 217, listed and approved by the California State Fire Marshal and tested & maintained in accordance with the manufacturer's instructions shall be installed in existing or new dwellings as follows: **in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms and on each story of the dwelling.** In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. Alarms that no longer function shall be replaced. New smoke alarms that are solely battery powered must have a non-replaceable and non-removable battery capable of powering the smoke alarm for at least 10 years. Fire alarm systems shall be permitted in lieu of smoke alarms if they comply with the provisions of NFPA 72. The installation of smoke alarms and smoke detectors shall also comply with the following requirements:

1. Smoke alarms shall not be located where ambient conditions, including humidity and temperature, are outside the limits specified by the manufacturer's published instructions.
2. Smoke alarms shall not be located within unfinished attics or garages or in other spaces where temperatures can fall below 40°F or exceed 100°F.
3. Where the mounting surface could become considerably warmer or cooler than the room, such as a poorly insulated ceiling below an unfinished attic or an exterior wall, alarms shall be mounted on an inside wall.
4. Smoke alarms shall be installed a minimum of 20 feet horizontal distance from a permanently installed cooking appliance, except Ionization smoke alarms with an alarm-silencing switch or Photoelectric smoke alarms shall be permitted to be installed 10 feet or greater from a permanently installed cooking appliance and Photoelectric smoke alarms shall be permitted to be installed greater than 6 feet from a permanently installed cooking appliance where the kitchen or cooking area and adjacent spaces have no clear interior partitions and the 10 foot distances would prohibit the placement of a required smoke alarm or smoke detector. Smoke alarms listed for use in close proximity to a permanently installed cooking appliance can be installed in accordance with their listing.
5. Smoke alarms shall be installed not less than a 3 foot horizontal distance 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 the code.
6. Smoke alarms shall not be installed within a 36 inch horizontal path from the supply registers of a forced air heating or cooling system and shall be installed outside of the direct airflow from those registers.
7. Smoke alarms shall not be installed within a 36 inch horizontal path from the tip of the blade of a ceiling-suspended (paddle) fan.
8. Where stairs lead to other occupied levels, alarm shall be located so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction.
9. For stairways leading up from a basement, alarms shall be located on the basement ceiling near the entry to the stairs.
10. For tray-shaped ceilings (coffered ceilings), alarms shall be installed on the highest portion of the ceiling or on the sloped portion of the ceiling within 12 inch vertically down from the highest point.
11. Smoke alarms installed in rooms with joists or beams shall comply with the requirements of NFPA 72.
12. Heat alarms and detectors installed in rooms with joists or beams shall comply with NFPA 72.

Carbon Monoxide Alarms listed in accordance with UL 2034, or combination carbon and smoke alarm listed in accordance with UL2034 and UL217, listed and approved by the California State Fire Marshal and installed and maintained in accordance with the manufacturer's instructions shall be installed in existing or new dwellings having a fuel-fired appliance, fireplace or an attached garage with an opening communicating with the dwelling as follows: **outside each separate sleeping area in the immediate vicinity of bedroom(s) and on every occupiable level of a dwelling unit.** If there is a fuel-burning appliance located with a bedroom or its attached bathroom, an alarm shall be located within the bedroom.

Power supply: Smoke and carbon monoxide alarms shall receive their primary power from the building wiring and shall be equipped with a battery back-up. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. Smoke and carbon monoxide alarms are permitted to be solely battery operated (carbon monoxide alarms can also be plug-in with battery back-up) in existing buildings where no construction is taking place; in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure unless there is an attic or crawl space available which could provide access for building wiring without the removal of interior finishes; where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck; or when work is limited to the installation, alteration or repairs of plumbing or mechanical systems or the installation, alteration or repair of electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure.

Interconnection: Where more than one smoke or carbon monoxide alarm is required to be installed within an individual dwelling or sleeping unit, 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 interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind; where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure unless there is an attic or crawl space available which could provide access for interconnection without the removal of interior finishes; where repairs or alterations are limited to the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck; or when work is limited to the installation, alteration or repairs of plumbing, mechanical or electrical systems which do not result in the removal of interior wall or ceiling finishes exposing the structure.

Spark arresters: When a permit has been issued and the value of the work exceeds \$1,000, a spark arrester must be installed on all fireplace chimneys if one does not already exist, per MMC Section II-3-2.06. Spark arresters shall be constructed in conformance with CRC Section 1003.9.2.

9. **INSPECTIONS:**

- A minimum of two inspections is required for kitchen remodels. A rough electrical inspection should be scheduled after the electrical boxes are installed and before any devices are connected. Any other structural, mechanical, or plumbing alterations should also be scheduled for a rough inspection. Additional inspections may be needed based on extent of the project. The final inspection should be scheduled after all the work is completed. Review with your inspector during the first inspection the requirements for your project. For each inspection, the Permit Card with the Energy Compliance Report forms completely filled and out attached, and the Approved Job Copy of the Drawings (if any) must be presented to the inspector. Permits expire 180 days after the last passed inspection.

10. **QUESTIONS:**

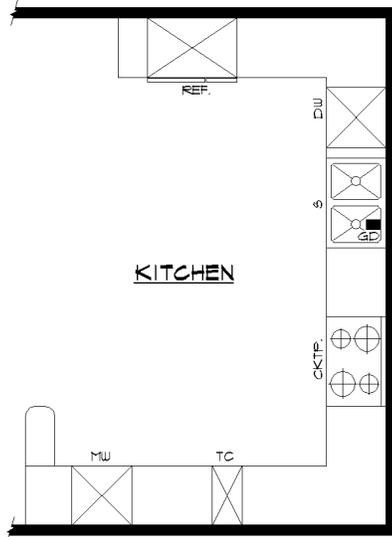
- If you have any questions regarding your project contact the Building & Safety Department at (408) 586-3240.

REQUIRED CIRCUITS

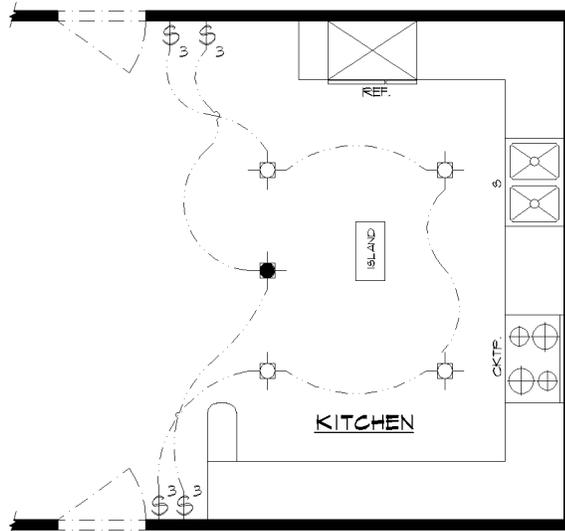
- (2) SMALL APPLIANCES
BRANCH CIRCUIT
- (1) LIGHTING
- (1) GARBAGE DISPOSAL
- (1) TRASH COMPACTOR
- (1) RANGE
- (1) OVEN
- (1) DISHWASHER
- (1) WARMER DRAWER
- (1) INSTANT HOT
- (1) MICROWAVE
- (1) HOOD
- (1) REFRIGERATOR
(IF BUILT IN)

ABBREVIATION

REF	REFRIGERATOR
CKTP.	COOK TOP
S	SINK
DW	DISHWASHER
GD	GARBAGE DISPOSAL
MW	MICROWAVE



SAMPLE FLOOR PLAN



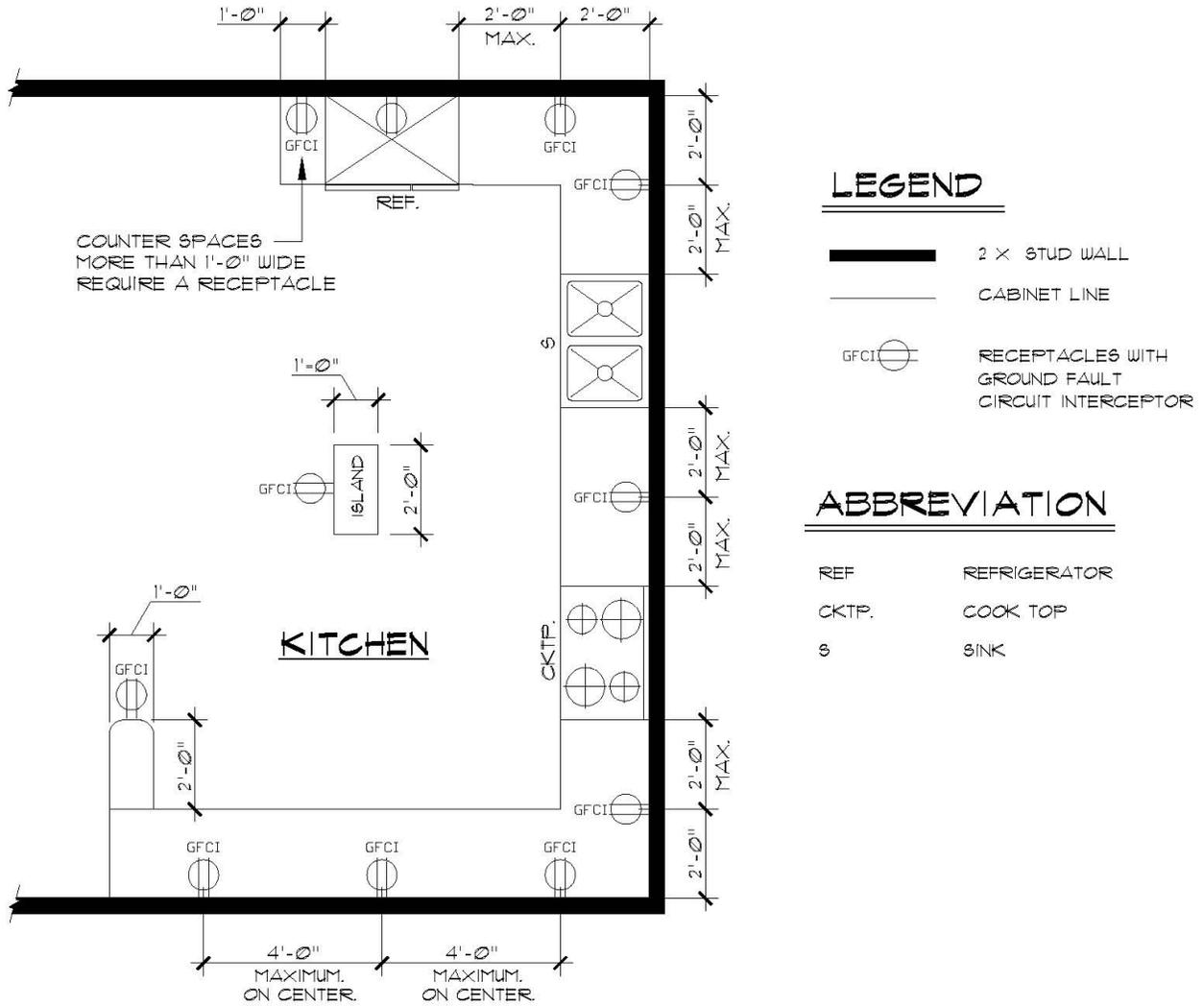
LEGEND

	2 X STUD WALL
	CABINET LINE
	26 WATT HIGH EFFICACY FLUORESCENT
	100 WATT INCANDESCENT
	3-WAY SWITCH

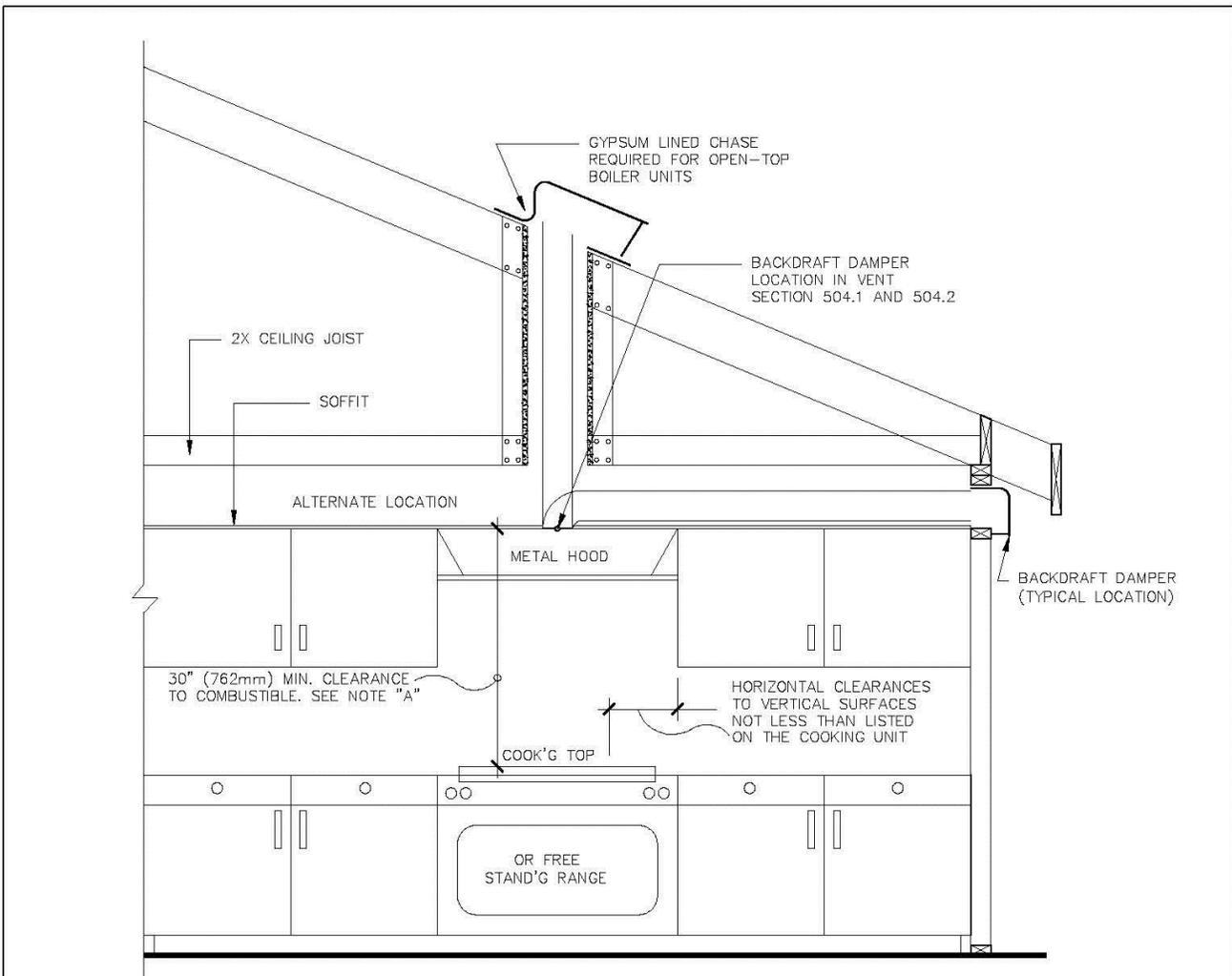
ABBREVIATION

REF	REFRIGERATOR
CKTP.	COOK TOP
S	SINK

SAMPLE LIGHTING FLOOR PLAN



SAMPLE RECEPTACLES ELECTRICAL FLOOR PLAN



NOTE "A"

□ **CMC 916.1.2: Vertical Clearance Above Cooking Top.** Household cooking appliances shall have a vertical clearance above the cooking top of not less than thirty (30) inches to combustible material or metal cabinets. A minimum clearance of twenty-four (24) inches is permitted when one of the following is installed:

- The underside of the combustible material or metal cabinet above the cooking top is protected with not less than one-fourth of inch insulating millboard covered with sheet metal not less than 0.0122 inch thick.
- A metal ventilating hood of sheet metal not less than 0.0122 inch thick is installed above the cooking top with a clearance of not less than one fourth of inch between the hood and the underside of the combustible material or metal cabinet, and the hood is at least as wide as the appliance and is centered over the appliance.
- A listed cooking appliance or microwave oven is installed over a listed cooking appliance and will conform to the terms of the upper appliance's listing and the manufacturer's instructions. [NFPA 54: 10.15.1.2]

REV.	DATE	BY:	SCALE:
1	01/2011	BK	N.T.S
2	12/2014	VP	DATE:
			AUG. 2006
			DRAWN BY:
			BK.

City of Milpitas
 Building & Safety Division
RESIDENTIAL COOK-TOP RANGE

SHEET
1
OF 1 SHEETS



EPA Renovation, Repair and Painting Rule

Does the RRP Rule apply to you?

The rule applies to all jobs in pre-1978 housing (i.e. "Target Housing") and child occupied facilities where more than 6 square feet per room or 20 square feet outside will be "disturbed" by worker(s) being compensated for the job. This includes landlords.

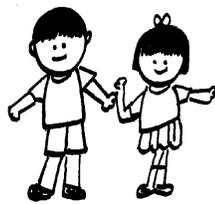
Where does the RRP Rule Apply?

The rule applies in Target Housing and Child-Occupied Facilities*



Target Housing - A house or apartment (including mobile homes) built before January 1, 1978 except for:

- 1) 0-bedroom units (like dorm rooms or studio apartments)
- 2) housing that is officially designated for the elderly or the handicapped
- 3) housing that has been tested by a State Certified Lead Inspector and found to be free of lead based paint.



Child Occupied Facility - A building, or portion of a building, constructed prior to 1978, visited by the same child, 6 years of age or under, on at least 2 different days within any week, provided that each day's visit lasts at least 3 hours, the combined weekly visit lasts at least 6 hours, and the combined annual visits last at least 60 hours. Such facilities may include, but are not limited to, day-care centers, preschools and kindergarten classrooms.

What does the RRP Rule Require? *California Law requires lead-safe work practices for all pre-1978 buildings.

1. **Pamphlet Distribution**—Contractors must give clients a pamphlet called "Renovate Right" and get a signed receipt before beginning a job.
2. **Individual Certification**—At least one RRP Certified Renovator is required at each job site. Certification involves taking a 1-day class from an EPA Accredited Training Provider.
3. **Firm Certification**—In addition to individual certification, each firm, agency or non-profit must also become RRP certified.
4. **On-the-Job-Training**—RRP Certified Renovators are required to train all non-certified people at the job site. Note: Contractors who work on buildings receiving Federal assistance, including Section 8, must have everyone trained in the classroom, or have a state-certified lead in construction supervisor present.
5. **Paint Testing**—The rule requires contractors to either test paint they will disturb BEFORE beginning a job, or assume that it is lead-based. In California contractors may not test paint. Instead, current law requires that they must assume that all surfaces in all structures built before 1978 contain lead based paint. The only people who can test for lead-based paint in California are State Certified Lead Inspectors/Risk Assessors.
6. **Use Lead Safe Work Practices**—The RRP Rule requires that "Lead Safe Work Practices" be used when disturbing more than six (6) square feet per room inside or more than twenty (20) square feet of painted surfaces outside.
7. **Cleaning Verification**—At the end of each job, contractors are required to do a "cleaning verification" to make sure they cleaned up properly.

FOR ADDITIONAL INFORMATION, VISIT
The Environmental Protection Agency www.epa.gov/getleadsafe
Get the Lead Out Coalition www.getleadout.org



WATER CONSERVING CERTIFICATE OF COMPLIANCE

Project Address: _____ Permit Number: _____

If the Building Inspector cannot physically inspect all plumbing fixtures in the building or cannot verify compliance due to lack of product markings or data, this Certificate of Compliance may be signed by the property owner(s) and given to the Building Inspector. The Building Inspector must inspect and verify all plumbing fixtures or receive this Certificate prior to final inspection.

California Civil Code Section 1101 requires the following. **Note this law applies only to properties built and available for use or occupancy on or before January 1, 1994.**

On or before January 1, 2017, for any **one and two family** residential building, all non-compliant plumbing fixtures shall be replaced with water-conserving plumbing fixtures (regardless of whether property undergoes alterations or improvement).

As of January 1, 2014, for any **multi-family** (more than two units) residential building and any **commercial** building, all non-compliant plumbing fixtures shall be replaced with water-conserving plumbing fixtures in the following circumstances:

1. Additions, if the sum of concurrent building permits by the same permit applicant would increase the floor area of the building by more than 10%, all non-compliant fixtures must be upgraded throughout the building. This includes all common area plumbing fixtures as well as fixtures in private individual units or tenant unit owned by the same owner.
2. Alterations or improvements, if total construction cost in the building permit exceeds \$150,000, all non-compliant fixtures that service the specific area of the alteration or improvement will be required to be upgraded.
3. Any alteration to a room that contains non-compliant plumbing fixtures will require all fixtures in that room to be upgraded.

On or before January 1, 2019, for any **multi-family** (more than two units) residential building and any **commercial** building, all non-compliant plumbing fixtures shall be replaced with water-conserving plumbing fixtures (regardless of whether property undergoes alterations or improvement).

The requirements of this law shall not apply to any of the following:

1. The requirements of this law shall be postponed one year from the date of issuance of a demolition permit for the building. If the building is not demolished after one year, the provision of this law shall apply even though the demolition permit is still in effect or a new demolition permit has been issued.
2. Registered historical sites.
3. Real property for which a licensed plumber certifies in writing that, due to the age or configuration of the property or its plumbing, installation of water-conserving plumbing fixtures is not technically feasible.
4. A building for which water service is permanently disconnected.
5. The property was built and available for use or occupancy after January 1, 1994.

I/We, the owner(s) of this property, certify under penalty of perjury:

- All existing plumbing fixtures meet the minimum requirements of water-conserving as noted below.
- All non-compliant plumbing fixtures have been replaced with water-conserving plumbing fixtures in accordance with Civil Code Sections 1101.1 through 1101.8, the current California Plumbing Code and California Green Building Standards Code, and manufacturer's installation requirements, and that the water-conserving plumbing fixtures comply with the requirements as noted below.
- I/We are exempt for reason #____ listed above. If for reason #3, attached is a letter from a licensed plumber.

Signature of Property Owner(s)

Print Name(s)

Date: _____

The following non-compliant fixtures shall be replaced with water-conserving fixtures as noted: (CGBC 4.303 & 5.303)

- Existing water closets that exceed 1.6 gallons per flush shall be replaced with one that has an effective flush volume not to exceed **1.28 gallons per flush**. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type toilets. The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.
- Existing urinals that exceed 1.0 gallons per flush shall be replaced with one that uses not more than an average of **0.125 gallons per flush** (0.47 L) for wall mounted and **0.5 gallons** (1.89 L) for other types of urinals.
- Existing single shower heads that exceed 2.5 gallons per minute shall be replaced with one that has a maximum flow rate of not more than **2.0 gallons per minute** at 80 psi. Shower heads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.
- When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed **2.0 gallons per minute** at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. A hand-held shower shall be considered a showerhead.
- Existing residential lavatory faucets that exceed 2.2 gallons per minute shall be replaced with one that has a maximum flow rate not to exceed **1.2 gallons** (4.54 L) per minute at 60 psi. The minimum flow rate shall not be less than 0.8 gallons (3.03 L) per minute at 20 psi.
- Existing lavatory faucets in residential common and public use areas (outside of dwellings or sleeping units) and in commercial areas that exceed 2.2 gallons per minute shall be replaced with one that has a maximum flow rate not to exceed **0.5 gallons per minute** at 60 psi.
 - Metering faucets shall have a maximum flow rate of **0.20 gallons per cycle commercial** or **0.25 residential**.
- Existing kitchen faucets that exceed 2.2 gallons per minute shall be replaced with one that has a maximum flow rate not to exceed **1.8 gallons per minute** at 60 psi. Residential kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.
 - Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

Lighting – Single Family Dwellings

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A. Types of Installed Lighting and Controls		Y or N
Select Yes or No according to whether your work on the project includes each of the following types of lighting and controls.		
01	Controls for any interior or outdoor lighting	
02	Luminaires in any interior room or outdoor	
03	luminaires recessed into ceilings	
04	Light Emitting Diode (LED) luminaires	
05	Kitchen lighting scope	
06	Lighting internal to cabinets	
07	Bathroom lighting	
08	Lighting in garages, laundry rooms, or utility rooms	
09	Lighting in rooms other than a kitchen, bathroom, garage, laundry room, or and utility room	
10	Outdoor lighting for single family residential	
11	Internally illuminated address signs	
12	Lighting in garages for 8 or more vehicles	

B. Lighting Controls	
01	150.0(k)2A: High efficacy luminaires are switched separately from low efficacy luminaires.
02	150.0(k)2B: Exhaust fans are switched separately from lighting systems, or can be switched OFF in accordance with EXCEPTION
03	150.0(k)2C: Luminaires are switched with readily accessible controls that permit luminaires to be manually switched ON and OFF
04	150.0(k)2D: Lighting controls and equipment are installed in accordance with manufacturer's instructions
05	150.0(k)2E: No controls are installed that bypass a dimmer or vacancy sensor function where that dimmer or vacancy sensor has been installed to comply with Section 150.0(k)
06	150.0(k)2F: Lighting control devices have been Certified to the Energy Commission as applicable; lighting control systems comply with the applicable requirements in Section 110.9.
07	150.0(k)2G: Energy Management Control Systems used to comply with dimmer requirements provide the functionality of a dimmer in accordance with Section 110.9, meet the installation certificate requirements in Section 130.4, the EMCS requirements in Section 130.5, and comply with all other applicable requirements in Section 150.0(k)2.
08	150.0(k)2H: Energy Management Control Systems used to comply with vacancy sensor requirements in Section 150.0(k) provide the functionality of a vacancy sensor in accordance with Section 110.9, meet the installation certificate requirements in Section 130.4, the EMCS requirements in Section 130.5, and comply with all other applicable requirements in Section 150.0(k)2.
09	150.0(k)2I: A multi-scene programmable controller used to comply with dimmer requirements provides the functionality of a dimmer in accordance with Section 110.9, and complies with all other applicable requirements in Section 150.0(k)2.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

C. Luminaires (Lighting Fixtures)	
01	150.0(k)1(A-C): For compliance with Section 150.0(k), all installed luminaires have been classified as high efficacy or low efficacy in accordance with the applicable requirements in Section 130.0(c), and in accordance with TABLE 150.0-A or TABLE 150.0-B
02	150.0(k)1D: Ballasts for fluorescent lamps rated 13 watts or greater are electronic.
03	150.0(k)1E: Night lights are rated to consume no more than five watts of power
04	150.0(k)1F: Lighting integral to exhaust fans meets all applicable requirements of Section 150.0(k)
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	



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D. Recessed Luminaires in Ceilings	
01	150.0(k)8A: Listed for zero clearance insulation contact (IC)
02	150.0(k)8B: Has label certifying air tight
03	150.0(k)8C: Sealed with a gasket or caulk between the luminaire housing and ceiling, and all air leak paths between conditioned and unconditioned spaces are sealed with a gasket or caulk; and
04	150.0(k)8D: Ballasts for compact fluorescent luminaires certified to the Commission in accordance with Section 110.9; and
05	150.0(k)8E: Allows ballast maintenance and replacement to be readily accessible to building occupants from below the ceiling without requiring the cutting of holes in the ceiling.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

E. LED Luminaires	
01	TABLE 150.0-A: The LED luminaires are classified as low efficacy because they have NOT been Certified to the Energy Commission, or they do not comply with all of the following requirements, as applicable: Sections 110.9(e), 130.0(c)9, 150.0(k)1A, TABLE 150.0-A, and Reference Joint Appendix JA8.
02	150.0(k)1A: The LED luminaires are classified as high efficacy because they ARE Certified to the Energy Commission by the manufacturer in accordance with all of the following requirements, as applicable: Sections 110.9(e), 130.0(c)9, 150.0(k)1A, TABLE 150.0-A, and Reference Joint Appendix JA8.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

F. Kitchen Lighting	
01	150.0(k)1C: The wattage of permanently installed luminaires should be determined as specified in Section 130.0(c).
02	150.0(k)1C: In the kitchen, Any electrical boxes finished with a blank cover count as 180 watts of low efficacy lighting.
03	Method <(a), (b), or (c) as selected above> from Section 150(k)3A: Compliance demonstrated using Method (a) because only high efficacy luminaires have been installed in the kitchen. Compliance demonstrated using Method (b). At least 50% of the installed watts from permanently installed high efficacy. Total A ≥ Total B in Installed Wattage Calculation Table (below) Compliance demonstrated with additional low efficacy wattage allowance of EXCEPTION to 150(k)3
04	<If method (c) is selected, this additional field will be displayed> EXCEPTION to 150.0(k)3: Additional low efficacy watts may be allowed when all luminaires in the kitchen are controlled by a vacancy sensor or dimmers, and 1. See 150.0(k)2A where high efficacy and low efficacy luminaires must be separately controlled. 2. See 150.0(k)2G where EMCS may be used as a dimmer; Section 150.0(k)2H where EMCS may be used as a vacancy sensor; or, 150.0(k)2I where multi-scene programmable controller may be used as a dimmer. NOTES: Compliance demonstrated using Method (c). Kitchen lighting qualifies for additional low efficacy lighting and as demonstrated in Installed Wattage Calculation Table in Method (b) (above) in addition to Additional Low Efficacy Wattage Calculation Table (below).
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	



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This Table is applicable only if Kitchen Lighting using Method (b) or (c) is selected in Table Q.

Method (b) Total Wattage Calculation								
Luminaire Type	Luminaire (Fixture)		Quantity			Total Watts		
	High Efficacy Watts	Low Efficacy Watts				High Efficacy	Low Efficacy	
			X	=				
			X	=				
			X	=				
			X	=				
			X	=				
			X	=				
	Complies with method (b) if Total A ≥ Total B							
						A	≥ B	

This Table is applicable only if Kitchen Lighting Using Method (c) is selected in Table F above

Method (c) Total Additional Low Efficacy Wattage Calculation			
(see footnote)			
Watts from Method (b)		Additional Watts Low Efficacy	Total Low Efficacy Watts Allowed
High Efficacy	Low Efficacy		
1. Insert 50 if house is ≤ 2,500 square feet; Insert 100 if house is > 2,500 square feet.			

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G. Lighting Internal to Cabinets

01	150.0(k)4: Permanently installed lighting internal to cabinets uses ≤ 20 watts of power per linear foot of illuminated cabinet.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

H. Lighting in Bathrooms

01	150.0(k)5A: A minimum of one high efficacy luminaire is installed in each bathroom; and
02	150.0(k)5B: All other lighting installed in each bathroom is high efficacy or controlled by vacancy sensors.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

I. Lighting in Garages, Laundry Rooms, and Utility Rooms

01	150.0(k)6: All installed luminaires are high efficacy AND controlled by vacancy sensors
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

J. Lighting other than in Kitchens, Bathrooms, Garages, Laundry Rooms, and Utility Rooms

01	150.0(k)7: Installed lighting is high efficacy
02	150.0(k)7: Installed lighting is low efficacy and controlled by dimmers or vacancy sensors
03	150.0(k)7: Exempt lighting is in closets that are < 70 sq ft.
04	150.0(k)7: Exempt lighting is in detached storage buildings that are $< 1,000$ sq ft.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

K. Address Signs

01	150.0(k)10A: Internally illuminated address signs. Internally illuminated address signs shall either: A. Comply with Section 140.8. Applicable nonresidential sign lighting compliance forms shall also be submitted, or B. Consume no more than 5 watts of power, determined according to Section 130.0(c).
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

L. Single Family Outdoor Lighting

01	150.0(k)9A: High efficacy outdoor lighting is installed
02	150.0(k)9A: Low efficacy outdoor lighting is installed, and meets all of the lighting control requirements as specified in Section 150.0(k)9A, as summarized below: i. Controlled by a manual ON and OFF switch; and ii. Controlled by a motion sensor; and iii. Controlled by Photocontrol, Astronomical time clock, or EMCS.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Installation documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
Address:	CEA/HERS Certification Identification (If applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> The information provided on this Certificate of Installation is true and correct. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation, and attest to the declarations in this statement (responsible builder/installer), otherwise I am an authorized representative of the responsible builder/installer. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations, and the installation conforms to the requirements given on the plans and specifications approved by the enforcement agency. I reviewed a copy of the Certificate of Compliance approved by the enforcement agency that identifies the specific requirements for the scope of construction or installation identified on this Certificate of Installation, and I have ensured that the requirements that apply to the construction or installation have been met. I will ensure that a registered copy of this Certificate of Installation shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy. 		
Responsible Builder/Installer Name:	Responsible Builder/Installer Signature:	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)	Position With Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone	Date Signed:

CF2R-LTG-01-E User Instructions

There are two version of the residential lighting certificate of installation. This version, the CF2R-LTI-01-E, is primarily used for demonstrating compliance with the residential lighting standards for single family dwellings.

The LTI-01 shall also be used to demonstrate compliance with the residential lighting requirements for high-rise residential dwelling units; outdoor lighting that is attached to a high-rise residential or hotel/motel building, and is separately controlled from the inside of a dwelling unit or guest room; fire station dwelling accommodations; hotel and motel guest rooms; and, dormitory and senior housing dwelling accommodations. When using the CF2R-LTI-01-E to demonstrate compliance with the lighting in the dwelling units, compliance with lighting that is not in the dwelling units, such as lighting in common areas, shall be demonstrated using the nonresidential lighting compliance documentation.

The other version of the residential lighting certificate of installation, the CF2R-LTI-02-E, is used for demonstrating compliance with the residential lighting standards for low-rise multi-family dwellings. The primary difference between the LTI-02 and the LTI-01 is that the LTI-02 includes additional requirements for demonstrating compliance with residential outdoor lighting, and common areas associated with low-rise multi-family dwelling units.

Table A

This table is used to identify the scope of the work being covered by the responsible person signing this document. One person may be responsible for all of the measures in this table, or several people may each be responsible for only a portion of the measures. If several people are responsible, each person must separately fill out this certificate of installation for those measures for which they are responsible. In some situations, such as for alterations and additions, only some of the measures may be included in the total scope of work.

For rows 1 through 4 and rows 6 through 12 - insert 'Y' for each measure that is included in the scope of work, and insert 'N' for each measure that is not included in the scope of work.

Row 5, if the scope of the work includes kitchen lighting, identify which method(s) are used to comply, as follows:

- Pick from the list “only high efficacy luminaires (method a)” if appropriate. If this method is picked, do not pick either of the other two pick options; or,
- Pick from the list “at least 50% of installed watts from permanently installed high efficacy lighting (Method (b), and,
- If also appropriate, pick “an additional low efficacy lighting allotment (Method (c))”

Table B

This table is a list of mandatory residential lighting control requirements. Any lighting controls installed must meet those requirements which are applicable to the scope of the work being covered by the responsible person signing this document.

Table C

This table is a list of mandatory residential luminaire requirements. Any luminaires installed must meet those requirements which are applicable to the scope of the work being covered by the responsible person signing this document. Additionally, some luminaires, covered in Tables D and E, have additional mandatory requirements.

Table D

This Table is displayed only if residential recessed lighting is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for residential recessed luminaires, which are in addition to the applicable residential luminaire requirements listed in Table C. Any recessed luminaires installed must meet those requirements which are applicable to the scope of the work being covered by the responsible person signing this document.

Table E

This Table is displayed only if residential LED lighting is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for residential LED luminaires, which are in addition to the applicable residential luminaire requirements listed in Tables C and D. Any LED luminaires installed must meet those requirements which are applicable to the scope of the work being covered by the responsible person signing this document.

Table F

This Table is displayed only if residential kitchen lighting is selected in Table A as being included in the scope of work. This table includes a list of mandatory requirements for Kitchen lighting. Any Kitchen lighting installed must meet those requirements which are applicable to the scope of the work being covered by the responsible person signing this document.

For the residential kitchen lighting power requirements, this certificate of installation provides three different methods for demonstrating compliance, as follows:

- Method (a) is used when only high efficacy luminaires have been installed in the kitchen.
- Method (b) is used when at least 50% of the installed watts from permanently installed high efficacy
- Method (c) is used when additional low efficacy watts are allowed because all luminaires in the kitchen are controlled by a vacancy sensor or dimmers, in addition to separately controlling the high efficacy and low efficacy luminaires.

Method (a) does not require a calculation table because only high efficacy luminaires have been installed. Therefore, there are no requirements to demonstrate that at least 50% of the installed lighting power is from high efficacy luminaires.

Method (b) requires the Installed Wattage Calculation Table to be filled out, as follows:

- Use a separate row for each different type of lighting installed in the kitchen.
- Luminaire Type – is an identifying name for the type of luminaire
- High Efficacy Watts – use this cell only if the luminaire on this row is classified as high efficacy according to Tables 150-A or B. Luminaire wattage shall be determined in accordance with Section 130.0(c).
- Low Efficacy Watts – use this cell only if the luminaire on this row is classified as low efficacy according to Tables 150-A or B. Luminaire wattage shall be determined in accordance with Section 130.0(c).
- Quantity – is the number of the type of luminaire being described on this row.
- Total Watts, High Efficacy – if the luminaire described on this row is high efficacy, multiply the high efficacy watts times the quantity. Add the sum total of all of the rows of total high efficacy lighting together on the bottom of this column.
- Total Watts, Low Efficacy – if the luminaire described on this row is low efficacy, multiply the low efficacy watts times the quantity. Add the sum total of all of the rows of total low efficacy lighting together on the bottom of this column.

The kitchen lighting complies with the lighting power requirements if the sum total watts of high efficacy lighting is \geq the sum total watts of low efficacy lighting. However, the kitchen may qualify for additional watts of low efficacy lighting, if also demonstrated by filling out the Method (c) table.

Method (c) requires the Total Additional Low Efficacy Wattage Calculation Table to be filled out, as follows:

- Use only one row for this calculation.
- Watts from Method (b), High Efficacy – is the sum total high efficacy watts taken from Method (b), Installed Wattage Calculation Table.
- Watts from Method (b), Low Efficacy – is the sum total low efficacy watts taken from Method (b), Installed Wattage Calculation Table.
- Additional Watts Low Efficacy – Enter 50 if the house is \leq 2,500 square feet, or enter 100 if the house is $>$ 2,500 square feet
- Total Low Efficacy watts allowed is the sum total of high efficacy watts taken from Method (b), plus the additional watts of low efficacy lighting documented in this table.

The residential kitchen lighting complies with the lighting power requirements if the sum total of all low efficacy watts installed is \leq total low efficacy watts allowed.

By signing this document the installer certifies that the requirements for residential kitchen lighting wattage allowances have been met.

Table G

This Table is displayed only if internal cabinet lighting is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for internal cabinet lighting. Any permanently installed lighting internal to cabinets must meet those requirements which are applicable to the scope of the work being covered by the responsible person signing this document.

Table H

This Table is displayed only if residential bathroom lighting is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for bathroom lighting. Lighting for each bathroom applicable to the scope of the work being covered by the responsible person signing this document must separately meet these requirements.

Table I

This Table is displayed only if residential garage, laundry room and utility room lighting is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for garage, laundry room and utility room lighting. Lighting for each garage, laundry room and utility room applicable to the scope of the work being covered by the responsible person signing this document must separately meet these requirements.

Table J

This Table is displayed only if lighting in rooms other than kitchen, bathroom, residential garage, laundry room and utility room is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for lighting in residential rooms other than kitchen, bathroom, garage, laundry room and utility room. These mandatory requirements apply to any room not defined in Section 100.1 of the

Standards as a residential kitchen, residential bathroom, residential garage, residential laundry room or residential utility room. Lighting for each room that is other than a kitchen, bathroom, garage, laundry room or utility room utility room applicable to the scope of the work being covered by the responsible person signing this document must separately meet these requirements.

Table K

This Table is displayed only if lighting for residential internally illuminated address signs is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for internally illuminated address signs. Lighting for each internally illuminated address sign applicable to the scope of the work being covered by the responsible person signing this document must separately meet these requirements.

Table L

This Table is displayed only if residential outdoor lighting is selected in Table A as being included in the scope of work. This table is a list of mandatory requirements for single family outdoor lighting. Any installed outdoor lighting must meet those requirements which are applicable to the scope of the work being covered by the responsible person signing this document.

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