

CITY OF MILPITAS

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



RESIDENTIAL PATIO COVER PATIO ENCLOSURE AND SUNROOM ADDITION

1. PERMIT INFORMATION:

- A building permit is required for any patio cover, patio enclosure or sunroom addition attached to the main structure, and for a detached patio cover, patio enclosure or sunroom addition exceeding 120 sq ft. All permits must be obtained in person at the Permit Center, Building & Safety Department, 455 E. Calaveras Blvd.
- NOTE:** All patio covers, patio enclosures and sunroom additions, even if a building permit is not required, must be reviewed and approved by the Planning Department and Engineering Department.
- Homeowners Association:** If the property is regulated by a Home Owners Association, any exterior work must have approval of the Association. It is the property owner's responsibility to obtain the approval.
- 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. PLANS REQUIRED:

Plans are required to be submitted and approved by the City to obtain a building permit. In order to expedite issuance of your permit, submit complete sets of plans. Incomplete submittals will cause delay in the approval of your project. If you have any questions, contact Building & Safety Department staff at City Hall or at the phone number above.

The following are guidelines for preparation and submittal of your plans. Specific plan requirements will depend largely upon the extent, nature and complexity of the work to be done. Some items listed below may not be required for your specific project. BE SURE TO INCLUDE ALL OF THE PERTINENT INFORMATION AND DRAWINGS.

Refer to "*Design Guidelines for Open Patio Cover*" for sample of the plans required, construction details and span tables for rafters and headers for a residential patio cover.

I. PLAN REQUIREMENTS:

- Plan Size:** Prepare plans on paper that is at least 17 inches x 11 inches in size.
- Sets of Plans:** Submit four (4) complete sets of plans.
- Clarity:** All plans shall be prepared to be sufficiently readable and clear for creating a digitized record. Plans shall be quality blue or black ink line drawings with uniform light (white) background color. Pencil drawings are not acceptable, but copies of pencil drawings can be submitted provided copies are readable with good contrast.

- Dimensions:** All drawings shall be fully dimensioned. Plot plans shall have a north arrow.
- Scale:** All drawings shall be drawn to an adequate scale with scale indicated. Recommended scales for drawings are:

Plot Plans: $1/8'' = 1'-0''$, $1'' = 10'$ or $1'' = 20'$
Floor Plan, Sections and Details: $1/4'' = 1'-0''$ or $1/2'' = 1'-0''$

- Existing (E) and New (N) Construction:** Throughout the plans, be sure to label all new (N) and existing (E) construction, to distinguish between new work to be done and the existing work.
- Completeness:** Please remember, the more complete and accurate the drawings and submittal documents, the sooner your permits can be issued.
- Architect or Engineer:** Patio covers or patio enclosures located on the Hillside shall be designed by a licensed California Licensed Architect or Engineer for minimum wind speed of $V_{sd} = 95$ mph and exposure C. Unusual designs may also require design by an Architect or Engineer.
- Signature:** The person who prepared the plans must sign each sheet. If any of the plan sheets are prepared by a licensed architect or registered engineer, that individual must stamp and sign at least two copies of each of the sheets he or she has prepared in accordance with the California Business and Professions Code prior to plan approval. Plans for elements of the structure designed by others must be reviewed and signed by the Engineer or Architect of record. [California Business and Professional Code 5536.1, 6735]

II. PROJECT INFORMATION - On the first sheet of the plans, provide the following information:

- Name of Designer:** The printed name, address and telephone number of the person who prepared the plans.
- Address and Owner:** List the street address of the property and the name of the legal owner of the property.
- Scope of Work:** State the complete scope of work to be performed under this permit.
- Building Codes:** All work must comply with the 2013 California Residential Code (CRC) or 2013 California Building Code, 2013 California Electrical Code (CEC), 2013 California Mechanical Code (CMC), 2013 California Plumbing Code (CPC), 2013 California Energy Code, 2013 California Green Building Code and 2014 Milpitas Municipal Code (MMC).

III. ARCHITECTURAL PLANS - The following are minimum architectural plan requirements for most projects.

- Site (Plot) Plan:** Show the property lines and the location of all existing and proposed new structures, location of easements and locations of adjacent streets or alleys. Show front, side and rear setback dimensions, dimensions to easements, dimensions of proposed patio enclosure, and dimensions between buildings if there is more than one building on the site.
- Floor Plan:** Include the following:
 - Plan view of the patio area as well as the rooms adjacent to the enclosure. Rooms shall be dimensioned and labeled.

Foundation Plan, Framing Plan, Sections and Elevations: Include the following:

- Provide top, side and front elevation views/framing plans.
- Provide grade and species of all wood to be used.
- Dimension all distances and specify framing sizes.
- Size of footing and connection of post to footing or slab.
- If post is to be placed into earth, provide 6” of gravel at post base, embed into concrete 1/3 of the distance above slab. The post must be pressure treated for direct contact with earth.
- All wood exposed to the weather shall be pressure treated.
- All fasteners in contact with pressure treated wood shall be hot dipped galvanized or stainless steel.
- All framing hardware in contact with pressure treated wood must be approved for use with the PT wood.
- Show and specify on plans type of connections of header to post, header to rafters, rafters to ledger, ledger to house.
- Rafters shall be supported laterally at ends and at each support by solid blocking except where the ends of rafters are face nailed to a header or rim joist.
- Show and specify the spacing and spans of rafters.
- If using a ledger bolted to existing framing, lag screws must fully engage a wood stud or rim joist and be provided with appropriate washers.
- Show method of providing lateral bracing: i.e. embedded post, braces or other approved method of construction.

IV. EVALUATION REPORT:

- If the enclosure will be built from a manufacturers factory built kit, provide a copy of the manufacturers current ICC or IAPMO evaluation report showing compliance with current codes.

3. CODE REQUIREMENTS:

- Patio covers are one story structures not exceeding 12 feet in height (CRC AH102). Patio covers shall be permitted to be detached from or attached to dwelling units. Patio covers shall be used only for recreational, outdoor living purposes and not as carports, garages, storage rooms or habitable rooms (CRC AH103). The existing exterior wall of the residence along with its doors and windows shall remain as a weather-resistive barrier.
- Patio covers may be enclosed with walls, however, the patio cover shall be unenclosed if there are emergency egress or rescue openings from sleeping rooms (CRC AH105). Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way. (CRC R310.1) Where exterior doors serve as an exit from the dwelling unit, the patio structure, unless unenclosed, shall be provided with exits conforming to the provision of CRC Section R310. (CRC AH105)
- Patio enclosure walls shall be permitted to be of any configuration provided the open or glazed area of the longer wall *and* one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches of each wall, measured from the floor. (CRC AH102).
- Patio enclosure wall openings shall be permitted to be enclosed with insect screening, approved translucent or transparent plastic not more than 0.125 inch in thickness, glass conforming to the provisions of CRC Section R308 or any combination of the foregoing. (CRC AH102)
- A “sunroom” is a one-story structure attached to a dwelling with a glazing area in excess of 40 percent of the gross area of the structure’s exterior walls *and roof* (CRC R202).

- Thermal isolation shall be maintained between the residence and the patio enclosure/sunroom, consisting of existing or new wall(s), doors, and/or windows.
- Patio covers, enclosures and sunrooms *attached* to the dwelling shall comply with the minimum side and rear yard setback requirements as required for the dwelling, which will require a minimum side yard setback distance of at least four (4) feet and a rear yard setback distance of at least 10 feet from the property line (please check with the Planning Department at (408) 586-3279 to obtain the specific setback requirements which vary depending on the zoning district the dwelling is located) (MMC XI-10-54.08).
- Patio covers and enclosures *detached* from the dwelling shall not be located within three (3) feet of any side or rear yard property line. Detached accessory structures shall be located at least six (6) feet from the dwelling unit and at least 14 feet from a residential structure existing or under construction on any adjacent lot. (MMC XI-10-54.08)
- Projection of eaves shall not be within three (3) feet from the property line, and if constructed less than five (5) feet from the property line and a building permit is required (structure is more than 120 square feet *or* is attached to the dwelling) must be protected on the underside with a 1-hour fire rating. (MMC XI-10-54.08)
- If a building permit is required for a patio cover, enclosure or sunroom (structure is more than 120 square feet *or* is attached to the dwelling) and it is located within five (5) feet of the property line, there must be a 1-hour fire rated wall constructed parallel to the property line with a maximum area of openings that does not exceed 25% of the area of the wall (CRC R302.1).
- The cumulative total area of all accessory structures shall not exceed 30% of the area of the required rear yard setback (MMC XI-10-54.08).
- All habitable rooms shall have natural light through an aggregate glazing area of not less 8% of the floor area of such rooms, or provided with artificial light providing an average of 6 foot candles (65 lux) over the area of the room at a height of 30" above the floor (CRC R303.1).
- All habitable rooms shall have natural ventilation through exterior openable windows, doors, louvers, skylights or other approved means which area totals a minimum of 4% of the floor area being ventilated, or provided with approved mechanical ventilation system capable of producing 0.35 air changes per hour in the room, or a whole-house mechanical ventilation system is installed capable of supplying outdoor ventilation air of 15 cubic feet per minute (cfm) per occupant computed on the basis of two occupants for the first bedroom and one occupant for each additional bedroom. Openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. (CRC R303.1)
- Required glazed openings shall be permitted to open into sunroom additions or patio covers that abut a street, yard, or court if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening, or if the longer wall is at least 65 percent unobstructed, and the ceiling height is not less than 7 feet (CRC R303.1, R303.7.1 and AH105).
- Openings required for light and/or ventilation shall be permitted to open into a thermally isolated sunroom addition or patio cover, provided that there is an openable area between the adjoining room and the sunroom addition or patio cover of not less than one-tenth of the floor area of the interior room but not less than 20 square feet. The minimum openable area to the outdoors shall be based upon the total floor area being ventilated. (CRC R303.2)

- For the purpose of determining light and ventilation requirements, any room shall be considered as a portion of an adjoining room when at least one-half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room but not less than 25 square feet. (CRC R303.2)
- Patio covers shall be designed and constructed to sustain all dead loads plus a minimum vertical live load of 10 pounds per square foot (CRC AH104.1).
- A patio cover shall be permitted to be supported on a slab on grade without footings, provided the slab conforms to the provisions of CRC Section R506, is not less than 3.5 inches thick and the columns do not support live and dead loads in excess of 750 pounds per column (CRC AH106).
- When the existing slab does not meet the minimum requirements as noted above, install a minimum 12" wide x 12" deep square footing with two #4 reinforcing steel bars each way at the bottom of the footing under each post.
- New footings shall be tied to existing slab with #4 x 12" long dowels on at least three sides. Embed dowels a minimum of 4" into existing concrete slab using ICC approved epoxy.
- Minimum clearance between the slab and bottom of the joists shall be 7'-0". Minimum clearance between the slab and the bottom of any beams shall be 6'-8" (R305.1).
- The concrete slab shall be a minimum 2" below wood siding, shall not block drainage from stucco weep screeds and may not block any foundation vents (CRC 317.1).
- Roofs must meet the minimum slope requirements of the manufacturer and CRC Chapter 9, but not be less than 1/4" per foot.
- Refer to the "*Lighting, Switches and Receptacles*" handout if new electrical will be installed.
 - Lighting installed outdoors shall be high-efficacy or low-efficacy controlled by a motion sensor AND a photocontrol, astronomical time clock or Energy Management Control System. Lighting must be controlled by a manual ON/OFF switch that is not capable of turning on any lighting that has been shut off by an automatic lighting control. Motion sensors may have a temporary override function that allows lighting to stay switched ON regardless of motion detection, but the motion sensor must automatically reactivate within six hours.
 - Lighting installed in patio enclosures and sunrooms shall be high-efficacy or low-efficacy controlled by a vacancy sensor or low-efficacy controlled by a dimmer switch. These options can be installed in combinations, for example high-efficacy downlights and dimmable low-efficacy track lights.
 - High efficacy lighting shall be controlled separately from low-efficacy lighting.
 - A list of High efficacy lighting certified as meeting the requirements of the Energy Code is available at www.appliances.energy.ca.gov.
 - 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.
 - Where branch-circuit wiring supplying 120-volt 15 and 20-ampere outlets in a patio enclosure or sunroom is modified, replaced or extended, the branch circuit shall be protected as per CEC 210.12(B) by:
 - 1) A listed combination AFCI located at the origin of the branch circuit, or
 - 2) A listed outlet branch-circuit AFCI located at the first receptacle outlet of the existing branch circuit
 - All outlets install outdoors shall be GFCI protected (CEC 210.8).
 - Receptacles install outdoors shall have a listed weatherproof cover.
 - All receptacles shall be listed tamper-resistant.

4. 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 on all chimneys is required prior to the final inspection. Refer to the “*Smoke Alarm, Carbon Monoxide Alarm and Spark Arrester Certificate*” attached for detailed information.

5. OTHER APPROVALS:

- Engineering Department:** Prior to completion of any plans, the Engineering Department should be contacted at (408) 586-3329 to find out the requirements due to the location of the proposed patio enclosure and any easements.
- Planning Department:** Prior to completion of any plans, the Planning Department should be contacted at (408) 586-3279 to find out the requirements due to the location and type of the proposed patio enclosure.
 - All accessory buildings and structures in the rear yard are limited cumulatively to a total area not exceeding thirty percent (30%) of the area of the required rear yard.
- Fire Department:** If a patio enclosure is located in the “Hillside Area”, prior to completion of any plans, the Fire Department should be contacted at City Hall or at (408) 586-3365 to find out the fire protection requirements of the proposed patio enclosure
- Home Owners Association:** If the property is regulated by a Home Owners Association, any exterior work must have approval of the Association. It is the property owner’s responsibility to obtain the approval.

6. INSPECTION PROCEDURES:

- An inspection is required prior to placement of any concrete. A framing inspection will be required before any finishes or the roofing is installed. A final inspection is required after all work is complete. For each inspection, the Permit Card and the Approved Job Copy of the Drawings (if any) must be presented to the inspector. Permits expire 180 days after issuance or last inspection passed, whichever is the latest.

7. QUESTIONS:

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

NOTES:

- If one or more of the required items mentioned above are omitted from the submittal plans, the application may be considered as incomplete and not ready for checking or approving.
- Revisions:** Once the permit has been issued, any changes in the design must be approved by the City. Submittal documents shall be reviewed by the Architect or Engineer of record with a notation indicating that the changes have been reviewed and are in general conformance with the design of the building prior to being submitted to the City for approval.



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.

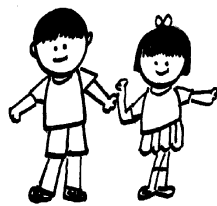
Where does the RRP Rule Apply?

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



SMOKE ALARM, CARBON MONOXIDE ALARM and SPARK ARRESTER CERTIFICATE

This "Certificate" can be signed by the property owner and provided to the Building Inspector prior to final inspection if access to the interior of the dwelling for inspection of the smoke and carbon monoxide alarms is not possible and the permitted work being performed is exterior only (such as re-roofing, re-siding, patio covers, swimming pools and the like).

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:

Smoke Alarms shall be listed and labeled in accordance with UL 217 and installed in accordance with the provisions of the code and the household fire warning equipment provisions of NFPA 72. Systems and components shall be California State Fire Marshal listed and approved. Alarms shall be tested and maintained in accordance with the manufacturer's instructions. Alarms that no longer function shall be replaced. Conventional ionization smoke alarms that are solely battery powered shall be equipped with a ten-year battery and have a silence feature. **Alarms installed in one and two-family dwellings shall be replaced after 10 years from the date of manufacture marked on the unit, or if the date of manufacture cannot be determined.** (CRC R314)

Smoke detection systems. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.

Location. Smoke alarms shall be installed 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. Apartment complexes and other multiple-dwelling complexes shall have a smoke detector installed in the common stairwells. For R-3.1 occupancies (Residential Care Facilities), refer to CBC Section 907.2.11.2. 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, Section 17.7.3.2.4.
12. Heat alarms and detectors installed in rooms with joists or beams shall comply with the requirements of NFPA 72, Section 17.6.3.

Carbon Monoxide Alarms: An approved carbon monoxide alarm listed as complying with UL 2034, approved and listed by the California State Fire Marshal, installed and maintained in accordance with NFPA 720 and the manufacturer's instructions shall be installed if they do not already exist in existing dwellings or sleeping units having a fossil fuel-burning heater or appliance, fireplace or an attached garage as follows: **outside each separate dwelling unit sleeping area in the immediate vicinity of bedroom(s) and on every level of dwelling unit.** Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances, installed and maintained as required for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075. (CRC R315)

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. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Smoke and carbon monoxide alarm wiring shall be directly connected to the permanent building wiring 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; and, for carbon monoxide alarms, when other power sources recognized for use by NFPA 720 are used.

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 and no previous method for interconnection existed; 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 repair 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. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

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.

*** CERTIFICATION ***

I understand the above requirements and certify that I now have smoke alarms, carbon monoxide alarms and spark arrestors installed as required above.

HOMEOWNERS NAME (please print): _____

ADDRESS: _____

SIGNATURE: _____

DATE: _____ PERMIT NO. _____

Lighting – Single Family Dwellings

CEC-CF2R-LTG-01-E (Revised 06/14)



CERTIFICATE OF INSTALLATION		CF2R-LTG-01-E
Lighting – Single Family Dwellings		(Page 1 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City	Zip Code

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.	

Lighting – Single Family Dwellings

CEC-CF2R-LTG-01-E (Revised 06/14)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF INSTALLATION		CF2R-LTG-01-E
Lighting – Single Family Dwellings		(Page 2 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City	Zip Code

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.	

Lighting – Single Family Dwellings

CEC-CF2R-LTG-01-E (Revised 06/14)



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

Method (b) Total Wattage Calculation							
Luminaire Type	Luminaire (Fixture)			Quantity	=	Total Watts	
	High	Low	High			Low	
	Efficacy Watts	Efficacy Watts	Efficacy			Efficacy	
			x	=	0	0	
			x	=	0	0	
			x	=	0	0	
			x	=	0	0	
			x	=	0	0	
			x	=	0	0	
Complies with method (b) if Total A ≥ Total B						0	0
						A >	B

Method (c) Total Additional Low Efficacy Wattage Calculation			
Watts From Method (b)		(see footnote)	
High	Low	Additional	Total Low Efficacy
Efficacy	Efficacy	Watts	Watts Allowed
Low Efficacy	Low Efficacy	Low Efficacy	Watts Allowed
0	0	0	0

1. Insert 50 if house is ≤ 2,500 square feet; Insert 100 if house is > 2,500 square feet.

Lighting – Single Family Dwellings

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G. Lighting Internal to Cabinets01 150.0(k)4: Permanently installed lighting internal to cabinets uses \leq 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:
- Comply with Section 140.8. Applicable nonresidential sign lighting compliance forms shall also be submitted, or
 - 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:

- Controlled by a manual ON and OFF switch; and
- Controlled by a motion sensor; and
- 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.

Lighting – Single Family Dwellings

CEC-CF2R-LTG-01-E (Revised 06/14)



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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:

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.