



# RESIDENTIAL WINDOW REPLACEMENT REQUIREMENTS

Building Department

390 Towne Centre Dr, Lathrop, CA 95330

Phone: (209) 941-7270

## PERMITTING REQUIREMENTS FOR RESIDENTIAL WINDOW REPLACEMENTS

Current Building and Energy Codes require that a building permit be obtained for window replacement and installation. All forms of retrofit window replacement other than a simple re-glazing of a window (installing glass into an existing frame) require permits.

The following is a list of general requirements for Permit Applications based on the California Residential Code (CRC) and California Energy Efficiency Standards.

- All windows shall be installed in accordance with the manufacturer's requirements (including new flashing)
- Windows are required to have Dual Glazing with a maximum U-Factor of 0.30, and a maximum Solar Heat Gain Coefficient (SHGC) of 0.23. (California Title24 Energy Standards). Exceptions may apply for minor glazing replacements (<75sqft replaced)
- Windows replaced in bedrooms shall meet all of the following emergency escape and rescue requirements (CRC R310.2):
  - Minimum 5.7 sqft of openable area. (minimum 5 sqft required for grade level bedrooms; less than 44" from exterior grade)
  - Minimum 20-inch clear width and minimum 24-inch clear height when open
  - Maximum sill height of 44 inches from the finished floor to the bottom of the clear opening
  - **Exception:** For replacement windows, if the existing window configuration complied with the code in effect during original construction, strict compliance with the above dimensional requirements is not required, provided that the replacement window is the largest standard size window that will fit within the existing gram or rough opening, and the replacement window is of the same operating style or of a style that provides for an equal or greater window opening area than the existing window
- Operable windows where the opening (measured at the window sill) is located more than 72 inches above the exterior finished grade and the interior opening is located <24" above the finished floor, shall either have an opening that does not allow the passage of a 4" diameter sphere, be provided with window fall prevention devices that comply with ASTM F2090, or be provided with window opening control devices complying with ASTM F2090 (CRC R312.2)
- Safety glazing (i.e. tempered) shall be installed in the following locations (CRC R308.4):
  - Glazing within a 2-foot arc of a door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches above the walking surface
  - Glazing in walls enclosing stairway landings, or glazing within 5 feet horizontally of the bottom tread, or 3 feet of the top of stairways and where the bottom edge of the glazing is less than 60 inches above the walking surface
  - Glazing located <60" above any standing/walking surface in enclosures for, or walls facing hot tubs, spas, pools, saunas, steam rooms, bathtubs and showers unless the glazing is located >60" from the edge of a shower, sauna, or steam room
  - Any glazing meeting all of the following conditions:
    - Exposed area of an individual pane greater than 9 square feet
    - Exposed bottom edge is less than 18 inches above the finished floor
    - Exposed top edge is greater than 36 inches above the finished floor
    - Where a walking surface is within 36 inches horizontally of the glazing



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When required, tempered glazing shall be permanently identified by a manufacturer marking that is permanently applied and cannot be removed without being destroyed (e.g. sand blasted, acid etched, ceramic fired, laser etched, or embossed). Stickers attached to the window are not sufficient evidence of safety glazing. (CRC R308.1)

CRC R314 & R315 Require that Smoke and Carbon Monoxide Alarms be installed whenever work requiring a permit is completed:

- Smoke Alarms are to be provided in all sleeping rooms and adjacent hallways, multi-levels, and basements. (CRC R314)
- Carbon Monoxide Alarms to be provided outside each sleeping area in the immediate vicinity of the bedrooms and one on every level of a dwelling unit, including basements. (CRC R315)
  - See form titled Smoke Alarm & Carbon Monoxide Requirement Form for additional information

## Retrofit Windows Using Original Window Frame

- Submittals only require a Completed Permit Application
- A Final Inspection shall be scheduled once permit is issued and all work is completed

Acceptance forms (CF2R-WNV or CF2R-ALT) or evidence showing the windows meet a maximum U-Factor of 0.30, and a maximum Solar Heat Gain Coefficient ([SHGC] of 0.22) will need to be provide to the Inspector at time of inspection. Stickers removed from the windows will be sufficient evidence for energy compliance.

## Addition of Windows or Doors and/or Altering Opening Size

- Submittals require:
  - A Completed Permit Application
  - Detailed plans that include a floor plan showing the existing and proposed opening (door/window) layout, size of all proposed doors/windows, size and connection details for all new headers and support, flashing details, and applicable energy compliance forms (CF1R-ALT, CF1R-ENV).
    - Depending on the scope of the proposed alterations, additional details/information, such as wall bracing or shear wall plans, may be required.
- Two inspections are generally required:
  - A Rough Frame Inspection shall be scheduled when the new window is installed or an existing window opening is changed, and before the exterior covering (stucco/siding) is added.
  - The Final Inspection shall be scheduled once all work is completed

Acceptance forms (CF2R-WNV or CF2R-ALT) or evidence showing the windows meet a maximum U-Factor of 0.30, and a maximum Solar Heat Gain Coefficient ([SHGC] of 0.22) will need to be provide to the Inspector at time of inspection. Stickers removed from the windows will be sufficient evidence for energy compliance.