



# Retro-fit Window and Door Installation For Single Family Dwellings

*City of San Ramon*

*Building & Safety Services*

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Office: (925) 973-2580 Fax (925) 242-9312

[www.sanramon.ca.gov](http://www.sanramon.ca.gov)

◆ **To obtain a permit for window installation, please provide the following:**

◆ **Building Permit Application**

◆ **Window Retrofit Schedule**

◆ **Copy of the signed contract**

◆ **Floor plan of dwelling including:**

- Dimensions of windows, existing and proposed
- Location of doors and stairs
- Room usage (Bedroom, Dining, Living, etc.)
- Detail of any new framing for enlarging window and door openings

• **Items to consider**

- ◆ Egress
- ◆ Safety Glazing
- ◆ Energy Requirements
- ◆ Installation Requirements
- ◆ Inspections

• **Egress**

Sleeping rooms in every dwelling shall have at least one operable window or door approved for emergency escape or rescue that shall open directly into a public street, public alley, yard, or exit court. The emergency door or window shall be operable from the inside to provide a full, net clear opening without the use of separate tools.

Escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet. The minimum net clear openable height dimension shall be 24 inches. The minimum net clear openable width dimension shall be 20 inches.

**Exception:** Dwelling units built prior to January 1, 1979, will not have to comply with the current building code. Those dwelling units built prior to January 1, 1979 shall be permitted to have window sill heights at no greater than 48 (forty-eight) inches, with a net clear width of 22 (twenty-two) inches and a net clear height of 22 (twenty-two) inches. Additionally, the minimum net clear area shall be a minimum of 5 (five) square feet. This is all in compliance with the 1973 Uniform Building Code, which would have been enforced until approximately January 1, 1979, considering a 2 (two) year delay in adoption of the 1976 Building Code.

For windows that are cut down to meet egress, provide flashing detail for division approval prior to installing window. Flashing will need to be inspected prior to installing the new or retrofit window, to insure the window is properly flashed.

For window openings where existing flashing has been removed, new construction (nail fin) windows are required to be installed in opening.

Bars, grilles, grates, or similar devices may be installed on emergency escape, rescue windows, or doors provided:

- The Building Official shall approve devices.
- The devices are equipped with approved release mechanisms that are openable from the inside without the use of a key or special knowledge or effort; and
- The building is equipped with smoke detectors installed in each sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. When the unit has more than one story, detectors shall be installed on each story. In dwelling units where the ceiling height of a room open to the hallway serving the sleeping rooms exceeds that of the hallway by 24 inches or more, smoke detectors shall be installed in the hallways and in the adjacent room.

If the valuation of the window replacement permit exceeds \$1000.00 (labor and materials), smoke detectors shall be installed on the ceiling in all sleeping rooms within 2 (two) feet of the door leading to the hall.

- **Safety Glazing**  
Hazardous Locations

Glazing shall meet safety requirements of section 2406 of 2001 California Building Code.

- **Energy Requirements**  
California energy requirements for Zone 12 (San Ramon)

The U-Value of fenestration being installed must be 0.65 or lower.

- **Installation Requirements**

Flashing and Counterflashing

- Exterior openings shall be flashed in such a manner as to make them weatherproof.
- Removal of existing frames without breaking back stucco or siding does not allow for flashing of replacement windows and therefore, is not permitted.

Landings

- When installing a new door or replacing a window with a door, a landing and or steps may be required at exterior of door. Provide plans to show a landing that is not less than the width of the door and no less than 36" in length in the direction of travel.

Insulation

- Voids between new and old frames or rough frames shall be filled with insulation.

- **Inspections**

Rough Frame

- A Rough Frame inspection is required for **ALL** windows and door installations.
- The frame inspection shall include; installation of retro-fit windows, alterations to header span and size, cripples, insulation, support cables, corbels, and the roof section of bay windows. Windows and doors should be in place with no interior trim installed. Insulation shall be installed at time of rough frame. If stucco or siding has been removed, flashing shall also be in place.

Note: Some windows and doors will require the manufacturer's installation instructions (bay windows, sliders, etc.)

Final

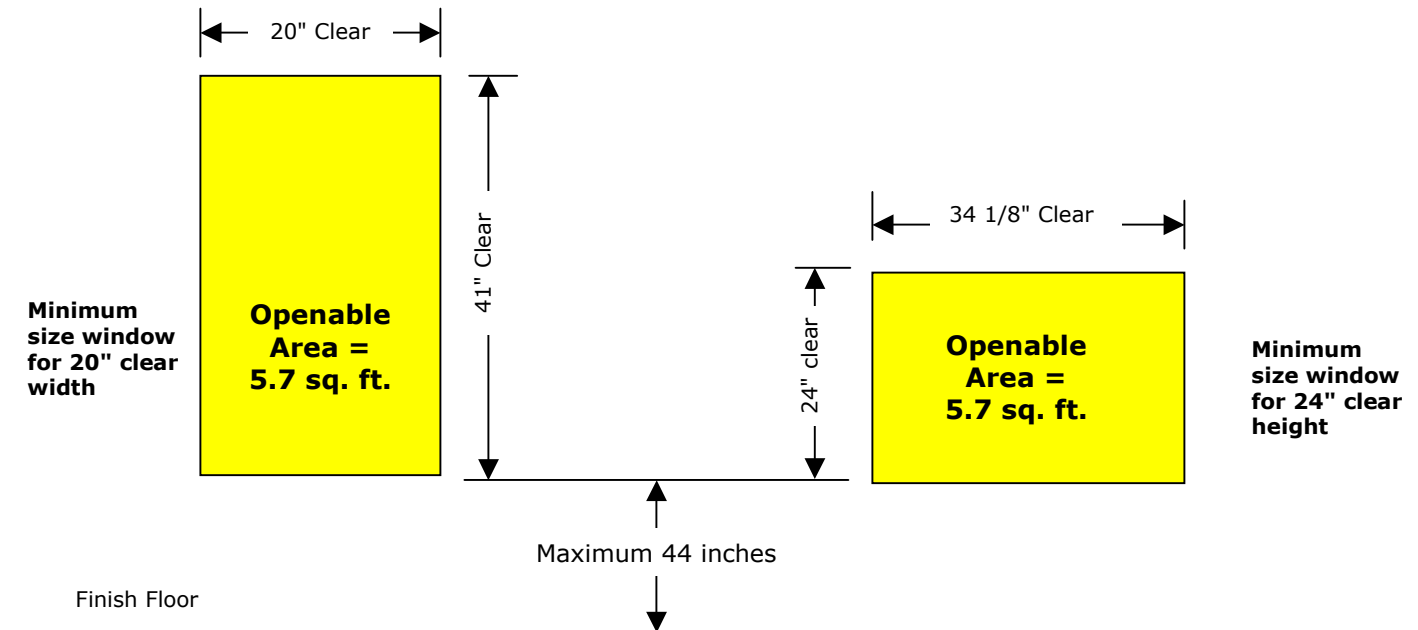
- Windows and doors will be caulked on all sides inside and outside to reduce water entry and air infiltration.
- Exposed wood shall be painted if not resistant to decay

If there are any questions regarding windows and their installation, please call and talk with an inspector.

Building Division Phone Number (925) 973-2580

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# Emergency Escape and Rescue Windows



Because so many fire deaths occur when occupants of residential buildings are asleep at the time of a fire, the C.B.C. requires that:

- *basements in dwelling units; and,*
- *every sleeping room below the fourth story shall:*  
**have at least one operable window or door approved for emergency egress and rescue. This exit shall open directly into a public street, public alley, yard, or exit court. The units shall be operable from the inside to provide a full clear opening without the use of separate tools or knowledge.**

Extensive testing by building and fire departments established the minimum size window requirements found in section 310.4:

- The net clear operable area shall be no less than 5.7 square feet.
- In addition to the above requirement, the net clear operable height dimension shall be a minimum of 24 inches. The net clear operable width dimension shall be a minimum of 20 inches. (Note: Using both minimum figures will NOT obtain the required 5.7 square feet).
- The finished sill height shall not be more than 44 inches above the floor.

## Minimum Width/Height Requirements for Emergency Escape and Rescue Windows

Width	20	20.5	21	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	26.5	27
Height	41	40	39.1	38.2	37.3	36.5	35.7	34.9	34.2	33.5	32.8	32.2	31.6	31	30.4

Width	27.5	28	28.5	29	29.5	30	30.5	31	31.5	32	32.5	33	33.5	34	34.2
Height	29.8	29.3	28.8	28.3	27.8	27.4	26.9	26.5	26.1	25.7	25.3	24.9	24.5	24.1	24