



## Window and Door Installations City of San Ramon Building & Safety Services

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### **The following are current applicable Codes:**

In accordance with State of California law, the following are the current applicable codes:

- 2010 California Residential Code
- 2010 California Electrical Code
- 2010 California Energy Code
- City of San Ramon Ordinances

### **PERMITS**

- A building permit is required for window installation and replacement, provide the following:
  1. Building Permit Application
  2. Window Schedule
  3. Floor plan of dwelling including dimensions of existing and proposed windows.

### **REQUIRED INSPECTIONS**

- A rough frame inspection is required for all windows and door installations.
- The frame inspection includes installation of retro-fit windows, alterations to header, cripples, studs, insulation, support cables, corbels, and the roof section of bay windows. Windows and doors shall 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 be in place. Note: Some windows and doors will require the manufacturer's installation instructions (bay windows, garden windows, sliders, etc.)
- FINAL: Smoke and carbon monoxide detector(s) shall be installed as required by the California Residential Code.

### **EGRESS**

- Sleeping rooms in every dwelling shall have one operable window or door 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.
- All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet. Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet where the sill height is not more than 44 inches above finished exterior ground level adjacent to the opening. The minimum net clear openable height dimension shall be 24 inches. The minimum net clear openable width dimension shall be 20 inches. Emergency escape and rescue window openings shall have a sill height of not more than 44 inches above interior finished floor.
- Exception: Dwelling units built prior to January 1, 1979 are permitted to have window sill height at no greater than 48 (forty-eight) inches, with a net clear width of 22 (twenty-two) inches.
- Window openings where existing flashing has been removed, new construction (nail fin) windows are required to be installed in opening.
- New 5.0 opening window sills that are cut down to meet egress shall be flashed. Flashing shall to be inspected prior to installing the new or retrofit window.

## **SAFETY GLAZING**

R308.1 Identification. Except as indicated in Section R308.1.1 each pane of glazing installed in hazardous locations as defined in Section R308.4 shall be provided with a manufacturer's designation specifying who applied the designation, designating the type of glass and the safety glazing standard with which it complies, which is visible in the final installation. The designation shall be acid etched, sandblasted, ceramic-fired, laser etched, embossed, or be of type which once applied cannot be removed without being destroyed. A label shall be permitted in lieu of the manufacturer's designation.

### R308.4 Hazardous locations.

The following shall be considered specific hazardous locations for the purposes of glazing:

1. Glazing in all fixed and operable panels of swinging, sliding and bifold doors.  
Exceptions:
  - 1) Glazed openings of a size through which a 3-inch diameter sphere is unable to pass.
  - 2) Decorative glazing.
2. Glazing in fixed or operable panels adjacent to a door where the nearest vertical edge of the glazing is within a 24 inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface.  
Exceptions:
  - 1) Decorative glazing.
  - 2) When there is an intervening wall or other permanent barrier between the door and the glazing.
  - 3) Glazing in walls on the latch side of and perpendicular to the plane of the door in a closed position.
  - 4) Glazing adjacent to a door where access through the door is to a closet or storage area 3 feet or less in depth.
  - 5) Glazing that is adjacent to fixed panel of patio doors.
3. Glazing in an individual fixed or operable panel that meets all of the following conditions:
  - 1) Exposed area of an individual pane is larger than 9 square feet; and
  - 2) Bottom edge less of glazing is than 18 inches above the floor; and
  - 3) Top edge of the glazing is more than 36 inches above the floor; and
  - 4) One or more walking surfaces within are 36 inches measured horizontally and in a straight line, of the glazing.  
Exceptions:
  - 1) Decorative glazing.
  - 2) When a horizontal rail is installed on the accessible side (s) of the glazing 34 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1 ½ inches in cross sectional height.
  - 3) Outboard panes in insulating glass units and other multiple glazed panels when the glass is 25 feet or more above grade ,a roof, walking surfaces or other horizontal surface adjacent to the glass exterior.
4. Glazing in walls and fences used as the barrier for indoor and outdoor swimming pools and spas when all the following conditions are present:
  - 1) The bottom edge of the glazing is less than 60 inches above the poolside of the glazing;
  - 2) The glazing is within 5 feet horizontally of swimming pool or spa water's edge;

5. Glazing in enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs, and showers where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing walking surface.  
Exception:
  - 1) Glazing that is more than 60 inches, measured horizontally and in a straight line, from the waters edge of a hot tub, whirlpool or bathtub.
  
6. Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glazing is less than 60 inches above the plane of the adjacent walking surface.  
Exceptions:
  - 1) When a rail is installed on the accessible side(s) of the glazing 34 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1 ½ inches in cross sectional height.
  - 2) The side of the stairway has a guardrail or handrail, including balusters or in-fill panels, complying with Sections R311.7.6 and R312 and the plane of the glazing is more than 18 inches from the railing; or
  - 3) When a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches to 36 inches above the walking surface and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as a guard.
  
7. Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glazing is less than 60 inches above the nose of the tread.  
Exceptions:
  - 1) The side of the stairway has a guardrail or handrail, including balusters or in-fill panels, complying with Section R311.7.6 and R312 and the plane of the glass is more than 18 inches from the railing;
  - 2) When a solid wall or panel extends from the plane of the adjacent walking surface to 34 inches to 36 inches above the walking surface and the construction at the top of that wall or panel is capable of withstanding the same horizontal load as a guard.

### **ENERGY REQUIREMENTS**

- California energy requirements for Zone 12 (San Ramon): **The U-Value of fenestration being installed must be 0.40 or lower.**

### **INSTALLATION REQUIREMENTS**

- Flashing and Counter flashing
  1. 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 require.
  
- Landings at Main Exit
  1. 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
  1. Voids between new and old frames or rough frames shall be filled with insulation.