



## CITY OF FOUNTAIN VALLEY

BUILDING DIVISION  
10200 Slater Ave  
Fountain Valley, CA 92708  
714 593-4429

### WINDOW REPLACEMENT WORKSHEET

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#### **CODE REQUIREMENTS**

##### **1. NATURAL LIGHT AND VENTILATION**

###### HABITABLE ROOMS:

- Shall be provided with natural light by means of exterior glazed openings with an area not less than 8% of area of such rooms,
- Shall be provided with natural ventilation by means of openable exterior openings with an area not less than 4% of the area of such rooms.

###### BATHROOMS, WATER CLOSET COMPARTMENTS, AND OTHER SIMILAR ROOMS:

- Shall be provided with aggregate exterior glazing area in windows of not less than 3 square feet, one-half of which must be openable. Exception: In lieu of windows, artificial light and local exhaust system (minimum 50 cubic feet per minute for intermittent ventilation or 20 cubic feet per minute for continuous ventilation) may be provided.

##### **2. EMERGENCY ESCAPE/RESCUE WINDOWS AND DOORS**

Basements, habitable attics, and every sleeping room (below fourth story) shall have at least one openable 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 window shall:

- be operable from the inside to provide full, clear opening without the use of separate tools;
- have a minimum net clear openable area of 5.7 square feet (5.0 sq. ft. at grade);
- have a minimum net clear openable height of 24 inches;
- have a minimum net clear openable width of 20 inches;
- have a finished sill height not more than 44 inches above the floor.

#### **EXEMPTION FOR SINGLE-FAMILY OR DUPLEX**

Where windows are required to provide emergency escape and rescue openings, replacement windows shall be exempt to comply provided that the replacement window meets the following conditions:

- a. The replacement window is manufacturer's largest standard size window that will fit within the existing frame or existing rough opening (no framing & stucco work). The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
- b. The replacement window is not part of a change of occupancy.
- c. Window opening control devices complying with ASTM F2090 shall be permitted for use on windows required to provide emergency escape and rescue openings.

### **3. ENERGY REQUIREMENTS**

All glazing (windows & doors w/ glass) that are new, replaced, re-used, relocated, or changed in size must meet current California Energy Code. Glazing must comply with the maximum U-Values and Solar Heat Gain Coefficient (SHGC) ratings per the prescriptive standards. A detailed computer analysis (performance method) of the dwelling by an energy consultant with possible further modifications to the building may allow a number greater than the prescriptive standards.

### **4. IMPACT OR HAZARD GLAZING (TEMPERED GLASS)**

Tempered or safety glazing shall be required where glazing is:

- in a door;
- within a 24 inch on either side of a door in the plane of the door in a closed position and where the bottom of the edge of the glazing is less than 60 inches above the walking surface;
- on a perpendicular to the plane of the door in a closed position, within a 24 inch of the hinge side of an in-swinging door, and where the bottom of the edge of the glazing is less than 60 inches above the walking surface;
- where the exposed area of an individual pane is larger than 9 sq.-ft., within 18 inch of the floor, top edge of the glazing is more than 36 inches above the floor, and one or more walking surfaces are within 36 inches, measured horizontally and in a straight line, of the glazing;
- enclosing a hot tub, spa, whirlpool, sauna, steam room, bathtub, shower, or swimming pool where the bottom of the window is less than 60 inches above the tub or shower bottom;
- within 60 inches measured horizontally from water's edge of a bathtub, hot tub, spa, whirlpool, or swimming pool or from the edge of shower, sauna, or steam room and when the exposed surface of the glazing is less than 60 inches above surface;
- adjacent to stairways, landings, and ramps when the exposed surface of the glazing is less than 36 inches above the plane of the adjacent walking surface;
- adjacent to the bottom landing of a stairway where the glazing is less than 36 inches above the landing and within a 60-inch horizontal arc less than 180° from the bottom tread nosing.

### **5. WINDOW FALL PROTECTION**

Where window fall prevention fall devices are not provided, window opening control devices complying with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

- a. The window is openable.
- b. The window replacement includes replacement of the sash and the frame.
- c. The top of the sill of the window opening is at a height less than 24 inches above finished floor.
- d. The window will permit openings that will allow passage of 4-inch diameter sphere where the window is in its largest opened position.
- e. The vertical distance from the top of the sill of the window opening to the finished grade or other surfaces below, on the exterior of the building, is greater than 72 inches.

The window opening control device, after operation to release the control device allowing the window to full open, shall not reduce the minimum net clear opening area of the window unit.

### **6. EGRESS DOOR REQUIREMENTS**

At least one egress door shall be provided for each residence (usually the front door). The egress door shall be side-hinge and have minimum size of 36 inch by 80 inch. Egress door shall be readily openable from inside the residence without the use of a key or special knowledge or effort.

**INSTRUCTIONS:**

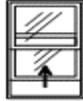
Complete the table below noting the complete scope of work. The numbering system can be used to reference locations of proposed work on the plan. Use the code information on this informational sheet to verify that your proposed construction meets code requirements. If you need assistance, see our "WINDOW REPLACEMENT-SAMPLE PLAN" handout or a permit technician.

**WINDOW TYPES:**

Caseament (CAS)



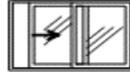
Single Hung (SH)



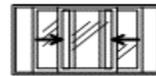
Double Hung (DH)



Slider (SLDR)



Slider fixed center panel (SLDR XOX)



Fixed (FIX)



**WORKSHEET**

ADDRESS: \_\_\_\_\_ PERMIT # \_\_\_\_\_

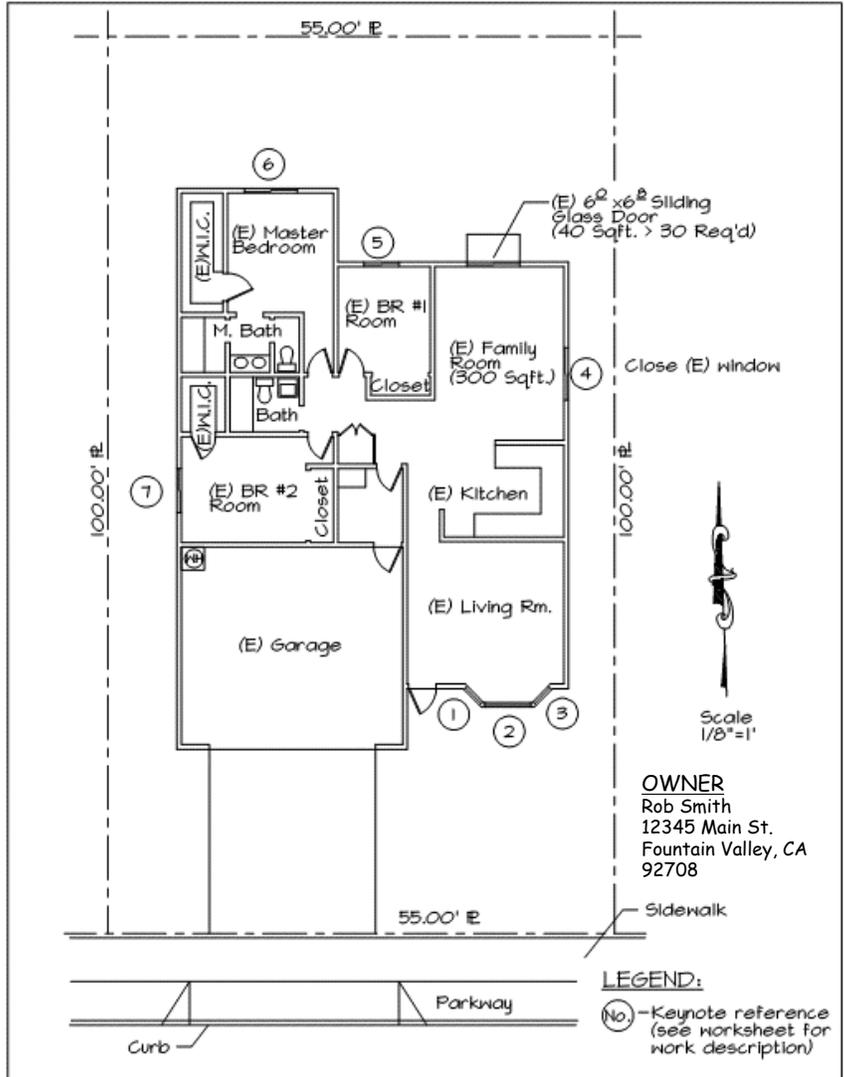
KEYNOTE SYMBOL	EXISTING WINDOW SIZE & TYPE	NEW WINDOW SIZE & TYPE	WINDOW AREA	LOCATION (ROOM)	SAFETY GLAZING (Yes/No)
①					
②					
③					
④					
⑤					
⑥					
⑦					
⑧					
⑨					
⑩					
⑪					
⑫					
⑬					
⑭					
⑮					
⑯					

Total Glazing Area \_\_\_\_\_ Max. U-Factor \_\_\_\_\_ Max. SHGC \_\_\_\_\_

Submission of this form is not a guarantee that the above stated windows will meet code requirements. Final determination will be made by the building inspector at the time of inspection. I acknowledge and will meet all the applicable code requirements as listed on this informational sheet for proposed window and door replacement.

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**SAMPLE PLAN**



**INSTRUCTIONS:**

To aid in communication between yourself, the inspectors, and the plan checkers, we have prepared this sample plan to assist in the preparation of your plan for window replacement. Follow the instructions on this informational sheet, then submit this information to the Building Division permit center.

**PREPARATION OF PLAN:**

Show on an 8-1/2" x 11" sheet of paper the following: (Although the plan is not required to be to scale, it should be close. A scale of 1/8" per foot will work for most residences.)

1. Show the property size, configuration, street, and alley location.
2. Show all buildings and/or structures on the property.
3. Draw the floor plan of the structure. Note the use of each room. If a window will be removed or the size changed, indicate the size of the room and the size and type of all other windows in the room.
4. Show all existing windows, and note which will be replaced. (Show their size and type. This can be done by keying each location to the table as shown on the sample plan.)
5. Show size and type of the new window.

**SPECIAL CASES:**

Rooms are required by the building code to meet minimum light and ventilation requirements. Sleeping rooms must have at least one window which meets emergency egress requirements. When making changes in size or removing windows, compliance to building code requirements must be shown. (See the Window Replacement Worksheet" for more specific details.)

**Removal of Windows**

1. Show room size and size of all other windows in the room. Remaining window must provide compliance to emergency egress requirements and light and ventilation requirements.

**Change in Window Size**

1. Reduction – Show room size and size of all other windows in the room. Remaining window must provide compliance to emergency egress, light and ventilation requirements.
2. Increase – More information is required for this type of work. For example, widening a window may require headed and shear wall retrofit, or lowering a window may weaken shearwalls in some buildings, Other types of projects require more information (framing plans, etc...) Check with a permit technician regarding your specific case.