

	<p align="center">CITY OF AGOURA HILLS</p> <p align="center">BUILDING & SAFETY DIVISION</p> <p align="center">30001 LADYFACE COURT AGOURA HILLS, CA 91301</p>	<p align="right">PHONE: (818) 597-7334 FAX: (818) 597-7352 www.AgouraHillsCity.org</p>	
<p align="center">RESIDENTIAL WINDOW REPLACEMENTS</p>		<p align="center">IH-05</p>	<p align="center">4-15-22</p>

INTRODUCTION

The following information is provided as a guide for residential window replacements and new installations using the 2019 California Building code, 2019 California Residential Code, and the 2019 California Energy Efficiency Standard Code. Within the City of Agoura Hills, all window and exterior door replacements require a building permit regardless of how they are classified; this includes both “Retrofit Windows” and “New construction flanged windows”.

A Planning review may be required and must be obtained prior to permit issuance. In areas with a Homeowners’ Association (HOA), approval from the HOA may also be required prior to permit issuance. Please contact your HOA to confirm if HOA approval is required prior to permit issuance. Any changes to an existing non-compliant egress window will trigger a mandated compliance requirement with the current applicable code dimensional requirements.

ENERGY REQUIREMENTS

Replacement window installations, without a Performance Energy Analysis, shall comply with the Mandatory Measures Prescriptive requirements. High-Performance Windows are required, reducing the U-Factor down to 0.30 or lower and the SHGC down to 0.23 or lower per the 2019 California Energy Code Section 150.1(c)3A. See Title 24 Part 6 Fenestration Alterations Residential Fact Sheet.

WINDOW SCHEDULE

A window schedule shall be provided listing the existing and new window type, U Factor, SHGC, glazing tempered glass requirement, and existing and new window sizes.

VERY HIGH FIRE HAZARD SEVERITY ZONE

All Agoura Hills properties are located within the Very High Fire Hazard Zone and therefore new and/or replacement windows shall have at least one tempered pane. For vinyl frame windows, the corners shall be of a welded construction with a metal reinforcement.

When installed, skylights and sloped glazing must be of tempered glass or other approved and tested materials and meeting the requirements of the Class “A” Assembly. Please note, most plastic skylights and plastic sloped glazing do not meet the fire resistive requirements of the code. To install plastic skylights, the product must be listed, fire rated and tested by a nationally recognized testing laboratory.

WINDOW INSTALLATION

Approved corrosion-resistive flashings shall be installed in a single fashion in a manner to prevent entry of water into the wall cavity or structural framing components. All flashings shall be installed following the Window Manufacturer’s Instructions, ASTM E2112 and AAMA installation guidelines.

For retrofit windows, the existing moisture barrier is not disturbed allowing the use of sealants and caulking.

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DOOR CONVERSIONS

When changing an existing window to a sliding or French door or when adding a new door, the following additional elements and/or requirements will apply:

- Landings are required at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel. Exterior landings shall be permitted to have a maximum slope of ¼-unit vertical in 12 units horizontal (2%).
- Landing elevations at the required egress doors shall not be more than 1 ½ inches lower than the top of the threshold:
 - **Exception:** The exterior landing or floor shall not be more than 7 ¾ inches below the top of the threshold provided the door does not swing over the landing or floor. When exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.
- Exterior lighting is required. A switch and light is required outside each outdoor entrance or exit.
- Installation of a new door will change the electrical receptacle layout within the room serviced by the door. Compliance of the minimum distances between outlets will apply.
- When moving the electrical wiring to allow a new door and adding the required lighting requires an electrical permit and inspection.

SMOKE AND CARBON MONOXIDE ALARMS

The State of California requires smoke and carbon monoxide alarms to be installed in all residential buildings. Smoke and carbon monoxide alarms are permitted to be battery operated when hardwiring is not available. Please see “Smoke & Carbon Monoxide Alarm” handout for more information.

EMERGENCY ESCAPE AND RESCUE OPENINGS

Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency escape and rescue shall be required in each sleeping room unless dwelling is equipped with an automatic sprinkler system in accordance with CRC Section P2904 and basement is provided with two means of egress. The following outlines the minimum dimensions for the egress compliance:

- The bottom of the net **clear** opening shall not be greater than 44 inches measured from the finished floor to the clear openings, **and**
- The minimum net **clear** opening area of 5.7 square feet is provided, **and**
 - **Exception:** *Net clear opening space of 5 square feet is allowed for windows at grade level.*
- The net clear opening height of 24 inches is provided, **and**
- Net clear opening width of 20 inches is provided.

Please note that all four of the above elements are required for egress compliance. While some windows may appear to be compliant when considering the overall opening size, window style and fixed window dimensions

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may render the open element to not comply. Casement windows without egress hinging may decrease the opening size as the window opens. All considerations must be given to egress window sizing.

GLAZING

Glazing installed in windows and doors shall meet the hazardous location’s requirements as specified in CRC R308.6.2. Laminated, tempered or other approved safety glazing is required in the following locations:

- Glazing in individual fixed or operable panels adjacent to a door where the nearest vertical edge of the glazing is within a 24 inch arc.
- Glazing in an individual or operable panel when all of the following conditions apply:
 - The exposed area of an individual pane is larger than 9 square feet, and
 - The bottom edge is less than 18” above the floor, and
 - The top edge is more than 36 inches above the floor, and
 - One or more walking surfaces located within 36 inches measured horizontally and in a straight line of the glazing.
- Glazing adjacent to stairs and ramps where the bottom edge of the glazing is less than 36 inches above the plane of the adjacent walking surface of stairs, landings, and ramps.
- Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within 60 inches horizontally of the bottom tread.
- Glazing in walls, enclosures, or fences facing hot tubs, spas, whirlpools, sauna steam rooms, bathtubs, showers, and indoor/outdoor swimming pools where the bottom edge of the glazing is less than 60 inches measured vertically above the standing or walking surface.

OPERATIONAL CONSTRAINTS

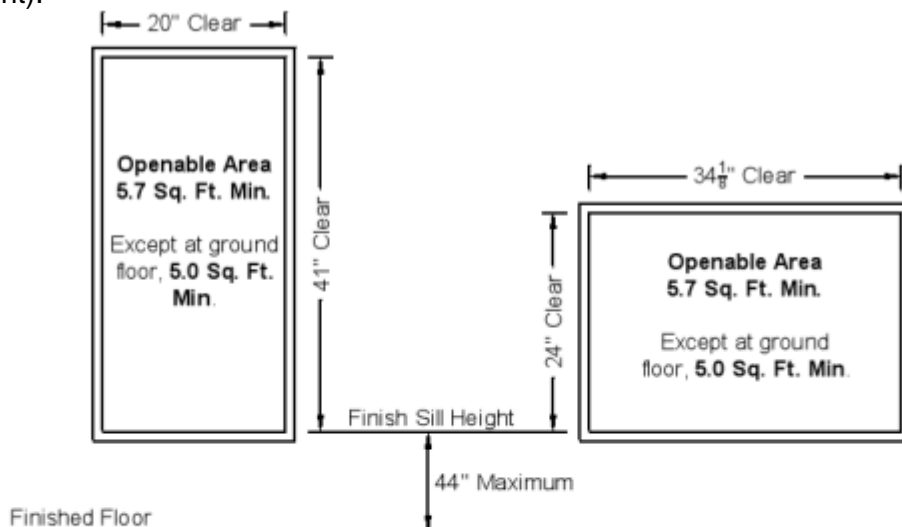
- Emergency escape and rescue openings shall be maintained free of any obstructions other than those allowed by this section and shall be operational from the inside of the room without the use of keys, tools or special knowledge.
 - **Exception:** *Group R1 occupancies provided with a monitored fire sprinkler system in accordance with section 903.2.8 may have openable window, permanently restricted to a maximum 4’ open position.*

ADDITIONAL REQUIREMENTS

The following details the additional requirements that apply to windows:

- Window wells
 - The minimum horizontal area of the window well shall be 9 square feet, with a minimum horizontal projection and width of 36 inches. The area of the window well shall allow the emergency escape and rescue opening to be fully opened.
 - **Exception:** *The ladder of steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6 inches into the required dimensions of the window well.*
- Ladder and steps
 - Window wells with a vertical depth greater than 44 inches shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of at least 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches on center vertically for the full height of the window well.
- Bulkhead enclosures

- Bulkhead enclosures shall provide direct access to the basement. The bulkhead enclosure with the door panels in the fully open position shall provide the minimum net clear opening required by Section R310.1.1. Bulkhead enclosures shall also comply with Section R311.7.10.2.
- Bars, grilles, covers, and screens:
 - Are permitted to be placed over emergency escape and rescue openings, bulkhead enclosures, or window wells that serve such openings, provided the minimum net clear opening size complies with Sections R310.1.1 to R310.1.3, and such devices shall be releasable or removable from the inside without the use of a key, tool, special knowledge or force greater than that which is required for normal operation of the escape and rescue opening. The release mechanism shall be maintained operable at all times.
- In dwelling units, where the opening of the operable window is located more than 72" above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24" above the finished floor surface of the room in which the window is located. Operable sections of windows shall not allow passage of a 4 inch diameter sphere where such openings are located within 24 inches of the finish floor.
- All habitable rooms shall have windows with their total areas equaling at least 8% of the room's floor area and with their total opening area equaling at least 4% of the room's floor area.
- All windows require a permanent California Energy Commission Certifications label.
- Bay windows and similar assemblies require the manufacturer's listed installation instructions for permit issuance (UL, ICC, or equivalent).



Minimum Width and Height Requirements for 5.7 Sq. Ft. Emergency and Rescue Windows (Inches)														
Width	20.0	20.5	21.5	22.0	22.5	23.0	23.5	24.0	24.5	25.0	25.5	26.0	26.5	27.0
Height	41.1	40.0	38.2	37.3	36.5	35.7	34.9	34.2	33.5	32.8	32.2	31.6	31.0	30.4
Width	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0
Height	29.9	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