

Oregon
Interpretive Ruling No. 92-21
EMERGENCY EGRESS AND HUMAN IMPACT REQUIREMENTS
WHEN REPLACING EXISTING GLASS
(revised 7-1-99, editorial only)

Requested By: Walter Friday, Code Engineer, BCA
June 12, 1991

REQUEST FOR RULING

An interpretative ruling related to emergency egress and human impact code requirements when existing glass is replaced.

CODE SECTIONS

111.1 Permit Required: A permit shall be obtained before beginning construction, or repairs, other than ordinary repairs, using application forms furnished by the building official. Ordinary repairs are nonstructural repairs and do not include addition to, alteration of, or replacement or relocation of water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electrical wiring, or mechanical or other work for which a permit is required by the building official.

Exceptions:

1. Structural. *Items, designated as follows, in or appurtenant to one-family dwellings* and which do not encroach over subsurface disposal systems or into required yards *are exempt from permits and fees in this code:*

- 1.1 Retrofitted insulation;
- 1.2 Concrete slabs;
- 1.3 Driveways and sidewalks;
- 1.4 Masonry repair;
- 1.5 Porches and decks, where the floor or deck is not more than 30 inches (762mm) above grade and where the edge of the porch, deck or floor does not come closer than 3 feet (914mm) to property lines;
- 1.6 Patio covers, not over 120 square feet (11m²) in area;
- 1.7 Painting,
- 1.8 Interior wall, floor or ceiling covering;
- 1.9 Nonbearing partitions, except when such partitions create habitable rooms;
- 1.10 Shelving and cabinet work;
- 1.11 Gutters and down-spouts;
- 1.12 Nonhabitable small accessory buildings not over 120 square feet (11m²) or a height of 10 feet (3048mm) measured to the highest point;
- 1.13 Door and *window replacements (where no structural member is changed);*
- 1.14 Replacement or repair of siding not required to be fire resistant;
- 1.15 Reroofing, except in wildfire hazard zones as provided in Section 325 or here replacement or repair of roofing does not exceed 30 percent of the required live load design capacity and is not required to be fire resistant;
- 1.16 Plastic glazed storm windows;
- 1.17 Except for barriers around swimming pools as required in Appendix D, fences not over 6 feet (1829mm) high; and
- 1.18 Retaining walls which are not over 4 feet (1219mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a charge.

(ORS 455.310).

2. Electrical. To replace light bulbs, florescent tubes or approved fuses, or to connect approved portable electrical equipment to permanently installed and properly wired receptacles.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. (Emphasis added)

and;

117.1 Continuation of existing use. Buildings and structures in existence at the time of the adoption of this code may have their existing use continued if such use was legal at the time of the adoption of this code, provided such continued use is not dangerous to life.

and;

117.3 Installation of glass. The installation or replacement of glass shall be made as required for new construction for hazardous locations (see Section 308.4).

and;

308.3 Human impact loads: Individual glazed areas in hazardous locations such as those indicated in Section 308.4 shall pass the test requirements of CPSC 16-CPR, Part 1201.

Exceptions

1. Polished wire glass for use in fire doors, fire windows and view panels in 1-hour fire-resistive walls shall comply with ANSI Z97.1.
2. The unbacked specimens of plastic materials shall be exposed in Arizona and Florida to 45 degrees facing south for three years. Approved plastic materials shall be acceptable if the impact strength is not reduced by more than 25 percent during exposure where tested in accordance with Section 1201.4(c)(2)(ii) of the CPSC standard, referenced in this section. Some discoloration is permissible, but defects other than this discoloration shall not be permissible. No bubbles or other noticeable decomposition shall be permissible in the irradiated portion.

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

1. Glazing in ingress and means of egress doors except jalousies.
2. Glazing in fixed and sliding panels of sliding (patio) door assemblies and panels in swinging doors.
3. Glazing in storm doors.
4. Glazing in all unframed swinging doors.
5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom edge of the glazing is less than 60 inches (1524mm) above the drain inlet.
6. Glazing, in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within 24 inches (610mm) arc of the door in a closed position and whose bottom edge is less than 60 inches (1524mm) above the floor or walking surface.
7. Glazing in an individual fixed or operable panel, other than those locations described in Items 5 and 6 above, that meets all of the following conditions:
 - 7.1 Exposed area of an individual pane greater than 9 square feet (0.836m²).
 - 7.2 Bottom edge less than 18 inches (457mm) above the floor.
 - 7.3 Top edge greater than 36 inches above the floor.
 - 7.4 One or more walking surfaces within 36 inches (914mm) horizontally of the glazing.
8. All glazing etc.

and;

310.2 Emergency egress openings: Every sleeping room shall have a least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside to a full clear opening without the use of a key or tools. Where windows are provided as a means of egress or rescue they shall have a sill height of not more than 44 inches (1118mm) above the floor.

310.2.1 Minimum size. All egress or rescue windows from sleeping rooms must have a minimum net clear opening of 5.7 square feet (0.530m²). The minimum net clear opening height shall be 22 inches (559mm). The minimum net clear opening width shall be 20 inches (508mm).

Exception: Grade floor window may have a minimum net clear opening of 5 square feet (320m²).

BACKGROUND

In The Dalles area there is a dispute between a glass shop and the Public Utility District (PUD) concerning necessary revisions to windows when they are replaced with more energy efficient models. The issue is over the need to make windows in the bedrooms larger to comply with today's emergency egress requirements. The PUD feels their only obligation is to improve the energy efficiency. The glass shop feels that they have a responsibility to bring the glazing to code including: human impact, emergency egress and energy efficiency requirements.

BOARD FINDINGS

- Section 111.1 does not require permits or inspections under certain conditions, in existing buildings, under the One and Two Family Dwelling Specialty Code.
- Section 117.1 allows structures in existence at the time of the adoption of the code to have their existing use continued if such use was legal at the time of the adoption of this code, provided such continued use is not dangerous to life.
- Section 111.1, Exception 1.13, waives permits and inspections only when the window is replaced-in-kind. If structural work is required to alter the opening, it requires permits and inspection and compliance with new construction requirements. If the glazing is in a hazardous location, as specified in Section 308.4, and no structural work is required, permits are not required, but the window must meet the requirements in Section 308.4. Installation or replacement of glazing in hazardous locations is regulated in Section 117.3, and the Federal Consumer Product Safety Commission (CPSC) regulations.

DISCUSSION AND CONCLUSION:

Except for the Exception in Section 111.1 and the requirements in Section 117, the Dwelling Code has no provisions on how to handle existing buildings.

Section 117 allows structures in existence at the time of the adoption of the code to have their existing use continued if such use was legal at the time of the adoption of this code, provided such continued use is not dangerous to life and the installation or replacement of glass is installed as required for new construction for hazardous locations.

1. Any noncomplying glazing which is replaced must be made to comply with the human impact provisions of the code. If the glazing is in a human impact zone it must be replaced with safety glazing.
2. If a window in a bedroom, which does not comply with the emergency egress provisions, is being replaced with a more energy efficient window which:
 - 1) has the same frame opening dimensions and same emergency egress opening as the old window, it may legally be replaced.
 - 2) has the same frame opening dimensions, but a smaller emergency egress opening than the old window, it may not be replaced without bringing the egress opening up to the current emergency egress opening requirements.
 - 3) has a larger frame opening than the old window, it shall be replaced with a window complying with the current emergency egress opening requirements.

Question	Human Impact Zone?	Framed Opening Complies?	Emergency Exit Opening (framed opening)	Answer
When new windows are installed in an existing home, for the purpose of energy efficiency, do the existing bedroom windows need to meet all of the code requirements for emergency egress and human impact?	Yes	No	Made smaller	Safety glazing must be installed and a window must be selected which is equal to existing or the emergency egress opening made to comply with Section 310.2.1.
	Yes	No	Remains the same	Safety glazing must be installed, but the opening may remain the same.
	Yes	No	Is made larger	Safety glazing must be installed and the emergency egress opening made to comply with Section 310.2.1.
	No	No	Made smaller	No safety glazing required, but another window must be selected with equal or larger emergency exit egress opening.
	No	No	Remains the same	No safety glazing required and the opening may remain the same.
	No	No	Is made larger	No safety glazing required, but shall comply with Section 310.2.1.
	Yes	Yes	Made smaller	Safety glazing must be installed and a nother window must be selected with code complying emergency egress opening.
	Yes	Yes	Remains the same	Safety glazing must be installed and a window must be selected with code complying emergency exit opening.
	Yes	Yes	Is made larger	Safety glazing must be installed and a window must be selected with code complying emergency exit opening.
	No	Yes	Made smaller	No safety glazing required and a window must be selected with code complying emergency exit opening.
	No	Yes	Remains the same	No safety glazing required and a window must be selected with code complying emergency exit opening.
	No	Yes	Is made larger	No safety glazing required and a window must be selected with code complying emergency exit opening.

(signed July 23, 1992)

John Talbott, Chairman
Structural Code Advisory Board

_____ Date

The recommendations and findings of the Structural Code Advisory Board are accepted and the interpretation is accepted.

(signed July 31, 1992)

Gary J. Wicks, Administrator
Building Codes Agency

_____ Date