

Oregon
Interpretive Ruling No. 94-28
INSULATION REQUIREMENTS FOR SINGLE-FAMILY DWELLING
WEATHERIZATION AND REMODEL PROJECTS

Requested By: ALAN SEYMOUR, ENERGY COORDINATOR
BUILDING CODES DIVISION

QUESTIONS

1. What are acceptable insulation requirements for weatherization projects (no permit required), to single-family dwellings?
2. What are acceptable insulation requirements for remodel projects where no permit is required, to single-family dwellings?

APPLICABLE CODE SECTIONS

Energy Conservation, One and Two Family Dwelling Speciality Code and Oregon Structural Specialty Code Chapter 53, Energy Conservation — Section 5303 (c), Construction Means and Methods

BACKGROUND

Section R-105.2 Additions, Alterations and Repairs: Additions, alterations and repairs (excluding ordinary repairs) may be made to any building or structure without requiring the existing building or structure to comply with all the requirements of this code, provided the additions, alterations and repairs (excluding ordinary repairs) conforms to that required for a new building or structure. . . .

Section R-110.1 Permit Required: . . .

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: retrofitted insulation; . . . door and window replacements (where no structural member is changed); . . .

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.

Section 105.2 implies that alteration (remodel) must comply with the requirements of the code. The residential requirements contained in Chapter 53 were crafted and are cost-effective for new construction. There are inherent limitations presented with remodeling when new construction requirements are applied. Remodeling is alteration to an existing residence and does not include any work regarding an addition.

A permit is not required for most weatherization and some remodeling work performed on a single-family dwelling. Work completed without a permit must comply with the requirements in the code.

FINDINGS

The minimum component requirements as specified in footnote 3 of Table 53-O are reasonable, allowable levels given favorable conditions for existing buildings.

There may be built-in limitations in existing building spaces to be insulated. Existing attic spaces may not have adequate room to install R-38 insulation. Wall cavities may be smaller than 3¹/₂ inches thick. Vaulted ceilings may be constructed with 2 x 6's or smaller rafters. It may not be practical to install the minimum levels in all cases.

DISCUSSION AND CONCLUSION

The answer is the same for both questions asked. Insulation requirements for weatherization and remodel work that does not require a permit shall be those specified in footnote 3 of Table 53-O, to the maximum

extent practicable. Where existing conditions are limited, such as 2 x 4 floor joists, those limitations may dictate the amount of insulation that can be installed. R-15 can be installed in 2 x 4 floor joists, not R-21 as specified in footnote 3.

The requirements only apply to work being done. For example: when one window is replaced it shall comply with the requirements, not all the windows. When wall cavities are exposed, those shall be insulated.

See Interpretive Ruling No. 92-21 for emergency egress and human impact requirements for glazing replacements.

Footnote 3 of Table 53-O is reproduced here for reference:

³MINIMUM COMPONENT REQUIREMENTS: Walls R-15; Floors R-21; Flat Ceilings R-38; Vaults R-21; Basement Walls R-21; Slab Edge R-10; Duct Insulation R-8. R-values used in this table are nominal, for the insulation only and not for the entire assembly. Window and skylight U-values shall not exceed 0.65 (CL65). Door U-values shall not exceed 0.54 (Nominal R-2). The wall component for Path 9 shall be a minimum solid log or timber wall thickness of 3.5 inches.

(signed November 2, 1994)
John A. Talbott, P.E., Chair
Building Codes Structures Board

Date

The recommendations and findings of the Building Codes Structures Board are accepted and the conclusions are adopted.

(signed January 20, 1995)
Michele J. Patterson, Acting Administrator
Building Codes Division

Date