

## CHAPTER 3

# CLIMATE ZONES

### SECTION 301 CLIMATE ZONES

**301.1 General.** Climate zones from Figure 301.1 or Table 301.1 shall be used in determining the applicable requirements from Chapters 4 and 5.

**TABLE 301.1  
CLIMATE ZONES, MOISTURE REGIMES,  
AND WARM-HUMID DESIGNATIONS BY COUNTY**

OREGON	
Climate Zone 4C	Climate Zone 5B
Benton	Baker
Clackamas	Crook
Clatsop	Deschutes
Columbia	Gilliam
Coos	Grant
Curry	Harney
Douglas	Hood River
Jackson	Jefferson
Josephine	Klamath
Lane	Lake
Lincoln	Malheur
Linn	Morrow
Marion	Sherman
Multnomah	Umatilla
Polk	Union
Tillamook	Wallowa
Washington	Wasco
Yamhill	Wheeler

> Key: B - Dry, C - Marine.

### SECTION 302 DESIGN CONDITIONS

**302.1 Interior design conditions.** The interior design temperatures used for heating and cooling load calculations shall be a maximum of 72°F (22°C) for heating and minimum of 75°F (24°C) for cooling.

### SECTION 303 MATERIALS, SYSTEMS AND EQUIPMENT

**303.1 Identification.** Materials, systems and equipment shall be identified in a manner that will allow a determination of compliance with the applicable provisions of this code.

**303.1.1 Building thermal envelope insulation.** An R-value identification mark shall be applied by the manufacturer to each piece of *building thermal envelope* insulation 12 inches (305 mm) or greater in width. Alternately, the insulation installers shall provide a certification listing the type, manufacturer and R-value of insulation installed in

each element of the *building thermal envelope*. For blown or sprayed insulation (fiberglass and cellulose), the initial installed thickness, settled thickness, settled R-value, installed density, coverage area and number of bags installed shall be *listed* on the certification. For sprayed polyurethane foam (SPF) insulation, the installed thickness of the areas covered and R-value of installed thickness shall be *listed* on the certification. The insulation installer shall sign, date and post the certification in a conspicuous location on the job site.

**303.1.1.1 Blown or sprayed roof/ceiling insulation.**

The thickness of blown-in or sprayed roof/ceiling insulation (fiberglass or cellulose) shall be written in inches (mm) on markers that are installed at least one for every 300 square feet (28 m<sup>2</sup>) throughout the attic space. The markers shall be affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers a minimum of 1 inch (25 mm) in height. Each marker shall face the attic access opening. Spray polyurethane foam thickness and installed R-value shall be *listed* on certification provided by the insulation installer.

**303.1.2 Insulation mark installation.** Insulating materials shall be installed such that the manufacturer's R-value mark is readily observable upon inspection.

**303.1.3 Fenestration product rating.** U-factors of fenestration products (windows, doors and skylights) shall be determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer or be determined using the commercial size category values listed in Chapter 15 of the 2009 ASHRAE *Handbook of Fundamentals*, Table No.4 and shall include the effects of the window frame. The solar heat gain coefficient (SHGC) of glazed fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer or be determined using the Solar Heat Gain Coefficients (SHGC) in Chapter 15 of the 2009 ASHRAE *Handbook of Fundamentals*, Table No.10. The overall values shall consider type of frame material and operator for the SHGC at normal incidence.

**303.1.3.1 Certification and labeling.** Windows shall be certified and labeled in accordance with Section 303.1.3. Windows shall have a temporary label not to be removed prior to inspection.

**Exception:** Site-built windows shall have a single certificate specifying glazing type, special coatings, spacers, gas fills, center-of-glass and overall U-factor, and center-of-glass SHGC for every type of site built glass used. These certificates shall be maintained on the job site and made available to the inspector.

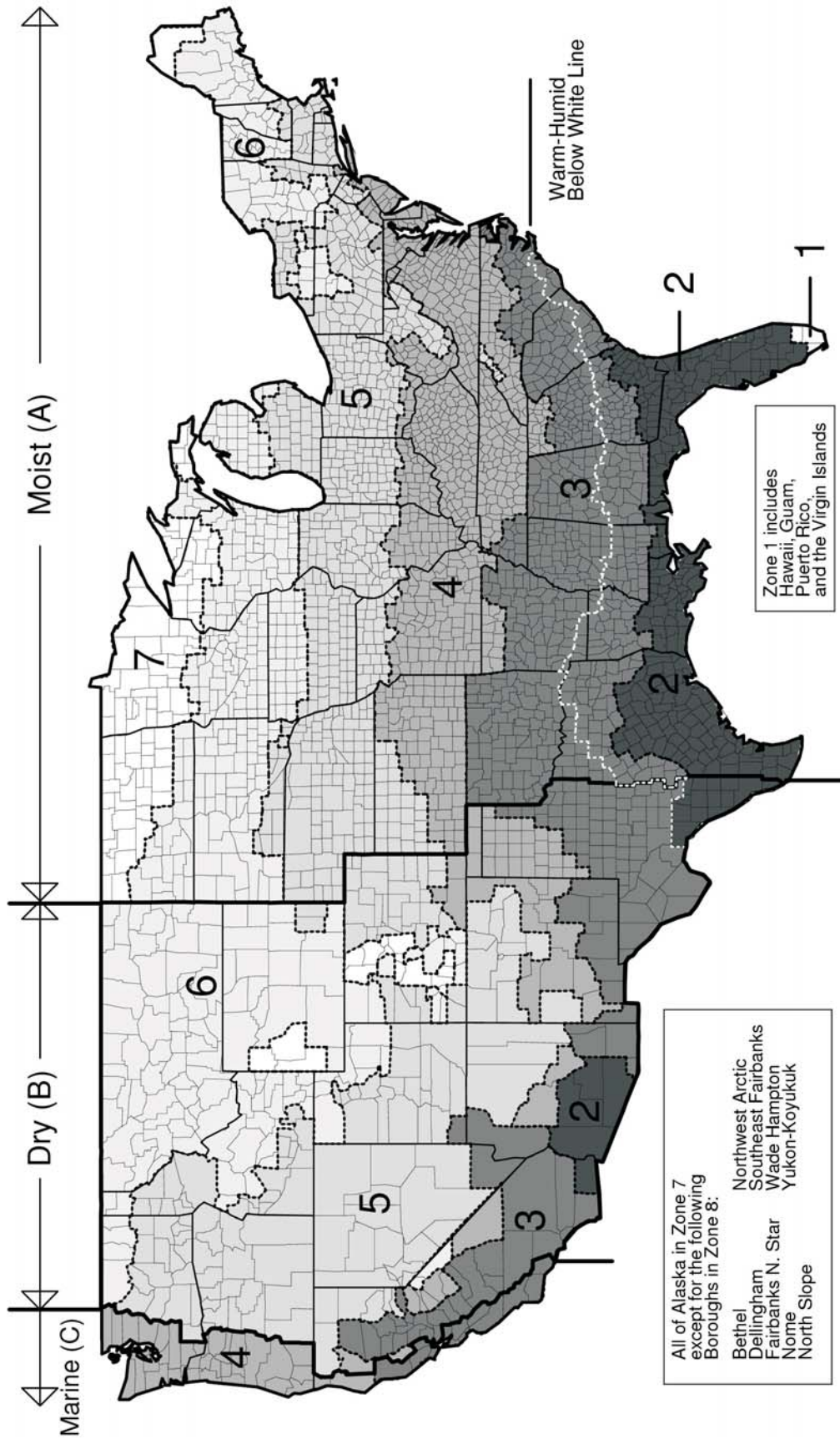


FIGURE 301.1  
CLIMATE ZONES

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**303.1.4 Insulation product rating.** The thermal resistance (R-value) of insulation shall be determined in accordance with the U.S. Federal Trade Commission R-value rule (CFR Title 16, Part 460, May 31, 2005) in units of  $h \times ft^2 \times ^\circ F/Btu$  at a mean temperature of 75°F (24°C).

**303.2 Installation.** All materials, systems and equipment shall be installed in accordance with the manufacturer's installation instructions and the *Building Code*.

**303.2.1 Protection of exposed foundation insulation.**

Insulation applied to the exterior of basement walls, crawl-space walls and the perimeter of slab-on-grade floors shall have a rigid, opaque and weather-resistant protective covering to prevent the degradation of the insulation's thermal performance. The protective covering shall cover the exposed exterior insulation and extend a minimum of 6 inches (153 mm) below grade.

**303.3 Maintenance information.** Maintenance instructions shall be furnished for equipment and systems that require preventive maintenance. Required regular maintenance actions shall be clearly stated and incorporated on a readily accessible label. The label shall include the title or publication number for the operation and maintenance manual for that particular model and type of product.

