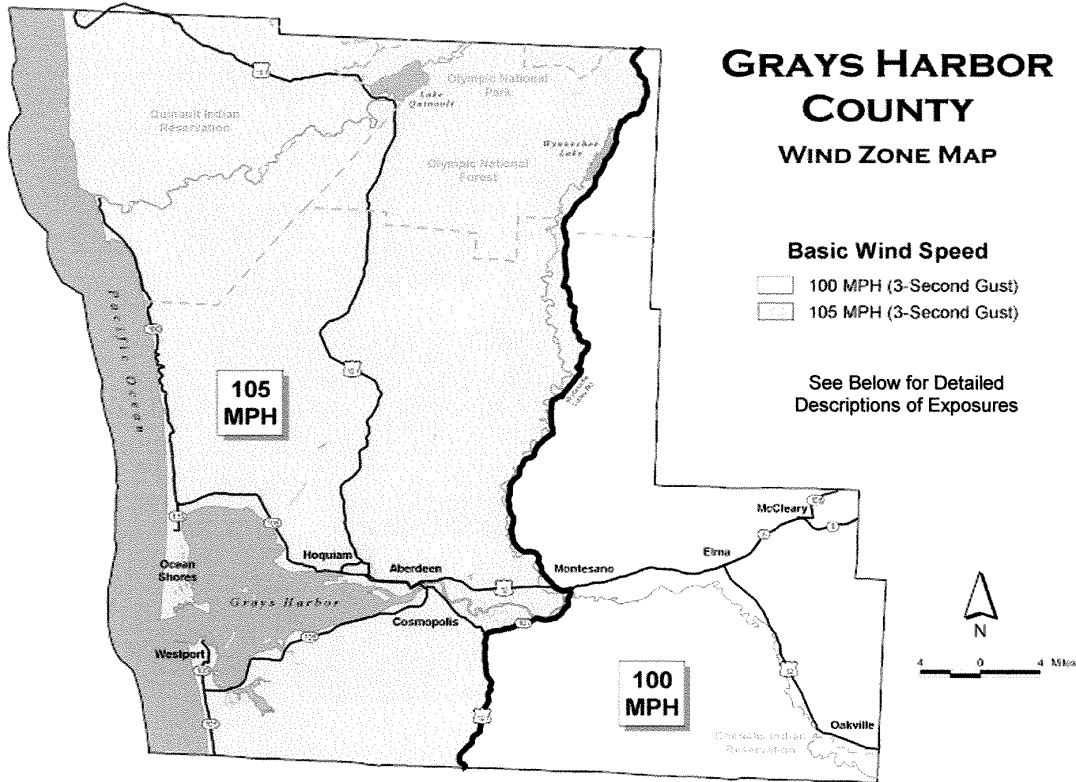


WIND ZONE MAP



**BASIC WINDSPEED.** Three-second gust speed at 33 feet (10,058 mm) above the ground in Exposure C.

**1609.4 Exposure Category.**

For each wind direction considered, an exposure category that adequately reflects the characteristics of ground surface irregularities shall be determined for the site at which the building or structure is to be constructed. Account shall be taken of variations in ground surface roughness that arise from natural topography and vegetation as well as from constructed features.

**1609.4.1 Wind directions and sectors.** For each selected wind direction at which the wind loads are to be evaluated, the exposure of the building or structure shall be determined for the two upwind sectors extending 45 degrees (0.79 rad) either side of the selected wind direction. The exposures in these two sectors shall be determined in accordance with Sections 1609.4.2 and 1609.4.3 and the exposure resulting in the highest wind loads shall be used to represent winds from that direction.

**1609.4.2 Surface roughness categories.** A ground surface roughness within each 45-degree (0.79 rad) sector shall be determined for a distance upwind of the site as defined in Section 1609.4.3 from the categories defined below, for the purpose of assigning an exposure category as defined in Section 1609.4.3.

**Surface Roughness B.** Urban and suburban areas, wooded areas or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger.

**Surface Roughness C.** Open terrain with scattered obstructions having

heights generally less than 30 feet (9144 mm). This category includes flat open country, grasslands and all water surfaces in hurricane-prone regions.

**Surface Roughness D.** Flat, unobstructed areas and water surfaces outside hurricane-prone regions. This category includes smooth mud flats, salt flats and unbroken ice.

**1609.4.3 Exposure categories.** An exposure category shall be determined in accordance with the following:

**Exposure B.** Exposure B shall apply where the ground surface roughness condition, as defined by Surface Roughness B, prevails in the upwind direction for a distance of at least 2,600 feet (792 m) or 20 times the height of the building, whichever is greater.

**Exception:** For buildings whose mean roof height is less than or equal to 30 feet (9144 mm), the upwind distance is permitted to be reduced to 1,500 feet (457 m).

**Exposure C.** Exposure C shall apply for all cases where Exposures B or D do not apply.

**Exposure D.** Exposure D shall apply where the ground surface roughness, as defined by Surface Roughness D, prevails in the upwind direction for a distance of at least 5,000 feet (1524 m) or 20 times the height of the building, whichever is greater. Exposure D shall extend inland from the shoreline for a distance of 600 feet (183 m) or 20 times the height of the building, whichever is greater.

# SEISMIC ZONE MAP

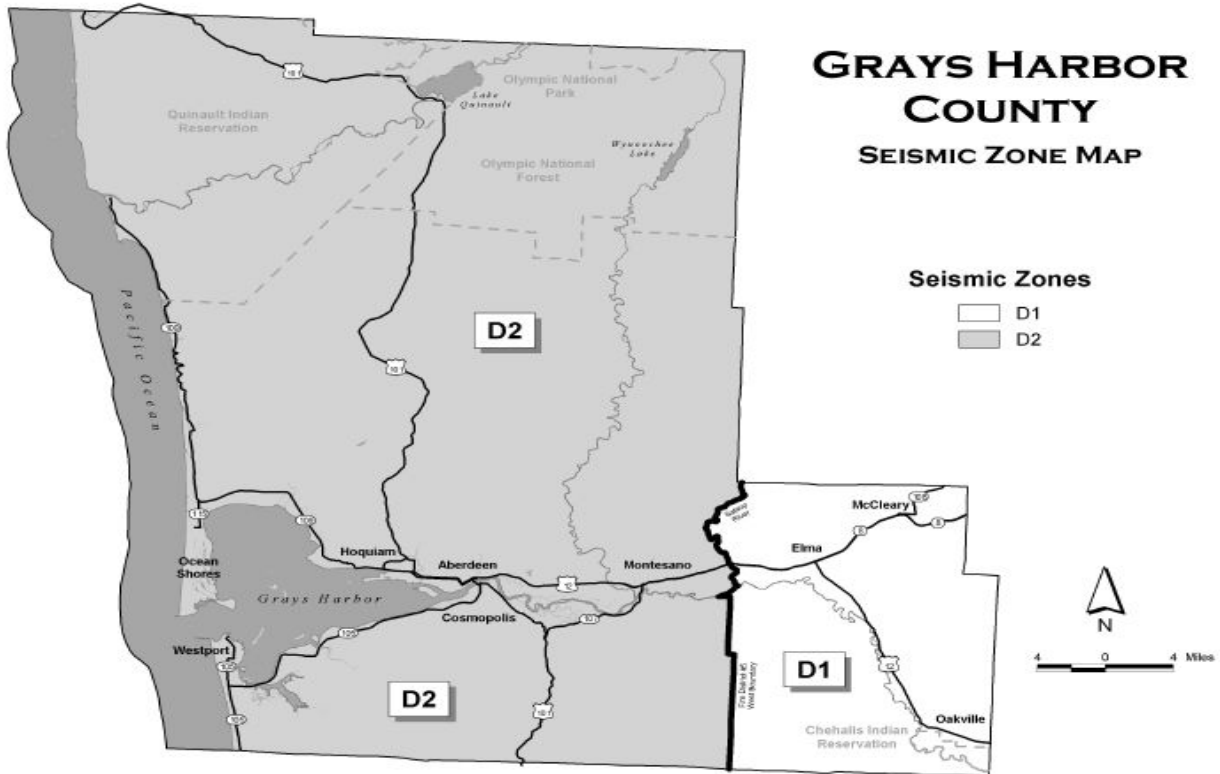


TABLE R301.2(1)  
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED <sup>d</sup> (mph)	SEISMIC DESIGN CATEGORY <sup>f</sup>	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP <sup>e</sup>	ICE BARRIER UNDERLAYMENT REQUIRED <sup>h</sup>	FLOOD HAZARDS <sup>g</sup>	AIR FREEZING INDEX <sup>i</sup>	MEAN ANNUAL TEMP <sup>j</sup>
			Weathering <sup>a</sup>	Frost line depth <sup>b</sup>	Termite <sup>c</sup>					
25 psf	100/105	D1/D2	Moderate	12"	Slight/Moderate	24°	NO	8/17/81 9/29/86	250	50°

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e. "negligible", "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2 (3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- The frost line depth may require deeper footings than indicated in Figure R403.1 (1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2 (4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- The outdoor design dry-bulb temperature shall be selected from the columns of 97½-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.
- The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- The jurisdiction shall fill in this part of the table with; (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas). (b) the date(s) of the currently effective FIRM and FBFM, or other flood hazard map adopted by the community, as may be amended.
- In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES". Otherwise, the jurisdiction shall fill in this part of the table with "NO".
- The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3 (2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index - USA Method (Base 32° Fahrenheit)" at [www.ncdc.noaa.gov/fpsf.html](http://www.ncdc.noaa.gov/fpsf.html).
- The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at [www.ncdc.noaa.gov/fpsf.html](http://www.ncdc.noaa.gov/fpsf.html)

**Grays Harbor County**  
**Planning & Building Division**  
 Public Services Department  
 100 W Broadway Suite 31  
 Montesano, WA 98563  
 360-249-5579  
 360-249-3203 (fax)  
[pbd@co.grays-harbor.wa.us](mailto:pbd@co.grays-harbor.wa.us)  
[www.co.grays-harbor.wa.us](http://www.co.grays-harbor.wa.us)

