



Code Amendment Proposal Application **OSSC 22-10**

Department of Consumer & Business Services
Building Codes Division
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APPLICANT INFORMATION

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PROPOSAL INFORMATION

Specialty code:	Oregon Structural Specialty Code (OSSC)
Code section(s):	1609.4

Briefly explain the subject of your proposal:	This proposal removes redundant language between ASCE 7 and the model code in the structural requirements for wind loads.
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Code Review Committee Outcomes

Nov. 9, 2021 – Approved.



STRUCTURAL ENGINEERS ASSOCIATION OF OREGON

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PART I – CODE AMENDMENT LANGUAGE

You must provide exact language for your code proposal. Failure to provide language will invalidate the application. Include all code sections that require changes and use the following format to show additions and deletions from the code — strikethrough for deleted text and underline and bold for new text.

Note: Where applicable, the proposed code language should show how the existing Oregon amendments will integrate with the base model code or if the proposal is rescinding an existing Oregon amendment. Any modification to the new model code should note or reflect any current Oregon amendments related to this language.

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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 the 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

1609.4.2 Surface Roughness categories

A ground surface roughness ~~shall be established in accordance with ASCE 7~~ within each 45-degree (0.79 rad) sector shall be determine for a distance upwind of the site as defined in Section 1609.4.3 from the following categories, for the purpose of assigning and 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 obstruction having the size of single-family dwellings or larger.~~

Surface Roughness C: ~~Open terrain with scattered obstruction having heights generally less than 30feet (9144 mm). This category includes flat open country and grasslands.~~

Surface Roughness D: ~~Flat, unobstructed areas and water surfaces. 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 [ASCE 7](#) the following:

Exposure B: For buildings with a mean roof height of less than 30ft (9144 mm), Exposure B shall apply where the ground surface roughness, as defined by Surface Roughness B, Prevails in the upwind direction for a distance not less than 1,500 feet (457m). For buildings with a mean roof height greater than 30feet (9144 mm), exposure B shall apply where Surface Roughness B prevails in the upwind direction for a distance of not less than 2,600ft (792 m) or 20 times the height of the building.

Exposure C: Exposure C shall apply for all cases where Exposure B or D does 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 not less than 5,000 feet (1524m) or 20 times the height of the building, whichever is greater. Exposure D shall apply where the ground surface roughness immediately upwind of the site is B or C, and within a distance of 600 feet (183 m) or 20 times the building height, whichever is greater, from and exposure D condition as defined in the previous sentence.

PART II – CODE AMENDMENT PROPOSAL REQUIREMENTS

Generally, proposals should only suggest amending the technical and scientific matters within the scope of the specialty code. Administrative matters are adopted and amended to align with statutes and rules governing the state building code.

Those administrative matters not regulated by a specialty code, include, but are not limited to:

- Licensing or certification requirements, or other qualifications and standards for businesses or workers;
 - Structure or equipment maintenance requirements;
 - Matters that conflict with federal or state law; and,
 - Matters that conflict with other specialty codes or publications adopted by the division.
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- Review the statutes and rules governing the state building code and ensure that your proposal is enforceable by the specialty code for which you are proposing an amendment.**

PART III – CODE AMENDMENT PROPOSAL CRITERIA

Code amendment proposals must conform to the requirements in ORS 455.020, ORS 455.030, ORS 455.110, and OAR 918-008-0060. All proposals must provide justification and the particular circumstances requiring the amendments. View the proposal criteria on page 3 of this application.

Code Amendment Proposal Criteria

Proposal

1. Describe the concept and purpose of this proposal.

This proposal carries forward the concept of a similar proposal in the 2019 OSSC to take the ASCE 7/IBC wind maps and set a wind speed by county. The 12 figures of the IBC are replaced by a table of wind speed by county with a figure of Oregon provided to determine special wind zones.

2. What problem in the existing Oregon code or national model code is this proposal solving? How does this amendment address the issue? If you have evidence demonstrating the problem, submit that information.
 - a) If this proposal corrects any unforeseen or probable outcomes resulting from the application of a code section, explain how.
 - b) If this proposal corrects inadequate application by a code section to a method, material or design, explain how.
 - c) If this proposal eliminates conflicting, obsolete, or duplicative code provisions or standards between Oregon-adopted codes, statutes or regulations, explain why.
 - d) If this proposal is for a fire or life safety matter, or is it otherwise needed to protect the health, safety, welfare, comfort and security of occupants and the public, explain why.
 - e) If this proposal is necessary to address unique geographic or climatic conditions within Oregon, explain why.
 - f) If there are alternatives to this proposal that solve the problem, explain why this proposal is the best or a necessary solution.
 - g) If this proposal provides for the use of unique or emerging technologies, or promotes advances in construction methods, devices, materials and techniques, explain how.
 - h) If this proposal meets any energy conservation or indoor air quality requirements, explain how.
 - i) If this proposal involves the adoption of an electrical or plumbing building product, note if the appropriate advisory board approved the product.

This code amendment cleans up unnecessary duplicate language between the IBC and ASCE 7. The IBC copies ASCE 7 sections 26.7.2 and 26.7.3 word for word. This requires the designer to go back and forth between the two documents for no reason which could cause errors. In addition this copied language adds to the length of the model code for no reason.

3. Has this been proposed at the national model code level. If so, explain when it was proposed, what happened, and why it was not adopted. Provide all associated national model code hearing information and background.

Not at this time, however it will be proposed for the 2024 cycle.

Implementation And Fiscal Impact

1. Explain how the proposed provisions would be enforced? Are additional inspections or permits required? Describe any necessary equipment, training, tests or special certifications.

This is enforced by the plans examiner checking the design wind speed. No additional inspections, equipment or training is required.

2. What is the fiscal impact of this proposal? Provide a cost benefit analysis and include the resources or methods you used to determine the fiscal impact.
 - a) If this proposal adds to the cost of construction, explain how the added cost contributes to the health and safety of occupants, or is necessary to conserve scarce resources.
 - b) If there are any other adverse fiscal impacts or cost savings passed on to the general public, the construction industry, local and state governments, and small businesses, an interested person must describe the added or reduced cost of a proposed code amendment, and describe the adverse fiscal impact or cost savings in relation to the current Oregon specialty code.
 - c) If this proposal will affect the cost of development of a detached single-family dwelling, please indicate the cost. For the purposes of illustrating the change on the cost, please use a 6,000-square-foot parcel and the construction of a 1,200-square-foot detached single-family dwelling on that parcel. The information on the cost must be sufficient to assist the division in preparing a housing cost impact statement.

No technical change, this proposals is solely to clean up duplicate language. There is no technical change to the code requirements.

Impacted Stakeholders And Other Specialty Codes

1. It is important that proposals be shared with stakeholders that will be impacted by them. Was this proposal developed with people or organizations likely to be affected by it? Has it been reviewed or shared with people or organizations likely to be affected by it? If so, who, and if not, why not?

This proposal was developed by the Structural Engineers of Oregon

2. Does this proposal impact other specialty codes or statewide programs?

No