

**Report From Agency**

**STATE OF WISCONSIN  
DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES**

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**IN THE MATTER OF RULEMAKING :  
PROCEEDINGS BEFORE THE : REPORT TO THE LEGISLATURE  
DEPARTMENT OF SAFETY AND : CLEARINGHOUSE RULE 14-015  
PROFESSIONAL SERVICES :**

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**I. THE PROPOSED RULE:**

The proposed rule revisions and the analysis are attached.

**II. REFERENCE TO APPLICABLE FORMS:**

These rule revisions would not require use of any new or revised forms.

**III. FISCAL ESTIMATE AND EIA:**

The Fiscal Estimate and EIA is attached.

**IV. DETAILED STATEMENT EXPLAINING THE BASIS AND PURPOSE OF THE PROPOSED RULE, INCLUDING HOW THE PROPOSED RULE ADVANCES RELEVANT STATUTORY GOALS OR PURPOSES:**

These rule revisions would clarify and simplify the prescriptive methods in chapter SPS 321 for designing wall bracing for one- and two-family homes to adequately withstand wind loads. Some building designers, homebuilders, and regulatory officials performing permitting, plan review, and inspections find the current rules for this wall bracing are too difficult to understand and apply, which results in unnecessary costs and delays in home building. These revisions would advance the goal under section 101.63 (1) (intro.) of the Statutes of establishing standards for the construction of one- and two-family homes, that take into account the costs of specific code provisions to home buyers in relationship to the benefits derived from the provisions.

**V. SUMMARY OF PUBLIC COMMENTS AND THE DEPARTMENT'S RESPONSES, AND EXPLANATION OF ANY RESULTING MODIFICATIONS TO THE PROPOSED RULES:**

The Department held a public hearing on March 11, 2014. The following people either testified at the hearing, submitted written comments, or did both:

Brad Boyks, representing the Wisconsin Builders Association.

Mike Coello, chairman of the Dwelling Code Council, and representing building-material suppliers.

Fred Dahlke, representing himself, as a building inspector.

Steve Gryboski, representing Gryboski Builders.  
Wendell E. Horst, representing himself, as a building contractor.  
Jesse Jerabek, representing Braun Building Center.  
Tom Kositzky, representing APA-The Engineered Wood Association.  
Mark Marthaler, representing building contractors.  
Richard Paur, P.E., representing the Wisconsin Code Officials Alliance.  
Mary Schroeder, representing building contractors.  
Chris Schuette, representing Wisconsin Building Supply.

## **SUMMARY OF HEARING COMMENTS:**

The Department summarizes the comments received either by hearing testimony or by written submission as follows:

1. All but one of the representatives of building contractors and material suppliers were in favor of the proposed rules, stating that the improved clarity and increased simplicity will reduce costs by making it easier for all parties to better accomplish their roles in this aspect of homebuilding. For example, these rules will improve the clarity for concrete contractors, for providing the foundation-embedment components that the wall bracing is anchored to. Because the rules will be easier to understand, without sacrificing structural adequacy, compliance will increase, which will result in better homes. Although the rules are still not as simple as they were several years ago, those rules did not give enough guidance or structure. These rules are a well-balanced compromise that should reduce the need for engineering input.
2. The representative of the Wisconsin Builders Association reported that a survey of their members readily identified the wall bracing requirements as needing the most improvement in the Uniform Dwelling Code. The revisions the Association then advanced were vetted thoroughly by the members – and were then accepted unanimously by the Uniform Dwelling Code Council, after further refinement through the Council's input.
3. One building contractor preferred to continue using the current rules because of already understanding them, being able to get answers if questions arises – and finding the new rules complicated, hard to understand, contradictory, and requiring more engineering input, which will increase costs and result in fewer new homes being built.
4. One building inspector preferred to give builders an option of continuing to use the current rules while transitioning to the new rules, and felt the new rules may be more difficult and costly to comply with than the current rules.
5. One building designer felt that although the rule changes are going in the right direction, the increased simplicity reduces the available options and provides less detail, such as for custom designs. Training opportunities would be helpful.
6. The representative of the Wisconsin Code Officials Alliance recommended not deleting the general design requirements, for all types of walls, in section SPS 321.23, which are similar to the general design requirements in other code sections for other major building elements, such as foundations, floors, and roofs. He also recommended not expanding the prescriptive method for increasing stud-wall heights from 10 to 12 feet, in SPS Table 321.25–A, unless

additional criteria are included to ensure the taller walls will adequately resist all dead loads and live loads, including snow loads – such as by limiting the tributary floor areas, the allowable bending stresses in the wood, the allowable grades and species of wood, and the deflection that is allowable for both brittle and non-brittle finish materials. The two building designers agreed with this recommendation.

7. The representative of APA-The Engineered Wood Association stated the new portal-frame bracing method would permit use of the narrowest wall bracing method without critical structural requirements such as a specified hold-down bracket or, in the case of continuous sheathed walls, requiring that the rest of the wall be sheathed with structural sheathing, including above and below openings. Portal frames used for intermittent bracing need hold-downs as shown in Figure R602.10.6.2 in the 2012 edition of the International Residential Code® (IRC) – and when used in continuously sheathed walls, need end restraint as shown in IRC figure 602.10.7. The bracing-panel-lengths for portal frames should be in Table 321.25–H rather than in Figure 321.25–A.

He also recommended changing the intermittent-bracing requirements in Table 321.25–I to not allow less than two panels, to not allow use of let-in bracing panels that have no gypsum sheathing on the interior side of the wall, to not allow use of portal-frame panels for intermittent bracing, to clarify footnote g, and to add a footnote explaining the perpendicular sides that are listed in the heading for columns 3 to 5.

He also recommended replacing all the continuous-bracing lengths in Table 321.25–J for top-of-wall-to-ridge heights of 15 to 20 feet, with a footnote having multipliers for those heights, so that the format of this Table would match the format of Table 32.025–I. He also recommended adding a footnote to allow omitting blocking of horizontal panel joints if twice the amount of bracing is provided, and a footnote for allowing additional contributed-length for portal-frame panels – as allowed by the IRC.

## **RESPONSE TO PUBLIC COMMENTS:**

1 and 2. The Department agrees with these comments.

3. The Department believes that use of the new rules will result in preferring them over the current rules. The new rules are a totally different method for providing wall bracing, and are not directly comparable to the current rules. Therefore no rule changes were made in response to this concern.

4. The Department believes that the sooner the new rules are used, the sooner the resulting cost-savings will occur. No rule changes were made in response to this comment.

5. The Department believes that whatever options are no longer available through this simplified prescriptive procedure are still available through the alternative procedure of applying structural analysis – and that what is gained by the simplification more than offsets whatever additional structural analysis may be needed. However, in response to this comment, the Department has expanded SPS Figure 321.25–B to clarify how the simplified procedure applies to buildings with angled sides and angled floor plans. The Department plans on developing and hosting future training events to educate people on how the new rules can be applied.

6. The proposed rules were changed as recommended by these comments.

7. The Department believes the proposed rules would provide an alternate method for resisting wind loads in Wisconsin that is equivalent to the methods recommended in these comments and contained in the IRC. The value in Table 321.25–I that is less than 2 is only used for calculation purposes, and the resulting value is always 2 or greater.

**VI. RESPONSE TO LEGISLATIVE COUNCIL STAFF RECOMMENDATIONS:**

All of the recommendations in the Clearinghouse Report were accepted in whole.

**VII. REPORT FROM THE SBRRB AND FINAL REGULATORY FLEXIBILITY ANALYSIS:**

These rules were not submitted to the Small Business Regulatory Review Board.

These rules will not have an adverse economic impact on small businesses.