

Public Comments Agenda for the IS-HRC First Public Comments Draft Dated November 2006

Item: Barbera 05-101.1

5) Revision to: Section _____ Table _____ Figure _____

6) **COMMENT** Revise as follows (check BOX and state proposed change):

Revise as follows: Add new text as follows Delete and substitute as follows: Delete without Substitution:

Show the proposed NEW or REVISED or DELETED TEXT in legislative format: ~~Line through text to be deleted.~~ Underline text to be added.

101.1 SCOPE

The prescriptive methods presented in this standard provide wind resistant designs and construction details for residential buildings of concrete, masonry, wood-framed, and cold formed steel framed construction sited in high wind regions. Residential buildings that are located in any seismic design category A, B, C, D, E, or F are beyond the scope of these provisions.

Exception: Those residential buildings which comply with ASCE 7-05 Section 11.1.2, Item Nos. 1 or 2.

COMMENT Continued (Attach additional sheets as necessary)

7) **SUPPORTING INFORMATION** (State purpose and reason, and provide substantiation to support proposed change):

During my 20-year employment with the ICBO especially when working with the FEMA in assisting communities after Hurricanes Hugo and Marilyn, I had numerous occasions to observe that very few Southern U.S. state jurisdictions or Puerto Rico and the Virgin Islands had any idea that they needed to comply with seismic provisions including the minimum prescriptive requirements for (the then) seismic zones they were located in. With the national and international scope of the International Codes, it is extremely important to specifically notify the users that even though the potential quakes are not as numerous and evident as the ones in the Western and Midwestern U.S, they can be as devastating since relevant EQ design and detailing provisions are not included in this standard*. Nevertheless, since there are exceptions for certain low-seismic design categories in ASCE 7, those communities should be allowed to use the IS-HRC provisions for one-story masonry and concrete buildings the up to two-story wood-framed and steel-framed buildings.

*[I was also staff lead of the ICBO High Winds and Hurricane Code Development Committee in the late 80's and early '90's and we developed certain one and two-story masonry and concrete buildings which had prescriptive detailing in addition to wind reinforcement. I mentioned this all to Eric Stafford and others before this committee started its work. Such detailing would open the options for many more designs than the ones provided and would provide safer prescriptive buildings in more areas of the high wind states that are also in moderate seismic design categories. Please contact me and the SEAW Wind Engineering Design Committee if we could participate in that effort.]

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Item: Shackelford 01-101.2 through 101.6

5) Revision to: Sections 101.2 thru 101.6 Table _____ Figure _____

6) **COMMENT** Revise as follows (check BOX and state proposed change):

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101.2 LIMITATIONS

101.2.1 The provisions of this standard are directed toward ensuring structural integrity for resisting wind loads. For design and construction requirements outside the scope of this standard, applicable requirements of the *International Residential Code* or *International Building Code* shall prevail. ~~Provisions contained in this standard are based on an enclosed building condition.~~

101.2.2 Provisions contained in this standard are based on an enclosed building condition.

101.2.3 Buildings outside the range of design parameters, design load criteria, and materials and methods of construction set forth in this standard are beyond the scope of this standard

101.3 INTEGRITY OF BUILDING ENVELOPE

Individual elements of a building not in strict compliance with or addressed by this standard may be engineered without requiring engineering for the entire building. Elements which maintain the structural integrity of the building envelope shall comply with Chapter 6. Windows and doors that are not addressed in Chapter 6 shall be designed for and installed to comply with the components and cladding loads of Section 1609 of the *International Building Code*.

101.4 ALTERNATE MATERIALS AND METHODS

It is recognized that a large number of alternatives are available to a designer for providing wind resistance. The provisions given are not intended to prevent the use of such alternate materials or methods permitted by Section 104.11 of the *International Building Code*.

101.5 ITEMS NOT ADDRESSED

Elements and assemblies not specifically addressed by this standard shall be designed and constructed in accordance with the *International Building Code* or *International Residential Code*.

101.6 INSPECTIONS

101.6.1 High Wind Inspections: For construction in high wind regions as established by Figure 104A, inspection of framing and masonry construction shall be made after the roof, masonry, all framing, sheathing fasteners, clips, straps and bracing are in place, but prior to placement of insulation, moisture barrier, or roof or wall covering material.

7) **SUPPORTING INFORMATION** (State purpose and reason, and provide substantiation to support proposed change):

101.2. Move the statement on enclosed building conditions to its own section. It should be a separate section since it is a completely different subject than the rest of 101.2.1. Also, it is important enough to warrant its own section.

101.3 Add the wording to require that windows and doors not meeting Chapter 6 must be installed to meet the IBC wind loads in addition to being properly designed. This is a prescriptive document, and more correctly covers installation than design.

101.5 Similar to above, add the words "and constructed", since this is a prescriptive document, and more correctly describes how to construct a dwelling than how to design one.

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101.6.1 Add roof and wall sheathing fasteners to the list of items that must be inspected. Roof sheathing fastening is possibly one of the most important connections in the building, and it is vitally important that the fastening be inspected. Similarly, the wall sheathing acts as both the enclosure and the shear resisting system, and possibly the uplift resisting system, so it is vitally important that it be done correctly. These items cannot be inspected if they are covered with felt or vapor barrier, so that wording was also added.

Item: Herrenbruck 02-101.2 and 701.2

5) Revision to: Section G-1: 701.2 & 101.2 Table _____ Figure _____

6) **COMMENT** Revise as follows (check BOX and state proposed change):

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REORGANIZE & REFOCUS: This standard’s scope is far too broad and overlaps with existing standards that are already contained within the current building code. If adopted, current code provisions will become even more confusing to code officials as they attempt to determine whether this standard’s provisions apply, or the code’s language is applicable. For a “prescriptive” code, this standard is far too complicated for public use in its current form. XPSA cannot determine how the evaluation was done for what is deemed to “work” under this standard’s provisions and what does not work? For example, how was the safety factor determined? What is the safety factor and is it the same for all materials? And last, but not least, what test results were used for support and how were they disseminated to affected industries for review?

In addition, the “consensus” process for the promulgation of this standard has fallen short in the ICC’s attempts to reach out to potentially affected groups. Unlike the ICC code development process; as a procedural matter this standard’s due process has failed and as a consequence has not undergone the normal industry review process reserved for such an overreaching standard. Finally, as witnessed by the following independently-submitted language changes to the proposed standard, is not yet ready for implementation. As an example XPSA and other foam insulation groups have not been contacted to participate in this process. Just placing the standard-development’s notice and its mere existence on the web, without publicizing the promulgation of the standard is insufficient due process.

In an ASTM; ANSI or other accredited standards-development agency used this process, it would probably not be accredited by ICC’s own accreditation services for such review. XPSA requests clarification that the language in the code will take precedence over this ICC standard. Many of its provisions are in conflict with the existing IRC 2006. In addition, XPSA would like ICC to clarify that this standard is intended only to apply to hurricane-prone areas as are currently defined in the IRC and NOT to other areas that allow 110mph and not designated hurricane prone area in the IRC. Scope 701.2 and 101.2.

SUPPORTING INFORMATION Continued (Attach additional sheets as necessary)

7) **SUPPORTING INFORMATION** (State purpose and reason, and provide substantiation to support proposed change):
The proposed standard, is on one hand, too broad in its scope. XPSA believed the original intent was to address “structural” concerns, thus the standard did not seem to apply to us. This turns out NOT to be the case as the standard brings in weather-resistive materials and insulation materials—both of us affect and concern us greatly as it is at the heart of our industry’s mission. On the other hand, what exists in this standard seems too narrowly focused on only two types of construction—concrete and masonry. For example, pages 18 through 111 of this standard deal strictly with concrete or masonry exterior walls in Chapter 2 (94 pages in total). This emphasis

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comprises 56% of the total standard. But even here, brick veneer is given little to no attention as an exterior covering material.

The sections for light-frame steel are incomplete and rely significantly on cross references to other design and construction standards (one of which is itself 300 pages long). Thus, it is an incomplete document that attempts to “glue together” many different pieces of information. The length and disjointed nature of information referenced in this document will serve to cause unnecessary confusion that will detract from the goal of the document. Therefore, it is recommended that the standard be re-organized and the activity be refocused to better meet end-user needs and the goals of the standard. The following types of actions would better achieve the goals and adequately address the concern of this comment:

- The masonry structural provisions in Chapter 2 should be adopted through ACI 530 where masonry design and construction requirements currently exist and where they should be expected to be found by the end-user community.
- The concrete structural provisions in Chapter 2 should be handled through PCA’s EB118 standard which is already in progress on these same issues and there is no need for duplicative effort in ICC 600.
- Wood structural provisions in Chapter 3 are unnecessary because they have already been addressed in the WFCM and all that is required is some additional information on foundations, which can be added to that existing standard rather than creating an additional layer of information and cross-referencing as ICC 600 currently proposes to do. The added foundation data would suggest that we have a rampant problem with houses and foundations overturning in wind storms. Is there factual evidence to support that the actual frequency of this failure mode warrants such a complex solution? This section needs more thought and requires an effort to better calibrate the design approach to actual experience.
- The steel provisions in Chapter 3 are already addressed in the AISI/PM standard and it is unnecessary for the same reason described above for wood construction.
- Chapter 4 is largely unnecessary because the existing standards mentioned above already address many of these issues or they can be added as a matter of adding more detail to the scope already addressed in those standards.
- Chapters 5 through 7 address roofing, fenestration, and exterior wall coverings in moderate to high wind areas and these topics are not necessarily addressed in the pre-existing standards or in the IRC and IBC codes for wind conditions beyond the code-specified wind limits for conventional construction. Therefore, these topics should be the focus and extent of scope of the ICC 600 standard activity.

If the above recommendations are followed, then the primary focus of this document will become weather-resistive (i.e., here and hereafter, this language should be “water-resistive” to be consistent with code terminology) envelope design and construction in high wind areas. With this focus and with additional technical effort in this area, this document could effectively address something that is currently lacking in the ICC building codes. Furthermore, it would be of much

greater value and be more readily available if the information from Chapters 5-7 were included as an appendix to the IRC and IBC rather than a separate standard that relies on cross-references to the building codes.

Most importantly, this re-focused effort should also require a renewed effort to involve the building envelope sector of the market. In reviewing the committee roster, there are only two individuals representing material interests on this matter – one for roofing (Chapter 5) and one for fenestration (Chapter 6). Apparently, **there are no individuals representing the variety of material interests on the topic of exterior wall coverings (Chapter 7)**. Thus, despite the activity having