



Public and Ballot Comments Agenda for the
IS-STM Third Public Comments Draft
Dated November 2007

Public Comment Item: Roeper 01 – 108.2

5) Revision to: [X] Section 108.2 [] Table [] Figure

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

[X] 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.

108.2 Labeling. Products, materials, or systems shall be labeled by and an approved agency when required by the applicable code.

[] COMMENT Continued (Attach additional sheets as necessary)

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

Editorial correction

Public Comment Item: Roeper 02-601.1

5) Revision to: [X] Section 601.1 [] Table [] Figure

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

[X] 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.

601.1 Fire Separation. Fire barriers and horizontal assemblies separating spaces or areas designated as storm shelters from other building areas shall have a minimum fire resistance rating of 2 hours and shall be constructed in accordance with the applicable building code.

[] COMMENT Continued (Attach additional sheets as necessary)

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

Editorial correction

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Public Comment Item: Roeper 03-703.6.1

5) Revision to: Section 703.6.1 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.

703.6.1 Capacity. The ~~emergency~~ standby electrical power system shall have adequate capacity and rating to supply all required systems and circuits intended to be operated at one time.

COMMENT Continued (Attach additional sheets as necessary)

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

Consistency with terminology used in 703.6

Public Comment Item: Roeper 04-703.6.2

5) Revision to: Section 703.6.2 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.

703.6.2 Duration. The ~~emergency~~ standby electrical power system shall be designed to continuously provide the required output capacity for a minimum of 24 hours

COMMENT Continued (Attach additional sheets as necessary)

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

Consistency with terminology used in 703.6

Public Comment Item: Roeper 05-703.6.3

5) Revision to: Section 703.6.3 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.

703.6.3 Independence. ~~Emergency~~ Standby electrical power supply shall be located on-site, and shall be independent of off-site sources of fuel or water.

COMMENT Continued (Attach additional sheets as necessary)

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

Consistency with terminology used in 703.6

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Public Comment Item: Roeper 06-703.6.4

5) Revision to: Section 703.6.4 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.

703.6.4 Protection of components. ~~Emergency~~ Standby electrical power supply, transformers, distribution panels, cabling, fuel supply storage tanks, fuel lines and other critical system components shall be protected from design event conditions.

COMMENT Continued (Attach additional sheets as necessary)

7) **SUPPORTING INFORMATION** (State purpose and reason, and provide substantiation to support proposed change):
Consistency with terminology used in 703.6

Public Comment Item: Roeper 07-703.6.5

5) Revision to: Section 703.6.5 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.

703.6.5 Location. ~~Emergency~~ Standby electrical power supply shall be accessible by a protected access route. The access route shall be located within the hurricane shelter or shall meet the provisions for exterior wall and roof opening protectives in accordance with this standard.

COMMENT Continued (Attach additional sheets as necessary)

7) **SUPPORTING INFORMATION** (State purpose and reason, and provide substantiation to support proposed change):
Consistency with terminology used in 703.6

Public Comment Item: Roeper 08-803.1

5) Revision to: Section 803.1 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.

803.1 Test Specimen. All parts of the test.....minimum of 4-feet (1219 ~~mm~~ m) wide

COMMENT Continued (Attach additional sheets as necessary)

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

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Ballot Comment Item: Messersmith 01-108.2



AFFIRMATIVE WITH COMMENT Section 108.2 - Change "and" to "or".
Section 302.1 - After "additional load combinations" insert "with W
in these additional load combinations", so provisions of
Section 302.1 are similar to those of Section 302.2.

**Ballot Comment Item: Tezak 01-Chapter 2,
Figure 304.2.2, Sections 401.1 and 401.1.1**

Comments with approval vote for ICC-500 Standard (November 2007 version). I feel that these are editorial in nature, but suggest that these be corrected prior to release of the standard.

- Page 5, Chapter 2, Local Emergency Planning Commission – the word shall is spelled "shal"
 - Page, 13, Chapter 3, Figure 304.2.2 (cont'd) Western Gulf of Mexico wind speed map – the 212 wind speed contour should be removed to match the larger map shown in Figure 304.2.2 Shelter Design Wind Speeds for Hurricanes
 - Page, 14, Chapter 3, Figure 304.2.2 Eastern Gulf of Mexico wind speed map – the 237 wind speed contour should be labeled "225" to match the larger map
 - Page 20, Chapter 4, in sections 401.1 and 401.1.1 the word minimum is misspelled
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**Ballot Comment Item: Kilcollins 01-107.3.1.8, 202, 501.1.1,
501.1.2.2, 701.1, 702.1.3 and Figure 304.2.2**

From: Danny J. Kilcollins

Re: ICC/NSSA Standard on the Design and Construction of Storm Shelters, ICC 500,
September 2007 Draft

I vote in the affirmative with the following comments/editorials:

1. Section 107.3.1.8 "...load path continuity." Revise continually to continuity
 2. Section 202, Storm Shelter design wind speed. "The maximum wind speed that..." Revise than to that
 3. Figure 304.2.2 Hurricanes—Eastern Gulf of Mexico: 237 mph contour should be revised to 225 mph. Consistency with intent of committee and Figure 304.2.2—Shelter Design Wind Speeds for Hurricanes
 4. Section 501.1.1 "The number of standing, seatinged, wheelchair..."
 5. Section 501.1.2.2 "the floor area of ~~excluded spaces~~, partitions and walls, columns..." Excluded spaces are not defined in this standard.
 6. Section 701.1 "the flood-resistance requirements of the applicable building eode or engineering standard Chapter 4." Chapter 4 establishes flood requirements for this standard.
 7. Section 702.1.3 "Outside air intakes openings..." Revise intakes to intakes
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**Ballot Comment Item: Waller 01-Chapter 2, 107.2.1, 107.3.3, 108.2, 303.2,
304.7, 308.1.1, 309.1.2, 309.1.2.3 and 503.1**

Comments on ICC STANDARD DEVELOPMENT BALLOT, November 20, 2007 by James E. Waller

1. The ICC/NSSA title reads "Standard on the Design and Construction of Storm Shelters". In FOREWORD, Adoption, it reads "Standard for the Design..."
2. General: Section titles should be have first words capitalized only when they are the main section shown in the Table of Contents. The text of the standard should be edited to eliminate unwarranted capitalized words following the first word of a sub-section.
3. **FOREWORD, Introduction**, line 11: Add "for" between "requirements" and "the main wind resisting..."

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4. **Chapter 2, Definitions, Shelter entry system, baffled.** ‘See definition of “Shelter entry system, alcove.” ‘
5. **Chapter 2, Definitions: Storm shelter design wind speed.** “The maximum wind speed thatthe shelter...” [change “than” to “that”].
6. **Section 107.2.1 Design information**, item 2: Since no description of the type of shelter is required in this list of information requirements, I recommend that item 2 be preceded by “**Type of shelter (tornado, hurricane) and** the shelter design wind speed, mph.”
7. **Section 107.3.3 Contractor responsibility**, Exception: Vertically align “Exception” with items 1. – 4. The second indentation of “Exception” aligned directly under 4. implies that it pertains only to item 4.
8. **Section 108.2 Labeling:** Change “and” to “an” in “...shall be labeled by **an** approved agency...”
9. **Section 303.2 Roof live loads:** Remove the tab (indentation) for this section.
10. **Section 304.7 Enclosure classifications**, second sentence: For professional reasons this voting member is on record as being in disagreement with the enclosure classification determination provision for tornado shelters - “For determining the enclosure classification for community shelters, the largest door or window on a wall that receives positive pressure shall be considered as an opening.” My disagreement is limited to the design of tornado shelters and is based on calculations and documentation presented to the Committee in the paper entitled, “Internal Pressures for Design of Storm Shelters”, by James E. Waller, P. E., dated September 25, 2005.
11. **Section 308.1.1 Stability:** An editorial error has occurred with the removal of two words from this section. The section should read, in part “...shall also be determined for building code design **wind speeds** (wind speeds which are below the shelter design wind speeds) where the host building...”
12. **Section 309.1.2 Calculation of resistance.** The phrase “at grade” is not adequately defined. Nearly every slab on grade is slightly higher than the surrounding grade. The Commentary should define the conditions where a slab may be considered to be “at grade”. The following commentary for C309.1.2 is suggested:

Slabs on grade which are at elevations within 6 inches of the adjacent finished grade may be considered “at grade”. Where all portions of a slab on grade deemed to be providing anchorage for a storm shelter are at least ten (10) times the difference in elevation between a slab edge and the adjacent finished grade away from that slab edge, the anchoring slab may be regarded as “at grade”.
13. **Section 309.1.2.3 Elevated storm shelter foundations**, second to last line: Add a dash between “flood” and “borne”.
14. **Section 503.1 Locks and latching mechanisms.** The word “specimen” is vague. Section 306 uses the word “assembly”. Section 306.4 uses the descriptive phrase “opening protective device”. I recommend substituting “assembly”. If this syntactical change cannot be made, then I recommend that specimen be defined in the Commentary.

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**Ballot Comment Item: Kiesling 01-106.2, 106.3, 106.4, ... 107.2, 107.2.1, ...
804.3, 804.4, 804.4.1, 804.9.1, 804.9.2, 804.9.3, 804.9.4, 804.9.5, & 804.9.6,
C804.9.1; C804.9.2; C804.9.3; C804.9.4; C804.9.5; & C804.9**

There are inconsistencies in capitalization of titles. Examples: 106.2, 106.3, 106.4, ... 107.2, 107.2.1, ... 804.3, 804.4, 804.4.1

Throughout Chapter 8:

The figures and the text sections referring to the figures appear on different pages. This should be corrected so that the user can read the text and view the relevant picture on the same page.

804.9.1, 804.9.2, 804.9.3, 804.9.4, 804.9.5, & 804.9.6

The following appears: ~~When specific locations on a test specimen are judged by the test agency to be more vulnerable to missile impact than one or more of those specified in the figure below, then the test agency shall have discretion to select those locations as alternates to those shown in the figure.~~

Strong opinion: **Omitting this statement significantly weakens this standard and limits the ability of a test agency to discern weaknesses in products.** The objective of some product producers might be simply to pass the prescribed test(s) and thus to design the product to (only) meet the prescriptive tests. In some instances, test agency personnel will be placed in the position of issuing a “passed the test” report even though feeling that the product is inferior or even unsafe.

Risks in conducting more than the minimum specified tests is a modest increase in cost of testing. Decisions regarding additional tests are made by involved and hopefully well-informed people. Risks in doing only the minimum specified testing accrue to the user who has most to lose in receiving a product with a “weak link” but who is in the poorest position to judge product quality or efficacy of product quality verification.

I shall recommend the following for the commentary:

C804.9.1; C804.9.2; C804.9.3; C804.9.4; C804.9.5; & C804.9.

The paramount objective of all parties involved in producing, testing, and evaluating storm shelter products should be the safety of shelter users. All parties--especially producers--should strive to offer high quality

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products without qualification or exception. Therefore evaluation and testing should be thorough, performed by competent, professional agencies and personnel.

When specific missile impact locations on a test specimen or assembly other than those specified in this Standard are suspected by the test agency to be vulnerable to failure from missile impact, then the test agency shall advise the sponsor of the quality concern and shall recommend impacting those locations in addition to those required by this Standard. Refusal of the sponsor to authorize such tests should be noted in the test report issued by the test agency. Authorization of the recommended additional testing and successful product performance should be reported.

108.1 Design Information. All shelters shall ~~be labeled~~ have a sign on or within the shelter with the name of the manufacturer or builder producer of the shelter and ~~for~~ the storm type (s) and **respective design** wind speed (s). The ~~label~~ sign shall remain legible and visible.

Red Italics: Kiesling's suggested further editorializing to the September 07 draft.

108.2 Labeling. Products, materials, or systems shall be labeled by an ~~d~~ approved agency when required by the applicable code or jurisdiction.