

BOARD OF APPEALS
October 15, 2015

Members Present: Chairperson Wayne Larson, Harold Thompson, Terry Welle, Jeff Furstenau
Others Present: Ron Strand, Ryan Erickson

Chairperson Larson called the meeting to order. Mr. Thompson moved to approve the minutes of the October 1, 2015 meeting and Mr. Welle seconded the motion. All members present voted aye and the motion was declared carried. Mr. Strand noted that there was no old business to address. He noted that Mr. Larson would be presenting to the Board at this meeting.

Item 1 – Review of changes to the 2015 International Building Code, Chapters 16-23

Chapter 16 Structural Design

Section 1601.1 Staff recommending continuing the existing local **AMENDMENT** adding to the end: “It shall not be the responsibility of the building official to determine engineering requirements of this code. Exclusive of the conventional light-frame wood construction provisions referenced in Section 2308, the method to resist loads as referenced in this chapter is the responsibility of a structural engineer or other qualified design professional.”

Section 1602 The definitions for Diaphragm, flexible and Diaphragm, rigid were deleted.

Section 1603.1.3 Items 4, thermal factor, and 5, drift surcharge loads, were added to items to be indicated on the plans.

Section 1603.1.7 A requirement was added that the flood design class will be assigned according to ASCE 24. The rest of the section was renumbered and the words “High Velocity wave action” was replaced by “Coastal High Hazard areas or Coastal A zones”.

Section 1603.1.8.1 The section on Photovoltaic panel systems was added. Mr. Larson noted that similar requirements had been added throughout subsequent chapters.

Section 1604.3.3 Additional steel joist references were added.

Table 1604.3 Added interior partition deflections and, in the footnotes, additional wording was added to footnote f.

Section 1604.4 The fourth paragraph clarifies when a diaphragm is considered rigid and removes confusion with ASCE 7-10.

Section 1604.5 now specifies that Table 1604.5 is to be used in lieu of ASCE 7, Table 1.5-1, in assigning a risk category.

Mr. Larson noted that, in many places, sections have had reference numbers updated or been slightly reworded. He stated that he would not specifically address those minor changes.

Table 1604.5 Under Risk Category III, under the second bullet the words “elementary school, secondary school or day care facilities” were changed to “Group E Occupancies”. Under the third bullet “Adult Educational Facilities, such as colleges and universities” was changed to “Educational occupancies for students above 12th grade”.

Section 1607.5 Partition loading must be added if the live load is 80 PSF or greater rather than greater than 80 PSF.

Table 1607.1 Under 24 Recreational uses, ice skating rinks with uniform load of 250 PSF and roller skating rinks with uniform load of 100 PSF were added. Under 25 Residential uses, canopies, including marquees with uniform load of 20 PSF, were added.

Section 1607.7.5 clarifies that an owner's authorized agent as well as the owner can post the maximum weight of vehicles allowed.

Section 1607.9.3 is a new section for loads due to elements supporting hoists for façade access equipment.

Section 1607.9.4 A section for loads due to lifeline anchorages for façade access equipment was added.

Section 1607.12.3 Vegetative roofs were added to occupiable roofs.

Section 1607.12.3.1 Added vegetative to landscaped roofs and added verbiage to include referencing ASTM E 2397 and Table 1607.1

Section 1607.12.5 includes a new section, including subsection 1 thru 4, dealing with loading of photovoltaic panel systems.

Section 1607.14 The exception was deleted and Section 1607.14.1 reworded so the exception is no longer required.

Section 1609.1.2 Under exception 1, the words "one-and two-story buildings" have been replaced with "buildings with a mean roof height of 33 feet".

Section 1610.1 Staff recommends continuing the existing local **AMENDMENT** revising the exception from 8 feet to 9 feet.

Section 1612 Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety to prevent conflict with the floodproofing code.

Section 1613.3.1 Additional figures are referenced, as new figures for Guam and American Samoa are now included in the following maps.

Section 1613.3.5.1 Alternative seismic design category determination: Slight Rewording of this section.

Section 1613.5 Amendments to ASCE 7 have been added. This allows for transfer of anchorage forces to diaphragms in a manner described in the section.

Section 1613.6 Ballasted photovoltaic panel systems have been added. This section describes how to design for seismic forces on ballasted photovoltaic panel systems.

Mr. Strand noted that staff may propose an **AMENDMENT** deleting Section 1603.1.7 if it is found to conflict with the Fargo floodproofing code.

Chapter 17 Special Inspections and Tests

Section 1701.3 The used materials section has been deleted. It stated that second-hand materials meeting minimum requirements of this code for new materials shall be permitted.

Section 1703.1 The words "specified in sections 1703.1.1 through 1703.1.3" were added to the end of the paragraph.

Section 1703.1.1 now specifies to whom to report conflict of interest.

Section 1703.5 In the first sentence, “where materials or assemblies are required by this code to be labeled by an approved agency in accordance with section 1703” has been deleted.

Section 1704.2 Exception 4 has been added reading, “The contractor is permitted to employ the approved agencies where the contractor is also the owner.”

Staff will revisit the existing local **AMENDMENT** adding an exception to read:

“5. The frequency and amount of special inspections shall be as determined by the design professional of record. The continuous and periodic inspections referenced in Tables 1705.2.3, 1705.3, 1705.6, 1705.7 and 1705.8 shall be considered as guidelines for that determination.”

Section 1704.2.1 now states that, prior to start of construction, the special inspectors qualifications are to be provided to the building official.

Section 1704.2.5 has been reworded and reformatted, along with exceptions, and the reference to Section 1704.2.5.1 updated.

Section 1704.5 is a new section that, along with special inspections and tests, lists specific items that need to be submitted to the building officials. Mr. Larson suggested staff may wish to review this section to determine whether they would like to propose an **AMENDMENT**.

Section 1705.2 Welding of reinforcing steel has been omitted from this section and included in the concrete construction section.

Section 1705.2.3 is a new section that specifies special inspections for steel joists and steel girders when required.

Section 1705.3.1 has been relocated from steel section

Table 1705.3 Referenced standard section numbers have been updated. The reinforcing bar welding section was expanded and anchors post-installed in hardened concrete were added.

Section 1705.10 is a new section addressing fabricated items.

Section 1707 Test Safe Load has been deleted and is now covered in Section 1710.

Section 1708.3.2 has changed the loading from at least equal to 2 times the unfactored design load to at a minimum the factored load.

Section 1709.5 clarifies that, for exterior window and door assemblies, the required design pressure shall be determined using the allowable stress design load combination of Section 1605.3.

Section 1711 Material and test standards has been deleted

Chapter 18 Soils and Foundations

Section 1803.5.6 Requirement that boring holes were to be at a minimum of 10 feet below foundations in rock strata has been eliminated. Now it states that boring holes are to be drilled to sufficient depth to assess the competency of the rock.

Section 1803.5.7 Excavation near foundations: Expanded section to require registered design professional to examine and provide for underpinning and protection, etc.

Sections 1804.2 and 1804.2.1 Underpinning sequencing has been added to tighten up underpinning requirements. The rest of section 1804 has been renumbered. Staff recommends continuing the existing local **AMENDMENT** deleting section 1804.4 will need to change to read “Section 1804.4 is hereby deleted and the following section enacted by City of Fargo Amendment:

Section 1804.4 now requires that surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection; that lots be graded to drain surface water away from foundation walls; and states that the procedure used to establish the final ground level adjacent to the foundation shall account for additional settlement of the backfill. Staff recommends continuing the existing local **AMENDMENT** deleting section 1804.4 will need to change to read, “Section 1804.5 is hereby deleted in its entirety.”

Section 1805.1.2.1 Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety to avoid conflict with the Fargo Floodproofing Code.

Section 1808.3.2 This section along with the exception has been added stating that no fill or other surcharge loads shall be placed adjacent to any building or structure unless the building or structure is capable of withstanding the additional loads.

Section 1809.5 Staff recommends continuing the existing local **AMENDMENT** adding exception 4 to read, “Free-standing buildings used as Group U occupancies for the storage of private or pleasure-type motor vehicles constructed in accordance with Sections 406.3.1 and 406.3.2.”

Section 1810.2.5 has been expanded to describe how the group effects of deep piles is to be determined.

Table 1810.3.2.6 Steel has been changed to structural steel.

Section 1810.3.5.3.1 now requires compliance with requirements for HP shapes in ASTM A6 or the following:”

Sections 1810.3.5.3.2 and 1810.3.5.3.3 are new sections.

Chapter 19 Concrete

Sections 1901.3 and 1901.4 are new sections.

Section 1903.1 An Exception was added to specify that the certain standards, referenced in Chapter 35 shall be permitted to be used.

Section 1903.2 is a new section on special inspections.

Section 1904 has been reorganized and Table 1904.2 has been deleted. The section now refers to ACI 318 and includes an exception for Group R-2 and R-3 occupancies 3 stories or fewer for a concrete compressive strength of 3000 psi, increased from 2500 psi.

Section 1905.1 The wall pier definition was deleted.

Section 1905.1.3 was reworded and the wall pier design and exception in seismic design category C left out as they are now in ACI 318.

Section 1905.1.7 ACI 318, section 14.1.4, was deleted and replaced with this section. This section is a reword and reformat of old Sections 1905.1.7 and 1905.1.8

Section 1905.1.8 This section is a reformat of a number of sections in the old code. The new language in Section 1905.1.8 of the 2015 IBC represents industry consensus among various code change proposals

dealing with concrete anchorage and is intended to remove confusion resulting from inconsistency between Chapter 19 of the 2012 IBC and ACI 318. The rest of the sections in chapter 19 have been renumbered.

Chapter 20 Aluminum

Mr. Larson noted that there had been no changes to Chapter 20.

Chapter 21 Masonry

Section 2101 This section refers to reference TMS 402/ACI 530/ASCE 5 or TMS 403 and deletes much of the previous verbiage. The section does add Special Inspection for Masonry as defined in Chapter 17.

Section 2102 Definitions for Anchor, Architectural Terra Cotta, Bond Beam, Compressive Strength of Masonry, Rubble Masonry, Stack Bond, and Thin Bed Mortar were deleted.

Section 2103 Sections 2103.1 through 2103.7 of the 2012 IBC have been condensed into Section 2103.1. The rest of the section has been renumbered and the reference numbers have been updated.

Section 2104 This section has been rewritten, eliminating much of the previous content as it is now covered in TMS 602/ACI 530.1/ASCE 6.

Section 2105 Most of this section in the 2012 IBC has been eliminated and is now covered in Chapter 17 and TMS 602/ACI 530.1/ASCE 6.

Section 2111.5 has been reformatted and reworded for clarity.

Section 2112.2.2 EN 15250 was added to what can be on labels.

Chapter 22 Steel

Section 2203 The words “or AISI S220” were added after the reference to AISI S200.

Section 2205 This section mainly addresses seismic design and has been reworded and reformatted. This section also adds struts collectors, chords, and foundation elements as items to be covered in this section.

Section 2207 Joist designations were updated and the section reworded for clarification.

Section 2209.1 The last part of the sentence “except that the mapped acceleration parameters S_s and S_1 , shall be determined in accordance with section 1613.3.1” that was added to the 2012 code was removed.

Section 2210.1.1.3 is a new section.

Section 2211.4 “Wall stud design” was changed to “structural wall stud design”

Chapter 23 Wood

Section 2301.2 The exception to subnote 3 was reworded and renamed it subnote 4. The rest of the section was renumbered.

Section 2302.1 Cross-Laminated Timber, Engineered Wood Rim Board, and Gable were added. Glued Built-up Member, and Subdiaphragm were deleted.

Sections 2303.1.4 and 2303.1.13 are new sections.

Section 2303.4.1.3 now includes the words “or the owners authorized agent” in the first sentence

Section 2303.5 now calls out that joist hangers are to be in accordance with ASTM standard ASTM D 7147.

Section 2304.6 This section has been rewritten to establish minimum structural performance requirements and clarify that wall sheathing on the outsides of exterior walls, as well as the connections of sheathing to framing, must be capable of resisting wind pressures in accordance with Section 1609. The term “gable” is included to clarify that exterior wall sheathing requirements for out-of-plane wind resistance are also applicable to the gable area at end walls.

Section 2304.7 This section used to be 2304.6.2. This causes the rest of sections of 2304 to be renumbered.

Section 2304.10.3 now references ASTM D 7147 instead of Section 1716.1.

Section 2304.10.6 The base thickness of connection material has been decreased from .04 inch to .0329 inch, to coordinate with AISI.

Table 2304.10.1 A number of elements have been renamed and more elements added.

Section 2304.12 has been reorganized and rewritten to identify exactly where waterborne preservatives are required and where they are not required.

Section 2306.1 American Forest and Paper Association has been changed to American Wood Council.

Section 2308 has been reformatted and reorganized in its entirety. Significant changes include the introduction of new designations for wall bracing methods similar to those in the International Residential Code, as shown in new Table 2308.6.3(1), and reformatted wall bracing requirements set forth in Table 2308.6.1.

Section 2308.2.5 has been reformatted and reorganized. It now clarifies that roof trusses and rafters shall not span more than 40 feet between points of vertical support.

Table 2308.4.2.1(1) Some of the spans have been changed for certain species.

Section 2308.7 Ceiling joist and rafter span tables from the International Residential Code have been incorporated into the conventional construction provisions of the International Building Code.

Table 2308.7.1(1) Some of the spans have been changed for certain species.

Section 2309 has been added to reference the American Wood Council's *Wood Frame Construction Manual* for structural design of wood frame buildings assigned to Risk Category I or II.

Mr. Strand thanked Mr. Larson for reviewing the changes to these chapters. There being no further business to come before the Board, the meeting was adjourned.

Respectfully submitted,

Ron C. Strand
Board Secretary