

**TITLE 748. OKLAHOMA UNIFORM BUILDING CODE COMMISSION
CHAPTER 20. ADOPTED CODES**

SUBCHAPTER 1. IBC® 2015

**748:20-1-1. Adoption of International Building Code®, 2015 Edition (IBC® 2015)
[AMENDED AND RENUMBERED TO 748:20-2-1]**

~~(a) The Oklahoma Uniform Building Code Commission (the "OUBCC") hereby adopts the International Building Code®, 2015 Edition (IBC® 2015 as amended and modified in this subchapter as the statewide minimum code for commercial building construction in the State of Oklahoma pursuant to 59 O.S. 1000.23.~~

~~(b) The OUBCC through formal action expressly chose to adopt the IBC® 2015 as amended and modified in this subchapter, as the statewide minimum code for commercial building construction in the State of Oklahoma.~~

~~(c) As part of its 2012 code cycle, the International Code Council, Inc.® (ICC®) reorganized the format of certain of its model codes as it was foreseeable to ICC that additional chapters will need to be added in the future as model regulations for new processes or operations are developed. The format reorganization was designed by ICC to accommodate such future chapters by providing reserved (unused) chapters in several parts of certain of its model codes as part of its 2012 code cycle. The format reorganization continues into the ICC's 2015 code cycle and is adopted by the OUBCC to the extent provided in this subchapter by the phrase "reserved for future use" inserted in lieu of titles for chapters.~~

~~(d) This material contains information which is proprietary to and copyrighted by the International Code Council, Inc. The acronym "ICC" and the ICC logo are trademarks and service marks of ICC. ALL RIGHTS RESERVED.~~

748:20-1-2. Effect of Adoption [AMENDED AND RENUMBERED TO 748:20-2-2]

The IBC® 2015 as amended and revised by these rules, is hereby established and adopted as the statewide minimum code for commercial building construction in Oklahoma pursuant to 59 O.S. § 1000.23, and may only be amended or altered by other jurisdictions pursuant to Oklahoma law and the administrative rules of the OUBCC as set forth in Title 748, Chapter 15 of the Oklahoma Administrative Code.

748:20-1-3. IBC® 2015 and Other Appendices [AMENDED AND RENUMBERED TO 748:20-2-3]

~~(a) None of the appendices of the IBC® 2015 have been adopted by the OUBCC for inclusion in the statewide minimum code for commercial building construction in the State of Oklahoma.~~

~~(b) The OUBCC hereby creates a new appendix, entitled "Appendix N, Supplemental Storm Shelter Requirements."~~

~~(c) The OUBCC has removed from Chapter Four of the IBC® 2015 Section 423.3 entitled "Critical emergency operations" and Section 423.4 entitled "Group E occupancies" and has relocated and renumbered those sections to the newly created Appendix N entitled "Supplemental Storm Shelter Requirements."~~

~~(d) Appendices A through N are not adopted as the minimum code for commercial building construction within the State of Oklahoma. However, other jurisdictions within the State of Oklahoma may adopt any or all of said appendices in accordance with 59 O.S. § 1000.29.~~

748:20-1-4. IBC® 2015 Provisions Adopted and Modified [AMENDED AND RENUMBERED TO 748:20-2-4]

(a) All chapters and provisions within chapters, including exceptions, of the IBC® 2015 not specifically addressed within these rules as being modified, deleted, moved or removed are hereby adopted without modification as the statewide minimum code for commercial building construction within the State of Oklahoma pursuant to 59 O.S. § 1000.23. Chapters and provisions within chapters, including exceptions adopted with modifications are specifically addressed in these rules.

(b) The ICC® has reserved Chapter 34 for possible future use. The OUBCC has not adopted Chapter 34 and the chapter is not considered part of the statewide minimum code for commercial building construction within the State of Oklahoma.

(c) To the extent any references in the IBC® 2015 as amended and modified in this sub-chapter are made to any other code or standard, the particular edition for that reference is defined in the referenced standards found in the IBC® 2015 as amended and modified in this sub-chapter and in the IBC® 2015 Chapter 35 entitled "Referenced Standards."

748:20-1-5. Participation in Federal Programs and/or Federally Funded or Financed Projects [AMENDED AND RENUMBERED TO 748:20-2-5]

In order to maximize federal financial aid, assistance, participation, financing and/or funding in any public project(s) and/or federal financial aid, participation, funding for and participation in any federal program(s) by the State of Oklahoma, its agencies, public trusts and instrumentalities, or by any Oklahoma municipalities and other political subdivisions, that receive financial aid, assistance, participation, financing and/or funding for and participate in any federal program(s), the State of Oklahoma, its agencies and instrumentalities, and any Oklahoma municipalities and other political subdivisions, may cooperate with the United States Government and any agency or instrumentality thereof, in the manner authorized and provided by federal law and regulation and in doing so may perform all necessary functions and take all necessary actions for accomplishing such federal purposes and programs, including but not limited to, following and/or complying with federal laws, regulations and/or requirements arising from or related to federal financial aid, assistance, participation, financing and/or funding, in the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, improvement, expansion, operation, maintenance, removal, and demolition of buildings and structures or any appurtenances attached to such buildings or structures, notwithstanding any provisions of any and all uniform building codes and standards adopted by the OUBCC to the contrary.

748:20-1-6. IBC® 2015 Chapter 1 Scope and Administration [AMENDED AND RENUMBERED TO 748:20-2-6]

Chapter 1 of the Oklahoma adopted IBC® 2015, includes the following Preamble at the very beginning of the chapter:

(1) Pursuant to 59 O.S. § 1000.23, the OUBCC has adopted the IBC® 2015 as amended and revised by the OUBCC, as the statewide minimum code to be used by all entities for commercial building construction in jurisdictions throughout the State of Oklahoma. However, the OUBCC's adoption of Chapter 1 "Scope and Administration" of the IBC® 2015 is for continuity purposes and the OUBCC's adoption of Chapter 1 recognizes the methods of best practice in fully implementing the statewide minimum code for commercial building construction.

~~(2) All provisions of the adopted IBC® 2015 2018, including Chapter 1, as amended and revised by the OUBCC, are hereby established and adopted as the statewide minimum code for commercial building construction in Oklahoma pursuant to 59 O.S. § 1000.23, which may only be amended or altered pursuant to Oklahoma law and the administrative rules of the OUBCC as set forth in Title 748, Chapter 15 of the Oklahoma Administrative Code. However, the provisions of Chapter 1 adopted herein are only intended to be in force and effect to the extent that the respective provisions do not conflict with State law or the lawful exercise of code administration and enforcement jurisdiction by entities empowered to do so pursuant to applicable law.~~

~~(3) Section 105.1.1 Annual permit. This section has been modified to clarify what an annual permit is. This section shall read: 105.1.1 An annual permit is a yearly permit which represents a group of individual permits for each alteration to an already approved electrical, gas, mechanical or plumbing installation. The building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.~~

~~(4) Section 105.1.2 Annual permit records. This section has been modified to require the building official to collect the OUBCC permit fee for each individual permit that is part of the annual permit at the completion of the annual permit term. This section has been modified to read: 105.1.2 Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The building official shall have access to such detailed records of alterations at all times. At the completion of the entity's annual permit term, the applicant shall file such detailed records of alterations with the building official. Pursuant to the authority of 59 O.S. § 1000.25, the building official shall collect fees for each individual permit which is part of the annual permit once the detailed records are submitted and remit such fees to the OUBCC.~~

~~(5) The OUBCC's adoption of Chapter 1 in this manner is made with the recognition that the legal authority granting state and local code administration and enforcement jurisdictions the power and discretion to administer and enforce codes arises from Oklahoma laws governing those jurisdictions. Furthermore, the OUBCC also recognizes that many state and local code administration and enforcement jurisdictions have already created, or have the lawful authority to create, departments, offices and administrative policies pursuant to various applicable laws and other adopted model codes with "Scope and Administration" provisions similar to Chapter 1 of the adopted IBC® 2015.~~

~~(6) This limited adoption of Chapter 1 is made in recognition of the authority and discretion possessed by jurisdictions to administer and enforce building codes. Exercising such authority and jurisdiction in a manner inconsistent with Chapter 1 must be supported by Oklahoma law. Code administration and enforcement jurisdictions shall not use the OUBCC's limited adoption of Chapter 1 to circumvent the remainder of the requirements established by the Oklahoma adopted IBC® 2015 and the Commission will strongly oppose any such practice.~~

748:20-1-8. IBC® 2015 Chapter 3 Use and Occupancy Classification [AMENDED AND RENUMBERED TO 748:20-2-8]

~~Chapter 3 of the IBC® 2015 is adopted with the following modifications:~~

~~(1) Section 305.2.4 Seven or fewer children in a detached dwelling. This section has been added to align the code with the Oklahoma Department of Human Services regulations for a~~

licensed daycare facility in the home and the change clarifies the total number of children includes both those under and above two and one half years of age. This section has been added to read: 305.2.4 Seven or fewer children in a detached dwelling. A facility such as the above within a detached dwelling and having seven or fewer children receiving such day care shall be permitted to comply with the International Residential Code® (IRC®). This number shall include children two and one half years or less of age.

(2) Section 305.2.5 Eight to twelve children in a detached dwelling. This section has been added to align the code with the Oklahoma Department of Human Services regulations for a licensed daycare facility with eight to twelve children within a detached dwelling, allowing the licensed daycare facility to comply with the requirements of the IRC® so long as the structure is fire sprinklered, and clarifies the total number of children includes both those under and above two and one half years of age. This section has been added to read: 305.2.5 Eight to 12 children in a detached dwelling. A facility such as the above within a detached dwelling and having eight to 12 children receiving such day care shall comply with the IRC® provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the IRC®. This number shall include children two and one half years or less of age.

(3) Section 310.5.2 Lodging houses. This section has been modified to limit a lodging house to four guest rooms if complying with the requirements in the IRC® to align the section with the requirements in Title 74 O. S. § 317.1. This section has been modified to read: 310.5.2 Lodging houses. Owner occupied lodging houses with four or fewer guest rooms shall be permitted to be constructed in accordance with the IRC®.

748:20-1-9. IBC® 2015 Chapter 4 Special Detailed Requirements Based on Use and Occupancy [AMENDED AND RENUMBERED TO 748:20-2-9]

Chapter 4 of the IBC® 2015 is adopted with the following modifications:

(1) Section 406.7.2.1 Canopies used to support gaseous hydrogen systems. This section has been modified by deleting the word "hydrogen" in the heading and in the third requirement; and by adding the wording "lighter than air" to the section header to make the section applicable to all lighter than air fuels. This section has been modified to read: 406.7.2.1 Canopies used to support lighter than air gaseous systems. Canopies that are used to shelter dispensing operations where flammable compressed gases are located on the roof of the canopy shall be in accordance with the following:

(A) The canopy shall meet or exceed Type I construction requirements.

(B) Operations located under canopies shall be limited to refueling only.

(C) The canopy shall be constructed in a manner that prevents the accumulation of gas.

(2) Section 406.7.2.2. Canopies sheltering units and devices that dispense lighter than air gas. This section has been added to require all canopies to be designed to prevent the accumulation or entrapment of ignitable vapors under canopies when dispensing lighter than air gas or all electrical equipment installed beneath the canopy is required to be suitable for Class I, Division 2 hazardous (classified) locations. This section has been added to read: 406.7.2.2 Canopies sheltering units and devices that dispense lighter than air gas. Where CNG, LNG, or Hydrogen motor fuel dispensing devices are installed beneath a canopy, the canopy shall be designed to prevent the accumulation or entrapment of ignitable vapors, including provisions for natural or mechanical ventilation means, or all electrical equipment installed beneath the canopy or within the enclosure shall be suitable for Class I, Division 2 hazardous (classified) locations. Tank vents that are installed within or attached to the canopy

shall extend a minimum of 5 feet (1524 mm) above the highest projection of the canopy. Compression and storage equipment located on the top of the canopy shall be in accordance with current State of Oklahoma adopted International Fire Code®, Section 2309.

~~(3) Section 419.1 General. This section has been modified to add a new exception to allow Group B, M, and F occupancies located in a detached dwelling unit to be constructed in accordance with the IRC® if they comply with the limitations in Section 419.1.1. This section has been modified to read: 419.1 General. A live/work unit shall comply with Sections 419.1 through 419.9. Exceptions:~~

~~(A) Dwelling or sleeping units that include an office that is less than 10 percent of the area of the dwelling unit are permitted to be classified as dwelling units with accessory occupancies in accordance with Section 508.2.~~

~~(B) Group B, M, and F occupancies that are located in a detached dwelling unit complying with the limitations of Section 419.1.1 shall be permitted to be constructed in accordance with the IRC®.~~

~~(4) Section 419.1.1 Limitations. This section has been modified to limit the nonresidential portion of the live/work unit to not greater than 2,500 square feet (232 square meters). This section has been modified to read: 419.1.1 Limitations. The following shall apply to all live/work areas:~~

~~(A) The nonresidential portion of the live/work unit is permitted to be not greater than 2,500 square feet (232 square meters) in area;~~

~~(B) The nonresidential area is permitted to be not more than 50 percent of the area of each live/work unit;~~

~~(C) The nonresidential area function shall be limited to the first or main floor only of the live/work unit; and~~

~~(D) Not more than five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.~~

~~(5) Section 423.1.1 Scope. This section has been modified to include above and below ground storm shelters and limit the use of the term storm shelter to those structures constructed according to this section. This section has been modified to read: 423.1.1 Scope. This section applies to the construction of above or below ground storm shelters constructed as separate detached buildings, or rooms within buildings, structures, or portions thereof for the purpose of providing safe refuge from storms that produce high winds, such as tornados and hurricanes. Any room or structure, as may be used as a place of refuge during a severe wind storm event, shall not be defined as a storm shelter unless specifically designed to the requirements as listed in Section 423.~~

~~(6) Section 423.3 Critical emergency operations. This section, including the exception, has been moved to the newly created Appendix N, entitled "Supplemental Storm Shelter Requirements" and is not adopted as a minimum standard for residential or commercial construction within the State of Oklahoma. This section has been renumbered in Appendix N to become N102. The section number 423.3 itself, will stay as part of this code for numbering alignment but will not have any requirements attached to it.~~

~~(7) Section 423.4 Group E occupancies. This section, including exceptions, has been moved to the newly created Appendix N, entitled "Supplemental Storm Shelter Requirements" and is not adopted as a minimum standard for residential or commercial construction within the State of Oklahoma. The section has been renumbered in Appendix N to become N103. The~~

section number 423.4 itself, will stay as part of this code for numbering alignment but will not have any requirements attached to it.

(8) Section 423.5 Required. This section has been added to specify the requirements when storm shelters are provided. This section has been added to read: 423.5 Required. Where storm shelters are provided, they shall be provided in compliance with ICC 500@ except as required by Sections 423.5.1 through 423.5.11.

(9) Section 423.5.1 Storm shelter documents. This section has been added to require the construction documents prepared for the storm shelter to be maintained and protected within the storm shelter by the owner or owner's authorized agent. This section has been added to read: 423.5.1 Storm shelter documents. The construction documents which were prepared for the construction of the storm shelter, shall be maintained and protected within the storm shelter by the owner or owner's authorized agent.

(10) Section 423.5.2 Signage. This section has been added to clarify that all signs for a storm shelter, as outlined in ICC 500@ Sections 108, 504.1, 504.1.1, and 504.1.2, comply with the applicable signage requirements of ICC A117.1@. This section has been added to read: 423.5.2 Signage. All signs, as outlined in ICC 500@ Sections 108, 504.1, 504.1.1 and 504.1.2 shall comply with the applicable requirements of ICC A117.1@.

(11) Section 423.5.2.1 Entrance signage. This section has been added to clarify entrance signage as required by ICC 500@ Section 504.1.1 is not required for the storm shelter when the storm shelter can be accessed from within the host building and is only open to the occupants of the host building. This section has been added to read: 423.5.2.1 Entrance signage. Entrance signage, as outlined in ICC 500@ Section 504.1.1 shall not be required at exterior entrances where the shelter can be accessed from within a host building and is only open to the occupants of the host building.

(12) Section 423.5.3 Roof live load reduction for shelters. This section has been added to clarify roof live loads may not be reduced as allowed in Section 1607.12.2.1 (Equation 16-26) if the roof live load is stipulated under ICC 500@ Section 303.2. This section has been added to read: 423.5.3 Roof live load reduction for shelters. Roof live load reduction in Section 1607.12.2.1 (Equation 16-26) shall not be allowed for roof live loads stipulated under ICC 500@ Section 303.2.

(13) Section 423.5.4 Design wind speed. This section has been added to modify the requirements of ICC 500@ Section 304.2 to clarify the minimum design wind speed for all storm shelters in the State of Oklahoma shall be set at 250 miles per hour. This section has been added to read: 423.5.4 Design wind speed. For storm shelters, the minimum design wind speed for the entire State of Oklahoma shall be 250 miles per hour.

(14) Section 423.5.5 Usable storm shelter floor area. This section has been added to modify the requirements of ICC 500@ Section 501.1.2 to clarify when calculating the maximum usable floor area of a shelter, the areas within a privacy enclosure for sanitary facilities shall not be included. This section has been added to read: 423.5.5 Usable storm shelter floor area. The usable storm shelter floor area shall be determined by ICC 500@ Section 501.1.2.1 or 501.1.2.2. Exception: Areas within privacy enclosures for sanitary facilities shall not be included in the usable floor area calculations.

(15) Section 423.5.6 Door operation. This section has been added to modify the requirements of ICC 500@ Section 501.5 to specify means of egress doors shall be operable from the inside of the storm shelter without the use of keys or special knowledge or effort. This

section has been added to read: 423.5.6 Door operation. Means of egress doors shall be operable from the inside without the use of keys or special knowledge or effort.

(16) Section 423.5.6.1 Additional doors and shutters operation. This section has been added to clarify doors and shutters designed to protect windows and other unprotected openings not required as a means of egress in storm shelters shall be operable from the inside without the use of keys or special relocatable tools. This section has been added to read: 423.5.6.1 Additional doors and shutters operation. Doors and shutters designed to protect windows or other unprotected openings not in a required means of egress in storm shelters shall be operable from the inside without the use of keys or special relocatable tools.

(17) 423.5.7 Height of storm shelter. This section has been added to clarify how to determine the location of the natural ventilation openings in storm shelters in accordance with ICC 500@ Section 702.1.1.1, by providing a definition for the height of the storm shelter to be calculated by average of the vertical dimensions from the floor elevation to the bottom of the storm shelter deck or to the underside of a hard ceiling within the storm shelter. This section has been added to read: 423.5.7 Height of storm shelter. When determining the location of natural ventilation in accordance with ICC 500@ Section 702.1.1.1, the height of the storm shelter shall be defined as an average of the vertical dimensions from the floor elevation to the bottom of the storm shelter deck or to the underside of a hard ceiling within the storm shelter.

(18) Section 423.5.8 Additional facilities for storm shelters. This section has been added to modify the requirements of ICC 500@ Section 702.2.2 to clarify when the required number of sanitation facilities for the storm shelter exceeds the number of required facilities provided for the normal occupancy of space, additional facilities may be temporary toilets, chemical toilets or other approved means and must have privacy enclosures with minimum clear inside dimensions of 5 feet by 5 feet (1524 mm by 1524 mm). This section has been added to read: 423.5.8 Additional facilities for storm shelters. Where the required number of sanitation facilities for the storm shelter exceeds the number of facilities provided for the normal occupancy of the space, the additional facilities shall be permitted to be temporary sanitary fixtures, chemical toilets, or other means approved by the authority having jurisdiction. Temporary toilets, chemical toilets, or other approved means shall have temporary or permanent privacy enclosures such as fabric, portable screens, or other means approved by the authority having jurisdiction. Privacy enclosures shall have minimum clear inside dimensions of 5 feet by 5 feet (1524 mm by 1524 mm).

(19) Section 423.5.9 Sanitary facilities support systems. This section has been added to modify the requirements of ICC 500@ Section 702.2.3 to clarify the support systems discussed in the section are for temporary sanitation facilities. This section has been added to read: 423.5.9. Sanitary facilities support systems. Support systems for the temporary sanitation facilities (e.g. bladders, storage tanks or vessels, etc.) shall be capable of supplying water and containing waste for the design capacity of the tornado shelter.

(20) Section 423.5.10 Conversion of plumbing systems. This section has been added to omit ICC 500@ Section 702.2.4 from the minimum requirements of the code. This section has been added to read: 423.5.10 Conversion of plumbing systems. ICC 500@ Section 702.2.4 is omitted.

(21) Section 423.5.11 First aid kit. This section has been added to modify the requirements of ICC 500@ Section 702.4 to specify that first aid kits for community shelters shall be required to be ANSI rated for the number of occupants in the shelter. This section has been added to

read: 423.5.11 First aid kit. An ANSI compliant first aid kit rated for the number of storm shelter occupants, as listed in the construction documents, shall be supplied in all tornado shelters.

748:20-1-11. IBC® 2015 Chapter 9 Fire Protection Systems [AMENDED AND RENUMBERED TO 748:20-2-14]

Chapter 9 of the IBC® 2015 is adopted with the following modifications:

~~(1) Section 903.2.7 Group M. This section has been modified to reword subsection 4 D of this text to provide a reasonable limit for these occupancies and adequate protection without excessive burden on Group M occupancies with small areas of upholstered furniture and mattresses. This section has been modified to read: 903.2.7 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:~~

~~(A) A Group M fire area exceeds 12,000 square feet (1115 square meters).~~

~~(B) A Group M fire area is located more than three stories above grade plane.~~

~~(C) The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 square meters).~~

~~(D) A Group M occupancy where the cumulative area used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 square meters).~~

~~(2) 903.2.9 Group S-1. This section has been modified to add an exception to the fifth requirement in the list for when an automatic fire sprinkler system is required. This section has been modified to read: 903.2.9 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:~~

~~(A) A Group S-1 fire area exceeds 12,000 square feet (1115 square meters).~~

~~(B) A Group S-1 fire area is located more than three stories above grade plane.~~

~~(C) The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 square meters).~~

~~(D) A Group S-1 fire area used for the storage of commercial motor vehicles where the fire area exceeds 5,000 square feet (464 square meters).~~

~~(E) A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 square meters). Exception: Self service storage facility where the fire area is less than 5,000 square feet (464 square meters).~~

~~(3) Section 907.2.3 Group E. This section has been modified to delete the requirement for an emergency voice/alarm communication system in Group E occupancies and require a fire alarm system. This section has been modified to read: 907.2.3 Group E. A manual fire alarm system that activates the occupant notification signal in accordance with Section 907.5 and installed in accordance with 907.6 shall be installed in Group E occupancies. When automatic sprinkler systems or smoke detectors are installed such systems or detectors shall be connected to the building fire alarm system. Exceptions:~~

~~(A) A manual fire alarm system is not required in Group E occupancies with an occupant load of 50 or less.~~

~~(B) Manual fire alarm boxes are not required in Group E occupancies where all of the following apply:~~

~~(i) Interior corridors are protected by smoke detectors.~~

~~(ii) Auditoriums, cafeterias, gymnasiums and similar areas are protected by heat detectors or other approved detection devices.~~

- (iii) Shops and laboratories involving dusts or vapors are protected by heat detectors or other approved detection devices.
 - (iv) The capability to activate the evacuation signal from a central point is provided.
 - (v) In buildings where normally occupied spaces are provided with a two-way communication system between such spaces and a constantly attended receiving station from where a general evacuation alarm can be sounded, except in locations specifically designated by the fire code official.
- (C) Manual fire alarm boxes shall not be required in Group E occupancies where all of the following apply:
- (i) The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1.
 - (ii) The fire alarm system will activate on sprinkler waterflow.
 - (iii) Manual activation is provided from a normally occupied location.
- (4) Section 911.1.3 Size. This section was modified to include an exception to make the fire command center smaller when approved by the fire code official. This section was modified to read: 911.1.3. Size. The room shall be a minimum of 200 square feet (19 square meters) with a minimum dimension of 10 feet (3048 mm). Exception: When approved by the fire code official the fire command center can be reduced in size to not less than a minimum of 96 square feet (9 square meters) with a minimum dimension of 8 feet (2438 mm).

748:20-1-12. IBC® 2015 Chapter 10 Means of Egress [AMENDED AND RENUMBERED TO 748:20-2-15]

Chapter 10 of the IBC® 2015 is adopted with the following modifications:

- (1) Section 1010.1.10 Panic and fire exit hardware. This section has been modified to add an exception to the requirement for panic hardware or fire exit hardware on the access doors for electrical rooms and working spaces. This section has been further modified to require personnel doors in rooms or spaces that contain electrical equipment rated 800 amperes or more that contain overcurrent devices, switching devices, or control devices where the personnel door intended for entrance to and egress from the working space is less than 25 feet from the nearest edge of the working space, to be equipped with panic hardware or fire exit hardware. This section has been modified to read: 1010.1.10 Panic and fire exit hardware. Doors serving a Group H occupancy and doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware. Exceptions:
- (A) A main exit of a Group A occupancy shall be permitted to have locking hardware in accordance with Section 1010.1.9.3, Item 2.
 - (B) Doors serving a Group A or E occupancy shall be permitted to be electromagnetically locked in accordance with Section 1010.1.9.9.
- (2) Electrical rooms with equipment operating at more than 600 volts, nominal, and equipment operating at 600 volts or less, nominal and rated 800 amperes or more that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel. Exception: Personnel entrance to and egress from doors of the electrical equipment working spaces that are greater than 25 feet (7.6 m) from the nearest edge of the electrical equipment.
- (3) Section 1015.6 Mechanical equipment, systems and devices. This section has been modified to clarify the circumstances under which guards shall be provided and to modify the

exception to require the authority having jurisdiction approve the use of a fall/restraint system instead of guards. This section has been modified to read: 1015.6 Mechanical equipment, systems and devices. Guards shall be provided where various components that require services are located on a roof or elevated structure and have a condition as set forth in Sections 1015.6.1 through 1015.6.3. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter. Exception: When approved by the authority having jurisdiction, guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from roof edges and the open sides of walking surfaces.

(4) Section 1015.6.1 Roof edge. This section has been added to clarify the circumstances required to exist for the installation of guards at the roof edge when the components needing service are within a specific distance of the roof edge. This section has been added to read: 1015.6.1 Roof edge. Guards shall be provided when components are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface or elevated structure and such edge or open side is located more than 30 inches (762 mm) above the floor, roof, or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of the component that requires service.

(5) Section 1015.6.2 Skylights. This section has been added to clarify the circumstances for the installation of guards around components near skylights and to provide exceptions to the requirement. This section has been added to read: 1015.6.2 Skylights. Guards shall be provided when a skylight is within 10 feet (3048 mm) of the component that requires service. The guard shall extend 30 inches (762 mm) beyond the edge of the skylight. Exceptions:

(A) Guards are not required when the skylight is located at least 42 inches (1067 mm) above the highest point of the walking surface adjacent to the skylight or component.

(B) Guards are not required if some other provision for skylight fall thru protection is provided and approved by the authority having jurisdiction.

(6) Section 1015.6.3 Roof hatch. This section has been added to clarify the circumstances for the installation of guards around components installed within a specific distance from the roof hatch. This section has been added to read: 1015.6.3 Roof hatch. Guards shall be provided when a roof hatch is within 10 feet (3048 mm) of the component that requires service. The guard shall extend 30 inches (762 mm) beyond the edge of the roof hatch. If the component is within 10 feet (3048 mm) of the ladder access side of the roof hatch, the guard shall incorporate a self closing, self latching gate. The gate shall have a top edge of not less than 42 inches (1067 mm) above the elevated surface adjacent to the gate and shall not allow the passage of a 21 inch (533 mm) sphere.

(7) Section 1015.7 Roof access. This section has been modified to require the authority having jurisdiction approve the use of a fall restraint system instead of a guard in the exception. This section has been modified to read: 1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter. Exception: When approved by the authority having jurisdiction, guards are not required where permanent fall

arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from roof edges and the open sides of the walking surfaces.

748:20-1-13. IBC® 2015 Chapter 16 Structural Design [AMENDED AND RENUMBERED TO 748:20-2-21]

Chapter 16 of the IBC® 2015 is adopted with the following modification: Section 1611.1 Design rain loads. This section has been modified to increase secondary drain size for short duration intensities. This section has been modified to read: 1611.1 Design rain loads. Each portion of a roof shall be designed to sustain the load of rainwater that will accumulate on it if the primary drainage system for that portion is blocked plus the uniform load Caused by water that rises above the inlet of the secondary drainage system at its design flow. The design rainfall shall be based on a rainfall rate of 10.2 inches per hour.

748:20-1-14. IBC® 2015 Chapter 18 Soils and Foundations [AMENDED AND RENUMBERED TO 748:20-2-23]

(a) Chapter 18 of the IBC® is adopted with the following modification: Section 1809.4 Depth and width of footings has been modified to provide an exception to the code for minor buildings such as small storage buildings to be constructed without expensive foundations and be mounted on skids and would apply to light gage metal or similar carports provided they are adequately anchored. This section has been modified to read: Section 1809.4 Depth and width of footings. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (305 mm). Where applicable, the requirements of Section 1809.5 shall also be satisfied. The minimum width of footings shall be 12 inches (305 mm). Exception: Single story free standing building meeting all of the following conditions shall be permitted without footings:

- (1) Assigned to Occupancy Category 1, in accordance with Section 1604.5;
- (2) Light frame wood or metal construction;
- (3) Area of 400 square feet (37 square meters) or less;
- (4) Eave height of 10 feet (3048 mm) or less; and
- (5) Building height of 15 feet (4572 mm) or less.

(b) Such buildings shall have an approved wooden floor, or shall be placed on a concrete slab having a minimum thickness of 3 1/2 inches (89 mm). Buildings shall be anchored to resist uplift as required by Section 1609.

748:20-1-15. IBC® 2015 Chapter 29 Plumbing Systems [AMENDED AND RENUMBERED TO 748:20-2-34]

Chapter 29 of the IBC® 2015 is adopted with the following modification: Section 2902.4.1 Directional signage has been modified to limit the requirement to Group A, B, I, M, and R-1 occupancies, clarify the number of signs needed, and provided two exceptions to the requirement. This section has been modified to read: 2902.4.1 Directional signage. Directional signage indicating the route to the required public toilet facilities in group A, B, I, M, and R-1 occupancies shall be posted in a lobby, corridor, aisle, or similar space, such that the sign can be readily seen from the main entrance to the building or tenant space. Only one sign at each main entrance that is intended for public use shall be required. Exceptions:

- (1) Group A occupancies that are part of an overall group E occupancy need not have directional signage.
- (2) Private-use Group B occupancies need not have directional signage.

748:20-1-16. IBC® 2015 Chapter 32 Encroachments into the Public Right-of-Way [AMENDED AND RENUMBERED TO 748:20-2-37]

Chapter 32 of the IBC® 2015 is adopted with the following modification: Section 3201.3 Other Laws has been modified to allow the authority having jurisdiction the ability in unusual circumstances to evaluate the risk of making an exception to a requirement in this chapter. This section has been modified to read: 3201.3 Other Laws. The provisions of this chapter shall not be construed to permit the violation of other laws or ordinances regulating the use and occupancy of public property or to prevent the holders of public right of way to grant special permission for encroachments in their rights of way greater than those permitted in Section 3202.

748:20-1-18. IBC® 2015 Chapter 35 Referenced Standards [AMENDED AND RENUMBERED TO 748:20-2-40]

Chapter 35 of the IBC® 2015 is adopted with the following modifications:

- (1) The reference to ICC 500® has been modified to change the sections to be referenced. This section has been modified to read: ICC 500®-14 ICC/NSSA Standard on the Design and Construction of Storm Shelters, Code reference sections: 202, 423.5, 423.5.1, 423.5.2, 423.5.2.1, 423.5.3, 423.5.4, 423.5.5, 423.5.6, 423.5.6.1, 423.5.7, 423.5.8, 423.5.9, 423.5.10, and 423.5.11.
- (2) The reference to the International Existing Building Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IEBC®-15 International Existing Building Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (3) The reference to the International Energy Conservation Code® has been modified to change the edition year to 2006. This section has been modified to read: IECC®-06 International Energy Conservation Code®.
- (4) The reference to the International Fire Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IFC®-15 International Fire Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (5) The reference to the International Fuel Gas Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IFGC®-15 International Fuel Gas Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (6) The reference to the International Mechanical Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IMC®-15 International Mechanical Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (7) The reference to the International Plumbing Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IPC®-15 International Plumbing Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (8) The reference to the International Residential Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC."

This section has been modified to read: IRC® 15 International Residential Code® as adopted and modified by the State of Oklahoma through the OUBCC.

(9) The referenced standard for NFPA® 70 National Electrical Code® has been modified to add after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: 70-14 National Electrical Code® as adopted and modified by the State of Oklahoma through the OUBCC.

748:20-1-19. Appendix N, Supplemental Storm Shelter Requirements [REVOKED]

This appendix has been newly created and entitled "Supplemental Storm Shelter Requirements". The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

(1) Section N101 General. This section has been added to clarify scope and design requirements for this appendix. This section has been added to read: N101 General.

(A) N101.1 Scope. This section has been added to specify the provisions of the appendix shall apply exclusively to the installation of storm shelters in critical emergency operation facilities and Group E occupancies. This section has been added to read: N101.1 Scope. The provisions of this appendix shall apply exclusively to the installation of storm shelters in critical emergency operation facilities and Group E occupancies.

(B) N101.2 Design. This section has been added to specify the technical requirements for the items herein shall comply with ICC 500® and Section 423. This section has been added to read: N101.2 Design. Technical requirements for items herein shall comply with ICC 500® and Section 423.

(2) Section N102 Critical emergency operations. This section, formerly numbered Section 423.3 has been moved into appendix N entitled "Supplemental Storm Shelter Requirements" and has been modified to require all 911 call stations, emergency operations centers and normally occupied fire, rescue ambulance and police stations to have a storm shelter constructed in accordance with ICC 500® and Section 423. The section has been added to read: N102 Critical emergency operations. All 911 call stations, emergency operations centers and normally occupied fire, ambulance, and police stations shall have a storm shelter constructed in accordance with ICC 500® and Section 423. Exception: Entire Buildings meeting the requirements for shelter design in ICC 500® and Section 423.

(3) Section N103 Group E occupancies. This section, formerly numbered Section 423.4 has been moved into appendix N entitled "Supplemental Storm Shelter Requirements" and has been modified to require Group E occupancies with an aggregate load over 50 to have a storm shelter and limit the requirement for the storm shelter capacity to classrooms and administrative areas in a new building or addition to an existing structure and not the entire occupant load of the structure. This section has been added to read: N103 Group E occupancies. All group E occupancies with an aggregate occupant load of 50 or more shall have a storm shelter constructed in accordance with ICC 500® and Section 423. The storm shelter shall be capable of housing the occupant load of the classrooms and administrative areas in the new building or addition containing the Group E occupancy. Exceptions:

(A) Group E day care facilities.

(B) Group E occupancies accessory to places of religious worship.

(C) Entire buildings meeting the requirements for storm shelter design in ICC 500® and Section 423.

SUBCHAPTER 2. IBC® 2018

748:20-2-1. Adoption of the International Building Code®, 2018 Edition (IBC® 2018)

(a) The Oklahoma Uniform Building Code Commission (the "OUBCC") hereby adopts the International Building Code®, 2018 Edition (IBC® 2018), second printing (January 2019) as amended and modified in this subchapter as the statewide minimum code for commercial building construction in the State of Oklahoma pursuant to 59 O.S. 1000.23.

(b) The OUBCC through formal action expressly chose to adopt the IBC® 2018 as amended and modified in this subchapter, as the statewide minimum code for commercial building construction in the State of Oklahoma.

(c) As part of its 2012 code cycle, the International Code Council, Inc.® (ICC®) reorganized the format of certain of its model codes as it was foreseeable to ICC that additional chapters will need to be added in the future as model regulations for new processes or operations are developed. The format reorganization was designed by ICC to accommodate such future chapters by providing reserved (unused) chapters in several parts of certain of its model codes as part of its 2012 code cycle. The format reorganization continues into the ICC's 2018 code cycle and is adopted by the OUBCC to the extent provided in this subchapter by the phrase "reserved for future use" inserted in lieu of titles for chapters.

(d) The OUBCC has pulled, from the ICC website, published errata to the second printing of the IBC® through July 31, 2019. Any errata published after that date has not been reviewed or incorporated into these rules.

(e) This material contains information which is proprietary to and copyrighted by the International Code Council, Inc. The acronym "ICC" and the ICC logo are trademarks and service marks of ICC. ALL RIGHTS RESERVED.

748:20-2-2. Effect of Adoption

The IBC® 2018 as amended and revised by these rules, is hereby established and adopted as the statewide minimum code for commercial building construction in Oklahoma pursuant to 59 O.S. § 1000.23, and may only be amended or altered by other jurisdictions pursuant to Oklahoma law and the administrative rules of the OUBCC as set forth in Title 748, Chapter 15 of the Oklahoma Administrative Code.

748:20-2-3. IBC® 2018 and Other Appendices

(a) None of the appendices of the IBC® 2018 have been adopted by the OUBCC for inclusion in the statewide minimum code for commercial building construction in the State of Oklahoma.

(b) Appendices A through N are not adopted as the minimum code for commercial building construction within the State of Oklahoma. However, other jurisdictions within the State of Oklahoma may adopt any or all of said appendices in accordance with 59 O.S. § 1000.29.

748:20-2-4. IBC® 2018 Provisions Adopted and Modified

(a) All chapters and provisions within chapters, including exceptions, of the IBC® 2018 not specifically addressed within these rules as being modified, deleted, moved or removed are hereby adopted without modification as the statewide minimum code for commercial building construction within the State of Oklahoma pursuant to 59 O.S. § 1000.23. Chapters and provisions within chapters, including exceptions adopted with modifications are specifically addressed in these rules.

(b) The ICC® has reserved Chapter 34 for possible future use. The OUBCC has not adopted Chapter 34 and the chapter is not considered part of the statewide minimum code for commercial building construction within the State of Oklahoma.

(c) To the extent any references in the IBC® 2018 as amended and modified in this sub-chapter are made to any other code or standard, the particular edition for that reference is defined in the referenced standards found in the IBC® 2018 as amended and modified in this sub-chapter and in the IBC® 2018 Chapter 35 entitled "Referenced Standards."

748:20-2-5. Participation in Federal Programs and/or Federally Funded or Financed Projects

In order to maximize federal financial aid, assistance, participation, financing and/or funding in any public project(s) and/or federal financial aid, participation, funding for and participation in any federal program(s) by the State of Oklahoma, its agencies, public trusts and instrumentalities, or by any Oklahoma municipalities and other political subdivisions, that receive financial aid, assistance, participation, financing and/or funding for and participate in any federal program(s), the State of Oklahoma, its agencies and instrumentalities, and any Oklahoma municipalities and other political subdivisions, may cooperate with the United States Government and any agency or instrumentality thereof, in the manner authorized and provided by federal law and regulation and in doing so may perform all necessary functions and take all necessary actions for accomplishing such federal purposes and programs, including but not limited to, following and/or complying with federal laws, regulations and/or requirements arising from or related to federal financial aid, assistance, participation, financing and/or funding, in the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, improvement, expansion, operation, maintenance, removal, and demolition of buildings and structures or any appurtenances attached to such buildings or structures, notwithstanding any provisions of any and all uniform building codes and standards adopted by the OUBCC to the contrary.

748:20-2-6. IBC® 2018 Chapter 1 Scope and Administration

Chapter 1 of the Oklahoma adopted IBC® 2018 includes the following Preamble at the very beginning of the chapter:

(1) Pursuant to 59 O.S. § 1000.23, the OUBCC has adopted the IBC® 2018 as amended and revised by the OUBCC, as the statewide minimum code to be used by all entities for commercial building construction in jurisdictions throughout the State of Oklahoma. However, the OUBCC's adoption of Chapter 1 "Scope and Administration" of the IBC® 2018 is for continuity purposes and the OUBCC's adoption of Chapter 1 recognizes the methods of best practice in fully implementing the statewide minimum code for commercial building construction.

(2) All provisions of the adopted IBC® 2018, including Chapter 1, as amended and revised by the OUBCC, are hereby established and adopted as the statewide minimum code for commercial building construction in Oklahoma pursuant to 59 O.S. § 1000.23, which may only be amended or altered pursuant to Oklahoma law and the administrative rules of the OUBCC as set forth in Title 748, Chapter 15 of the Oklahoma Administrative Code. However, the provisions of Chapter 1 adopted herein are only intended to be in force and effect to the extent that the respective provisions do not conflict with State law or the lawful exercise of code administration and enforcement jurisdiction by entities empowered to do so pursuant to applicable law.

(3) Section 105.1.1 Annual permit. This section has been modified to clarify an annual permit is a yearly permit that represents a group of individual permits for each alteration to already approved electrical, gas, mechanical or plumbing installation. This section shall read: 105.1.1 Annual permit. An annual permit is a yearly permit which represents a group of individual permits for each alteration to an already approved electrical, gas, mechanical or plumbing installation. The building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

(4) Section 105.1.2 Annual permit records. This section has been modified to require the building official to collect the OUBCC permit fee for each individual permit that is part of the annual permit at the completion of the annual permit term. This section has been modified to read: 105.1.2 Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The building official shall have access to such detailed records of alterations at all times. At the completion of the entity's annual permit term, the applicant shall file such detailed records of alterations with the building official. Pursuant to the authority of 59 O.S. § 1000.25, the building official shall collect fees for each individual permit which is part of the annual permit once the detailed records are submitted and remit such fees to the OUBCC.

(5) The OUBCC's adoption of Chapter 1 in this manner is made with the recognition that the legal authority granting state and local code administration and enforcement jurisdictions the power and discretion to administer and enforce codes arises from Oklahoma laws governing those jurisdictions. Furthermore, the OUBCC also recognizes that many state and local code administration and enforcement jurisdictions have already created, or have the lawful authority to create, departments, offices and administrative policies pursuant to various applicable laws and other adopted model codes with "Scope and Administration" provisions similar to Chapter 1 of the adopted IBC® 2018.

(6) This limited adoption of Chapter 1 is made in recognition of the authority and discretion possessed by jurisdictions to administer and enforce building codes. Exercising such authority and jurisdiction in a manner inconsistent with Chapter 1 must be supported by Oklahoma law. Code administration and enforcement jurisdictions shall not use the OUBCC's limited adoption of Chapter 1 to circumvent the remainder of the requirements established by the Oklahoma adopted IBC® 2018 and the OUBCC will strongly oppose any such practice.

748:20-2-7. IBC® 2018 Chapter 2 Definitions

Chapter 2 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications: (1) The definition of a CAPACITOR ENERGY STORAGE SYSTEM" has been modified to delete the additional two sub-definitions for a "Preengineered capacitor energy storage system" and a "Prepackaged capacitor energy storage system." This definition has been modified to read: CAPACITOR ENERGY STORAGE SYSTEM. A stationary, rechargeable energy storage system consisting of capacitors, chargers, controls and associated electrical equipment designed to provide electrical power to a building or facility. The system is typically used to provide standby or emergency power, an uninterruptable power supply, load shedding, load sharing or similar capabilities.

(A) The definition of a "Preengineered stationary storage battery system" has been stricken from the code.

(B) The definition of a "Prepackaged stationary storage battery system" has been stricken from the code.

(2) The definition of an INTERMODAL SHIPPING CONTAINER has been added to clarify multiple references in the code. This section has been added to read: INTERMODAL SHIPPING CONTAINER. A six-sided steel unit originally constructed as a general cargo container used for the transport of goods and materials.

748:20-2-8. IBC® 2018 Chapter 3 Use and Occupancy Classification

Chapter 3 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) Section 310.4 Residential Group R-3. This section has been modified to limit a lodging house to four guest rooms with no more than two person per room if constructed in compliance with the requirements of the International Residential Code®, to align the section to the requirements in Title 74 O.S. § 317.1. This section has been modified to read: 310.4 Residential Group R-3. Residential Group R-3 occupancies where the occupants are primarily permanent in nature and not classified as a Group R-1, R-2, R-4 or I, including:

(A) Buildings that do not contain more than two dwelling units

(B) Care facilities that provide accommodations for five or fewer persons receiving care

(C) Congregate living facilities (nontransient) with 16 or fewer occupants

(i) Boarding houses (nontransient)

(ii) Convents

(iii) Dormitories

(iv) Fraternities and sororities

(v) Monasteries

(D) Congregate living facilities (transient) with 10 or fewer occupants - Boarding houses (transient)

(E) Lodging houses (transient) with four or fewer guest rooms and no more than 2 persons per room.

(2) Section 310.4.2 Lodging houses. This section has been modified to limit a lodging house to four guest rooms and no more than two persons per room if constructed in compliance with the requirements in the International Residential Code® to align the section with the requirements in Title 74 O. S. § 317.1. This section has been modified to read: 310.4.2 Lodging houses. Owner-occupied lodging houses with four or fewer guest rooms and no more than 2 persons per room shall be permitted to be constructed in accordance with the International Residential Code®.

748:20-2-9. IBC® 2018 Chapter 4 Special Detailed Requirements Based on Use and Occupancy

Chapter 4 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) Section [F] 403.4.8.2 Fuel line piping protection. This section has been modified to add a third option for separating fuel lines supplying a generator set inside a building utilizing a fire-resistant pipe-protection system that has been tested in accordance with UL 1489. This section has been modified to read: [F] 403.4.8.2. Fuel line piping protection. Fuel lines supplying a generator set inside a building shall be separated from areas of the building other than the room the generator is located in, by one of the following methods:

(A) A fire-resistant pipe-protection system that has been tested in accordance with UL 1489. The system shall be installed as tested and in accordance with the manufacturer's installation instructions, and shall have a rating of not less than 2 hours. Where the

building is protected throughout with an automatic fire sprinkler system installed in accordance with Section 903.3.1.1, the required rating shall be reduced to 1 hour.

(B) An assembly that has a fire-resistance rating of not less than 2 hours. Where the building is protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, the required fire-resistance rating shall be reduced to 1 hour.

(C) Other approved methods.

(2) Section 406.7.2.1 Canopies used to support gaseous hydrogen systems. This section has been modified by deleting the word "hydrogen" in the heading and in the third requirement; and by adding the wording "lighter-than-air" to the section header to make the section applicable to all lighter-than-air fuels. This section has been modified to read: 406.7.2.1 Canopies used to support lighter-than-air gaseous systems. Canopies that are used to shelter dispensing operations where flammable compressed gases are located on the roof of the canopy shall be in accordance with the following:

(A) The canopy shall meet or exceed Type I construction requirements.

(B) Operations located under canopies shall be limited to refueling only.

(C) The canopy shall be constructed in a manner that prevents the accumulation of gas.

(3) Section 406.7.2.2. Canopies sheltering units and devices that dispense lighter-than-air gas. This section has been added to require all canopies to be designed to prevent the accumulation or entrapment of ignitable vapors under canopies when dispensing lighter-than-air gas or all electrical equipment installed beneath the canopy is required to be suitable for Class I, Division 2 hazardous (classified) locations. This section has been added to read: 406.7.2.2 Canopies sheltering units and devices that dispense lighter-than-air gas. Where CNG, LNG, or Hydrogen motor fuel dispensing devices are installed beneath a canopy, the canopy shall be designed to prevent the accumulation or entrapment of ignitable vapors, including provisions for natural or mechanical ventilation means, or all electrical equipment installed beneath the canopy or within the enclosure shall be suitable for Class I, Division 2 hazardous (classified) locations. Tank vents that are installed within or attached to the canopy shall extend a minimum of 5 feet (1524 mm) above the highest projection of the canopy. Compression and storage equipment located on the top of the canopy shall be in accordance with current State of Oklahoma adopted International Fire Code®, Section 2309.

(4) Table 414.5.1 Explosion Control Requirements. This table has been modified to add electrochemical energy storage systems to the Special Uses section of the table and to add footnote "i" to the notes at the bottom of the table. The table has been modified to read: Table 414.5.1 Explosion Control Requirements. The superscript letters "a" and "h" are listed after the title indicating the relative footnotes applicable to the entire table. The table has 30 rows with 4 columns per row and is described below.

(A) Row 1 is the header row and contains the headers for the four columns as listed below:

(i) Row 1, column 1, header is entitled "MATERIAL."

(ii) Row 1, column 2, header is entitled "CLASS."

(iii) Row 1, column 3, header is entitled "Barricade construction (Explosion Control Method)."

(iv) Row 1, column 4, header is entitled "Explosion (deflagration) venting or explosion (deflagration) prevention systems (Explosion Control Method)" with a superscript "b" after the word "systems" to indicate footnote "b" applies.

(B) Row 2 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 2, column 1 contains the wording "HAZARD CATEGORY."
- (ii) Row 2, column 2 is blank.
- (iii) Row 2, column 3 is blank.
- (iv) Row 2, column 4 is blank.

(C) Row 3 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 3, column 1 contains the wording "Combustible dusts" with a superscript "c" after the word "dust" to indicate footnote "c" applies.
- (ii) Row 3, column 2 contains a hyphen with no words or numbers.
- (iii) Row 3, column 3 contains the wording "Not Required."
- (iv) Row 3, column 4 contains the wording "Required."

(D) Row 4 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 4, column 1 contains the wording "Cryogenic flammables."
- (ii) Row 4, column 2 contains a hyphen with no words or numbers.
- (iii) Row 4, column 3 contains the wording "Not Required."
- (iv) Row 4, column 4 contains the wording "Required."

(E) Row 5 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 5, column 1 contains the wording "Explosives."
- (ii) Row 5, column 2 contains the wording "Division 1.1."
- (iii) Row 5, column 3 contains the wording "Required."
- (iv) Row 5, column 4 contains the wording "Not Required."

(F) Row 6 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 6, column 1 contains the wording "Explosives."
- (ii) Row 6, column 2 contains the wording "Division 1.2."
- (iii) Row 6, column 3 contains the wording "Required."
- (iv) Row 6, column 4 contains the wording "Not Required."

(G) Row 7 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 7, column 1 contains the wording "Explosives."
- (ii) Row 7, column 2 contains the wording "Division 1.3."
- (iii) Row 7, column 3 contains the wording "Not Required."
- (iv) Row 7, column 4 contains the wording "Required."

(H) Row 8 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 8, column 1 contains the wording "Explosives."
- (ii) Row 8, column 2 contains the wording "Division 1.4."
- (iii) Row 8, column 3 contains the wording "Not Required."
- (iv) Row 8, column 4 contains the wording "Required."

(I) Row 9 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 9, column 1 contains the wording "Explosives."

- (ii) Row 9, column 2 contains the wording "Division 1.5."
 - (iii) Row 9, column 3 contains the wording "Required."
 - (iv) Row 9, column 4 contains the wording "Not Required."
- (J) Row 10 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 10, column 1 contains the wording "Explosives."
 - (ii) Row 10, column 2 contains the wording "Division 1.6."
 - (iii) Row 10, column 3 contains the wording "Required."
 - (iv) Row 10, column 4 contains the wording "Not Required."
- (K) Row 11 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 11, column 1 contains the wording "Flammable gas."
 - (ii) Row 11, column 2 contains the wording "Gaseous."
 - (iii) Row 11, column 3 contains the wording "Not Required."
 - (iv) Row 11, column 4 contains the wording "Required."
- (L) Row 12 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 12, column 1 contains the wording "Flammable gas."
 - (ii) Row 12, column 2 contains the wording "Liquefied."
 - (iii) Row 12, column 3 contains the wording "Not Required."
 - (iv) Row 12, column 4 contains the wording "Required."
- (M) Row 13 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 13, column 1 contains the wording "Flammable liquid."
 - (ii) Row 13, column 2 contains the letters "IA" followed by a superscript "d" to indicate footnote "d" applies.
 - (iii) Row 13, column 3 contains the wording "Not Required."
 - (iv) Row 13, column 4 contains the wording "Required."
- (N) Row 14 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 14, column 1 contains the wording "Flammable liquid."
 - (ii) Row 14, column 2 contains the letters "IB" followed by a superscript "e" to indicate footnote "e" applies.
 - (iii) Row 14, column 3 contains the wording "Not Required."
 - (iv) Row 14, column 4 contains the wording "Required."
- (O) Row 15 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 15, column 1 contains the wording "Organic peroxides."
 - (ii) Row 15, column 2 contains the letter "U."
 - (iii) Row 15, column 3 contains the wording "Required."
 - (iv) Row 15, column 4 contains the wording "Not Permitted."
- (P) Row 16 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 16, column 1 contains the wording "Organic peroxides."
 - (ii) Row 16, column 2 contains the letter "I."
 - (iii) Row 16, column 3 contains the wording "Required."

- (iv) Row 16, column 4 contains the wording "Not Permitted."
- (Q) Row 17 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 17, column 1 contains the wording "Oxidizer liquids and solids."
 - (ii) Row 17, column 2 contains the number "4."
 - (iii) Row 17, column 3 contains the wording "Required."
 - (iv) Row 17, column 4 contains the wording "Not Permitted."
- (R) Row 18 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 18, column 1 contains the wording "Pyrophoric gas."
 - (ii) Row 18, column 2 contains a hyphen with no words or numbers.
 - (iii) Row 18, column 3 contains the wording "Not Required."
 - (iv) Row 18, column 4 contains the wording "Required."
- (S) Row 19 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 19, column 1 contains the wording "Unstable (reactive)."
 - (ii) Row 19, column 2 contains the number "4."
 - (iii) Row 19, column 3 contains the wording "Required."
 - (iv) Row 19, column 4 contains the wording "Not Permitted."
- (T) Row 20 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 20, column 1 contains the wording "Unstable (reactive)."
 - (ii) Row 20, column 2 contains the wording "3 Detonable."
 - (iii) Row 20, column 3 contains the wording "Required."
 - (iv) Row 20, column 4 contains the wording "Not Permitted."
- (U) Row 21 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 21, column 1 contains the wording "Unstable (reactive)."
 - (ii) Row 21 column 2 contains the wording "3 Nondetonable".
 - (iii) Row 21, column 3 contains the wording "Not Required."
 - (iv) Row 21, column 4 contains the wording "Required."
- (V) Row 22 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 22, column 1 contains the wording "Water-reactive liquids and solids."
 - (ii) Row 22, column 2 contains the number "3."
 - (iii) Row 22, column 3 contains the wording "Not Required."
 - (iv) Row 22, column 4 contains the wording "Required."
- (W) Row 23 contains the following information in each of the four columns listed for the header row number 1:
- (i) Row 23 column 1 contains the wording "Water-reactive liquids and solids."
 - (ii) Row 23, column 2 contains the number "2" followed by a superscript "g" to indicate footnote "g" applies.
 - (iii) Row 23, column 3 contains the wording "Not Required."
 - (iv) Row 23, column 4 contains the wording "Required."
- (X) Row 24 contains the following information in each of the four columns listed for the header row number 1:

- (i) Row 24 column 1 contains the wording "SPECIAL USES."
 - (ii) Row 24, column 2 is blank
 - (iii) Row 24, column 3 is blank.
 - (iv) Row 24, column 4 is blank.
- (Y) Row 25 contains the following information in each of the four columns listed for the header row number 1:
 - (i) Row 25 column 1 contains the wording "Acetylene generator rooms"
 - (ii) Row 25, column 2 contains a hyphen with no words or numbers.
 - (iii) Row 25, column 3 contains the wording "Not Required."
 - (iv) Row 25, column 4 contains the wording "Required."
- (Z) Row 26 contains the following information in each of the four columns listed for the header row number 1:
 - (i) Row 26 column 1 contains the wording "Electrochemical energy storage systems" followed by a superscript "i" to indicate footnote "i" applies.
 - (ii) Row 26, column 2 contains a hyphen with no words or numbers.
 - (iii) Row 26, column 3 contains the wording "Not Required."
 - (iv) Row 26, column 4 contains the wording "Required."
- (AA) Row 27 contains the following information in each of the four columns listed for the header row number 1:
 - (i) Row 27 column 1 contains the wording "Grain processing."
 - (ii) Row 27, column 2 contains a hyphen with no words or numbers.
 - (iii) Row 27, column 3 contains the wording "Not Required."
 - (iv) Row 27, column 4 contains the wording "Required."
- (BB) Row 28 contains the following information in each of the four columns listed for the header row number 1:
 - (i) Row 28 column 1 contains the wording "Liquefied petroleum gas-distribution facilities."
 - (ii) Row 28, column 2 contains a hyphen with no words or numbers.
 - (iii) Row 28, column 3 contains the wording "Not Required."
 - (iv) Row 28, column 4 contains the wording "Required."
- (CC) Row 29 contains the following information in each of the four columns listed for the header row number 1:
 - (i) Row 29 column 1 contains the wording "Where explosion hazards exist" followed by a superscript "f" to indicate footnote "f" applies.
 - (ii) Row 29, column 2 contains the wording "Detonation."
 - (iii) Row 29, column 3 contains the wording "Required."
 - (iv) Row 29, column 4 contains the wording "Not Permitted."
- (DD) Row 30 contains the following information in each of the four columns listed for the header row number 1:
 - (i) Row 30 column 1 contains the wording "Where explosion hazards exist" followed by a superscript "f" to indicate footnote "f" applies.
 - (ii) Row 30, column 2 contains the wording "Deflagration."
 - (iii) Row 30, column 3 contains the wording "Not Required."
 - (iv) Row 30, column 4 contains the wording "Required."
- (EE) There are nine footnotes that follow the table and are listed below:
 - (i) Footnote "a" See Section 414.1.3.

- (ii) Footnote "b" See the International Fire Code®.
- (iii) Footnote "c" As generated during manufacturing or processing.
- (iv) Footnote "d" Storage or use.
- (v) Footnote "e" In open use or dispensing.
- (vi) Footnote "f" Rooms containing dispensing and use of hazardous materials where an explosive environment can occur because of the characteristics or nature of the hazardous materials or as a result of the dispensing or use process.
- (vii) Footnote "g" A method of explosion control shall be provided where Class 2 water-reactive materials can form potentially explosive mixtures.
- (viii) Footnote "h" Explosion venting is not required for Group H-5 fabrication areas complying with Section 415.11.1 and the International Fire Code®.
- (ix) Footnote "i" Where explosion control is required in Section 1206.6 of the International Fire Code®.

(5) Section 419.1 General. This section has been modified to add a new exception to allow Group B, M, and F occupancies located in a detached dwelling unit to be constructed in accordance with the IRC® if they comply with the limitations in Section 419.1.1. This section has been modified to read: 419.1 General. A live/work unit shall comply with Sections 419.1 through 419.9. Exceptions:

(A) Dwelling or sleeping units that include an office that is less than 10 percent of the area of the dwelling unit are permitted to be classified as dwelling units with accessory occupancies in accordance with Section 508.2.

(B) Group B, M, and F occupancies that are located in a detached dwelling unit complying with the limitations of Section 419.1.1 shall be permitted to be constructed in accordance with the International Residential Code®.

(C) The office of a self-service storage facility with a dwelling or sleeping unit shall not be considered a live/work unit.

(6) Section 419.1.1 Limitations. This section has been modified to limit the nonresidential portion of the live/work unit to not greater than 2,500 square feet (232 square meters). This section has been modified to read: 419.1.1 Limitations. The following shall apply to all live/work areas:

(A) The nonresidential portion of the live/work unit is permitted to be not greater than 2,500 square feet (232 square meters) in area;

(B) The nonresidential area is permitted to be not more than 50 percent of the area of each live/work unit;

(C) The nonresidential area function shall be limited to the first or main floor only of the live/work unit; and

(D) Not more than five nonresidential workers or employees are allowed to occupy the nonresidential area at any one time.

(7) Section 423.1 General. This section has been modified to include above and below ground storm shelters and limit the use of the term storm shelter to those structures constructed according to this section. This section has been modified to read: 423.1 General. This section applies to the construction of above or below ground storm shelters constructed as separate detached buildings, or rooms or spaces within buildings, structures, or portions thereof for the purpose of providing protection from storms that produce high winds, such as tornados and hurricanes during the storm. Any room or structure, as may be used as a place of refuge during a severe wind storm event, shall not be defined as a storm shelter unless

specifically designed to the requirements as listed in Section 423. Design of facilities for use as emergency shelters after the storm are outside the scope of ICC 500 and shall comply with Table 1604.5 as a Risk Category IV Structure.

(8) Section 423.1.1 Hardened Spaces. This section has been added to prohibit the use of a room or structure, used as a place of refuge during a severe wind event from being called a storm shelter unless specifically designed to the requirements listed in Section 423. This section has been added to read: 423.1.1 Hardened spaces. Any room or structure, as may be used as a place of refuge during a severe wind storm event, shall not be defined as a storm shelter unless specifically designed to the requirements as listed in Section 423.

(9) Section 423.3 Critical emergency operations. This section has been modified to remove a reference to shelter design wind speed and Figure 304.2(1) of the ICC 500®. This section has been modified to read: 423.3 Critical emergency operations. Buildings that contain 911 call stations, emergency operation centers, and fire, rescue, ambulance and police stations shall comply with Table 1604.5 as a Risk Category IV structure and shall be provided with a storm shelter constructed in accordance with ICC 500®.

(10) Section 423.4 Group E occupancies. This section has been modified to require all Group E occupancies with an occupant load over 200 to have a storm shelter constructed in accordance with ICC 500®; and add a fourth exception requiring all additions to existing Group E occupancies comply with the International Existing Building Code®. This section has been modified to read: 423.4 Group E occupancies. All Group E occupancies with an occupant load of 200 or more shall have a storm shelter constructed in accordance with ICC 500®. Exceptions:

(A) Group E day care facilities.

(B) Group E occupancies accessory to places of religious worship.

(C) Buildings meeting the requirements for shelter design in ICC 500®.

(D) Additions to Group E occupancies shall comply with the requirements of Section 1106 of the International Existing Building Code®.

(11) Section 423.4.1 Required occupant capacity. This section has been modified to require the occupant capacity of the storm shelter to include all buildings on the site and be the greater of the total occupant load of the classrooms, vocational room and offices of the Group E occupancy or the occupant load of the largest indoor assembly space associated with the Group E occupancy. For clarification, the exceptions apply to the entire section and are not exceptions to item B. This section has been modified to read: 423.4.1 Required occupant capacity. The required occupant capacity of the storm shelter shall include all of the buildings on the site and shall be the greater of the following:

(A) The total occupant load of the classrooms, vocational rooms and offices of the Group E occupancy.

(B) The occupant load of the largest indoor assembly space that is associated with the Group E occupancy.

(C) Exceptions:

(i) Where a new building is being added on an existing Group E site, and where the new building is not of sufficient size to accommodate the required occupant capacity of the storm shelter for all of the buildings on the site, the storm shelter shall at a minimum accommodate the required occupant capacity for the new building.

(ii) The required occupant capacity of the shelter shall be permitted to be reduced by the occupant capacity of any existing storm shelters or safe rooms on the site.

(12) Section 423.5 Required. This section has been added to specify the requirements when storm shelters are provided. This section has been added to read: 423.5 Required. Where storm shelters are provided, they shall be provided in compliance with ICC 500® except as required by Sections 423.5.1 through 423.5.11.

(13) Section 423.5.1 Storm shelter documents. This section has been added to require the construction documents prepared for the storm shelter to be maintained and protected within the storm shelter by the owner or owner's authorized agent. This section has been added to read: 423.5.1 Storm shelter documents. The construction documents which were prepared for the construction of the storm shelter, shall be maintained and protected within the storm shelter by the owner or owner's authorized agent.

(14) Section 423.5.2 Signage. This section has been added to clarify that all signs for a storm shelter, as outlined in ICC 500® Sections 108, 504.1, 504.1.1, and 504.1.2, comply with the applicable signage requirements of ICC A117.1®. This section has been added to read: 423.5.2 Signage. All signs, as outlined in ICC 500® Sections 108, 504.1, 504.1.1 and 504.1.2 shall comply with the applicable requirements of ICC A117.1®.

(15) Section 423.5.2.1 Entrance signage. This section has been added to clarify entrance signage as required by ICC 500® Section 504.1.1 is not required for the storm shelter when the storm shelter can be accessed from within the host building and is only open to the occupants of the host building. This section has been added to read: 423.5.2.1 Entrance signage. Entrance signage, as outlined in ICC 500® Section 504.1.1 shall not be required at exterior entrances where the shelter can be accessed from within a host building and is only open to the occupants of the host building.

(16) Section 423.5.3 Roof live load reduction for shelters. This section has been added to clarify roof live loads may not be reduced as allowed in Section 1607.13.2.1 (Equation 16-26) if the roof live load is stipulated under ICC 500® Section 303.2. This section has been added to read: 423.5.3 Roof live load reduction for shelters. Roof live load reduction in Section 1607.13.2.1 (Equation 16-26) shall not be allowed for roof live loads stipulated under ICC 500® Section 303.2.

(17) Section 423.5.4 Design wind speed. This section has been added to modify the requirements of ICC 500® Section 304.2 to clarify the minimum design wind speed for all storm shelters in the State of Oklahoma shall be set at 250 miles per hour. This section has been added to read: 423.5.4 Design wind speed. For storm shelters, the minimum design wind speed for the entire State of Oklahoma shall be 250 miles per hour.

(18) Section 423.5.5 Usable storm shelter floor area. This section has been added to modify the requirements of ICC 500® Section 501.1.2 to clarify when calculating the maximum usable floor area of a shelter, the areas within a privacy enclosure for sanitary facilities shall not be included. This section has been added to read: 423.5.5 Usable storm shelter floor area. The usable storm shelter floor area shall be determined by ICC 500® Section 501.1.2.1 or 501.1.2.2. Exception: Areas within privacy enclosures for sanitary facilities shall not be included in the usable floor area calculations.

(19) Section 423.5.6 Door operation. This section has been added to modify the requirements of ICC 500® Section 501.5 to specify means of egress doors shall be operable from the inside of the storm shelter without the use of keys or special knowledge or effort. This section has been added to read: 423.5.6 Door operation. Means of egress doors shall be operable from the inside without the use of keys or special knowledge or effort.

(20) Section 423.5.6.1 Additional door and shutter operation. This section has been added to clarify doors and shutters designed to protect windows and other unprotected openings not required as a means of egress in storm shelters shall be operable from the inside without the use of keys or special relocatable tools. This section has been added to read: 423.5.6.1 Additional door and shutter operation. Doors and shutters designed to protect windows or other unprotected openings not in a required means of egress in storm shelters shall be operable from the inside without the use of keys or special relocatable tools.

(21) 423.5.7 Height of storm shelter. This section has been added to clarify how to determine the location of the natural ventilation openings in storm shelters in accordance with ICC 500® Section 702.1.1.1, by providing a definition for the height of the storm shelter to be calculated by average of the vertical dimensions from the floor elevation to the bottom of the storm shelter deck or to the underside of a hard ceiling within the storm shelter. This section has been added to read: 423.5.7 Height of storm shelter. When determining the location of natural ventilation in accordance with ICC 500® Section 702.1.1.1, the height of the storm shelter shall be defined as an average of the vertical dimensions from the floor elevation to the bottom of the storm shelter deck or to the underside of a hard ceiling within the storm shelter.

(22) Section 423.5.8 Additional facilities for storm shelters. This section has been added to modify the requirements of ICC 500® Section 702.2.2 to clarify when the required number of sanitation facilities for the storm shelter exceeds the number of required facilities provided for the normal occupancy of space, additional facilities may be temporary toilets, chemical toilets or other approved means and must have privacy enclosures with minimum clear inside dimensions of 5 feet by 5 feet (1524 mm by 1524 mm). This section has been added to read: 423.5.8 Additional facilities for storm shelters. Where the required number of sanitation facilities for the storm shelter exceeds the number of facilities provided for the normal occupancy of the space, the additional facilities shall be permitted to be temporary sanitary fixtures, chemical toilets, or other means approved by the authority having jurisdiction. Temporary toilets, chemical toilets, or other approved means shall have temporary or permanent privacy enclosures such as fabric, portable screens, or other means approved by the authority having jurisdiction. Privacy enclosures shall have minimum clear inside dimensions of 5 feet by 5 feet (1524 mm by 1524 mm).

(23) Section 423.5.9 Sanitary facilities support systems. This section has been added to modify the requirements of ICC 500® Section 702.2.3 to clarify the support systems discussed in the section are for temporary sanitation facilities. This section has been added to read: 423.5.9. Sanitary facilities support systems. Support systems for the temporary sanitation facilities (e.g. bladders, storage tanks or vessels, etc.) shall be capable of supplying water and containing waste for the design capacity of the tornado shelter.

(24) Section 423.5.10 Conversion of plumbing systems. This section has been added to omit ICC 500® Section 702.2.4 from the minimum requirements of the code. This section has been added to read: 423.5.10 Conversion of plumbing systems. ICC 500® Section 702.2.4 is omitted.

(25) Section 423.5.11 First aid kit. This section has been added to modify the requirements of ICC 500® Section 702.4 to specify that first aid kits for community shelters shall be required to be ANSI rated for the number of occupants in the shelter. This section has been added to read: 423.5.11 First aid kit. An ANSI compliant first aid kit rated for the number of storm

shelter occupants, as listed in the construction documents, shall be supplied in all tornado shelters.

(26) Section 429 Cultivation, Extraction and Processing of Plant Material. This section header has been added to clarify a new section has been added related to the cultivation, extraction and processing of plant material. This section has been added to read: 429 Cultivation, Extraction and Processing of Plant Material.

(27) Section 429.1 General. This section has been added to clarify plant growing facilities that utilized carbon dioxide enrichment systems in accordance with Section 5307.4 of the International Fire Code® and plant processing or extraction facilities in accordance with Chapter 39 of the International Fire Code® shall also comply with Sections 429.2 through 429.6. This section has been added to read: 429.1 General. Plant growing facilities that utilize carbon dioxide enrichment systems in accordance with Section 5307.4 of the International Fire Code® and plant processing or extraction facilities in accordance with Chapter 39 of the International Fire Code® shall also comply with Sections 429.2 through 429.6.

(28) Section 429.2 Construction. This section has been added to clarify the construction of buildings used for the extraction process that include the act of extraction of the oils and fats by use of solvent, desolventizing of the raw material, production of the miscella, distillation of the solvent from the miscella and solvent recovery shall comply with the section. It provides an exception for extraction processes that utilize nonhazardous solvents or carbon dioxide. This section has been added to read: 429.2 Construction. The construction of buildings used for the extraction process that include the act of extraction of the oils and fats by use of solvent, desolventizing of the raw material, production of the miscella, distillation of the solvent from the miscella and solvent recovery shall comply with this section. Exception: Extraction process that utilizes nonhazardous solvents or carbon dioxide.

(29) Section 429.2.1 Noncombustible construction. This section has been added to clarify extraction equipment and processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code® shall be located in a room constructed of noncombustible construction. This section has been added to read: 429.2.1 Noncombustible construction. Extraction equipment and processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code® shall be located in a room constructed of noncombustible materials.

(30) Section 429.2.2 Prohibited occupancies. This section has been added to clarify extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code® are not permitted in any building containing a Group A, E, I or R occupancy. This section has been added to read: 429.2.2 Prohibited occupancies. Extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code® shall not be located in any building containing a Group A, E, I, or R occupancy.

(31) Section 429.3 Equipment location. This section has been added to clarify extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code® as solvents shall be located in a room dedicated to extraction and the room shall not be used for any other purpose. The section prohibits the storage of solvents in the extraction room. This section has been added to read: 429.3 Equipment location. The extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code® as solvents shall be located in a room dedicated to extraction and

the room shall not be used for any other purpose. There shall be no storage of solvents in the extraction room.

(32) Section 429.4 Interior finish. This section has been added to require the interior finish of wall and ceilings in plant growing, processing and extraction facilities to comply with this section and Section 803. This section has been added to read: 429.4 Interior finish. Interior finish of walls and ceilings in plant growing, processing and extraction facilities shall comply with this section and Section 803.

(33) Section 429.4.1 Plastic, mylar and other thin sheeting. This section has been added to require plastic, mylar or other thin sheeting that covers any walls or ceilings comply with this section and Section 803. This section has been added to read: 429.4.1 Plastic, mylar and other thin sheeting. Plastic, mylar and other thin sheeting that covers any walls or ceilings shall comply with this section and Section 803.

(34) Section 429.4.1.1 Installation. This section has been added to prohibit plastic, mylar or other thin sheeting to be hung from ceilings or suspended overhead structures to create divider walls or rooms. This section has been added to read: 429.4.1.1 Installation. Plastic, mylar and other thin sheeting shall not be hung from ceilings or suspended overhead structures to create divider walls or rooms.

(35) Section 429.5 Emergency power system. This section has been added to require emergency power to lighting and ventilation systems in the extraction room when the extraction process utilizes hydrocarbon gases or liquids as solvents, in accordance with Section 2702. This section has been added to read: 429.5 Emergency power system. For extraction processes utilizing hydrocarbon gases or liquids as solvents, the extraction room lighting and ventilation system shall be provided with emergency power in accordance with Section 2702.

(36) Section 429.6 Means of egress. This section has been added to require at least one means of egress door from an extraction room, utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code®, swing in the direction of egress travel. It requires the egress door to be equipped with panic hardware or fire exit hardware and to have a self-closing or automatic-closing device. This section has been added to read: 429.6 Means of egress. Extraction rooms utilizing materials classified as physical hazards in accordance with Section 307 of the International Fire Code® shall have a minimum of one exit access door that swings in the direction of egress travel. The exit access door shall be equipped with panic hardware or fire exit hardware and a self-closing or automatic-closing device.

748-20-2-10. IBC® 2018 Chapter 5 General Building Heights and Areas

Chapter 5 of the Oklahoma adopted IBC 2018 is adopted with the following modification: Table 509 Incidental uses has been modified to remove the row related to stationary storage battery systems. This table has been modified read as follows: Table 509 Incidental uses. The table contains 18 rows with 2 columns in each row as described below:

(1) Row 1 is the header row and contains the headers for the two columns as listed below:

(A) Row 1, column 1 header is entitled "Room or Area."

(B) Row 1, column 2 header is entitled "Separation and/or Protection."

(2) Row 2 contains the following information in each of the two columns listed for the header row number 1:

(A) Row 2, column 1 contains the wording "Furnace room where any piece of equipment is over 400,000 Btu per hour input."

- (B) Row 2, column 1 contains the wording "1 hour or provide automatic sprinkler system."
- (3) Row 3 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 3, column 1 contains the wording "Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower."
- (B) Row 3, column 2 contains the wording "1 hour or provide automatic sprinkler system."
- (4) Row 4 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 4, column 1 contains the wording "Refrigerant machinery room."
- (B) Row 4, column 2 contains the wording "1 hour or provide automatic sprinkler system."
- (5) Row 5 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 5, column 1 contains the wording "Hydrogen fuel gas rooms, not classified as Group H."
- (B) Row 5, column 2 contains the wording "1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies."
- (6) Row 6 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 6, column 1 contains the wording "Incinerator rooms."
- (B) Row 6, column 2 contains the wording "2 hours and provide automatic sprinkler system."
- (7) Row 7 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 7, column 1 contains the wording "Paint shops, not classified as Group H, located in occupancies other than Group F."
- (B) Row 7, column 2 contains the wording "2 hours; or 1 hour and provide an automatic sprinkler system."
- (8) Row 8 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 8, column 1 contains the wording "In Group E occupancies, laboratories and vocational shops not classified as Group H."
- (B) Row 8, column 2 contains the wording "1 hour or provide automatic sprinkler system."
- (9) Row 9 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 9, column 1 contains the wording "In Group I-2 occupancies, laboratories not classified as Group H."
- (B) Row 9, column 2 contains the wording "1 hour and provide automatic sprinkler system."
- (10) Row 10 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 10, column 1 contains the wording "In ambulatory care facilities, laboratories not classified as Group H."

- (B) Row 10, column 2 contains the wording "1 hour or provide automatic sprinkler system."
- (11) Row 11 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 11, column 1 contains the wording "Laundry rooms over 100 square feet."
- (B) Row 11, column 2 contains the wording "1 hour or provide automatic sprinkler system."
- (12) Row 12 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 12, column 1 contains the wording "In Group I-2, laundry rooms over 100 square feet."
- (B) Row 12, column 2 contains the wording "1 hour."
- (13) Row 13 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 13, column 1 contains the wording "Group I-3 cells and Group I-2 patient rooms equipped with padded surfaces."
- (B) Row 13, column 2 contains the wording "1 hour."
- (14) Row 14 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 14, column 1 contains the wording "In Group I-2, physical plant maintenance shops."
- (B) Row 14, column 2 contains the wording "1 hour."
- (15) Row 15 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 15, column 1 contains the wording "In ambulatory care facilities or Group I-2 occupancies, waste and linen collection rooms with containers that have an aggregate volume of 10 cubic feet or greater."
- (B) Row 15, column 2 contains the wording "1 hour."
- (16) Row 16 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 16, column 1 contains the wording "In other than ambulatory care facilities and Group I-2 occupancies, waste and linen collection rooms over 100 square feet."
- (B) Row 16, column 2 contains the wording "1 hour or provide automatic sprinkler system."
- (17) Row 17 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 17, column 1 contains the wording "In ambulatory care facilities or Group I-2 occupancies, storage rooms greater than 100 square feet."
- (B) Row 17, column 2 contains the wording "1 hour."
- (18) Row 18 contains the following information in each of the two columns listed for the header row number 1:
- (A) Row 18, column 1 contains the wording "Electrical installations and transformers."
- (B) Row 18, column 2 contains the wording "See Sections 110.26 through 110.34 and Sections 450.8 through 450.48 of NFPA 70® for protection and separation requirements."

(19) At the bottom of the table the following appears: "For SI: 1 square foot equals 0.0929 square meters, 1 pound per square inch (psi) equals 6.9 kPa, 1 British thermal unit (Btu) per hour equals 0.293 watts, 1 horsepower equals 746 watts, 1 gallon equals 3.785 L, and 1 cubic foot equals 0.0283 meters cubed."

748:20-2-11. IBC® Chapter 6 [RESERVED]

748-20-2-12. IBC® 2018 Chapter 7 Fire and Smoke Protection Features

Chapter 7 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) Section 706.8 Openings. This section has been modified to require openings in double fire walls constructed in accordance with NFPA® 221 to be protected using one fire door or fire shutter assembly in each separate wall. A third exception to the section has been added for fire protection assemblies, ratings and markings for openings in double fire walls constructed in accordance with NFPA® 221 that meet the fire rating indicated in Table 706.8. This section has been modified to read: 706.8 Openings. Each opening through a fire wall shall be protected in accordance with Section 716 and shall not exceed 156 square feet (15 square meters). Openings in double fire walls, constructed in accordance with NFPA® 221, shall be protected using one fire door or fire shutter assembly in each separate wall. The aggregate width of openings at any floor level shall not exceed 25 percent of the length of the wall. Exceptions:

(A) Openings are not permitted in party walls constructed in accordance with Section 706.1.1.

(B) Openings shall not be limited to 156 square feet (15 square meters) where both buildings are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

(C) Fire protection assemblies, ratings and markings for openings in double fire walls, constructed in accordance with NFPA® 221, shall meet the fire rating indicated in Table 706.8.

(2) Table 706.8 Opening Fire Protection Assemblies, Ratings and Markings for Double Fire Walls Constructed in Accordance with NFPA® 221. This table has been added to the code to provide the requirements for constructing double fire walls in accordance with NFPA® 221. The table has been added to read: Table 706.8 Opening Fire Protection Assemblies, Ratings and Markings for Double Fire Walls Constructed in Accordance with NFPA® 221. The table contains 4 rows and 9 columns, as described below:

(A) Row 1 contains the headers for each column, which are listed below in order from column one through column nine:

(i) Row 1, column 1 heading is entitled "Required Single Fire Wall Assembly Rating (Hours)."

(ii) Row 1, column 2 heading is entitled "Each Wall of the Double Fire Wall Assembly Rating (Hours)."

(iii) Row 1, column 3 heading is entitled "Minimum Fire Door and Fire Shutter Assembly Rating (Hours)."

(iv) Row 1, column 4 heading is entitled "Door Vision Panel Size" and includes a superscript letter "a" after the word "Size."

(v) Row 1, column 5 heading is entitled "Fire Rated Glazing Marking Door Vision Panel" and includes superscript letters "b" and "c" after the word "Panel."

- (vi) Row 1, column 6 heading is entitled "Minimum Sidelight/Transom Assembly Fire-Protection Rating (Hours)."
- (vii) Row 1, column 7 heading is entitled "Minimum Sidelight/Transom Assembly Fire-Resistance Rating (Hours)."
- (viii) Row 1, column 8 heading is entitled "Fire-Protection Rated Glazing Marking Sidelight/Transom Panel (Hours)."
- (ix) Row 1, column 9 heading is entitled "Fire-Resistance Rated Glazing Marking Sidelight/Transom Panel (Hours)."
- (B) Row 2 contains the following information in each of the nine columns listed for the header row number 1:
- (i) Row 2, column 1 contains the number "4."
- (ii) Row 2, column 2 contains the number "3."
- (iii) Row 2, column 3 contains the number "3."
- (iv) Row 2, column 4 contains the wording "See note a."
- (v) Row 2, column 5 contains the wording "D hyphen H hyphen W hyphen 180."
- (vi) Row 2, column 6 contains the wording "Not Permitted."
- (vii) Row 2, column 7 contains the number "3."
- (viii) Row 2, column 8 contains the wording "Not Permitted."
- (ix) Row 2, column 9 contains the wording "W hyphen 180."
- (C) Row 3 contains the following information in each of the nine columns listed in the header row number 1:
- (i) Row 3, column 1 contains the number "3."
- (ii) Row 3, column 2 contains the number "2."
- (iii) Row 3, column 3 contains the number and wording "1 hyphen one half."
- (iv) Row 3, column 4 contains the wording "100 sq. in."
- (v) Row 3, column 5 contains the wording "less than or equal to 100 sq. in. equals D hyphen H hyphen 90, greater than 100 sq. in. equals D hyphen H hyphen W hyphen 90"
- (vi) Row 3, column 6 contains the wording "Not Permitted."
- (vii) Row 3, column 7 contains the number "2."
- (viii) Row 3, column 8 contains the wording "Not Permitted."
- (ix) Row 3, column 9 contains the wording "W hyphen 120."
- (D) Row 4 contains the following information in each of the nine columns listed in the header row number 1:
- (i) Row 4, column 1 contains the number "2."
- (ii) Row 4, column 2 contains the number "1."
- (iii) Row 4, column 3 contains the number "1."
- (iv) Row 4, column 4 contains the wording "100 sq. in."
- (v) Row 4, column 5 contains the wording "less than or equal to 100 sq. in. equals D hyphen H hyphen 60, greater than 100 sq. in. equals D hyphen H hyphen W hyphen 60"
- (vi) Row 4, column 6 contains the wording "Not Permitted."
- (vii) Row 4, column 7 contains the number "1."
- (viii) Row 4, column 8 contains the wording "Not Permitted."
- (ix) Row 4, column 9 contains the wording "W hyphen 60."
- (E) Several footnotes are provided under the table with the following wording:

(i) "For SI: 1 square inch equals 645.2 mm"

(ii) Footnote a. Fire-resistance-rated glazing tested to ASTM E-119 in accordance with Section 716.1.2.3 shall be permitted, in the maximum size tested.

(iii) Footnote b. Under the column heading "Fire-rated glazing marking door vision panel," W refers to the fire-resistance rating of the glazing, not the frame.

(iv) Footnote c. See Section 716.1.2.2.1 and Table 716.1(1) for additional permitted markings.

(3) Table 721.1(2) Rated Fire-Resistance Periods for Various Walls and Partitions. This table has been modified to correct errata published by the ICC, in Row 16, Sub-rows 1, 2 and 3. This table has been modified to read: Table 721.1(2) Rated Fire-Resistance Periods for Various Walls and Partitions. Following the table title are the three superscript letters: "a," "o," and "p" to indicate those footnotes are applicable to the entire table. The table contains 17 rows and 4 columns. Column 4 contains 4 subcolumns. The table is described below.

(A) Row 1 contains the headers for the table and are listed below:

(i) Row 1, column 1 is entitled "Material."

(ii) Row 1, column 2 is entitled "Item Number."

(iii) Row 1, column 3 is entitled "Construction."

(iv) Row 1, column 4 is entitled "Minimum Finished Thickness Face-to-Face (inches). A superscript letter "b" is after the wording "Face-to-Face" before the word "(inches)" to indicate footnote "b" applies. The subcolumns are listed below:

(I) Row 1, column 4, subcolumn 1 is entitled "4 hours."

(II) Row 1, column 4, subcolumn 2 is entitled "3 hours."

(III) Row 1, column 4, subcolumn 3 is entitled "2 hours."

(IV) Row 1, column 4, subcolumn 4 is entitled "1 hour."

(B) Row 2 lists the material type entitled "1. Brick of clay or shake" and contains 4 subrows. No changes have been made to this row or any subrow.

(C) Row 3 lists the material type entitled "2. Combination of clay brick and load-bearing hollow clay tile" and contains 2 subrows. No changes have been made to this row or any subrow.

(D) Row 4 lists the material type entitled "3. Concrete masonry units" and contains four subrows. No changes have been made to this row or any subrow.

(E) Row 5 lists the material type entitled "4. Solid concrete" and contains superscript letters "h" and "i" after the word concrete. The row contains four subrows. No changes have been made to this row or any subrow.

(F) Row 6 lists the material type entitled "5. Glazed or unglazed facing tile, nonload bearing" and contains eight subrows. No changes have been made to this row or any subrow.

(G) Row 7 lists the material type entitled "6. Solid gypsum plaster" and contains six subrows. No changes have been made to this row or any subrow.

(H) Row 8 lists the material type entitled "7. Solid perlite and Portland cement." No changes have been made to this row.

(I) Row 9 lists the material type entitled "8. Solid neat wood fibered gypsum plaster." No changes have been made to this row.

(J) Row 10 lists the material type entitled "9. Solid wall board partition." No changes have been made to this row.

(K) Row 11 lists the material type entitled "10. Hollow (studless) gypsum wallboard partition" and contains two subrows. No changes have been made to this row or any subrow.

(L) Row 12 lists the material type entitled "11. Noncombustible studs-interior partition with plaster each side" and contains four subrows. No changes have been made to this row or any subrow.

(M) Row 13 lists the material type entitled "12. Wood studs-interior partition with plaster each side" and contains four subrows. No changes have been made to this row or any subrow.

(N) Row 14 lists the material type entitled "13. Noncombustible studs-interior partition with gypsum wallboard each side" and contains three subrows. No changes have been made to this row or any subrow.

(O) Row 15 lists the material type entitled "14. Wood studs-interior partition with gypsum wallboard each side" and contains six subrows. No changes have been made to this row or any subrow.

(P) Row 16 lists the material type entitled "15. Exterior or interior walls (continued) and contains twenty subrows. No changes have been made to this row or any subrow.

(Q) Row 17 lists the material type entitled "16. Exterior walls rated for fire resistance from the inside only in accordance with Section 705.5" and contains three subrows.

(i) Subrow 1 lists the Item Number entitled "16-1.1" with a superscript letter "q" has been modified to correct the Type X gypsum wallboard size from 4 inches wide to 4 feet wide in the construction requirements of column 3.

(I) This subrow has been modified to read: 2" x 4" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with 5/8" Type X gypsum wallboard, 4' wide, applied horizontally unblocked, and fastened with 2 1/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered vertically, horizontal joints blocked and fastened with 6d common nails (bright) - 12" on center in the field, and 6" on center panel edges. Cavity to be filled with 3 1/2" mineral wool insulation. Rating established for exposure from interior side only.

(II) No changes have been made to column 4 or any subcolumn.

(ii) Subrow 2 lists the Item Number entitled "16-1.2" with the superscript letter "q" has been modified to correct the Type X gypsum wallboard size from 4 inches to 4 feet wide in the construction requirements of column 3.

(I) This subrow has been modified to read: 2" x 6" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with 5/8" Type X gypsum wallboard, 4' wide, applied horizontally or vertically with vertical joints over studs and fastened with 2 1/4" Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound, exterior side covered with 7/16" wood structural panels fastened with 6d common nails (bright) spaced 12" on center in the field and 6" on center along the panel edges. Cavity to be filled with 5 1/2" mineral wool insulation. Rating established from the gypsum-covered side only.

(II) No changes have been made to column 4 or any subcolumn.

(iii) Subrow 3 lists the Item Number entitled "16-1.3" with the superscript letter "q" has been modified to correct the size of the Type X gypsum wallboard size from 4 inches to 4 feet wide in the construction requirements of column 3.

(I) This subrow has been modified to read: 2" x 6" wood studs at 16" centers with double top plates, single bottom plates; interior side covered with 5/8" Type X gypsum wallboard, 4' wide, applied vertically with all joints over framing or blocking and fastened with 2 1/4" Type S drywall screws spaced 7" on center. Joints to be covered with tape and joint compound. Exterior covered with 3/8" wood structural panels, applied vertically with edges over framing or blocking and fastened with 6d common nails (bright) at 12" on center in the field and 6" on center on panel edges. R-19 mineral fiber insulation installed in the stud cavity. Rating established from the gypsum-covered side only.

(II) No changes have been made to column 4 or any subcolumn.

(R) No changes have been made to any of the footnotes to the table.

748:20-2-13 IBC® Chapter 8 [RESERVED]

748:20-2-14. IBC® 2018 Chapter 9 Fire Protection Systems

Chapter 9 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) Section 903.2.9 Group S-1. This section has been modified to add an exception to the fifth requirement in the list for when an automatic fire sprinkler system is required. This section has been modified to read: 903.2.9 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

(A) A Group S-1 fire area exceeds 12,000 square feet (1115 square meters).

(B) A Group S-1 fire area is located more than three stories above grade plane.

(C) The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 square meters).

(D) A Group S-1 fire area used for the storage of commercial motor vehicles where the fire area exceeds 5,000 square feet (464 square meters).

(E) A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 square meters). Exception: Self-service storage facility where the fire area is less than 5,000 square feet (464 square meters).

(2) Section 907.2.22 Energy storage systems. This section has been modified to change the header name from "Battery rooms" to "Energy storage systems" and to add an option for radiant-energy detection systems to be installed in rooms and walk-in units containing energy storage systems as required in Section 1206. This section has been modified to read: 907.2.22 Energy storage systems. An automatic smoke detection system or radiant-energy detection system shall be installed in rooms, areas, and walk-in units containing energy storage systems as required in Section 1206 of the International Fire Code®.

(3) Section 907.2.23 Capacitor energy storage systems. This section has been stricken from the code.

(4) Section 911.1.3 Size. This section has been modified to include an exception to make the fire command center smaller when approved by the fire code official. This section has been modified to read: 911.1.3. Size. The fire command center shall be not less than 0.015 percent of the total building area of the facility served or 200 square feet (19 square meters) in area, whichever is greater, with a minimum dimension of 0.7 times the square root of the room

area or 10 feet (3048 mm), whichever is greater. Exception: When approved by the fire code official the fire command center can be reduced in size to not less than a minimum of 96 square feet (9 square meters) with a minimum dimension of 8 feet (2438 mm).

(5) Section 916.7 Gas sampling. This section has been modified to correct errata published by the ICC, in the second exception to clarify the toxic gases sample analysis to be performed is for all toxic gas that are not HPM. This section has been modified to read: 916.7 Gas sampling. Gas sampling shall be performed continuously. Sample analysis shall be processed immediately after sampling, except as follows:

(A) For HPM gases, sample analysis shall be performed at intervals not exceeding 30 minutes.

(B) For toxic gases that are not HPM, sample analysis shall be performed at intervals not exceeding 5 minutes, in accordance with Section 6004.2.2.7 of the International Fire Code®.

(C) Where a less frequent or delayed sampling interval is approved.

748:20-2-15. IBC® 2018 Chapter 10 Means of Egress

Chapter 10 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) Section 1003.4 Floor surface. This section has been modified to change the heading name form "Slip resistance surface" to "Floor surface" and to prohibit openings in the horizontal floor plane. This section has been modified to read: 1003.4 Floor surface. Circulation paths of the means of egress shall have a slip-resistant surface and be securely attached. Floor surfaces that are a part of a means of egress shall have a solid surface. A floor for this purpose is also defined as the space between a floor surface and a guard if it projects beyond the edge of a floor. Exceptions:

(A) Where approved by the Building Official, openings in floor surfaces shall be a size that does not permit the passage of 1/2-inch-diameter (12.7 mm) sphere. Elongated openings shall be placed so that the long dimension is perpendicular to the direction of travel.

(B) Where approved by the Building Official in Group F, H and S occupancies, other than areas of parking structures accessible to the public, openings in the floor surface shall not be prohibited provided a sphere with a diameter of 1 1/8 inches (29 mm) cannot pass through the opening.

(2) Section 1008.2.3 Exit discharge. This section has been modified to allow for required exit discharge illumination to be provided by the building lighting or other site lighting such as street lighting and adds a second exception to the requirement for buildings that comply for a single exit in accordance with Table 1006.2.1. This section has been modified to read: 1008.2.3 Exit discharge. Illumination shall be provided along the path of travel for the exit discharge from each exit to the public way. Illumination may be provided by the building or other site lighting such as street lighting. Exceptions:

(A) Illumination shall not be required where the path of exit discharge meets both of the following requirements:

(i) The path of exit discharge is illuminated from the exit to a safe dispersal area complying with Section 1028.5.

(ii) A dispersal area shall be illuminated to a level not less than 1 foot-candle (11 lux) at the walking surface.

(B) Buildings that comply for a single exit in accordance with Table 1006.2.1.

(3) Section 1010.1.10 Panic and fire exit hardware. This section has been modified to add a third paragraph to require personnel doors in rooms or spaces that contain electrical equipment rated 800 amperes or more that contain overcurrent devices, switching devices, or control devices where the personnel door intended for entrance to and egress from the working space is less than 25 feet from the nearest edge of the working space, to be equipped with panic hardware or fire exit hardware This section has been modified to read: 1010.1.10 Panic and fire exit hardware. Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an occupant load of 50 or more in a group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware. Exceptions:

(A) A main exit of a Group A occupancy shall be permitted to have locking devices in accordance with Section 1010.1.9.4, Item 2.

(B) Doors provided with panic hardware or fire exit hardware and serving a Group A or E occupancy shall be permitted to be electrically locked in accordance with Section 1010.1.9.9 or 1010.1.9.10.

(4) Electrical rooms rated 1200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.

(5) Where electrical equipment rated 800 amperes or more that contains overcurrent devices, switching devices, or control devices is installed and there is a personnel door(s) intended for entrance to and egress from the working space less than 25 feet (7.6 m) from the nearest edge of the working space, the personnel door shall be equipped with panic hardware or fire exit hardware. The door(s) shall open in the direction of egress.

(6) Section 1015.4 Opening limitations. This section has been modified to prohibit an opening in the horizontal plane of the floor walking surface. This section has been modified to read: 1015.4 Opening limitations. Required guards shall not have openings that allow passage of a sphere 4 inches (102 mm) in diameter from the walking surface to the required guard height. The 4-inch sphere allowable opening permitted by this section only applies to openings in a vertical plane not openings in floors or similar horizontal surfaces. Exceptions:

(A) From a height of 36 inches (914 mm) to 42 inches (1067 mm), guards shall not have openings that allow passages of a sphere 4 3/8 inches (111 mm) in diameter.

(B) The triangular openings at the open sides of a stair, formed by the riser, tread and bottom rail shall not allow the passage of a sphere 6 inches (152 mm) in diameter.

(C) At elevated walking surfaces for access to and use of electrical, mechanical or plumbing systems or equipment, guards shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.

(D) In areas that are not open to the public within occupancies in Group I-3, F, H or S, and for alternating tread devices and ship's ladders, guards shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.

(E) In assembly seating areas, guards required at the end of aisles in accordance with Section 1029.17.4 shall not have openings that allow passage of a sphere 4 inches (102 mm) in diameter up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, guards shall not have openings that allow passage of a sphere 8 inches (203 mm) in diameter.

(F) Within individual dwelling units and sleeping units in Group R-2 and R-3 occupancies, guards on the open sides of stairs shall not have openings that allow passage of a sphere 4 3/8 inches (111 mm) in diameter.

(7) Section 1015.6 Mechanical equipment, systems and devices. This section has been modified to clarify the circumstances under which guards shall be provided and to modify the exception to allow the authority having jurisdiction to approve the use of a fall/restraint system instead of guards. This section has been modified to read: 1015.6 Mechanical equipment, systems and devices. Guards shall be provided where various components that require services are located on a roof or elevated structure and have a condition as set forth in Sections 1015.6.1 through 1015.6.3. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter. Exception: When approved by the authority having jurisdiction, guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from roof edges and the open sides of walking surfaces.

(8) Section 1015.6.1 Roof edge. This section has been added to clarify the circumstances required to exist for the installation of guards at the roof edge when the components needing service are within a specific distance of the roof edge. This section has been added to read: 1015.6.1 Roof edge. Guards shall be provided when components are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface or elevated structure and such edge or open side is located more than 30 inches (762 mm) above the floor, roof, or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of the component that requires service.

(9) Section 1015.6.2 Skylights. This section has been added to clarify the circumstances for the installation of guards around components near skylights and to provide exceptions to the requirement. This section has been added to read: 1015.6.2 Skylights. Guards shall be provided when a skylight is within 10 feet (3048 mm) of the component that requires service. The guard shall extend 30 inches (762 mm) beyond the edge of the skylight. Exceptions:

(A) Guards are not required when the skylight is located at least 42 inches (1067 mm) above the highest point of the walking surface adjacent to the skylight or component.

(B) Guards are not required if some other provision for skylight fall-thru protection is provided and approved by the authority having jurisdiction.

(10) Section 1015.6.3 Roof hatch. This section has been added to clarify the circumstances for the installation of guards around components installed within a specific distance from the roof hatch. This section has been added to read: 1015.6.3 Roof hatch. Guards shall be provided when a roof hatch is within 10 feet (3048 mm) of the component that requires service. The guard shall extend 30 inches (762 mm) beyond the edge of the roof hatch. If the component is within 10 feet (3048 mm) of the ladder access side of the roof hatch, the guard shall incorporate a self-closing, self-latching gate. The gate shall have a top edge of not less than 42 inches (1067 mm) above the elevated surface adjacent to the gate and shall not allow the passage of a 21 inch (533 mm) sphere.

(11) Section 1015.7 Roof access. This section has been modified to allow the authority having jurisdiction to approve the use of a fall-restraint system instead of a guard in the exception and provide criteria for installation of the fall-restraint system. This section has

been modified to read: 1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter. Exception: When approved by the authority having jurisdiction, guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from roof edges and the open sides of the walking surfaces.

748:20-2-16. IBC® Chapter 11 [RESERVED]

748:20-2-17. IBC® Chapter 12 [RESERVED]

748:20-2-18. IBC® Chapter 13 [RESERVED]

748:20-2-19. IBC® Chapter 14 [RESERVED]

784:20-2-20. IBC® 2018 Chapter 15 Roof Assemblies and Rooftop Structures

Chapter 15 of the Oklahoma adopted IBC® 2018 is adopted with the following modification: Section 1511.3.1.1 Exceptions. This section has been modified to add a fourth condition when a roof recover shall not be permitted. This section has been modified to read: 1511.3.1.1 Exceptions. A roof recover shall not be permitted where any of the following conditions occur:

- (1) Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
- (2) Where the existing roof covering is slate, clay, cement or asbestos-cement tile.
- (3) Where the existing roof has two or more applications of any type of roof covering.
- (4) Where the existing roof has one or more applications of asphalt shingles, additional applications of asphalt shingles shall not be permitted.

748:20-2-21. IBC® 2018 Chapter 16 Structural Design

Chapter 16 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

- (1) Section 1604.10 Loads on storm shelters. This section has been modified to add a reference to Section 423.5.3 to point to a change made to that section related to roof live loads and storm shelters. This section has been modified to read: 1604.10 Loads on storm shelters. Loads and load combinations on storm shelters shall be determined in accordance with Section 423.5.3 and ICC 500®.
- (2) Figure 1609.3(1) Basic Wind Speeds, V, for Risk Category II Buildings and Other Structures. The footnotes to this figure have been modified to correct errata published by the ICC. The errata corrects the URL reference in footnote number 6 from "www.atcouncil.org/windspeed" to "www.hazards.atcouncil.org." The footnotes for this figure have been modified to read: Notes:
 - (A) Footnote 1. Values are nominal design 3-second gust wind speeds in miles per hour (m divided by s) at 33 feet (10 meters) above the ground for Exposure C category.

(B) Footnote 2. Linear interpolation is permitted between contours. Point values are provided to aid with interpolation.

(C) Footnote 3. Islands, coastal areas, and land boundaries outside the last contour shall use the last wind speed contour.

(D) Footnote 4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

(E) Footnote 5. Wind speeds correspond to approximately a 7 percent probability of exceedance in 50 years (Annual Exceedance Probability equals 0.00143, MRI equals 700 Years).

(F) Footnote 6. Location-specific basic wind speeds shall be permitted to be determined using www.hazards.atcouncil.org.

(3) Figure 1609.3(2) Basic Wind Speeds, V, for Risk Category III Buildings and Other Structures. The footnotes to this figure have been modified to correct errata published by the ICC. The errata corrects the footnotes to include the "N" in the word "Notes" above the footnotes and to include the footnote numbers cut off in the printing. Footnote 6 has been modified to change the URL reference from "www.atcouncil.org/windspeed" to "www.hazards.atcouncil.org." The footnotes for this figure have been modified to read:

Notes:

(A) Footnote 1. Values are nominal design 3-second gust wind speeds in miles per hour (m divided by s) at 33 feet (10 meters) above the ground for Exposure C category.

(B) Footnote 2. Linear interpolation is permitted between contours. Point values are provided to aid with interpolation.

(C) Footnote 3. Islands, coastal areas, and land boundaries outside the last contour shall use the last wind speed contour.

(D) Footnote 4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

(E) Footnote 5. Wind speeds correspond to approximately a 3 percent probability of exceedance in 50 years (Annual Exceedance Probability equals 0.000588, MRI equals 1700 Years).

(F) Footnote 6. Location-specific basic wind speeds shall be permitted to be determined using www.hazards.atcouncil.org.

(4) Figure 1609.3(3) Basic Wind Speeds, V, for Risk Category IV Buildings and Other Structures. The footnotes to this figure have been modified to correct errata published by the ICC. The errata corrects the URL reference in footnote number 6 from

"www.atcouncil.org/windspeed" to "www.hazards.atcouncil.org." The footnotes for this figure have been modified to read: Notes:

(A) Footnote 1. Values are nominal design 3-second gust wind speeds in miles per hour (m divided by s) at 33 feet (10 meters) above the ground for Exposure C category.

(B) Footnote 2. Linear interpolation is permitted between contours. Point values are provided to aid with interpolation.

(C) Footnote 3. Islands, coastal areas, and land boundaries outside the last contour shall use the last wind speed contour.

(D) Footnote 4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

(E) Footnote 5. Wind speeds correspond to approximately a 1.6 percent probability of exceedance in 50 years (Annual Exceedance Probability equals 0.00033, MRI equals 3000 Years).

(F) Footnote 6. Location-specific basic wind speeds shall be permitted to be determined using www.hazards.atcouncil.org.

(5) Figure 1609.3(1) Basic Wind Speeds, V, for Risk Category I Buildings and Other Structures. The footnotes to this figure have been modified to correct errata published by the ICC. The errata corrects the URL reference in footnote number 6 from "www.atcouncil.org/windspeed" to "www.hazards.atcouncil.org." The footnotes for this figure have been modified to read: Notes:

(A) Footnote 1. Values are nominal design 3-second gust wind speeds in miles per hour (m divided by s) at 33 feet (10 meters) above the ground for Exposure C category.

(B) Footnote 2. Linear interpolation is permitted between contours. Point values are provided to aid with interpolation.

(C) Footnote 3. Islands, coastal areas, and land boundaries outside the last contour shall use the last wind speed contour.

(D) Footnote 4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

(E) Footnote 5. Wind speeds correspond to approximately a 15 percent probability of exceedance in 50 years (Annual Exceedance Probability equals 0.00333, MRI equals 300 Years).

(F) Footnote 6. Location-specific basic wind speeds shall be permitted to be determined using www.hazards.atcouncil.org.

(6) Section 1611.1 Design rain loads. This section has been modified to increase secondary drain size for short duration intensities the equation at the end of the section is still applicable. This section has been modified to read: 1611.1 Design rain loads. Each portion of a roof shall be designed to sustain the load of rainwater that will accumulate on it if the primary drainage system for that portion is blocked plus the uniform load caused by water that rises above the inlet of the secondary drainage system at its design flow. The design rainfall shall be based on a rainfall rate of 10.2 inches per hour.

(A) Equation 16-35

(B) R equals $5.2 (d \text{ with a subscript "s"} + d \text{ with a subscript "h"})$

(C) For SI: R equals $0.0098 (d \text{ with a subscript "s"} + d \text{ with a subscript "h"})$ where:

(i) $d \text{ with a subscript "h"}$ equals Additional depth of water on the undeflected roof above the inlet of secondary drainage system at its design flow (in other words, the hydraulic head) in inches (mm).

(ii) $D \text{ with a subscript "s"}$ equals Depth of water on the undeflected roof up to the inlet of secondary drainage system when the primary drainage system is blocked (in other words, the static head) in inches (mm).

(iii) R equals Rain load on the undeflected roof, in psf (kN divided by square meters). Where the phrase "undeflected roof" is used, deflections from loads (including dead loads) shall not be considered when determining the amount of rain on the roof.

748:20-2-22. IBC® 2018 Chapter 17 Special Inspections and Tests

Chapter 17 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) Section 1704.2.1 Special inspector qualifications. This section has been modified to require all special inspectors to meet at least one of the required minimum qualifications for each specific special inspection listed in Table 1704.2 before performing special inspections. This section has been modified to read: 1704.2.1 Special inspector qualifications. Prior to the start of construction, the approved agencies shall provide written documentation to the building official demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and tests during construction. Experience or training shall be considered to be relevant where the documented experience or training is related in complexity to the same type of special inspection or testing activities for projects of similar complexity and material qualities. The special inspector shall be qualified in accordance with Table 1704.2. These qualifications are in addition to the qualifications specified in other sections of this code.

(2)The registered design professional in responsible charge and engineers of record involved in the design of the project are permitted to act as the approved agency and their personnel are permitted to act as special inspectors for the work designed by them, provided they qualify as special inspectors.

(3) Table 1704.2 Minimum Qualifications for Special Inspections. This table has been added to provide a list of certifications and qualifications required before performing special inspections. This table has been added to read: Table 1704.2 Minimum Qualifications for Special Inspections. Four superscript numbers appear at the end of the table title and read as "1, 2, 3, 4" to indicate all four footnotes to the table are applicable to the entire table. The table contains 13 rows and 2 columns and is described below:

(A) Row 1 contains the header row and lists the column headings below:

(i) Row 1, column 1, heading is entitled "Category of Inspection."

(ii) Row 1, column 2, heading is entitled "Required Certification."

(B) Row two contains the following information:

(i) Row 2, column 1 lists the special inspection category "High Strength Steel Bolting and Steel Erection."

(ii) Row 2, column 2 lists the four possible certifications a special inspector should have at least one of, to inspect the special inspection category "High Strength Steel Bolting and Steel Erection:"

(I) ICC Structural Steel and Bolting Special Inspector.

(II) AWS/AISC Certified Structural Steel Inspector.

(III) EIT with relevant experience.

(IV) PE with relevant experience.

(C) Row 3 contains the following information:

(i) Row 3, column 1 lists the special inspection category "Steel Welding."

(ii) Row 3, column 2 lists two possible certifications a special inspector should have at least one of, to inspect the special inspection category "Steel Welding."

(I) ICC Structural Welding SI.

(II) AWS Certified Welding Inspector.

(D) Row 4 contains the following information:

(i) Row 4, column 1 lists the special inspection category "Nondestructive Testing."

(ii) Row 4, column 2 lists the one certification a special inspector should have to inspect the special inspection category "Nondestructive Testing." The certification is: ASNT SNT-TC-1A, NDT Level II or III.

- (E) Row 5 contains the following information:
- (i) Row 5, column 1 lists the special inspection category "Prestressed Concrete."
 - (ii) Row 5, column 2 lists five possible certifications a special inspector should have at least one of, to inspect the special inspection category "Prestressed Concrete:"
 - (I) ICC Prestressed Concrete Special Inspector.
 - (II) PTI Level 1 Unbonded Post-Tension Inspector.
 - (III) ACI Concrete Field Tech 1 Certification (for field testing only).
 - (IV) EIT with relevant experience.
 - (V) PE with relevant experience.
- (F) Row 6 contains the following information:
- (i) Row 8, column 1 lists the special inspection category "Reinforced Concrete, Post-installed Structural Anchors."
 - (ii) Row 8, column 2 lists five possible certifications a special inspector should have at least one of, to inspect the special inspection category "Reinforced Concrete, Post-installed Structural Anchors:"
 - (I) ICC Reinforced Concrete Special Inspector.
 - (II) ACI Concrete Construction Special Inspector.
 - (III) ACI Concrete Field Tech I Certification (for field testing only).
 - (IV) EIT with relevant experience.
 - (V) PE with relevant experience.
- (G) Row 7 contains the following information:
- (i) Row 7, column 1 lists the special inspection category "Masonry Construction."
 - (ii) Row 7, column 2 lists three possible certifications a special inspector should have at least one of, to inspect the special inspection category "Masonry Construction:"
 - (I) ICC Structural Masonry Special Inspector.
 - (II) EIT with relevant experience.
 - (III) PE with relevant experience.
- (H) Row 8 contains the following information:
- (i) Row 8, column 1 lists the special inspection category "Soils."
 - (ii) Row 8, column 2 lists four possible certifications a special inspector should have at least one of, to inspect the special inspection category "Soils:"
 - (I) NICET II.
 - (II) ICC Soils SI.
 - (III) EIT with relevant experience.
 - (IV) PE with relevant experience.
- (I) Row 9 contains the following information:
- (i) Row 9, column 1 lists the special inspection category "Driven deep foundation, Cast-in place deep foundations, Helical pile foundations, Excavation."
 - (ii) Row 9, column 2 lists three possible certifications a special inspector should have at least one of, to inspect the special inspection category "Driven deep foundation, Cast-in place deep foundations, Helical pile foundations, Excavation:"
 - (I) NICETT II (geotechnical or construction, or construction material testing or soils.
 - (II) EIT with relevant experience.
 - (III) PE with relevant experience.
- (J) Row 10 contains the following information:

- (i) Row 10, column 1 lists the special inspection category "Sprayed fire-resistant materials, Mastic and intumescent fire-resistance coatings."
 - (ii) Row 10, column 2 lists the five possible certifications a special inspector should have at least one of, to inspect the special inspection category "Sprayed fire-resistant materials, Mastic and intumescent fire-resistance coatings;"
 - (I) ICC Spray-applied Fireproofing Special Inspector.
 - (II) UL approved Spray-applied Fireproofing Inspector.
 - (III) EIT with relevant experience.
 - (IV) PE with relevant experience.
 - (V) RA with relevant experience.
- (K) Row 11 contains the following information:
 - (i) Row 11, column 1 lists the special inspection category "Exterior insulation and finish systems (EIFS)."
 - (ii) Row 11, column 2 lists four possible certifications a special inspector should have at least one of, to inspect the special inspection category "Exterior insulation and finish systems (EIFS):"
 - (I) AWCI EIFS Inspector
 - (II) EIT with relevant experience.
 - (III) PE with relevant experience.
 - (IV) RA with relevant experience.
- (L) Row 12 contains the following information:
 - (i) Row 12, column 1 lists the special inspection category "Fire-resistant penetrations and joints."
 - (ii) Row 12, column 2 lists three possible certifications a special inspector should have at least one of, to inspect the special inspection category "Fire-resistant penetrations and joints:"
 - (I) UL approved firestop inspector.
 - (II) FM approved firestop inspector.
 - (III) Inspector otherwise approved by the AHJ.
- (M) Row 13 contains the following information:
 - (i) Row 13, column 1 lists the special inspection category "Testing for smoke control."
 - (ii) Row 13, column 2 lists three possible certifications a special inspector should have at least one of, to inspect the special inspection category "Testing for smoke control:"
 - (I) AABC technical certification
 - (II) EIT with relevant experience.
 - (III) PE with relevant experience.
- (N) The following footnotes are listed beneath the table:
 - (i) The special inspector shall meet one of the required certifications listed for the applicable category of inspection.
 - (ii) Applicants shall comply with one of the following education and experience requirements in addition to the required certifications:
 - (I) Oklahoma Professional Engineer or Oklahoma Registered Architect and a minimum of three months of relevant work experience.

- (II) Bachelor of Science Degree in Engineering, Architecture, or Physical Science and a minimum of six months of relevant work experience.
- (III) Two years of verified college or technical school and a minimum of one year of relevant work experience.
- (IV) High school or equivalent graduate and a minimum of one year of relevant work experience.
- (iii) Oklahoma Professional Engineer or Oklahoma Registered Architect competent in the specific category are exempt from the required certifications listed in this table, but are subject to on-site assessment of competence by the authority having jurisdiction.
- (iv) Abbreviations in the table as noted below:
 - (I) AA stands for Associate of Arts (degree)
 - (II) AABC stands for Associated Air Balance Council
 - (III) ACI stands for American Concrete Institute
 - (IV) ANSI stands for American National Standards Institute
 - (V) API stands for American Petroleum Institute
 - (VI) ANST stands for American Society for Nondestructive Testing
 - (VII) ASTM stands for American Society for Testing and Materials
 - (VIII)AWCI stands for Association of the Wall and Ceiling Industry
 - (IX)AWS stands for American Welding Society
 - (X) BS stands for Bachelor of Science (degree)
 - (XI) CWI stands for Certified Welding Inspector
 - (XII) EIFS stands for Exterior insulation and finish system
 - (XIII) FM stands for Factory Mutual Global
 - (XIV) IAS stands for International Accreditation Service
 - (XV) IBC stands for International Building Code
 - (XVI) ICC stands for International Code Council
 - (XVII) ICC-ES stands for ICC Evaluation Service
 - (XVIII) NDT stands for Nondestructive testing
 - (XIX) NICET stands for National Institute for Certification of Engineering Technologists
 - (XX) PE stands for Professional engineer
 - (XXI) RDP stands for Registered design professional
 - (XXII) SI stands for Special inspector
 - (XXIII) SIA stands for Special inspection agency
 - (XXIV) UL stands for Underwriters Laboratories
 - (XXV) EIT stands for Engineer in Training

748:20-2-23. IBC® 2018 Chapter 18 Soils and Foundations

(a) Chapter 18 of the Oklahoma adopted IBC® 2018 is adopted with the following modification: Section 1809.4 Depth and width of footings has been modified to provide an exception to the code for minor buildings such as small storage buildings to be constructed without expensive foundations and be mounted on skids and would apply to light gage metal or similar carports provided they are adequately anchored. This section has been modified to read: 1809.4 Depth and width of footings. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (305 mm). Where applicable, the requirements of Section 1809.5 shall be satisfied. The minimum width of footings shall be 12 inches (305 mm). Exception: Single story

free-standing building meeting all of the following conditions shall be permitted without footings:

- (1) Assigned to Occupancy Category 1, in accordance with Section 1604.5;
- (2) Light-frame wood or metal construction;
- (3) Area of 400 square feet (37 square meters) or less;
- (4) Eave height of 10 feet (3048 mm) or less; and
- (5) Building height of 15 feet (4572 mm) or less.

(b) Such buildings shall have an approved wooden floor, or shall be placed on a concrete slab having a minimum thickness of 3 1/2 inches (89 mm). Buildings shall be anchored to resist uplift as required by Section 1609.

748:20-2-24. IBC® Chapter 19 [RESERVED]

748:20-2-25. IBC® Chapter 20 [RESERVED]

748:20-2-26. IBC® Chapter 21 [RESERVED]

748:20-2-27. IBC® Chapter 22 [RESERVED]

748:20-2-28. IBC® 2018 Chapter 23 Wood

Chapter 23 of the Oklahoma adopted IBC® 2018 is adopted with the following modification: Section 2306.1 Allowable stress design has been modified to correct errata published by the ICC. The modification corrects the reference number of one standard and names for two of the applicable standards listed under the American Society of Agricultural and Biological Engineers. The standard "ASABE EP 484.2, Diaphragm Design of Metal-clad Post Frame Rectangular Buildings" has been corrected to read as "ASABE EP 484.3, Diaphragm Design of Metal-clad Wood-Frame Rectangular Buildings," and standard "ASABE EP 559.1 Design Requirements and Bending Properties for Mechanically Laminated Columns" has been corrected to read "ASABE EP 559.1 Design Requirements and Bending Properties for Mechanically Laminated Wood Assemblies." This section has been modified to read: 2306.1 Allowable stress design. The design and construction of wood elements in structures using allowable stress design shall be in accordance with the following applicable standards:

- (1) American Woods Council
 - (A) ANSI/AWC NDS, National Design Specification for Wood Construction.
 - (B) SDPWS, Special Design Provisions for Wood and Seismic.
- (2) American Society of Agricultural and Biological Engineers
 - (A) ASABE EP 484.3 Diaphragm Design of Metal-clad, Wood-Frame Rectangular Buildings.
 - (B) ASABE EP 486.2 Shallow Post Foundation Design.
 - (C) ASABE EP 559.1 Design Requirements and Bending Properties for Mechanically Laminated Wood Assemblies.
- (3) APA - The Engineered Wood Association.
 - (A) ANSI 117, Standard Specifications for Structural Glued Laminated Timber of Softwood Species.
 - (B) ANSI A190.1, Structural Glued Laminated Timber Panel Design Specification
 - (C) Plywood Design Specification Supplement 1 - Design & Fabrication of Plywood Curved Panel

- (D) Plywood Design Specification Supplement 2 - Design & Fabrication of Glued Plywood-lumber Beams
- (E) Plywood Design Specification Supplement 3 - Design & Fabrication of Plywood Stressed-skin Panels
- (F) Plywood Design Specification Supplement 4 - Design & Fabrication of Plywood Sandwich Panels
- (G) Plywood Design Specification Supplement 5 - Design & Fabrication of All-plywood Beams
- (H) APA T300, Glulam Connection Details
- (I) APA S560, Field Notching and Drilling of Glued Laminated Timber Beams
- (J) APA S475, Glued Laminated Beam Design Tables
- (K) APA X450, Glulam in Residential Construction
- (L) APA X440, Product and Application Guide: Glulam
- (M) APA R540, Builders Tips: Proper storage and Handling of Glulam Beams
- (4) Truss Plate Institute, Inc., TPI 1, National Design Standard for Metal Plate Connected Wood Truss Construction
- (5) West Coast Lumber Inspection Bureau.
 - (A) AITC 104, Typical Construction Details
 - (B) AITC 110, Standard Appearance Grades for Structural Glued Laminated Timber
 - (C) AITC 113, Standard for Dimensions of Structural Glued Laminated Timber
 - (D) AITC 119, Standard Specifications for Structural Glued Laminated Timber of Hardwood Species
 - (E) AITC 220, Inspection Manual

748:20-2-29. IBC® Chapter 24 [RESERVED]

748:20-2-30. IBC® Chapter 25 [RESERVED]

748:20-2-31. IBC® Chapter 26 RESERVED]

748: 20-2-32. IBC® 2018 Chapter 27 Electrical

Chapter 27 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

- (1) Section [F] 2702.1.2 Fuel-line piping protection. This section has been modified to add a third option for separating fuel lines supplying a generator set inside a building utilizing a fire-resistant pipe-protection system tested in accordance with UL 1489. This section has been modified to read: [F] 2702.1.2 Fuel-line piping protection. Fuel lines supplying a generator set inside a high-rise building shall be separated from areas of the building other than the room the generator is located in, by one of the following methods:
 - (A) A fire-resistant pipe-protection system that has been tested in accordance with UL 1489. The system shall be installed as tested and in accordance with the manufacturer's installation instructions, and shall have a rating of not less than 2 hours. Where the building is protected throughout with an automatic fire sprinkler system installed in accordance with Section 903.3.1.1, the required rating shall be reduced to 1 hour.
 - (B) An assembly that has a fire-resistance rating of not less than 2 hours. Where the building is protected throughout with an automatic sprinkler system installed in

accordance with Section 903.3.1.1, the required fire-resistance rating shall be reduced to 1 hour.

(C) Other approved methods.

(2) Section 2703 Lightning Protection Systems. This section header title has been added to signify a new section has been added to the code to address lightning protection systems.

This section header has been added to read: 2703 Lightning Protection Systems.

(3) Section 2703.1 General. This section has been added to clarify when lightning protection systems are provided, they shall comply with Sections 2703.2 through 2703.4. This section has been added to read: 2703.1 General. Where provided, lightning protection systems shall comply with Sections 2703.2 through 2703.4.

(4) Section 2703.2 Installation. This section has been added to require all lightning protection systems for all new building and additions to be installed in accordance with NFPA® 780 and UL 96A. It provides an exception for when UL 96A may not be utilized. This section has been added to read: 2703.2 Installation. Lightning protection systems for all new buildings and additions shall be installed in accordance with one of the following standards:

(A) NFPA® 780.

(B) UL 96A.

(5) Exception. UL 96A shall not be utilized for structures used for the production, handling, or storage of ammunition, explosives, flammable liquids or gases, and other explosive ingredients including dust.

(6) 2703.3 Additions to existing systems. This section has been added to clarify where additions are constructed to a building that contains a lightning protection system, the existing systems lightning protection system shall be properly interconnected with the new lightning protection system. This section has been added to read: 2703.3 Additions to existing systems. Where additions are constructed to a building containing a lightning protection system, the existing building's lightning protection system shall be properly interconnected to the new lightning protection system.

(7) 2703.4 Surge protection. This section has been added to require surge protective devices to be installed for all normal and emergency electrical systems and all communication systems in accordance with Section 2703.2 and NFPA 70. This section has been added to read: 2703.4 Surge protection. Surge protective devices shall be installed for all normal and emergency electrical systems and all communication systems in accordance with Section 2703.2 and NFPA® 70.

748:20-2-33. IBC® Chapter 28 [RESERVED]

748:20-2-34. IBC® 2018 Chapter 29 Plumbing Systems

Chapter 29 of the Oklahoma adopted IBC® 2018 is adopted with the following modification: Section 2902.4.1 Directional signage has been modified to limit the requirement to Group A, B, I, M, and R-1 occupancies, clarify the number of signs needed, and provide two exceptions to the requirement. This section has been modified to read: 2902.4.1 Directional signage. Directional signage indicating the route to the required public toilet facilities in group A, B, I, M, and R-1 occupancies shall be posted in a lobby, corridor, aisle, or similar space, such that the sign can be readily seen from the main entrance to the building or tenant space. Only one sign at each main entrance that is intended for public use shall be required. Exceptions:

(1) Group A occupancies that are part of an overall group E occupancy need not have directional signage.

(2) Private-use Group B occupancies need not have directional signage.

748:20-2-35. IBC® 2018 Chapter 30 [RESERVED]

748:20-2-36. IBC® 2018 Chapter 31 Special Construction

Chapter 31 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) Section 3101.1 Scope. This section has been modified to add intermodal shipping containers to the list of special building construction items that are governed by the provisions of this chapter. This section has been modified to read: 3101.1 Scope. The provisions of this chapter shall govern special building construction including membrane structures, temporary structures, pedestrian walkways and tunnels, automatic vehicular gates, awnings and canopies, marquees, signs, towers, antennas, relocatable buildings, swimming pool enclosures and safety devices, solar energy systems, and intermodal shipping containers.

(2) Section 3114 Intermodal Shipping Containers. This section header has been added to signify a new section has been added to the code to address intermodal shipping containers. This section has been modified to read: 3114 Intermodal Shipping Containers.

(3) Section 3114.1 General. This section has been added to clarify this section and other applicable sections of the code shall apply to intermodal shipping containers that are repurposed for use as buildings or structures or as a part of buildings and structures. The section provides four exceptions to the section. This section has been added to read: 3114.1 General. The provisions of Section 3114 and other applicable sections of this code, shall apply to intermodal shipping containers that are repurposed for use as buildings or structures or as a part of buildings or structures. Exceptions:

(A) Intermodal shipping containers previously approved as existing relocatable buildings complying with Chapter 14 of the International Existing Building Code®.

(B) Energy Storage Systems (ESS) located in intermodal shipping containers complying with Chapter 12 of the International Fire Code®.

(C) Intermodal shipping containers that are listed as equipment complying with the standard for equipment, such as air chillers, engine generators, modular data centers, and other similar equipment.

(D) Intermodal shipping containers housing or supporting experimental equipment are exempt from the requirements of Section 3114 provided they comply with all of the following:

(i) Such units shall be single stand-alone units supported at grade level and used only for occupancies as specified under Risk Category I in Table 1604.5;

(ii) Such units are located a minimum of 8 feet from adjacent structures and are not connected to a fuel gas system or fuel gas utility; and

(iii) In hurricane-prone regions and flood hazard areas, such units are designed in accordance with the applicable provisions of Chapter 16.

(4) Section 3114.2 Construction documents. This section has been added to require construction documents to contain information to verify the dimensions and establish the physical properties of the steel components, and wood floor components, of the intermodal shipping container in addition to the information required by Sections 107 and 1603. This section has been added to read: 3114.2 Construction documents. The construction documents shall contain information to verify the dimensions and establish the physical properties of the

steel components, and wood floor components, of the intermodal shipping container in addition to the information required by Sections 107 and 1603.

(5) Section 3114.3 Intermodal shipping container information. This section has been added to require intermodal shipping containers to bear an existing data plate containing information as required by ISO 6346 and verified by an approved agency. This section requires a report of the verification process and findings to be provided to the building owner. The section goes on to allow the building official to approve removing the markings and existing data plate from the intermodal shipping containers before they are repurposed for use as buildings or structures or as a part of a building or structure. This section has been added to read: 3114.3 Intermodal shipping container information. Intermodal shipping containers shall bear an existing data plate containing the following information as required by ISO 6346 and verified by an approved agency. A report of the verification process and findings shall be provided to the building owner.

(A) Manufacturer's name or identification number

(B) Date manufactured

(C) Safety approval number

(D) Identification number

(E) Maximum operating gross mass or weight (kg) (lbs.)

(F) Allowable stacking load for 1.8G (kg) (lbs.)

(G) Transverse racking test force (Newtons)

(H) Valid maintenance examination date

(6) Where approved by the building official, the markings and existing data plate are permitted to be removed from the intermodal shipping containers before they are repurposed for use as buildings or structures or as a part of buildings or structures.

(7) Section 3114.4 Protection against decay and termites. This section has been added to require wood structural floors of intermodal shipping containers to be protected from decay and termites in accordance with the applicable provisions of Section 2304.12.1.1. This section has been added to read: 3114.4 Protection against decay and termites. Wood structural floors of intermodal shipping containers shall be protected from decay and termites in accordance with the applicable provisions of Section 2304.12.1.1.

(8) Section 3114.5 Under-floor ventilation. This section has been added to require the space between the bottom of the floor joists and the earth under any intermodal shipping container, except spaces occupied by basements with cellars, to be provided with ventilation in accordance with Section 1202.4. This section has been added to read: 3114.5 Under-floor ventilation. The space between the bottom of the floor joists and the earth under any intermodal shipping container, except spaces occupied by basements with cellars, shall be provided with ventilation in accordance with Section 1202.4.

(9) Section 3114.6 Roof assemblies. This section has been added to require intermodal shipping container roof assemblies to comply with the applicable requirements of Chapter 15 and provides an exception for single-unit stand-alone intermodal shipping containers not attached to, or stacked vertically over, other intermodal shipping containers, buildings or structures. This section has been added to read: 3114.6 Roof assemblies. Intermodal shipping container roof assemblies shall comply with the applicable requirements of Chapter 15. Exception: Single-unit stand-alone intermodal shipping containers not attached to, or stacked vertically over, other intermodal shipping containers, buildings or structures.

(10) Section 3114.7 Joints and voids. This section has been added to require joints and voids that create concealed spaces between intermodal shipping containers, that are connected or stacked, at fire-resistance-rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies to be protected by an approved fire-resistance joint system in accordance with Section 715. This section has been added to read: 3114.7 Joints and voids. Joints and voids that create concealed spaces between intermodal shipping containers, that are connected or stacked, at fire-resistance-rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies shall be protected by an approved fire-resistant joint system in accordance with Section 715.

(11) Section 3114.8 Structural. This section has been added to require intermodal shipping containers that conform to ISO 1496-1 that are repurposed for use as buildings or structures, or as a part of buildings or structures, to be designed in accordance with Chapter 16 and this section. This section has been added to read: 3114.8 Structural. Intermodal shipping containers which conform to ISO 1496-1 that are repurposed for use as buildings or structures, or as a part of buildings or structures, shall be designed in accordance with Chapter 16 and this section.

(12) Section 3114.8.1 Foundations. This section has been added to require intermodal shipping containers repurposed for use as a permanent building or structure to be supported on foundations or other supporting structures designed and constructed in accordance with Chapters 16 through 23 of this code. This section has been added to read: 3114.8.1 Foundations. Intermodal shipping containers repurposed for use as a permanent building or structure shall be supported on foundations or other supporting structures designed and constructed in accordance with Chapters 16 through 23 of this code.

(13) Section 3114.8.1.1 Anchorage. This section has been added to require intermodal shipping containers to be anchored to foundations or other supporting structures as necessary to provide a continuous load path for all applicable design and environmental loads in accordance with Chapter 16. This section has been added to read: 3114.8.1.1 Anchorage. Intermodal shipping containers shall be anchored to foundations or other supporting structures as necessary to provide a continuous load path for all applicable design and environmental loads in accordance with Chapter 16.

(14) Section 3114.8.2 Welds. This section was added to require all new welds and connections to be equal to or greater than the original connections. This section has been added to read: 3114.8.2 Welds. All new welds and connections shall be equal to or greater than the original connections.

(15) Section 3114.8.3 Structural design. This section has been added to require the structural design for the intermodal shipping containers repurposed for use as a building or structure, or as part of a building or structure to comply with Section 3114.8.4 or 3114.8.5. This section has been added to read: 3114.8.3 Structural design. The structural design for the intermodal shipping containers repurposed for use as a building or structure, or as part of a building or structure, shall comply with Section 3114.8.4 or 3114.8.5.

(16) Section 3114.8.4 Detailed design procedure. This section has been added to require a structural analysis meeting the requirements of this section to be provided to the building code official to demonstrate the structural adequacy of the intermodal shipping containers. An exception has been provided for shipping containers designed in accordance with Section 3114.8.5. This section has been added to read: 3114.8.4 Detailed design procedure. A structural analysis meeting the requirements of this section shall be provided to the building

official to demonstrate the structural adequacy of the intermodal shipping containers.

Exception: Intermodal shipping containers designed in accordance with Section 3114.8.5.

(17) Section 3114.8.4.1 Material properties. This section has been added to require structural material properties for existing intermodal shipping container steel components to be established by material testing where the steel grade and composition cannot be identified by the manufacturer's designation. This section has been added to read: 3114.8.4.1 Material properties. Structural material properties for existing intermodal shipping container steel components shall be established by material testing where the steel grade and composition cannot be identified by the manufacturer's designation.

(18) Section 3114.8.4.2 Seismic design parameters. This section has been added to require the seismic force-resisting system to be designed and detailed in accordance with one of three requirements. This section has been added to read: 3114.8.4.2 Seismic design parameters. The seismic force-resisting system shall be designed and detailed in accordance with one of the following:

(A) Where all or portions of the corrugated steel container sides are considered to be the seismic force-resisting system, design and detailing shall be in accordance with the ASCE 7 Table 12.2-1 requirements for light-frame bearing-wall systems with shear panels of all other materials,

(B) Where all or portions of the corrugated steel container sides are retained, but are not considered to be the seismic force-resisting system, an independent seismic force-resisting system shall be selected, designed and detailed in accordance with ASCE 7 Table 12.2-1, or

(C) Where all or portions of the corrugated steel container sides are retained and integrated into a seismic force-resisting system other than as permitted by Section 3114.8.2 Item 1, seismic design parameters shall be developed from testing and analysis in accordance with Section 104.11 and ASCE 7 Section 12.2.1.1 or 12.2.1.2.

(19) Section 3114.8.4.3 Allowable shear value. This section has been added to require allowable shear values for the intermodal shipping container corrugated steel sheet panel side walls and end walls to be demonstrated by testing and analysis in accordance with Section 104.11. It further requires where penetrations are made in the side walls or end walls designated as part of the lateral force-resisting system, the penetrations to be substantiated by rational analysis. This section has been added to read: 3114.8.4.3 Allowable shear value. The allowable shear values for the intermodal shipping container corrugated steel sheet panel side walls and end walls shall be demonstrated by testing and analysis in accordance with Section 104.11. Where penetrations are made in the side walls or end walls designated as part of the lateral force-resisting system, the penetrations shall be substantiated by rational analysis.

(20) Section 3114.8.5 Simplified structural design of single-unit containers. This section has been added to specify single-unit intermodal shipping containers conforming to the limitations of Section 3114.8.5.1 shall be permitted to be designed in accordance with the simplified structural design provisions of this section. This section has been added to read: 3114.8.5 Simplified structural design of single-unit containers. Single-unit intermodal shipping containers conforming to the limitations of Section 3114.8.5.1 shall be permitted to be designed in accordance with the simplified structural design provisions of this section.

(21) 3114.8.5.1 Limitations. This section has been added to provide a list of limitations for the use of Section 3114.8.5. This section has been added to read: 3114.8.5.1 Limitations. Use of Section 3114.8.5 is subject to all of the following limitations:

(A) The intermodal shipping container shall be a single-unit, stand-alone unit supported on a foundation and shall not be in contact with or supporting any other shipping container or other structure.

(B) The intermodal shipping container top and bottom rails, corner castings, and columns or any portion thereof shall not be notched, cut, or removed in any manner.

(C) The intermodal shipping container shall be erected in a level and horizontal position with the floor located at the bottom.

(D) The intermodal shipping container shall be located in Seismic Design Category A, B, C or D.

(22) Section 3114.8.5.2 Simplified structural design. This section has been added to require where permitted by Section 3114.8.5.1, single-unit, stand-alone intermodal shipping containers be designed using a list of assumptions for corrugated steel shear walls. This section has been added to read: 3114.8.5.2. Simplified structural design. Where permitted by Section 3114.8.5.1, single-unit, stand-alone intermodal shipping containers shall be designed using the following assumptions for the corrugated steel shear walls:

(A) The appropriate detailing requirements contained in Chapters 16 through 23,

(B) Response modification coefficient, R equals 2,

(C) Over strength factor, * equals 2.5,

(D) Deflection amplification factor, C equals 2, and

(E) Limits on structural height, h equals 9.5 feet (2900 mm).

(23) Section 3114.8.5.3 Allowable shear. This section has been added to require the allowable shear for the corrugated steel side walls (longitudinal) and end walls (transverse) for wind design and for seismic design using the coefficients of Section 3114.8.5.2 to be in accordance with Table 3114.8.5.3 provided that a specific list of conditions is met. This section has been added to read: 3114.8.5.3 Allowable shear. The allowable shear for the corrugated steel side walls (longitudinal) and end walls (transverse) for wind design and for seismic design using the coefficients of Section 3114.8.5.2 shall be in accordance with Table 3114.8.5.3 provided that all of the following conditions are met:

(A) The total linear length of all openings in any individual side walls or end walls shall be limited to not more than 50 percent of the length of that side wall or end wall.

(B) Any full height wall length, or portion thereof, less than 4 feet (305 mm) long shall not be considered as a portion of the lateral force-resisting system.

(C) All side walls or end walls used as part of the lateral force-resisting system shall have an existing or new boundary element on all sides to form a continuous load path, or paths, with adequate strength and stiffness to transfer all forces from the point of application to the final point of resistance.

(D) Where openings are made in container walls, floors, or roofs for doors, windows and other openings:

(i) The openings shall be framed with steel elements that are designed in accordance with Chapter 16 and Chapter 22.

(ii) The cross section and material grade of any new steel element shall be equal to or greater than the steel element removed.

(E) A maximum of one penetration not greater than a 6-inch (152 mm) diameter hose for conduits, pipes, tubes or vents, or not greater than 16 square inches (10 322 mm²) for electrical boxes, is permitted for each individual 8-foot length (2438 mm) lateral force-resisting wall. Penetrations located in walls that are not part of the wall lateral force-

resisting system shall not be limited in size or quantity. Existing intermodal shipping container vents shall not be considered a penetration.

(F) End wall door or doors designated as part of the lateral force-resisting system shall be welded closed.

(24) Table 3114.8.5.3 Allowable Shear Values for Intermodal Shipping Container Corrugated Steel Walls for Wind or Seismic Loading. This table has been added to provide allowable shear values for side walls and end walls for specific container designations with specific container dimensions for both nominal length and nominal height. The table has been added to read: Table 3114.8.5.3. Allowable Shear Values for Intermodal Shipping Container Corrugated Steel Walls for Wind or Seismic Loading. The table contains 16 rows with 5 columns per row; and is described below:

(A) Row 1 is the header row and lists the following headers in each of the five columns:

(i) Row 1, column 1 is entitled "Container Designation" with a superscript "b" after "Designation."

(ii) Row 1, column 2 is entitled "Container Dimension (Nominal Length)."

(iii) Row 1, column 3 is entitled "Container Dimension (Nominal Height)."

(iv) Row 1, column 4 is entitled "Allowable Side Wall Shear Values (PLF)" with the superscript letters "a" and "c" after "(PLF)."

(v) Row 1, column 5 is entitled "Allowable End Wall Shear Values (PLF)" with the superscript letters "a" and "c" after "(PLF)."

(B) Row 2 contains the following information:

(i) Row 2, column 1 lists the container designation "1EEE."

(ii) Row 2, column 2 lists the container dimension nominal length of "45 feet (13.7 m)."

(iii) Row 2, column 3 lists the container dimension nominal height of "9.5 feet (2896 mm)."

(iv) Row 2, column 4 lists the allowable side wall shear value (PLF) of "75."

(v) Row 2, column 5 lists the allowable end wall shear value (PLF) of "843."

(C) Row 3 contains the following information:

(i) Row 3, column 1 lists the container designation "1EE."

(ii) Row 3, column 2 lists the container dimension nominal length of "45 feet (13.7 m)."

(iii) Row 3, column 3 lists the container dimension nominal height of "9.5 feet (2896 mm)."

(iv) Row 3, column 4 lists the allowable side wall shear value (PLF) of "75."

(v) Row 3, column 5 lists the allowable end wall shear value (PLF) of "843."

(D) Row 4 contains the following information:

(i) Row 4, column 1 lists the container designation "1AAA."

(ii) Row 4, column 2 lists the container dimension nominal length of "40 feet (12.2 m)."

(iii) Row 4, column 3 lists the container dimension nominal height of "9.5 feet (2896 mm)."

(iv) Row 4, column 4 lists the allowable side wall shear value (PLF) of "84."

(v) Row 4, column 5 lists the allowable end wall shear value (PLF) of "843."

(E) Row 5 contains the following information:

(i) Row 5, column 1 lists the container designation "1AA."

- (ii) Row 5, column 2 lists the container dimension nominal length of "40 feet (12.2 m)."
 - (iii) Row 5, column 3 lists the container dimension nominal height of "8.5 feet (2591 mm)."
 - (iv) Row 5, column 4 lists the allowable side wall shear value (PLF) of "84."
 - (v) Row 5, column 5 lists the allowable end wall shear value (PLF) of "843."
- (F) Row 6 contains the following information:
 - (i) Row 6, column 1 lists the container designation "1A."
 - (ii) Row 6, column 2 lists the container dimension nominal length of "40 feet (12.2 m)."
 - (iii) Row 6, column 3 lists the container dimension nominal height of "8.0 feet (2438 mm)."
 - (iv) Row 6, column 4 lists the allowable side wall shear value (PLF) of "84."
 - (v) Row 6, column 5 lists the allowable end wall shear value (PLF) of "843."
- (G) Row 7 contains the following information:
 - (i) Row 7, column 1 lists the container designation "1AX."
 - (ii) Row 7, column 2 lists the container dimension nominal length of "40 feet (12.2 m)."
 - (iii) Row 7, column 3 lists the container dimension nominal height of "less than 8.0 feet (2438 mm)."
 - (iv) Row 7, column 4 lists the allowable side wall shear value (PLF) of "84."
 - (v) Row 7, column 5 lists the allowable end wall shear value (PLF) of "843."
- (H) Row 8 contains the following information:
 - (i) Row 8, column 1 lists the container designation "1BBB."
 - (ii) Row 8, column 2 lists the container dimension nominal length of "30 feet (9.1 m)."
 - (iii) Row 8, column 3 lists the container dimension nominal height of "9.5 feet (2896 mm)."
 - (iv) Row 8, column 4 lists the allowable side wall shear value (PLF) of "112."
 - (v) Row 8, column 5 lists the allowable end wall shear value (PLF) of "843."
- (I) Row 9 contains the following information:
 - (i) Row 9, column 1 lists the container designation "1BB."
 - (ii) Row 9, column 2 lists the container dimension nominal length of "30 feet (9.1 m)."
 - (iii) Row 9, column 3 lists the container dimension nominal height of "8.5 feet (2591 mm)."
 - (iv) Row 9, column 4 lists the allowable side wall shear value (PLF) of "112."
 - (v) Row 9, column 5 lists the allowable end wall shear value (PLF) of "843."
- (J) Row 10 contains the following information:
 - (i) Row 10, column 1 lists the container designation "1B."
 - (ii) Row 10, column 2 lists the container dimension nominal length of "30 feet (9.1 m)."
 - (iii) Row 10, column 3 lists the container dimension nominal height of "8.0 feet (2438 mm)."
 - (iv) Row 10, column 4 lists the allowable side wall shear value (PLF) of "112."
 - (v) Row 10, column 5 lists the allowable end wall shear value (PLF) of "843."

- (K) Row 11 contains the following information:
- (i) Row 11, column 1 lists the container designation "1BX."
 - (ii) Row 11, column 2 lists the container dimension nominal length of "30 feet (9.1 m)."
 - (iii) Row 11, column 3 lists the container dimension nominal height of "less than 8.0 feet (2438 mm)."
 - (iv) Row 11, column 4 lists the allowable side wall shear value (PLF) of "112."
 - (v) Row 11, column 5 lists the allowable end wall shear value (PLF) of "843."
- (L) Row 12 contains the following information:
- (i) Row 12, column 1 lists the container designation "1CC."
 - (ii) Row 12, column 2 lists the container dimension nominal length of "20 feet (6.1 m)."
 - (iii) Row 12, column 3 lists the container dimension nominal height of "8.5 feet (2591 mm)."
 - (iv) Row 12, column 4 lists the allowable side wall shear value (PLF) of "168."
 - (v) Row 12, column 5 lists the allowable end wall shear value (PLF) of "843."
- (M) Row 13 contains the following information:
- (i) Row 13, column 1 lists the container designation "1CC."
 - (ii) Row 13, column 2 lists the container dimension nominal length of "20 feet (6.1 m)."
 - (iii) Row 13, column 3 lists the container dimension nominal height of "8.0 feet (2438 mm)."
 - (iv) Row 13, column 4 lists the allowable side wall shear value (PLF) of "168."
 - (v) Row 13, column 5 lists the allowable end wall shear value (PLF) of "843."
- (N) Row 14 contains the following information:
- (i) Row 14, column 1 lists the container designation "1CX."
 - (ii) Row 14, column 2 lists the container dimension nominal length of "20 feet (6.1 m)."
 - (iii) Row 14, column 3 lists the container dimension nominal height of "less than 8.0 feet (2438 mm)."
 - (iv) Row 14, column 4 lists the allowable side wall shear value (PLF) of "168."
 - (v) Row 14, column 5 lists the allowable end wall shear value (PLF) of "843."
- (O) Row 15 contains the following information:
- (i) Row 15, column 1 lists the container designation "1D."
 - (ii) Row 15, column 2 lists the container dimension nominal length of "10 feet (3.0 m)."
 - (iii) Row 15, column 3 lists the container dimension nominal height of "8.0 feet (2438 mm)."
 - (iv) Row 15, column 4 lists the allowable side wall shear value (PLF) of "337."
 - (v) Row 15, column 5 lists the allowable end wall shear value (PLF) of "843."
- (P) Row 16 contains the following information:
- (i) Row 16, column 1 lists the container designation "1DX."
 - (ii) Row 16, column 2 lists the container dimension nominal length of "10 feet (3.0 m)."
 - (iii) Row 16, column 3 lists the container dimension nominal height of "less than 8.0 feet (2438 mm)."

(iv) Row 16, column 4 lists the allowable side wall shear value (PLF) of "337."

(v) Row 16, column 5 lists the allowable end wall shear value (PLF) of "843."

(Q) Three footnotes to the table read as follows:

(i) Footnote a: The allowable shear for the side walls and end walls of the intermodal shipping containers are derived from ISO 1496-1 and reduced by a factor of safety of 5.

(ii) Footnote b: Container designation type is derived from ISO 668.

(iii) Footnote c: Limitations of Section 3114.8.5.1 shall apply.

748:20-2-37. IBC® 2018 Chapter 32 Encroachments into the Public Right-of-Way

Chapter 32 of the Oklahoma adopted IBC® 2018 is adopted with the following modification: Section 3201.3 Other Laws has been modified to allow the authority having jurisdiction the ability in unusual circumstances to evaluate the risk of making an exception to a requirement in this chapter. This section has been modified to read: 3201.3 Other Laws. The provisions of this chapter shall not be construed to permit the violation of other laws or ordinances regulating the use and occupancy of public property or to prevent the holders of public right-of-way to grant special permission for encroachments in their rights-of-way greater than those permitted in Section 3202.

748:20-2-38. IBC® Chapter 33 [RESERVED]

748:20-2-39. IBC® Chapter 34 [RESERVED]

748:20-2-40. IBC® 2018 Chapter 35 Referenced Standards

Chapter 35 of the Oklahoma adopted IBC® 2018 is adopted with the following modifications:

(1) The reference to ICC 500® has been modified to change the sections to be referenced. This section has been modified to read: ICC 500®-14 ICC/NSSA Standard on the Design and Construction of Storm Shelters, Code reference sections: 202, 423.5, 423.5.1, 423.5.2, 423.5.2.1, 423.5.3, 423.5.4, 423.5.5, 423.5.6, 423.5.6.1, 423.5.7, 423.5.8, 423.5.9, 423.5.10, and 423.5.11.

(2) The reference to the International Existing Building Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IEBC®-18 International Existing Building Code® as adopted and modified by the State of Oklahoma through the OUBCC.

(3) The reference to the International Energy Conservation Code® has been modified to change the edition year to 2006. This section has been modified to read: IECC®-06 International Energy Conservation Code®.

(4) The reference to the International Fire Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IFC®-18 International Fire Code® as adopted and modified by the State of Oklahoma through the OUBCC.

(5) The reference to the International Fuel Gas Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IFGC®-18 International Fuel Gas Code® as adopted and modified by the State of Oklahoma through the OUBCC.

- (6) The reference to the International Mechanical Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IMC®-18 International Mechanical Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (7) The reference to the International Plumbing Code® has been modified to include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IPC®-18 International Plumbing Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (8) The reference to the International Residential Code® has been modified to change the edition year to 2015 and include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IRC®-15 International Residential Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (9) The referenced standard for NFPA® 70 National Electrical Code® has been modified to add after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: 70-17 National Electrical Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (10) The referenced standard ISO 668 - 2013 Series 1 Freight Containers - Classifications, Dimensions and Ratings has been added to the referenced standards. This standard has been added to read: ISO 668 - 2013 Series 1 Freight Containers - Classifications, Dimensions and Ratings. Code reference sections: Table 3114.8.5.3.
- (11) The referenced standard ISO 1496-1 - 2013 Series 1 Freight Containers - Specification and Testing - Part 1: General Cargo Containers for General Purposes has been added to the referenced standards. This standard has been added to read: ISO1496-1 - 2013 Series 1 Freight Containers - Specification and Testing - Part 1: General Cargo Containers for General Purposes. Code reference sections: 3114.8, Table 3114.8.5.3.
- (12) The referenced standard ISO 6346 - 1995 with Amendment 3 - 2012 Freight Containers - Coding, Identification and Marking has been added to the referenced standards. This standard has been added to read: ISO 6346 - 1995 with Amendment 3 - 2012 Freight Containers - Coding, Identification and Marking. Code reference section: 3114.3.
- (13) The referenced standard NFPA® 780 - 17 Standard for the Installation of Lightning Protection Systems has been added to the referenced standards. This standard has been added to read: NFPA® 780 - 17 Standard for the Installation of Lightning Protection Systems. Code reference section: 2703.2.
- (14) The referenced standard UL 96A - 2016 Standard for Installation Requirements for Lightning Protection Systems has been added to the referenced standards. This standard has been added to read: UL 96A - 2016 Standard for Installation Requirements for Lightning Protection Systems. Code reference section: 2703.2
- (15) The referenced standard UL 1489-2016 Fire Resistant Piping Protection Systems Carrying Combustible Liquids has been added to the referenced standards. This standard has been added to read: UL 1489-2016 Fire Resistant Piping Protection Systems Carrying Combustible Liquids. Code reference sections: 403.4.8.2, 2702.1.2.