

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

**RULEMAKING ACTION:**

EMERGENCY adoption

**RULES:**

**Subchapter 1. IBC® 2015**

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

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

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

**Subchapter 2. IBC® 2015 [NEW]**

748:20-2-1. Adoption of the International Building Code® (IBC®) [RESERVED]

748:20-2-2. Effect of Adoption [RESERVED]

748:20-2-3. IBC® and Other Appendices [RESERVED]

748:20-2-4. IBC® Provisions Adopted and Modified [RESERVED]

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

748:20-2-6. IBC® Chapter 1 [RESERVED]

748:20-2-7. IBC® 2015 Chapter 2 Definitions [NEW]

748:20-2-8. IBC® Chapter 3 [RESERVED]

748:20-2-9. IBC® 2015 Chapter 4 Special Detailed Requirements Based on Use and Occupancy [NEW]

748:20-2-10. IBC® Chapter 5 [RESERVED]

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

748:20-2-12. IBC® Chapter 7 [RESERVED]

748:20-2-13. IBC® Chapter 8 [RESERVED]

748:20-2-14. IBC® 2015 Chapter 9 Fire Protection Systems [NEW]

748:20-2-15. IBC® 2015 Chapter 10 Means of Egress [NEW]

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]

748:20-2-20. IBC® Chapter 15 [RESERVED]

748:20-2-21. IBC® Chapter 16 [RESERVED]

748:20-2-22. IBC® Chapter 17 [RESERVED]

748:20-2-23. IBC® Chapter 18 [RESERVED]

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® Chapter 23 [RESERVED]

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® Chapter 27 [RESERVED]
- 748:20-2-33. IBC® Chapter 28 [RESERVED]
- 748:20-2-34. IBC® Chapter 29 [RESERVED]
- 748:20-2-35. IBC® Chapter 30 [RESERVED]
- 748:20-2-36. IBC® Chapter 31 [RESERVED]
- 748:20-2-37. IBC® Chapter 32 [RESERVED]
- 748:20-2-38. IBC® Chapter 33 [RESERVED]
- 748:20-2-39. IBC® Chapter 34 [RESERVED]
- 748:20-2-40. IBC® Chapter 35 [RESERVED]

**Subchapter 3. IFC® 2015**

- 748:20-3-4. IFC® 2015 Provisions Adopted and Modified [AMENDED AND RENUMBERED TO 748:20-4-4.]
- 748:20-3-6. IFC® 2015 Chapter 1 Scope and Administration [AMENDED AND RENUMBERED TO 748:20-4-6.]
- 748:20-3-7. IFC® 2015 Chapter 2 Definitions [AMENDED AND RENUMBERED TO 748:20-4-7.]
- 748:20-3-11. IFC® 2015 Chapter 9 Fire Protection Systems [AMENDED AND RENUMBERED TO 748:20-4.14.]
- 748:20-3-12. IFC® 2015 Chapter 10 Means of Egress [AMENDED AND RENUMBERED TO 748:20-4-15.]
- 748:20-3-14. IFC® 2015 Chapter 80 Referenced Standards [AMENDED AND RENUMBERED TO 748:20-4-85.]

**Subchapter 4. IFC® 2015**

- 748:20-4-1. Adoption of the International Fire Code® [RESERVED]
- 748:20-4-2. Effect of Adoption [RESERVED]
- 748:20-4-3. IFC® and Other Appendices [RESERVED]
- 748:20-4-4. IFC® 2015 Provisions Adopted and Modified [NEW]
- 748:20-4-5. IFC® Participation in Federal Programs and/or Federally Funded or Financed Projects [RESERVED]
- 748:20-4-6. IFC® 2015 Chapter 1 Scope and Administration [NEW]
- 748:20-4-7. IFC® 2015 Chapter 2 Definitions [NEW]
- 748:20-4-8. IFC® Chapter 3 [RESERVED]
- 748:20-4-9. IFC® Chapter 4 [RESERVED]
- 748:20-4-10. IFC® Chapter 5 [RESERVED]
- 748:20-4-11. IFC® Chapter 6 [RESERVED]
- 748:20-4-12. IFC® Chapter 7 [RESERVED]
- 748:20-4-13. IFC® Chapter 8 [RESERVED]
- 748:20-4-14. IFC® 2015 Chapter 9 Fire Protection Systems [NEW]
- 748:20-4-15. IFC® 2015 Chapter 10 Means of Egress [NEW]
- 748:20-4-16. IFC® Chapter 11 [RESERVED]
- 748:20-4-17. IFC® Chapter 12 [RESERVED]
- 748:20-4-18. IFC® Chapter 13 [RESERVED]
- 748:20-4-19. IFC® Chapter 14 [RESERVED]
- 748:20-4-20. IFC® Chapter 15 [RESERVED]
- 748:20-4-21. IFC® Chapter 16 [RESERVED]
- 748:20-4-22. IFC® Chapter 17 [RESERVED]

748:20-4-23. IFC® Chapter 18 [RESERVED]  
748:20-4-24. IFC® Chapter 19 [RESERVED]  
748:20-4-25. IFC® Chapter 20 [RESERVED]  
748:20-4-26. IFC® Chapter 21 [RESERVED]  
748:20-4-27. IFC® Chapter 22 [RESERVED]  
748:20-4-28. IFC® Chapter 23 [RESERVED]  
748:20-4-29. IFC® Chapter 24 [RESERVED]  
748:20-4-30. IFC® Chapter 25 [RESERVED]  
748:20-4-31. IFC® Chapter 26 [RESERVED]  
748:20-4-32. IFC® Chapter 27 [RESERVED]  
748:20-4-33. IFC® Chapter 28 [RESERVED]  
748:20-4-34. IFC® Chapter 29 [RESERVED]  
748:20-4-35. IFC® Chapter 30 [RESERVED]  
748:20-4-36. IFC® Chapter 31 [RESERVED]  
748:20-4-37. IFC® Chapter 32 [RESERVED]  
748:20-4-38. IFC® Chapter 33 [RESERVED]  
748:20-4-39. IFC® Chapter 34 [RESERVED]  
748:20-4-40. IFC® Chapter 35 [RESERVED]  
748:20-4-41. IFC® Chapter 36 [RESERVED]  
748:20-4-42. IFC® Chapter 37 [RESERVED]  
748:20-4-43. IFC® Chapter 38 [RESERVED]  
748:20-4-44. IFC 2015® Chapter 39 Processing and Extraction Facilities [NEW]  
748:20-4-45. IFC® Chapter 40 [RESERVED]  
748:20-4-46. IFC® Chapter 41 [RESERVED]  
748:20-4-47. IFC® Chapter 42 [RESERVED]  
748:20-4-48. IFC® Chapter 43 [RESERVED]  
748:20-4-49. IFC® Chapter 44 [RESERVED]  
748:20-4-50. IFC® Chapter 45 [RESERVED]  
748:20-4-51. IFC® Chapter 46 [RESERVED]  
748:20-4-52. IFC® Chapter 47 [RESERVED]  
748:20-4-53. IFC® Chapter 48 [RESERVED]  
748:20-4-54. IFC® Chapter 49 [RESERVED]  
748:20-4-55. IFC® Chapter 50 [RESERVED]  
748:20-4-56. IFC® Chapter 51 [RESERVED]  
748:20-4-57. IFC® Chapter 52 [RESERVED]  
748:20-4-58. IFC® Chapter 53 Compressed Gases [NEW]  
748:20-4-59. IFC® Chapter 54 [RESERVED]  
748:20-4-60. IFC® Chapter 55 [RESERVED]  
748:20-4-61. IFC® Chapter 56 [RESERVED]  
748:20-4-62. IFC® Chapter 57 [RESERVED]  
748:20-4-63. IFC® Chapter 58 [RESERVED]  
748:20-4-64. IFC® Chapter 59 [RESERVED]  
748:20-4-65. IFC® Chapter 60 [RESERVED]  
748:20-4-66. IFC® Chapter 61 [RESERVED]  
748:20-4-67. IFC® Chapter 62 [RESERVED]  
748:20-4-68. IFC® Chapter 63 [RESERVED]

- 748:20-4-69. IFC® Chapter 64 [RESERVED]
- 748:20-4-70. IFC® Chapter 65 [RESERVED]
- 748:20-4-71. IFC® Chapter 66 [RESERVED]
- 748:20-4-72. IFC® Chapter 67 [RESERVED]
- 748:20-4-73. IFC® Chapter 68 [RESERVED]
- 748:20-4-74. IFC® Chapter 69 [RESERVED]
- 748:20-4-75. IFC® Chapter 70 [RESERVED]
- 748:20-4-76. IFC® Chapter 71 [RESERVED]
- 748:20-4-77. IFC® Chapter 72 [RESERVED]
- 748:20-4-78. IFC® Chapter 73 [RESERVED]
- 748:20-4-79. IFC® Chapter 74 [RESERVED]
- 748:20-4-80. IFC® Chapter 75 [RESERVED]
- 748:20-4-81. IFC® Chapter 76 [RESERVED]
- 748:20-4-82. IFC® Chapter 77 [RESERVED]
- 748:20-4-83. IFC® Chapter 78 [RESERVED]
- 748:20-4-84. IFC® Chapter 79 [RESERVED]
- 748:20-4-85. IFC® 2015 Chapter 80 Referenced Standards [NEW]
- 748:20-4-86. [RESERVED]

**Subchapter 10. NEC® 2014**

- 748:20-10-1. Adoption of the National Electrical Code® (NEC®) [RESERVED]
- 748:20-10-2. Effect of Adoption [RESERVED]
- 748:20-10-3. NEC® Informative Annexes [RESERVED]
- 748:20-10-4. NEC® Provisions Adopted and Modified [RESERVED]
- 748:20-10-5. Participation in Federal Programs and/or Federally Funded or Financed Projects [RESERVED]
- 748:20-10-6. NEC® Article 90 [RESERVED]
- 748:20-10-7. NEC® Chapter 1 [RESERVED]
- 748:20-10-8. NEC® Chapter 2 [RESERVED]
- 748:20-10-9. NEC® Chapter 3 [RESERVED]
- 748:20-10-10. NEC® 2014 Chapter 4 Equipment for General Use [NEW]
- 748:20-10-11. NEC® Chapter 5 [RESERVED]
- 748:20-10-12. NEC® Chapter 6 [RESERVED]
- 748:20-10-13. NEC® Chapter 7 [RESERVED]
- 748:20-10-14. NEC® Chapter 8 [RESERVED]
- 748:20-10-15. NEC® Chapter 9 [RESERVED]

**AUTHORITY:**

Oklahoma Uniform Building Code Commission; 59 O.S. § 1000.23 and 1000.24

**COMMENT PERIOD:**

January 3, 2020 through January 17, 2020

**PUBLIC HEARING:**

January 21, 2020

**ADOPTION:**

January 21, 2020

**EFFECTIVE:**

Immediately upon Governor's approval

**EXPIRATION:**

Effective through September 14, 2020, unless superseded by another rule or disapproved by the Legislature

**SUPERSEDED EMERGENCY ACTIONS:**

n/a

**INCORPORATIONS BY REFERENCE:**

**Incorporated standards:**

International Code Council; International Building Code®, 2015 Edition

International Code Council; International Fire Code®, 2015 Edition

National Fire Protection Association; National Electrical Code®, 2014 Edition

**Incorporating rules:**

748:20-1-9., 748:20-1-11., 748:20-1-12., 748:20-2-1., 748:20-2-2., 748:20-2-3., 748:20-2-4., 748:20-2-5., 748:20-2-6., 748:20-2-7., 748:20-2-8., 748:20-2-9., 748:20-2-10., 748:20-2-11., 748:20-2-12., 748:20-2-13., 748:20-2-14., 748:20-2-15., 748:20-2-16., 748:20-2-17., 748:20-2-18., 748:20-2-19., 748:20-2-20., 748:20-2-21., 748:20-2-22., 748:20-2-23., 748:20-2-24., 748:20-2-25., 748:20-2-26., 748:20-2-27., 748:20-2-28., 748:20-2-29., 748:20-2-30., 748:20-2-31., 748:20-2-32., 748:20-2-33., 748:20-2-34., 748:20-2-35., 748:20-2-36., 748:20-2-37., 748:20-2-38., 748:20-2-39., 748:20-2-40., 748:20-3-4., 748:20-3-6., 748:20-3-7., 748:20-3-11., 748:20-3-12., 748:20-3-14., 748:20-4-1., 748:20-4-2., 748:20-4-3., 748:20-4-4., 748:20-4-5., 748:20-4-6., 748:20-4-7., 748:20-4-8., 748:20-4-9., 748:20-4-10., 748:20-4-11., 748:20-4-12., 748:20-4-13., 748:20-4-14., 748:20-4-15., 748:20-4-16., 748:20-4-17., 748:20-4-18., 748:20-4-19., 748:20-4-20., 748:20-4-21., 748:20-4-22., 748:20-4-23., 748:20-4-24., 748:20-4-25., 748:20-4-26., 748:20-4-27., 748:20-4-28., 748:20-4-29., 748:20-4-30., 748:20-4-31., 748:20-4-32., 748:20-4-33., 748:20-4-34., 748:20-4-35., 748:20-4-36., 748:20-4-37., 748:20-4-38., 748:20-4-39., 748:20-4-40., 748:20-4-41., 748:20-4-42., 748:20-4-43., 748:20-4-44., 748:20-4-45., 748:20-4-46., 748:20-4-47., 748:20-4-48., 748:20-4-49., 748:20-4-50., 748:20-4-51., 748:20-4-52., 748:20-4-53., 748:20-4-54., 748:20-4-55., 748:20-4-56., 748:20-4-57., 748:20-4-58., 748:20-4-59., 748:20-4-60., 748:20-4-61., 748:20-4-62., 748:20-4-63., 748:20-4-64., 748:20-4-65., 748:20-4-66., 748:20-4-67., 748:20-4-68., 748:20-4-69., 748:20-4-70., 748:20-4-71., 748:20-4-72., 748:20-4-73., 748:20-4-74., 748:20-4-75., 748:20-4-76., 748:20-4-77., 748:20-4-78., 748:20-4-79., 748:20-4-80., 748:20-4-81., 748:20-4-82., 748:20-4-83., 748:20-4-84., 748:20-4-85., 748:20-4-86., 748:20-10-1., 748:20-10-2., 748:20-10-3., 748:20-10-4., 748:20-10-5., 748:20-10-6., 748:20-10-7., 748:20-10-8., 748:20-10-9., 748:20-10-10., 748:20-10-11., 748:20-10-12., 748:20-10-13., 748:20-10-14., and 748:20-10-15.

**Availability:**

8:00 a.m. to 4:30 p.m., Monday through Friday at the Oklahoma Uniform Building Code Commission, 2401 NW 23rd Street, Suite 2F, Oklahoma City, OK 73107, 405-521-6501.

**FINDING OF EMERGENCY:**

The modifications to the OUBCC's adoption of the 2015 editions of the International Building Code®, International Fire Code®, and the 2014 edition of the National Electrical Code® are necessitated by the Medical Marijuana, 63 O.S. § 420-427, the Oklahoma Medical Marijuana and Patient Protection Act, 63 O.S. § 427.1-427.23 and the Oklahoma Medical Marijuana Waste Management Act, 63 O.S. § 427a-430 and related rules of the State Department of Health to clarify life safety building code requirements related to growing, processing and processing and extraction methods utilized through any industry that utilizes these practices.

**GIST/ANALYSIS:**

The purpose of these emergency rules is to continue implementation of 59 O.S. § 1000.20

through 1000.29 (the "Act") creating the Oklahoma Uniform Building Code Commission (the "OUBCC"). These emergency rules amend the adoptions of the 2015 Edition of the International Building Code®, as the statewide minimum code for commercial building construction in the State of Oklahoma; the 2015 Edition of the International Fire Code®, as the statewide minimum code for residential and commercial fire prevention and fire protection systems in the State of Oklahoma; and the 2014 Edition of the National Electrical Code® as the statewide minimum code for commercial electrical construction in the State of Oklahoma.

Sections 748:20-1-9., 748:20-1-11., and 748:20-1-12. of the IBC® 2015, have been amended and renumbered to 748:20-2-9., 748:20-2-14., and 748:20-2-15, respectively. Subchapter 2 has been added to begin the process of renumbering the agency rules related to the adoption of the International Building Code® (IBC®), which will conclude with the filing of permanent rules. Sections 748:20-2-7., 748:20-2-9., 748:20-2-14., and 748:20-2-15., amend the OUBCC's previous adoption of Oklahoma modifications to provide for changes needed for the extraction and processing of plant materials to provide critical safety requirements to those involved in any industry utilizing these practices, to the provisions adopted by the OUBCC for the IBC®, 2015 edition. Sections 748:20-2-1., through 748:20-2-6., 748:20-2-8., 748:20-2-10, through 748:20-2-13., and 748:20-2-16., through 748:20-2-40 have been reserved to address future changes to the chapters of the IBC® in permanent rulemaking.

Sections 748:20-3-4., 748:20-3-6., 748:20-3-7., 748:20-3-11., 748:20-3-12., and 748:20-3-14., of the IFC® 2015 have been amended and renumbered to 748:20-4-4., 748:20-4-6., 748:20-4-7., 748:20-4-14., 748:20-4-15., and 748:20-4-85, respectively. Subchapter 4 has been added to begin the process of renumbering the agency rules related to the adoption of the International Fire Code®, (IFC®), which will conclude with the filing of permanent rules. Sections 748:20-4-4., 748:20-4-6., 748:20-4-7., 748:20-4-14., 748:20-4-15., 748:20-4-44., 748:20-4-58., and 748:20-4-85., have been added to amend the OUBCC's previous adoption of Oklahoma modifications to provide for changes needed for the extraction and processing of plant materials to provide critical safety requirements to those involved in any industry utilizing these practices, to the provisions adopted by the OUBCC for the IFC®, 2015 edition. Sections 748:20-4-1., through 748:20-4-3., 748:20-4-5., 748:20-4-8., through 748:20-4-13., 748:20-4-16., through 748:20-4-43., 748:20-4-45., through 748:20-4-57., and 748:20-4-59., through 748:20-4-84., and 748:20-4-85., have been reserved to address future changes to the chapters of the IFC® in permanent rulemaking.

Subchapter 10 has been added to being the process of renumbering the agency rules related to the adoption of the National Electrical Code® (NEC®), which will conclude with the filing of permanent rules. Section 748:20-10-10 amends the OUBCC's previous adoption of Oklahoma modifications to provide for changes needed for horticultural lighting, to the provisions adopted by the OUBCC for the NEC® 2014 edition. Subchapters 748:20-10-1., through 748:20-10-9., and 748:20-10-11 through 748:20-10-15 have been reserved to address future changes to the chapters of the NEC® in permanent rulemaking.

**CONTACT PERSON:**

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**PURSUANT TO THE ACTIONS DESCRIBED HEREIN, THE FOLLOWING EMERGENCY RULES ARE CONSIDERED PROMULGATED AND EFFECTIVE UPON THE APPROVAL BY THE GOVERNOR AS SET FORTH IN 75 O.S., SECTION 253 (F):**

**SUBCHAPTER 1. IBC® 2015**

**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.

## **SUBCHAPTER 2. IBC® 2015**

### **748:20-2-1. Adoption of the International Building Code® (IBC®) [RESERVED]**

### **748:20-2-2. Effect of Adoption [RESERVED]**

### **748:20-2-3. IBC® and Other Appendices [RESERVED]**

### **748:20-2-4. IBC® Provisions Adopted and Modified [RESERVED]**

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

**748:20-2-6. IBC® Chapter 1 [RESERVED]**

**748:20-2-7. IBC® 2015 Chapter 2 Definitions**

Chapter 2 of the IBC® 2015 is adopted with the following modification: The definition of a GAS DETECTION SYSTEM has been added to clarify multiple references in the code. The definition has been added to read: GAS DETECTION SYSTEM. A system or portion of a combination system that utilizes one or more stationary sensors to detect the presence of a specified gas at a specified concentration and initiate one or more responses required by this code, such as notifying a responsible person, activating an alarm signal, or activating or deactivating equipment. A self-contained gas detection and alarm device is not classified as a gas detection system.

**748:20-2-8. IBC® Chapter 3 [RESERVED]**

**748:20-2-9. IBC® 2015 Chapter 4 Special Detailed Requirements Based on Use and Occupancy**

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.

(22) Section 427 Cultivation, Extraction and Processing Plant Material. This section header has been added to create and identify requirements related to cultivation, extraction and processing of plant material, covered by the 2018 edition of NFPA® 1, Fire Code, not

otherwise covered by the IBC® or IFC®. This section has been added to read: 427 Cultivation, Extraction and Processing Plant Material.

(23) Section 427.1 General. This section has been added to clarify 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 427.2 through 427.6 of this code. This section has been added to read: 427.1 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 427.2 through 427.6.

(24) Section 427.2 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. An exception has been provided for extraction processes that utilize nonhazardous solvents or carbon dioxide. This section has been added to read: 427.2 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.

(25) Section 427.2.1 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 this code and the International Fire Code® shall be located in a room constructed of noncombustible construction. This section has been added to read: 427.2.1 Noncombustible construction. Extraction equipment and processes utilizing materials classified as physical hazards in accordance with Section 307 and the International Fire Code® shall be located in a room constructed of noncombustible materials.

(26) Section 427.2.2 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 this code and 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: 427.2.2 Prohibited occupancies. Extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 and the International Fire Code® shall not be located in any building containing a Group A, E, I, or R occupancy.

(27) Section 427.3 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 this code and 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: 427.3 Equipment location. The extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 and 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.

(28) Section 427.4 Interior finish. This section has been added to require the interior finish of walls and ceilings in plant growing, processing and extraction facilities to comply with this section and Section 803 of this code. This section has been added to read: 427.4 Interior finish. Interior finish of walls and ceilings in plant growing, processing and extraction facilities shall comply with this section and Section 803.

(29) Section 427.4.1 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: 427.4.1 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.

(30) Section 427.4.1.1 Installation. This section has been added to prohibit plastic, mylar or other thin sheeting from being hung from ceilings or suspended overhead structures to create divider walls or rooms. This section has been added to read: 427.4.1.1 Installation. Plastic, mylar and other thin sheeting shall not be hung from ceilings or suspended overhead structures to create divider walls or rooms.

(31) Section 427.5 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: 427.5 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.

(32) Section 427.6 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 this code and the International Fire Code®, to swing in the direction of egress travel. The section 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: 427.6 Means of egress. Extraction rooms utilizing materials classified as physical hazards in accordance with Section 307 and 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® Chapter 5 [RESERVED]**

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

**748:20-2-12. IBC® Chapter 7 RESERVED]**

**748:20-2-13. IBC® Chapter 8 [RESERVED]**

**748:20-2-14. IBC® 2015 Chapter 9 Fire Protection Systems**

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

(1) Section 902.1 Definitions. This section has been modified to clarify the definition of a "GAS DETECTION SYSTEM" has been added to chapter two of the code. This section has been modified to read: 902.1 Definitions. The following terms are defined in Chapter 2:

(A) [F] ALARM NOTIFICATION APPLIANCE.

(B) [F] ALARM SIGNAL.  
(C) [F] ALARM VERFICATION FEATURE.  
(D) [F] ANNUNCIATOR.  
(E) [F] AUDIBLE ALARM NOTIFICATION APPLIANCE.  
(F) [F] AUTOMATIC.  
(G) [F] AUTOMATIC FIRE-EXTINGUISHING SYSTEM.  
(H) [F] AUTOMATIC SMOKE DETECTION SYSTEM.  
(I) [F] AUTOMATIC SPRINKLER SYSTEM.  
(J) [F] AUTOMATIC WATER MIST SYSTEM.  
(K) [F] AVERAGE AMBIENT SOUND LEVEL.  
(L) [F] CARBON DIOXIDE EXTINGUISHING SYSTEMS.  
(M) [F] CEILING LIMIT.  
(N) [F] CLEAN AGENT.  
(O) [F] COMMERCIAL MOTOR VEHICLE.  
(P) [F] CONSTANTLY ATTENDED LOCATION.  
(Q) [F] DELUGE SYSTEM.  
(R) [F] DETECTOR, HEAT.  
(S) [F] DRY-CHEMICAL EXTINGUISHING AGENT.  
(T) [F] ELECTRICAL CIRCUIT PROTECTIVE SYSTEM.  
(U) [F] ELEVATOR GROUP.  
(V) [F] EMERGENCY ALARM SYSTEM.  
(W) [F] EMERGENCY VOICE/ALARM COMMUNICATIONS.  
(X) [F] FIRE ALARM BOX, MANUAL.  
(Y) [F] FIRE ALARM CONTROL UNIT.  
(Z) [F] FIRE ALARM SIGNAL.  
(AA) [F] FIRE ALARM SYSTEM.  
(BB) FIRE AREA.  
(CC) [F] FIRE COMMAND CENTER.  
(DD) [F] FIRE DETECTOR, AUTOMATIC.  
(EE) [F] FIRE PROTECTION SYSTEM.  
(FF) [F] FIRE SAFETY FUNCTIONS.  
(GG) [F] FOAM-EXTINGUISHING SYSTEM.  
(HH) [F] GAS DETECTION SYSTEM.  
(II) [F] HALOGENATED EXTINGUISHING SYSTEM.  
(JJ) [F] INITIATING DEVICE.  
(KK) [F] MANUAL FIRE ALARM BOX.  
(LL) [F] MULTIPLE-STATION ALARM DEVICE.  
(MM) [F] MULTIPLE-STATION SMOKE ALARM.  
(NN) [F] NOTIFICATION ZONE.  
(OO) [F] NUISANCE ALARM.  
(PP) PRIVATE GARAGE.  
(QQ) [F] RECORD DRAWINGS.  
(RR) [F] SINGLE-STATION SMOKE ALARM.  
(SS) [F] SMOKE ALARM.  
(TT) [F] SMOKE DETECTOR.  
(UU) [F] SMOKEPROOF ENCLOSURE.

(VV) [F] STANDPIPE SYSTEM, CLASSES OF.

- (i) Class I system.
- (ii) Class II system.
- (iii) Class III system.

(WW) [F] STANDPIPE, TYPES OF.

- (i) Automatic dry.
- (ii) Automatic wet.
- (iii) Manual dry.
- (iv) Manual wet.
- (v) Semiautomatic dry.

(XX) [F] SUPERVISING STATION.

(YY) [F] SUPERVISORY SERVICE.

(ZZ) [F] SUPERVISORY SIGNAL.

(AAA) [F] SUPERVISORY SIGNAL-INITIATING DEVICE.

(BBB) [F] TIRES, BULK STORAGE OF.

(CCC) [F] TROUBLE SIGNAL.

(DDD) [F] VISIBLE ALARM NOTIFICATION APPLIANCE.

(EEE) [F] WET CHEMICAL EXTINGUISHING SYSTEM.

(FFF) [F] WIRELESS PROTECTION SYSTEM.

(GGG) [F] ZONE.

(HHH) [F] ZONE, NOTIFICATION.

(2) Section 903.2.7 Group M. This section has been modified to reword subsection 4 D of this section 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).

(3) 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).

(4) 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.

(5) 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).

(6) Section 916 Gas Detection Systems. This section header has been added to the code to clarify a new section of code has been added. This section heading has been added to read: Section 916 Gas Detection Systems.

(7) Section 916.1 Gas detection systems. This section has been added to specify when the requirements for gas detection systems are provided, they shall be in compliance with Section 916.2 through 916.11. This section has been added to read: 916.1 Gas detection systems. Gas detection systems required by this code shall comply with Sections 916.2 through 916.11.

(8) Section 916.2 Permits. This section has been added to specify permits shall be required as set forth in Section 105.7 of the International Fire Code®. This section has been modified to

read: 916.2 Permits. Permits shall be required as set forth in Section 105.7 of the International Fire Code®.

(9) Section 916.2.1 Construction documents. This section has been added to require construction documentation to be submitted with the application for permit. It requires the documentation of the gas detection system design and equipment be used, demonstrate compliance with the requirements of this code and be provided with the permit application. This section has been added to read: 916.2.1 Construction documents. Documentation of the gas detection system design and equipment to be used that demonstrates compliance with the requirements of this code shall be provided with the application for permit.

(10) Section 916.3 Equipment. This section has been added to require gas detection systems to be designed for use with the gases being detected and to be installed in accordance with the manufacturer's instructions. This section has been added to read: 916.3 Equipment. Gas detection system equipment shall be designed for use with the gases being detected and shall be installed in accordance with the manufacturer's instructions.

(11) Section 916.4 Power connections. This section has been added to require gas detection systems to be permanently connected to the building electrical power supply or be permitted to be cord connected to an unswitched receptacle using an approved restraining means that secures the plug to the receptacle. This section has been added to read: 916.4 Power connections. Gas detection systems shall be permanently connected to the building electrical power supply or shall be permitted to be cord connected to an unswitched receptacle using an approved restraining means that secures the plug to the receptacle.

(12) Section 916.5 Emergency and standby power. This section has been added to require standby or emergency power to be provided to the gas detection system, or if the power supply is interrupted, the system shall initiate a trouble signal at an approved location. This section has been added to read: 916.5 Emergency and standby power. Standby or emergency power shall be provided or the gas detection system shall initiate a trouble signal at an approved location if the power supply is interrupted.

(13) Section 916.6 Sensor locations. This section has been added to require sensors to be installed in approved locations where leaking gases are expected to accumulate. This section has been added to read: 916.6 Sensor locations. Sensors shall be installed in approved locations where leaking gases are expected to accumulate.

(14) Section 916.7 Gas sampling. This section has been added to require gas sampling to be performed continuously and be processed immediately after sampling, except under certain conditions. The section further requires upon activation of a gas detection alarm, alarm signals or other required responses shall be specified by the section of this code requiring a gas detection system. The section requires audible and visible alarm signals associated with the gas detection alarm to be distinct from fire alarm and carbon monoxide signals. HPM stands for "Hazardous Production Material" as defined in Chapter 2 of this code. This section has been added 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.

(15) Section 916.8 System activation. This section has been added to require a gas detection alarm to be initiated where any sensor detects a concentration of gases exceeding the thresholds specified in this section. The section requires upon activation of a gas detection alarm, alarm signals or other required responses to be specified by the section of this code requiring a gas detection system. The section further requires the alarm signals to be both audible and visible alarm signals that are distinct from fire alarm and carbon monoxide signals. IDLH stands for "Immediately Dangerous to Life and Health" as defined in Chapter 2 of this code. This section has been added to read: 916.8 System activation. A gas detection alarm shall be initiated where any sensor detects a concentration of gas exceeding the following thresholds:

(A) For flammable gases, a gas concentration exceeding 25 percent of the lower flammability limit (LFL).

(B) For nonflammable gases, a gas concentration exceeding one-half of the IDLH, unless a different threshold is specified by the section of this code requiring a gas detection system.

(16) Upon activation of a gas detection alarm, alarm signals or other required responses shall be specified by the section of this code requiring a gas detection system. Audible and visible alarm signals associated with a gas detection alarm shall be distinct from fire alarm and carbon monoxide alarm signals.

(17) Section 916.9 Signage. This section has been added to require signage to be provided adjacent to gas detection system alarm signaling devices that advises occupants of the nature of the signals and actions to take in response to the signal. This section has been added to read: 916.9 Signage. Signs shall be provided adjacent to gas detection system alarm signaling devices that advise occupants of the nature of the signals and actions to take in response to the signal.

(18) Section 916.10 Fire alarm system connections. This section has been added to prohibit gas sensors and gas detection systems to be connected to fire alarm systems unless approved and connected in accordance with the fire alarm equipment manufacturer's instructions. This section has been added to read: 916.10 Fire alarm system connections. Gas sensors and gas detection systems shall not be connected to fire alarm systems unless approved and connected in accordance with the fire alarm equipment manufacturer's instructions.

(19) Section 916.11 Inspection, testing and sensor calibration. This section has been added to require gas detection systems and sensors to be inspected, tested and calibrated in accordance with the International Fire Code®. This section has been added to read: 916.11 Inspection, testing and sensor calibration. Gas detection systems and sensors shall be inspected, tested and calibrated in accordance with the International Fire Code®.

(20) Section 917 Emergency Responder Radio Coverage. This section has been modified to change the section title number from 916 to 917. This section has been modified to read: Section 917 Emergency Responder Radio Coverage.

(21) Section 917.1 General. This section has been modified to change the section reference from 916.1 to 917.1. This section has been modified to read: 917.1 General. Emergency responder radio coverage shall be provided in all new buildings in accordance with Section 510 of the International Fire Code®.

## **748:20-2-15. IBC® 2015 Chapter 10 Means of Egress**

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

(1) Section 1010.1.9.8 Sensor release of electrically locked egress doors. This section has been modified to permit the use of sensor release of electronic locking systems on doors located in a means of egress in any occupancy except Group H where installed and operated in accordance with specific criteria. This section has been modified to read: 1010.1.9.8 Sensor release of electrically locked egress doors. Sensor release of electric locking systems shall be permitted on doors located in a means of egress in any occupancy except Group H where installed and operated in accordance with all of the following criteria:

(A) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors, and shall cause the electric locking system to unlock.

(B) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(C) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(D) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of the power to the electric lock - independent of other electronics - and the doors electric lock shall remain unlocked for not less than 30 seconds.

(E) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(F) Activation of the building automatic fire sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(G) The door locking system units shall be listed in accordance with UL 294.

(2) Section 1010.1.9.9. Door hardware release of electrically locked egress doors. This section has been modified to change part of the section heading and permit door hardware release of electric locking systems to be on all doors in a means of egress in any occupancy except Group H where installed and operated in accordance specific requirements. This section has been modified to read: 1010.1.9.9. Door hardware release of electrically locked egress doors. Door hardware release of electric locking systems shall be permitted on doors in the means of egress in any occupancy except Group H where installed and operated in accordance with all of the following:

(A) The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.

(B) The door hardware is capable of being operated with one hand and shall comply with Section 1010.1.9.5.

(C) Operation of the door hardware directly interrupts the power to the electric lock and unlocks the door immediately.

(D) Loss of power to the electric locking system automatically unlocks the door.

(E) Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electric lock.

(F) The locking system units shall be listed in accordance with UL 294.

(3) Section 1010.1.10 Panic and fire exit hardware. This section has been modified to change the door type, and allow for doors provided with panic hardware or fire exit hardware serving Group A or E occupancies to be permitted to be electrically locked, in accordance with Section 1010.1.9.8, or 1010.1.9.9. 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. 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 hardware devices in accordance with Section 1010.1.9.3, 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 1010.1.9.8 or 1010.1.9.9.

(4) Electrical rooms with equipment rated 1,200 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 1015.6 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.

(7) 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.

(8) 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.

(9) 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.

(10) 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.

**748:20-2-16. 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]**

**748:20-2-20. IBC® Chapter 15 [RESERVED]**

**748:20-2-21. IBC® Chapter 16 [RESERVED]**

**748:20-2-22. IBC® Chapter 17 [RESERVED]**

**748:20-2-23. IBC® Chapter 18 [RESERVED]**

**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® Chapter 23 [RESERVED]**

**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® Chapter 27 [RESERVED]**

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

**748:20-2-34. IBC® Chapter 29 [RESERVED]**

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

**748:20-2-36. IBC® Chapter 31 [RESERVED]**

**748:20-2-37. IBC® Chapter 32 [RESERVED]**

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

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

**748:20-2-40. IBC® Chapter 35 [RESERVED]**

### **SUBCHAPTER 3. IFC® 2015**

#### **748:20-3-4. IFC® 2015 Provisions Adopted and Modified [AMENDED AND RENUMBERED TO 748:20-4-4.]**

(a) All chapters and provisions within chapters, including exceptions, of the IFC® 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 residential and commercial fire prevention and fire protection systems 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 Chapters 12 through 18, Chapters 38 through 49, Chapter 52, and Chapters 68 through 79 for possible future use. The OUBCC has not adopted Chapters 12 through 18, Chapters 38 through 49, Chapter 52, and Chapters 68 through 79 and these chapters

are not considered part of the statewide minimum code for residential and commercial fire prevention and fire protection systems within the State of Oklahoma.

(e) To the extent any references in the IFC® 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 IFC® 2015 as amended and modified in this sub-chapter and in the IFC® 2015 Chapter 80 entitled "Referenced Standards."

### **748:20-3-6. IFC® 2015 Chapter 1 Scope and Administration [AMENDED AND RENUMBERED TO 748:20-4-6.]**

Chapter 1 of the Oklahoma adopted IFC® 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 IFC® 2015 as amended and revised by the Commission, as the statewide minimum code to be used by all entities for residential and commercial fire prevention and fire protection systems in jurisdictions throughout the State of Oklahoma. However, the OUBCC's adoption of Chapter 1 "Scope and Administration" of the IFC® 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 residential and commercial fire prevention and fire protection systems.

(2) All provisions of the adopted IFC® 2015, including Chapter 1, as amended and revised by the OUBCC, are hereby established and adopted as the statewide minimum code for residential and commercial fire prevention and fire protection systems 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: 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: 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 IFC® 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 IFC® 2015 and the OUBCC will strongly oppose any such practice.

**748:20-3-7. IFC® 2015 Chapter 2 Definitions [AMENDED AND RENUMBERED TO 748:20-4-7.]**

Chapter 2 of the IFC® 2015 is adopted with the following modifications:

(1) The definition of an AUTHORITY HAVING JURISDICTION has been added to clarify the different individuals that may have authority with in the code. This definition has been added to read: AUTHORITY HAVING JURISDICTION. Means an organization, office, or individual responsible for enforcing the requirements of the State Adopted Building Codes, including the prior authorization or approval of any equipment, materials, installations or procedures used in all or part of the construction of a new, or alteration or renovation of an existing building or structure, including integral finishes, fixtures and building system therein.

(2) The definition of a DISPENSING AREA has been added to clarify multiple references in the code with regard to fuel dispensing. This definition has been added to read: DISPENSING AREA. The appropriate hazardous (classified) locations for the fuel being dispensed in accordance with the National Electrical Code® NFPA® 70.

(3) The definition of a MAIN RAILROAD TRACK has been added to provide clarity to building code officials. This definition has been added to read: MAIN RAILROAD TRACK. That part of the railway, exclusive of switch tracks, branches, yards, and terminals upon which trains are operated by timetable or train order or both.

(4) The definition for Residential Group R-3 has been modified to clarify the International Residential Code® 2015 (IRC® 2015) can be utilized so long as the facilities have four or fewer rooms. This definition has been modified to read: [BG] Residential Group R-3. Residential R-3 occupancies where occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-5, or I including Boarding houses (non-transient) with 16 or fewer occupants, Boarding houses (transient) with 10 or fewer occupants, Buildings that do not contain more than two dwelling units, Care facilities that provide accommodations for five or fewer persons receiving care, Congregate living facilities (non-transient with 16 or fewer occupants), Congregate living facilities (transient) with 10 or fewer occupants and Lodging houses with four or fewer guest rooms.

(A) [BG] Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single family dwelling are permitted to 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®.

~~(B) [BG] Lodging houses. Owner-occupied lodging houses with four or fewer guest rooms shall be permitted to be constructed in accordance with the IRC®.~~

~~(5) The definition of a SELF-SERVICE STORAGE FACILITY from the International Building Code®, 2015 Edition (Section 202) has been added to the International Fire Code®, 2015 Edition. This definition has been added to read: SELF-SERVICE STORAGE FACILITY. Real property designed and used for the purpose of renting or leasing individual storage spaces to customers for the purpose of storing and removing personal property on a self-service basis.~~

### **748:20-3-11. IFC® 2015 Chapter 9 Fire Protection Systems [AMENDED AND RENUMBERED TO 748:20-4-14.]**

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

~~(1) Section 903.2.7 Group M. This section has been modified to reword subsection 4 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 remove the requirement for an emergency voice/alarm system and require a fire alarm system in Group E occupancies. The 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 or similar areas are protected by heat detectors or other approved detection devices.~~
- ~~(iii) Shop 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 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 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.~~

**748:20-3-12. IFC® 2015 Chapter 10 Means of Egress [AMENDED AND RENUMBERED TO 748:20-4-15.]**

Chapter 10 of the IFC® 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 devices 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 1010.1.9.8 or 1010.1.9.9.~~

~~(2) Electrical rooms and working spaces with equipment operating at more than 600 volts, nominal, and equipment operating at 600 volts or less, nominal and rated 800 amperes or more 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. 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.

#### **748:20-3-14. IFC® 2015 Chapter 80 Referenced Standards [AMENDED AND RENUMBERED TO 748:20-4-85.]**

Chapter 80 of the IFC® 2015 is adopted with the following modifications:

- (1) The reference to the International 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: IBC® 15 International Building Code® as adopted and modified by the State of Oklahoma through the OUBCC.
- (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 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.
- (4) 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.
- (5) 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 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.
- (6) 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.
- (7) The referenced standard for NFPA® 2 Hydrogen Technologies Code has been modified to change the edition year from 2011 to 2016. This Section has been modified to read: 02-16 Hydrogen Technologies Code.
- (8) The referenced standard for NFPA® 70® National Electrical 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: 70-14 National Electrical Code® as adopted and modified by the State of Oklahoma through the OUBCC.

#### **SUBCHAPTER 4. IFC® 2015**

##### **748:20-4-1. Adoption of the International Fire Code® (IFC®) [RESERVED]**

##### **748:20-4.2. Effect of Adoption [RESERVED]**

##### **748:20-4.3. IFC® and Other Appendices [RESERVED]**

#### **748:20-4-4. IFC® 2015 Provisions Adopted and Modified**

(a) All chapters and provisions within chapters, including exceptions, of the IFC® 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 residential and commercial fire prevention and fire protection systems 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 Chapters 12 through 18, Chapters 38 through 49, Chapter 52, and Chapters 68 through 79 for possible future use. The OUBCC has not adopted Chapters 12 through 18, Chapters 38 through 49, Chapter 52, and Chapters 68 through 79 and these chapters are not considered part of the statewide minimum code for residential and commercial fire prevention and fire protection systems within the State of Oklahoma.

(c) In light of the notice by ICC® of the creation of a new Chapter 39 entitled "Processing and Extraction Facilities" in the IFC® 2018, the OUBCC has created a Chapter 39 entitled "Processing and Extraction Facilities" as hereby amended and modified to clarify requirements to be utilized when processing and extracting fats and oils from plant based materials, not currently addressed in the IFC® 2015 as amended and modified in this sub-chapter.

(d) To the extent any references in the IFC® 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 IFC® 2015 as amended and modified in this sub-chapter and in the IFC® 2015 Chapter 80 entitled "Referenced Standards."

#### **748:20-4-5 Participation in Federal Programs and/or Federally Funded or Financed Projects [RESERVED]**

#### **748:20-4-6. IFC® 2015 Chapter 1 Scope and Administration**

Chapter 1 of the Oklahoma adopted IFC® 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 IFC® 2015 as amended and revised by the Commission, as the statewide minimum code to be used by all entities for residential and commercial fire prevention and fire protection systems in jurisdictions throughout the State of Oklahoma. However, the OUBCC's adoption of Chapter 1 "Scope and Administration" of the IFC® 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 residential and commercial fire prevention and fire protection systems.

(2) All provisions of the adopted IFC® 2015, including Chapter 1, as amended and revised by the OUBCC, are hereby established and adopted as the statewide minimum code for residential and commercial fire prevention and fire protection systems 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: 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: 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) Table 105.6.9 Permit Amounts for Compressed Gases. This table has been modified to add carbon dioxide used in carbon dioxide enrichment systems and carbon dioxide used in insulated liquid carbon dioxide beverage dispensing systems to the list of types and amounts of compressed gases where an operational permit is required, if the amount of compressed gases used for the storage, use or handling of the compressed gases at normal temperature and pressure (NTP), is in excess of the amount listed in the table. This table has been modified to read: Table 105.6.9 Permit Amounts for Compressed Gases. The table contains ten rows with two columns per row as described below:

(A) Row 1 contains the headers for the two columns as listed below:

(i) Row 1, column 1 is entitled "Type of Gas."

(ii) Row 1, column 2 is entitled "Amount (cubic feet at NTP)."

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

(i) Row 2, column 1 lists the compressed gas type entitled "Carbon dioxide used in carbon dioxide enrichment systems."

(ii) Row 2, column 2 lists the amount of cubic feet at NTP of "875 (100 lbs.)"

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

(i) Row 3, column 1 lists the compressed gas type entitled "Carbon dioxide used in insulated liquid carbon dioxide beverage dispensing applications."

(ii) Row 3, column 2 lists the amount of cubic feet at NTP of "875 (100 lbs.)"

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

(i) Row 4, column 1 lists the compressed gas type entitled "Corrosive;"

(ii) Row 4, column 2 lists the amount of cubic feet at NTP of "200."

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

(i) Row 5, column 1 lists the compressed gas type entitled "Flammable (except cryogenic fluids and liquefied petroleum gases.)"

(ii) Row 5, column 2 lists the amount of cubic feet at NTP of "200."

(F) Row 6 contains the following information for the two columns listed in the header row number 1

- (i) Row 6, column 1 lists the compressed gas type entitled "Highly toxic."
  - (ii) Row 6, column 2 lists the amount of cubic feet at NTP of "Any Amount."
- (G) Row 7 contains the following information for the two columns listed in the header row number 1:
  - (i) Row 7, column 1 lists the compressed gas type entitled "Inert and simple asphyxiant."
  - (ii) Row 7, column 2 list the amount of cubic feet at NTP of "6,000."
- (H) Row 8 contains the following information for the two columns listed in the header row number 1:
  - (i) Row 8, column 1 lists the compressed gas type "Oxidizing (including oxygen)."
  - (ii) Row 8, column 2 lists the amount of cubic feet at NTP of "504."
- (I) Row 9 contains the following information for the two columns listed in the header row number 1:
  - (i) Row 9, column 1 lists the compressed gas type "Pyrophoric."
  - (ii) Row 9, column 2 lists the amount of cubic feet at NTP of "Any Amount."
- (J) Row 10 contains the following information for the two columns listed in the header row number 1:
  - (i) Row 10, column 1 lists the compressed gas type "Toxic."
  - (ii) Row 10, column 2 lists the amount of cubic feet at NTP of "Any amount."
- (K) Below the table is a footnote that reads: "For SI: 1 cubic foot equals 0.02832 cubic meters."
- (6) Section 105.6.49 Plant extraction systems. This section has been added to require an operational permit for a plant extraction system. This section has been added to read: 105.6.49 Plant extraction systems. An operational permit is required to use plant extraction systems.
- (7) Section 105.7.19 Gas detection systems. This section has been added to require a construction permit for the installation of or modification to a gas detection systems. The section clarifies that maintenance performed in accordance with the code is not considered a modification and shall not require a permit. This section has been added to read: 105.7.19 Gas detection systems. A construction permit is required for the installation of or modification to gas detection systems. Maintenance performed in accordance with this code is not considered a modification and shall not require a permit.
- (8) Section 105.7.20 Plant extraction systems. This section has been added to require a construction permit for the installation of or modification to plant extraction systems. The section clarifies that maintenance performed in accordance with the code, is not considered a modification and shall not require a construction permit. This section has been added to read: 105.7.20 Plant extraction systems. A construction permit is required for the installation of or modification to plant extraction systems. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.
- (9) 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 IFC® 2015.

(10) 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 IFC® 2015 and the OUBCC will strongly oppose any such practice.

#### **748:20-4-7. IFC® 2015 Chapter 2 Definitions**

Chapter 2 of the IFC® 2015 is adopted with the following modifications:

(1) The definition of an AUTHORITY HAVING JURISIDCTION has been added to clarify the different individuals that may have authority with in the code. This definition has been added to read: AUTHORITY HAVING JURISDICTION. Means an organization, office, or individual responsible for enforcing the requirements of the State Adopted Building Codes, including the prior authorization or approval of any equipment, materials, installations or procedures used in all or part of the construction of a new, or alteration or renovation of an existing building or structure, including integral finishes, fixtures and building system therein.

(4) The definition of a DISPENSING AREA has been added to clarify multiple references in the code with regard to fuel dispensing. This definition has been added to read: DISPENSING AREA. The appropriate hazardous (classified) locations for the fuel being dispensed in accordance with the National Electrical Code® – NFPA® 70.

(5) The definition of GAS DETECTION SYSTEM has been added to clarify multiple references in the code with regard to gas detection. This section has been added to read: GAS DETECTION SYSTEM. A system or portion of a combination system that utilizes one or more stationary sensors to detect the presence of a specified gas at a specified concentration and initiate one or more responses required by this code, such as notifying a responsible person, activating an alarm signal, or activating or deactivating equipment. A self-contained gas detection and alarm device is not classified as a gas detection system.

(6) The definition of a MAIN RAILROAD TRACK has been added to provide clarity to building code officials. This definition has been added to read: MAIN RAILROAD TRACK. That part of the railway, exclusive of switch tracks, branches, yards, and terminals upon which trains are operated by timetable or train order or both.

(7) The definition of MISCELLA has been added to clarify multiple references in the code. This definition has been added to read: MISCELLA. A mixture, in any proportion, of the extracted oil or fat and the extracting solvent.

(8) The definition for Residential Group R-3 has been modified to clarify the International Residential Code® 2015 (IRC® 2015) can be utilized so long as the facilities have four or fewer rooms. This definition has been modified to read: [BG] Residential Group R-3. Residential R-3 occupancies where occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-5, or I including Boarding houses (non-transient) with 16 or fewer occupants, Boarding houses (transient) with 10 or fewer occupants, Buildings that do not contain more than two dwelling units, Care facilities that provide accommodations for five or fewer persons receiving care, Congregate living facilities (non-transient with 16 or

fewer occupants), Congregate living facilities (transient) with 10 or fewer occupants and Lodging houses with four or fewer guest rooms.

(A) [BG] Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to 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®.

(B) [BG] Lodging houses. Owner-occupied lodging houses with four or fewer guest rooms shall be permitted to be constructed in accordance with the IRC®.

(9) The definition of a SELF-SERVICE STORAGE FACILITY from the International Building Code®, 2015 Edition (Section 202) has been added to the International Fire Code®, 2015 Edition. This definition has been added to read: SELF-SERVICE STORAGE FACILITY. Real property designed and used for the purpose of renting or leasing individual storage spaces to customers for the purpose of storing and removing personal property on a self-service basis.

**748:20-4-8. IFC® Chapter 3 [RESERVED]**

**748:20-4-9. IFC® Chapter 4 [RESERVED]**

**748:20-4-10. IFC® Chapter 5 [RESERVED]**

**748:20-4-11. IFC® Chapter 6 [RESERVED]**

**748:20-4-12. IFC® Chapter 7 [RESERVED]**

**748:20-4-13. IFC® Chapter 8 [RESERVED]**

**748:20-4-14. IFC® 2015 Chapter 9 Fire Protection Systems**

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

(1) Section 902.1 Definitions. This section has been modified to clarify the definition for a "GAS DETECTION SYSTEM," has been added to the list of definitions defined in Chapter 2. This section has been modified to read: 902.1 Definitions. The following terms are defined in Chapter 2.

(A) ALARM NOTIFICATION APPLIANCE.

(B) ALARM SIGNAL.

(C) ALARM VERIFICATION FEATURE.

(D) ANNUNCIATOR.

(E) AUDIBLE ALARM NOTIFICATION APPLIANCE.

(F) AUTOMATIC.

(G) AUTOMATIC FIRE-EXTINGUISHING SYSTEM.

(H) AUTOMATIC SMOKE DETECTION SYSTEM.

(I) AUTOMATIC SPRINKLER SYSTEM.

(J) AUTOMATIC WATER MIST SYSTEM.

(K) AVERAGE AMBIENT SOUND LEVEL.

(L) CARBON DIOXIDE EXTINGUISHING SYSTEM.

(M) CLEAN AGENT.

(N) COMMERCIAL MOTOR VEHICLE.

(O) CONSTANTLY ATTENDED LOCATION.  
(P) DELUGE SYSTEM.  
(Q) DETECTOR, HEAT.  
(R) DRY-CHEMICAL EXTINGUISHING AGENT.  
(S) ELEVATOR GROUP.  
(T) EMERGENCY ALARM SYSTEM.  
(U) EMERGENCY VOICE/ALARM COMMUNICATIONS.  
(V) FIRE ALARM BOX, MANUAL.  
(W) FIRE ALARM CONTROL UNIT.  
(X) FIRE ALARM SIGNAL.  
(Y) FIRE ALARM SYSTEM.  
(Z) FIRE AREA.  
(AA) FIRE DETECTOR, AUTOMATIC.  
(BB) FIRE PROTECTION SYSTEM.  
(CC) FIRE SAFETY FUNCTIONS.  
(DD) FIXED BASE OPERATOR (FBO).  
(EE) FOAM-EXTINGUISHING SYSTEM.  
(FF) GAS DETECTION SYSTEM.  
(GG) HALOGENATED EXTINGUISHING SYSTEM.  
(HH) IMPAIRMENT COORDINATOR.  
(II) INITATING DEVICE.  
(JJ) MANUAL FIRE ALARM BOX.  
(KK) MULTIPLE-STATION ALARM DEVICE.  
(LL) MULTIPLE-STATION SMOKE ALARM.  
(MM) NOTIFICATION ZONE.  
(NN) NUISANCE ALARM.  
(OO) PRIVATE GARAGE.  
(PP) RECORD DRAWINGS.  
(QQ) SINGLE-STATION SMOKE ALARM.  
(RR) SLEEPING UNIT.  
(SS) SMOKE ALARM.  
(TT) SMOKE DETECTOR.  
(UU) STANDPIPE SYSTEM, CLASSES OF.  
    (i) Class I system.  
    (ii) Class II system.  
    (iii) Class III system.  
(VV) STANDPIPE, TYPES OF.  
    (i) Automatic dry.  
    (ii) Automatic wet.  
    (iii) Manual dry.  
    (iv) Manual wet.  
    (v) Semiautomatic dry.  
(WW) SUPERVISING STATION.  
(XX) SUPERVISORY SERVICE.  
(YY) SUPERVISORY SIGNAL.  
(ZZ) SUPERVISORY SIGNAL-INITIATING DEVICE.

- (AAA) TIRES, BULK STORAGE OF.
- (BBB) TRANSIENT AIRCRAFT.
- (CCC) TROUBLE SIGNAL.
- (DDD) VISIBLE ALARM NOTIFICATION APPLIANCE.
- (EEE) WET-CHEMICAL EXTINGUISHING AGENT.
- (FFF) WIRELESS PROTECTION SYSTEM.
- (GGG) ZONE.
- (HHH) ZONE, NOTIFICATION.

(2) Section 903.2.7 Group M. This section has been modified to reword subsection 4 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).

(3) 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).

(4) Section 907.2.3 Group E. This section has been modified to remove the requirement for an emergency voice/alarm system and require a fire alarm system in Group E occupancies. The 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 or similar areas are protected by heat detectors or other approved detection devices.

(iii) Shop 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 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 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.

(5) Section 916 Gas Detection Systems. This section header has been added to the code to clarify a new section of code has been added. This section heading has been added to read: Section 916 Gas Detection Systems.

(6) Section 916.1 Gas detection systems. This section has been added to specify when the requirements for gas detection systems are provided, they shall be in compliance with section 916.2 through 916.11. This section has been added to read: 916.1 Gas detection systems. Gas detection systems required by this code shall comply with Sections 916.2 through 916.11.

(7) Section 916.2 Permits. This section has been added to specify permits shall be required as set forth in Section 105.7. This section has been modified to read: 916.2 Permits. Permits shall be required as set forth in Section 105.7.

(8) Section 916.2.1 Construction documents. This section has been added to require construction documentation to be submitted with the application for permit. It requires the documentation of the gas detection system design and equipment to be used, demonstrate compliance with the requirements of this code and be provided with the permit application. This section has been added to read: 916.2.1 Construction documents. Documentation of the gas detection system design and equipment to be used that demonstrates compliance with the requirements of this code shall be provided with the application for permit.

(9) Section 916.3 Equipment. This section has been added to require gas detection system equipment to be designed for use with the gases being detected and be installed in accordance with the manufacturer's instructions. This section has been added to read: 916.3 Equipment. Gas detection system equipment shall be designed for use with the gases being detected and shall be installed in accordance with the manufacturer's instructions.

(10) Section 916.4 Power connections. This section has been added to require gas detection systems to be permanently connected to the building electrical power supply or be permitted to be cord connected to an unswitched receptacle using an approved restraining means that secures the plug to the receptacle. This section has been added to read: 916.4 Power connections. Gas detection systems shall be permanently connected to the building electrical power supply or shall be permitted to be cord connected to an unswitched receptacle using an approved restraining means that secures the plug to the receptacle.

(11) Section 916.5 Emergency and standby power. This section has been added to require standby or emergency power to be provided to the gas detection system, or if the power

supply is interrupted, the system shall initiate a trouble signal at an approved location. This section has been added to read: 916.5 Emergency and standby power. Standby or emergency power shall be provided or the gas detection system shall initiate a trouble signal at an approved location if the power supply is interrupted.

(12) Section 916.6 Sensor locations. This section has been added to require sensors to be installed in approved locations where leaking gases are expected to accumulate. This section has been added to read: 916.6 Sensor locations. Sensors shall be installed in approved locations where leaking gases are expected to accumulate.

(13) Section 916.7 Gas sampling. This section has been added to require gas sampling to be performed continuously and require sample analysis to be processed immediately after sampling, except under certain conditions. HPM stands for "Hazardous Production Material" as defined in Chapter 2 of this code. This section has been added 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.

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

(14) Section 916.8 System activation. This section has been added to require a gas detection alarm to be initiated where any sensor detects a concentration of gases exceeding the thresholds specified in this section. The section requires upon activation of a gas detection alarm, alarm signals or other required responses to be specified by the section of this code requiring a gas detection system. The section further requires the alarm signals to be both audible and visible alarm signals that are distinct from fire alarm and carbon monoxide signals. IDLH stands for "Immediately Dangerous to Life and Health" as defined in Chapter 2 of the IBC®. This section has been added to read: 916.8 System activation. A gas detection alarm shall be initiated where any sensor detects a concentration of gas exceeding the following thresholds:

(A) For flammable gases, a gas concentration exceeding 25 percent of the lower flammability limit (LFL).

(B) For nonflammable gases, a gas concentration exceeding one-half of the IDLH, unless a different threshold is specified by the section of this code requiring a gas detection system.

(15) Upon activation of a gas detection alarm, alarm signals or other required responses shall be specified by the section of this code requiring a gas detection system. Audible and visible alarm signals associated with a gas detection alarm shall be distinct from fire alarm and carbon monoxide alarm signals.

(16) Section 916.9 Signage. This section has been added to require signage to be provided adjacent to gas detection system alarm signaling devices that advises occupants of the nature of the signals and actions to take in response to the signal. This section has been added to read: 916.9 Signage. Signs shall be provided adjacent to gas detection system alarm signaling devices that advise occupants of the nature of the signals and actions to take in response to the signal.

(17) Section 916.10 Fire alarm system connections. This section has been added to prohibit gas sensors and gas detection systems to be connected to fire alarm systems unless approved

and connected in accordance with the fire alarm equipment manufacturer's instructions. This section has been added to read: 916.10 Fire alarm system connections. Gas sensors and gas detection systems shall not be connected to fire alarm systems unless approved and connected in accordance with the fire alarm equipment manufacturer's instructions.

(18) Section 916.11 Inspection, testing and sensor calibration. This section has been added to require gas detection systems to be inspected and tested not less than annually and sensors to be calibrated as specified by the sensor manufacturer. This section has been added to read: 916.11 Inspection, testing and sensor calibration. Inspection and testing of gas detection systems shall be conducted not less than annually. Sensor calibration shall be confirmed at the time of sensor installation and calibration shall be performed at the frequency specified by the sensor manufacturer.

#### **748:20-4-15. IFC® 2015 Chapter 10 Means of Egress**

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

(1) Section 1010.1.9.8 Sensor release of electrically locked egress doors. This section has been modified to permit the use of sensor release of electronic locking systems on doors located in a means of egress in any occupancy except Group H, where installed and operated in accordance with specific criteria. This section has been modified to read: 1010.1.9.8 Sensor release of electrically locked egress doors. Sensor release of electric locking systems shall be permitted on doors located in a means of egress in any occupancy except Group H where installed and operated in accordance with all of the following criteria:

(A) The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors, and shall cause the electric locking system to unlock.

(B) The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

(C) Loss of power to the lock or locking system shall automatically unlock the electric locks.

(D) The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of the power to the electric lock - independent of other electronics - and the doors electric lock shall remain unlocked for not less than 30 seconds.

(E) Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

(F) Activation of the building automatic fire sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

(G) The door locking system units shall be listed in accordance with UL 294.

(2) Section 1010.1.9.9. Door hardware release of electrically locked egress doors. This section has been modified to change part of the section heading and permit door hardware release of electric locking systems to be on all doors in a means of egress in any occupancy except Group H, where installed and operated in accordance with specific requirements. This section has been modified to read: 1010.1.9.9. Door hardware release of electrically locked egress doors. Door hardware release of electric locking systems shall be permitted on doors

in the means of egress in any occupancy except Group H where installed and operated in accordance with all of the following:

(A) The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.

(B) The door hardware is capable of being operated with one hand and shall comply with Section 1010.1.9.5.

(C) Operation of the door hardware directly interrupts the power to the electric lock and unlocks the door immediately.

(D) Loss of power to the electric locking system automatically unlocks the door.

(E) Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electric lock.

(F) The locking system units shall be listed in accordance with UL 294.

(3) Section 1010.1.10 Panic and fire exit hardware. This section has been modified to change the door type, and allow for doors provided with panic hardware or fire exit hardware serving Group A or E occupancies to be permitted to be electrically locked, in accordance with Section 1010.1.9.8, or 1010.1.9.9. 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. 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 1010.1.9.3, 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 1010.1.9.8 or 1010.1.9.9.

(4) Electrical rooms with equipment 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 1015.6 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.

(7) 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.

(8) 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.

(9) 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.

(10) 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.

**748:20-4-17. IFC® Chapter 12 [RESERVED]**

**748:20-4-18. IFC® Chapter 13 [RESERVED]**

**748:20-4-19. IFC® Chapter 14 [RESERVED]**

**748:20-4-20. IFC® Chapter 15 [RESERVED]**

**748:20-4-21. IFC® Chapter 16 [RESERVED]**

**748:20-4-22. IFC® Chapter 17 [RESERVED]**

**748:20-4-23. IFC® Chapter 18 [RESERVED]**

**748:20-4-24. IFC® Chapter 19 [RESERVED]**

**748:20-4-25. IFC® Chapter 20 [RESERVED]**

**748:20-4-26. IFC® Chapter 21 [RESERVED]**

**748:20-4-27. IFC® Chapter 22 [RESERVED]**

**748:20-4-28. IFC® Chapter 23 [RESERVED]**

**748:20-4-29. IFC® Chapter 24 [RESERVED]**

**748:20-4-30. IFC® Chapter 25 [RESERVED]**

**748:20-4-31. IFC® Chapter 26 [RESERVED]**

**748:20-4-32. IFC® Chapter 27 [RESERVED]**

**748:20-4-33. IFC® Chapter 28 [RESERVED]**

**748:20-4-34. IFC® Chapter 29 [RESERVED]**

**748:20-4-35. IFC® Chapter 30 [RESERVED]**

**748:20-4-36. IFC® Chapter 31 [RESERVED]**

**748:20-4-37. IFC® Chapter 32 [RESERVED]**

**748:20-4-38. IFC® Chapter 33 [RESERVED]**

**748:20-4-39. IFC® Chapter 34 [RESERVED]**

**748:20-4-40. IFC® Chapter 35 [RESERVED]**

**748:20-4-41. IFC® Chapter 36 [RESERVED]**

**748:20-4-42. IFC® Chapter 37 [RESERVED]**

**748:20-4-43. IFC® Chapter 38 [RESERVED]**

**748:20-4-44. IFC® 2015 Chapter 39 Processing and Extraction Facilities**

Chapter 39 of the IFC® has been created and added to the 2015 edition to address plant processing and extraction facilities. This chapter title has been added to read: Chapter 39 Processing and Extraction Facilities. Chapter 39 is adopted as follows:

(1) Section 3901 General. This section heading has been added to clarify a new section of code has been added to address the scope, utilization of existing buildings and permit requirements for plant processing and extraction facilities. This section heading has been added to read: Section 3901. General.

(2) Section 3901.1 Scope. This section has been added to clarify plant processing and extraction facilities will comply with this chapter and the International Building Code®. The section clarifies the extraction process includes the act of extracting oils and fats by the use of a solvent, desolventizing of the raw material, production of the miscella, distillation of the solvent and solvent recovery. The section further requires the use, storage and transfilling and handling of hazardous materials in these facilities to comply with the chapter, other applicable provisions of this code and the International Building Code®. This section has been added to read: 3901.1 Scope. Plant processing or extraction facilities shall comply with this chapter and the International Building Code®. The extraction process includes the act of extraction of the oils and fats by use of a solvent, desolventizing of the raw material, production of the miscella, distillation of the solvent from the miscella and solvent recovery. The use, storage, transfilling, and handling of hazardous materials in these facilities shall comply with this chapter, other applicable provisions of this code and the International Building Code®.

(3) Section 3901.2 Existing buildings or facilities. This section has been added to clarify when existing buildings or facilities used for the processing of plants or where the medium of extraction or solvent is changed, they shall comply with this chapter. This section has been added to read: 3901.2 Existing buildings or facilities. Existing buildings or facilities used for the processing of plants or where the medium of extraction or solvent is changed shall comply with this chapter.

(4) Section 3901.3 Permits. This section has been added to clarify permits shall be required as set forth in Sections 105.6 and 105.7. This section has been added to read: Permits shall be required as set forth in Sections 105.6 and 105.7.

(5) Section 3902 Definitions. This section heading has been added to signify the start of a new section of code related to definitions. This section heading has been added to read: 3902 Definitions.

(6) Section 3902.1 Definitions. This section has been added to clarify what terms have definitions in Chapter 2. This section has been added to read: 3902.1 Definitions. The following terms are defined in Chapter 2:

(A) DESOLVENTIZING.

(B) MISCELLA.

(7) Section 3903 Processing and Extraction. This section heading has been added to signify the start of new section of code related to processing and extraction. This section heading has been added to read: 3903 Processing and Extraction.

(8) Section 3903.1 Construction. This section has been added to clarify all processing shall be located in buildings complying with the International Building Code®. This section has been added to read: 3903.1 Construction. Processing shall be located in a building complying with the International Building Code®.

(9) Section 3903.2 Prohibited occupancies. This section has been added to clarify that any extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Building Code® and other provisions of this code shall not be located in any building containing a Group A, E, I or R occupancy. This section has been added to read: 3903.2 Prohibited occupancies. Extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Building Code® and other provisions of this code shall not be located in any building containing a Group A, E, I or R occupancy.

(10) Section 3903.3 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 Building Code® and other provisions of this code shall be located in a room dedicated to extraction and prohibits the room from being used for any other purpose. The section prohibits the storage of solvents in the extraction room. This section has been added to read: 3903.3 Location. The extraction equipment and extraction processes utilizing materials classified as physical hazards in accordance with Section 307 of the International Building Code® and other provisions of this 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.

(11) Section 3903.4 Post-process purification and winterization. This section has been added to clarify post processing and winterization involving the heating, cooling or pressurizing of miscella to other than normal pressure or temperature shall be approved and performed in an appliance listed for such use and shall comply with Sections 3903.4.1 or 3903.4.2. The section prohibits the use of domestic or commercial cooking appliances. This section has been added to read: 3903.4 Post-process purification and winterization. Post-processing and winterization involving the heating, cooling or pressurizing of the miscella to other than normal pressure or temperature shall be approved and performed in an appliance listed for such use and shall comply with Sections 3903.4.1 or 3903.4.2. Domestic or commercial cooking appliances and cooling appliances shall not be used.

(12) Section 3903.4.1 Industrial ovens. This section has been added to require industrial ovens, when used, to comply with Chapter 30. This section has been added to read: 3903.4.1 Industrial Ovens. The use of industrial ovens shall comply with Chapter 30.

(13) Section 3903.4.2 Refrigerators, freezers and other cooling equipment. This section has been added to require refrigerators, freezers and other cooling equipment used to store or cool flammable liquids to be listed for the storage of flammable and/or combustible liquids or shall be listed for Class I Division I locations in accordance with NFPA 70®. This section has been added to read: 3903.4.2 Refrigerators, freezers and other cooling equipment. Refrigerators, freezers and other cooling equipment used to store or cool flammable liquids shall be listed for the storage of flammable and/or combustible liquids or shall be listed for Class I, Division I locations in accordance with NFPA 70®.

(14) Section 3903.4.3. Post-processing. This section has been added to require post-processing operations, including dispensing of flammable liquids between containers, to be performed within a hazardous exhaust fume hood rated for exhausting flammable vapors and

listed in accordance UL 1805. The section requires the electrical equipment utilized within the hazardous exhaust fume hood to be rated for use in flammable atmospheres and provides an exception for the exhaust fume hood when an approved exhaust system is installed in accordance with NFPA 91®. This section has been added to read: 3903.4.3 Post-processing. Post-processing operations, including dispensing of flammable liquids between containers, shall be performed within a hazardous exhaust fume hood rated for exhausting flammable vapors and listed in accordance with UL 1805. Electrical equipment used within the hazardous exhaust fume hood shall be rated for use in flammable atmospheres. Exception: A hazardous exhaust fume hood is not required where an approved exhaust system is installed in accordance with NFPA 91®.

(15) Section 3903.5 Use of flammable and combustible liquids. This section has been added to specify the use of flammable and combustible liquids for liquid extraction processes, including dispensing of flammable liquids between containers, where the liquid is boiled, distilled, or evaporated, to be located within a hazardous exhaust fume hood, rated for exhausting flammable vapors and listed in accordance with UL 1805. The section requires all electrical equipment used within the hazardous exhaust fume hood to be rated for use in flammable atmospheres, prohibits the heating of flammable or combustible liquids over an open flame, and provides exceptions when certain conditions are met. This section has been added to read: 3903.5 Use of flammable and combustible liquids. The use of flammable and combustible liquids for liquid extraction processes, including dispensing of flammable liquids between containers, where the liquid is boiled, distilled, or evaporated shall be located within a hazardous exhaust fume hood, rated for exhausting flammable vapors and listed in accordance with UL 1805. Electrical equipment used within the hazardous exhaust fume hood shall be rated for use in flammable atmospheres. Heating of flammable or combustible liquids over an open flame is prohibited. Exceptions:

(A) The use of a heating element not rated for flammable atmospheres, where documentation from the manufacturer, or approved testing laboratory indicates the element is rated for heating of flammable liquids.

(B) Unheated processes at atmospheric pressure using less than 16 oz. (473 ml) of flammable liquids are not required to be located within a hazardous exhaust fume hood.

(C) A hazardous exhaust fume hood is not required where an approved exhaust system is installed in accordance with NFPA 91®. Electrical equipment used within this room shall be rated for use in flammable atmosphere.

(16) Section 3903.6 Liquefied petroleum gas. This section has been added to require plant processing and extraction utilizing liquefied petroleum gas to comply with Sections 3903.6.1 through 3903.6.4 and other applicable provisions of this code. This section has been added to read: 3903.6 Liquefied Petroleum gas. Plant processing and extraction utilizing liquefied petroleum gas shall comply with Section 3903.6.1 through 3903.6.4 and other applicable provisions of this code.

(17) Section 3903.6.1 Release of gas. This section has been added to prohibit liquefied petroleum gases from being released to the atmosphere except when released in accordance with Section 7.3 of NFPA 58®. This section has been added to read: 3903.6.1 Release of gas. Liquefied petroleum gases shall not be released to the atmosphere except where released in accordance with Section 7.3 of NFPA 58®.

(18) Section 3903.6.2 Exhaust. This section has been added to require any plant processing and extraction utilizing liquefied petroleum gas including processes for off-gassing spent

plant material and oil retrieval to be located under a chemical fume hood, listed in accordance with UL 1805. The section provides an exception where an approved exhaust system is installed in accordance with NFPA 91®. This section has been added to read: 3903.6.2 Exhaust. Plant processing and extraction utilizing liquefied petroleum gas, including processes for off-gassing spent plant material and oil retrieval, shall be located under a chemical fume hood, listed in accordance with UL 1805. Exception: A chemical fume hood is not required where an approved exhaust system is installed in accordance with NFPA 91®.

(19) Section 3903.6.3 Electrical. This section has been added to require the extraction room where liquefied petroleum gas is used as a solvent to be classified as Class I, Division I hazardous location in accordance with NFPA 70®. The section requires all conductive equipment and conductive objects within the extraction room to be bonded and grounded with a resistance of less than 1.0 times 10 to the sixth power ohms in accordance with NFPA 70®. This section has been added to read: 3903.6.3 Electrical. The extraction room where liquefied petroleum gas is used as a solvent shall be classified as Class I, Division I hazardous location in accordance with NFPA 70®. All conductive equipment and conductive objects within the extraction room shall be bonded and grounded with a resistance of less than 1.0 times 10 to the sixth power ohms in accordance with NFPA 70®.

(20) Section 3903.6.4 Automatic fire-extinguishing system. This section has been added to require chemical fume hoods and enclosures, including ductwork required by Section 3903.6.2 to be provided with an automatic fire-extinguishing system complying with Section 903.3.1.1, 904.6, 904.8 or 904.10. This section has been added to read: 3903.6.4 Automatic fire-extinguishing system. Chemical fume hoods and enclosures, including ductwork required by Section 3903.6.2 shall be provided with an automatic fire-extinguishing system complying with Section 903.3.1.1, 904.6, 904.8 or 904.10.

(21) Section 3903.7 Carbon dioxide extraction. This section has been added to require plant processing and extraction facilities utilizing carbon dioxide solvents to comply with Sections 3903.7.1 through 3903.7.3, Section 5307 and other applicable provisions of the code. This section has been added to read: 3903.7 Carbon dioxide extraction. Plant processing and extraction facilities utilizing carbon dioxide solvents shall comply with Sections 3903.7.1 through 3903.7.3, Section 5307 and other applicable provisions of this code.

(22) Section 3903.7.1 Storage and handling. This section has been added to require all carbon dioxide compressed gas cylinders to be secured to a fixed object to prevent falling. This section has been added to read: 3903.7.1 Storage and handling. All carbon dioxide compressed gas cylinders shall be secured to a fixed object to prevent falling.

(23) Section 3903.7.2 Gas detection system. This section has been added to require a gas detection system complying with Sections 916 and 5307.4.3 to be provided in a room where carbon dioxide solvents are used in the extraction process. This section has been added to read: 3903.7.2 Gas detection system. A gas detection system complying with Sections 916 and 5307.4.3 shall be provided in a room where carbon dioxide solvents are used in the extraction process.

(24) Section 3903.7.3 Carbon dioxide discharge. This section has been added to require the carbon dioxide equipment pressure relief device and blow-off valves to be piped to the exterior of the building. This section has been added to read: 3903.7.3 Carbon dioxide discharge. The carbon dioxide extraction equipment pressure relief device and blow-off valves shall be piped to the exterior of the building.

(25) Section 3904 Systems and Equipment. This section heading has been added to signify the start of new section of code to address the systems and equipment for processing and extraction facilities. This section header has been added to read: 3904 Systems and Equipment.

(26) Section 3904.1 General requirements. This section has been added to require systems and equipment used with the processing and extraction of oils and products from plants, to comply with Sections 3904.2 through 3904.4 and 5003.2, and other applicable provisions of this code, the International Building Code® and International Mechanical Code®. This section has been added to read: 3904.1 General requirements. Systems and equipment used with the processing and extraction of oils and products from plants shall comply with Sections 3904.2 through 3904.4 and 5003.2, and other applicable provisions of this code, the International Building Code®, and International Mechanical Code®.

(27) 3904.2 Systems and equipment. This section has been added to require systems and equipment used for the extraction of oils from plant material to be listed or approved for the specific use or require the unlisted systems and equipment to be reviewed by a registered design professional who will review and consider any information provided by the systems designer or manufacturer. The section requires for systems and equipment not listed for a specific use that a technical report, in accordance with Section 3904.3, be prepared by the registered design professional and submitted to the fire code official for review and approval, and requires the firm or individual preparing the technical report to be approved by the fire code official prior to performing the analysis. This section has been added to read: 3904.2 Systems and equipment. Systems or equipment used for the extraction of oils from plant material shall be listed or approved for the specific use. If the system used for extraction of oils and products from plant material is not listed, the system shall be reviewed by a registered design professional. The registered design professional shall review and consider any information provided by the system's designer or manufacturer. For systems and equipment not listed for the specific use, a technical report in accordance with Section 3904.3 shall be prepared and submitted to the fire code official for review and approval. The firm or individual preparing the technical report shall be approved by the fire code official prior to performing the analysis.

(28) 3904.3 Technical report. This section has been added to specify a technical report must be reviewed and approved by the fire code official as required by Section 3904.2 prior to the equipment being located or installed at the facility. The section requires the report to be prepared by a registered design professional or other professional approved by the fire code official. This section has been added to read: 3904.3 Technical report. A technical report, reviewed and approved by the fire code official as required by Section 3904.2, is required prior to the equipment being located or installed at the facility. The report shall be prepared by a registered design professional or other professional approved by the fire code official.

(29) 3904.3.1 Report content. This section has been added to list out the items to be included in the technical report required in Section 3904.3. This section has been added to read: Section 3904.3.1 Report content. The technical report shall contain all of the following:

- (A) Manufacturer information.
- (B) Preparer of record of the technical report.
- (C) Date of review and report revision history.
- (D) Signature page, including all of the following:
  - (i) Author of the report.

(ii) Date of the report.

(iii) Date and signature of registered design professional of record performing the design or peer review.

(E) Model number of the item evaluated. If the equipment is provided with a serial number the serial number shall be included for verification at the time of site inspection.

(F) Methodology of the design or peer review process used to determine minimum safety requirement. Methodology shall consider the basis of design, and shall include a code analysis and code path to demonstrate whether specific codes or standards are applicable.

(G) Equipment description. A list of every component and subassembly, such as fittings, hose, quick disconnects, gauges, site glass, gaskets, valves, pumps, vessels, containers and switches, of the system or equipment, indicating the manufacturer, model number, material and solvent compatibility. Manufacturer's data sheets shall be provided.

(H) A general flow schematic or general process flow diagram of the process. Post-processing or winterization shall be included in this diagram. Primary components of the process equipment shall be identified and match the equipment list required in Item 7. Operating temperatures, pressures and solvent state of matter shall be identified in each primary step or component. A piping and instrumentation diagram (PID or P&ID) shall be provided.

(I) Analysis of the vessel(s) if pressurized beyond standard atmospheric pressure. Analysis shall include purchased and fabricated components.

(J) Structural analysis for the frame system supporting the equipment.

(K) Process safety analysis of the extraction system, from the introduction of raw product to the end of the extraction process.

(L) Comprehensive process hazard analysis considering failure modes and points of failure throughout the process. The process hazard analysis shall include a review of emergency procedure information provided by the manufacturer of equipment or process and not that of the facility, building or room.

(M) Review of the assembly instructions, operational and maintenance manuals provided by the manufacturer.

(N) List of references used in the analysis.

(30) Section 3904.4 Site Inspection. This section has been added to specify prior to the operation of the extraction equipment, when required by the fire code official, the engineer of record or approved professional, as approved in Section 3904.2, inspect the site of the extraction process once equipment has been installed for compliance with the technical report and building analysis. The section requires the engineer of record or approved professional to provide a report of the findings and observations of the site inspection to the fire code official prior to the approval of the extraction process. It requires the field inspection report authored by the engineer of record to include the serial number of the equipment used in the process and confirm that the equipment installed is the same model and type of equipment identified in the technical report. This section has been added to read: 3904.4 Site inspection. Prior to the operation of the extraction equipment, where required by the fire code official, the engineer of record or approved professional, as approved in 3904.2, shall inspect the site of the extraction process once equipment has been installed for compliance with the technical report and the building analysis. The engineer of record or approved professional shall provide a report of the findings and observations of the site inspection to the fire code official prior to the approval of the extraction process. The field inspection report authored by the

engineer of record shall include the serial number of the equipment used in the process and shall confirm that the equipment installed is the same model and type of equipment identified in the technical report.

(31) Section 3905 Safety Systems. This section header has been added to signify the addition of new section of code related to the safety systems for extraction and processing facilities. This section heading has been added to read: Section 3905 Safety Systems.

(32) Section 3905.1 Gas detection. This section has been added to require a continuous gas detection system to be provided for extraction processes utilizing flammable gases as solvents. It requires the gas detection threshold be not greater than 25 percent of the lower explosive limit/lower flammability limit (LEL/LFL) of the materials. This section has been added to read: 3905.1 Gas detection. For extraction processes utilizing flammable gases as solvents, a continuous gas detection system shall be provided. The gas detection threshold shall be not greater than 25 percent of the lower explosive limit/lower flammability limit (LEL/LFL) of the materials.

(33) Section 3905.1.1 System design. This section has been added to require the flammable gas detection system to be listed or approved and calibrated to the types of fuels or gases used for the extraction process. The section requires the gas detection system to be designed to activate when the level of flammable gas exceeds 25 percent of the LFL. This section has been added to read: 3905.1.1 System design. The flammable gas detection system shall be listed or approved and shall be calibrated to the types of fuels or gases used for the extraction process. The gas detection system shall be designed to activate when the level of flammable gases exceeds 25 percent of the LFL.

(34) Section 3905.1.2 Gas detection system components. This section has been added to require gas detection system control units and gas detectors to be listed and labeled in accordance with specific standards for use with the gases and vapors being detected. This section has been added to read: 3905.1.2 Gas detection system components. Gas detection system control units shall be listed and labeled in accordance with UL 864 or UL 2017. Gas detectors shall be listed and labeled in accordance with UL 2075 for use with the gases and vapors being detected.

(35) Section 3905.1.3 Operation. This section has been added to require the activation of the gas detection system to result in the initiation of specific actions to activate alarms and the ventilation systems while deactivating heating systems, located in the extraction room. This section has been added to read: 3905.1.3 Operation. Activation of the gas detection system shall result in all of the following:

- (A) Initiation of distinct audible and visual alarm signals in the extraction room.
- (B) Deactivation of all heating systems located in the extraction room.
- (C) Activation of the mechanical ventilation system, where the system is interlocked with gas detection.

(36) Section 3905.1.4 Failure of the gas detection system. This section has been added to require specific actions to occur when the gas detection system experiences a failure. This section has been added to read: 3905.1.4 Failure of the gas detection system. Failure of the gas detection system shall result in the deactivation of the heating system; activation of the mechanical ventilation system where the system is interlocked with the gas detection system; and initiation of a trouble signal to sound in an approved location.

(37) Section 3905.1.5 Interlocks. This section has been added to require electrical components within the extraction room to be interlocked with the gas detection system and

disable all light switches and electrical outlets when the gas detection system is activated. This section has been added to read: 3905.1.5 Interlocks. Electrical components within the extraction room shall be interlocked with the gas detection system. Activation of the gas detection system shall disable all light switches and electrical outlets.

(38) Section 3905.2 Emergency shutoff. This section has been added to require an emergency shutoff system to be provided when extraction processes utilize gaseous hydrocarbon-based solvents. This section has been added to read: 3905.2 Emergency shutoff. Extraction processes utilizing gaseous hydrocarbon-based solvents shall be provided with emergency shutoff systems in accordance with Section 5803.1.3.

(39) Section 3905.3 Emergency power system. This section has been added to require the extraction room lighting and extraction room ventilation system to be provided with emergency power for extraction processes utilizing hydrocarbon gases or liquids as solvents, in accordance with Section 2702 of the International Building Code®. This section has been added to read: 3905.3 Emergency power system. For extraction processes utilizing hydrocarbon gases or liquids as solvents, the extraction room lighting and extraction room ventilation system shall be provided with emergency power in accordance with Section 2702 of the International Building Code®.

**748:20-4-45. IFC® Chapter 40 [RESERVED]**

**748:20-4-46. IFC® Chapter 41 [RESERVED]**

**748:20-4-47. IFC® Chapter 42 [RESERVED]**

**748:20-4-48. IFC® Chapter 43 [RESERVED]**

**748:20-4-49. IFC® Chapter 44 [RESERVED]**

**748:20-4-50. IFC® Chapter 45 [RESERVED]**

**748:20-4-51. IFC® Chapter 46 [RESERVED]**

**748:20-4-52. IFC® Chapter 47 [RESERVED]**

**748:20-4-53. IFC® Chapter 48 [RESERVED]**

**748:20-4-54. IFC® Chapter 49 [RESERVED]**

**748:20-4-55. IFC® Chapter 50 [RESERVED]**

**748:20-4-56. IFC® Chapter 51 [RESERVED]**

**748:20-4-57. IFC® Chapter 52 [RESERVED]**

**748:20-4-58. IFC® 2015 Chapter 53 Compressed Gases**

Chapter 53 of the IFC® is adopted with the following modifications:

(1) Section 5302.1 Definitions. This section has been modified to clarify the definition for a "CARBON DIOXIDE ENRICHMENT SYSTEM" has been added to the list of definitions

defined in Chapter 2. This section has been modified to read: 5302.1 Definitions. The following terms are defined in Chapter 2:

(A) CARBON DIOXIDE ENRICHMENT SYSTEM.

(B) COMPRESSED GAS.

(C) COMPRESSED GAS CONTAINER.

(D) COMPRESSED GAS SYSTEM.

(E) NESTING.

(F) TUBE TRAILER.

(2) Section 5307 Compressed gases not otherwise regulated. This section header has been modified to change the title from "Carbon Dioxide Systems used in Beverage Dispensing Applications" to "Compressed gases not otherwise regulated" and to update Section 5307 to address more than carbon dioxide systems used in beverage dispensing applications. This section header has been modified to read: 5307 Compressed Gases Not Otherwise Regulated.

(3) Section 5307.1 General. The original Section 5307.1 published in the 2015 IFC® has been modified and moved to Section 5307.3 and a new Section 5307.1 with the same section heading entitled: "General" has been added to clarify compressed gases in storage or use not regulated by material specific provisions in other chapters of the code, including asphyxiant, irritant and radioactive gases, shall comply with this section in addition to other requirements in this chapter. This section has been modified to read: 5307.1 General. Compressed gases in storage or use not regulated by the material-specific provisions of Chapters 6, 54, 55, and 60 through 67, including asphyxiant, irritant and radioactive gases, shall comply with this section in addition to other requirements of this chapter.

(4) Section 5307.2 Ventilation. The original Section 5307.2 published the 2015 IFC®, entitled "Permits" has been stricken from the code. A new Section 5307.2 entitled "Ventilation" has been added in its place. This section has been added to clarify indoor storage and use areas and storage buildings shall be provided with ventilation in accordance with Section 5004.3; and where mechanical ventilation is provided, the system shall be operational during such time as the building or space is occupied. The section provides exceptions to the requirement for mechanical ventilation when a gas detection system complying with Section 5307.2.1 is utilized and when areas containing insulated liquid carbon dioxide systems used in beverage dispensing applications comply with Section 5307.3. This section has been added to read: 5307.2 Ventilation: Indoor storage and use areas and storage buildings shall be provided with ventilation in accordance with Section 5004.3. Where mechanical ventilation is provided, the systems shall be operational during such time as the building or space is occupied. Exceptions:

(A) A gas detection system complying with Section 5307.2.1 shall be permitted in lieu of mechanical ventilation.

(B) Areas containing insulated liquid carbon dioxide systems used in beverage dispensing applications shall comply with Section 5307.3.

(5) Section 5307.2.1 Gas detection systems. This section has been added to require a gas detection system complying with Section 916 or where approved, an oxygen depletion alarm system, either of which initiates audible and visible alarm signals in the room or area where the sensors are installed, shall be provided. This section has been added to read: 5307.2.1 Gas detection systems. In rooms or areas not provided with ventilation in accordance with Section 5307.2, a gas detection system complying with Section 916 or, where approved, an oxygen

depletion alarm system, either of which initiates audible and visible alarm signals in the room or area where the sensors are installed, shall be provided.

(6) Section 5307.3 Insulated liquid carbon dioxide systems used in beverage dispensing applications. The original Section 5307.3 published in the 2015 IFC® entitled "Equipment" has been stricken and the originally published Section 5307.1 entitled "General" has been modified and moved to change the title of the section from "General" to "Insulated liquid carbon dioxide systems used in beverage dispensing applications." The section requires insulated liquid carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications to comply with Section 5307.3.1. This section has been modified to read: 5307.3 Insulated liquid carbon dioxide systems used in beverage dispensing applications. Insulated liquid carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall comply with Section 5307.3.1.

(7) Section 5307.3.1. Ventilation. The original section 5307.5 published in the 2015 IFC® has been modified and moved to Section 5307.3.1 by changing the title of the section from "Required protection" to "Ventilation." The section requires insulated liquid carbon dioxide storage tanks, cylinders, piping and equipment located indoors and in any other indoor areas where a leak of carbon dioxide may accumulate to be provided with mechanical ventilation and to be designed to have a negative pressure in relation to the surrounding area. The section contains an exception if there is a gas detection system complying with Section 5307.3.2. This section has been added to read: 5307.3.1 Ventilation. Where insulated liquid carbon dioxide storage tanks, cylinders, piping and equipment are located indoors, rooms or areas containing storage tanks, cylinders, piping and equipment, and other areas where a leak of carbon dioxide is expected to accumulate, shall be provided with mechanical ventilation in accordance with Section 5004.3 and designed to maintain the room containing the carbon dioxide at a negative pressure in relation to the surrounding area. Exception: A gas detection system complying with Section 5307.3.2 shall be permitted in lieu of mechanical ventilation.

(8) Section 5307.3.2 Gas detection system. This section has been added to specify where ventilation is not provided in accordance with Section 5307.3.1, a gas detection system shall be provided in rooms or indoor areas and in below grade outdoor locations with insulated carbon dioxide systems. The section specifies where carbon dioxide sensors shall be provided and requires the system to be designed to activate audible and visible supervisory alarms under specific circumstances and at specific locations. This section has been added to read: 5307.3.2 Gas detection system. Where ventilation is not provided in accordance with Section 5307.3.1, a gas detection system shall be provided in rooms or indoor areas and in below grade outdoor locations with insulated carbon dioxide systems. Carbon dioxide sensors shall be provided within 12 inches (305 mm) of the floor in the area where the gas is expected to accumulate or other approved locations. The system shall be designed as follows:

(A) Activates an audible and visible supervisory alarm at a normally attended location upon detection of a carbon dioxide concentration of 5,000 ppm (9000 mg/cubic meter).

(B) Activates an audible and visible alarm within the room or immediate area where the system is installed upon the detection of a carbon dioxide concentration of 30,000 ppm (54 000 mg/cubic meter).

(9) Section 5307.4 Carbon dioxide enrichment systems. The originally published Section 5307.4 entitled "Protection from damage" has been stricken from the code and has been

replaced with a new Section 5307.4 entitled "Carbon dioxide enrichment systems." The section specifies the design, installation and maintenance of carbon dioxide enrichment systems with more than 100 pounds (45.4 kg) of carbon dioxide and carbon dioxide enrichment systems with any quantity of carbon dioxide having a remote fill connection, to comply with Sections 5307.4.1 through 5307.4.7. This section has been added to read: 5307.4 Carbon dioxide enrichment systems. The design, installation and maintenance of carbon dioxide enrichment systems with more than 100 pounds (45.4 kg) of carbon dioxide, and carbon dioxide enrichment systems with any quantity of carbon dioxide having a remote fill connection, shall comply with Sections 5307.4.1 through 5307.4.7.

(10) Section 5307.4.1 Documentation. This section has been added to list the information that must be submitted with the application for permit. This section has been added to read: 5307.4.1 Documentation. The following information shall be provided with the application for permit:

(A) Total aggregate quantity of liquid carbon dioxide in pounds or cubic feet at normal temperature and pressure.

(B) Location and total volume of the room where the carbon dioxide enrichment operation will be conducted. Identify whether the room is at grade or below grade.

(C) Location of containers relative to equipment, building openings, and means of egress.

(D) Manufacturer's specifications and pressure rating, including cut sheets, of all piping and tubing to be used.

(E) A piping and instrumentation diagram that shows piping support and remote fill connections.

(F) Details of container venting, including but not limited to vent line size, material and termination location.

(G) Alarm and detection system and equipment, if applicable.

(H) Seismic support for containers.

(11) Section 5307.4.2 Equipment. This section has been added to require pressure relief, vent piping, fill indicators, fill connections, vent terminations, piping systems and the storage, use and handling of carbon dioxide to be in accordance with Chapter 53 and NFPA 55. This section has been added to read: 5307.4.2 Equipment. Pressure relief, vent piping, fill indicators, fill connections, vent terminations, piping systems and the storage, use and handling of carbon dioxide shall be in accordance with Chapter 53 and NFPA 55.

(12) Section 5307.4.3. Gas detection system. This section has been added to require a gas detection system complying with Section 916 to be provided in rooms or indoor areas in which the carbon dioxide enrichment process is located, in rooms or areas where container systems are located, and in other areas where carbon dioxide is expected to accumulate. The section provides directions on where the carbon dioxide sensors will be located, how the system shall be designed and specifications for alarm activation. This section has been added to read: 5307.4.3 Gas detection system. A gas detection system complying with Section 916 shall be provided in rooms or indoor areas in which the carbon dioxide enrichment process is located, in rooms or indoor areas in which container systems are located, and in other areas where carbon dioxide is expected to accumulate. Carbon dioxide sensors shall be provided within 12 inches (305 mm) of the floor in the area where the gas is expected to accumulate or leaks are most likely to occur. The system shall be designed as follows:

(A) Activates a low-level alarm upon detection of carbon dioxide concentration of 5,000 ppm (9000 mg/cubic meter).

(B) Activates a high-level alarm upon detection of carbon dioxide concentration of 30,000 ppm (54 000 mg/cubic meter).

(13) Section 5307.4.3.1 System activation. This section has been added to specify the required automatic system activation steps for both low level and high level gas detection alarms. This section has been added to read: 5307.4.3.1 System activation.

(A) Activation of the low level gas detection system alarms shall automatically:

(i) Stop the flow of carbon dioxide to the piping system.

(ii) Activate the mechanical exhaust ventilation system.

(iii) Activate the audible and visible supervisory alarm signal at an approved location within the building.

(B) Activation of the high-level gas detection system alarm shall automatically:

(i) Stop the flow of carbon dioxide to the piping system.

(ii) Activate the mechanical exhaust ventilation system.

(iii) Activate the audible and visible evacuation alarm both inside and outside of the carbon dioxide enrichment area, and the area in which the carbon dioxide containers are located.

(14) Section 5307.4.4 Pressurizing and ventilation. This section has been added to require rooms or indoor areas in which carbon dioxide enrichment is provided to be maintained at a negative pressure in relation to the surrounding areas in the building. The section requires a mechanical ventilation system to be provided in accordance with the International Mechanical Code® and other requirements in the section. This section has been added to read: 5307.4.4 Pressurizing and ventilation. Rooms or indoor areas in which carbon dioxide enrichment is provided shall be maintained at a negative pressure in relation to the surrounding areas in the building. A mechanical ventilation system shall be provided in accordance with the International Mechanical Code® that complies with all of the following:

(A) Mechanical ventilation in the room or area shall be at a rate of not less than 1 cfm per square foot [0.00508 cubic meters divided by (s times meters squared)].

(B) When activated by the gas detection system, the mechanical ventilation system shall remain on until manually reset.

(C) The exhaust system intakes shall be taken from points within 12 inches (305 mm) of the floor.

(D) The ventilation system shall discharge to the outdoors in an approved location.

(15) Section 5307.4.5 Signage. This section has been added to require hazard identification signs to be posted at the entrance to the room and indoor areas where the carbon dioxide enrichment process is located and at the entrance to the rooms or indoor areas where the carbon dioxide containers are located. The section specifies the minimum size of the sign and the required warning language for the sign. This section has been added to read: 5307.4.5 Signage. Hazard identification signs shall be posted at the entrance to the room and indoor areas where the carbon dioxide enrichment process is located and at the entrance to the room or indoor area where the carbon dioxide containers are located. The sign shall be not less than 8 inches (200 mm) in width and 6 inches (150 mm) in height and indicate: CAUTION - CARBON DIOXIDE GAS. VENTILATE THE AREA BEFORE ENTERING. A HIGH CARBON DIOXIDE (CO<sub>2</sub>) GAS CONCENTRATION IN THIS AREA CAN CAUSE ASPHYXIATION.

(16) Section 5307.4.6 Seismic and structural design. This section has been added to require carbon dioxide system containers and piping to comply with the seismic design requirements

in Chapter 16 of the International Building Code® and not exceed the floor loading limitation of the building. This section has been added to read: 5307.4.6 Seismic and structural design. Carbon dioxide system containers and piping shall comply with the seismic design requirements in Chapter 16 of the International Building Code® and shall not exceed the floor loading limitation of the building.

(17) Section 5307.4.7 Container refilling. This section has been added to prohibit refilling of carbon dioxide containers located indoors, unless filled from a remote connection located outdoors. This section has been added to read: 5307.4.7 Container refilling. Carbon dioxide containers located indoors shall not be refilled unless filled from a remote connection located outdoors.

(18) Section 5307.5 Required protection. The originally published section 5307.5 entitled "Required protection" in the 2015 IFC® has been modified and moved to Section 5307.3.1 entitled "Ventilation."

(19) Section 5307.5.1 Ventilation. This section has been stricken from the code.

(20) Section 5307.5.2 Emergency alarm system. This section has been stricken from the code.

(21) Section 5308 Compressed gases not otherwise regulated. This section header and the subsequent sections 5308.1 General and 5308.2 Ventilation have been stricken from the code.

**748:20-4-59. IFC® Chapter 54 [RESERVED]**

**748:20-4-60. IFC® Chapter 55 [RESERVED]**

**748:20-4-61. IFC® Chapter 56 [RESERVED]**

**748:20-4-62. IFC® Chapter 57 [RESERVED]**

**748:20-4-63. IFC® Chapter 58 [RESERVED]**

**748:20-4-64. IFC® Chapter 59 [RESERVED]**

**748:20-4-65. IFC® Chapter 60 [RESERVED]**

**748:20-4-66. IFC® Chapter 61 [RESERVED]**

**748:20-4-67. IFC® Chapter 62 [RESERVED]**

**748:20-4-68. IFC® Chapter 63 [RESERVED]**

**748:20-4-69. IFC® Chapter 64 [RESERVED]**

**748:20-4-70. IFC® Chapter 65 [RESERVED]**

**748:20-4-71. IFC® Chapter 66 [RESERVED]**

**748:20-4-72. IFC® Chapter 67 [RESERVED]**

**748:20-4-73. IFC® Chapter 68 [RESERVED]**

**748:20-4-74. IFC® Chapter 69[RESERVED]**

**748:20-4-75. IFC® Chapter 70 [RESERVED]**

**748:20-4-76. IFC® Chapter 71 [RESERVED]**

**748:20-4-77. IFC® Chapter 72 [RESERVED]**

**748:20-4-78. IFC® Chapter 73 [RESERVED]**

**748:20-4-79. IFC® Chapter 74 [RESERVED]**

**748:20-4-80. IFC® Chapter 75 [RESERVED]**

**748:20-4-81. IFC® Chapter 76 [RESERVED]**

**748:20-4-82. IFC® Chapter 77 [RESERVED]**

**748:20-4-83. IFC® Chapter 78 [RESERVED]**

**748:20-4-84. IFC® Chapter 79 [RESERVED]**

**748:20-4-85. IFC® 2015 Chapter 80 Referenced Standards**

Chapter 80 of the IFC® 2015 is adopted with the following modifications:

(1) The reference to the International 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: IBC®-15 International Building Code® as adopted and modified by the State of Oklahoma through the OUBCC.

(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 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.

(4) 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.

(5) 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 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.

(6) 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.

(7) The referenced standard for NFPA® 2 Hydrogen Technologies Code has been modified to change the edition year from 2011 to 2016. This Section has been modified to read: 02-16 Hydrogen Technologies Code.

(8) The referenced standard for NFPA® 70® National Electrical 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: 70-14 National Electrical Code® as adopted and modified by the State of Oklahoma through the OUBCC.

(9) A reference to the UL Standard 1805 - 2002 Standard for Laboratory Hoods and Cabinets has been added to the list of UL standards. This standard has been added to read: UL 1805 - 2002: Standard for Laboratory Hoods and Cabinets. 3903.4.3, 3903.5, 3903.6.2.

## **748:20-4-86. IFC® Appendix O [RESERVED]**

### **Subchapter 10. NEC® 2014**

#### **748:20-10-1. Adoption of the National Electrical Code® (NEC®) [RESERVED]**

#### **748:20-10-2. Effect of Adoption [RESERVED]**

#### **748:20-10-3. NEC® Informative Annexes [RESERVED]**

#### **748:20-10-4. NEC® Provisions Adopted and Modified [RESERVED]**

#### **748:20-10-5. Participation in Federal Programs and/or Federally Funded or Financed Projects [RESERVED]**

#### **748:20-10-6. NEC® Article 90 [RESERVED]**

#### **748:20-10-7. NEC® Chapter 1 [RESERVED]**

#### **748:20-10-8. NEC® Chapter 2 [RESERVED]**

#### **748:20-10-9. NEC® Chapter 3 [RESERVED]**

#### **748:20-10-10. NEC® 2014 Chapter 4 Equipment for General Use**

Chapter 4 of the NEC® 2014 is adopted with the following modifications:

(1) Section 410.2 Definition. This section has been modified to add two definitions to the section:

(A) The definition of HORTICULTURAL LIGHTING EQUIPMENT has been added to clarify lighting equipment identified for horticultural use is to be designed to provide supplemental general illumination within the growing environment. This definition has been added to read: HORTICULTURAL LIGHTING EQUIPMENT. Lighting equipment identified for horticultural use is designed to provide a spectral characteristic needed for the growth of plants and can also provide supplemental general illumination within the growing environment.

(B) The definition of LUMINAIRE REMOTE POWER SOURCES has been added to clarify Luminaire remote power sources include LED Drivers, fluorescent ballasts or HID ballasts. This definition has been added to read: LUMINAIRE REMOTE POWER SOURCES. Luminaire remote power sources include LED Drivers, fluorescent ballasts, or HID ballasts.

(2) Part XVI. Special Provisions for Horticultural Lighting Equipment. This part header has been added to Article 410 Luminaires, Lampholders, and Lamps to signify the start of a new section of code related to provisions for horticultural lighting equipment. This part heading has been added to read: Part XVI. Special Provisions for Horticultural Lighting Equipment

(3) Section 410.170 General. This section has been added to clarify luminaires complying with Parts I, II, III, IV, V, VI, VII, IX, X, XI, and XII of this article shall be permitted to be used for horticultural lighting. The section clarifies Part XVI of the article shall apply to lighting equipment specifically identified for horticultural use. This section has been added to read: 410.170 General. Luminaires complying with Parts, I, II, III, IV, V, VI, VII, IX, X, XI, and XII of this article shall be permitted to be used for horticultural lighting. Part XVI shall additionally apply to lighting equipment specifically identified for horticultural use.

(4) Section 410.172 Listing. This section has been added to clarify lighting equipment identified for horticultural use is required to be listed. This section has been added to read: 410.172 Listing. Lighting equipment identified for horticultural use shall be listed.

(5) Section 410.174 Installation and use. This section has been added to clarify lighting equipment identified for horticultural use shall be installed and used in accordance with the manufacturer's installation instructions and installation markings on the equipment as required by the listing. This section has been added to read: 410.174 Installation and use. Lighting equipment identified for horticultural use shall be installed and used in accordance with the manufacturer's installation instructions and installation markings on the equipment as required by that listing.

(6) Section 410.176 Locations not permitted. This section has been added to clarify the location and installation where lighting equipment identified for horticultural use is not permitted. This section has been added to read: 410.176 Locations not permitted.

(A) General Lighting. Lighting equipment identified for horticultural use shall not be installed as lighting for general illumination unless such use is indicated in the manufacturer's instructions.

(B) Installed Location. Lighting equipment identified for horticultural use shall not be installed where it is likely to be subject to physical damage or where concealed.

(7) Section 410.178 Flexible cord. This section has been added to clarify flexible cords will be permitted only when provided as part of a listed lighting equipment identified for horticultural use and identified for specific uses. This section has been added to read: 410.178 Flexible cord. Flexible cord shall only be permitted when provided as part of listed lighting equipment identified for horticultural use for any of the following uses:

(A) Connecting a horticultural lighting luminaire directly to a branch circuit outlet.

(B) Interconnecting horticultural lighting luminaires.

(C) Connecting a horticultural lighting luminaire to a remote power source.

(8) Section 410.180 Fittings and connectors. This section has been added to clarify fittings and connectors attached to flexible cords shall be provided as part of a listed horticultural lighting equipment device or system and be installed in accordance with the instructions provided as part of the listing. This section has been added to read: 410.180 Fittings and

connectors. Fittings and connectors attached to flexible cords shall be provided as part of a listed horticultural lighting equipment device or system and installed in accordance with the instructions provided as part of that listing.

(9) Section 410.182 Grounding. This section has been added to require lighting equipment identified for horticultural use to be grounded as required in Article 250 and Part V of this article. This section has been added to read: 410.182 Grounding. Lighting equipment identified for horticultural use shall be grounded as required in Article 250 and Part V of this article.

(10) Section 410.184 Ground-fault circuit-interrupter protection. This section has been added to clarify lighting equipment identified for horticultural use employing flexible cord(s) with one or more connectors to be supplied by lighting outlets with ground-fault circuit-interrupter protection. This section has been added to read: 410.184 Ground-fault circuit-interrupter protection. Lighting equipment identified for horticultural use employing flexible cord(s) with one or more connectors shall be supplied by lighting outlets with ground-fault circuit-interrupter protection.

(11) Section 410.186 Support. This section has been added to clarify special fittings identified for support of horticultural lighting equipment shall be designed specifically for the horticultural lighting equipment on which they are installed and shall be used in accordance with the installation instructions provided and shall be securely fastened. This section has been added to read: 410.186 Support. Special fittings identified for support of horticultural lighting equipment shall be designed specifically for the horticultural lighting equipment on which they are installed and shall be used in accordance with the installation instructions provided and shall be securely fastened.

(12) Section 410.188 Hazardous (classified) locations. This section has been added to clarify where horticultural lighting is installed in hazardous (classified) locations, the horticultural lighting equipment shall conform to Articles 500 through 517 in addition to this article. This section has been added to read: 410.188 Hazardous (classified) locations. Where installed in hazardous (classified) locations, horticultural lighting equipment shall conform to Articles 500 through 517 in addition to this article.

**748:20-10-11. NEC® Chapter 5 [RESERVED]**

**748:20-10-12. NEC® Chapter 6 [RESERVED]**

**748:20-10-13. NEC® Chapter 7 [RESERVED]**

**748:20-10-14. NEC® Chapter 8 [RESERVED]**

**748:20-10-15. NEC® Chapter 9[RESERVED]**