

**2015**

**International Fire Code**

**Ordinance # 26249**

**Adopted 9/24/19**

**Effective 9/24/19**

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1. **Chapter 1, Section 101.1** is amended to read as follows:  
  
**101.1 Title.** These regulations shall be known as the Fire Code of the City of Oklahoma City, hereinafter, referred to as "this code."
2. **Chapter 1, Section 102.7** is amended to read as follows:  
  
**102.7 Referenced codes and standards.** The codes and standards referenced in this code shall be those that are listed in Chapter 80 and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. The jurisdiction will reference the most recent edition of these codes and standards available. Where The City of Oklahoma City has adopted a specific referenced code or standard different than those listed, the adopted code shall apply.
3. **Chapter 1, Section 103.1** is amended to read as follows:  
  
**103.1 General.** Fire Prevention Services is established within the jurisdiction under the direction of the Fire Marshal. The function of the division shall be the implementation, administration, and enforcement of the provisions of this code.
4. **Chapter 1, Section 104.3.1** is amended to read as follows:  
  
**104.3.1 Warrant.** Where the fire code official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an owner or occupant or person having charge, care, or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to permit entry therein by the fire code official for the purpose of inspection and examination pursuant to this code.  
  
**Exception:** In instances where the fire code official knows or has reason to believe an emergency exists, entry for inspection purposes is authorized. As used in this section, "emergency" means circumstance which the fire code official knows, or has reason to be, exist and which reasonably may constitute immediate danger to life and property.
5. **Chapter 1, Section 104.4** is amended to read as follows:  
  
**104.4 Identification.** The fire code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code. It shall be unlawful for any unauthorized person to use an official badge, uniform, or other credentials so as to impersonate a fire code official for the purpose of gaining access to any building or premises.
6. **Chapter 1, Section 104.10** is amended to read as follows:  
  
**104.10 Fire Investigation.** The fire code official, the fire department or other responsible authority shall have the authority to investigate the cause, origin and circumstances of any fire, explosion or other hazardous condition. When in the opinion of the Fire Marshal, reasonable cause exists that the fire or explosion may have been of incendiary origin, Fire Marshal shall have the authority to take custody of all physical evidence relating to the cause of the fire or explosions and to continue the investigation to conclusion. Information that could be related to trade secrets or process shall not be made part of the public record except as directed by a court of law.
7. **Chapter 1, Section 104.11.2** is amended by adding the following subsection:

**Section 104.11.2 Obstructing operations.** It shall be unlawful for any person to interfere with a fire code official carrying out any duties or functions prescribed by the Fire Prevention Code. Violation shall be classified as a "class b" offense as identified in the Oklahoma City Municipal Code 2010.

8. **Chapter 1, Section 105.3.1** is amended to read as follows:

**105.3.1 Expiration.** An operational permit shall remain in effect until reissued, renewed, or revoked or for such period of time as specified in the permit. Construction permits shall automatically become invalid unless the work authorized by such permits is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Before such work recommences, a new permit shall be first obtained and the fee to recommence work if any shall be in accordance with the Oklahoma City Municipal Code 2010, Chapter 60- General Schedule of Fees; provided no changes have been made or will be made in the original construction document for such work and provided further that such suspension or abandonment has not exceeded one year. Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

9. **Chapter 1, Section 105.6.9** is amended by adding the following subsection:

**105.6.9 Compressed gasses.** An operational permit is required for the storage, use or handling at normal temperatures and pressure (NTP) of compressed gases in excess of the amounts listed in Table 105.6.8.

**Exception:** Vehicles equipped for and using compressed gases as a fuel for propelling the vehicle.

**105.6.9.1 Places of Assembly.** A permit is required for each temporary installation or use of compressed gases in a place of assembly.

10. **Chapter 1, Section 105.6.12** is amended as follows:

**105.6.12 Cutting and welding.** An operational permit is required to conduct cutting or welding operations within the jurisdiction. Permits and site inspections shall be required as necessary during time periods when the jurisdiction or other authorized agency prohibits burning.

11. **Chapter 1, Section 105.6.28** is amended to read as follows:

**105.6.28 LP-gas.** An operational permit is required for:

1. Storage and use of LP-Gas for temporary and permanent installations in commercial and residential occupancies.

**Exception:** A permit is not required for individual containers with an 80-gallon (288L) water capacity or less serving occupancies in Group R-3.

2. Operation of cargo tankers that transport LP-gas.

12. **Chapter 1, Section 105.6.32** is amended by deletion and replaced with the following:

**105.6.32 Open burning.** An operational permit is required for all fires conducted outside of a building including but not limited to bonfires, burn piles and Air Curtain Incinerators. Permits will not be issued unless the burning operation complies with air pollution authority rules. No permit shall be required for:

1. Fires kindled for the instruction of personnel in methods of fighting fires when approved by the fire code official.
2. Small fires kindled in barbecue pit, exterior fireplace, cookout device, or other similar out-of-doors eating or cooking device when required for entertainment or necessity.
3. Recreational fires.

**105.6.32.1 Burn Permits.** Request for burn permits shall be made to the Fire Prevention Office by phone, in person or in writing. A Fire Prevention Inspector will conduct an inspection of the proposed burn site. When the site is approved, a permit will be issued to the requesting party. The permit shall not be valid until the Fire Prevention Office receives appropriate fees where required as per Section 60-20 of the Oklahoma City Municipal Code, 2010, as amended - General Schedule of Fees. After receipt of the required fees, the permits shall be valid for 30 calendar days unless extended by the Fire Prevention Office. Violation of this section shall be considered a "class b" offense per Oklahoma City Municipal Code, 2010, as amended.

**106.6.32.2 Air Curtain Incinerators (ACI).** The use of an air curtain incinerator (ACI) including any device which operates by forcefully projecting a curtain of air across an open chamber, or open pit in which combustion occurs, including fire boxes and trench burners, shall also comply with this section. Burning of materials shall be limited to the disposal of 100 percent wood waste, 100 percent clean lumber, or 100 percent mixture of only wood waste and/or clean lumber. The operator shall be educated in and fully aware of the functions required for proper operation of the ACI.

Use of the ACI shall require approval of the fire code official after inspection of site to ensure proper installation and operations, approval of fuels to be burned and proper bum permits issued. All open burning requirements of the jurisdiction and other regulatory agencies shall also be enforced.

13. **Chapter 1, Section 105.6.34** is amended as follows:

**105.6.34 Open flames and candles.** An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments whether indoors or outdoors including fire pits or similar open flame devices.

**105.6.34.1 Protection from flames.** Guards or similar features shall be provided around fire pits or similar open flame devices to accomplish a barrier to prevent occupants from contacting the flame or heated elements This barrier shall prevent occupants from being within 36 inches of the flame or a barrier with a height of 42 inches above the floor surface. Alternative methods to accomplish this shall be allowed when approved by the fire code official.

**105.6.34.2 Special District boundaries.** For purposes of obtaining Open Flame permits, the Fire Code Official is authorized to establish a geographic area for the purposes of determining and permitting it as a single location.

14. **Chapter 1, Section 105.6.47** is amended to add the following subsection:

**105.6.47.1 Precautions during operations.** Vehicle recycling of any kind conducted in these facilities shall comply with Section 911 and the following:

1. Establish and follow procedures for removal of all fuel tanks, compressed gas cylinders prior to shredding, crushing or compacting.

2. Provide for ventilation of shredders or other machinery according to manufacturer's specifications.
3. Cleaning and maintenance according to manufacturer's specifications to prevent metal dust build-up.
4. Immediate reporting to the fire code official of any and all explosions due to operations conducted on site, and maintenance of an on-site log of explosions. Reporting shall be pursuant to procedures established by the fire code official.
5. Hours of operations of shredding, crushing or compacting equipment are limited to 7:00a.m. to 7:00p.m. Temporary exceptions to the starting time may be granted by the fire code official, but hours of operation shall not be permitted before 5:00 a.m. nor be conducted more than 12 hours in a single day.

15. **Chapter 1, Section 105.6** is amended to add the following subsections:

**105.6.49 Electronic door hardware.** An operational permit is required for the operation of electronic door hardware in or on any facility. This includes electronic strikes, magnetic locks and any similar devices.

**105.6.50 Plant Extraction systems.** An operational permit is required for any extracting, processing, or testing process. This includes facilities that extract, produce or reduce the byproducts including but not limited to cannabidiol(CBD) or tetrahydrocannabinol (THC).

**105.6.51 Carbon Dioxide Enrichment Systems.** An operational permit is required to utilize carbon dioxide enrichment systems.

16. **Chapter 1, Section 107** is amended by addition of the following subsection:

**107.6 Overcrowding.** Overcrowding or admittance of any person beyond the approved capacity of a building or a portion thereof shall not be allowed. The fire code official, upon finding any overcrowding conditions or obstructions in aisles, passageways or other means of egress, or upon finding any condition which constitutes a life safety hazard shall be authorized to cause the event to be stopped until such conditions or obstructions are corrected.

**107.6.1 Failure to vacate.** No person shall fail to leave any premises which are overcrowded when told to do so by the management of the premises or any authorized fire code official or law enforcement officer.

**107.6.2 Obstruction of fire exits.** No owner, lessee, or person in possession of any premises, which under this code is required to provide fire exits, shall obstruct or allow to be obstructed any aisle, passageway, stairway or door in any occupancy, with tables, show cases, or other obstructions during hours the occupancy is open to the public.

**107.6.3 Penalty.** Any violation of this section shall be a "Class b" offense as identified in Oklahoma City Municipal Code, 2010, as amended.

**107.7 Maintaining a fire hazard.** No person shall knowingly maintain a fire hazard.

17. **Chapter 1, Section 108** is stricken and amended to read as follows:

**108.1 Appeals Procedure.** In order to hear and decide appeals of orders, decisions, or determinations made by the fire code official relative to the application and interpretation of this code, parties desiring appeal of an order or decision of the fire code official shall put in writing their appeal along with any supporting documentation and submit to the fire code official. The appeal shall be based on the claim that

the intent of the code has been incorrectly interpreted, the provisions of the code do not fully apply, or an equivalent method of protection or safety is proposed. A decision regarding the appeal shall be rendered in writing by the fire code official within 10 business days.

18. **Chapter 1, Section 111.4** is amended as follows:

**111.4 Failure to comply.** Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to remove a violation or unsafe condition shall be guilty of a municipal offense, punishable by fines and/or imprisonment in accordance with the Oklahoma City Municipal Code, 2010, as amended.

19. **Chapter 2, Section 202** is amended to add the following definitions:

**Carbon Dioxide Enrichment system.** A system where carbon dioxide gas is intentionally introduced into an indoor environment, typically for the purpose of stimulating plant growth.

**Dispensing Area.** The appropriate hazardous (classified) locations for fuel being dispensed in accordance with the National Electrical Code as adopted by The City of Oklahoma City.

**Disolventizing.** The act of removing a solvent from a material.

**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.

**Miscella.** A mixture, of any proportion, of the extracted oil or fat and the extracting solvent.

**Registered Design Professional.** An individual who is registered or licensed to practice as an Architect or Professional Engineer as defined by the statutory requirements of the professional licensing or registration laws of the State of Oklahoma.

**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.

20. **Chapter 2, Section 202**, is amended to change the Definition of OCCUPANCY CLASSIFICATION for Residential Group R-3 and Lodging Houses to **four** or fewer guest rooms.

**Owner-occupied** lodging with four or fewer guest rooms shall be permitted to be constructed in accordance with the International Residential Code as adopted by The City of Oklahoma City.

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21. **Chapter 3, Section 305** is amended by adding the following subsection:

**305.6 Spreading fires.** No person shall knowingly permit any fire to spread which in the opinion of the Fire Code Official may endanger life or property or use or operate any device which can be a source of ignition unless proper removal of flammable material surrounding the operation is accomplished or such other reasonable precautions are taken to ensure against the starting and spreading of unfriendly fires.

22. **Chapter 3, Section 307.4** is amended as follows:

**307.4 Location.** The location for open burning shall not be less than 150 feet (45.7m) from residences or other structures. Burning shall also be no less than 1000 feet (304.8m) from any oil and gas well



locations or surface equipment. Surrounding clear area around burn site shall be determined by Fire Code Official prior to issuance of a permit.

**Exceptions:**

1. Fires in approved containers that are not less than 15 feet (4572 mm) from a structure.
2. The minimum required distance from a structure shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.

In addition to location requirements listed above-all open burning shall comply with all requirements of the State of Oklahoma.

23. **Chapter 3, Section 307.4.1** is amended as follows:

**307.4.1 Bonfires.** A bonfire shall not be conducted less than 150 feet (45.7m) from residences or other structures. Burning shall also be no less than 1000 feet (304.8m) from any oil and gas well locations or surface equipment. Surrounding clear area around burn site shall be determined by Fire Code Official prior to issuance of a permit.

24. **Chapter 3, Section 307.5** is amended by deletion of section and replaced with the following:

**307.5 Time and attendance.** All open burning shall be constantly attended until the fire is completely extinguished. Initial burning with approval of the Fire Prevention Office may begin three hours after sunrise and shall be entirely extinguished prior to sunset. No additional fuels may be added to burn piles after three hours prior to sunset. Adequate fire protection as approved by the Fire Prevention Office shall be provided by permittee, including but not limited to water supply, hose and nozzle, earth moving equipment, and fire extinguishers.

25. **Chapter 3, Section 307** is amended by adding as following section:

**307.6 Materials.** Materials to be burned shall be limited to vegetative materials only. No construction materials, oils, rubbers and other similar materials which produce unreasonable amounts of air contaminants shall be burned. Care shall be used to minimize the amount of dirt on the materials being burned

26. Chapter 3, Section 308.1.6.3 is amended to read as follows:

**308.1.6.3 Sky lanterns** A person shall not release or cause to be released a sky lantern.

27. **Chapter 3, Section 308.5** is amended to read as follows:

**Section 308.5 Group E, and Group I occupancies.** Open flame devices shall not be used in Group E. and Group I occupancies.

**Exception:** The Fire Code Official may permit open flame devices where needed for educational purposes and appropriate safety measures are provided.

28. **Chapter 4, Section 401.3** is amended by adding the following subsection:

**401.3.4 Reporting hazardous condition.** Any person, upon discovering evidence of spontaneous heating or other abnormal heating of any merchandise, commodity, cargo, shipment, or other material of any kind in any building or premises, or any person upon discovering or being apprised of any

uncontrolled hazardous gas leak or hazardous material or combustible or flammable liquid spill, shall immediately notify the Fire Department.

29. **Chapter 4, Section 401.8** is amended by addition of the following subsections:

**401.8.1 Driving over fire hose.** No person shall drive over or cause any vehicle to be driven or propelled over any fire hose of the Fire Department when laid down on any street, alleyway, private drive, or other vehicular roadway without the consent of the fire official in command of said operations.

**401.8.2 Unlawful boarding of or tampering with fire department equipment.** A person shall not without proper authorization from the fire official in charge of Fire Department equipment, cling to, attach themselves to, climb upon or into, board or swing upon any Fire Department vehicle, whether the same is in motion or at rest, or sound the siren, horn, bell, or other sound producing device manipulate or tamper with, or attempt to manipulate or tamper with any levers, valves, switches, starting devices, brakes, pumps, or any equipment or protective clothing on, or a part of, any Fire Department vehicle, whether the vehicle is at motion or rest.

**401.8.3 Damages/injuries to equipment or personnel.** It shall be unlawful for any person to damage or deface or attempt or conspire to damage or deface any Fire Department vehicle or equipment at any time or to injure or attempt or conspire to injure Fire Department personnel while performing departmental duties.

30. **Chapter 4, Section 403.13** is added to read as follows:

**403.13 Required Training** Personnel approved by the Fire Code Official to perform authorized Fire Watch or Crowd Managers shall complete annual training provided by the Fire Code Official and pay the required fee in accordance with Chapter 60 of the Municipal code.

31. **Chapter 5, Section 501.4** is amended to read as follows:

**501.4 Timing of Installation.** When fire apparatus access roads, including fire lanes or a water supply for fire protection is required to be installed, such protection shall be installed and made serviceable prior to any above-slab construction or storage of combustible materials on site and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles in accordance with Section 505.2.

32. **Chapter 5, Section 503** is amended as follows:

**503.1 Where required.** Fire apparatus access roads including fire lane shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3.

**503.1.1 Buildings and facilities.** Approved fire apparatus access roads including fire lanes shall be provided for every facility, building or portion of a building hereafter constructed or moved into within the jurisdiction. Fire apparatus roads shall be provided for all buildings which are set back more than 150 (45.72 m) feet from a public road or exceed 30 (9.14 m) feet in height and are set back over 50 (15.24 m) feet from a public road. The fire apparatus access roads or fire lanes shall comply with the requirements of this section and shall extend to within 150 feet (45.720m) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

**Exceptions:**

1. The fire code official is authorized to increase the dimension of 150 feet (45.720m) where any of the following conditions occur:

1.1 The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

1.2. Fire apparatus access roads including fire lanes cannot be installed because of location on property, topography, waterways, non- negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

1.3. There are not more than two Group R-3 or Group U occupancies.

2. Where approved by the fire code official, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

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**503.2 Specifications.** Fire apparatus roads including fire lanes shall be installed and arranged in accordance with Sections 5.3.2.1 through 503.2.8.

**503.2.1 Dimensions.** Fire apparatus access roads including fire lanes shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6 and an unobstructed vertical clearance of not less than 14 feet (4.27m).

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**503.2.3 Surface.** Fire apparatus access roads including fire lanes shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all weather driving capabilities. Fire lanes shall be constructed of asphalt or concrete or other alternative pre-approved by the fire code official and sufficient to support apparatus.

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33. **Chapter 5 is amended to provide a new Section 503.7** to read as follows:

**503.7 Emergency rapid access devices.**

**503.7.1 Gated communities or gated commercial premises.** For purposes of this section, gated communities shall include all commercial properties, housing developments, apartment and townhouse complexes and all other residential communities that have limited access electronic gates for ingress into and egress from the community or commercial premises where fire department access is required as determined by the Fire Code Official. Commercial premises shall include all properties except one-or-two family dwellings.

**503.7.2 Emergency rapid access devices.** For purposes of this section, emergency rapid access devices include rapid access key boxes, switch control devices, security padlocks and the locks and keys used in such devices shall be approved by the fire code official.

**503.7.3 Responsible persons/entities.** For gated communities and gated commercial premises, the person/entity responsible for compliance with this section shall be the person/entity responsible for maintenance of the gated access. For new gated communities or gated commercial premises, the person/entity responsible for compliance with this section shall be the developer or builder of the gated community or gated commercial premises.

34. **Chapter 5, Section 508.1.3** is amended to add the following exception:
- Exception:** When approved by the fire code official the 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).
35. **Chapter 5, Section 509** is amended to add a new **subsection 509.3 to read as follows:**
- 509.3 Interference with fire protection equipment.** No person shall render any portable or fixed fire extinguishing system or device or any fire warning system inoperative or inaccessible except as may be necessary during emergencies, maintenance, drills or prescribed testing.
36. **Chapter 8, Section 807.5.2.3** is amended as follows:
- 807.5.5.3 Artwork in classrooms.** Artwork and teaching materials shall be limited on the walls of classrooms to not more than 20 percent of the specific wall area to which they are attached.
37. **Chapter 9, Section 903.2.1.2** is amended to add the following:
4. The fire area has a total occupant load of *more than 50 and less than 100*, and a travel distance of more than 75 feet.
38. **Chapter 9, Section 903.2.7** amended to add the following:
5. 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).
39. **Chapter 9, Section 903.4.3** is amended as follows:
- Section 903.4.3 Floor Control Valves.** Approved supervised indicating control valves shall be provided for each floor at the point of connection to the riser on all multistory buildings. The Fire Code Official shall be allowed to accept alternative provisions to accomplish the subdividing intent of the floor valves.
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40. **Chapter 9, Section 907.2.3** is amended to read as follows:
- 907.2.3 Group E.** A manual fire alarm system that initiates 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: (Remain as written)
41. **Chapter 9, Section 912.2.3** is amended to add the following subsection:
- 912.2.3 Visible alarm.** A strobe alarm shall be installed above the fire department connection or in a location approved by the Fire Code Official. The alarm shall be activated by flow in the sprinkler system.
42. **Chapter 9, Section 912.3** is amended to read as follows:
- 912.3 Fire Hose Threads.** Fire department connections for high-rise buildings shall be a Siamese 2.5-inch OKC tread design. Other Fire Department Connections shall a 4-inch Storz connection with locking Knox cap, unless otherwise approved by the Fire Code Official.

43. **Chapter 9, Section 916** is added to read as follows:

## **SECTION 916**

### **GAS DETECTION SYSTEMS**

**916.1 Gas detection systems.** Gas detection systems required by this code shall comply with Sections 916.2 through 916.11.

**916.2 Permits.** Permits shall be required as set forth in Section 105.7.11.

**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.

**916.3 Equipment.** Gas detection system equipment shall be designed for use with the gases being detected and shall be installed in accordance with manufacturer's instructions.

**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.

**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.

**916.6 Sensor locations.** Sensors shall be installed in approved locations where leaking gases are expected to accumulate.

**916.7 Gas sampling.** Gas sampling shall be performed continuously. Sample analysis shall be processed immediately after sampling, except as follows:

1. For HPM gases, sample analysis shall be performed at intervals not exceeding 30 minutes.
2. 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.
3. Where a less frequent or delayed sampling interval is approved.

**916.8 System activation.** A gas detection alarm shall be initiated where any sensor detects a concentration of gas exceeding the following thresholds:

- I. For flammable gases, a gas concentration exceeding 25 percent of the lower flammability limit (LFL).
2. 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.

Upon activation of a gas detection alarm, alarm signals or other required responses shall be as 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.

**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.

**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.

**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.

44. **Chapter 10, Section 1004.3** is amended to add the following:

**Section 1004.3.1 Tampering with or removal of signs.** Tampering with or removal of approved signs or posting of non-approved signs shall be a violation of this code.

45. **Chapter 11, Section 1101.1** is amended to read as follows

**1101.1 Scope.** The provisions of this chapter shall apply to existing buildings constructed prior to the adoption of this code.

**Exception:** Buildings or portions of a building that comply with the IEBC currently adopted by The City of Oklahoma City or the IEBC that was in effect at the time a remodel occurred. This exception does not apply to the requirements of Illuminous markings of section 1104.25.

46. **Chapter 11, Section 1103.4.2** is amended by changing the exceptions to read as follows:

1. Vertical opening protection is not required for Group R-3 occupancies.
2. Vertical opening protection is not required for open parking garages and ramp.
3. Vertical opening protection for escalators shall be in accordance with Section 1103.4.5, 1103.4.6, or 1103.4.7.
4. Exit access stairways and ramps shall be in accordance with section 1103.4.8.
5. Vertical openings that comply with the requirements of Section 803.2.1 of the International Existing Building Code as adopted.

47. **Chapter 11, Section 1104.1** is amended to add the following exception:

Exception: When in the opinion of the Fire Code Official and the Building Code Official they do not constitute a distinct hazard to life.

48. **Chapter 11, Section 1104.18** is amended as follows:

**Section 1104.18 Dead-ends.** Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead ends do not exceed the limits specified in Table 1104.18. In Group I-2, in smoke compartments containing sleeping rooms and treatment rooms, dead end corridors shall be in accordance with Section 1105.5.6

**Exceptions:**

1. A dead-end passageway or corridor shall not be limited in length where the length of the dead-end passageway or corridor is less than 2.5 times the least width of the dead-end passageway or corridor.

2. Dead-ends that comply with the requirements of Section 805.6 of the International Existing Building Code as adopted.

49. **Chapter 11 Section 1104.25** is amended to add the following exception:

Exception 2. The Fire Code Official is authorized to work with existing high-rise buildings to develop and implement a work plan to achieve compliance with this section within a reasonable timeframe as determined by the Fire Code Official.

50. **Chapter 31, Section 3103.2** is amended as follows:

**3103.2 Approval Required.** An operation permit is required to operate an air-supported temporary membrane structure or tent having an area in excess of 225 square feet (20.9m<sup>2</sup>) or a canopy in excess of 225 square feet (20.9m<sup>2</sup>) in accordance with Section 105.6.45.

51. **A new chapter 38 is added to read as follows:**

## CHAPTER 38

### PROCESSING AND EXTRACTION FACILITIES

User note:

About this chapter: Chapter 38 is a new chapter focused on the processing and extraction of oils and fats from various plants. This process includes extraction by use of a solvent, desolventizing the raw material, production of the miscella, distillation of the solvent from the miscella and solvent recovery. The processes used are not necessarily typical hazardous material processes, and often the systems and equipment associated with such processes are not listed. Because of the typical lack of listings, the systems and equipment need specific approvals for each Installation This chapter provides the tools to appropriately address the hazards while also meeting the unique needs of Industry. This chapter has provisions for a technical report prepared by a registered design professional and requires site Inspections to make sure equipment and systems are installed as designed and approved

### SECTION 3801

#### GENERAL

**3801.1 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.

**3801.2 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.

**3801.1 Permits.** Permits shall be required as set forth in Sections 105.6 and 105.7.

### SECTION 3802

#### DEFINITIONS

**3902.1 Definitions.** The following terms are defined in Chapter 2

DESOLVENTIZING.

MISCELLA

## SECTION 3803

### PROCESSING AND EXTRACTION

**3803.1 Construction.** Processing shall be located in a building complying with the International Building Code

**3803.2 Prohibited occupancies.** Extraction processes utilizing flammable gases or flammable cryogenic fluids shall not be located in any building containing a Group A, E, I or R occupancy.

**3803.3 Location.** The extraction equipment and extraction processes utilizing hydrocarbon solvents shall be located in a room or area dedicated to extraction.

**3803.4 Post-process purification and winterization.** Post-processing and winterization involving the heating or pressurizing of the *miscella* to other than normal pressure or temperature shall be approved and performed in an appliance listed for such use. Domestic or commercial cooking appliances shall not be used.

**3803.4.1 Industrial ovens.** The use of industrial ovens shall comply with Chapter 30.

**3803.5 Use of flammable and combustible liquids.** The use of flammable and combustible liquids for liquid extraction processes where the liquid is boiled, distilled or evaporated shall be located within a hazardous exhaust fume hood, rated for exhausting flammable vapors. Electrical equipment used within the hazardous exhaust fume hood shall be rated for use in flammable atmospheres. Heating or flammable or combustible liquids over an open flame is prohibited.

**Exception:** The use of a heating element not rated for flammable atmospheres, where documentation from the manufacture, or approved testing laboratory indicates the element is rated for heating of flammable liquids.

**3803.6 Liquefied petroleum gas.** Liquefied petroleum gases shall not be released to the atmosphere except where released in accordance with Section 7.3 of NFPA 58

## SECTION 3804

### SYSTEMS AND EQUIPMENT

**3804.1 General requirements.** Systems and equipment used with the processing and extraction of oils and products from plants shall comply with Sections 3804.1 through 3804.4 and 5003.2, and other applicable provisions of this code, the International Building Code and the International Mechanical Code.

**3804.2 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 3804.3 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.



**3804.3 Technical report.** A technical report reviewed and approved by the fire code official as required by Section 3804.2, 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

**3804.3. I Report content.** The technical report shall contain all the following:

1. Manufacturer information
2. Preparer of record of the technical report.
3. Date of review and report revision history.
4. Signature page, including all of the following:
  - 4.1. Author of the report
  - 4.2. Date of report
  - 4.3. Date and signature of *registered design professional* of record performing the design or peer review.
5. 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.
6. Methodology of the design or peer review process used to determine minimum safety requirements. 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.
7. 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. Manufacturers data sheets shall be provided.
8. 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.
9. Analysis of the vessel(s) it pressurized beyond standard atmospheric pressure. Analysis shall include purchased and fabricated components.
10. Structural analysis for the frame system supporting the equipment
11. Process safety analysis of the extraction system, from the introduction of raw product to the end of the extraction process.
12. 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 the equipment or process and not that of the facility, building or room.
13. Review of the assembly instructions, operational and maintenance manuals provided by the manufacturer.
14. List of references used in the analysis.

**3804.4 Site inspection.** Prior to operation of the extraction equipment, where required by the *fire code official*, the engineer of record or approved professional, as approved in Section 3804 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 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.

## SECTION 3805

### SAFETY SYSTEMS

**3805.1 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.

**3805.1.1 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 gas exceeds 25 percent of the LFL.

**3805.1.2 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.

**3805.1.3 Operation.** Activation of the gas detection system shall result in all the following:

1. Initiation of distinct audible and visual alarm signals in the extraction room.
2. Deactivation of all heating systems located in the extraction room.
3. Activation of the mechanical ventilation system; where the system is interlocked with gas detection

**3805.1.4 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.

**3805.1.5 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.

**3805.2 Emergency shutoff.** Extraction processes utilizing gaseous hydrocarbon-based solvents shall be provided with emergency shutoff systems in accordance with Section 5803.1.3.

**Chapters 39-49 are reserved**

52. **A new Section is added to Section 5309 read as follows:**

## SECTION 5309

### CARBON DIOXIDE ENRICHMENT SYSTEMS

**5309.1 General.** 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 5309.1 through 5309.8.

**5309.2 Documentation.** The following information shall be provided with the application for permit:

1. Total aggregate quantity of liquid carbon dioxide in pounds or cubic feet at *normal temperature and pressure*.
2. 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.

3. Location of containers relative to equipment, building openings and *means of egress*.
4. Manufacturer's specifications and pressure rating, including cut sheets, of all piping and tubing to be used.
5. A piping and instrumentation diagram that shows piping support and remote fill connections.
6. Details of container venting, including but not limited to vent line size, material and termination location.
7. Alarm and detection system and equipment, if applicable.
8. Seismic support for containers.

**5309.3 Equipment.** Pressure relief, vent piping, fill indicators, fill connections, vent terminations, piping systems and the storage, use and handling of the carbon dioxide shall be in accordance with Chapter 53 and NFPA 55.

**5309.4 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:

1. Activates a low-level alarm upon detection of a carbon dioxide concentration of 5,000 ppm (9,000 mg/m<sup>3</sup>).
2. Activates a high-level alarm upon detection of a carbon dioxide concentration of 30,000 ppm (54,000 mg/m<sup>3</sup>).

**5309.4.1 System activation.** Activation of the low-level gas detection system alarm shall automatically:

1. Stop the flow of carbon dioxide to the piping system.
2. Activate the mechanical exhaust ventilation system.
3. Activate an audible and visible supervisory alarm signal at an *approved* location within the building

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

1. Stop the flow of carbon dioxide to the piping system.
2. Activate the mechanical exhaust ventilation system.
3. Activate an 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.

**5309.5 Pressurization and ventilation.** Rooms or indoor areas in which carbon dioxide enrichments 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:

1. Mechanical ventilation in the room or area shall be at a rate of not less than 1 cfm per square foot [0.00508 m<sup>3</sup>/(s • m<sup>2</sup>)].
2. When activated by the gas detection system, the mechanical ventilation system shall remain on until manually reset.
3. The exhaust system intakes shall be taken from points within 12 inches (305 mm) of the floor.

4. The ventilation system shall discharge to the outdoors in an *approved* location.

**5309.6 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 THIS AREA BEFORE ENTERING.  
A HIGH CARBON DIOXIDE (CO<sub>2</sub>)  
GAS CONCENTRATION IN THIS AREA  
CAN CAUSE ASPHYXIATION.

**5309.7 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.

**5309.8 Container refilling.** Carbon dioxide containers located indoors shall not be refilled unless filled from a remote connection located outdoors.

53. **Chapter 56, Section 5601.1** is amended as follows:

**5601.1 Scope.** The provisions of this chapter shall govern the possession, storage, handling, and use of explosives, explosive materials, fireworks, and small arms ammunition. Manufacture or sale of fireworks in the City of Oklahoma City shall be prohibited. Any reference to "manufacture" or "sale" of fireworks in this chapter shall be deleted.

54. **Chapter 56, Section 5601.1.3** Exception #1 is amended as follows:

**5601.1.3 Fireworks.** The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

**Exceptions:**

1. Storage and handling of fireworks permitted in Section 5604 for permitted displays only.
2. Items preempted by State statute.
3. The possession and storage of specific types of Division 1.4G fireworks where allowed by applicable laws, ordinances and regulations, provided such fireworks comply with NFPA 1122, CPSC 16 CFR Parts 1500 and 1507, and DOTn 49 CFR Parts 100-185, for consumer fireworks.

55. **Chapter 56, Section 5601.2.2** is amended as follows:

**5601.2.2 Sale and retail display.** No person shall construct a retail display nor offer for sale explosives, explosive materials upon highways, sidewalks, public property or in Group A or E occupancies. Fireworks shall not be sold anywhere within the corporate city limits of the City of Oklahoma City.

56. **Chapter 56, Section 5601.4** is amended as follows:

**5601.4 Qualifications.** Persons in charge of magazines, blasting, fireworks display, or pyrotechnic special effect operations shall not be under the influence of alcohol or drugs which impair sensory or motor skills, shall be at least 21 years of age, and shall demonstrate knowledge of all safety precautions related to the storage, handling or use of explosives, explosive materials or fireworks and possess a Certificate of Fitness as required by Oklahoma City Municipal Code, 2010, as amended Chapter 20 and other licenses as required by the State of Oklahoma.

57. **Chapter 56, Section 5605** is amended by removing the words "and fireworks" from the section title.

**SECTION 5605  
MANUFACTURE, ASSEMBLY  
AND TESTING OF EXPLOSIVES,  
AND EXPLOSIVE MATERIALS**

58. **Chapter 57, Section 5706.6.2.1** is amended to read as follows:

**5706.6.2.1 Parking near residential, educational and institutional occupancies and other high-risk areas.** Tank vehicles shall not be left unattended at any time on residential streets, or within 500 feet (152.4m) of a residential area, apartment or hotel complex, educational facility, and hospital or care facility or assembly occupancy. Tank vehicles shall not be left unattended at any other place that would in the opinion of the fire code official, pose an extreme life hazard.

59. **Section 6101.3** is amended by deletion and replaced with the following:

**6101.3 Construction documents.** The installer shall submit construction documents for all LP-Gas installations requiring permits as per Sections 105.6 and 105.7 of this code.

60. **Appendix.** Appendix D -Fire Apparatus Access Roads is hereby specifically adopted by the jurisdiction and is amended to add the following exceptions:

Section D107.1 is amended to add the following exception:

**Exception 3:** Where a divided drive is provided to serve 100 or less lots as allowed by the Subdivision regulations.

Section D107.2 is amended to add the following exception:

**Exception:** Where site conditions limit the remoteness that is possible, the *fire code official* is authorized to allow a shorter distance.