Proposed City of Bee Cave 2015 International Fire Code Amendments
Version 5/13/2022

LTFR recommends adoption of the Appendices as follows:

Appendix A Board of Appeals: **No opinion.**

Appendix B Fire-Flow Requirements for Buildings: **Adopt.**

Appendix C Fire Hydrant Locations and Distribution: **Do not adopt.** Hydrant locations and distribution requirements are described in the amendments to Chapter 5.

Appendix D Fire Apparatus Access Roads: **Adopt.**

Appendix E Hazard Categories: **Do not adopt.** This appendix is for information purposes and is not intended for adoption.

Appendix F Hazard Ranking: **Adopt.**

Appendix G Cryogenic Fluids – Weight and Volume Equivalents: **Do not adopt.** This appendix is for information purposes and is not intended for adoption.

Appendix H Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) Instructions: **Do not adopt.** A hazardous materials inventory is already collected during building plan reviews.

Appendix I Fire Protection Systems – Noncompliant Conditions: **Do not adopt.** Requirements for non-compliant systems are already described in NFPA standards.

Appendix J Building Information Sign: **Do not adopt.** LTFR is not requesting this signage.

Appendix K Construction Requirements for Existing Ambulatory Care Facilities: **Do not adopt.** Existing facilities meet the 2006 IFC requirements which is considered equivalent to the 2015 IFC.

Appendix L Requirements for Fire Fighter Air Replenishment Systems: **Do not adopt.** These are expensive systems that can be controversial and require additional firefighter training.

Appendix M High-Rise Building – Retroactive Automatic Sprinkler Requirement: **Do not adopt.** These requirements would not apply to any existing building in the City of Bee Cave.

Green text indicates text added to the fire code.
Red text indicates text deleted from the fire code.

Section 105.6.45 is amended to provide as follows:

105.6.45 Temporary membrane structures and tents. An operational permit is required to operate an air-supported temporary membrane structure, a temporary stage canopy or a tent having an area in excess of ~~400 square feet (37 m^2)~~ 1200 square feet (111 m^2).

Exceptions:

1. Tents used exclusively for recreational camping purposes.

2. Tents open on all sides, which comply with all of the following:

   2.1 Individual tents having a maximum size of ~~700 square feet (65 m^2)~~ 1200 square feet (111 m^2).

   2.2 The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed ~~700 square feet (65 m^2)~~ 1200 square feet (111 m^2) total.

   2.3 A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

Justification: It is LTFR's opinion that tents smaller than 1,200 square feet in size pose a significantly reduced life safety hazard and thus should not require a permit. This aligns with amendments to Sections 105.7.18 and 3103.2.

New Section 105.6.49 is added to provide as follows:

105.6.49 Mobile food preparation vehicle. An operational permit is required for mobile food preparation vehicles equipped with appliances that produce smoke or grease-laden vapors.

Justification: This section provides LTFR with the option of requiring this permit in the future. Many other jurisdictions in the region currently require this permit.

Section 105.7.18 is amended to provide as follows:

105.7.18 Temporary membrane structures and tents. A construction permit is required to erect an air-supported temporary membrane structure, a temporary stage canopy or a tent having an area in excess of ~~400 square feet (37 m^2)~~ 1200 square feet (111 m^2).

Exceptions:

1. Tents used exclusively for recreational camping purposes.

2. Funeral tents and curtains, or extensions attached thereto, when used for funeral services.

3. Tents and awnings open on all sides, which comply with all of the following:

   3.1 Individual tents having a maximum size of ~~700 square feet (65 m^2)~~ 1200 square feet (111 m^2).

   3.2 The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed ~~700 square feet (65 m^2)~~ 1200 square feet (111 m^2) total.

   3.3 A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

Justification: It is LTFR's opinion that tents smaller than 1,200 square feet in size pose a significantly reduced life safety hazard and thus should not require a permit. This aligns with amendments to Sections 105.6.45 and 3103.2.

New Section 105.7.19 is added to provide as follows:

105.7.19 Electronic access control systems. A construction permit is required for the installation or modification of an electronic access control system. An electronic access control system is defined as a system installed in accordance with Sections 1010.1.9.6, 1010.1.9.7, 1010.1.9.8, or 1010.1.9.9. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

Justification: Electronic access control systems directly impact the ability of building occupants to safely exit a building. These systems are designed and installed by separate contractors and this permit will ensure these systems are properly designed and installed. It is the current practice of LTFR to require this permit.

New Section 105.7.20 is added to provide as follows:

105.7.20 Emergency call box systems. A construction permit is required for the installation or modification of an emergency call box system installed to comply with the two-way communication system requirement in Sections 1009.6.5 and 1009.8. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

Justification: Emergency call box systems are life safety systems that must be installed in accordance with NFPA 72. Requiring a permit ensures that these systems are installed correctly. It is the current practice of LTFR to require this permit.

New Section 107.7.21 is added to provide as follows:

105.7.21 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.

Justification: The 2015 IFC requires gas detection in certain circumstances and this amendment clarifies that a permit is required for these systems. The permit requirement will ensure that these life safety systems are installed and maintained correctly.

New Section 105.7.22 is added to provide as follows:

105.6.22 High-piled combustible storage. A construction permit is required for the installation of or modification to a structure exceeding 500 square feet (46 m^2), including aisles, for high-piled combustible storage. Maintenance performed in accordance with this code is not considered to be a modification and does not require a construction permit.

Justification: This amendment clarifies that a construction permit is required for the installation or modification of a high-piled storage system.

New Section 105.7.23 is added to provide as follows:

105.7.23 Static water tanks. A construction permit is required for the installation or modification of a static water tank for a fire protection water supply that is installed in accordance with Section 507.2.2. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

Justification: Where it is not practical for a developer to install fire hydrants, the fire code official may allow the installation of a static water tank. Static water tanks must comply with Section 507 and NFPA 22, and requiring a permit ensures that these tanks are installed correctly. It is the current practice of LTFR to require this permit.

Section 307.2.1 is amended to provide as follows:

307.2.1 Authorization. All outdoor burning shall be done in accordance with the Texas Outdoor Burning Rule, Title 30, Texas Administrative Code (TAC) Sections 111.201 through 111.221, the 2015 International Fire Code, and the Travis County ESD No. 6 Fire Protection Criteria Manual. Where a conflict may arise, the more stringent rule shall apply. Where required by state or local law or regulations, *open burning* shall only be permitted with prior approval from the state or local air and water quality management authority, provided that all conditions specified in the authorization are followed.

Justification: This amendment describes the existing rules that LTFR uses for open burning.

Section 308.1.4 is amended to provide as follows:

308.1.4 Open-flame cooking devices. Charcoal burners and other open-flame cooking devices shall not be operated on ~~combustible~~ balconies or within 10 feet (3048 mm) of combustible construction. Propane cooking devices shall not be stored on balconies, patios, inside residential units, or within attached garages.

Exceptions:

1. One- and two-family dwellings.

~~2. Where buildings, balconies and decks are protected by an automatic sprinkler system.~~

~~3. LP-gas cooking devices having LP-gas container with a water capacity not greater than 21/2 pounds [nominal 1 pound (0.454 kg) LP-gas capacity].~~

Justification: Fires on multi-family residential balconies and patios caused by cooking devices are a common occurrence and the public is most at risk during a structure fire when they are sleeping.

Section 308.1.6.2 is amended to provide as follows:

308.1.6.2 Portable fueled open-flame devices. Portable open-flame devices fueled by flammable or combustible gases or liquids shall be enclosed or installed in such a manner as to prevent the flame from contacting combustible material. LP-gas containers user for portable fueled open-flame heating devices shall not be stored on any balcony.

Exceptions:

1. LP-gas-fueled devices used for sweating pipe joints or removing paint in accordance with Chapter 61.

2. Cutting and welding operations in accordance with Chapter 35.

3. Torches or flame-producing devices in accordance with Section 308.4.

4. Candles and open-flame decorative devices in accordance with Section 308.3.

5. One- and two-family dwelling.

Justification: The fire code does not permit LP-gas to be stored within buildings. This amendment recognizes that storing LP-gas containers on balconies is just as hazardous as

storing them within the building. This is especially true for multi-family residential buildings where building occupants are sleeping and most at risk from fire.

Section 503.2.1 is amended to provide as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than ~~20 feet (6096 mm)~~ 25 feet (7620 mm)~~, exclusive of shoulders~~, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

> **Exception:**
>
> Widths as narrow as 20 feet as approved by the City based on a recommendation from the fire code official for good cause based on special circumstances or characteristics of the affected property and not just economic hardship to the applicant, if the decreased width, with any other special arrangements would not result in an increased risk of fire, additional threat to public safety, and would not result in the necessity of extraordinary public expense or the creation of a nuisance.

Justification: The regional standard for fire apparatus access roadway widths is 25 feet. This width allows fire apparatus and ambulances to pass each other. Many fire apparatus respond to a structure fire and different vehicles have different tasks at a fire. Fire apparatus must be able to pass each other for efficient operations.

Section 503.2.3 is amended to provide as follows:

503.2.3 Surface. Fire apparatus access roads 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~~ with concrete or asphalt.

Justification: LTFR has defined an all-weather surface as being concrete or asphalt.

Section 503.3 is amended to provide as follows:

503.3 Marking. ~~Where required by the fire code official, approved signs or other approved notices or markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.~~ Where required by the fire code official, fire apparatus access roads shall be marked as follows: Where curb and guttering exists, all curbs of fire apparatus access roads shall be painted red and be conspicuously and legibly marked with the warning “FIRE LANE – TOW AWAY ZONE” in white letters at least three inches tall, at intervals not exceeding 35 feet. Markings may be painted on only one side of the fire apparatus road when the roadway width exceeds 32 feet in width, except that both sides shall be marked where Aerial Fire Apparatus Access Roads are required per Appendix D,

Section D105.

Where no curb and guttering exists, fire apparatus access roads shall be marked with permanent FIRE LANE – TOW AWAY ZONE signs at intervals not exceeding 50 feet. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs may be posted on one side of the fire apparatus road when the roadway width exceeds 32 feet in width, except that both sides shall be marked where Aerial Fire Apparatus Access Roads are required per Appendix D, Section D105. The signs shall be approved by the fire code official.

Alternate markings may be approved by the fire code official provided such markings clearly identify the lane at both ends and at intervals not exceeding 35 feet.

Any markings on fire lanes approved by the fire code official and existing on the effective date of this code shall be deemed to be in compliance, provided that any re-painting of the curbs of such fire lanes shall be painted to comply with the marking prescribed in this rule.

Justification: This amendment reflects LTFR's current fire lane marking requirements.

Section 505.1 is amended to provide as follows:

505.1 Address identification. New and existing buildings shall be provided with *approved* address and building identification. The address and building identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address and building identification characters shall contrast with their background. Address and building numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than ~~4 inches (102 mm)~~ 6 inches (152 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the *fire code official*, address and building identification shall be provided in additional *approved* locations to facilitate emergency response. Where access is by means of a private road and/or the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure as approved by the fire code official. Address identification shall be maintained.

Justification: During an emergency time is of the essence and emergency responders must be able to quickly find the address of the emergency. This amendment increases the visibility of address numbers.

Section 507.5.1 is amended to provide as follows:

507.5.1 Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than ~~400 feet (122 m)~~ 300 feet (91 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided ~~where required by the fire code official~~ so that all exterior portions of buildings are within 300 feet of one hydrant and

500 feet of a second hydrant. This distance is measured as travel distance around the exterior of the building and along fire apparatus access roads (the distance is not a radius).

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).

2. ~~For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).~~

Justification: The regional standard for the spacing of fire hydrants is 300 feet from all exterior portions of a building along with 500 feet to a second hydrant. This recognizes that working structure fires require the use of hydrants and hydrants must be readily accessible to firefighters. Sprinkler systems are not designed to extinguish structure fires, and so hydrants must also be readily accessible at sprinklered buildings.

Section 507.5.1.1 is amended to provide as follows:

507.5.1.1 Hydrant for automatic sprinkler systems and standpipe systems. Buildings equipped with an automatic sprinkler system installed in accordance with Section 903 or a standpipe system installed in accordance with Section 905 shall have a fire hydrant within 100 feet (30 480 mm) of the fire department connections.

~~**Exception:** The distance shall be permitted to exceed 100 feet (30 480 mm) where *approved* by the *fire code official*.~~

Justification: Fire sprinkler systems are not designed to extinguish fires. Responding firefighters must always connect to the FDC and provided additional water to sprinkler systems during a building fire. This amendment helps to ensure that firefighters can quickly accomplish this important task.

New Section 507.5.1.2 is added to provide as follows:

507.5.1.2 Installation. Hydrants shall be installed in accordance with local water utility standards. Hydrants shall have not less than two (2) 2 ½-inch outlets with National Hose Thread and one (1) 4 ½-inch pumper outlet with National Hose Thread. Hydrants shall be installed with the center of the four and a half (4 1/2) inch steamer opening at least 18 inches above finished grade. The four and a half (4 1/2) inch opening must face the driveway or street and must be totally unobstructed to the street. Set back from the face of the hydrant to the back of the curb shall be in accordance with local utility authority standards except that on private property, set back shall be three (3) to six (6) feet to avoid vehicular damage, unless specifically approved by the fire code official.

Justification: The above requirements are LTFR's standard hydrant installation requirements.

New Section 507.6 is added to provide as follows:

507.6 Public and private streets. Hydrants shall be provided along new public and private streets in the following locations:

1. Hydrants shall be installed at the intersection of two (2) streets and in between intersections at distances not more than 300 feet between hydrants or as approved by the fire code official.

   Exception: The distance between hydrants in single-family residential areas may be increased to a maximum of 600 feet.

2. Hydrants shall be installed on both sides of all divided roads/highways. Roads/highways where opposing lanes of traffic are separated by a vehicle obstruction shall be considered a divided road/highway.

Justification: This amendment describes the regional standard for the installation of fire hydrants along roads. The fire code does not require hydrants along roads, but it is common practice for municipalities to require hydrants along roads. These hydrants are useful in many situations including transportation emergencies, brush fires, and as backup hydrants for major structure fires.

New Section 507.7 is added to provide as follows:

507.7 Marking. Hydrants shall be painted silver and the bonnet and caps shall be painted the designated color per the gallons per minute (GPM) as follows:

Class AA	Light Blue	1,500 or higher GPM
Class A	Green	1,000-1,499 GPM
Class B	Orange	500-999 GPM
Class C	Red	Less than 500 GPM
Class D	Black	Out of Service

Exception: Privately-owned fire hydrants shall be painted red with the bonnet and caps painted as prescribed above.

Justification: This amendment describes the NFPA standard for the color coding of fire hydrants.

New Section 509.3 is added to provide as follows:

509.3 Main electrical disconnect. The main electrical disconnect for each building shall be installed on the exterior of the building in an approved location. When required by the fire code official, an approved shunt trip shall be installed to disconnect electrical service.

Justification: One of the first tasks that firefighters must accomplish at a structure fire is to disconnect the electrical service. A delay in disconnecting the electrical service increases the potential for firefighter injury or death. This amendment ensures that the electrical disconnect will be accessible to firefighters.

Section 510.4 is amended to provide as follows:

510.4 Technical requirements. Emergency responder radio coverage systems shall be installed in accordance with this section and NFPA 1225. Equipment required to provide the emergency responder radio coverage system shall be listed in accordance with UL 2524. Systems, components and equipment required to provide the emergency responder radio coverage system shall comply with Sections 510.4.1 through 510.4.2.5.

Justification: Clarifies that these systems shall be installed in accordance with NFPA 1221, which is also stated in NFPA 72. These systems will be in place for the life of the building and requiring equipment to be listed in accordance with UL 2524 ensures that only current and state-of-the-art equipment will be installed for these systems.

New Section 901.4.7 is added to provide as follows:

901.4.7 Pump and riser rooms. Fire pumps and automatic sprinkler system risers shall be in a dedicated room which has an exterior door that faces a fire apparatus access road.

Justification: The activation of a fire sprinkler system causes a significant amount of water flow in a building. It is imperative that firefighters be able to quickly and safely access the riser room to check the system status and shut-off the system to limit water damage. Also, when responding to a building fire with a fire pump, checking the fire pump is an early task assigned to firefighters and it is important that a safe and efficient path to the fire pump is provided. An inoperative fire pump will require firefighters to significantly modify their tactics.

Section 903.2.8 is amended to provide as follows:

903.2.8 Group R. An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

Exception: One- and two-family dwellings that are not classified as Townhouses.

Justification: State law does not permit municipalities to require fire sprinklers on one- and two-family dwellings.

Section 903.3.1.2.2 is amended to provide as follows:

~~**903.3.1.2.2 Open-ended corridors.** Sprinkler protection shall be provided in *open-ended corridors* and associated *exterior stairways* and *ramps* as specified in Section 1027.6, Exception 3.~~

903.3.1.2.2 Corridors, patios, and balconies. Sprinkler protection shall be provided in all corridors, for all patios and balconies, and for all storage rooms accessed from patios and balconies.

Justification: NFPA 13R fire sprinkler systems are life safety systems. Corridor protection is critical to maintain the means of egress, and corridors regularly include miscellaneous storage, fixtures, artwork, and furnishings. Balcony protection is required due to the issues with fire exposure via soffit vents and the potential for significant combustible loading. Balconies are a common area of fire origin in our community. LTFR believes this amendment will greatly increase the probability of survival for apartment building occupants during a fire.

Section 903.4.2 is amended to provide as follows:

903.4.2 Alarms. ~~An approved audible device~~ A weatherproof 75 cd horn/strobe, located on the exterior of the building ~~in an approved location~~ as close to the FDC as possible, shall be connected to each automatic sprinkler system. Such sprinkler waterflow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.

Justification: This amendment captures the regional standard of providing a horn/strobe on the exterior of the building instead of a water gong device. The horn/strobe has the advantage of provided a visual indication of water flow.

New Section 903.7 is added to provide as follows:

903.7. A safety factor of 10 psi shall be added to the minimum required water supply calculation for automatic sprinkler systems, applied at the endpoint of the hydraulic calculations excluding any required flow for hose streams.

Justification: Fire sprinkler system piping is sized based on the water pressure available based on a fire hydrant flow test and the required flow from the sprinklers. Requiring an additional 10 psi is a regional standard and helps to account for fluctuations in the water supply.

The entirety of Section **905.3.4.1 Hose and cabinet** is deleted.

Justification: This section requires 1 1/2-inch fire hose be provided for hose connections installed for stages. It is the policy of LTFR that fire hose not be provided for occupant use due to the danger of the public attempting an offensive fire attack. This hose would never be used by firefighters for fire attack due to the small size and lack of regular maintenance.

The entirety of **Section 905.5.3 Class II system 1-inch hose** is deleted.

Justification: This section requires 1-inch fire hose be provided for Class II standpipe hose connections. It is the policy of LTFR that fire hose not be provided for occupant use due to the danger of the public attempting an offensive fire attack. This hose would never be used by firefighters for fire attack due to the small size and lack of regular maintenance.

New Section 905.12 is added to provide as follows:

905.12 FDC pressure. For buildings that are not classified as high-rise buildings, the standpipe system shall be designed such that the calculated hydraulic demand pressure at the fire department connection does not exceed 150 psi.

Justification: Firefighters are trained to pump 150 psi to all FDCs unless directed otherwise. Requiring systems to function correctly at 150 psi will ensure that standpipe systems function correctly when firefighters supply the standard pressure.

Section 905.8 is amended to provide as follows:

905.8 Dry standpipes. Dry standpipes shall not be installed.

> **Exception:** Where subject to freezing and in accordance with NFPA 14. Manual dry standpipe systems shall be supervised by a fire alarm system with 7 psig of air pressure. If a listed air pressure monitoring system requires an air pressure other than 7 psi, the system shall be monitored by the air pressure required by the listed air pressure monitoring system.

Justification: Without supervisory air pressure, there is nothing stopping anyone from opening a hose valve and leaving it open. Open valves will prevent the system from functioning in the event of a fire.

New Section 916 is added to provide 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 916.12.

916.2 Permits. Permits shall be required as set forth in Section 105.7.21.

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:

1. 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.

916.12 Existing systems. Gas detection systems that were installed prior to the adoption of this code shall be modified as necessary to meet all requirements within Section 916.

Justification: The 2015 IFC requires gas detection systems in certain circumstances and this amendment clarifies the requirements for these systems. This amendment represents the current state-of-the-art for these systems.

Section 1103.1 is amended to provide as follows:

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through ~~1103.10~~ 1103.11.

The provisions of this chapter shall not be construed to allow the elimination of fire protection systems or a reduction in the level of fire safety provided in buildings constructed in accordance with previously adopted codes.

Exceptions:

1. Where a change in fire-resistance rating has been approved in accordance with Section 803.6 of the International Existing Building Code.

2. Group U occupancies.

New Section 1103.11 is added to provide as follows:

1103.11 Carbon dioxide systems used in beverage dispensing systems. Carbon dioxide systems used in beverage dispensing systems shall be in accordance with Section 5307.

Justification: The requirement for carbon dioxide detection is in response to injuries and deaths that have occurred due to carbon dioxide leaks in restaurants. This amendment will provide this life system for existing restaurants in Bee Cave.

Section 3101.2 is amended to provide as follows:

3103.2 Approval required. Tents and membrane structures having an area in excess of ~~400 square feet (37 m^2)~~ 1200 square feet (111 m^2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the *fire code official*.

Exceptions:

1. Tents used exclusively for recreational camping purposes.

2. Tents open on all sides that comply with all of the following:

    1.1. Individual tents having a maximum size of ~~700 square feet (65 m^2)~~ 1200 square feet (111 m^2).

    1.2. The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding ~~700 (65 m^2)~~ 1200 square feet (111 m^2) total.

    1.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.

Justification: It is LTFR's opinion that tents smaller than 1,200 square feet in size pose a significantly reduced life safety hazard and thus should not require a permit. This aligns with amendments to Sections 105.6.45 and 105.7.18.

Chapter 80 is amended to provide as follows:

Chapter 80

Referenced Standards

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.7. The National Fire Protection Association (NFPA) standards refenced by this code are hereby amended as detailed below:

~~02-11~~ 02-2019 Hydrogen Technologies Code

~~10-13~~ 10-2021	Standard for Portable Fire Extinguishers
~~11-10~~ 10-2016	Standard for Low-, Medium- and High-expansion Foam
~~12-11~~ 12-2018	Standard on Carbon Dioxide Extinguishing Systems
~~12A-09~~ 12A-2018	Standard on Halon 1301 Fire Extinguishing Systems
~~13-13~~ 13-2019	Standard for the Installation of Sprinkler Systems
~~13D-13~~ 13D-2019	Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes
~~13R-13~~ 13R-2019	Standard for the Installation of Sprinkler Systems in Low Rise Residential Occupancies
~~14-13~~ 14-2019	Standard for the Installation of Standpipe and Hose Systems
~~15-12~~ 15-2017	Standard for Water Spray Fixed Systems for Fire Protection
~~16-15~~ 16-2019	Standard for the Installation of Foam-water Sprinkler and Foam-water Spray Systems
~~17-13~~ 17-2020	Standard for Dry Chemical Extinguishing Systems
~~17A-13~~ 17A-2020	Standard for Wet Chemical Extinguishing Systems
~~20-13~~ 20-2019	Standard for the Installation of Stationary Pumps for Fire Protection
~~22-13~~ 22-2018	Standard for Water Tanks for Private Fire Protection
~~24-13~~ 24-2019	Standard for Installation of Private Fire Service Mains and Their Appurtenances
~~25-14~~ 25-2020	Standard for the Inspection, Testing and Maintenance of Water-based Fire Protection Systems
~~30-12~~ 30-2021	Flammable and Combustible Liquids Code
~~30A-15~~ 30A-2021	Code for Motor Fuel-dispensing Facilities and Repair Garages
~~30B-15~~ 30B-2019	Code for the Manufacture and Storage of Aerosol Products
~~31-11~~ 31-2020	Standard for the Installation of Oil-burning Equipment
~~32-11~~ 32-2016	Standard for Dry Cleaning Plants
~~33-15~~ 33-2018	Standard for Spray Application Using Flammable or Combustible Materials
~~34-15~~ 34-2018	Standard for Dipping, Coating and Printing Processes Using Flammable or Combustible Liquids
~~35-11~~ 35-2016	Standard for the Manufacture of Organic Coatings
~~40-11~~ 40-2019	Standard for the Storage and Handling of Cellulose Nitrate Film

~~51-13~~ 51-2018	Standard for the Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting and Allied Processes
51A-12	Standard for Acetylene Cylinder Charging Plants
~~52-13~~ 52-2019	Vehicular Gaseous Fuel System Code
~~55-13~~ 55-2019	Compressed Gases and Cryogenic Fluids Code
~~56-12~~ 56-2020	Standard for Fire and Explosion Prevention during Cleaning and Purging of Flammable Gas Piping Systems
~~58-14~~ 58-2020	Liquefied Petroleum Gas Code
~~59A-13~~ 59A-2019	Standard for the Production, Storage and Handling of Liquefied Natural Gas (LNG)
~~61-13~~ 61-2020	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities
~~69-14~~ 69-2019	Standard on Explosion Prevention Systems
70-14	National Electrical Code
~~72-13~~ 72-2019	National Fire Alarm and Signaling Code
~~80-13~~ 80-2019	Standard for Fire Doors and Other Opening Protectives
~~85-15~~ 85-2019	Boiler and Combustion System Hazards Code
~~86-15~~ 86-2019	Standard for Ovens and Furnaces
~~92-15~~ 92-2018	Standard for Smoke Control Systems
~~99-15~~ 99-2021	Health Care Facilities Code
~~101-15~~ 101-2021	Life Safety Code
~~105-13~~ 105-2019	Standard for Smoke Door Assemblies and Other Opening Protectives
~~110-13~~ 110-2019	Standard for Emergency and Standby Power Systems
~~111-13~~ 111-2019	Standard on Stored Electrical Energy Emergency and Standby Power Systems
~~120-15~~ 120-2020	Standard for Fire Prevention and Control in Coal Mines
~~160-11~~ 160-2021	Standard for the Use of Flame Effects Before an Audience
~~170-15~~ 170-2018	Standard for Fire Safety and Emergency Symbols
~~204-15~~ 204-2018	Standard for Smoke and Heat Venting
211-13	Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances
~~241-13~~ 241-2019	Standard for Safeguarding Construction, Alteration and Demolition Operations

~~253-15~~ 253-2019	Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
~~260-13~~ 260-2019	Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture
~~261-13~~ 261-2018	Standard Method of Test for Determining Resistance of Mock-up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes
~~265-11~~ 265-2019	Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Wall Coverings in Full Height Panels and Walls
~~286-15~~ 286-2019	Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth
~~289-13~~ 289-2019	Standard Method of Fire Test for Individual Fuel Packages
~~303-11~~ 303-2021	Fire Protection Standard for Marinas and Boatyards
~~318-15~~ 318-2018	Standard for the Protection of Semiconductor Fabrication Facilities
~~326-10~~ 326-2020	Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair
~~385-12~~ 385-2017	Standard for Tank Vehicles for Flammable and Combustible Liquids
~~400-13~~ 400-2019	Hazardous Materials Code
~~407-12~~ 407-2017	Standard for Aircraft Fuel Servicing
~~409-11~~ 409-2016	Standard for Aircraft Hangars
~~410-10~~ 410-2020	Standard on Aircraft Maintenance
~~484-15~~ 484-2019	Standard for Combustible Metals
~~495-13~~ 495-2018	Explosive Materials Code
~~498-13~~ 498-2018	Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives
~~505-13~~ 505-2018	Fire Safety Standard for Powered Industrial Trucks, Including Type Designations, Areas of Use, Maintenance and Operation
~~654-13~~ 654-2020	Standard for Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids
~~655-12~~ 655-2017	Standard for the Prevention of Sulfur Fires and Explosions
~~664-12~~ 664-2020	Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities
~~701-10~~ 701-2019	Standard Methods of Fire Tests for Flame-propagation of Textiles and Films
~~703-15~~ 703-2021	Standard for Fire Retardant-Wood and Fire-Retardant Coatings for Building Materials
~~704-12~~ 704-2017	Standard System for Identification of the Hazards of Materials for Emergency Response

720-2015	Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment
~~750-14~~ 750-2019	Standard on Water Mist Fire Protection Systems
~~914-10~~ 914-2019	Code for Fire Protection of Historic Structures
~~1122-13~~ 1122-2018	Code for Model Rocketry
~~1123-14~~ 1123-2018	Code for Fireworks Display
~~1124-06~~ 1124-2017	Code for the Manufacture, Transportation, Storage and Retail Sales of Fireworks and Pyrotechnic Articles
~~1125-12~~ 1125-2017	Code for the Manufacture of Model Rocket and High Power Rocket Motors
~~1126-11~~ 1126-2021	Standard for the Use of Pyrotechnics Before a Proximate Audience
~~1127-13~~ 1127-2018	Code for High Power Rocketry
1142-2014	Standard on Water Supplies for Suburban and Rural Fire Fighting
1225-2022	Standard for Emergency Services Communications
~~2001-15~~ 2001-2018	Standard on Clean Agent Fire Extinguishing Systems

Justification: NFPA standards describe how fire protection systems are installed and the 2015 IFC refers to obsolete standards. It is in the best interest of the public that new fire protection systems represent the current state-of-the-art. Using the most recent standards will also provide for standardization throughout the region which will reduce confusion among developers and contractors.

New Section B103.3.1 is added to provide as follows:

B103.3.1 Static water tank monitoring. Static water tanks shall have valve tamper switches and the water level switch monitored by a fire alarm control panel. This system shall be monitored by an approved central station. A 75 cd waterproof horn/strobe device shall be mounted on the tank and shall activate when the water level drops below the minimum quantity of water required by NFPA 1142.

Justification: Where installed, static water tanks are the sole fire protection water supply for a building. This amendment will help ensure that the minimum required amount of water is available in the event of a fire.