ORDINANCE NO.___ _

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF GRAPEVINE, TEXAS AMENDING CHAPTER 11 OF THE GRAPEVINE CODE OF ORDINANCES, FIRE PROTECTION AND PREVENTION, RELATING TO THE ADOPTION OF THE 2021 INTERNATIONAL FIRE CODE AS PUBLISHED BY THE INTERNATIONAL CODE COUNCIL, PROVIDING AMENDMENTS TO SAME, REPEALING CONFLICTING ORDINANCES; PROVIDING A PENALTY, NOT TO EXCEED TWO THOUSAND DOLLARS ($2,000.00) FOR EACH SEPARATE OFFENSE AND A SEPARATE OFFENSE SHALL BE DEEMED COMMITTED UPON EACH DAY DURING OR ON WHICH A VIOLATION OCCURS; DECLARING AN EMERGENCY AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Grapevine has previously adopted model codes for fire protection and prevention issues through Chapter 11 of the Code of Ordinances, and

WHEREAS, the International Code Council has promulgated updated model codes, and through participation with the North Texas Chapter of the International Code Council and through the regional review process by the Regional Codes Coordinating Committee of the North Central Texas Council of Governments (NCTCOG); and recommends same for adoption by municipalities; and

WHEREAS the City wishes to update its model codes, including appropriate amendments thereto; and

WHEREAS all constitutional and statutory prerequisites for the approval of this Ordinance/Resolution have been met, including but not limited to the Open Meetings Act; and

WHEREAS the City Council deems the adoption of this ordinance/resolution to be in the best interests of the health, safety, and welfare of the public.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GRAPEVINE, TEXAS:

Section 1. That all matters stated hereinabove are found to be true and correct and are incorporated herein by reference as if copied in their entirety.

Section 2. That Chapter 11, Fire Protection and Prevention, Article Ill, Fire Code, Section 11-40, 11-44, 11-45, 11-46, Code Adopted; Amendments, of the City of Grapevine Code of Ordinances, is hereby repealed in its entirety and a new section shall be added to read as follows:

Section 11-40. Code Adopted, Amendments:

(a) The City of Grapevine hereby adopts the 2021 Edition of the International Fire Code, including Appendix A, B, C, D, E, F, G, H, I, J, K, L, M and N, published by the International Code Council, Inc., save and except such portions as are deleted or amended by this ordinance, and the same are hereby adopted and incorporated as fully as if set out at length herein. One (1) copy of the 2021 Edition of the International Fire Code shall be on file with the City Secretary. From the date on which this ordinance shall take effect, the provisions thereof shall be controlled within the limits of the City of Grapevine and its extraterritorial jurisdiction.

(b) Fire Code—Amendments

CHAPTER 1

SCOPE AND ADMINISTRATION

Amend **Section 101.1 Title;** to read as follows:

101.1 Title. These regulations shall be known as the Grapevine Fire Code, hereinafter referred to as “this code."

Explanation: This is a current amendment that identifies the International Fire Code regulations as the Grapevine Fire Code and that in the text of the code it is referred to as "this code". It is intended to allow easier reading.

Section 102.1 is amended by amending numbered paragraph 3 to read as follows:

3**.** Existing structures, facilities and conditions when required in Chapter 11 or in specific sections of this code.

(Reason: To clarify that there are other provisions in the fire code applicable to existing buildings that are not located in Chapter 11, including but not limited to Section 505 Premises Identification.)

SECTION 105

PERMITS

Section 105.6 is amended by adding Section 105.6.25 to read as follows:

105.7.25 Electronic access control systems. Construction permits are required to install or modify an electronic access control system, as specified in Chapter 10. A separate construction permit is required to install or modify a fire alarm system that may be connected to the access control system. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

(Reason: Adds construction permit requirements for electronic access control systems affecting access and/or egress to ensure proper design and installation of such systems. These changes reflect the local practices of municipalities in this region.)

CHAPTER 2
DEFINITIONS

SECTION 202
GENERAL DEFINITIONS

Section 202 is amended by adding definitions for the phrases "DEFEND IN PLACE," "SELF-SERVICE STORAGE FACILITY, "STANDYBY PERSONNEL," and "UPGRADED OR REPLACED FIRE ALARM SYSTEM" to read as follows:

DEFEND IN PLACE. A method of emergency response that engages building components and trained staff to provide occupant safety during an emergency. Emergency response involves remaining in place, relocating within the building, or both, without evacuating the building.

(Reason: Added from International Building Code (IBC) definitions for consistency in interpretation of the subject requirements pertaining to such occupancies.)

SELF-SERVICE STORAGE FACILITY. Real property is 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.

(Reason: To provide a definition that does not exist in the code.)

STANDBY PERSONNEL. Qualified fire service personnel, approved by the fire code official. When utilized, the number required shall be as directed by the fire code official. Charges for utilization shall be normally calculated by the jurisdiction.

(Reason: To provide a definition that does not exist in the code for fire watch accommodations as required by the jurisdiction.)

UPGRADED OR REPLACED FIRE ALARM SYSTEM. A fire alarm system that is upgraded or replaced includes, but is not limited to the following:

1. Replacing a single board or fire alarm control unit component with a newer model
2. Installing a new fire alarm control unit in addition to or in place of an existing one
3. Conversion from a horn/strobe system to an emergency voice/alarm communication system
4. Conversion from a conventional system to one that utilizes addressable or analog devices.

The following are not considered an upgrade or replacement:

1. Firmware updates
2. Software updates
3. Replacing boards of the same model with chips utilizing the same or newer firmware

(Reason: This is referenced in several places, but the wording of "upgraded or replaced" is somewhat ambiguous and open to interpretation. Defining it here allows for consistent application across the region.)

Section 202 is amended by amending the definitions of "AMBULATORY HEALTH CARE FACILITY," "ATRIUM," "FIRE WATCH," "FIREWORKS," "HIGH-PILED COMBUSTIBLE STORAGE," "HIGH RISE BUILDING," AND "REPAIR GARAGE" to read as follows:

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to persons who are rendered incapable of self-preservation by the services provided. This group shall include but not be limited to the following:

- Dialysis center
- Procedures involving Sedation

- Sedation dentistry
- Surgery centers
- Colonic centers
- Psychiatric centers

(Reason: to clarify the range of uses included in the definition)

ATRIUM. An opening connecting three or more stories.

(Reason: Accepted practice in the region based on legacy codes. IBC Section 1009 permits unenclosed two-story stairways under certain circumstances.)

FIRE WATCH. A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals or standby personnel when required by the fire code official, for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department.

(Reason: Clearly defines options to the fire department for providing a fire watch).

FIREWORKS. Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration, detonation, and/or activated by ignition with a match or other heat producing device that meets the definition of 1.4G fireworks or 1.3G fireworks as set forth herein.

(Reason: Increased safety from fireworks related injuries.)

HIGH-PILED COMBUSTIBLE STORAGE. Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12 feet in height. Where required by the fire code official, high-piled combustible storage also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets and similar commodities, where the top of storage is greater than 6 feet in height. Any building classified as a group S Occupancy or Speculative Building exceeding 6,000 sq. ft. that has a clear height in excess of 14 feet, making it possible to be used for storage in excess of 12 feet, shall be considered to be high-piled storage. When a specific product cannot be identified, a fire protection system and life safety features shall be installed as for Class IV commodities, to the maximum pile height.

(Reason: To provide protection for worst-case scenarios in flexible or unknown situations).

HIGH-RISE BUILDING. A building with an occupied floor located more than 55 feet (16,764 mm) above the lowest level of fire department vehicle access.

(Reason: Allows for additional construction safety features to be provided, based on firefighting response capabilities.)

REPAIR GARAGE. A building, structure or portion thereof used for servicing or repairing motor vehicles. This occupancy shall also include garages involved in minor repair, modification and servicing of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement and other such minor repairs.

(Reason: To further clarify types of service work allowed in a repair garage, as well as to correspond with definition in the IBC.)

CHAPTER 3 GENERAL REQUIREMENTS

SECTION 307
OPEN BURNING, RECREATIONAL FIRES AND PORTABLE OUTDOOR FIREPLACES

Section 307.1.1 is amended to read as follows:

Section 307.1.1 Prohibited open burning. Open burning that is offensive or objectionable because of smoke emissions, or when atmospheric conditions or local circumstances make such fires hazardous, shall be prohibited.

Exception: {No Change.}

(Reason: To further protect adjacent property owners/occupants from open burning and/or smoke emissions from open burning.)

Section 307.2 Permit required. A permit shall be obtained from the fire code official in accordance with Section 105.5 Required operational permit prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or open burning. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

Examples of state or local law, or regulations referenced elsewhere in this section may include but not be limited to the following:

1. Texas Commission on Environmental Quality guidelines and/or restrictions.
2. State, County or local temporary or permanent bans on open burning.
3. Local written policies as established by the fire code official.

(Reason: Amendments to 307.2, 307.4, 307.4.3, and 307.5 better explain current requirements and recognize that jurisdictions have local established policies that best fit their environments.)

Section 307.3 is amended to read as follows:

Section 307.3 Extinguishment authority. The fire code official is authorized to order the extinguishment by the permit holder, another person responsible or the fire department of open burning that creates or adds to a hazardous or objectionable situation.

(Reason: Provides direction as to responsible parties relative to extinguishment of the subject open burning.)

Section 307.4 is amended to read as follows:

307.4 Location. The location for open burning shall not be less than 300 feet (91,440 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 300 feet (91,440 mm) of any structure.

{Exceptions unchanged}

307.4.1 Bonfires. A bonfire shall not be conducted within 50 feet (15 240 mm), or greater distance as determined by the fire code official, of a structure or combustible material, unless the fire is contained in a barbecue pit. Conditions that could cause a fire to spread within the required setback of a structure shall be eliminated prior to ignition.

(Reason: To increase the separation distance thereby increasing the safety to adjacent properties, as per applicable TCEQ rules and regulations regarding outdoor burning. Bonfires were added to this requirement to allow the AHJ the ability to match the increased setback utilized for open burning as necessary. Size of bonfire will help to determine needed setback, fire equipment and apparatus as per permit requirements.)

Section 307.4.3 is amended by adding a new paragraph 2 under "Exceptions" to read as follows:

Exceptions:

1. Portable outdoor fireplaces are used at one- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an approved automatic sprinkler system.

(Reason: To reflect similar allowances for open-flame cooking in these same locations.)

Section 307.4 is amended by adding Section 307.4.4 and Section 307.4.5 to read as follows:

307.4.4 Permanent outdoor fire pit. Permanently installed outdoor fire pits for recreational fire purposes shall not be installed within 10 feet of a structure or combustible material.

Exception: Permanently installed outdoor fireplaces constructed in accordance with the International Residential Code or International Building Code.

307.4.5 Trench Burns. Trench burns shall be conducted in air curtain trenches and in accordance with Section 307.2.

(Reason: To provide a greater level of safety for this potentially hazardous fire exposure condition. Decrease in separation distance allowed for outdoor fire pits due to permanent nature of construction having substantial securement).

Section 307.5 is amended to read as follows:

307.5 Attendance. Open burning, trench burns, bonfires, recreational fires and use of portable outdoor fireplaces shall be constantly attended.

(Reason: Adds attendance for trench burns based on previous amendment provision for such).

SECTION 308

OPEN FLAMES

Section 308.1.4 is amended to read as follows:

308.1.4 Open-flame cooking devices. Open-flame cooking devices, charcoal grills, and other similar devices used for cooking, shall not be located or used on combustible balconies, decks, or within 10 feet (3048 mm) of combustible construction.

Exceptions:

1. One- and two-family dwelling, except that LP-gas containers are limited to a water capacity not greater than 50 pounds (22.68 kg) [nominal 20-pound (9.08 kg) LP-gas

capacity] with an aggregate LP-gas capacity not to exceed 100 lbs. (5 containers). All LP-gas containers shall be stored outside, as per Chapter 61.

2. Where buildings, balconies and decks are protected by an approved automatic sprinkler system, except that LP-gas containers are limited to a water capacity not greater than 50 pounds (22.68 kg) [nominal 20-pound (9.08 kg) LP-gas capacity], with an aggregate LP-gas capacity not to exceed 40 lbs. (2 containers). All LP-gas containers shall be stored outside, as per Chapter 61.

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

(Reason: Decrease fire risk in multi-family dwellings and minimizes ignition sources and clarify allowable limits for 1 & 2 family dwellings and allow an expansion for sprinkled multi-family uses. This amendment adds clarification and defines the container size allowed for residences).

Section 308.1.6.2 is amended by amending Exception number 3 to read as follows:

Torches or flame-producing devices in accordance with Section 308.1.3.

(Reason: Section identified in published code is inappropriate.)

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 an unmanned free-floating device containing an open flame or other heat source, such as but not limited to a sky lantern.

(Reason: Eliminates the potential fire hazard presented by utilization of such devices and the potential accidental release of such devices).

SECTION 311

VACANT PREMISIS

Section 311.5 is amended to read as follows:

311.5 Placards. The fire code official is authorized to require marking of any vacant or abandoned buildings or structures determined to be unsafe pursuant to Section 114 of this code relating to structural or interior hazards, as required by Section 311.5.1 through 311.5.5.

(Reason: There may be situations where placarding is not desired or necessary; also clarifies intent that it is not the fire code official's responsibility to provide the placard).

CHAPTER 4

EMERGENCY PLANNING AND PREPAREDNESS

SECTION 404

FIRE SAFETY, EVACUTION, AND LOCKDOWN PLANS

Section 404.2.2; by adding number 4.10 to read as follows:

4.10 Fire extinguishing system controls.

(Reason: It is believed this information could be of great help to such plans to facilitate locating sprinkler valves to minimize water damage, for instance).

SECTION 405

EMERGENCY EVACUATION DRILLS

Section 405.5 is amended to read as follows:

405.5 Time. The fire code official may require an evacuation drill at any time. Drills shall be held at unexpected times and under varying conditions to simulate the unusual conditions that occur in case of fire.

Exceptions:

1. In severe climates, the fire code official shall have the authority to modify the emergency evacuation drill termination points and frequency.
2. In Groups I-1, I-2, I-3 and R-4, where staff-only emergency evacuation drills are conducted after visiting hours or where care recipients are expected to be asleep, a coded announcement shall be an acceptable alternative to audible alarms.
3. Notification of teachers/staff having supervision of light- or sound-sensitive students/occupants, such as those on the autism spectrum, for the protection of those students/occupants, shall be allowed prior to conducting a drill.

(Reason: This change clarifies who may require a fire or evacuation drill, and also allows for consideration/protection of students/occupants who may be severely negatively impacted by the nature of a fire alarm notification during a practice drill).

CHAPTER 5

FIRE SERVICE FEATURES

SECTION 501

GENERAL

Section 501.4 is amended to read as follows:

501.4 Timing of installation. When fire apparatus access roads or a water supply for fire protection is required to be installed for any structure or development, they shall be installed, tested, and approved prior to the time of which construction has progressed beyond completion of the foundation of any structure.

(Reason: Reflects current practice in the region relative to ensuring fire department and EMS access during construction, which can be a time of increased frequency for emergency incidents).

SECTION 503

FIRE APPARATUS ACCESS ROADS

Section 503.1.1 is amended to read as follows:

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45,720 mm) 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. Except for one-or two-family dwellings, the path of measurement shall be along a minimum of a ten foot (10') wide unobstructed pathway around the external walls of the structure.

Exception: {unchanged}

(Reason: Recognizes that the hose lay provision can only be measured along a pathway that is wide enough for firefighter access.)

Section 503.2.1 is amended to read as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 24 feet (7315 mm), exclusive of shoulders, and an unobstructed vertical clearance of not less than 14 feet (4267 mm).

(Reason: Amendments to 503.2.1 and 503.2.2 recognize that the equipment now used in firefighting is increasing in size. The code already recognizes that larger dimensions may be required under Section 503.2.2. The amendments are to standardize the dimensions for this area. With the increase in fire apparatus size, this will allow for the passage of two fire apparatus during a fire or EMS emergency.)

Section 503.2.2 is amended to read as follows:

503.2.2 Authority. The fire code official shall have the authority to require an increase in the minimum access widths and vertical clearances where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction.

(Reason: Amendments to 503.2.1 and 503.2.2 recognize that the equipment now used in firefighting is increasing in size. The code already recognizes that larger dimensions may be required under Section 503.2.2. The amendments are to standardize the dimensions for this area. With the increase in fire apparatus size, this will allow for the passage of two fire apparatus during a fire or EMS emergency).

Section 503.2.3 is amended to read as follows:

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of 85,000 lbs. for fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

(Reason: To address the current size of fire trucks in use – figure derived from DOT requirements for waiver of vehicle exceeding such weight and from current maximum weights of fire trucks being purchased by jurisdictions in North Texas).

Section 503.2.7 is amended to read as follows:

503.2.7 Grade. The grade of the fire apparatus access roads shall not exceed 6 percent in grade.

(Reason: NCTCOG ESTABLISHES THE GRADE AT 6%)

Section 503.3 is amended to read as follows:

503.3 Marking. Striping, signs, or other markings, when approved by the fire code official, shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Striping, signs and other markings should be always maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

(1) Striping – Fire apparatus access roads shall be continuously marked by painted lines of red traffic paint six inches (6") in width to show the boundaries of the lane. The words "NO PARKING FIRE LANE" or "FIRELANE NO PARKING" shall appear in four inch (4") white letters at 25 feet intervals on the red border markings along both sides of the fire lanes. Where a curb is available, the stripping shall be on the vertical face of the curb.

(2) Signs – Signs shall read "NO PARKING FIRE LANE" or "FIRE LANE NO PARKING" and shall be 12" wide and 18" high. Signs shall be painted on a white background with letters and borders in red, using not less than 2" lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6' 6") above finished grade. Signs shall be spaced not more than fifty feet (50') apart along.

both sides of the fire lane. Signs may be installed on permanent buildings or walls or as approved by the fire code official.

(Reason: Establishes a standard method of marking and reflects regional long-standing practices.)

Section 503.4 is amended to read as follows:

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 and 503.2.2 and any area marked as a fire lane as described in Section 503.3 shall be always maintained.

SECTION 505

PREMISIS IDENTIFICATION

Section 505.1 is amended to read as follows:

505.1 Address identification. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address 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 (152.4 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road, buildings do not immediately front a street, and/or the building cannot be viewed from the public way, a monument, pole or other sign with approved 6 inch (152.4 mm) height building numerals or addresses and 4 inch (101.6 mm) height suite/apartment numerals of a color contrasting with the background of the building or other approved means shall be used to identify the structure. Numerals or addresses shall be posted on a minimum 20-inch (508 mm) by 30-inch (762 mm) background on border. Address identification shall be maintained.

Exception: R-3 Single Family occupancies shall have approved numerals of a minimum 3 ½ inches (88.9 mm) in height and a color contrasting with the background clearly visible

and legible from the street fronting the property and rear alleyway where such alleyway exists.

(Reason: To increase the minimum addressing requirements for commercial properties and establish a minimum for single-family residential properties Such improves legibility of these signs which are critical to emergency response in a timelier manner).

SECTION 507

FIRE PROTECTION WATER SUPPLIES

Section 507.4 is amended to read as follows:

507.4 Water Supply Test Date and Information. The water supply test used for hydraulic calculation of fire protection systems shall be conducted in accordance with NFPA 291 “Recommended Practice for Fire Flow Testing and Marking of Hydrants” and within one year of sprinkler plan submittal. The fire code official shall be notified prior to the water supply test. Water supply tests shall be witnessed by the fire code official, as required. The exact location of the static/residual hydrant and the flow hydrant shall be indicated on the design drawings. All fire protection plan submittals shall be accompanied by a hard copy of the water flow test report, or as approved by the fire code official. The report must indicate the dominant water tank level at the time of the test and the maximum and minimum operating levels of the tank, as well, or identify applicable water supply fluctuation. The licensed contractor must then design the fire protection system based on this fluctuation information, as per the applicable referenced NFPA standard. Reference Section 903.3.5 for additional design requirements.

(Reason: Clarifies intent of the test to ensure contractor accounts for water supply fluctuations).

Sections 507.5.1 and 507.5.1.1 are amended to read 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 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.

507.5.1.1 Hydrant for sprinkler and standpipe systems. Buildings equipped with an automatic fire sprinkler or standpipe system shall have a fire hydrant within 100 feet (30 480 mm) of the fire department connection.

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

Section 507.5.4 is amended to read as follows:

507.5.4 Obstruction. Unobstructed access to fire hydrants shall be maintained at all times. Posts, fences, vehicles, growth, trash, storage and other materials or objects shall not be placed or kept near fire hydrants, fire department inlet connections or fire protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately discernible. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants.

(Reason: Additional guidance based on legacy language to ensure these critical devices are available in an emergency incident).

SECTION 509

FIRE PROTECTION AND UTILITY EQUIPMENT IDENTIFICATION AND ACCESS

Section 509.1 is amended by adding a new Section 509.1.2 to read as follows:

509.1.2 Sign Requirements. Unless more stringent requirements apply, lettering for signs required by this section shall have a minimum height of two (2) inches (50.8 mm) when located inside a building and four (4) inches (101.6 mm) when located outside, or as approved by the fire code official. The letters shall be of a color that contrasts with the background.

(Reason: Provides direction as to appropriate sign criteria to develop local and regional consistency in this regard).

SECTION 605

FUEL-FIRED APPLIANCES

605.4 Fuel oil storage systems. Fuel oil storage systems shall be installed and maintained in accordance with this code. Tanks and fuel-oil piping systems shall be installed in accordance with Chapter 13 of the International Mechanical Code and Chapter 57

605.4.1 Fuel oil storage in outside, above-ground tanks. Where connected to a fuel-oil piping system, the maximum amount of fuel oil storage allowed outside above ground without additional protection shall be 660 gallons (2498 L). The storage of fuel oil above ground in quantities exceeding 660 gallons (2498 L) shall comply with NFPA 31 and Chapter 57.

605.4.1.1 Approval. Outdoor fuel oil storage tanks shall be in accordance with UL 142 or UL 2085, and also listed as double wall/secondary containment tanks.

605.4.2 Fuel oil storage inside buildings. Fuel oil storage inside buildings shall comply with Sections 605.4.2.2 through 605.4.2.8 or and Chapter 57.

605.4.2.2 Quantity limits. One or more fuel oil storage tanks containing Class II or Class III combustible liquid shall be permitted in a building. The aggregate capacity of all tanks shall not exceed the following:

1. 660 gallons (2498 L) in non-sprinkled buildings, stored in a tank complying with UL 80, UL 142 or UL 2085, and also listed as a double-wall/secondary containment tank for Class II liquids.

2. 1,320 gallons (4996 L) in buildings equipped with an automatic sprinkler system in accordance with Section 903.3.1.1, where stored in a tank complying with UL 142 or UL 2085. The tank shall be listed as a secondary containment tank, and the secondary containment shall be monitored visually or automatically.

3. 3,000 gallons (11,356 L) in buildings equipped with an automatic sprinkler system in accordance with Section 903.3.1.1, where stored in protected above-ground tanks complying with UL 2085 and Section 5704.2.9.7. The tank shall be listed as a secondary containment tank, as required by UL 2085, and the secondary containment shall be monitored visually or automatically.

(Reason: Issues addressed by Chapter 57, such as venting to outside of buildings, remote fill to outside of building, overfill protection, physical protection, etc., are not included in Section 605.4, so compliance with Chapter 57 is also required. The Board removed the applicability to heating systems only from the charging statement based on this more prudent method of diesel storage for generators, boilers, fire pumps and other fuel fired.

equipment inside buildings without requiring Group H occupancy classification – this is now established practice in the region as well.)

CHAPTER 8

INTERIOR FINISH, DECORATIVE MATERIALS AND FURNISHINGS

SECTION 807

DECORATIVE MATERIALS and ARTIFICIAL DECORATIVE VEGETATION IN NEW and EXISTING BUILDINGS

Section 807.5.2.2 is amended to read as follows:

807.5.2.2 Artwork in Corridors. Artwork and teaching materials shall be limited on the walls of corridors to not more than 20 percent of the wall area. Such materials shall not be continuous from floor to ceiling or wall to wall. Curtains, draperies, wall hangings and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.

Exception: Corridors protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be limited to 50 percent of the wall area.

Section 807.5.2.3 is amended to read as follows:

807.5.2.3 Artwork in Classrooms. Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached. Curtains, draperies, wall hangings and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.

Section 807.5.5.2 is amended to read as follows:

Section 807.5.5.2 Artwork in Corridors. Artwork and teaching materials shall be limited on the walls of corridors to not more than 20 percent of the wall area. Such materials shall not be continuous from floor to ceiling or wall to wall. Curtains, draperies, wall hangings and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.

Exception: Corridors protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be limited to 50 percent of the wall area.

(Reason: This change allows an increase in wall coverage due to the presence of sprinklers. Also provides additional guidance relative to fire resistance requirements in these areas).

Section 807.5.5.3 is amended to read as follows:

Section 807.5.5.3 Artwork in Classrooms. Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached. Curtains, draperies, wall hangings and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.

(Reason: This change allows an increase in wall coverage due to the presence of sprinklers. Also provides additional guidance relative to fire resistance requirements in these areas).

CHAPTER 9

FIRE PROTECTION AND LIFE SAFETY SYSTEMS

SECTION 901

GENERAL

Section 901.6.1 is amended by adding Section 901.6.1.1 to read as follows:

901.6.1.1 Standpipe Testing. Building owners must maintain and test a pipe system as per NFPA 25 requirements. The following additional requirements shall be applied to the testing that is required every 5 years:

1. The piping between the Fire Department Connection (FDC) and the standpipe shall be backflushed or inspected by approved camera when foreign material is present or when caps are missing, and also hydrostatically tested for all FDC's on any type of standpipe system. Hydrostatic testing shall also be conducted in accordance with NFPA 25 requirements for the different types of standpipe systems.

2. For any manual (dry or wet) standpipe system not having an automatic water supply capable of flowing water through the standpipe, the tester shall connect hose from a fire hydrant or portable pumping system (as approved by the fire code official) to each FDC, and flow water through the standpipe system to the roof outlet to verify that each inlet connection functions properly. Confirm that there are no open hose valves prior to introducing water into a dry standpipe. There are no required pressure criteria at the outlet.

Verify that check valves function properly and that there are no closed control valves on the system.

3. Any pressure relief, reducing, or control valves shall be tested in accordance with the requirements of NFPA 25. All hose valves shall be exercised.

4. If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDC's as required by the fire code official.

5. Upon successful completion of standpipe test, place a blue tag (as per Texas Administrative Code, Fire Sprinkler Rules for Inspection, Test and Maintenance Service (ITM) Tag) at the bottom of each standpipe riser in the building. The tag shall be check-marked as "Fifth Year" for Type of ITM, and the note on the back of the tag shall read "5 Year Standpipe Test" at a minimum.

6. The procedures required by Texas Administrative Code Fire Sprinkler Rules regarding Yellow Tags and Red Tags or any deficiencies noted during the testing, including the required notification of the local Authority Having Jurisdiction (fire code official) shall be followed.

7. Additionally, records of the testing shall be maintained by the owner and contractor, if applicable, as required by the State Rules mentioned above and NFPA 25.

8. Standpipe system tests where water will be flowing external to the building shall not be conducted during freezing conditions or during the day prior to expected night time freezing conditions.

9. Contact the fire code official for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this firefighting equipment. All standpipe hose valves must remain in place and be provided with an approved cap and chain when approval is given to remove hose by the fire code official.

(Reason: Increases the reliability of the fire protection system and re-emphasizes the requirements of NFPA 25 relative to standpipe systems, as well as ensuring that FDC connections are similarly tested/maintained to ensure operation in an emergency incident).

Section 901.6 is amended by adding Sections 901.6.4, 901.6.5, 901.6.6 to read as follows:

901.6.4 False Alarms and Nuisance Alarms. False alarms and nuisance alarms shall not be given, signaled or transmitted or caused or permitted to be given, signaled or transmitted in any manner.

(Reason: Places the responsibility on the business or property owner to maintain their fire alarm systems in approved condition. Allows the enforcement of “prohibition of false alarms”. Replaces text lost from the legacy codes that helps to ensure the maintenance of life safety systems).

901.6.5 Systems in high-rise buildings. The owner of a high-rise building shall be responsible for assuring that the fire and life-safety systems required by the Building Code are always maintained in an operable condition. Unless otherwise required by the chief, quarterly tests of such systems shall be conducted by approved persons. A written record shall be maintained and shall be made available to the inspection authority.

901.6.6 Smoke-control systems. Mechanical smoke-control systems, such as those in high-rise buildings, buildings containing atria, covered mall buildings and mechanical ventilation systems utilized in smoke proof enclosures and for smoke-removal systems utilized in high-piled combustible storage occupancies, shall be always maintained in an operable condition. Unless otherwise required by the chief, quarterly tests of such systems shall be conducted by approved persons. A written record shall be maintained and shall be made available to the inspection authority.

Section 901.7 is amended to read as follows:

901.7 Systems Out of Service. Where a required fire protection system is out of service or in the event of an excessive number of activations, the fire department and the fire code official shall be notified immediately and, where required by the fire code official, the building shall either be evacuated or an approved fire watch shall be provided for all occupants left unprotected by the shut down until the fire protection system has been returned to service.

(Reason: Gives fire code official more discretion with regards to enforcement of facilities experiencing nuisance alarm or fire protection system activations necessitating correction/repair/replacement. The intent of the amendment is to allow local jurisdictions to enforce fire watches, etc., where needed to ensure safety of occupants where fire protection systems are experiencing multiple nuisance activations).

SECTION 903

AUTOMATIC SPRINKLER SYSTEMS

Section 903.1.1 is amended to read as follows:

903.1.1 Alternative protection. Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted in addition to automatic sprinkler protection where recognized by the applicable standard or as approved by the fire code official.

(Reason: Such alternative systems do not provide the reliability of automatic sprinkler protection. Most gaseous type systems are highly susceptible to open doors, ceiling or floor tile removal, etc. However, an applicant could pursue an Alternate Method request to help mitigate the reliability issues with these alternative systems with the fire code official if so desired, or there may be circumstances in which the fire code official is acceptable to allowing an alternate system in lieu of sprinklers, such as kitchen hoods or paint booths).

Section 903.2 is amended to read as follows:

Section 903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12. Automatic Sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoist ways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances. Storage shall not be allowed within the elevator machine room. Signage shall be provided at the entry doors to the elevator machine room indicating “ELEVATOR MACHINERY – NO STORAGE ALLOWED.”

(Reason: Firefighter and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3005.5 for the purpose of elevator passenger and firefighter safety. This amendment is contingent on the Building Code amendment eliminating the Exceptions to Section 3005.4, such that passive fire barriers for these areas are maintained. The exception deletion is due to such telecom areas pose an undue fire risk to the structural integrity of the building.)

Section 903.2.4.2; change to read as follows:

903.2.4.2 Group F-1 distilled spirits. An automatic sprinkler system shall be provided throughout a Group F-1 fire area used for the manufacture of distilled spirits involving more than 120 gallons of distilled spirits (>16% alcohol) in the fire area at any one time. (Reason: To establish a sprinkler criteria limit based on existing maximum allowable quantities provided for flammable liquids in a non-sprinkled space from Chapter 50 and allow very small distillery type operations without sprinkler requirements as has been historically allowed).

Section 903.2.9.3; change to read as follows:

903.2.9.3 Group S-1 distilled spirits or wine. An automatic sprinkler system shall be provided throughout a Group S-1 fire area used for the bulk storage of distilled spirits or wine involving more than 120 gallons of distilled spirits or wine (>16% alcohol) in the fire area at any one time.
(Reason: To establish a sprinkler criteria limit based on existing maximum allowable quantities provided for flammable liquids in a non-sprinkled space from Chapter 50 and allow very small storage operations without sprinkler requirements as has been historically allowed).

Section 903.2.9 is amended by adding Section 903.2.9.5 to read as follows:

903.2.9.5 Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

(Reason: Fire departments are unable to regularly inspect the interior of these commercial occupancies and are unaware of the contents being stored. Previous allowance to separate units by fire barriers is difficult to enforce maintenance after opening).

Section 903.2.11 is amended by adding Sections 903.2.11.7, 903.2.11.8, and 903.2.11.9 to read as follows:
903.2.11.3 Buildings 35 feet or more in height. An automatic sprinkler system shall be installed throughout buildings that have one or more stories, other than penthouses in compliance with Section 1511 of the International Building Code, located 35 feet (10 668 mm) or more above the lowest level of fire department vehicle access, measured to the finished floor.

903.2.11.7 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4572 mm), see Chapter 32 to determine if those provisions apply.

903.2.11.8 Spray Booths and Rooms. New and existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system.

903.2.11.9 Buildings Over 6000 sq. ft. An automatic sprinkler system shall be installed throughout all buildings with a building area of 6000 square fee or greater and in all existing buildings that are enlarged to be 6000 sq. ft. or greater. For the purpose of this provision, fire walls shall not define separate buildings.

Exception: Open parking garages in compliance with Section 406.5 of the International Building Code where all the following conditions apply.
a. The structure is freestanding.

b. The structure does not contain any mixed uses, accessory uses, storage rooms, electrical rooms, elevators or spaces used or occupied for anything other than motor vehicle parking.
c. The structure does not exceed 3 stories.
d. An approved fire apparatus access road is provided around the entire structure.

(Reason: Provides jurisdictions options as to their desired level of sprinkler protection based on multiple factors including firefighting philosophies/capabilities.)

Section 903.3.1.1.1 is amended to read as follows:

903.3.1.1.1 Exempt locations. When approved by the building official and fire code official, automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion and/or rate of rise heat detectors. Sprinklers shall not be removed from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard as determined by the building official or fire code official.

2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, where approved by the building official or fire code official.

3. Generator and transformer rooms, under the direct control of a public utility, separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.

4. Elevator machine rooms, machinery spaces, and hoist ways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.

(Reason: Gives more direction to code official. Exception 4 deleted to provide protection where fire risks are poorly addressed. Amendment 903.2 addresses Exception 5 above relative to the elimination of sprinkler protection in these areas to avoid the shunt trip requirement).

Section 903.3.1.2 is amended by Section 903.3.1.2.2 and Section 903.3.1.2.3 to read as follows:

903.3.1.2 NFPA 13R sprinkler systems. Automatic sprinkler systems in Group R occupancies shall be permitted to be installed throughout in accordance with NFPA 13R where the Group R occupancy meets all of the following conditions:

1. Four stories or less above grade plane.

2. The floor level of the highest story is 30 35 feet (9144 10668 mm) or less above the lowest level of fire department vehicle access.

3. The floor level of the lowest story is 30 35 feet (9144 10668 mm) or less below the lowest level of fire department vehicle access.
{No change to remainder of section}.

(Reason: The change to the 2021 IFC over-reached to limit 13R systems to 30 feet high at topmost floor level, which basically results in limiting 13R systems to three story buildings. This change to 35 ft. would still allow 13R systems in 4 story apartment buildings, as has been allowed historically and as intended by 13R's scope.)

Section 903.3.1.2.2; change to read as follows:

903.3.1.2.2 Corridors and balconies in the means of egress. Sprinkler protection shall be provided in all corridors and for all balconies.

(Reason: Corridor protection is critical to the means of egress, and corridors are regularly utilized for miscellaneous storage, fixtures, artwork, food kiosks and beverage dispensers, and furnishings. Balcony protection is required due to issues with fire exposure via soffit vents and the potential for significant combustible loading).

903.3.1.2.3 Attics, Open Breezeways, and Attached Garages. Sprinkler protection is required in attached garages, open breezeways, and in the following attic spaces:

1. Attics that are used or intended for living purposes or storage shall be protected by an automatic sprinkler system.

2. Where fuel-fired equipment is installed in a non-sprinklered attic, not fewer than one quick-response intermediate temperature sprinkler shall be installed above the equipment.

3. Attic spaces of buildings that are two or more stories in height above grade plane or above the lowest level of fire department vehicle access.

4. Group R-4, Condition 2 occupancy attics not required by Item 1 or 3 to have sprinklers shall comply with one of the following:

4.1. Provide automatic sprinkler system protection.

4.2. Provide a heat detection system throughout the attic that is arranged to activate the building fire alarm system.

4.3. Construct the attic using noncombustible materials.

4.4. Construct the attic using fire-retardant-treated wood complying with Section 2303.2 of the International Building Code.

1.5 Fill the attic with noncombustible insulation.

(Reason: Attic protection is required due to issues with fire exposure via soffit vents, as well as firefighter safety. Several jurisdictions indicated experience with un-protected attic fires resulting in displacement of all building occupants. NFPA 13 provides for applicable attic sprinkler protection requirements, as well as exemptions to such, based on noncombustible construction, etc. Attached garages already require sprinklers via NFPA 13R – this amendment just re-emphasizes the requirement).

Section 903.3.1.3 is amended to read as follows:

903.3.1.3 NFPA 13D sprinkler systems. Automatic sprinkler systems installed in one- and two-family dwellings, Group R-3 and R-4 Condition 1 and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D or in accordance with state law.

(Reason: To allow the use of the Plumbing section of the International Residential Code (IRC) and recognize current state stipulations in this regard).

Section 903.3.1 is amended by adding Section 903.3.1.4, 903.3.1.4.1, and 903.3.1.4.2 to read as follows:

903.3.1.4 Freeze protection. Freeze protection systems for automatic fire sprinkler systems shall be in accordance with the requirements of the applicable referenced NFPA standard and this section.

903.3.1.4.1 Attics. Only dry-pipe, pre-action, or listed antifreeze automatic fire sprinkler systems shall be allowed to protect attic spaces.

Exception: Wet-pipe fire sprinkler systems shall be allowed to protect non-ventilated attic spaces where:

1. The attic sprinklers are supplied by a separate floor control valve assembly to allow ease of draining the attic system without impairing sprinklers throughout the rest of the building, and

2. Adequate heat shall be provided for freeze protection as per the applicable referenced NFPA standard, and

3. The attic space is a part of the building's thermal, or heat, envelope, such that insulation is provided at the roof deck, rather than at the ceiling level.

903.3.1.4.2 Heat trace/insulation. Heat trace/insulation shall only be allowed where approved by the fire code official for small sections of large diameter water-filled pipe.

(Reason: In the last few years, severe winters brought to light several issues with current practices for sprinkle ring attics, not the least of which was wet-pipe sprinklers in ventilated attics provided with space heaters, etc. for freeze protection of such piping. This practice is not acceptable for the protection of water-filled piping in a ventilated attic space as it does not provide a reliable means of maintaining the minimum 40 degrees required by NFPA, wastes energy, and presents a potential ignition source to the attic space. Listed antifreeze is specifically included because NFPA currently allows such even though there is no currently listed antifreeze at the time of development of these amendments. The intent of this amendment is to help reduce the large number of freeze breaks that have occurred in the past with water-filled wet-pipe sprinkler systems in the future, most specifically in attic spaces).

Section 903.3.5 is amended to read as follows:

903.3.5 Water supplies. Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the International Plumbing Code. For connections to public waterworks systems, the water supply test used for design of fire protection systems shall be adjusted to account for seasonal and daily pressure fluctuations based on information from the water supply authority and as approved by the fire code official. Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective NFPA standards; however, every water-based fire protection system shall be designed with a 10psi safety factor. Reference Section 507.4 for additional design requirements.

(Reason: To define uniform safety factor for the region).

Section 903.4 is amended by adding the following paragraph after the Exceptions.

Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

(Reason: To avoid significant water losses. Consistent with amendment to IFC 905.9.)

Section 903.4.2 is amended to read as follows:

903.4.2 Alarms. An approved audible device, located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system. Such sprinkler water-flow 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.

The alarm device required on the exterior of the building shall be a weatherproof horn/strobe notification appliance with a minimum 75 candela strobe rating, installed as close as practicable to the fire department connection.

(Reason: Fire department connections are not always located at the riser; this allows the fire department faster access and ease of recognition of the FDC location, especially at night).

SECTION 905

STANDPIPE SYSTEMS

Section 905.3 is amended by adding Section 905.3.9 to read as follows:

905.3.9 Buildings Exceeding 10,000 sq. ft. In buildings exceeding 10,000 square feet in area per story and where any portion of the building's interior area is more than 150 feet (45720 mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access, Class I automatic wet or manual wet standpipes shall be provided.

Exceptions:

1. Automatic dry, semi-automatic dry, and manual dry standpipes are allowed as provided for in NFPA 14 where approved by fire code official.

2. R-2 occupancies four stories or less in height having no interior corridors.

(Reason: Allows for the rapid deployment of hose lines to the body of the fire in larger structures).

Section 905.4 is amended to read as follows:

905.4 Location of Class I standpipe hose connections

Class I standpipe hose connections shall be provided in all the following locations:

1. In every required exit stairway, a hose connection shall be provided for each story above and below grade plane. Hose connections shall be located at an

intermediate landing between stories, unless otherwise approved by the fire code official.

2. On each side of the wall adjacent to the exit there is an opening of a horizontal exit.

Exception: Where floor areas adjacent to a horizontal exit are reachable from an interior exit stairway hose connection by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the horizontal exit.

3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

Exception: Where floor areas adjacent to an exit passageway are reachable from an exit stairway hose connection by a 30- foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance from an exit passageway or exit corridor to the mall. In open mall buildings, adjacent to each public entrance to the mall at the perimeter line and adjacent to each entrance from an exit passageway or exit corridor to the mall.

5. Where the roof has a slope less than four unit's vertical in 12 unit's horizontal (33.3-percent slope), each standpipe shall be provided with a two-way hose connection located to serve the roof or at the highest landing of an exit stairway with stair access to the roof provided in accordance with Section 1011.12.

6. Where the most remote portion of a non-sprinklered floor or story is more than 150 feet (45720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet (60960 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations.

7. When required by this Chapter, standpipe connections shall be placed adjacent to all required exits to the structure and at two hundred feet (200') intervals along major corridors thereafter, or as otherwise approved by the fire code official.

(Reason: Item 1, 3, and 5 amendments to remove 'interior' will help to clarify that such connections are required for all 'exit' stairways, to ensure firefighter capabilities are not diminished in these tall buildings, simply because the stair is on the exterior of the building. Item 5 reduces the amount of pressure required to facilitate testing and provides backup protection for fire fighter safety. Item 7 allows for the rapid deployment of hose lines to the body of the fire).

Section 905.9 is amended by adding the following paragraph after the Exceptions:

Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

(Reason: To avoid significant water losses. Consistent with amendment to IFC 903.4.)

SECTION 906

PORTABLE FIRE EXTINGUISHERS

Paragraph 1 of Section 906.1 is amended to read in its entirety as follows, including the deletion of the Exception:

1. In new and existing Group, A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies

(Reason: This provision of only having vehicle-mounted fire extinguishers is not at all consistent with historical practice of requiring extinguishers throughout based on travel distance. Often, the vehicle is what has caused the incident and/or may be the source of the incident, so having the extinguisher vehicle-mounted results in greater potential injury of the user. This assumes the only occupants in the building are on a vehicle, which again, significantly reduces access to fire extinguishers throughout the building to other occupants. Future use of the building/tenancy may change further complicating the issue).

SECTION 907

FIRE ALARM AND DETECTION SYSTEMS

Section 907.2.1 is amended to read as follows:

907.2.1 Group A. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies having an occupant load of 300 or more persons or more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.10 of the International Building Code shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for Group E occupancy.

Activation of fire alarm notification appliances shall:

1. Cause illumination of the means of egress with light of not less than 1 foot-candle (11lux) at the walking surface level, and

2. Stop any conflicting or confusing sounds and visual distractions.

(Reason: Increases the requirement to be consistent with Group B requirement. Also addresses issue found in Group A occupancies of reduced lighting levels and other A/V equipment that distracts from fire alarm notification devices or reduces ability of fire alarm system to notify occupants of the emergency condition.)

Section 907.2.3 is amended to read in its entirety as follows:

907.2.3 Group E. A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. Where automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarms system. An approved smoke detection system shall be installed in Group E Day care occupancies. Unless separated by a minimum of 100' open space, all buildings, where portable buildings or the main building, will be considered one building for alarm occupant load consideration and interconnection of alarm systems.

Exceptions:

1. A manual fire alarm system is not required in Group E occupancies with an occupant load of 50 or less when provided with an approved automatic sprinkler system.

1.1 Residential In-Home day care with not more than 12 children may use hard-wired or wireless interconnected single station detectors with battery backup in all habitable rooms. (For care of more than five children 2 ½ or less years of age, see Section 907.2.6).

2. Emergency voice/alarm communication systems meeting the requirements of section. 907.5.2.2 and installed in accordance with section 907.6 shall not be required in Group E occupancies with occupant loads of 100 or less, if activation of the manual fire alarm system initiates an approved occupant notification signal in accordance with Section 907.5.

(Reason: To distinguish educational from day care occupancy minimum protection requirements. Further, to define threshold at which portable buildings are considered a separate building for the purposes of alarm systems. Exceptions provide consistency with State law concerning such occupancies).

Section 907.2.10 is amended to read as follows:

907.2.10 Group S. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group S public- and self-storage occupancies for interior corridors and interior common areas. Visible notification appliances are not required within storage units.

Exception: {No change}

(Reason: Because of the potential unknown fire load and hazards in self-storage type facilities, which could include flammable liquids for instance, as well as other hazardous materials, prompt evacuation in the event of fire alarm is needed; therefore, notification in the corridors/common areas is critical to all such occupancies, regardless of height).

Exception 3 in Section 907.2.13 is amended to read as follows:

3. Open air portions of buildings with an occupancy in Group A-5 in accordance with Section 303.1; however, this exception does not apply to accessory uses including but not limited to skyboxes, restaurants and similarly enclosed areas.

(Reason: To indicate that enclosed areas within open air seating type occupancies are not exempted from automatic fire alarm system requirements).

Section 907.4.2 is amended by adding Section 907.4.2.7 to read as follows:

907.4.2.7 Type. Manual alarm actuating devices shall be an approved double action type.

(Reason: Helps to reduce false alarms)

907.6.1.1 Wiring Installation. All fire alarm systems shall be installed in such a manner that the failure of any single initiating device or single open in an initiating circuit conductor will not interfere with the normal operation of other such devices. All signaling line circuits (SLC) shall be installed in such a way that a single open will not interfere with the operation of any addressable devices (Class A). Outgoing and return SLC conductors shall be installed in accordance with NFPA 72 requirements for Class A circuits and shall have a minimum of four feet separation horizontal and one foot vertical between supply and return circuit conductors. The initiating device circuit (IDC) from a signaling line circuit interface device may be wired Class B, provided the distance from the interface device to the initiating device is ten feet or less.

(Reason: To provide uniformity in system specifications and guidance to design engineers. Improves reliability of fire alarm devices and systems).

907.6.3. Delete all four Exceptions.

(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems. This is moved from 907.6.5.3 in the 2012 IFC and reworded to match new code language and sections).

Section 907.6.6 is amended by adding Section 907.6.6.4 to read as follows:

907.6.6.4 Communication requirements. All alarm systems, new or replacement, shall transmit alarm, supervisory and trouble signals descriptively to the approved central station, remote supervisory station or proprietary supervising station as defined in NFPA 72, with the correct device designation and location of addressable device identification. Alarms shall not be permitted to be transmitted as a general alarm or zone condition.

(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems. This was moved from 907.6.5.3 in the 2012 IFC and reworded to match new code language and sections (legacy language).

SECTION 910

SMOKE AND HEAT REMOVAL

Section 910.2 is amended by amending first paragraph, Exceptions 2 and 3 to read as follows:

910.2 Where required. Smoke and heat vents or a mechanical smoke removal system shall be installed as required by Sections 910.2.1, 910.2.2 and 910.2.3.

Exceptions:

1. Frozen food warehouses used solely for storage of Class I and II commodities where protected by an approved automatic sprinkler system.

2. Only manual smoke and heat removal shall be required in areas of buildings equipped with early suppression fast-response (ESFR) sprinklers. Automatic smoke and heat removal is prohibited.

3. Only manual smoke and heat removal shall be required in areas of buildings equipped with control mode special application sprinklers with a response time index of $50(m*s)^{1/2}$ or less that are listed to control a fire in stored commodities with 12 or fewer sprinklers. Automatic smoke and heat removal is prohibited.

(Reason: Allows the fire department to control the smoke and heat during and after a fire event, while still prohibiting such systems from being automatically activated,

which is a potential detriment to the particular sprinkler systems indicated.)

910.2.3 Group H. Buildings and portions thereof used as a Group H occupancy as follows:

1. In occupancies classified as Group H-2 or H-3, any of which are more than 5,000 square feet in single floor area.

   Exception: Buildings of noncombustible construction containing only noncombustible materials.

2. In areas of buildings in Group H used for storing Class 2, 3, and 4 liquid and solid oxidizers, Class 1 and unclassified detonable organic peroxides, Class 3 and 4 unstable (reactive) materials, or Class 2 or 3 water-reactive materials as required for a high-hazard commodity classification.

   Exception: Buildings of noncombustible construction containing only noncombustible materials.

   (Reason: Maintains a fire protection device utilized in such occupancies where it is sometimes necessary to allow chemicals to burn out, rather than extinguish. This is based on legacy language establishing long-standing historical practice).

Section 910.4.3.1 is amended to read as follows:

910.4.3.1 Makeup Air. Makeup air openings shall be provided within six feet (1829 mm) of the floor level. Operation of makeup air openings shall be automatic. The minimum gross area of makeup air inlets shall be 8 square feet per 1,000 cubic feet per minute (0.74 m2 per 0.4719 m3/s) of smoke exhaust.

(Reason: Makeup air has been required to be automatic for several years now in this region when mechanical smoke exhaust systems are proposed. This allows such systems to be activated from the smoke control panel by first responders without having to physically go around the exterior of the building opening doors manually. Such requires a significant number of first responders on scene to conduct this operation and significantly delays activation and/or capability of the smoke exhaust system).

SECTION 912

FIRE DEPARTMENT CONNECTIONS

Section 912.2 is amended by adding Section 912.2.3 to read as follows:

912.2.3 Hydrant Distance. An approved fire hydrant shall be located within 100 feet of the fire department connection as the fire hose lays along an unobstructed path.

(Reason: To accommodate limited hose lengths, improve response times where the FDC is needed to achieve fire control, and improve ease of locating a fire hydrant in those situations also. Also, consistent with NFPA 14 criteria).

SECTION 913

FIRE PUMPS

Section 913.2.1 is amended by adding the following second paragraph and exception to read as follows:

When located on the ground level at an exterior wall, the fire pump room shall be provided with an exterior fire department access door that is not less than 3 ft. in width and 6 ft. – 8 in. in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by Section 506.1.

Exception: When it is necessary to locate the fire pump room on other levels or not at an exterior wall, the corridor leading to the fire pump room access from the exterior of the building shall be provided with equivalent fire resistance as that required for the pump room, or as approved by the fire code official. Access keys shall be provided in the key box as required by Section 506.1.

(Reason: This requirement allows fire fighters safer access to the fire pump room. The requirement allows access without being required to enter the building and locate the fire pump room interior access door during a fire event. The exception recognizes that this will not always be a feasible design scenario for some buildings, and as such, provides an acceptable alternative to protect the pathway to the fire pump room).

SECTION 914

FIRE PROTECTION BASED ON SPEACIAL DETAILED REQUIREMENTS of USE and OCCUPANCY

Section 914.3.1.2 is amended to read as follows:

914.3.1.2 Water Supply to required Fire Pumps. In buildings that are more than 120 feet (128 m) in building height, required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: {No change to exception}

(Reason: The 2009 edition of the IFC added this requirement based on a need for redundancy of the water supply similar to the redundancy of the power supply to the fire pumps required for such tall buildings, partially due to the fact that these buildings are rarely fully evacuated in a fire event. More commonly, the alarm activates on the floor of the event, the floor above and the floor below. Back-up power to the fire pump becomes critical for this reason. Certainly, the power is pointless if the water supply is impaired for any reason, so a similar requirement is provided here for redundant water supplies. The 2015 edition changes the requirement to only apply to very tall buildings over 420 ft. This amendment modifies/lowers the requirement to 120 ft., based on this same height requirement for fire service access elevators. Again, the language from the 2009 and 2012 editions of the code applied to any high-rise building. This compromise at 120 ft. is based on the above technical justification of defend-in-place scenarios in fire incidents in such tall structures).

CHAPTER 10

MEANS OF EGRESS

Chapter 10 is amended by replacing all references to “fire code official” with “building official.”

SECTION 1006

NUMBERS of EXITS and EXIT ACCESS DOORWAYS

1006.2.1; change Exception #3 to read as follows:

1006.2.1 Egress based on occupant load and common path of egress travel distance. Two exits or exit doorways from any space shall be provided where the design.

occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1. The cumulative occupant load from adjacent rooms, areas or space shall be determined in accordance with Section 1004.2.

Exceptions:
1. {No change}
2. {No change}
3. Unoccupied rooftop mechanical rooms and penthouses are not required to comply with the common path of egress travel distance measurement.

(Reason: Add “rooftop” to Exception No. 3 to clarify that only such mechanical rooms located on the roof may be exempted).

SECTION 1009

ACCESIBLE MEANS OF EGRESS

Section 1009.8 is amended by adding Exception 7 to read as follows:

1. through 6. {No change.}
7. Buildings regulated under State Law and built in accordance with State registered plans, including any variances or waivers granted by the State, shall be deemed to follow the requirements of Section 1009 and Chapter 11.

(Reason: To accommodate buildings regulated under Texas State Law and to be consistent with amendments in Chapter 11).

SECTION 1010

DOORS, GATES and TURNSTILES

Section 1010.2.5 is amended by amending Exceptions 3 and 4 to read as follows:

3. Where a pair of doors serves an occupant load of less than 50 persons in a Group B, F, M, or S occupancy, manually operated edge-or surface-mounted bolts are permitted on the inactive leaf. The inactive leaf shall contain no doorknobs, panic bars or similar operating hardware.

4. Where a pair of doors serves a Group A, B, F, M or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf provided such inactive leaf is not needed to meet egress width requirements and the building is equipped throughout with an automatic sprinkler system in accordance with Section.

903.3.1.1. The inactive leaf shall contain no doorknobs, panic bars or similar operating hardware.

(Reason: It is common in our region to see the 2nd leaf locked, when that leaf is not part of the required egress door clear width, such as in a typical Group M occupancy. Exception No. 4 was expanded to Group A due to it being a similar situation for Group A restaurants).

SECTION 1020

CORRIDORS

Section 1020.2 is amended by adding Exception 6 to read as follows:

6. In Group B office buildings, corridor walls and ceilings need not be of fire-resistive construction within a single tenant space when the space is equipped with approved automatic smoke-detection within the corridor. The actuation of any detector shall activate self-annunciating alarms audible in all areas within the corridor. Smoke detectors shall be connected to an approved automatic fire alarm system where such a system is provided.

(Reason: Similar concept was previously in UBC – legacy language. This scenario occurs primarily in existing, non-sprinkled buildings, which under current IBC would be required to have a fire resistance rated corridor. This exception provides a cost-effective solution for single tenant space in lieu of the base IBC requirement to retrofit a fire sprinkler system throughout the building).

SECTION 1030

ASSEMBLY

Section 1030.1.1.1; add Exception#4 to read as follows:

Exceptions:
1. through 3. {No change}
4. Where alternate means or methods are submitted to and approved by the Building and Fire Officials.

(Reason: This base IBC provision applies to all grandstands and bleachers and does not differentiate between open air grandstands & bleachers, smaller, less complex grandstands and bleachers and or movable/non-fixed grandstands and bleachers. The

new exceptions permit the AHJ to be presented with alternate means or methods that take into consideration these differentiators that are unique to the specific grandstand and/or bleacher).

Section 1032.2 is amended to read as follows:

1032.2 Reliability. Required exit accesses, exits and exit discharges shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or another emergency. An exit or exit passageway shall not be used for any purpose that interferes with a means of egress.

(Reason: Maintain legacy levels of protection and long-standing regional practice and provide firefighter safety).

CHAPTER 11

CONSTRUCTION REQUIREMENTS FOR EXISTING BUILDINGS

SECTION 1103

FIRE SAFETY REQUIRMENTS for EXISTING BUILDINGS

Section 1103.3 is amended by adding the following sentence to end of paragraph:

Provide emergency signage as required by Section 604.4.

Section 1103.5.1 is amended by adding the following sentence to the end of the paragraph:

Fire sprinkler system installation shall be completed within 24 months from date of notification by the fire code official.

(Reason: Regional consistency of this retroactive requirement to allow business owners adequate time to budget to accommodate the cost of the fire sprinkler system).

Section 1103.5 is amended by adding Section 1103.5.6 to read as follows:

1103.5.6 Spray Booths and Rooms. Existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system in accordance with

Section 2404.

(Reason: Consistent with amendment to IFC 2404, and long-standing regional requirement to protect this hazardous operation).

Section 1103.7.5.1 is amended to add sentence to read as follows:

Fire sprinkler system installation shall be completed within 24 months from date of notification by the fire code official.

(Reason: Regional consistency of this retroactive requirement to allow business owners adequate time to budget to accommodate the cost of the fire sprinkler system).

Section 1103.7 is amended by adding Sections 1103.7.7 and 1103.7.7.1 to read as follows:

1103.7.7 Fire Alarm System Design Standards. Where an existing fire alarm system is upgraded or replaced, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke and/or heat detectors shall have analog initiating devices.

Exception: Existing systems need not comply unless the total building, or fire alarm system, remodel or expansion exceeds 30% of the building. When cumulative building, or fire alarm system, remodel or expansion initiated after the date of original fire alarm panel installation exceeds 50% of the building, or fire alarm system, the fire alarm system must comply within 18 months of permit application.

1103.7.7.1 Communication requirements. Refer to Section 907.6.6 for applicable requirements.

(Reason: To assist responding personnel in locating the emergency event and provide clarity as to percentages of work that results in a requirement to upgrade the entire fire alarm system).

CHAPTER 12

ENERGY SYSTEMS

SECTION 1203

EMERGENCY STANBY and POWER SYSTEMS

Section 1203.1.3 is amended to read as follow:

1203.1.3 Installation. Emergency power systems and standby power systems shall be installed in accordance with the International Building Code, NFPA 70, NFPA 110 and NFPA 111. Existing installations shall be maintained in accordance with the original approval, except as specified in Chapter 11.

1203.1.5 Load Duration. Emergency power systems and standby power systems shall be designed to provide the required power for a minimum duration of 2 hours without being refueled or recharged, unless specified otherwise in this code.

Exception: Where the system is supplied with natural gas from a utility provider and is approved.
Section 1203 is amended by adding Section 1203.1.10 to read as follows:

1203.1.10 Critical Operations Power Systems (COPS). For Critical Operations Power Systems necessary to maintain continuous power supply to facilities or parts of facilities that require continuous operation for the reasons of public safety, emergency management, national security, or business continuity, see NFPA 70.

Section 1203.2.4 is amended to read as follows:

1203.2.4 Emergency Voice/alarm Communications Systems. Emergency power shall be provided for emergency voice/alarm communications systems in the following occupancies, or as specified elsewhere in this code, as required in Section 907.5.2.2.5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

Covered and Open Malls, Section 907.2.20 and 914.2.
Group A Occupancies, Sections 907.2.1 and 907.5.2.2.
Special Amusement Buildings, Section 907.2.12 and 914.7
High-rise Buildings, Section 907.2.13 and 914.3
Atriums, Section 907.2.14 and 914.4
Deep Underground Buildings, Section 907.2.19 and 914.5

Sections 1203.2.14 and 1203.2.15 are amended to read as follows:

1203.2.14 Means of Egress Illumination. Emergency power shall be provided for means of egress illumination in accordance with Sections 1008.3 and 1104.5.1. (90 minutes).

1203.2.15 Membrane Structures. Emergency power shall be provided for exit signs in temporary tents and membrane structures in accordance with Section 3103.12.6. (90 minutes) Standby power shall be provided for auxiliary inflation systems in permanent membrane structures in accordance with Section 2702 of the International Building Code. (4 hours) Auxiliary inflation systems shall be provided in temporary air-supported and air-inflated membrane structures in accordance with Section 3103.10.4.

Section 1203.2.18 is amended to read as follows:

1203.2.18 Smoke Control Systems. Standby power shall be provided for smoke control systems in the following occupancies, or as specified elsewhere in this code, as required in Section 909.11:

Covered Mall Building, International Building Code, Section 402.7
Atriums, International Building Code, Section 404.7
Underground Buildings, International Building Code, Section 405.8
Group I-3, International Building Code, Section 408.4.2
Stages, International Building Code, Section 410.
Special Amusement Areas (as applicable to Group A's), International Building Code, Section 411.
Smoke-Protected Assembly Seating, Section 1030.6.2.

1203.2.22 Smoke proof Enclosures and Stair Pressurization Alternative. Standby power shall be provided for smoke proof enclosures, stair pressurization alternative and associated automatic fire detection systems as required by the International Building Code, Section 909.20.7.2.

1203.2.23 Elevator Pressurization. Standby power shall be provided for the elevator pressurization system as required by the International Building Code, Section 909.21.5.

1203.2.24 Elimination of Smoke Dampers in Shaft Penetrations. Standby power shall be provided when eliminating the smoke dampers in ducts penetrating shafts in accordance with the International Building Code, Section 717.5.3, exception 2.3.

1203.2.25 Common Exhaust Systems for Clothes Dryers. Standby power shall be provided for common exhaust systems for clothes dryers located in multistory structures in accordance with the International Mechanical Code, Section 504.11, Item 7.

1203.2.26 Means of Egress Illumination in Existing Buildings. Emergency power shall be provided for means of egress illumination in accordance with Section 1104.5 when required by the fire code official. (90 minutes in I-2, 60 minutes elsewhere).

(Reason: These amendments were moved from Chapter 6, due to relocation of the published sections to this new Chapter 12 in the past edition of the code and have now been updated for this edition. These provisions provide a list to complete and match that throughout the codes. The only additional requirements are the reference to COPS in NFPA 70, and the specified Energy time duration. Other changes are a reference to a code provision that already exists).

CHAPTER 23

MOTOR FUEL-DISPENSING FACILITIES AND REPAIR GARAGES

SECTION 2304

DISPENSING OPERATIONS

Section 2304.1 is amended to read as follows:

2304.1 Supervision of Dispensing. The dispensing of fuel at motor fuel-dispensing facilities shall be in accordance with the following:

1. Conducted by a qualified attendant; and/or,

2. Shall be under the supervision of a qualified attendant; and/or

3. Shall be an unattended self-service facility in accordance with Section 2304.3.

At any time, the qualified attendant of item Number 1 or 2 above is not present, such operations shall be considered as an unattended self-service facility and shall also comply with Section 2304.3.

(Reason: Allows a facility to apply the attended and unattended requirements of the code when both are potentially applicable).

CHAPTER 24

FLAMMABLE FINISHES

SECTION 2401

GENERAL

Section 2401.2: delete this section in its entirety.

(Reason: This section eliminates such booths from all compliance with Chapter 24 including, but not limited to: size, ventilation, fire protection, construction, etc. If the product utilized is changed to a more flammable substance, the lack of compliance with Chapter 15 could result in significant fire or deflagration and subsequent life safety hazard).

CHAPTER 31

TENTS, TEMPORARY SPEACIAL EVENT STRUCTURES AND OTHER MEMBRANE STRUCTURES

SECTION 3103

Temporary Tents and Membrane Structures

Section 3103.3.1: delete this section in its entirety

(Reason: This section requires a fire sprinkler system to be installed in temporary tents and membrane structures, which is not a reasonable or enforceable requirement for temporary use. A fire watch or fire alarm system is a more advisable approach for such occupancies that are only temporary in nature).

CHAPTER 32

HIGH-PILED COMBUSTIBLE STORAGE

SECTION 3206
General Fire Protection and Life Safety Features

Table 3206.2 is amended by amending Footnote h to read as follows:

h. Where storage areas are protected by either early suppression fast response

(ESFR) sprinkler systems or control mode special application sprinklers with a response time index of 50 (m • s) 1/2 or less that are listed to control a fire in the stored commodities with 12 or fewer sprinklers, installed in accordance with NFPA 13, manual smoke and heat vents or manually activated engineered mechanical smoke exhaust systems shall be required within these areas.

(Reason: Allows the fire department to control the smoke and heat during and after a fire event, while ensuring proper operation of the sprinkler protection provided. Also, gives an alternative to smoke and heat vents).

Table 3206.2 is amended by adding footnote j to row titled 'High Hazard' and 'Greater than 300,000' to read as follows:

j. High hazard high-piled storage areas shall not exceed 500,000 square feet. A 2-hour fire wall constructed in accordance with Section 706 of the International Building Code shall be used to divide high-piled storage exceeding 500,000 square feet in area.

(Reason: This is a long-standing legacy requirement and provides passive protection for extremely large buildings where it would be otherwise impossible to control the spread of fire without the fire wall in place in an uncontrolled fire event, which is much more likely in high hazard commodities, such as tires, flammable liquids, expanded plastics, etc.).

CHAPTER 33

FIRE SAFETY DURING CONSTRUCTION AND DEMOSTRATION

SECTION 3311

ACCESS for FIREFIGHTER

Section 3311.1 is amended to read as follows:

3311.1 Required access. Approved vehicle access for firefighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet (30 480 mm) of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting an 80,000 lb. vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available. When fire apparatus access roads are required to be installed for any structure or development, they shall be approved prior to the time of which construction has progressed beyond completion of the foundation of any structure. Whenever the connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an approved sign.

(Reason: Improves access to the FDC where required, as well as coordinates with the timing of installation amendment from Section 501.4.)

CHAPTER 56

EXPLOSIVES AND FIREWORKS

SECTION 5601

GENERAL

Section 5601.1.3 is amended to read in its entirety as follows:

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

Exceptions:

1. Only when approved for fireworks displays, the storage and handling of fireworks as allowed in Section 5604 and 5608.

2. The use of fireworks for approved fireworks displays as allowed in Section 5608

(Reason: Restricts fireworks to approved displays only, which is consistent with regional practice. Such is intended to help protect property owners and individuals from unintentional fireworks fires within the jurisdiction, as well as to help protect individuals from fireworks injuries. It is noted that there has been a change in the State Law to allow possession of unopened fireworks in certain areas of the vehicle, and it is highly recommended that AHJ's familiarize themselves with the applicable State Laws in this regard.)

CHAPTER 57

FLAMMAMBLE and COMBUSTIBLE LIQUIDS

SECTION 5703

GENERAL REQUIRMENTS

Section 5703.6 is amended to read as follows:

5703.6 Piping Systems. Piping systems, and their component parts, for flammable and combustible liquids shall be in accordance with Section 5703.6.1 through 5703.6.11. An approved method of secondary containment shall be provided for underground tanks and piping systems.

(Reason: Increased protection in response to underground leak problems and remediation difficulty in underground applications. Coordinates with TCEQ requirements).

SECTION 5704

STORAGE

Section 5704.2.11.4 is amended to read as follows:

5704.2.11.4 Leak Prevention. Leak prevention for underground tanks shall comply with Sections 5704.2.11.4.1 through 5704.2.11.4.3. An approved method of secondary containment shall be provided for underground tanks and piping systems.

(Reason: Increased protection in response to underground leak problems and remediation difficulty in underground applications. Coordinates with TCEQ requirements.)

Section 5704.2.11.4.2 is amended to read as follows:

5704.2.11.4.2 Leak Detection. Underground storage tank systems shall be provided with an approved method of leak detection from any component of the system that is designed and installed in accordance with NFPA 30 and as specified in Section 5704.2.11.4.3.

(Reason: Reference to IFC Section 5704.2.11.4.3 amendment.)

5704.2.11.4.3 Observation wells. Approved sampling tubes of a minimum four inches

in diameter shall be installed in the backfill material of each underground flammable or combustible liquid storage tank. The tubes shall extend from a point 12 inches below the average grade of the excavation to ground level and shall be provided with suitable surface access caps. Each tank site shall provide a sampling tube at the corners of the excavation with a minimum of 4 tubes. Sampling tubes shall be placed in the product line excavation within 10 feet of the tank excavation and one every 50 feet routed along product lines towards the dispensers, a minimum of two are required.

(Reason: Provides an economical means of checking potential leaks at each tank site. This is a long-standing regional practice).

Section 5707.4 is amended to read as follows:

5707.4 Mobile Fueling Areas. During fueling, the mobile fueling vehicle and point of connection to the vehicle shall not be located on public streets, public ways or inside buildings. Fueling on the roof level of parking structures or other buildings is prohibited.

Mobile fueling sites shall be restricted to commercial, industrial, governmental, or manufacturing, where the parking area having such operations is primarily intended for employee vehicles. Mobile fueling shall be conducted for fleet fueling or employee vehicles only, not the public. Commercial sites shall be restricted to office- type or similar occupancies that are not primarily intended for use by the public.

(Reason: The public does not expect a hazardous operation to be occurring in a typical parking lot or for a fuel truck to be traversing such parking lot, temporarily fueling a vehicle, and moving on to the next area in the parking lot to fuel the next vehicle. Vehicular accidents occur in parking lots on a regular basis, but the presence of a fuel truck, especially one in the process of fueling a vehicle with gasoline, greatly adds to the potential risk involved in such accidents. By restricting such operations to the occupancies in question, the employees of the business may be adequately notified to expect such operations to occur in the parking lot).

CHAPTER 61

LIQUEFIED PETROLEUM GASES

SECTION 6103

INSTALLATION OF EQUIPMENT

Section 6103.2.1 is amended by adding a new Section 6103.2.1.8 to read as follows:

6103.2.1.8 Jewelry Repair, Dental Labs and Similar Occupancies. Where natural gas service is not available, portable LP-Gas containers are allowed to be used to supply approved torch assemblies or similar appliances. Such containers shall not exceed 20- pound (9.0 kg) water capacity. Aggregate capacity shall not exceed 60-pound (27.2 kg) water capacity. Each device shall be separated from other containers by not less than 20 feet.

(Reason: To provide a consistent and reasonable means of regulating the use of portable LP-Gas containers in these situations. Reduces the hazard presented by portable containers when natural gas is already available. Please note that current State Law does not allow for the enforcement of any rules more stringent than that adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law).

Section 6104.2 is amended by numbering the existing Exception as "1" and adding an Exception 2 to read as follows:

2. Except as permitted in Sections 308 and 6104.3.3, LP-gas containers are not permitted in residential areas.

(Reason: To provide a consistent and reasonable means of regulating the use LP-Gas containers. Reduces the hazard presented by such containers when natural gas is already available. References regional amendment to IFC 6104.3.3. Please note that current State Law does not allow for the enforcement of any rules more stringent than those adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law).

Section 6104.3 is amended by adding a new Section 6104.3.3 to read as follows:

6104.3.3 Spas, Pool Heaters, and Other Listed Devices. Where natural gas service is not available, an LP-gas container is allowed to be used to supply spa and pool heaters or other listed devices. Such containers shall not exceed 250-gallon water capacity per lot. See Table 6104.3 for location of containers.

Exception: Lots where LP-gas can be off-loaded wholly on the property where the tank is located may install up to 500 gallons above ground or 1,000 gallon underground approved containers.

(Reason: Allows for an alternate fuel source. Dwelling density must be considered and possibly factored into zoning restrictions. Reduces the hazard presented by over-sized LP-Gas containers. Please note that current State Law does not allow for the enforcement of any rules more stringent than those adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law).

SECTION 6107

SAFETY PRECAUTIONS and DEVICES

Section 6107.4 and 6109.13; change to read as follows:

6107.4 Protecting Containers from Vehicles. Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with NFPA 58 Section 312.

6109.13 Protection of Containers. LP-gas containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicle impact protection shall be provided as required by Section 6107.4.

Exception: Vehicle impact protection shall not be required for protection of LP-gas containers where the containers are kept in lockable, ventilated cabinets of metal construction.

(Reason: NFPA 58 does not provide substantial physical protection [it allows raised sidewalks, fencing, ditches, parking bumpers as 'vehicle barrier protection'] of the container(s) from vehicular impact as is required and has been required historically, as per Section 312, i.e. bollard protection. Further, the exception to Section 6109.13 would allow for portable containers in ventilated metal cabinets to not require any physical protection whatsoever from vehicular impact, regardless of the location of the containers. Please note that current State Law does not allow for the enforcement of any rules more stringent than those adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law).

APPENDIX B

FIRE-FLOW REQUIRMENTS FOR BUILDINGS

****Table B105.2; change footnote a. to read as follows:**

a. The reduced fire-flow shall be not less than 1,500 gallons per minute.

(Reason: The minimum fire-flow of 1,500 gpm for other than one- and two- family dwellings has existed since the 2000 edition of the IFC, as well as the Uniform Fire Code before that. Little to no technical justification was provided for the proposed code change at the code hearings. The board believes that the already-allowed 75 percent reduction in required fire-flow for the provision of sprinkler protection is already a significant trade-off. The minimum 1,500 gpm is not believed to be overly stringent for most of the public water works systems in this region, especially since it has existed as the requirement for so many years. Further, the continued progression of trading off more and more requirements in the codes for the provision of sprinkler protection has made these systems extremely operation-critical to the safety of the occupants and properties in question. In other words, should the sprinkler system fail for any reason, the fire-flow requirements drastically increase from that anticipated with a sprinkler-controlled fire scenario).

APPENDIX D

FIRE APPARATUS ACCESS ROADS

SECTION D 102

REQUIRED ACCESS

Section D102.1; change to read as follows:

D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing up to 75,000 85,000 pounds (34 050 38 556 kg).

(Reason: To address the current size of fire trucks in use – figure derived from DOT requirements for waiver of vehicle exceeding such weight and from current maximum

weights of fire trucks being purchased by jurisdictions in North Texas.)

SECTION D103

MINIMUM SPECIFICATIONS

Section D103.4; change to read as follows:

D103.4 Dead ends. Dead-end fire apparatus access roads more than 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance.
with Table D103.4.

TABLE D103.4
REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	**WIDTH (feet)**	**TURNAROUNDS REQUIRED**
0–150	20 24	None required
151–500	20 24	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
501–750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
Over 750	Special approval required	

For SI: 1 foot = 304.8 mm.

(Reason: Reflects current increased apparatus access roadway widths as indicated in the recommended amendment to 503.2.1.)

Section D103.6; change to read as follows:

D103.6 Signs. Marking. Striping, signs, or other markings, when approved by the fire code official, shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Striping, signs and other markings should be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.
(1) Striping – Fire apparatus access roads shall be continuously marked by painted lines of red traffic paint six inches (6") in width to show the boundaries of the lane. The words "NO PARKING FIRE LANE" or "FIRE LANE NO PARKING" shall appear in four inch (4") white letters at 25 feet intervals on the red border markings along both sides of the fire lanes. Where a curb is available, the striping shall be on the vertical face of the curb.
(2) Signs – Signs shall read "NO PARKING FIRE LANE" or "FIRE LANE NO PARKING" and shall be 12" wide and 18" high (See Figure D103.6). Signs shall have red letters on a white reflective background, using not less than 2" lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6'6") above finished grade. Signs shall be spaced not more than fifty feet (50') apart along both sides of the fire lane. Signs may be installed on permanent buildings or walls or as approved by the Fire Chief.

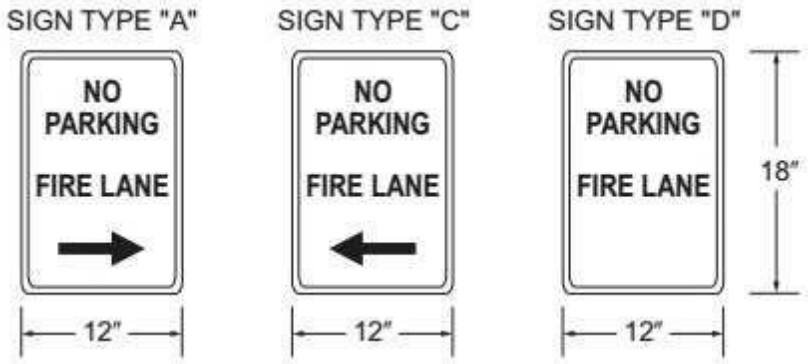

FIGURE D103.6
FIRE LANE SIGNS

(Reason: Reflects current markings for apparatus access roadways as indicated in the recommended amendment to Section 503.3)

Section D103.6.1 and D103.6.2; delete sections as follows:

D103.6.1Roads 20 to 26 feet in width. Fire lane signs as specified in

Section.
D103.6 shall be posted on both sides of fire apparatus access roads that are 20 to 26 feet wide (6096 to 7925 mm).
D103.6.2 Roads more than 26 feet in width. Fire lane signs as specified in Section D103.6 shall be posted on one side of fire apparatus access roads more than 26 feet wide (7925 mm) and less than 32 feet wide (9754 mm).

(Reason: Reflects current markings for apparatus access roadways as indicated in the recommended amendment to 503.3 and D103.6, which requires the signage on both sides of the fire apparatus access roads, regardless of width)

SECTION D104

COMMERCIAL and INDUSTRIAL DEVELOPMENTS

Section D104.3; change to read as follows:
D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses, or as approved by the fire code official.

(Reason: To provide some additional flexibility to the fire code official on the location of the two fire apparatus access roads.)

SECTION D105

AERIAL FIRE APPARATUS ACCESS ROADS

D105.3 Proximity to building. Unless otherwise approved by the fire code official, one or more of the required access routes meeting this condition shall be located not less than 15 feet (4572 mm) and not greater than 30 feet (9144 mm) from the building and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

(Reason: To provide some additional flexibility to the fire code official on the location of the aerial fire apparatus access roads).

SECTION D106

MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

Section D106.3; change to read as follows:

D106.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured

in a straight line between accesses, or as approved by the fire code official.

(Reason: To provide some additional flexibility to the fire code official on the location of the two fire apparatus access roads.)

SECTION D107

ONE- or TWO-FAMILY RESIDENTIAL DEVELOPMENTS

Section D107.2; change to read as follows:

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses, or as approved by the fire code official.

(Reason: To provide some additional flexibility to the fire code official on the location of the two fire apparatus access roads).

APPENDIX L

REQUIREMENTS FOR FIRE FIGHTER AIR REPLENISHMENT SYSTEMS

SECTION L101

GENERAL

Section L101.1 Scope. Fire fighter air replenishment systems (FARS) shall be provided in accordance with this appendix in new buildings when any of the following conditions occur:
1. Any new building is five or more stories in height.
2. Any new building with two or more floors below grade.
3. Any new building 500,000 square feet or more in size.

Each stairwell shall have a supply riser. SCBA fill panels shall be located on odd numbered floors commencing at the first level in the primary stairwell and on even numbered floors commencing at level two in the remaining stairwells. Fill panels in buildings over 500,000 square feet shall be located adjacent to each standpipe connection.

(Reason: Breathing air is critical for firefighting operations. Historically, fire departments have supplied air bottles by manually transporting air bottles up stairways or across long distances in a building, which is an extraordinarily intensive process and takes firefighters away from their primary mission of rescue and firefighting. The

FARS technology in Appendix L exists to address this issue using in-building air supply systems. Many jurisdictions in North Texas and across the country have already adopted this Appendix and are enforcing and installing these systems to improve the life safety of firefighters and enhance their firefighting capabilities in an emergency incident, which is one of the reasons for recommending this Appendix for adoption – to ensure regional consistency, as well as to improve mutual emergency aid among jurisdictions in North Texas).

Section L104.13.1; delete this section in its entirety.

(Reason: The amendment to Section L101.1 above addresses the location criteria for SCBA fill panels).

SECTION L104

DESIGN and INSTALLATION

Section L104.14; add paragraph to read as follows:

The external mobile air connection shall be located with approved separation from the Fire Department Connection (FDC) to allow functionality of both devices by first responders; shall be visible from and within 50 ft. of a fire apparatus access road along an unobstructed path; and shall be located in an approved signed, secured cabinet.

(Reason: To accommodate the needs of first responders to be able to locate and utilize the required connection to ensure air supply availability to this system, similar to the requirements of FDC's).