The following sections, paragraphs, and sentences of the *2021 International Building Code* are hereby amended as follows: Standard type is text from the IBC. Underlined type is text inserted. ~~Lined through type is deleted text from IBC.~~

Section 101.4; change to read as follows:

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.~~7~~8 and referenced elsewhere in this code, when specifically adopted, shall be considered part of the requirements of this code to the prescribed extent of each such reference. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the Electrical Code shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

Section 101.4.8; add the following:

101.4.8 Electrical. The provisions of the Electrical Code shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

(Reason: This was dropped when ICC quit publishing the ICC Electrical Code, but the Electrical Code still should be referenced regardless of how it is adopted.)

Section 103 and 103.1; amend to insert the Department Name

~~CODE COMPLIANCE AGENCY~~ BUILDING INSPECTIONS DEPARTMENT

103.1 Creation of enforcement agency. The ~~[INSERT NAME OF DEPARTMENT]~~ Building Inspections Department is hereby created and the official in charge thereof shall be known as the *building official*. The function of the agency shall be the implementation, administration and enforcement of the provisions of this code.

(Reason: Reminder to be sure ordinance reads the same as designated by the city.)

Section 105.2 Work exempt from permit; amend to read as follows:

105.2 Work exempt from permit. Exemptions from *permit* requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. *Permits* shall not be required for the following:

Building:

~~1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m_2).~~

~~2. Fences not over 7 feet (1829 mm) high.~~

~~3. Oil derricks.~~

~~4. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIA liquids.~~

~~5.~~ 1. (Remainder Unchanged)

~~6.~~ 2. (Remainder Unchanged)

~~7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.~~

~~8. Temporary motion picture, television and theater stage sets and scenery.~~

~~9. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 24 inches (610 mm) deep, are not greater than 5,000 gallons (18 925 L) and are installed entirely above ground.~~

~~10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.~~

~~11. Swings and other playground equipment accessory to detached one- and two-family dwellings.~~

~~12.~~ 3. Window awnings supported by an exterior wall of ~~in~~ Group R-3, as applicable in Section 101.2, and Group U occupancies, ~~supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support~~.

~~13. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.~~

~~**Electrical:**~~

1. ~~**Repairs and maintenance**: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.~~
2. ~~**Radio and television transmitting stations**: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installation of towers and antennas.~~
3. ~~**Temporary testing systems**: A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.~~

~~**Gas:**~~

1. ~~Portable heating appliance.~~
2. ~~Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.~~

~~**Mechanical:**~~

1. ~~Portable heating appliance.~~
2. ~~Portable ventilation equipment.~~
3. ~~Portable cooling unit.~~
4. ~~Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.~~
5. ~~Replacement of any part that does not alter its approval or make it unsafe.~~
6. ~~Portable evaporative cooler.~~
7. ~~Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors if 1 horsepower (0.75 kW) or less.~~

~~**Plumbing:**~~

1. ~~The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.~~
2. ~~The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided that such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.~~

Section 109; add Section 109.7, 109.8, and 109.8.1 to read as follows:

109.7 Re-inspection Fee. A fee as established by city council resolution may be charged when:

1. The inspection called for is not ready when the inspector arrives;

2. No building address or permit card is clearly posted;

3. Town approved plans are not on the job site available to the inspector;

4. The building is locked or work otherwise not available for inspection when called;

5. The job site is red-tagged twice for the same item;

6. The original red tag has been removed from the job site;

7. Failure to maintain erosion control, trash control or tree protection.

Any re-inspection fees assessed shall be paid before any more inspections are made on that job site.

109.8 Work Without Permit.

109.8.1 Investigation. Whenever work for which a permit is required by this code has been commenced without first obtaining a permit, a special investigation shall be made before a permit may be issued for such work.

(Reason: This fee is not a fine or penalty but is designed to compensate for time and trips when inspections are called for when not ready and to remove incentive to attempt to evade permits and code compliance.)

Section 110.3.6; Lath, gypsum board and gypsum panel product inspection; Delete exception

~~***Exception:** Gypsum board and gypsum panel products that are not part of a fire resistance rated assembly or a shear assembly.*~~

(Reason: Lath or gypsum board inspections are not typically performed in this area.)

Section 116.5; add Section 116.5.1 to read as follows:

116.5 Damage or renovations to existing structures. When a structure is renovated or is damaged to 50% of the gross floor area or if the value of the damage or renovation exceed 50% of the value of the structure at the time of damage or renovation all requirements of this code shall be complied with in any such repair, fix, or renovation.

Section 202; amend definitions of Ambulatory Care Facility, Atrium, High-Rise Building, and Special Inspector 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 ~~or staff has accepted responsibility for care recipients already incapable~~. This group may include but not be limited to the following:

- Dialysis centers;
- Sedation dentistry;
- Surgery centers;
- Colonic centers;
- Psychiatric centers.

ATRIUM. ~~A vertical space that is closed at the top, connecting two or more *stories* in Group I-2 and I-3 occupancies or~~ An opening connecting three or more *stories* in all other occupancies.

HIGH-RISE BUILDING. A building with an occupied floor located more than ~~75 feet (22 860 mm)~~ 55 feet (16,764 mm) above the lowest level of fire department vehicle access.

SPECIAL INSPECTOR. A qualified person employed or retained by an *approved* agency ~~and approved by the building official~~ who shall prove to the satisfaction of the registered design professional in

responsible charge and the Building Official as having the competence necessary to inspect a particular type of construction requiring *special inspection*.

*(Reason: To clarify the range of uses included in the definition. [Explanatory note related to **Ambulatory Care Facilities**: This group of uses includes medical or dental offices where persons are put under for dental surgery or other services. Section 903.2.2 will now require such uses to be sprinklered if on other than the floor of exit discharge or if four or more persons are put under on the level of exit discharge. Recommend (1.) jurisdictions document any pre-existing non-conforming conditions prior to issuing a new C of O for a change of tenant and, (2.) On any medical or dental office specify on C of O the maximum number of persons permitted to be put under general anesthesia. It is recommended that before a Certificate of Occupancy is issued, a letter of intended use from the business owner shall be included and a C of O documenting the maximum number of care recipients incapable of self preservation allowed.)*
*(Reason, **Atrium**: Accepted practice in the region based on legacy codes. Section 1019 permits unenclosed two story stairways under certain circumstances.)*
*(Reason, **High-Rise Building**: To define high-rise, as it influences sprinkler requirement thresholds based on the fire fighting capabilities of a jurisdiction.)*
*(Reason, **Special Inspector**: The registered design professional in responsible charge should be included.)*

Section 202; amended to add new definitions for Assisted Living Facilities and Repair Garage to read as follows:

ASSISTED LIVING FACILITIES. A building or part thereof housing persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff.

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 serving of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement and other such minor repairs.

Section 303.1; amended to add Section 303.1.2 Associated with Group E Occupancies to read as follows:

303.1.2 Associated with Group E occupancies. A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy, when applying the assembly requirements of Chapters 10 and 11.

(Reason: To clarify that egress and accessibility requirements are applicable for assembly areas, i.e. cafeteria, auditoriums, etc.)

Section 304.1; amended to add the following to the list of occupancies to read as follows:

Fire stations
Police stations with detention facilities for 5 or less

(Reason: Consistent with regional practice dating back to the legacy codes.)

Section 307.1.1; add the following sentence to Exception 4 to read as follows:

4. Cleaning establishments… *{Text unchanged}* …with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 711, or both. See also IFC Chapter 21, Dry Cleaning Plant provisions.

(Reason: To call attention to detailed requirements in the Fire Code.)

Section 402.4.2.1 Tennant Separation amend to read as follows:

402.4.2.1 Tenant separations. Each tenant space shall be separated from other tenant spaces by a *fire partition* wall sheet rocked on both sides and complying with Section 708. ~~A tenant separation wall is not required between any tenant space and the mall.~~

Exception: Existing conditions shall be subject to field inspection and review for approval at that time.

Section 403.1, Exception 3; amend to read as follows:

3. The open air portion of a building *[remainder unchanged].*

(Reason: To clarify enclosed portions are not exempt.)

Section 403.3.2, Water supply to required fire pumps; amend to read as follows:

403.3.2 Water supply to required fire pumps. In ~~all~~ buildings that are more than ~~420 feet (129 m) in building height and buildings of Type IVA and IVB construction that are more than 120 feet (36 576 mm)~~ 120 feet (36.5 m) in *building height*, required fire pumps shall be supplied by connections to no~~t~~ 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. (No change to exception).

Section 403.3, Exception; amend to read as follows:

403.3 Automatic sprinkler system. Buildings and structures shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 403.3.3.

Exception: An *automatic sprinkler system* shall not be required in spaces or areas of ~~telecommunications equipment buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided that those spaces or areas are equipped throughout with an automatic fire detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 or not less than 2-hour horizontal assemblies constructed in accordance with Section 711, or both~~ open parking garages in accordance with Section 406.5.

(Reason: To provide adequate fire protection to enclosed areas.)

Section 404.5; delete Exceptions.

(Reason: Consistent with amended atrium definition.)

Section 404.10, Exit stairways in an atrium; amend to read as follows:

404.10 Exit stairways in an atrium. Where an *atrium* contains an ~~interior~~ *exit access stairway* all the following shall be met:

1. The entry to the *exit access stairway* is the edge of the closest riser of the *exit access stairway*.
2. The entry of the *exit access stairway* shall have access from a minimum of two directions.
3. The distance between the entry to an *exit access stairway* in an *atrium* and the entrance to a minimum of one *exit access stairway* enclosed in accordance with Section 1023.2 shall comply with the separation required by Section 1007.1.1.
4. *Exit* access travel distance shall be measured to the closest riser of the *exit access stairway*.
5. Not more than 50 percent of the *exit access stairways* shall be located in the same *atrium*.

Section 406.3.3.1 Carport separation; amend read as follows:

406.3.3.1 Carport separation. A fire separation is not required between a Group R-~~3~~2 and U carport, provided that the carport is entirely open on ~~two or more~~ all sides and ~~there are not enclosed areas above~~ that the distance between the two is at least 10 feet (3048 mm).

(Reason: Simplifies the fire separation distance and eliminates the need to obtain opening information on existing buildings when adding carports in existing apartment complexes. Consistent with legacy codes in effect in region for years and no record of problems with car fires spreading to apartments as a result.)

Section 423.5.1 Required occupant capacity; amend to read as follows:

423.5.1 Required occupant capacity. The required occupant capacity of the *storm shelter* shall include all of the buildings on the site and shall be the ~~greater of the following~~:

1. ~~The~~ t*Total occupant* load of the classrooms, vocational rooms and offices in the Group E occupancy.
2. ~~The occupant load of the largest indoor assembly space that is associated with Group E occupancy.~~

Exceptions:

1. Where a new building is being added on an existing Group E site, and where the new building is not of sufficient size to accommodate the required occupant capacity of the *storm shelter* for all of the buildings on the site, the storm shelter shall at a minimum accommodate the required occupant capacity for the new building.
2. Where approved by the *building official*, the required occupant capacity of the shelter shall be permitted to be reduced by the occupant capacity of any existing *storm shelters* on the site.
3. Where approved by the building official, the actual number of occupants for whom each occupied space, floor or building is designed, although less than those determined by occupant load calculation, shall be permitted to be used in the determination of the required design occupant capacity for the storm shelter.

Section 503.1 General; amend to read as follows:

503.1 General. Unless otherwise specifically modified in Chapter 4 and this chapter, *building height*, number of *stories* and *building area* shall not exceed the limits specified in Sections 504 and 506 based on the type of construction as determined by Section 602 and the occupancies as determined by Section 302 except as modified hereafter. *Building height*, number of stories and *building* area provisions shall be applied independently. For the purposes of determining area limitations, height limitations and type of construction, each portion of a building separated by one or more *fire walls* complying with Section 706 shall be considered to be a separate building. Where a building contains more than one distinct type of construction, the building shall comply with the most restrictive area, height and stories, for the lesser type of construction or be separated by fire walls, except as allowed in Section 510.

Table 506.2; delete footnote "i" from the table.

~~i. The maximum allowable area for a single-story non sprinklered Group U greenhouse is permitted to be 9000 square feet or the allowable area shall be permitted to comply with Table C102.1 of Appendix C.~~

(Reason: To eliminate the need for Appendix C adoption and remain consistent with 6000 sq. ft. sprinkler provision.)

Section 506.3.1 Minimum percentage of perimeter; amend to read as follows:

506.3.1 Minimum percentage of perimeter. To qualify for an area factor increase based on frontage, a building shall have not less than 25 percent of its perimeter on a *public way* or open space. Such open space shall be either on the same lot or dedicated for pubic use and shall be accessed from a street or approved *fire lane*.

Section 602.1.1 Minimum requirements; add sentence to read as follows:

602.1.1 Minimum Requirements. [Existing Text to remain]

Where a building contains more than one distinct type of construction, the building shall comply with the most restrictive area, height, and stories for the lesser type of construction or be separated by fire walls.

(Reason: To create definite language that requires separation between dissimilar building types.)

Section 708.4.2 Fireblocks and draftstops in combustible construction; amend to read as follows:

708.4.2 Fireblocks and draftstops in combustible construction. *[Body of text unchanged]*

Exceptions:

1. Buildings equipped with an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, or in accordance with Section 903.3.1.2 provided that sprinkler protection is provided in the space between the top of the fire partition and the underside of the floor or roof sheathing, deck or slab above as required for systems complying with Section 903.3.1.1. Portions of buildings containing concealed spaces filled with noncombustible insulation as permitted for sprinkler omission shall not apply to this exception for draftstopping. *[Remainder unchanged]*

Reason: (The most common exception used to eliminate the need for sprinklers in concealed spaces of combustible construction is to fill the space with noncombustible insulation. This exception was changed in 2010 to permit a 2-inch air gap at the top of the filled space. A space compliant with the permitted omission above would allow hot gas and smoke to spread unimpeded throughout a building not provided with draftstopping. For this reason, omission of sprinklers permitted in accordance with NFPA 13 referenced standard should not be permitted with IBC exception requiring draftstopping in combustible construction.)

Section 712.1.9 Two-story openings; amended to read as follows:

712.1.9 Two-story openings. *[Body of text unchanged]*

1. Does not connect more than two stories.
2. Does not penetrate a horizontal assembly that separates fire areas or smoke barriers that separate smoke compartments.
3. Is not concealed within the construction of a wall or a floor/ceiling assembly.
4. Is not open to a corridor in Group I and ~~R~~ H occupancies.
5. Is not open to a corridor on nonsprinklered floors.
6. Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.

Section 718.3 Draftstopping in floors; exceptions is amended to read as follows:

718.3 Draftstopping in floors. *[Body of text unchanged]*

Exceptions: Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. and provided that in combustible construction, sprinkler protection is provided in the floor space.

(Reason: To remain consistent with changes in 708.4.2 code.)

Section 901.6.1 Automatic sprinkler system; add Section 901.6.1.1 to read as follows:

901.6.1.1 Standpipe Testing. Building owners/managers must maintain and test standpipe systems 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 is 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 with regard to 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 flowed external to the building shall not be conducted during freezing conditions or during the day prior to expected nighttime 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 903.1.1; amend to read as follows:

903.1.1 Alternative Protection. Alternative automatic *fire-extinguishing systems* complying with Section 904 shall be permitted ~~instead of~~ in addition to automatic sprinkler protection where recognized by the applicable standard ~~and~~, 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 Where required; amend to read as follows and delete the exception:

903.2 Where required. ~~Approved a~~Automatic ~~s~~Sprinklers ~~systems in new buildings and structures~~ shall ~~be provided in the locations described in Sections 903.2.1 through 903.2.12~~ not be installed in elevator machine rooms, elevator machine spaces, and elevator hoistways, 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 the fact that such telecom areas pose an undue fire risk to the structural integrity of the building.)

Section 903.2.4.2 Group F-1 distilled spirits; amend 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.

Section 903.2.9 Group S-1; amend by adding Section 903.2.9.3 and add Section 903.2.9.3.1 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.

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

(Reason: Fire departments are unable to inspect 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 903.2.9.4 Group S-1 upholstered furniture and mattresses; amend by deleting the exception.

903.2.9.4 Group S-1 upholstered furniture and mattresses. [Body of text unchanged]

> ~~**Exception**: Self-service storage facilities not greater than one story above grade plane where all storage spaces can be accessed directly from the exterior.~~

Section 903.2.9; 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.

Section 903.2.11; amend Section 903.2.11.3 and add Sections 903.2.11.7, 903.2.11.8, and 903.2.11.9 to read as follows:

903.2.11.3 Buildings over ~~55~~ 35 feet ~~or more~~ in height. An *automatic sprinkler system* shall be installed throughout buildings that have one or more stories ~~with an occupant load of 30 or more~~, other than penthouses in compliance with Section 1510 of the *International Building Code*, that is located ~~55~~ 35 feet (~~16 764~~ 10 668 mm) or more above the lowest level of fire department vehicle access, measured to the finished floor.

Exceptions~~:~~

~~1.~~ Open parking structures in compliance with Section 406.5 of the *International Building Code, having no other occupancies above the subject garage*.

~~2. Occupancies in Group F-2.~~

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 spraying rooms shall be protected by an approved automatic fire-extinguishing system.

903.2.11.9 Buildings over 5,000 sq. ft. An automatic sprinkler system shall be installed throughout all buildings with a building area 5,000 sq. ft. or greater, as well as in all existing buildings that are enlarged to be 5,000 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*.

(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 Exempt locations; amend to read as follows:

903.3.1.1.1 Exempt Locations. When approved by the *fire code official*, ~~A~~automatic sprinklers shall not be required in the following rooms or areas where such *...{text unchanged}…* 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.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, whe~~re~~n *approved* by the 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. ~~Rooms or areas that are of noncombustible construction with wholly noncombustible contents.~~
5. ~~Fire service access e~~Elevator machine rooms, ~~and~~ machinery spaces, and hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.

6. {Delete.}

(Reason: Gives clarification. 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 NFPA 13R sprinkler systems; amend 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 ~~fewer~~ 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.

[Remainder of section unchanged]

Section 903.3.1.2.2 Corridors and balconies in the means of egress; amend 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 ~~in the means of egress where any of the following conditions apply~~.

~~1. Corridors with combustible floor or walls.~~
~~2. Corridors with an interior change of direction exceeding 45 degrees (0.79 rad).~~
~~3. Corridors that are less than 50 percent open to the outside atmosphere at the ends.~~
~~4. Open-ended corridors and associated exterior stairways and ramps as specified in Section 1027.6, Exception 3.~~
~~5. Egress balconies not complying with Sections 1021.2 and 1021.3.~~

Section 903.3.1.2.3; amend to read as follows:

Section 903.3.1.2.3 Attached Garages and Attics. ~~Attic~~ Sprinkler protection ~~shall be provided as follows~~ is required in attached garages, and in the following attic spaces:

1. [Remainder Unchanged]
2. [Remainder Unchanged]
3. ~~Where located in a building of Type III, Type IV or Type V construction designed in accordance with Section 510.2 or 510.4, attics not required by Item 1 to have sprinklers shall comply with one of the following if the roof assembly is located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access needed to meet the provisions in Section 503.~~

   ~~3.1 Provide automatic sprinkler system protection.~~
   ~~3.2 Construct the attic using noncombustible materials.~~
   ~~3.3 Construct the attic using fire-retardant-treated wood complying with Section 2303.2.~~
   ~~3.4 Fill the attic with noncombustible insulation.~~

4. 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.

~~The height of the roof assembly shall be determined by measuring the distance from the lowest required fire vehicle access road surface adjacent to the building to the eave of the highest pitched roof, the intersection of the highest roof to the exterior wall, or the top of the highest parapet, whichever yields the greatest distance. For the purpose of this measurement, required fire vehicle access roads shall include only those roads that are necessary for compliance with Section 503 of the International Fire Code:~~

5. 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 head 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.
   4.5 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; amend 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; Group 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 903.3.1.4; add new Section 903.3.1.4 to read as follows:

[F] 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, preaction, 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 sprinklering 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; amend 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 standards; however, every water-based fire protection system shall be designed with a 10-psi safety factor. Reference Section 507.4 for additional design requirements.

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

Section 903.4; amend by adding the following paragraph after "Exceptions," to read as follows:

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; amend by adding the following sentence at the end of the section to read as follows:

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.)

Section 905.2; amend to read as follows:

905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14. ~~Fire department connections for standpipe systems shall be in accordance with Section 912.~~ Manual dry standpipe systems shall be supervised with a minimum of 10 psig and a maximum of 40 psig air pressure with a high/low alarm.

(Reason: To define manual dry standpipe supervision requirements. Helps ensure the integrity of the standpipe system via supervision, such that open hose valves will result in a supervisory low air alarm.)

Section 905.3; amend by adding Section 905.3.9 and exception 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 200 feet (60960 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 the fire code official.
2. R-2 occupancies of 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. Manual dry option added this edition.)

Section 905.4, amend paragraphs 1, 3, and 5 and add new paragraph 7 to read as follows:

1. In every required ~~interior~~ *exit stairway*, a hose connection shall be provided for each story above and below *grade plane*. Hose connections shall be located at ~~the main floor~~ an intermediate landing between stories, unless otherwise *approved* by the fire code official.
   Exception: {No change}
2. {No change.}
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 a~~n~~ ~~interior~~ *exit stairway* hose connection by a {remainder of text unchanged}.
4. {No change.}
5. Where the roof has a slope less than 4 units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a two-way ~~a~~ hose connection ~~shall be~~ located to serve the roof or at the highest landing of a~~n~~ ~~interior~~ *exit stairway* with stair access to the roof provided in accordance with Section 1011.12.
6. {No change.}
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 905.8; amend "Exception," to read as follows:

Exception: Where subject to freezing and in accordance with NFPA 14. Additionally, manual dry standpipe systems shall be supervised with a minimum of 10 psig and a maximum of 40 psig air pressure with a high/low Supervisory alarm.

Section 905.9; amend by adding the following paragraph after "Exceptions," to read as follows:

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 906.1.1; amended by deleting exception 3 in its entirety.

Section 907.1; amended to add Section 907.1.4 to read as follows:

907.1.4 Design standards. Where a new fire alarm system is installed, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke detectors shall have analog initiating devices.

(Reason: Provides for the ability of descriptive identification of alarms, and reduces need for panel replacement in the future. Updated wording to match the language of the new requirement at 907.5.2.3. Change of terminology allows for reference back to definitions of NFPA 72.)

Section 907.2.1; amend 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 ~~where the~~ having an *occupant load* ~~due to the assembly occupancy is~~ of 300 or more persons, or where the ~~Group A~~ occupant load is 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 the Group E occupancy.

Exception: {No change.}

Activation of fire alarm notification appliances shall:

1. Cause illumination of the *means of egress* with light of not less than 1 foot-candle (11 lux) 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; amend to read 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 educational occupancies. Wher~~e~~n *automatic sprinkler systems* or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm 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, whether portable buildings or the main building, will be considered one building for alarm occupant load consideration and interconnection of alarm systems.

Exceptions:

1. {No change.}

    1.1. Residential In-Home day care with not more than 12 children may use interconnected single station detectors in all habitable rooms. (For care of more than five children 2 1/2 or less years of age, see Section 907.2.6.)
    1.2. Residential In-Home day care with not more than 12 children may use interconnected single station detectors in all habitable rooms. (For care of more than five children 2 ½ years of age, see Section 907.2.6.) {No change to remainder of exceptions.}

(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; amend 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 ~~three~~

~~stories or greater in height~~ for interior corridors and interior common areas. Visible notification appliances are not required within storage units.

Exception: {No change.}

Section 907.2.11.1; amend to read as follows:

Section 907.2.11.1 Group R-1. Single- or multiple-station smoke alarms and carbon monoxide alarms shall be installed and maintained in all the following locations in Group R-1:

1. In sleeping areas.
2. In every room in the path of the means of egress from the sleeping area to the door leading from the sleeping unit.
3. In each story within the sleeping unit, including basements. For sleeping units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. For new construction, an approved carbon monoxide alarm shall be installed outside of each separate area in the immediate vicinity of the bedrooms in dwelling units that have an attached garage or gas fired appliance.
5. Where work requiring a permit occurs in existing dwellings that have attached garages or gas fired appliances, carbon monoxide alarms shall be provided.

Section 907.2.13; amend paragraph 3 under "Exceptions," to read as follows:

3. Open air portions of buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code*; however, this exception does not apply to accessory uses including but not limited to sky boxes, 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; amend by adding Section 907.4.2.7 to read as follows:

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

(Reason: Helps to reduce false alarms.)

Section 907.6.1; amend by adding Section 907.6.1.1 to read as follows:

907.6.1.1 Wiring Installation. All fire alarm systems shall be installed in such a manner that a 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.)

Section 907.6.3; amend by deleting all four Exceptions.

(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems.)

Section 907.6.6; amend by adding a sentence at end of the paragraph to read as follows:

See 907.6.6 for the required information transmitted to the supervising station.

(Reason: Deleted Previous code amendment Section 909.22, For removal because it is already in the code in Sections 909.20.5, 909.20.6, 909.20.6.1, 909.20.6.2, and 909.20.6.3.)

Sections 909.20.5; amend to read as follows:

909.20.5 Stairway ramp pressurization alternative. Where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.1.1, ~~the vestibule is not required, provided that each~~ and the stair pressurization alternative is chosen for compliance with building code requirements for a smokeproof enclosure, *interior exit stairways or ramps* ~~is~~ shall be pressurized to ~~not less than~~ a minimum of 0.10 inches of water (25 Pa) and ~~not more than~~ a maximum of 0.35 inches of water (87 Pa) in the *shaft* relative to the building measured with all *interior exit stairway* and *ramp* doors closed under maximum anticipated conditions of stack effect and wind effect. Such systems shall comply with Section 909, including the installation of a separate fire-fighter's some control panel as per Section 909.16, and a smoke control permit shall be required from the Fire Department as per Section 105.7.

Sections 909.20.7 through 909.20.7.3; amend to read as follows:

909.20.7 Ventilating equipment. The activation of ventilating equipment ~~required by the alternatives in Sections 909.20.4, 909.20.5 and 909.20.6~~ for the stair or ramp pressurization system shall be by smoke detectors installed at each floor level at an *approved* location at the entrance to the *smokeproof enclosure*. When the closing device for the *stairway* ~~and~~ or *ramp shaft* and vestibule doors is activated by smoke detection or power failure, mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.3.

909.20.7.1 Ventilating systems. *Smokeproof enclosure* ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the *smokeproof enclosure* or connected to the *smokeproof enclosure* by ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 of the building code or *horizontal assemblies* constructed in accordance with Section 711 of the building code, or both.
2. Equipment, control wiring, power wiring and ductwork shall be located within the *smokeproof enclosure* with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 of the building code or *horizontal assemblies* constructed in accordance with Section 711 of the building code, or both.
3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour *fire barriers* constructed in accordance with Section 707 of the building code or *horizontal assemblies* constructed in accordance with Section 711 of the building code, or both.

Exceptions:

1. ~~Control wiring and power wiring located outside of a 2-hour fire barrier construction shall be protected using any one of the following methods:~~
2. ~~Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 2 hours.~~ Control wiring and power wiring utilizing a 2-hour rated cable or cable system.
3. Where encased with not less than 2 inches (51 mm) of concrete.

4. Control wiring and power wiring protected by a listed *electrical circuit protection system*~~s~~ ~~shall have~~ with a *fire-resistance rating* of not less than 2 hours. ~~Electrical circuit protective systems shall be installed in accordance with their listing requirements.~~

909.20.7.2 Standby power. Mechanical vestibule and *stairway* and *ramp shaft* ventilation systems and automatic fire detection systems shall be provided with standby power in accordance with Section 2702 of the building code.

909.20.7.3 Acceptance and testing. Before the mechanical equipment is *approved*, the system shall be tested in the presence of the ~~building~~ *fire code official* to confirm that the system is operating in compliance with these requirements.

Section 910.2; amend to read as follows:

910.2 Where required. Smoke and heat vents or a mechanical smoke removal system shall be installed as required by Section 910.2.1, 910.2.2, and 910.3.2.

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 ~~not~~ 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 ~~not~~ 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.)

Section 910.2; amend by adding Section 910.2.3 to read as follows:

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 15,000 square feet (1394 m^2) 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.)

Section 910.3.4; amend Section 910.3.4 and add Sections 910.3.4.1 and 910.3.4.2 to read as follows:

910.3.4 Vent operation. Smoke and heat vents shall be capable of being operated by *approved* automatic and manual means. Automatic operation of smoke and heat vents shall conform to the provisions of Sections 910.3.2.1 through 910.3.2.3.

910.3.4.1 Sprinklered buildings. Where installed in buildings equipped with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically. The automatic operating mechanism of the smoke and heat vents shall operate at a temperature rating at least 100 degrees F (approximately 38 degrees Celsius) greater than the temperature rating of the sprinklers installed.

Exception: Manual only systems per Section 910.2.

910.3.4.2 Nonsprinklered Buildings. Where installed in buildings not equipped with an approved automatic sprinkler system, smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100°F (56°C) and 220°F (122°C) above ambient.
Exception: Listed gravity-operated drop out vents.

(Reason: Amendment continues to keep applicable wording from prior to the 2012 edition of the IFC. Specifically, automatic activation criteria is no longer specifically required in the published code. Specifying a temperature range at which smoke and heat vents should activate in sprinklered buildings helps to ensure that the sprinkler system has an opportunity to activate and control the fire prior to vent operation.)

Section 910.4.3.1; amend to read as follows:

910.4.3.1 Makeup Air. Makeup air openings shall be provided within 6 feet (1829 mm) of the floor level. Operation of makeup air openings shall be ~~manual or~~ 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 910.4.4; amend to read as follows:

Section 910.4.4 Activation. The mechanical smoke removal system shall be activated ~~by manual controls only~~ automatically by the automatic sprinkler system or by an approved fire detection system. Individual manual controls shall also be provided.

Exception: Manual only systems per Section 910.2.

Section 912.2; amend 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 913.2.1; amend by adding Section 913.2.1.1 and exception to read as follows:

913.2.1.1 Fire pump room access. 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 IFC 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 IFC 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 913.4; amend by adding the following sentence at the end of the section:

The fire-pump system shall also be supervised for "loss of power," "phase reversal," and "pump running" conditions by supervisory signal on district circuits.

Section 1006.2.1; amend Exception 3 to read as follows:

3. Unoccupied rooftop mechanical rooms and *penthouses* are not required to comply with the common path of egress travel distance measurement.

Section 1006.2.2; amend by adding Section 1006.2.2.7 to as follows:

1006.2.2.7 Electrical rooms. For electrical rooms, special exiting requirements may apply. Reference the electrical code as adopted.

(Reason: Cross reference necessary for coordination with the NEC which has exiting requirements as well.)

Section 1009.1; amend by adding paragraph 3 under "Exceptions," to read as follows:

3. 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 be in compliance with the requirements of Section 1009.

Section 1009.8; amend by adding the following Exception 7:

7. Buildings regulated under State Law and built in accordance with State registered plans, including variances or waivers granted by the State, shall be deemed to be in compliance with 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 1010.2.5; amend exceptions 3 and 4 to read as follows:

Exceptions:
3. Where a pair of doors serves an *occupant load* of less than 50 persons in a Group B, F, M or S occupancy… (remainder unchanged)
4. Where a pair of doors serves a Group A, B, F, M or S occupancy. (remainder unchanged)

(Reason: Application to M occupancies reflects regional practice; No. 4 expanded to Group A due to it being a similar scenario to other uses; No. 4 was regional practice.)

Section 1015.8; amend paragraph 1 to read as follows:

1. Operable windows where the top of the sill of the opening is located more than ~~75~~ 55 feet (~~22 860~~ 16764 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F2006~~-17~~.

Section 1020.2 Construction; add exception 6 to read as follows:

6. In unsprinklered group B occupancies, 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 must activate self-annunciating alarms audible in all areas within the corridor. Smoke detectors must be connected to an approved automatic fire alarm system where such system is provided.

(Reason: Regionally accepted alternate method.)

Section 1020.7; amend to read as follows:

1020.7 Corridor continuity. All corridors ~~Fire-resistance-rated corridors~~ shall be continuous from the point of entry to an *exit* and shall not be interrupted by intervening rooms. ~~Where the path of egress travel within a fire-resistance-rated corridor to the exit includes travel along enclosed exit access stairways or ramps, the fire resistance rating shall be continuous for the length of the stairway or ramp and for the length of the connecting corridor on the adjacent floor leading to the exit.~~

~~**Exceptions:**~~

~~1. Foyers, lobbies or reception rooms constructed as required for corridors shall not be construed as intervening rooms.~~
~~2. Enclosed elevator lobbies as permitted by Item 1 of Section 1016.2 shall not be construed as intervening rooms.~~

Section 1030.1.1.1 Spaces under grandstands and bleachers; delete this section.

(Reason: Unenforceable.)

****Section 1101.1 Scope; add exception to Section 1101.1 as follows:**

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

(Reason: To accommodate buildings regulated under state law. Further clarified in 2015 to mean components that are specifically addressed by TDLR shall be exempt.)

Section 1101.1; amended by adding "Exception," to read as follows:

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

Table 1505.1; amend by amending footnote "b" to read as follows and deleting footnote "c":

b. Nonclassified roof coverings shall be permitted on buildings of ~~Group R-2 and~~ U occupancies~~, where there is a minimum fire separation distance of 6 feet measured from the leading edge of the roof~~ having not more than 120 sq. ft. of projected roof area. When exceeding 120 sq. ft. of projected roof area, buildings of U occupancies may use non-rated non-combustible roof coverings.

Section 1510.1; amend to read as follows:

1510.1 General. ~~A radiant barrier installed above a deck shall comply with Sections 1510.2 through 1510.4.~~ Materials and methods of applications used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15. All individual replacement shingles shall be in compliance with the rating required by Table 1505.1.

Section 1809.5.1; delete section in its entirety.

Section 2211.1; amend by adding Exception 5 to read as follows:

5. All framed walls top plates must be braced and supported by structural members to ceiling steel or roof at 6' (foot) on center spacing. (Lay in grid is not a structural support.)

Section 2308.5.8; amend to read as follows:

2308.5.8 Pipes in walls. Stud partitions containing plumbing, heating or other pipes 2 inches and larger shall be ~~framed~~ installed in a 2" x 6" stud wall and top/bottom plates and the joist underneath spaced to provide proper clearance for the piping. {Remainder of text unchanged.}

Section 2702; amend by adding Section 2702.5 to read as follows:

2702.5 Designated critical operations area (DCOA): In areas within a facility or site requiring continuous operation for the purpose of public safety, emergency management, national security or business continuity, the power systems shall comply with NFPA 70 Article 708.

Section 2901.1; amend by adding a sentence to read as follows:

[P] 2901.1 Scope. {*existing text to remain*} The provisions of this Chapter are meant to work in coordination with the provisions of Chapter 4 of the International Plumbing Code. Should any conflicts arise between the two chapters, the Building Official shall determine which provision applies.

(Reason: Gives building official discretion.)

Section 2902.1; amend by adding the following sentence to read as follows:

{Existing text to remain.} In other than E Occupancies, the minimum number of fixtures in Table 2902.1 may be lowered, if requested in writing, by the applicant stating reasons for a reduced number and approved by the Building Official.

(Reason: To allow flexibility for designer to consider specific occupancy needs.)

Table 2902.1; amend by adding footnote g to read as follows:

g. Drinking fountains are not required in M Occupancies with an occupant load of 100 or less, B Occupancies with an occupant load of 25 or less, and for dining and/or drinking establishments.

(Reason: Adjustment meets the needs of specific occupancy types.)

Section 2902.1; amend by adding new Section 2902.1.4 to read as follows:

2902.1.4 Additional fixtures for food preparation facilities. In addition to the fixtures required in this Chapter, all food service facilities shall be provided with additional fixtures set out in this section.

2902.1.4.1 Hand washing lavatory. At least one hand washing lavatory shall be provided for use by employees that is accessible from food preparation, food dispensing and ware washing areas. Additional hand washing lavatories may be required based on convenience of use by employees.

2902.1.4.2 Service sink. In new or remodeled food service establishments, at least one service sink or one floor sink shall be provided so that it is conveniently located for the cleaning of mops or similar wet floor cleaning tool and for the disposal of mop water and similar liquid waste. The location of the service sink(s) and/or mop sink(s) shall be approved by the Town of Bartonville's health department.

(Reason: Coordinates Health law requirements with code language for consistent regional practice.)

Section 3001.2 Emergency elevator communication systems for the deaf, hard of hearing and speech impaired; delete this section in its entirety.

(Reason: Per Elevator manufacturers input, they were not consulted prior to code approval and technology of elevator provisions as submitted are not currently available to provide this feature.)

Section 3002.1; amend by adding exceptions to read as follows:

Exceptions:

1. Elevators completely located within atriums shall not require hoistway enclosure protection.

2. Elevators in open or enclosed parking garages that serve only the parking garage, shall not require hoistway enclosure protection.

(Reason: Provides specific Code recognition that elevators within atriums and within parking garages do not require hoistway enclosure protection. Amendment needed since specific Code language does not currently exist.)

Section 3005.4; amend to read as follows:

3005.4 Machine rooms, control rooms, machinery spaces and control spaces. ~~The following rooms and~~ Elevator machine rooms, control rooms, control spaces and machinery spaces shall be enclosed with *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.

~~1. Machine rooms~~
~~2. Control rooms~~
~~3. Control spaces~~
~~4. Machinery spaces outside of the hoistway enclosure~~

The *fire-resistance rating* shall be not less than the required rating of the hoistway enclosure served by the machinery. Openings in the *fire barriers* shall be protected with assemblies having a *fire protection rating* not less than required for the hoistway enclosure door.

Exceptions:

1. ~~For other than fire service access elevators and occupant evacuation elevators, where machine rooms, machinery spaces, control rooms and control spaces do not abut and do not have openings to the hoistway enclosure they serve, the fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, shall be permitted to be reduced to a 1-hour fire-resistance rating.~~ Elevator machine rooms, control rooms, machinery spaces and

control spaces completely located within atriums shall not require enclosure protection.

2. ~~For other than fire service access elevators and occupant evacuation elevators, in buildings for stories or less above grade plane where machine room, machinery spaces, control room and control spaces do not abut and do not have openings to the hoistway enclosure the serve, the machine room, machinery spaces, control rooms and control spaces are not required to be fire-resistance rated.~~ Elevator machine rooms, control rooms, machinery spaces and control spaces in open or enclosed parking garages that serve only the parking garage, shall not require enclosure protection.

(Reason: This amendment eliminates code language to be consistent with the regional goal to require passive enclosures of these areas unless a hoistway enclosure is not required by other Code provisions. See companion change to eliminate fire sprinklers thereby eliminating shunt trip.)

Section 3005.5; amend by adding subsections 3005.5.1, 3005.5.1.1, 3005.5.1.1.1, 3005.5.1.1.2, 3005.5.1.2, 3005.5.1.3, and 3005.5.1.4 to read as follows:

3005.5.1 Fire protection in machine rooms, control rooms, machinery spaces and control spaces.

3005.5.1.1 Automatic sprinkler system. The building shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3005.5.1.1.1.

3005.5.1.1.1 Prohibited locations. Automatic sprinklers shall not be installed in machine rooms, elevator machinery spaces, control rooms, control spaces and elevator hoistways.

3005.5.1.1.2 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve supervisory switch and water-flow initiating device provided for each floor that is monitored by the building's fire alarm system.

3005.5.1.2 Water protection. An approved method to prevent water from infiltrating into the hoistway enclosure from the operation of the automatic sprinkler system outside the elevator lobby shall be provided.

3005.5.1.3 Omission of shunt trip. Means for elevator shutdown in accordance with Section 3005.5 shall not be installed.

3005.5.1.4 Storage. Storage shall not be allowed within the elevator machine rooms, control room, machinery spaces and/or control spaces. Provide approve signage at each entry to the above listed locations stating: "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. The new section above is intended to be identical to Sections 3007.2, 3007.3, and 3007.4 for Fire Service Access Elevators and Sections 3008.2, 3008.3 and 3008.4 for Occupant Evacuation Elevators; reinforces the need to maintain space clean and free of combustibles. See companion change to eliminate fire sprinklers therein, to always require an enclosure - with IBC 3005.4 exceptions deleted - resulting in the limited need for a shunt trip system.)

Section 3006.2; amend paragraph 5 to read as follows:

5. The building is a high rise and the elevator hoistway is more than ~~75 feet (22 860 mm)~~ 55 feet (16764 mm) in height. The height of the hoistway shall be measured from the *lowest floor* at or above grade to the highest floors served by the hoistway.

(Reason: 2018 IBC text does not address hoistways that are greater than 75'-0" in height that are both below grade and above grade but not located above the high rise classification nor does the IBC address hoistways wholly located above grade such as those that serve sky lobbies".)

Section 3007.3; amend to read as follows:

3007.3 Water protection. Water from the operation of an automatic sprinkler system outside the lobby shall be prevented from infiltrating into the hoistway enclosure in accordance with an approved method.

Section 3008.3; amend to read as follows:

3008.3 Water protection. Water from the operation of an *automatic sprinkler system* outside the lobby shall be prevented from infiltrating into the hoistway enclosure in accordance with an *approved* method.

End