

STAFF DRAFT PRE-LAW DEPT REVIEW

ORDINANCE NO.

AN ORDINANCE REPEALING AND REPLACING DIVISION 1 OF ARTICLE 1 OF CITY CODE CHAPTER 25-12 TO ADOPT THE 2021~~15~~ INTERNATIONAL BUILDING CODE AND LOCAL AMENDMENTS; AND REPEALING AND REPLACING ARTICLE 10 OF CITY CODE CHAPTER 25-12 TO ADOPT THE 2021~~15~~ INTERNATIONAL EXISTING BUILDING CODE AND LOCAL AMENDMENTS; AND CREATING OFFENSES.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

PART 1. City Code Chapter 25-12 is amended to repeal Division 1 (International Building Code and Local Amendments) of Article 1 (Building Code) and replace it with a new Division 1 (International Building Code and Local Amendments) to read as follows:

ARTICLE 1. BUILDING CODE.

Division 1. International Building Code and Local Amendments

§ 25-12-1 INTERNATIONAL BUILDING CODE.

- A. The International Building Code, 2021~~15~~ Edition ("2021~~15~~ Building Code"), published by the International Code Council is adopted and incorporated by reference into this section with the deletions in Subsection (B) and amendments in Section 25-12- 3 (Local Amendments to the 2021~~15~~ Building Code).
- B. The following sections of the 2021~~15~~ Building Code are deleted:

<u>101.4.1112</u>	<u>308.5.1</u>	<u>1108.6.1.2</u>	<u>103 & subsections</u>
<u>101.4.2</u>	<u>308.5.3</u>	<u>1108.6.2.2.2</u>	<u>1507.8 & subsections</u>
<u>101.4.3</u>	<u>308.5.4</u>	<u>1108.6.2.3.2</u>	<u>1507.9 & subsections</u>
<u>103.1</u>	<u>310.2</u>	<u>1108.6.3</u>	<u>1612 & subsections</u>
<u>104.2.1</u>	<u>310.4.1</u>	<u>1108.6.4.2</u>	<u>Table 2901.1 Footnote (e)</u>
<u>105.1.1</u>	<u>406.4.3</u>	<u>1301.1</u>	<u>Table 1004.1.2</u>
<u>105.2</u>	<u>414.1.3</u>	<u>1607.8.2</u>	
<u>107.2.6</u>	<u>503.1.4 & Subsections</u>	<u>2901.1</u>	
<u>112.3</u>	<u>Chapter 9</u>	<u>2902.2</u>	
<u>305.2</u>	<u>901.1</u>	<u>2902.6</u>	

STAFF DRAFT PRE-LAW DEPT REVIEW

<u>305.2.2</u>	<u>1008.2.1</u>	<u>3201.1</u>	
<u>305.2.3</u>	<u>1009.3</u>	<u>3202.1</u>	
<u>308.2.3</u>	<u>1010.1.2</u>		
<u>308.2.4</u>	<u>1010.2.7</u>		
<u>308.3</u>	<u>1010.3.3</u>		
<u>308.3.1.1</u>	<u>1101.2</u>		
<u>308.3.2</u>			
<u>308.5</u>			

<u>Section 101.4.1</u>	<u>Section 101.4.2</u>	<u>Section 101.4.3</u>	<u>Section 103 and subsections</u>
<u>Section 104.2.1</u>	<u>Section 104.10.1</u>	<u>Section 105.1.1</u>	<u>Section 105.2</u>
<u>Section 105.3.2</u>	<u>Section 105.5</u>	<u>Section 107.2.5</u>	<u>Section 110.3.1</u>
<u>Section 110.3.5</u>	<u>Section 110.3.7</u>	<u>Section 113</u>	<u>Section 305.2</u>
<u>Section 305.2.2</u>	<u>Section 305.2.3</u>	<u>Section 308.3.3</u>	<u>Section 308.3.4</u>
<u>Section 308.4</u>	<u>Section 308.4.1.1</u>	<u>Section 308.4.2</u>	<u>Section 308.6</u>
<u>Section 308.6.1</u>	<u>Section 308.6.3</u>	<u>Section 308.6.4</u>	<u>Section 310.3</u>
<u>Section 310.5.1</u>	<u>Section 403.2.1</u>	<u>Section 403.2.1.1</u>	<u>Section 403.2.1.2</u>
<u>Section 403.3</u>	<u>Section 403.5.3.1</u>	<u>Section 406.4.4</u>	<u>Section 406.5.7</u>
<u>Section 414.1.3</u>	<u>Section 503.1.1</u>	<u>Section 507.3</u>	<u>Section 507.4</u>
<u>Section 510.4</u>	<u>Section 602.4.2</u>	<u>Section 705.5</u>	<u>Section 714.4.1.2</u>
<u>Section 901.5</u>	<u>Section 903.2.1.6</u>	<u>Section 903.2.8.3</u>	<u>Section 903.3.1.1.1</u>
<u>Section 903.3.1.2.1</u>	<u>Section 903.3.5</u>	<u>Section 903.3.6</u>	<u>Section 904.9</u>
<u>Section 904.12</u>	<u>Section 904.13</u>	<u>Section 905.1</u>	<u>Section 905.3.4.1</u>

STAFF DRAFT PRE-LAW DEPT REVIEW

Section 905.4	Section 905.5.3	Section 907.2	Section 907.2.8.2
Section 907.2.9.1	Section 907.5.2.1.1	Section 907.6.6	Section 909.5
Section 909.6.3	Section 909.10.2	Section 909.12.4	Section 909.18.8
Section 909.20 and subsections		Section 912.4	Section 912.4.1
Table 1004.1.2	Section 1006.3.2	Table 1006.3(1)	Table 1006.3(2)
Section 1007.1.1	Section 1008.2.1	Section 1009.3	Section 1010.1.2
Section 1010.1.4.3	Section 1010.1.9.8	Section 1010.1.9.11	Section 1020.4
Section 1027.3	Section 1101.2	Section 1104.1	Section 1106.6
Section 1107.6.1.2	Section 1107.6.2.2.2	Section 1107.6.3.2	Section 1107.6.3
Section 1107.6.4.2	Section 1110.1	Section 1301.1	Section 1301.1.1
Section 1507.8 and subsections		Section 1507.9 and subsections	
Section 1607.7.2	Section 1612 and subsections		Section 2902.1
Table 2901.1	Section 2902.1.1	Section 2902.6	Section 3102.1
Section 3109.3	Section 3201.1	Section 3202.1	Section 3202.2.1
Section 3202.3.3			

- C. The city clerk shall file a copy of the 2021~~15~~ International Building Code with the official ordinances of the City.

§ 25-12-2 CITATIONS TO THE BUILDING CODE.

In the City Code, "Building Code" means the 2021~~15~~ Building Code adopted and amended by Section 25-12-1 (*International Building Code*), as amended by Section 25- 12-3 (*Local Amendments to the 2021~~15~~ Building Code*).

§ 25-12-3 LOCAL AMENDMENTS TO THE BUILDING CODE.

STAFF DRAFT PRE-LAW DEPT REVIEW

The following provisions are local amendments to the 2021~~15~~ International Building Code. Each provision in this section is a substitute for the identically numbered provision deleted by Section 25-12-1(B) (*Building Code*) or is an addition to the 2021~~15~~ International Building Code.

[A] 101.4.1 Gas. The provisions of the *International Fuel Gas Code* and the Plumbing Code shall apply to the installation of gas piping from the point of delivery, gas appliances, and related accessories as covered in this code. The Plumbing Code supersedes the International Fuel Gas Code to the extent of conflict. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

[A] 101.4.2 Mechanical. The provisions of the *International Mechanical Code* and the Mechanical Code shall apply to the installation, alterations, repairs, and replacement of mechanical systems, including equipment, appliances, fixtures, fittings, and/or appurtenances, including ventilating, heating, cooling, air conditioning, and refrigeration systems, incinerators, and other energy related systems. The Mechanical Code supersedes the International Mechanical Code to the extent of conflict.

[A] 101.4.3 Plumbing. The provisions of the *International Plumbing Code* and the Plumbing Code shall apply to the installation, alteration, repairs, and replacement of plumbing systems, including equipment, appliances, fixtures, fittings, and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The Plumbing Code supersedes the International Plumbing Code to the extent of conflict. The provisions of the *International Private Sewage Disposal Code* and the Plumbing Code shall apply to private sewage disposal systems. The Plumbing Code supersedes the International Private Sewage Code to the extent of conflict.

101.4.8 Building Criteria Manual. Additional information on procedures and rules for administration of this code are available in the Building Criteria Manual.

SECTION 103 BUILDING OFFICIAL

~~**103.1 Authority.** The building official is the City official responsible for administering, implementing, and enforcing the Building Code. The building official may appoint one or more deputy building officials.~~

103.1 Building Official. The building official administers, enforces, and interprets this code. The building official may designate one or more deputy building officials.

[A] 104.2.1 Determination of Substantially Improved or Substantially Damaged Existing Buildings and Structures in Flood Hazard Areas. For applications for reconstruction, rehabilitation, repair, alteration, addition or other improvement of existing buildings or structures located in flood hazard areas, the building official shall examine or cause to be examined the construction documents and shall prepare a finding with regard to the value of the proposed. If the work is a substantial improvement as defined in Section 202 (*Definitions*), the proposed work shall comply with Section 1612 (*Flood Loads*) and Appendix G of this Code.

[A] 105.1.1 Annual Permit. Instead of an individual permit for each alteration to an already approved electrical, gas, mechanical or plumbing installation, and minor building alterations and repairs, the building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified trade persons in the building, structure or on the premises owned or operated

STAFF DRAFT PRE-LAW DEPT REVIEW

by the applicant for the permit. The facility shall maintain records on all work performed under the annual permit in accordance with Section 105.1.2 (*Annual Permit Records*).

105.1.1.1 Authorized Scope of Work. See Building Criteria Manual, section 1.1.2 Building Inspection Processes for authorized work under the annual permit.

Building. Work that:

- ~~1. does not alter a bearing wall or other structural elements; and~~
- ~~2. does not require a change to an exit system; and~~
- ~~3. does not alter fire resistive construction; and~~
- ~~4. is performed on or in a structure with a certificate of occupancy that is consistent with the existing occupancy; and~~
- ~~5. does not alter natural gas piping or medical gas piping systems; and~~
- ~~6. does not alter hazardous production material (HPM) supply or waste piping in areas of the building not currently classified as an H occupancy; and~~
- ~~7. does not remove, relocate, replace, or install a backflow prevention device; and~~
- ~~8. does not increase the existing square footage of the facility; and~~
- ~~9. otherwise complies with all other applicable provisions of this title; and~~
- ~~10. is performed by licensed contractors as required by the Plumbing Code, Electrical Code, or Mechanical Code.~~

Electrical. Work that:

- ~~1. repairs, modifies, or installs equipment or branch circuits; and~~
- ~~2. does not involve sub-panels, panels, electrical service, or other similar work that requires a permit in Section 80.19 of the Electrical Code; and~~
- ~~3. is performed by an electrical contractor employee with the proper license classification or a licensed master electrician employed by the facility; and~~
- ~~4. is performed consistent with Section 80.40 (Supervision) of the Electric Code.~~

Mechanical.

STAFF DRAFT PRE-LAW DEPT REVIEW

~~1.Replacement, modification, or relocation of existing ductwork, fan coil units, VAV boxes, volume dampers, environmental make up air systems, and related equipment; and~~

~~2.Modification of existing hazardous production material (HPM) supply systems, HPM drain systems and HPM exhaust systems in H occupancy areas, as defined in the Building Code, and in exterior areas to accommodate the installation or relocation of equipment.~~

~~**Plumbing.** Installation, repair, and replacement of fixtures, traps, shut-off valves, water distribution piping, drains, building waste piping, vent stacks and water heaters with a capacity of 100 gallons or less and a rating of 75,000 BTU or less, provided the work does not require approval of the Austin Travis County Health Department, the City of Austin Water Utility, or the Texas Department of Licensing and Regulation.~~

[A] 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, shade cloth structures constructed for outdoor covered areas that are not A2 or E occupancies, and similar uses, provided the floor area is not greater than 120 square feet (11 m²); provided they are not located within a flood hazard area.
2. Fences not over 7 feet (2134 mm) high; provided they are not located within a flood hazard area.
3. Oil derricks; provided they are not located within a flood hazard area.
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 IIIA liquids; provided they are not located within a flood hazard area.
5. Water tanks supported directly on grade if the capacity is not greater than 5,000 gallons (18 925 L) and the ratio of height to diameter or width is not greater than 2:1; provided they are not located within a flood hazard area.
6. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or story below and are not part of an accessible route; provided they are not located within a flood hazard area.
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; provided they are not located within a flood hazard area.
10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems; provided they are not located within a flood hazard area.

STAFF DRAFT PRE-LAW DEPT REVIEW

11. Swings and other playground equipment accessory to detached one- and two-family dwellings; provided they are not located within a flood hazard area.
12. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1,372 mm) from the exterior wall and do not require additional support.
13. Non-fixed and movable fixtures, cases, racks, counters, and partitions not over 5 feet 9 inches (1,753 mm) in height.
14. Repair and replacement to gypsum board and backer board that ~~is~~are not part of a fire-resistance-rated wall, a shear assembly, or wet areas; provided it is limited to a maximum of ~~32~~ 96 square feet.
15. Emergency removal of water damaged material such as, but not limited to gypsum board, insulation, wood paneling, etc., in order to avoid health hazard issues; a permit is required for the repairs.
16. Repair to exterior siding that is not part of a fire-rated assembly wall or shear assembly; provided that it is limited to a maximum of 96 square feet.
17. Other work as determined by the building official.

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 installations 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.
4. Electrical work exempt from permit per Chapter 25-12 Article 4 Electrical Code.
5. Other work as determined by the building official.

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.~~

STAFF DRAFT PRE-LAW DEPT REVIEW

- ~~6. Portable evaporative cooler.~~
- ~~7. Self contained refrigeration system containing 10 pounds (5 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.~~
- 8.1. As per Chapter 25-12 Article 5 Mechanical Code
2. Other work as determined by the building official

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 such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.~~
- 3.1. As per Chapter 25-12 Article 6 Plumbing Code
2. Other work as determined by the building official

~~**105.5 Time limits for applications and permit expiration and reactivation.** Time limits on permit applications and requirements for permit expiration and reactivation, including a review fee for expired permits, are set forth in City Code Chapter 25-12, Article 13 (Administration of Technical Codes).~~

105.5 Time Limits. City Code Chapter 25-12, Article 13 (Administration of Technical Codes) establishes permit application time limits and requirements applicable to permit expiration and reactivation, including a review fee for expired permits.

~~**Exception:** Permits issued under Section 105.1.1 (Annual permit) are only valid for a period of 360 days from the date of issuance and cannot be extended.~~

~~**105.8 Transfer of permit.** The building official is authorized to establish a building permit transfer policy.~~

[A] 107.2.6 Site Plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades, and as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. For a building or structure involving below-grade construction, the site plan shall show the location of proposed earth retention system components allowed under Section 3202.1.4 (*Earth Retention System Components*). The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

STAFF DRAFT PRE-LAW DEPT REVIEW

108.5 Temporary Earth Retention Systems. Temporary earth retention system components used to facilitate below-grade construction of a building or structure shall conform to Sections 1811 (*Earth Retention Systems*) and Section 3202.1.4 (*Earth retention system components*).

109.7 Plan Review Fees. An applicant must pay a plan review fee, adopted by separate ordinance, when plans and specifications are submitted for review under Section 107 (*Submittal Documents*). ~~The building official shall compute the building plan review fees using the total value of all construction work for which the permit is issued as well as the value of all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire extinguishing systems, and other permanent equipment.~~ The building official shall charge an additional plan review fee if plans are incomplete or changed so as to require additional plan review. The plan review fees referenced in this section are in addition to the permit fees referenced in Section 109.1 (*Payment of fees*).

~~**110.3.1 Building pre-construction inspection.** This is the first inspection conducted. The inspector verifies the permits that were issued for work at a site and meets with the contractor or owner at the site to review plans and identify potential issues. The inspector notifies the contractor of the inspector's work hours and identifies required inspections.~~

~~**110.3.1.1 Layout Inspection.** A layout inspection shall be made after all foundation forms have been erected and are in place, but before any concrete is placed.~~

~~**[A] 110.3.1.2 Footing and foundation inspection.** Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94, the concrete need not be on the job.~~

~~**[A] 110.3.5 Lath, gypsum board and gypsum panel product inspection.** Lath, gypsum board and gypsum panel product inspections shall be made after lathing, gypsum board and gypsum panel products, interior and exterior, are in place, but before any plastering is applied or gypsum board and gypsum panel product joints and fasteners are taped and finished.~~

~~**Exception:** Gypsum board and gypsum panel products that are not part of a fire resistance rated assembly, a shear assembly, or part of a shower or water closet surround; provided it is limited to a maximum of 32 square feet.~~

~~**110.3.7 Energy efficiency inspections.** Inspections shall be made to determine compliance with the energy efficiency requirements of the Energy Code, as adopted by Chapter 25-12, Article 12 (*Energy Code*), and shall include, but not be limited to, inspections for: envelope insulation R and U values, fenestration U value, duct system R value, and HVAC and water heating equipment efficiency.~~

~~**111.5 Maintenance of records.** The building owner, or the owner's authorized agent, must maintain a copy of the certificate of occupancy on the premises and provide it to an authorized official on request.~~

~~**112.3 Authority to Disconnect Service Utilities.** The building official shall have the authority to authorize disconnection of utility service to the building, structure or service system regulated by this code and the codes referenced under this section.~~ City Code Chapter 15-9, Article 7 (Limitation on City's Liability; Release)

STAFF DRAFT PRE-LAW DEPT REVIEW

establishes liability from property damage, personal injury, business damage or other loss resulting from a negligent or non-negligent act of the City.

~~112.3.1 Circumstances that will result in utility service disconnection.~~ The building official may authorize the disconnection of utilities if the building official determines that:

- ~~1. disconnection is necessary to eliminate an immediate hazard to life or property;~~
- ~~2. an owner or occupant is in violation of a stop work order;~~
- ~~3. electrical work has been installed without a permit;~~
- ~~4. plumbing or gas piping has been installed without a permit; or~~
- ~~5. development does not comply with Title 25 (Land Development).~~

~~112.3.2 Notice requirements for utility service disconnection.~~

~~112.3.2.1 Disconnection due to an immediate threat to life or property.~~ If disconnection of utilities is necessary to eliminate an immediate hazard to life, the building official shall notify the serving utility and whenever possible, the owner and occupant of the building, structure, or service system of the decision prior to taking any action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, by certified mail, return receipt requested, as soon as practical thereafter.

~~112.3.2.2 Disconnection due to a circumstance other than an immediate threat to life or property.~~ If the disconnection of utilities is for a reason other than to eliminate an immediate hazard to life, the building official shall give notice according to this section. Notice shall first be provided for the violation in accordance with the applicable section of Title 25 (Land Development). The notice of violation shall include a statement that the building official may authorize the disconnection of utilities if the violation is not cured within the timeframe established in the notice of violation. If the owner or occupant fails to comply with the notice of violation, the building official may issue a notice to the owner and occupant stating that utilities to the property will be disconnected not less than one week after the date that the notice is mailed. The notice must identify each utility that will be disconnected.

~~SECTION 113 BUILDING AND FIRE CODE BOARD OF APPEALS.~~ The Building and Fire Code Board of Appeals must comply with Chapter 2-1 (Boards and Commissions).

113 Building and Fire Code Board of Appeals. Regulations regarding the Building and Fire Code Board of Appeals are found in Chapter 2-1 of the City Code.

SECTION 202 DEFINITIONS

~~202.1 Amended Definitions.~~ The definitions in this subsection apply throughout the Building Code and amend the definitions found in Section 202 (*General Definitions*) of the 2015 Building Code.

202 Definitions. The following definitions are amended as follows:

BASE FLOOD. A flood that has the following characteristics:

1. For areas amended to incorporate Atlas 14 data, a flood that has a one percent chance of being equaled or exceeded in any given year (100-year flood) calculated under fully developed conditions as prescribed by the Drainage Criteria Manual as amended to incorporate Atlas 14 data;
2. For areas not yet amended to incorporate Atlas 14 data, a flood that has a 0.2 percent chance of being equaled or exceeded in any given year (500-year flood) calculated under the conditions underlying the FEMA Flood Insurance Rate Map as of January 6, 2016, as subsequently revised, or as calculated under existing conditions as prescribed by the Drainage Criteria Manual using data predating Atlas 14; or
3. For the Colorado River, a flood that has a one percent chance of being equaled or exceeded in any given year (100-year flood) calculated under the conditions underlying the FEMA Flood Insurance Rate Map dated January 6, 2016, or as subsequently revised.

DESIGN FLOOD. A flood that has the following characteristics:

1. For areas amended to incorporate Atlas 14 data, a flood associated with an area of a floodplain subject to a one percent or greater chance of being flooded in any year (100-year flood) based on projected full development in accordance with the City of Austin Drainage Criteria Manual as amended to incorporate Atlas 14 data;
2. For areas not yet amended to incorporate Atlas 14 data, a flood associated with an area of a floodplain subject to a 0.2 percent or greater chance of being flooded in any year (500-year flood) calculated under the conditions underlying the FEMA Flood Insurance Rate Map as of January 6, 2016, as subsequently revised, or as calculated under existing conditions as prescribed by the Drainage Criteria Manual using data predating Atlas 14; or
3. For the Colorado River, a flood associated with an area of a floodplain subject to a one percent or greater chance of being flooded in any year (100-year flood) as depicted on the FEMA Flood Insurance Rate Map dated January 6, 2016, or as subsequently revised.

DESIGN FLOOD ELEVATION. The elevation of the "design flood" relative to the City of Austin vertical datum standard.

FLOOD HAZARD AREA. An area that has the following characteristics:

1. For areas amended to incorporate Atlas 14 data, an area within a floodplain subject to a one percent or greater chance of being flooded in any year (100-year flood) based on projected full development in accordance with the City of Austin Drainage Criteria Manual as amended to incorporate Atlas 14 data;

2. For areas not yet amended to incorporate Atlas 14 data, an area of a floodplain subject to a 0.2 percent or greater chance of being flooded in any year (500-year flood) calculated under the conditions underlying the FEMA Flood Insurance Rate Map as of January 6, 2016, as subsequently revised, or as calculated under existing conditions as prescribed by the Drainage Criteria Manual using data predating Atlas 14; or
3. For the Colorado River, an area within a floodplain subject to a one percent or greater chance of being flooded in any year (100-year flood) as depicted on the FEMA Flood Insurance Rate Map dated January 6, 2016, or as subsequently revised.

FLOODWAY. The channel of the river, creek, or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. An area that has the following characteristics:

1. For the Colorado River, an area with a floodplain subject to a four percent or greater chance of flooding in any year (25-year flood) based on existing developed conditions as prescribed by the Drainage Criteria Manual using data predating Atlas 14; or
2. For all other rivers, creeks, and watercourses in areas amended to incorporate Atlas 14 data, an area with a four percent or greater chance of flooding in any year (25-year flood) based on a projected full development in accordance with the City of Austin Drainage Criteria Manual as amended to incorporate Atlas 14 data.
3. For all other rivers, creeks, and watercourses in areas not yet amended to incorporate Atlas 14 data, an area with a one percent or greater chance of flooding in any year (100-year flood) based on a projected full development in accordance with the City of Austin Drainage Criteria Manual using data predating Atlas 14.

START OF CONSTRUCTION. The date a permit is issued for new construction or substantial improvements to existing structures if construction, repair, reconstruction, rehabilitation, addition, placement or other improvement starts within 180 days from the date the permit is issued. Construction starts when permanent construction of a building (including a manufactured home) is first placed and includes pouring a slab or footing, installing pilings, or constructing columns. Permanent construction does not include preparing land (clearing, excavating, grading, or filling); installing streets or walkways; excavating for a basement, footing, pier, or foundation; or erecting temporary forms or installing accessory buildings not occupied as dwelling units or not part of the main building. For a substantial improvement, construction starts when a wall, ceiling, floor, or other structural part of a building is altered even if the alteration does not affect the external dimensions of the building.

SUBSTANTIAL IMPROVEMENT. For the purpose of determining compliance with the flood hazard management provisions of the Building Code, a substantial improvement is any combination of repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure during the immediate 10-year period, the cost of which cumulatively equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started, or if the structure has been damaged and is being

STAFF DRAFT PRE-LAW DEPT REVIEW

restored, before the damage occurred. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either of the following:

- 1 .Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
2. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure; for the purpose of this exclusion, a historic building is a building that is:
 - a. listed or preliminarily determined to be eligible for listing in the National Register of Historic Places; or
 - b. determined by the Secretary of the U.S. Department of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or
 - c. designated as historic under a State of Texas or local historic preservation program that is approved by the Department of the Interior.

202.1 Supplemental Definitions. The definitions in this subsection apply throughout this code and amend or supplement the definitions in Section 202 (*General Definitions*) in the 2021 International Building Code, as published:

BALCONY, EXTERIOR. An exterior floor projected from and supported by a structure without additional independent supports.

BED AND BREAKFAST. A private residence having a limited number of sleeping rooms which are available for transient guests who have paid for accommodations. For the different classifications of Bed and Breakfast, refer to LDC 25-2-781 (*Bed and Breakfast Residential Use Structures Classified*).

~~**CHILD CARE FACILITIES.**—Facilities that provide care to more than five children, 2 ½ years of age or less.~~

DECK. An exterior floor supported on at least two opposing sides by an adjacent structure, and/or post, piers or other independent supports.

REGULATORY FLOOD DATUM. An established plane of reference from which elevations and depth of flooding may be determined for specific locations of the floodplain. It is the water level of the design flood plus a freeboard factor of one foot. Design flood plus freeboard equals Regulatory Flood Datum.

202.1.2 Deleted Definitions. The following definitions are deleted from Section 202 (*General Definitions*) in the ~~2015~~ 2021 International Building Code, as published:

FLOOD HAZARD AREA SUBJECT TO HIGH VELOCITY WAVE ACTION.

FOSTER CARE FACILITIES.

305.2 Group E, Day Care Facilities. This group includes buildings and structures or portions thereof occupied by more than six children older than 2 ½ years of age who receive educational, supervision, or *personal care services* for fewer than 24 hours per day.

305.2.2 Six or Fewer Children. A facility having six or fewer children receiving such day care shall be classified as part of the primary occupancy.

305.2.3 Six or Fewer Children in a Dwelling Unit. A facility such as the above within a dwelling unit and having six or fewer children receiving such day care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

308.2.3 Seven to 16 Persons Receiving Custodial Care. A facility housing not fewer than seven and not more than 16 persons receiving custodial care shall be classified as Group R-4.

308.2.4 Six or Fewer Persons Receiving Custodial Care. A facility with six or fewer persons receiving custodial care shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code* as published.

308.3 Institutional Group I-2. Institutional I-2 occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than six persons who are incapable of self-preservation. This group shall include, but not be limited to, the following: detoxification facilities; hospitals; nursing homes; and psychiatric hospitals.

308.3.1.1 Condition 1. This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification.

308.3.2 Six or Fewer Persons Receiving Medical Care. A facility with six or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code* as published.

308.5 Institutional Group I-4, Day Care Facilities. Institutional Group I-4 shall include buildings and structures occupied by more than six persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following: adult day care and child day care.

308.5.1 Classification as Group E. A child care facility that provides care for more than six but no more than 100 children 2 ½ years or less of age, where the rooms in which the children are cared for are located on a *level*

of exit discharge serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.

308.5.3 Six or Fewer Persons Receiving Care. A facility having six or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

308.5.4 Six or Fewer Persons Receiving Care in a Dwelling Unit. A facility such as the above within a dwelling unit and having six or fewer persons receiving *custodial care* shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*, provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 (*NFPA 13D sprinkler systems*) or with Section P2904 of the 2021 *International Residential Code* as published.

310.2 Residential Group R-1. Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including: boarding houses (transient) for more than 10 occupants, congregate living facilities (transient) for more than 10 occupants, hotels (transient), motels (transient), and bed and breakfast establishments.

Exception. Compliance with Section 903.2.8 (Group R) is not required for a single structure Group R-1 Bed and Breakfast occupancy described in [Section 25-2-781](#) (*Bed and Breakfast Residential Use Structures Classified*) when the owner resides within the Bed and Breakfast occupancy and provided that:

1. The structure is a detached single family home that was legally constructed and occupied as a single family residence prior to January 1, 2006;
2. The total number of sleeping rooms has not been increased after January 1, 2006;
3. The residence is protected by a monitored residential style fire/security system with an appropriate automatic smoke detection system installed throughout the residence with occupant notification devices in accordance with Section 907.5 (*Occupant notification systems*); and
4. The residential style fire/security system must be inspected, tested and maintained in accordance with Section 907.8 (*Inspection, testing and maintenance*).

310.4.1 Care Facilities within a Dwelling. Care facilities for six or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the *International Residential Code*, provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 (*NFPA 13D sprinkler systems*) or with Section P2904 of the 2021 *International Residential Code* as published.

Exception: Compliance with Section 903.3.1.3 (*NFPA 13D sprinkler systems*) is not required for adult care and child care facilities that are within the proprietor's single-family home; provided that the home was permitted prior to October 1, 2010.

~~403.2.1 Reduction in fire-resistance rating.~~ The fire-resistance rating reductions listed in Section 403.2.1.1 (*Type of construction*) shall be allowed in buildings that have sprinkler control valves equipped with supervisory initiating devices and water-flow initiating devices for each floor.

~~403.2.1.1 Type of construction.~~ The following reductions in the minimum construction type allowed in Table 601 shall be allowed as provided in Section 403.2.1 (*Reduction in fire-resistance rating*):

- ~~1. Type 1A construction shall be allowed to be reduced to Type IB, except in buildings over 12 stories or over 160 feet high.~~

~~Exception:~~ The required *fire-resistance rating* of columns supporting floors shall not be permitted to be reduced.

- ~~2. In other than Groups F-1, M, and S-1 Type IB construction shall be allowed to be reduced to Type IIA.~~

- ~~3. The height and area limitations of the reduced construction type shall be allowed to be the same as for the original construction type.~~

~~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 (*NEPA-13 sprinkler system*) and a secondary water supply where required by Section 403.3.3 (*Secondary water supply*).

~~Exception:~~ An *automatic sprinkler system* shall not be required in spaces or areas of:

- ~~1. Stand-alone open parking garages in accordance with Section 406.5 (*Open parking garages*).~~
- ~~2. 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 (*Where required—new buildings and structures*) and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 (*Fire Barriers*) or not less than 2-hour horizontal assemblies constructed in accordance with Section 711 (*Horizontal Assemblies*), or both.~~

~~403.5.3.1 Stairway communications system.~~ A telephone or other two-way communications system connected to an approved constantly attended station shall be provided at not less than every floor in each required stairway if the doors to the stairway are capable of being locked.

~~Exception:~~ The stairway communication system is not required in high-rise buildings when all the following conditions are met;

- ~~1. Area of refuge communication system terminal, installed and maintained per International Building Code Sec. 1009.6.5 (Two-way communication), is located immediately adjacent to each floor level landing.~~
- ~~2. The area of refuge communication terminal is connected to an approved constantly attended station.~~
- ~~3. The door between the stair and the vestibule (area of refuge) cannot be locked.~~
- ~~4. An approved sign is provided at each floor level landing inside the stairwell.~~

406.4.3 Ramps. ~~Vehicle ramps shall not serve as an exit element unless pedestrian facilities are provided. Such pedestrian facilities shall meet the minimum exit width requirements of Section 1005, exclusive of parking spaces and vehicle circulation aisles. The minimum width and depth of parking spaces and vehicle circulation aisles shall be in accordance with the Austin Transportation Criteria Manual, Table 9-1 or Table 9-2 (residential and low-use garages only). Vehicle ramps that serve as an exit element shall not exceed a slope of 1:8 (12.5 percent). Vehicle ramps that serve as part of an accessible route shall not exceed a slope of 1:20 (5% percent).~~ Vehicle ramps shall not be considered as required exits unless pedestrian facilities are provided. Vehicle ramps that are utilized for vertical circulation as well as for parking shall not exceed a slope of 1 unit vertical in 15 unit's horizontal (6.67-percent slope).

406.5.7 Means of egress. ~~Where persons other than parking attendants are permitted, open parking garages shall meet the means of egress requirements of Chapter 10 (*Means of Egress*). Lifts shall be permitted to be installed for use of employees only, provided they are completely enclosed by noncombustible materials.~~

414.1.3 Information Required. Separate floor plans shall be submitted for buildings and structures with an occupancy in Group H, identifying the locations of anticipated contents and processes, to reflect the nature of each occupied portion of every building and structure. The floor plan shall identify the hazards associated with the contents and processes. A report identifying hazardous materials including, but not limited to, materials representing hazards that are classified in Group H to be stored or used, shall be submitted and the methods of protection from such hazards shall be indicated on the construction documents. The *building official* or fire marshal may also require a technical opinion that addresses the adequacy of the protective measures provided. The opinion and report shall be prepared by a qualified individual, firm or corporation approved by the *building official* and fire marshal, and shall be provided without charge to the City of Austin.

503.1.4 Occupied Roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the *story* immediately below the roof. The area of the occupied roofs shall not be included in the *building area* as regulated by Section 506. An occupied roof shall not be included in the *building height* or number of *stories* as regulated by Section 504, provided that the *penthouses* and other *enclosed rooftop structures* comply with Section 1511.

Exceptions:

1. The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the *story* immediately below the roof where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Sections 907.5.2.1 and 907.5.2.3 is provided in the area of the occupied roof. *Emergency voice/alarm communication system* notification per Section 907.5.2.2 shall also be provided in the area of the occupied roof where such system is required elsewhere in the building.
2. Assembly occupancies shall be permitted on roofs of open parking spaces of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.

STAFF DRAFT PRE-LAW DEPT REVIEW

3. An open noncombustible trellis or similar overhead shading device complying with the structural requirements of this code shall not be considered as a covering or roof provided that the trellis or shade has an evenly distributed net free area of 50 percent or greater.

503.1.4.1 Enclosures over occupied roof areas. Elements or structures enclosing the occupied roof areas shall not extend more than 48 inches (1220 mm) above the surface of the occupied roof.

Exception: *Penthouses* constructed in accordance with Section 1511.2 and towers, domes, spires and cupolas constructed in accordance with Section 1511.5.

~~**427.5 Interstitial Spaces.** When decks or other walking surfaces are constructed above a roof to facilitate rooftop occupancy, the space between the roof/ceiling assembly and the deck or surface shall be constructed in a manner that precludes the accumulation of material between the roof/ceiling assembly and the deck or walking surface and that prevents the introduction of ignition sources to the space.~~

503.1.4.2 Interstitial Spaces beneath Rooftop Occupancies. When decks or other walking surfaces are constructed above a roof to facilitate rooftop occupancy, the space between the roof surface and the deck or walking surface shall be constructed in a manner that precludes the accumulation of material between the roof surface and the deck or walking surface, and that prevents the introduction of ignition sources to the space and allows for proper roof drainage.

SECTION 427 OCCUPIED ROOFS

~~**427.1 Applicability.** The provisions of Sections 427.1 through 427.6 shall apply to all parts of buildings and structures that contain any occupancies located on the roof area of the building or structure.~~

~~**427.2 Allowable occupancies.** The proposed occupancy for a roof shall be allowed only if the same occupancy is allowed in the floor below the roof. Assembly occupancies on roofs must comply with Section 903.2.1.6 (Assembly occupancies on roofs).~~

~~**427.3 Construction requirements.** Roofs approved for rooftop occupancy shall have a minimum fire resistance of one hour or the fire resistance required for the building, whichever is greater. Occupied roofs shall be treated as a story for the following construction-related purposes:~~

- ~~1. for determining the required construction type and minimum fire resistance rating for the roof structure;~~
- ~~2. for calculating occupant load and building height as they relate to exiting requirements of Chapter 10 and thresholds for fire safety features required by Sections 903 (Automatic Sprinkler Systems), Section 905 (Standpipe Systems), and 907 (Fire Alarm and Detection Systems).~~

~~**Exception:** The occupant load of an occupied roof that complies with this section shall not contribute to the occupant load of the fire area below for the purposes of requiring automatic sprinkler and/or fire alarm protection provided that:~~

- ~~a) All openings from below are protected with fire resistive assemblies, and~~
- ~~b) The occupied roof has code-compliant exits independent of the building or buildings below.~~

~~3. For the location and installation of toilet facilities.~~

427.4 Fall protection. Occupied rooftops shall be provided with guards compliant with Section 1013~~1015~~ (*Guards*).

427.6 Coverings above or around the occupants of an occupied rooftop. A rooftop equipped with a horizontal or vertical covering or coverings, including weather protection, such as a roof or a tent or membrane structure that exceeds the limitations of Chapter 24 (*Flammable Finishes*) of the Fire Code shall be considered an additional story and shall comply with the construction and occupancy requirements of the City Code as a floor.

Exceptions:

- ~~1. Small roof coverings may be approved for weather protection of restrooms and beverage preparation areas such as bars without requiring the rooftop to comply with all of the requirements of this code for a story or floor. Such coverings shall comply with the Building Code as to construction materials and fire resistance. The area of such coverings shall be limited to the minimum area required to comply with sanitation and health safety regulations.~~
- ~~2. An open noncombustible trellis or similar overhead shading device complying with the structural requirements of this code shall not be considered as a covering or roof provided that the trellis or shade has an evenly distributed net free area of 50 percent or greater.~~

~~**503.1.1 Special industrial occupancies.** In other than H occupancies, Buildings and structures designed to house special industrial processes that require large areas and unusual building heights to accommodate craneways or special machinery and equipment, including, among others, rolling mills; structural metal fabrication shops and foundries; or the production and distribution of electric, gas or steam power, shall be exempt from the building height, number of stories and building area limitations specified in Sections 504 (Building Height and Number of Stories) and 506 (Building Area).~~

~~**507.4 Sprinklered, one story.** The area of a Group A-4 building no than one story above grade plane of other than Type V construction, or the area of a Group B, F, M or S building no more than one story above grade plane of any construction type, shall not be limited where the building is provided with an automatic sprinkler system throughout in accordance with Section 903.3.1.1 (NFPA 13 sprinkler systems), and is surrounded and adjoined by public ways or yards not less than 60 feet (18,288 mm) in width.~~

Exceptions:

- ~~1. Buildings and structures of Type I and II construction for rack storage facilities which do not have access by the public shall not be limited in height provided that such buildings conform to the requirements of Sections 507.4 (Sprinklered, one story) and 903.3.1.1 (NFPA 13 sprinkler systems) and Chapter 32 (High-Piled Combustible Storage) of the International Fire Code.~~
- ~~2. The automatic sprinkler system shall not be required in the areas occupied for indoor participant sports, such as tennis, skating, swimming, and equestrian activities in occupancies in Group A-4 provided that all of the following criteria are met:~~

- ~~2.1. Exit doors directly to the outside are provided for occupants of the participant sports areas;~~
- ~~2.2. The building is equipped with a fire alarm system with manual fire alarm boxes installed in accordance with Section 907 (Fire Alarm and Detection Systems); and~~
- ~~2.3. Accessory and ancillary spaces shall be fully protected in accordance with NFPA 13.~~

~~**510.4 Parking beneath Group R.** Where a maximum *one story above grade plane* Group S-2 parking garage, enclosed or open, or combination thereof, of Type I construction, with grade entrance, is provided under a building of Group R, the number of stories to be used in determining the minimum type of construction shall be measured from the floor above such a parking area. The floor assembly between the parking garage and the Group R above shall comply with the type of construction required for the parking garage and shall also provide a fire resistance rating not less than 3 hours.~~

~~**602.4.2 Cross-laminated timber in exterior walls.** Cross-laminated timber complying with Section 2303.1.4 shall be permitted within exterior wall assemblies with a 2-hour rating or less, provided the exterior surface of the cross-laminated timber is protected by one of the following:~~

- ~~1. Type X Gypsum board not less than ½ inch (12.7 mm) thick; or~~
- ~~2. A noncombustible material.~~

~~**705.5 Fire-resistance ratings.** Exterior walls shall be fire-resistance rated in accordance with Tables 601 and 602 and this section. The required fire-resistance rating of exterior walls with a fire separation distance of greater than 10 feet (3048 mm) shall be rated for exposure to fire from the inside. The required fire-resistance rating of exterior walls with a fire separation distance of less than or equal to 10 feet (3048 mm) shall be rated for exposure to fire from both sides. Exterior walls of Type III construction shall be rated for exposure from both sides, when required by Tables 601 and 602 and this section, regardless of separation distance.~~

~~**714.4.1.2 Through-penetration firestop system.** Through penetrations shall be protected by an approved through-penetration firestop system installed and tested in accordance with ASTM E 814 or UL 1479, with a minimum positive pressure differential of 0.01 inch of water (2.49 Pa). The system shall have an F rating/T rating of not less than 1 hour but not less than the required rating of the floor penetrated.~~

Exceptions:

- ~~1. Floor penetrations contained and located within the cavity of a wall above the floor or below the floor do not require a T rating.~~
- ~~2. Floor penetrations by floor drains, tub drains or shower drains contained and located within the concealed space of a horizontal assembly do not require a T rating.~~
- ~~3. Floor penetrations of maximum 4-inch (102 mm) nominal diameter penetrating directly into metal-enclosed electrical power switchgear do not require a T rating.~~

STAFF DRAFT PRE-LAW DEPT REVIEW

~~4. Penetrations by non-ferrous conduits or pipes up to 4 inches (101.6 mm) in diameter with the annular space protected with materials that have been demonstrated to prevent the passage of flame and hot gasses when the penetrations and penetrating materials are completely contained within a fire resistive assembly consisting of an approved fire-rated wall assembly connected to an approved fire-rated floor/ceiling assembly by an approved joint.~~

901.1 Scope. The provisions of this chapter shall specify where *fire protection* and *life safety systems* are required, and shall apply to the design, installation and operation of *fire protection* and *life safety systems*. For those requirements, refer to Chapter 25-12 Article 7 Fire Code for combined amendments and the 2021 International Fire Code Chapter 9.

901.5 Installation acceptance testing. ~~Fire detection and alarm systems, fire extinguishing systems, fire hydrant systems, fire standpipe systems, fire pump systems, private fire service mains and all other *fire protection systems* and appurtenances thereto shall be subject to acceptance tests as contained in the installation standards and as approved by the fire department. The fire department emergency prevention division shall be notified before any required acceptance testing.~~

903.2.1.6 Assembly occupancies on roofs. ~~Where an occupied roof has an assembly occupancy with an *occupant load* exceeding 100 for Group A-2 and 300 for other Group A occupancies, all floors between the occupied roof and the level of exit discharge shall be equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1 (*NFPA 13 sprinkler systems*).~~

903.2.8.3 Group R-4 Condition 2. ~~An *automatic sprinkler system* installed in accordance with Section 903.3.1.2 (*NFPA 13R sprinkler systems*) shall be permitted in Group R-4 Condition 2 occupancies.~~

903.3.1.1.1 Exempt locations. ~~When approved, 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. Sprinklers shall not be omitted from a room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.~~

- ~~1. A room where the application of water, or flame and water, constitutes a serious life or fire hazard.~~
- ~~2. Transformer rooms owned and operated by an electric utility, and 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. The *automatic fire detection system* for exempt locations is not required.~~
- ~~3. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.~~
- ~~4. Fire service access elevator machine rooms and machinery spaces.~~
- ~~5. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008 (*Occupant Evacuation Elevators*).~~

~~**903.3.1.2.1 Balconies and decks.** Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units and sleeping units where the building is of Type V construction or of Type III construction if the balcony or deck is framed with wood, provided there is a roof or deck above. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.~~

~~**903.3.1.2.3 Balcony closets.** Sprinkler protection shall be provided for all balcony closets.~~

~~**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 (*Standards*). Fire hydrant flow tests shall be in accordance with the Fire Code Section 507.4. Protection of potable water supplies shall be in accordance with the Fire Code Section 507.6.~~

~~**903.3.5.3 Water supply safety factors.** Water supplies designed for automatic sprinkler systems shall provide a safety factor of ten (10) pounds per square inch gauge (PSIG) or ten (10) percent of the minimum required residual pressure, whichever is greater. The safety factor shall be based on the calculated system design flow and pressure.~~

~~**Exception:** A safety factor less than those defined in this Section may be approved by the fire chief only if historical water supply data is available to demonstrate that reasonable expected fluctuations will not cause the water supply to fall below the system demand.~~

~~**903.3.5.4 Hose Stream Demand.** The minimum calculated hose stream demand for Type V B and Type V A construction, as defined in the Building Code, shall be a minimum of 250 Gallons Per Minute (GPM).~~

~~**903.3.6 Hose threads.** Fire hose threads and fittings used in connection with automatic sprinkler systems shall be approved and shall be National Standard Hose Thread.~~

~~**903.3.9 Sprinkler System Flexible Hoses.** Flexible hoses used in automatic sprinkler systems shall be limited in length to a maximum of 6 feet. The extinguishing agent shall pass through a maximum of one 6 foot section before discharging from the sprinkler orifice (head). Approval of shop drawing submittals shall be required for all uses of flexible hose sprinkler piping and where more than one (1) flexible hose sprinkler drop is used in a remodel application the adequacy of the water supply shall be verified by hydraulic calculations.~~

~~**904.9 Halon systems.** Halogenated extinguishing systems shall be installed, maintained, and periodically inspected and tested in accordance with NFPA 12A and their listing. The conditions of approval of all Halon automatic fire extinguishing systems shall include (i) a demonstration of need acceptable to the fire chief detailing a critical need for the system such as a direct effect on life safety that cannot be adequately addressed by other types of suppression systems, and (ii) an approved method of testing that does not include the intentional release of Halon gas.~~

~~**904.12 Commercial cooking systems.** The automatic fire extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust systems of the type~~

STAFF DRAFT PRE-LAW DEPT REVIEW

~~and arrangement protected. Each pre-engineered automatic dry and wet chemical extinguishing system shall be tested in accordance with UL 300 and listed and labeled for its intended application. Other types of extinguishing systems shall be listed and labeled for specific use as protection for commercial cooking operations. The system shall be installed in accordance with this code, its listing and the manufacturer's installation instructions. Automatic fire suppression systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:~~

- ~~1. Carbon-dioxide-extinguishing systems, NFPA 12.~~
- ~~2. Automatic sprinkler system, NFPA 13.~~
- ~~3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.~~
- ~~4. Dry-chemical extinguishing systems, NFPA 17.~~
- ~~5. Wet-chemical extinguishing systems, NFPA 17A.~~

~~**Exception 1:** Factory-built commercial cooking recirculating systems that are tested in accordance with UL 710B, and listed, labeled and installed in accordance with Section 303.1 of the Mechanical Code.~~

~~**Exception 2:** With the concurrence of the *Building Official*, commercial cooking equipment used intermittently for periods which total less than 6 hours per week may be served by a Type II ventilation hood without fixed fire suppression. A portable fire extinguisher rated for commercial cooking applications shall be provided.~~

~~**904.13 Domestic cooking systems in Group I-2 Condition 1.** In Group I-2 Condition 1 occupancies where cooking facilities are installed in accordance with Section 407.2.6 (*Nursing home cooking facilities*) of this code, the domestic cooking hood provided over the cooktop or range shall be equipped with an automatic fire-extinguishing system of a type recognized for protection of domestic cooking equipment. Preengineered automatic extinguishing systems shall be tested in accordance with UL 300A and listed and labeled for the intended application. The system shall be installed in accordance with this code, its listing and the manufacturer's instructions.~~

~~**Exception:** I-2 Foster Care facilities providing care for 6 or fewer children 2.5 years of age or younger.~~

~~**905.1 General.** Standpipe systems shall be provided in new buildings and structures in accordance with this Section. Fire hose threads used in connection with new fire standpipe systems shall be approved and shall be National Standard Hose Thread. Except as otherwise approved by the fire chief, existing standpipe fire hose threads shall be national standard hose thread. The location of fire department hose connections shall be approved. In buildings used for high piled combustible storage, fire protection shall be in accordance with *International Fire Code*.~~

~~**905.1.1 Hose.** With the concurrence of the *Building Official*, hoses need not be installed or maintained on standpipes of any class when the occupancy does not provide training in the use of standpipe hose and the employees, residents, or other regular occupants of the occupancy are trained/instructed to evacuate and evacuation drills are conducted at intervals agreed on by the owner/agent and the Fire Department.~~

905.3.4.1 Hose and cabinet. ~~If hose is installed, the 1½ inch (38 mm) hose connections shall be equipped with sufficient lengths of 1½ inch (38 mm) hose to provide fire protection for the stage area. Hose connections shall be equipped with an approved adjustable fog nozzle and be mounted in a cabinet or on a rack.~~

905.4 Location of Class I standpipe hose connections. ~~Class I standpipe hose connections shall be provided in all of the following locations:~~

- ~~1. In every required *interior exit stairway*, a hose connection shall be provided for each story above and below grade. 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* 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 (30 480 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 *interior exit stairway* hose connection by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 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 to the mall and adjacent to each 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 units vertical in 12 units horizontal (33.3 percent slope), a hose connection shall be located to serve the roof or at the highest landing of a stairway with stair access to the roof provided in accordance with Section 1011.12 (*Stairway to roof*). An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.~~

- ~~6. Where the most remote portion of a nonsprinklered floor or *story* is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or *story* is more than 200 feet (60 960 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in *approved* locations.~~

905.5.3 Class II system hose. ~~If installed, the minimum diameter for standpipe hose shall be 1½ inch (38 mm) and such hose shall be listed for this service.~~

~~907.2 Where required new buildings and structures. An approved manual, automatic or manual and automatic fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 (Group A) through 907.2.23 (Battery rooms) and provide occupant notification in accordance with Section 907.5 (Occupant notification systems), unless other requirements are provided by another section of this code. The fire alarm control panel or a full function remote annunciator shall be installed at the main entrance for use by fire department personnel.~~

~~A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or water flow detection devices. The automatic fire detectors shall be smoke detectors. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed. The manual fire alarm box is required to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event. The manual fire alarm box may be located in an area that is accessible to the public. The manual fire alarm box is required to provide a means for fire watch personnel to initiate an impairment.~~

Exceptions:

- ~~1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.~~
- ~~2. Automatic heat detection required by this section shall not be required if automatic sprinkler protection installed in accordance with Section 903.3.1.1 (NFPA 13 sprinkler systems) or 903.3.1.2 (NFPA 13R sprinkler systems) is provided and connected to the building fire alarm system.~~
- ~~3. Where ambient conditions prohibit installation of automatic smoke detection, other approved automatic fire detection may be allowed.~~
- ~~4. Duct smoke detectors installed in accordance with applicable mechanical code requirements for stand-alone operation, located in separate lease spaces, occupied or vacant, of shell buildings need not be connected to the fire alarm control panels (FACP) where the only FACP is only required for the sprinkler monitoring system.~~

~~907.2.1.3 Electrical Shunt for Amplified Sound Conditions. For venues with amplified music or sound systems, in Group A occupancies having an occupant load of 300 or more, electrical shunts shall be provided to de-energize the music or sound systems upon alarm activation as necessary to demonstrate compliance with the audibility requirements of NFPA 72.~~

~~907.2.3.1. Common Areas Within Day Care and Child Care Facility Occupancies. Group E day care occupancies shall be provided a fire alarm system as required by sections 907.2.6.4 (Common Areas within Day Care Occupancies) and 907.2.3 (Group E).~~

~~907.2.6.4 Common Areas within Day Care Occupancy. Day care occupancies shall be protected by a fire alarm system which monitors smoke detectors installed in accordance with this section, the listing of the detectors and NFPA 72. Detectors must be placed on each story in front of doors to the stairways and at no greater spacing than the detector's listed spacing in the corridors of all floors containing the day care facility. Detectors must also~~

STAFF DRAFT PRE-LAW DEPT REVIEW

~~be installed in lounges, recreation areas and sleeping rooms in the day care occupancy and as required by the Building Code. Alarms shall be visible and audible throughout the day care facility.~~

Exceptions:

- ~~1. Day cares housed within a single room.~~
- ~~2. A Group E day care housed within and serving the students of an E occupancy, such as an after school program, summer program, or similar function, are permitted to comply with the alarm and detection requirements of section 907.2.3 (Group E).~~
- ~~3. Day cares serving less than 12 children when operated within the single family residence of the day care operator, provided that the dwelling is protected with interconnected hard wired smoke alarms located as required by this section and powered as required for a new home in accordance with the International Residential Code and NFPA 72. When such residential day cares serve hearing impaired children, parents, or guardians, the interconnected single station smoke alarms shall be listed for visual alarm service.~~
- ~~4. Single story day care occupancies serving 30 or fewer children with multiple remote at grade exits as defined by the Building Code may be provided with a smoke detection system complying with the State of Texas licensing standards provided that the operation of any detection device will cause the operation of an alarm device within every area listed above. When such small day cares serve hearing impaired children, parents, or guardians, the alarm signals shall be produced by devices listed for visual alarm service.~~

~~**907.2.8.2 Automatic smoke detection system.** An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 (*Occupant notification systems*) shall be installed throughout all group R-1 occupancies. Listed system type automatic detectors shall be installed within interior corridors serving sleeping units and unseparated areas such as recreational rooms, laundry rooms, and similar areas served by interior corridors providing access to and egress from sleeping units.~~

~~**Exception:** An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access, an egress balcony or similar exit access that leads directly to an exit.~~

~~**907.2.9.1 Manual and automatic fire alarm system.** A manual and automatic fire alarm system that activates the occupant notification system in accordance with 907.5 (*Occupant notification systems*) shall be installed in Group R-2 occupancies where any of the following apply:~~

- ~~1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge.~~
- ~~2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit.~~
- ~~3. The building contains more than 16 dwelling units or sleeping units.~~

~~Listed system type automatic detectors shall be installed within interior corridors serving as the primary access and egress for dwelling units, and unseparated common areas such as recreational room, laundry rooms and similar areas.~~

Exceptions:

- ~~1. A fire alarm system is not required in buildings not more than two stories in height where all *dwelling units* or *sleeping units* and contiguous *attic* and crawl spaces are separated from each other and public or common areas by at least 1-hour *fire partitions* and each *dwelling unit* or *sleeping unit* has an *exit* directly to a *public way*, *egress court* or *yard*.~~
- ~~2. Manual fire alarm boxes are not required throughout the building when all the following conditions are met:
 - ~~2.1. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 (*NFPA 13 sprinkler systems*) or Section 903.3.1.2 (*NFPA 13R sprinkler systems*);~~
 - ~~2.2. The notification appliances will automatically activate throughout the notification zones upon sprinkler water flow; and~~~~
- ~~3. A separate fire alarm system is not required in buildings that do not have interior *corridors* serving *dwelling units* and are protected by an *approved automatic sprinkler system* installed in accordance with 903.3.1.1 (*NFPA 13 sprinkler systems*) or 903.3.1.2 (*NFPA 13R sprinkler systems*), provided that sprinkler system activation results in a local alarm designed to notify all occupants and *dwelling units* have a means of egress door opening directly to an exterior exit access that leads directly to the exists or are served by open ended *corridors* as defined in Section 202 (*Definitions*) and designed in accordance with Section 1027.6 (*Exterior exit stairway and ramp protection*), exception 3.~~

~~**907.5.2.1.1 Average sound pressure.** The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of not less than 60 seconds, whichever is greater, in every occupiable space and occupiable balcony within the building.~~

~~**907.6.2.1 Protection of fire alarm control unit and notification power supplies.** In areas that are not continuously occupied, a single smoke detector shall be provided at the location of each fire alarm control unit, notification appliance circuit power extenders, and supervising station transmitting equipment.~~

Exceptions:

- ~~1. Where ambient conditions prohibit installation of automatic smoke detection, when approved, a heat detector shall be permitted.~~

~~**907.6.6 Monitoring.** Fire alarm systems required by this chapter or by the International Fire Code shall be monitored by an approved supervising station in accordance with NFPA 72, or by a local alarm which gives audible and visual signals at a constantly attended location. Reporting procedures and personnel training records for local alarm systems monitored at a constantly attended location shall be maintained for review and approval by the Fire Department.~~

Exceptions: Supervisory service is not required for:

- ~~1. Single and multiple station smoke alarms required by Section 907.2.11 (*Single and multiple station smoke alarms*).~~
- ~~2. Automatic sprinkler systems in one and two family dwellings.~~

~~907.6.7 Annunciation and control.~~ The main fire alarm control panel or an full function remote annunciator shall be install at the main entrance or at an approved location near the main entrance of buildings with fire alarm systems.

~~909.5 Smoke barrier construction.~~ Smoke barriers required for passive smoke control and a smoke control system using the pressurization method shall comply with Section 709 (*Smoke Barriers*). Smoke barriers shall be constructed and sealed to limit leakage areas exclusive of protected openings. The maximum allowable leakage area shall be the aggregate area calculated using the following leakage area ratios:

- ~~1. Exterior Walls $A/A_w = 0.00035$ (includes construction cracks, and cracks around windows and doors)~~
- ~~2. Stairwell walls: $A/A_w = 0.00035$ (includes construction cracks but not cracks around windows or doors)~~
- ~~3. Elevator shaft walls: $A/A_w = 0.0018$ (includes construction cracks but not cracks around doors)~~
- ~~4. Floors: $A/A_F = 0.00017$ (includes construction cracks and gaps around penetrations)~~

where:

A = Total leakage area, square feet (m^2)

A_F = Unit floor or roof area of barrier, square feet (m^2)

A_w = Unit wall area of barrier, square feet (m^2)

The leakage area ratios shown do not include openings due to gaps around doors and operable windows. The total leakage area of the smoke barrier shall be determined in accordance with Section 909.5.1 (*Total leakage area*) and tested in accordance with Section 909.5.2 (*Testing of leakage area*).

~~909.6.3 Pressurized stairways and elevator hoistways.~~ Where stairways or elevator hoistways are pressurized, such pressurization systems shall comply with Section 909 (*Smoke Control Systems*) as smoke control systems, in addition to the requirements of 909.21 of the *International Fire Code*.

~~909.10.2 Ducts.~~ Duct materials and joints shall be capable of withstanding the probable temperatures and pressures to which they are exposed as determined in accordance with Section 909.10 (*Equipment*). Shafts constructed of gypsum board or gypsum panel products are not allowed. Ducts shall be constructed and supported in accordance with the Mechanical Code. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance with nationally accepted practices. Measured leakage shall not exceed 5 percent of design flow. Results of such testing shall be a part of the documentation procedure. Ducts shall be supported directly from fire resistance rated structural elements of the building by substantial, noncombustible supports.

Exception: Flexible connections, for the purpose of vibration isolation, complying with the Mechanical Code and that are constructed of approved fire resistance-rated materials.

~~909.12.4 Automatic Control.~~ Where completely automatic control is required or used, the automatic control sequences shall be initiated from an appropriately zoned automatic sprinkler system complying with Section 903.3.1.1 (*NFPA 13 sprinkler systems*), an automatic smoke detection system complying with 907.2.13 (*High*

~~rise buildings), manual controls that are readily accessible to the fire department and any smoke detectors required by the engineering analysis.~~

~~**909.18.8 Testing for smoke control.** Smoke control systems shall be tested by a special inspector.~~

~~**909.20 Smokeproof enclosures.** Where required by Section 1023.11 (*Smokeproof enclosures*), a smokeproof enclosure shall be constructed in accordance with this section. A smokeproof enclosure shall consist of a pressurized *interior exit stairway or ramp* that is enclosed in accordance with the applicable provisions of Section 1023 (*Interior Exit Stairways and Ramps*) and a pressurized vestibule meeting the requirements of this section. Where access to the roof is required by the *International Fire Code*, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.~~

~~**909.20.1 Access.** Access to the stairway or ramp shall be by way of a vestibule. The minimum dimension of the vestibule shall be not less than the required width of the corridor leading to the vestibule but shall not have a width of less than 44 inches (1118 mm) and shall not have a length of less than 72 inches (1829 mm) in the direction of egress travel.~~

~~**909.20.2 Vestibule doors.** The door assembly from the building into the vestibule shall be a fire door assembly complying with Section 716.5.3 (*Door assemblies in corridors and smoke barriers*). The door assembly from the vestibule to the stairway or ramp shall not have less than a 90-minute fire protection rating and shall meet the requirements for a smoke door assembly in accordance with Section 716.5.3 (*Door assemblies in corridors and smoke barriers*). The door shall be installed in accordance with NFPA 105.~~

~~**909.20.3 Construction.** The smokeproof enclosure shall be separated from the remainder of the building by not less than 2-hour fire barriers constructed in accordance with Section 707 (*Fire Barriers*) or horizontal assemblies constructed in accordance with Section 711 (*Horizontal Assemblies*), or both. Openings are not permitted other than the required means of egress doors. The vestibule shall be separated from the stairway or ramp by not less than 2-hour fire barriers constructed in accordance with Section 707 (*Fire Barriers*) or horizontal assemblies constructed in accordance with IBC Section 711 (*Horizontal Assemblies*), or both.~~

~~**909.20.4 Door closers.** Doors in a smokeproof enclosure shall be self-closing and self-latching.~~

~~**909.20.5 Stair pressurization system.** The stairs shall be pressurized to accommodate the conditions of all doors closed and the ground floor exterior stair door open with all other doors closed. The maximum allowable door opening force shall be 30 pounds with the system operating. Validation of the pressurization fan sizes shall include the analysis described in Section 909.4 (*Analysis*) under both winter and summer conditions and shall use the allowable leakage ratios of Section 909.5 (*Smoke barrier construction*). A relief vent sized at 5,000 cfm and a 0.35-inch w.g. (field adjustable) opening point shall be provided at the upper portion of the stair shaft. The system shall have multiple injection points into the stairwell. Use of algebraic equations for pressurization fan sizing shall only be acceptable for simple idealized buildings. Complex systems for mixed-use high-rises and very tall buildings shall be designed using a network model.~~

STAFF DRAFT PRE-LAW DEPT REVIEW

~~**909.20.6 Pressurized vestibules.** The minimum pressure difference within the vestibule with the doors closed shall be 0.05 inch w.g. positive pressure relative to the floor and 0.05 inch w.g. negative relative to the stairwell for a total differential of +0.10 inch w.g. from the stairwell to the corridor/floor.~~

~~**909.20.7 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 (*Emergency and Standby Power Systems*).~~

~~**909.20.8 Acceptance and testing.** Before the mechanical equipment is approved, the system shall be tested in the presence of the fire official to confirm that the system is operating in compliance with these requirements.~~

~~**912.1.1 Number of Hose Connections.** Fire department connections (FDC's) shall include a minimum of two (2) 2½ inch (63.5 mm) female National Standard Hose Thread (NST) inlet connections. Where system design flow rates exceed 500 gpm (1,893 lpm), a minimum of one FDC inlet connection shall be installed for each 250 gpm (946 lpm) or portion thereof.~~

~~**Exception:** A single 2½ inch FDC inlet shall be provided for NFPA 13R automatic sprinkler systems.~~

~~**912.4 Access.** Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls or any other fixed or moveable object for a minimum of 3 feet (914 mm). Access to fire department connections shall be *approved* by the fire chief.~~

~~**Exception:** Fences, where provided with an access gate equipped with a sign complying with the legend requirements of this section and a means of emergency operation. Locks, if installed shall be openable by use of a fire department Knox Key. The gate and means of emergency operation shall be approved by the fire chief and maintained operational at all times.~~

~~**912.4.1 Locking fire department connection caps.** The fire code official is authorized to require locking caps on fire department connections for water based fire protection systems. The locking caps shall be manufactured by an approved manufacturer and used and maintained as designed.~~

~~**912.4.1.2 Locking fire department connection caps in existing buildings or structures.** The fire code official is authorized to require locking caps on fire department connections (FDC) for water based fire protection systems serving existing buildings where the fire department has observed obstructions placed in the FDC or where the FDC is missing caps. The locking caps shall be manufactured by an approved manufacturer and used and maintained as designed.~~

~~**912.5.1 Fire department connection placard for existing buildings or structures.** In addition to the signage required in 912.5 (*Signs*), an all weather, permanent, system placard shall be placed in a visible location adjacent to the fire department connection on all structures with a fire protection system requiring pressures exceeding 150psi. The placard text shall be white reflective letters, 1 ½ inch minimum height, on either a red or black background. The placard shall contain the following information:~~

STAFF DRAFT PRE-LAW DEPT REVIEW

1. ~~Required system pressure at FDC inlet.~~
2. ~~Area of building served by FDC~~
3. ~~System PRV locations~~

**TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT**

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR ^a
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport Terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Exhibit Gallery and Museum	30 net
Assembly with fixed seats	See Section 1004.5
Assembly without fixed seats	
Concentrated	7 net
Standing space or queuing space	7 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	100 gross
Courtrooms—other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Exercise rooms	50 gross
Group H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	
Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Mall buildings—covered and open	See section 402.8.2
Mercantile	60 gross

STAFF DRAFT PRE-LAW DEPT REVIEW

Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m².

a. Floor area in square feet per occupant.

1006.3.2 Single exits. ~~A single exit or access to a single exit shall be permitted from any story or occupied roof where one of the following conditions exists:~~

- ~~1. The occupant load, number of dwelling units and exit access travel distance do not exceed the values in Table 1006.3.2(1) or 1006.3.2(2).~~
- ~~2. Rooms, areas and spaces complying with Section 1006.2.1 (Egress based on occupant load and common) path of egress travel distance with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit or access to a single exit.~~
- ~~3. Parking garages where vehicles are mechanically parked shall be permitted to have one exit or access to a single exit.~~
- ~~4. Group R-3 and R-4 occupancies shall be permitted to have one exit or access to a single exit.~~
- ~~5. Individual single-story or multistory dwelling units shall be permitted to have a single exit or access to a single exit from the dwelling unit provided that both of the following criteria are met:~~
 - ~~5.1. The dwelling unit complies with Section 1006.2.1 (Egress based on occupant load and common path of egress travel distance) as a space with one means of egress.~~
 - ~~5.2. Either the exit from the dwelling unit discharges directly to the exterior at the level of exit discharge, or the exit access outside the dwelling unit's entrance door provides access to not less than two approved independent exits.~~
- ~~6. An elevator lobby may have one exit if the use of the exit does not require keys, tools, special knowledge or effort to operate.~~

TABLE 1006.3(1)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STAFF DRAFT PRE-LAW DEPT REVIEW

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement, first or second story above grade plane	R-2a, b	2 dwelling units	125 feet
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted

NA = Not Applicable

- a. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1030.
- b. This table is used for R-2 occupancies consisting of dwelling units. For R-2 occupancies consisting of sleeping units, use Table 1006.3(2).

TABLE 1006.3(2)

STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANTS PER STORY	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
First story above grade plane	A, Bb, E, Fb, M, U, Sb	49 occupants	75 feet
	H-2, H-3	3 occupants	25 feet
	H-4, H-5, I, R-1, R-2a, c, R-4	10 occupants	75 feet
	Sb, d	29 occupants	100 feet
Second story above grade plane or first story below grade plane	R-1, R-2a, c, R-4, B, F, M, Sd, He	10 occupants	75 feet
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP = Not Permitted

NA = Not Applicable

- a. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1030.
- a. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum exit access travel distance of 100 feet.
- b. This table is used for R-2 occupancies consisting of sleeping units. For R-2 occupancies consisting of dwelling units, use Table 1006.3(1).
- c. The length of exit access travel distance in a Group S-2 open parking garage shall be not more than 100 feet.
- d. Story below grade is not allowed.

1007.1.1. Two exits or exit access doorways. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways shall be placed at a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors or exit access doorways. Interlocking or scissor stairs shall be counted as one exit stairway.

Exceptions:

- ~~1. When interior exit stairways are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1018 (Corridors), the required exit separation shall be measured along the shortest direct line of travel within the corridor.~~
- ~~2. For an exit and exit access doorway that is not the primary exit access into a required exit stairway and that is located in a building that is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 (NFPA 13 sprinkler systems) or 903.3.1.2 (NFPA 13R sprinkler systems), the separation distance of the exit door or exit access doorway shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.~~

1008.2.1 Illumination Level Under Normal Power. The *means of egress* illumination level shall be not less than 1 foot-candle (11 lux) at the walking surface.

Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface is permitted to be reduced during performances by one of the following methods provided that the required illumination is automatically restored upon activation of a premises' fire alarm system:

1. Externally illuminated walking surfaces shall be permitted to be illuminated to not less than 0.2 foot-candle (2.15 lux).
2. Steps, landings and the sides of ramps shall be permitted to be marked with self-luminous materials in accordance with Sections 1025.2.1, 1025.2.2 and 1025.2.4 by systems listed in accordance with UL 1994; or in accordance with Section 1025.6.

1009.3 Stairways. In order to be considered part of an accessible means of egress, a stairway between stories shall have a clear width of 48 inches (1219 mm) minimum between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from an area of refuge complying with Section 1009.6 (*Areas of refuge*). Exit access stairways that connect levels in the same story are not permitted as part of an accessible means of egress.

Exceptions:

1. Exit access stairways providing means of egress from mezzanines are permitted as part of an accessible means of egress.
2. Except for a building governed by Section 403 (High-Rise Buildings) ~~or 405 (Underground Buildings)~~, the clear width of 48 inches (1219 mm) between handrails is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 (NFPA 13 sprinkler systems) or 903.3.1.2 (NFPA 13R sprinkler systems).
3. Areas of refuge are not required at exit access stairways where two-way communication is provided at the elevator landing in accordance with Section 1009.8 (*Two-way communication*).

4. Except for a building governed by Section 403 (*High-Rise Buildings*) ~~or 405 (*Underground Buildings*)~~, the Areas of refuge are not required at stairways in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 (*NFPA 13 sprinkler systems*) or 903.3.1.2 (*NFPA 13R sprinkler systems*).
5. Areas of refuge are not required at stairways serving open parking garages.
6. Areas of refuge are not required for smoke-protected assembly seating areas complying with Section 1029.6.2 (*Smoke-protected assembly seating*).
7. Areas of refuge are not required for stairways accessed from a refuge area in conjunction with a horizontal exit.

1010.1.2 Door Swing. Egress doors shall be of the pivoted or side-hinged swinging type.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single dwelling unit in Groups R-2 and R-3.
5. In other than Group H occupancies, revolving doors complying with Section 1010.3.1 (*Revolving doors*).
6. ~~In other than Group H-1, H-2, H-3 and H-4 occupancies, horizontal sliding doors complying with Section 1010.1.4.3 (*Special purpose horizontal sliding, accordion or folding doors*) are permitted in a means of egress.~~ In other than Group H-1, H-2, H-3, and H-4 occupancies, special purpose horizontal sliding, accordion or folding door assemblies complying with Section 1010.3.3.
7. Power-operated doors in accordance with Section 1010.3.2 (*Power-operated doors*).
8. Doors serving a bathroom within an individual sleeping unit in Group R-1.
9. In other than Group H occupancies, manually operated horizontal sliding doors are permitted in a means of egress from spaces with an occupant load of 10 or less.

1010.3.3 Special Purpose Horizontal Sliding, Accordion or Folding Doors. In other than Group H-1, H-2, H3 and H-4 occupancies, special purpose horizontal sliding, accordion or folding door assemblies permitted to be a component of a means of egress in accordance with Exception 6 to Section 1010.1.2 (*Door swing*) shall comply with all of the following criteria:

1. The doors shall be power operated and shall be capable of being operated manually in the event of power failure.

2. The doors shall be open able by a simple method ~~from both sides~~ without special knowledge or effort from the egress side or sides.
3. The force required to operate the door shall not exceed 30 pounds (133 N) to set the door in motion and 15 pounds (67 N) to close or open the door to the minimum required width.
4. The door shall be open able with a force not to exceed 15 pounds (67 N) when a force of 250 pounds (1100 N) is applied perpendicular to the door adjacent to the operating device.
5. The door assembly shall comply with the applicable fire protection rating and, where rated, shall be self-closing or automatic closing by smoke detection in accordance with Section 716.2.6.6 (*Smoke-activated doors*), shall be installed in accordance with NFPA 80 and shall comply with Section 716 (*Door closing*).
6. The door assembly shall have an integrated standby power supply.
7. The door assembly power supply shall be electrically supervised.
8. The door shall open to the minimum required width within 10 seconds after activation of the operating device.

1010.2.7 Stairway Doors. Interior *stairway means of egress* doors shall be open able from both sides without the use of a key or special knowledge or effort.

Exceptions:

1. *Stairway* discharge doors shall be open able from the egress side and shall only be locked from the opposite side.
2. This section shall not apply to doors arranged in accordance with Section 403.5.3 (*Stairway door operation*).
3. In *stairways* serving two stories or greater in a building not classified as a high-rise by Section 403 (*High-Rise Buildings*), doors are permitted to be locked from the side opposite the egress side, provided they are open able from the egress side. The exit doors shall be capable of being unlocked simultaneously without unlatching upon a signal from and approved fire department key switch. The key switch shall be located at the exterior opening of the stair or at the main entrance to the building.
4. *Stairway exit* doors shall be open able from the egress side and shall only be locked from the opposite side in Group B, F, M and S occupancies where the only interior access to the tenant space is from a single *exit stairway* where permitted in Section 1006.3.4 (*Single exits*).
5. *Stairway exit* doors shall be open able from the egress side and shall only be locked from the opposite side in Group R-2 occupancies where the only interior access to the *dwelling unit* is from a single *exit stairway* where permitted in Section 1006.3.4 (*Single exits*).

1020.4 Dead ends. ~~Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6,096 mm) in length.~~

Exceptions:

- ~~1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section 308.5 (Group I-3)), the dead end in a corridor shall not exceed 30 feet (9,144 mm).~~
- ~~2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, R-4, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 (NFPA 13 sprinkler systems), the length of the dead end corridors shall not exceed 50 feet (15,240 mm).~~
- ~~3. A dead end corridor shall not be limited in length where the length of the dead end corridor is less than 2.5 times the least width of the dead end corridor.~~

1025.6 Active Egress Path Illumination System. An active egress path illumination system shall be in accordance with Sections 1025.6.1 (*Luminaries*) through 1025.6.6.3 (*Instrumentation and Annunciation*). Designs complying with this section are equivalent to the requirements in Sections 1025.1 (*General*) through 1025.5 (*Illumination*).

The level of the egress illumination shall be in accordance with Section 1008 (*Means of Egress Illumination*).

1025.6.1 Luminaries. Luminaries shall be listed for emergency illumination and contain a lamp with an integral battery, battery charger and manual test switch and comply with Article 700 of the Electrical Code. The unit equipment shall be housed in a ~~sealed and gasketed fixture~~ rated fixture for indoor wet locations. Luminaire batteries shall be listed for use as a secondary power supply in accordance with UL 924. Luminaires shall not be equipped with an occupancy sensor. Every luminaire shall have a test switch to confirm the lamp's availability for service when operating on primary or emergency power.

Exception: The integral battery and battery charger is not required when luminaires are connected to a Stored Energy Emergency Power Supply System (SEPSS) complying with Section 1025.6.5 (*Stored Energy Emergency Power Supply System*).

1025.6.2 Primary and Secondary Electrical Power. A primary and secondary power source shall be provided for each luminaire. Primary power shall be a dedicated electrical branch circuit supplied from utility power. Secondary power shall be a branch circuit connected to an Emergency Power system complying with the *International Fire Code* Section 1203.2.15 (Means of Egress illumination). The primary and emergency source for each luminaire shall be connected to a dedicated primary and emergency power branch circuit.

1025.6.3 Location. Luminaries for the active egress path illumination system shall be located at each intermediate landing and stair landing within each interior exit stairway.

1025.6.4 Functional Test and Records. The luminaries shall be tested in accordance with *International Fire Code* Section 1032.10 (Emergency Lighting Equipment Inspection and Testing) except that the frequency of activation tests shall be weekly. Documentation records for the location of each luminaire and the results of the weekly activation and annual power tests shall be in accordance with *International Fire Code* Section 1032.10 (Emergency Lighting Equipment Inspection and Testing) Records shall be available to the fire code official upon

request. Operational testing and maintenance reports produced by the SEPSS are permitted provided they comply with NFPA 110 Chapter 8.

1025.6.5 Lamp Failure. Luminary lamps that do not operate because of a test or an incident shall be replaced. Any battery that cannot operate a lamp for a minimum of 90 minutes shall be replaced.

1025.6.6 Stored Energy Emergency Power Supply System. When provided, the SEPSS with an integral alternating current – to – direct current inverter shall comply with *International Fire Code* Section 1203.1.3 (Installation) and be listed in accordance with UL 924. The SEPSS shall be designed as Level 1 system in accordance with NFPA 111.

The SEPSS shall be located in the room separated from the remainder of the building by a minimum 1-hour fire-resistance rated construction and required opening protectives in accordance with the this code. The design temperature and humidity of the room housing the SEPPS shall be in accordance the manufacture installation instructions.

SEPSS are prohibited inside a Fire Command Center.

1025.6.6.1 Load Carrying Capacity. Battery systems complying with NFPA 111 shall be used to supply the emergency power to luminaires serving the active egress path illumination system. Batteries shall be rated for a minimum 90 minute discharge time and sized based on the total combined load of luminaires connected to the SEPSS.

1025.6.6.2 Required SEPSS. In buildings where the highest occupied floor is less than or equal to 120 feet above the lowest level of fire department access, one SEPSS shall be provided that complies with Section 1025.6.6 (*Stored Energy Emergency Power Supply System*) for all required interior exit stairways. A SEPSS shall be provided for each required interior exit stairway that serves floors greater than 120 feet above the lowest level of fire department access.

1025.6.6.3 Instrumentation and Annunciation. Instrumentation and annunciation shall be in accordance with NFPA 111. A remote annunciator displaying the status of the SEPSS shall be provided in the Fire Command Center. The SEPSS and its annunciator shall display the following information and its function shall be identified in the Fire Command Center:

1. Electrical load on utility power
2. Electrical load on emergency power
3. Output circuit breaker open
4. Output overload or overcurrent
5. High temperature
6. Emergency conversion equipment is bypassed
7. Low battery capacity
8. Any major or minor alarms prescribed by the SEPSS manufacturer

~~**1027.3 Open side.** Exterior exit stairways and ramps serving as an element of a required means of egress shall be open on not less than two sides, except for required structural columns, beams, handrails and guards. The~~

STAFF DRAFT PRE-LAW DEPT REVIEW

~~open area shall not be less than 50% of the perimeter of the stairs excluding the main landing. The open area shall be so distributed as to minimize the accumulation of smoke or toxic gases.~~

~~**1101.2 Design.** Buildings and facilities that are not included in the scope of the Texas Accessibility Standards (TAS) shall be designed and constructed to be accessible in accordance with the Building Code and ICC A117.1. Buildings and facilities included in the scope of TAS shall be designed and constructed to be accessible in accordance with the Texas Accessibility Standards of the Architectural Barriers Act, Article 9102, Texas Civil Statutes, as amended. Where conflicts occur between this chapter and any scoping provisions of the Texas Accessibility Standards, the more stringent requirement shall apply.~~

1101.2 Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with this code and ICC A117.1.

Exception: Components of projects designed in accordance with and regulated by the Architectural Barriers Division of the Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter, provided the scope of accessible features complies with the building code.

~~**1104.1 Site arrival points.** At least one accessible route within the site shall be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. An accessible route shall be located so that a person using the route is not required to travel in a traffic lane or behind a parked vehicle (except the vehicle the person operates or in which the person is a passenger).~~

~~**Exception:** Other than in buildings or facilities containing or serving Type A or Type B units, an accessible route shall not be required between site arrival points and the building or facility entrance if the only means of access between them is a vehicular way not providing for pedestrian access.~~

~~**1106.6 Location.** Accessible parking spaces shall be located on the shortest accessible route of travel from adjacent parking to an accessible building entrance. An accessible route shall be located so that a person using the route is not required to travel in a traffic lane or behind a parked vehicle (except the vehicle the person operates or in which the person is a passenger). Accessible parking spaces shall be dispersed among the various types of parking facilities provided. In parking facilities that do not serve a particular building, accessible parking spaces shall be located on the shortest route to an accessible pedestrian entrance to the parking facility. Where buildings have multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located near the accessible entrances.~~

Exceptions:

- ~~1. In multilevel parking structures, van accessible parking spaces are permitted on one level.~~
- ~~2. Accessible parking spaces shall be permitted to be located in different parking facilities if substantially equivalent or greater accessibility is provided in terms of distance from an accessible entrance or entrances, parking fee and user convenience.~~

1108.6.1.2 Type B Units. In structures with three or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1108.7 (*General exceptions*).

1108.6.2.2.2 Type B Units. Where there are three or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1108.7 (*General exceptions*).

1108.6.2.3.2 Type B Units. Where there are three or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and every sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1108.7 (*General exceptions*).

1108.6.3 Group R-3. In Group R-3 occupancies where there are three or more dwelling units or sleeping units intended to be occupied as a residence in a single structure, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit. Bedrooms within congregate living facilities shall be counted as *sleeping units* for the purpose of determining the number of units.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1108.7 (*General exceptions*).

1108.6.4.2 Type B Units. In structures with three or more dwelling units or sleeping units intended to be occupied as a residence, every dwelling unit and sleeping unit intended to be occupied as a residence shall be a Type B unit.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1108.7 (*General exceptions*).

~~**1110.1 General.** Recreational facilities shall be provided with accessible features in accordance with Sections 11110.2 (*Facilities serving Group R-2, R-3 and R-4 occupancies*) through 11110.4 (*Recreational facilities*). Elements of recreational and sport facilities not covered by the design standards in Section 11101.2 (*Design*) shall be designed in accordance with the “ADA and ABA Accessibility Guidelines for Buildings and Facilities, Chapter 10: Recreational Facilities”, published by the United States Access Board.~~

1301.1 Energy Efficiency. Buildings shall be designed and constructed in accordance with the Energy Code, adopted by Chapter 25-12, Article 12 (*Energy Code*).

1607.8.2 Fire Truck and Emergency Vehicles. Where a structure or portions of a structure are accessed and loaded by fire department access vehicles and other similar emergency vehicles, the structure shall be designed as specified in the Fire Code Section 503.2.6 Bridges and elevated surfaces.

SECTION 1612 FLOOD LOADS

1612.1 General. Within flood hazard areas as established in Section 1612.3 (*Establishment of flood hazard areas*), all new construction and alterations of buildings, structures and portions of buildings and structures, including substantial improvement and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads. When new construction constitutes a substantial improvement or restoration of substantial damage, all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design. All elevation requirements noted in this ordinance shall be documented using the Elevation Certificate, FEMA 81-31, and shall be certified by a registered professional engineer, surveyor, or architect, and shall be submitted to the Floodplain Administrator.

1612.2 Definitions. The following terms are defined in Chapter 2:

BASE FLOOD

BASE FLOOD ELEVATION

BASEMENT

DESIGN FLOOD

DESIGN FLOOD ELEVATION

DRY FLOODPROOFING

EXISTING STRUCTURE

FLOOD or FLOODING

FLOOD DAMAGE-RESISTANT MATERIALS

FLOOD HAZARD AREA

FLOOD INSURANCE RATE MAP (FIRM)

FLOOD INSURANCE STUDY

FLOODWAY

LOWEST FLOOR

REGULATORY FLOOD DATUM

SPECIAL FLOOD HAZARD AREA

START OF CONSTRUCTION

SUBSTANTIAL DAMAGE

SUBSTANTIAL IMPROVEMENT

1612.3 Establishment of Flood Hazard Areas. Flood hazard areas are:

1. the areas of special flood hazard areas identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Williamson County, Texas and Incorporated Areas" dated December 20, 2019, with accompanying Flood Insurance Rate Maps (FIRM) dated December 20, 2019, the current scientific and engineering report entitled "The Flood Insurance Study for Travis County, Texas and Incorporated Areas" dated January 6, 2016, with accompanying Flood Insurance Rate Maps dated January 6, 2016, and any revisions are adopted by reference and declared to be a part of this section; and
2. the 100-year and 25-year floodplains as defined in the Austin City Code and Drainage Criteria Manual are adopted by reference and declared to be part of this section.

1612.4 Design and Construction. The design and construction of buildings and structures, and additions and alterations to buildings and structures located in flood hazard areas, shall be in accordance with ASCE 24, Flood Resistant Design and Construction.

1612.4.1 Freeboard. A minimum freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified, unless otherwise specified in [Title 25](#) (*Land Development*).

1612.4.2 Provisions of Safe Refuge.

1. Buildings or structures constructed in the flood hazard area where the ground surface is below the design flood elevation, or where flood water velocities at the building may exceed five feet per second, shall be provided with an enclosed refuge space two feet or more above the design flood elevation, and of sufficient area to provide for the occupancy load with a minimum of 12 square feet per person. The refuge space shall be provided to an exterior platform and stairway not less than three feet wide.
2. Existing buildings and structures in flood hazard areas which are enlarged, extended, or altered, or where a change of use or occupancy is made, shall conform to the requirements of Subsection 1.
3. No floor level or portion of a building or structure that is lower than one foot above the design flood elevation, regardless of the structure or space classification, shall be used residentially, or for storage of

any property, materials, or equipment that might constitute a safety hazard when contacted by flood waters.

1612.4.3 Means of Egress. Normal access to the building shall be by direct connection with an area that is a minimum of one foot above the design flood elevation, unless otherwise approved by the building official.

1612.5 Flood Hazard Documentation. The following documentation shall be prepared and sealed by a registered design professional and submitted to the building official:

1. For construction in flood hazard areas:

1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3 (*Lowest floor elevation*) and for the final inspection in Section 110.3.10.1 (*Flood hazard documentation*).

1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.6.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.6.2.2 of ASCE 24.

1.3. For dry flood-proofed nonresidential buildings, construction documents shall include a statement that the dry flood proofing is designed in accordance with ASCE 24.

SECTION 1811 EARTH RETENTION SYSTEMS

1811.1 Tieback Anchors and Soil and Rock Nails. Tieback anchors and soil and rock nails that are allowed in the public right-of-way as components of earth retention systems as provided in Section 3202.1.4 (*Earth retention system components*) shall comply with Sections 1811.1.1 (*Depth of tiebacks anchors and soil and rock nails*) through 1811.1.3 (*Length of tiebacks anchors and soil and rock nails*).

1811.1.1 Depth of Tieback Anchors and Soil and Rock Nails. At the right-of-way line, tieback anchors and soil and rock anchors must be at least 6 feet (1829 mm) below the elevation of the adjacent street curb.

1811.1.2 Separation Distance from Buried Utilities. Tieback anchors and soil and rock nails must be below and at least five feet (1524 mm) away from the nearest outside surface of any existing or planned buried utility in the public right-of-way.

1811.1.3 Length of Tieback Anchors and Soil and Rock Nails. Tieback anchors and soil and rock nails that extend beyond the center of the public right-of-way are prohibited.

2108.4 ACI 530/ASCE 5/TMS402

STAFF DRAFT PRE-LAW DEPT REVIEW

Section 3.1.7.2.2. In Plane Bending. For masonry subjected to in-plane loads, the modulus of rupture, f_r , normal and parallel to the bed joints shall be taken from Table 3.1.7.2.1. For grouted stack bond masonry, tension parallel to the bed joints shall be assumed to be resisted only by the continuous horizontal grout section.

2901.1 Scope. The provisions of this chapter and the Uniform Plumbing Code shall govern the design, construction, erection and installation of plumbing components, appliances, equipment and systems used in buildings and structures covered by this code.

Table 2902.1, Column Header 4. Reference to Section 424.2 of the International Plumbing Code shall be replaced with the following: In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in assembly and educational occupancies. Urinals shall not be substituted for more than 50 percent of the required water closets in all other occupancies.

Table 2902.1, Column Header 7. Reference to Section 410 of the International Plumbing Code shall be replaced with Section 415 of the Uniform Plumbing code.

2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided in the minimum number as shown in Table 422.1 of the Plumbing Code based on the actual use of the building or space. Uses not shown in Table 422.1 of the Plumbing Code shall be considered individually by the code official. The number of occupants shall be determined by this code.

2902.1.1 Fixture calculations. To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of each sex in accordance with Table 422.1 of the Plumbing Code. Fractional numbers resulting from applying the fixture ratios of Table 422.1 of the Plumbing Code shall be rounded up to the next whole number. For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then rounded up to the next whole number.

Exception: The total occupant load shall not be required to be divided in half where approved statistical data indicate a distribution of the sexes of other than 50 percent of each sex.

2902.2 Separate Facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for *dwelling units* and *sleeping units*.
2. Separate facilities shall not be required in structures or tenant spaces with a total *occupant load*, including both employees and customers, of 15 or fewer.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or fewer.

STAFF DRAFT PRE-LAW DEPT REVIEW

4. Separate facilities shall not be required in business occupancies when the maximum occupant load is 50 or fewer.

5. Separate facilities shall not be required to be designated by sex where single-user toilets rooms are provided in accordance with Section 2902.1.2.

6. Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by both sexes and privacy for water closets are installed in accordance with Section 405.3.4 of the *International Plumbing Code*. Urinals shall be located in an area visually separated from the remainder of the facility or each urinal that is provided shall be located in a stall.

2902.6 Small Occupancies. Drinking fountains shall not be required for an occupant load of 30 or fewer. For a business or a mercantile occupancy where the occupancy load is 30 or fewer, service sinks shall not be required.

~~**3102.1 General.** The provisions Sections 3102.1 (*General*) through 3102.8 (*Inflation systems*) shall apply to air-supported, air-inflated, membrane-covered cable, membrane-covered frame and *tensile membrane structures*, collectively known as membrane structures separated by at least 20 feet (6,096 mm) from any building as specified in IFC Section 3103.8.2 (*Location*) and erected for a period of 180 days or longer. The provisions of this section also apply to membrane structures separated by less than 20 feet from any building and erected for a period of 90 days or longer. Those erected for a shorter period of time shall comply with the *International Fire Code*. Membrane structures covering water storage facilities, water clarifiers, water treatment plants, sewage treatment plants, greenhouses and similar facilities not used for human occupancy, are required to meet only the requirements of Sections 3102.3.1 (*Membrane and interior liner material*) and 3102.7 (*Engineering design*). Membrane structures erected on a building, balcony, deck or other structure for any period of time shall comply with this section.~~

~~**3103.1.3 Permit expiration.** Every permit issued for a temporary structure will expire on the last scheduled day of the event of which the permit was issued. The permit cannot be used to cover other events following the date of the original event.~~

3103.5 Portable Classrooms. Portable classroom buildings may be moved into or within this jurisdiction or within a public school district without conforming to the adopted Energy Code.

~~**3103.6 Moved residential buildings.** Residential buildings or structures moved into or within the City's zoning jurisdiction shall be sited in compliance with applicable provisions of Title 25 of the City Code. Foundations of relocated residential buildings or structures must comply with the provisions of the Building Code for new buildings or structures. All other building elements must comply with the requirements of the International Residential Code.~~

~~**3103.7 Moved non-residential buildings.** Non-residential buildings moved into or within the City's zoning jurisdiction must comply with the provisions of the Building Code for new buildings or structures.~~

~~**3109.3 Public swimming pools.** Public swimming pools shall be enclosed as per the Texas Department of Health Standards for Swimming Pools and Spas.~~

~~3112 AERIAL PASSAGEWAYS~~

~~**3112.1 Definition.** An aerial passageway is a structure located over an alley or street connecting two buildings on opposite sides of the alley or street.~~

~~**3112.2 Requirements.** An aerial passageway shall comply with this section.~~

- ~~1. The structure shall be used for access only and not for storage or occupancy.~~
- ~~2. The structure shall be constructed entirely of non-combustible materials. See section 3104.3~~
- ~~3. Self-closing Class A doors shall be placed at each end of the passageway. SEE SECTION 3104.5.1~~
- ~~4. If the structure interferes with any public utility facilities, all costs associated with relocation and remediation shall be borne by the Owner.~~
- ~~5. No electric, gas, or water shall be attached to or be permitted to cross on or in the aerial passageway. Telephone and other communication utilities may be allowed subject to the execution of a license agreement.~~
- ~~6. Except as otherwise provided in the section, a minimum clearance of 18 feet above the surface of the alley or street is required. The *building official* may allow a height that is less than 18 feet but not less than 17 feet if she determines that the lower height will result in an equivalent installation.~~
- ~~7. A license agreement required by City Code Chapter 14-11 is executed.~~

3201.1 Scope. The provisions of this chapter shall govern the encroachment of structures into the public right-of-way, including components of earth retention systems used to facilitate below-grade construction of a building or structure.

3202.1 Encroachments Below Grade. Encroachments below grade shall comply with Sections 3202.1.1 (*Structural support*) through 3202.1.4 (*Earth retention system components*).

3202.1.4 Earth Retention System Components. Components of earth retention systems that are required for structural support of a building or structure are prohibited in the public right-of-way. Components of earth retention systems that are needed only during construction of the below-grade portion of a building or structure are subject to the following conditions:

1. Approval of the Director of the Public Works Department is required before construction of earth retention system components in public right-of-way commences.
2. All components of an earth retention system are prohibited in the public right-of-way except for (1) tieback anchors that are part of a soldier pile and lagging system; (2) tieback anchors that are part of a diaphragm or slurry wall system; (3) tieback anchors that are part of a sheet pile wall system; (4) tieback anchors that are part of a secant wall system; and (5) soil or rock nails that are part of a nail wall.
3. Tieback anchors or soil or rock nails that are necessary as functional components of the earth retention system for longer than 12 months are prohibited in the public right-of-way.

STAFF DRAFT PRE-LAW DEPT REVIEW

4. Tieback anchors and soil and rock nails allowed in the public right-of-way must be designed according to the criteria in Section 1811 (*Earth Retention Systems*).

3202.3.4 Pedestrian Walkways. The installation of a pedestrian walkway over a public right-of-way and all associated utilities shall be subject to the approval of an encroachment agreement as per city code chapter 14-11- Use of Right- of- Way. The vertical clearance from the public right-of-way to the lowest part of a pedestrian walkway shall be not less than 16.5 feet over roadway and alley subject to truck traffic, and not less than 15'-0" over other areas in the right-of-way.

APPENDIX G FLOOD-RESISTANT CONSTRUCTION

SECTION G100 STATUTORY AUTHORIZATION

As a home-rule city, the City of Austin has the responsibility and power to adopt regulations designed to minimize flood losses. The Legislature of the State of Texas has in Sections 16.3145 and 16.315 of the Texas Water Code authorized local government units to adopt regulations designed to minimize flood losses.

SECTION G101 ADMINISTRATION

G101.1 Purpose. The purpose of this appendix is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific *flood hazard areas* through the establishment of comprehensive regulations for management of *flood hazard areas* designed to:

1. Prevent unnecessary disruption of commerce, access and public service during times of flooding.
2. Manage the alteration of natural flood plains, stream channels and shorelines.
3. Manage filling, grading, dredging and other development which may increase flood damage or erosion potential.
4. Prevent or regulate the construction of flood barriers which will divert floodwaters or which can increase flood hazards.
5. Contribute to improved construction techniques in the flood plain.
6. Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities; and
7. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.

G101.2 Objectives. The objectives of this appendix are to protect human life, minimize the expenditure of public money for flood control projects, minimize the need for rescue and relief efforts associated with flooding, minimize prolonged business interruption, minimize damage to public facilities and utilities, help maintain a stable tax base by providing for the sound use and development of flood-prone areas, contribute to improved construction techniques in the flood plain and ensure that potential owners and occupants are notified that property is within *flood hazard areas*.

G101.3 Scope. The provisions of this appendix shall apply to all proposed development in a *flood hazard area* established in Section 1612 (*Flood Loads*) of this code.

G101.4 Violations. Any violation of a provision of this appendix, or failure to comply with a permit or variance issued pursuant to this appendix or any requirement of this appendix, shall be handled in accordance with Section 114 (*Violations*).

SECTION G102 APPLICABILITY

G102.1 General. This appendix, in conjunction with this code, provides minimum requirements for development located in flood hazard areas, including:

1. The subdivision of land.
2. Site improvements and installation of utilities.
3. Placement and replacement of manufactured homes.
4. Placement of recreational vehicles.
5. New construction and repair, reconstruction, rehabilitation, or additions to new construction.
6. Substantial improvement of existing buildings and structures, including restoration after damage.
7. Installation of tanks.

G102.1.1 Abrogation and Greater Restrictions. This appendix is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this appendix and another city code provision, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

G102.2 Establishment of Flood Hazard Areas. Flood hazard areas are established in Section 1612.3 (*Establishment of flood hazard areas*).

G102.3. Nonconforming Uses.

A structure, or the use of a structure or premises, which was lawful before the adoption of the Building Code, but which does not conform with the requirements of these regulations, may be continued subject to the following conditions:

1. No such use shall be expanded, changed, enlarged, or altered in a way which increases its nonconformity.
2. No substantial improvement of the structure shall be made unless the structure is changed to conform to these regulations.
3. If a nonconforming use is discontinued for a period of 90 days, any future use of the building or premises shall conform to these regulations.

4. Any nonconforming use or structure which is destroyed by means, including floods, to an extent of 50 percent or more of its market value, shall not be reconstructed except in conformance with the provisions of these regulations.

SECTION G103 POWERS AND DUTIES

G103.1 Permit Applications. All applications for permits must comply with the following:

1. The *building official* shall review all *permit* applications to determine whether proposed development is located in *flood hazard areas* established in Section 1612.3 (*Establishment of flood hazard areas*).
2. Where a proposed development site is in a *flood hazard area*, all development to which this appendix is applicable as specified in Section G102.1 (*General*) shall be designed and constructed with methods, practices and materials that minimize *flood* damage and that are in accordance with this code and ASCE 24.

G103.2 Other Permits. It shall be the responsibility of the *building official* to ensure that approval of a proposed development shall not be given until proof that necessary approvals and/or permits have been granted by federal, state, or local agencies having jurisdiction over such development.

G103.3 Determination of Design Flood Elevations. If design flood elevations are not specified, the *building official* is authorized to require the applicant to:

1. Obtain, review and reasonably utilize data available from a federal, state or other source; or
2. Determine the design flood elevation in accordance with the 100-year floodplain based on projected full development in accordance with the City of Austin Drainage Criteria Manual. Such analyses shall be performed and sealed by a Professional Engineer licensed by the State of Texas. Studies, analyses and computations shall be submitted in sufficient detail to allow review and approval by the *building official*. The accuracy of data submitted for such determination shall be the responsibility of the applicant.

G103.4 Activities in Riverine Flood Hazard Areas. In riverine situations, the *building official* shall not permit any new construction, substantial improvement or other development, including fill, unless the applicant submits and engineering analysis prepared by a *registered design professional*, demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the design flood elevation at any point that results in additional adverse flooding on other property.

G103.5 Floodway Encroachment. Prior to issuing a permit for any floodway encroachment, including fill, new construction, substantial improvements and other development or land-disturbing activity, the *building official* shall require submission of a certification prepared by a Professional Engineer licensed by the State of Texas, along with supporting technical data in accordance with the City of Austin Drainage Criteria Manual, demonstrating that such development will not cause any increase of the level of the design flood.

G103.5.1 Floodway Revisions. A floodway encroachment that increases the level of the design flood may be considered for a variance only if the applicant has applied for a conditional Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency (FEMA) provided the

conditional Flood Insurance Rate Map (FIRM) revision is required by the City of Austin Drainage Criteria Manual.

G103.6 Watercourse Alteration. Prior to issuing a permit for any alteration or relocation of any watercourse, the *building official* shall require the applicant to provide notification of the proposal to the appropriate authorities of all affected adjacent government jurisdictions, as well as appropriate state agencies. A copy of the notification shall be maintained in the permit records and submitted to FEMA.

G103.6.1 Engineering Analysis. The *building official* shall require submission of an engineering analysis in accordance with the City of Austin Drainage Criteria Manual performed and sealed by a Professional Engineer licensed by the State of Texas demonstrating that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased. Such watercourses shall be maintained in a manner which preserves the channel's flood-carrying capacity.

G103.7 Records. The *building official* shall maintain a permanent record of all permits issued in flood hazard areas, including copies of inspection reports and certifications required in Section 1612 (*Flood Loads*).

G103.9 Inspections. Development for which a *permit* under this appendix is required shall be subject to inspection. The *building official* or the *building official's* designee shall make, or cause to be made, inspections of all development in *flood hazard areas* authorized by issuance of a *permit* under this appendix.

SECTION G104 PERMITS

G104.1 Required. Any person, owner or owner's authorized agent who intends to conduct any development in a *flood hazard area* shall first make application to the *building official* and shall obtain the required *permit*.

G104.2 Application for Permit. The applicant shall file an application in writing on a form furnished by the *building official*. Such application shall:

1. Identify and describe the development to be covered by the *permit*.
2. Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitely locate the site.
3. Include a site plan showing the delineation of *flood hazard areas*, *floodway* boundaries, flood zones, design flood elevations, ground elevations, proposed lowest floor elevation, proposed fill and excavation and drainage patterns and facilities.
4. Include in subdivision proposals and other proposed developments with more than 50 lots or larger than 5 acres (20 234 m²), base flood elevation data in accordance with Section 1612.3 (*Establishment of flood hazard areas*).
5. Indicate the use and occupancy for which the proposed development is intended.
6. Be accompanied by construction documents, grading and filling plans and other information deemed appropriate by the *building official*.

7. State the valuation of the proposed work.
8. Be signed by the applicant or the applicant's authorized agent.

G104.3 Validity of Permit. The issuance of a *permit* under this appendix shall not be construed to be a *permit* for, or approval of, any violation of this appendix or any other ordinance of the jurisdiction. The issuance of a *permit* based on submitted documents and information shall not prevent the *building official* from requiring the correction of errors. The *building official* is authorized to prevent occupancy or use of a structure or site which is in violation of this appendix or other ordinances of the City of Austin.

G104.4 Time Limitation on Application; Permit Expiration and Reactivation. Time limits on permit applications and requirements for permit expiration and reactivation, including a review fee for expired permits, are set forth in Chapter 25-12, Article 13 (*Administration of Technical Codes*).

Exception: Permits issued under Section 105.1.1 (*Annual permit*) are only valid for a period of 360 days from the date of issuance and cannot be extended.

G104.5 Suspension or Revocation. The *building official* is authorized to suspend or revoke a *permit* issued under this appendix wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or code of the City of Austin.

SECTION G105 VARIANCES

G105.1 General. The City Council shall decide requests for variances from the floodplain regulations in this code and City Code Chapter 25-7 (*Drainage*) after conducting a public hearing. The City Council shall base its determination on technical justifications, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of this appendix and Section 1612 (*Flood Loads*).

G105.2 Records. The *building official* shall maintain a permanent record of all variance actions, including justification for their issuance.

G105.3 Historic Structures. A variance may be issued for the repair or rehabilitation of a historic structure upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure, and the variance is the minimum necessary to preserve the historic character and design of the structure.

Exception: Within flood hazard areas, historic structures that are not:

- a. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places; or
- b. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or
- c. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.

G105.4 Functionally Dependent Facilities. A variance may be issued for the construction or substantial improvement of a functionally dependent facility provided the criteria in Section 1612.1 (*General*) are met and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to methods and materials that minimize flood damages during the design flood and create no additional threats to public safety.

G105.5 Restrictions. The City Council shall not issue a variance for any proposed development in a floodway if any increase in flood levels would result during the design flood discharge.

G105.6 Considerations. In reviewing applications for variances, the City Council shall consider all technical evaluations, all relevant factors, all other portions of this appendix, and each of the following:

1. The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
2. The danger to life and property due to flooding or erosion damage.
3. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
4. The importance of the services provided by the proposed development to the community.
5. The availability of alternate locations for the proposed development that are not subject to flooding or erosion.
6. The compatibility of the proposed development with existing and anticipated development.
7. The relationship of the proposed development to the comprehensive plan and flood plain management program for that area.
8. The safety of access to the property in times of flood for ordinary and emergency vehicles.
9. The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
10. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

G105.7 Conditions for Issuance. Variances shall only be issued by the City Council upon:

1. A technical showing of good and sufficient cause based on the unique characteristics of the size, configuration or topography of the site;
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable;
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances;

4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and
5. Notification to the applicant in writing over the signature of the *building official* that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance, and that such construction below the base flood level increases risks to life and property.

SECTION G201 DEFINITIONS

G201.1 General. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein. Refer to Chapter 2 for general definitions.

G201.2 Definitions.

DEVELOPMENT. Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, operations and other land disturbing activities.

FUNCTIONALLY DEPENDENT FACILITY. A facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading or unloading of cargo or passengers, shipbuilding or ship repair. The term does not include long-term storage, manufacture, sales or service facilities.

MANUFACTURED HOME. A structure that is transportable in one or more sections, built on a permanent chassis, designed for use with or without a permanent foundation when attached to the required utilities, and constructed to the Federal Mobile Home Construction and Safety Standards and rules and regulations promulgated by the U.S. Department of Housing and Urban Development. The term also includes mobile homes, park trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

MANUFACTURED HOME PARK OR SUBDIVISION. A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

RECREATIONAL VEHICLE. A vehicle that is built on a single chassis, 400 square feet (37.16 m²) or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light-duty truck, and designed primarily not for use as a permanent dwelling but, as temporary living quarters for recreational, camping, travel or seasonal use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect-type utilities and security devices and has no permanently attached additions.

VARIANCE. A grant of relief from the requirements of this section which permits construction in a manner otherwise prohibited by this section where specific enforcement would result in unnecessary hardship.

VIOLATION. A development that is not fully compliant with this appendix or Section 1612 (*Flood Loads*), as applicable.

SECTION G301 SUBDIVISIONS

G301.1 General. Any subdivision proposal, including proposals for manufactured home parks and subdivisions, or other proposed new development in a flood hazard area shall be reviewed to verify all of the following:

1. All such proposals are consistent with the need to minimize flood damage;
2. All public utilities and facilities, such as sewer, gas, electric and water systems are located and constructed to minimize or eliminate flood damage; and
3. Adequate drainage is provided to reduce exposure to flood hazards.

G301.2 Subdivision Requirements. The following requirements shall apply in the case of any proposed subdivision, including proposals for manufactured home parks and subdivisions, any portion of which lies within a *flood hazard area*:

1. The *flood hazard area*, including *floodways*, as appropriate, shall be delineated on tentative and final subdivision plats.
2. Design flood elevations shall be shown on tentative and final subdivision plats.
3. Residential building lots shall be provided with adequate buildable area outside the *flood hazard area*.
4. The design criteria for utilities and facilities set forth in this appendix, Section 1612 (*Flood Loads*), ASCE 24, the City of Austin Drainage Criteria Manual, and applicable FEMA design criteria shall be met.

SECTION G401 SITE IMPROVEMENT

G401.1 Development in Floodways. Development or land disturbing activity shall not be authorized in the *floodway* unless it has been demonstrated through hydrologic and hydraulic analyses performed and sealed by a Professional Engineer licensed by the State of Texas in accordance with the City of Austin Drainage Criteria Manual, that the proposed encroachment will not result in any increase in the level of the design flood.

G401.2 Sewer Facilities. All new or replaced sanitary sewer facilities, private sewage treatment plants (including all pumping stations and collector systems) and on-site waste disposal systems shall be designed in accordance with Chapter 7, ASCE 24, to minimize or eliminate infiltration of floodwaters into the facilities and discharge from the facilities into floodwaters, or impairment of the facilities and systems.

G401.3 Water Facilities. All new replacement water facilities shall be designed in accordance with the provisions of Chapter 7, ASCE 24, to minimize or eliminate infiltration of floodwaters into the systems.

G401.4 Storm Drainage. Storm drainage shall be designed to convey the flow of surface waters to minimize or eliminate damage to persons or property.

G401.5 Streets and Sidewalks. Streets and sidewalks shall be designed to minimize potential for increasing or aggravating flood levels.

SECTION G501 MANUFACTURED HOMES

G501.1 Elevation. All new and replacement manufactured homes to be placed or substantially improved in a *flood hazard area* shall be elevated such that the lowest floor of the manufactured home is elevated to a minimum of one (1) foot above the design flood elevation. Elevation certification required by Section 1612.5 (*Flood hazard documentation*) shall be submitted to the *building official*.

G501.2 Foundations. All new and replacement manufactured homes, including substantial improvement of existing manufactured homes, shall be placed on a permanent, reinforced foundation that is designed in accordance with Section R322 of the *International Residential Code*.

G501.3 Anchoring. All new and replacement manufactured homes to be placed or substantially improved in a *flood hazard area* shall be installed using methods and practices which minimize flood damage. Manufactured homes shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. Methods of anchoring are authorized to include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

G501.4 Protection of Mechanical Equipment and Outside Appliances. Mechanical equipment and outside appliances shall be elevated to or above the *design flood elevation*.

Exception: Where such equipment and appliances are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to the elevation required by Section R322 of the *International Residential Code*, the systems and equipment shall be permitted to be located below the elevation required by Section R322 of the *International Residential Code*. Electrical wiring systems shall be permitted below the *design flood elevation* provided they conform to the provisions of NFPA 70.

G501.5 Enclosures. Fully enclosed areas below elevated manufactured homes shall comply with the requirements of Section R322 of the *International Residential Code*.

SECTION G601 RECREATIONAL VEHICLES

G601.1 Placement Prohibited. The placement of recreational vehicles shall not be authorized in *floodways*.

G601.2 Temporary Placement. Recreational vehicles in flood hazard areas shall be fully licensed and ready for highway use, and shall be placed on a site for less than 180 consecutive days.

G601.3 Permanent Placement. Recreational vehicles that are not fully licensed and ready for highway use, or that are to be placed on a site for more than 180 consecutive days, shall meet the requirements of Section G501 (*Manufactured Homes*) for manufactured homes.

SECTION G701 TANKS

G701.1 Tanks. Underground and above-ground tanks shall be designed, constructed, installed and anchored in accordance with ASCE 24.

STAFF DRAFT PRE-LAW DEPT REVIEW

Section G702 Referenced Standards

ASCE 24-13	Flood Resistance Design and Construction	G103.1, G401.3, G401.4, G701.1, G801.1, G801.5, G801.6, G801.7, G901.1, G1001.4, G201
HUD 24 CFR	Manufactured Home	G201
Part 3280 (2008)	Construction and Safety Standards	
IBC-15	International Building Code	G102.2, G1001.1, G1001.3
IRC-15	International Residential Code	G501.2, G501.4, G501.5
NFPA 70-11	National Electric Code	G501.4, G1001.6

PART2. City Code Chapter 25-12 to adopt a new Article 10 (*Reserved*) to read as follows:

ARTICLE 10. EXISTING BUILDING CODE

§ 25-12-231 INTERNATIONAL EXISTING BUILDING CODE.

- A. The International Existing Building Code, ~~2015~~ **2021** Edition ("~~2015~~ **2021** Existing Building Code"), published by the International Code Council is adopted and incorporated by reference into this section with the deletions in Subsection (B) and amendments in Section 25-12-233 (*Local Amendments to the ~~2015~~ **2021** Existing Building Code*).
- B. The following sections of the ~~2015~~ **2021** Existing Building Code are deleted:

103 & Subsections	105.1.1	105.5	106.2.6	111.3	112
103 and subsections	105.1.1	105.3			
105.3.2	105.5	106.2.3	106.2.5		
109.3.1	109.3.5	111.3	112		

(C) The city clerk shall retain a copy of the ~~2015~~ **2021** Existing Building Code with the official ordinances of the City of Austin.

§ 25-12-232 CITATIONS TO THE ~~2015~~ **2021 EXISTING BUILDING CODE.**

In the City Code, "Existing Building Code" means the ~~2021~~ **2015** Existing Building Code adopted and amended by Section 25-12-231 (*International Existing Building Code*), as amended by Section 25-12-233 (*Local Amendments to the ~~2021~~ **2015** Existing Building Code*).

STAFF DRAFT PRE-LAW DEPT REVIEW

§ 25-12-233 LOCAL AMENDMENTS TO THE ~~2015~~ 2021 EXISTING BUILDING CODE.

The following provisions are local amendments to the ~~2015~~ 2021 Existing Building Code. Each provision of this section is a substitute for any identically numbered provision of the ~~2015~~ 2021 Existing Building Code deleted by Section 25-12-231(8) (*International Existing Building Code*) or is an addition to the ~~2015~~ 2021 Existing Building Code:

SECTION 103 BUILDING OFFICIAL.

~~103.1 Authority. The building official is the City official responsible for administering, implementing, and enforcing the Building Code. The building official may appoint one or more deputy building officials.~~

[A] 103.1 Authority. The building official administers, enforces, and interprets this code. The building official may designate one or more deputy building officials.

105.1.1 Annual permit. Instead of an individual permit for each alteration to an already approved electrical, gas, mechanical or plumbing installation, and minor building alterations and repairs, the building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified trade persons in the building, structure or on the premises owned or operated by the applicant for the permit. The facility shall maintain records on all work performed under the annual permit in accordance with Section 105.1.2 (*Annual Permit Records*).

105.1.1.1 Authorized Scope of Work. See Building Criteria Manual, section 1.1.2 Building Inspection Processes for authorized work under the annual permit. ~~Work under the annual permit is limited to the following:~~

~~Building. Work that:~~

- ~~1. does not alter a bearing wall or other structural elements; and~~
- ~~2. does not require a change to an exit system; and~~
- ~~3. does not alter fire resistive construction; and~~
- ~~4. is performed on or in a structure with a certificate of occupancy that is consistent with the existing occupancy; and~~
- ~~5. does not alter natural gas piping or medical gas piping systems; and~~
- ~~6. does not alter hazardous production material (HPM) supply or waste piping in areas of the building not currently classified as an H occupancy; and~~
- ~~7. does not remove, relocate, replace, or install a backflow prevention device; and~~

STAFF DRAFT PRE-LAW DEPT REVIEW

- ~~8. does not increase the existing square footage of the facility; and~~
- ~~9. otherwise complies with all other applicable provisions of this title; and~~
- ~~10. is performed by licensed contractors as required by the Plumbing Code, Electrical Code, or Mechanical Code.~~

Electrical. Work that:

- ~~1. repairs, modifies, or installs equipment or branch circuits; and~~
- ~~2. does not involve sub-panels, panels, electrical service, or other similar work that requires a permit in Section 80.19 of the Electric Code; and~~
- ~~3. is performed by an electrical contractor employee with the proper license classification or a licensed master electrician employed by the facility; and~~
- ~~4. is performed consistent with Section 80.40 (*Supervision*) of the Electric Code.~~

Mechanical.

- ~~1. Replacement, modification, or relocation of existing ductwork, fan coil units, VAV boxes, volume dampers, environmental make-up air systems and related equipment; and~~
- ~~2. Modification of existing hazardous production material (HPM) supply systems, HPM drain systems and HPM exhaust systems in H-occupancy areas, as defined in the Building Code, and in exterior areas to accommodate the installation or relocation of equipment.~~

Plumbing. ~~Installation, repair, and replacement of fixtures, traps, shut-off valves, water distribution piping, drains, building waste piping, vent stacks and water heaters with a capacity of 100 gallons or less and a rating of 75,000 BTU or less, provided the work does not require approval of the Austin Travis County Health Department, the City of Austin Water Utility, or the Texas Department of Licensing and Regulation.~~

105.3 Application for a permit. ~~To obtain a permit, the applicant shall first file an application therefor in writing on a form furnished by the department of building safety for that purpose. Such application shall:~~

- ~~1. Identify and describe the work to be covered by the permit for which the application is made.~~
- ~~2. Describe the land on which the proposed work is to be done by legal description, street address or similar description that will readily identify and definitely locate the proposed building or work.~~
- ~~3. Indicate the use and occupancy for which the proposed work is intended.~~

STAFF DRAFT PRE-LAW DEPT REVIEW

~~4. Be accompanied by construction documents and other information as required in Section 106.3 (Examination of documents).~~

~~5. State the valuation of the proposed work.~~

~~6. Be signed by the applicant, or the applicant's authorized agent.~~

~~7. Give such other data and information as required by the code official.~~

~~8. Trench protection. An application must include certification by a registered professional engineer that trench safety systems have been designed in accordance with state law and OSHA standards~~

~~**105.5 Time limits for applications and permit expiration and reactivation.** Time limits on permit applications and requirements for permit expiration and reactivation, including a review fee for expired permits, are set forth in City Code Chapter 25-12, Article 13 (Administration of Technical Codes).~~

~~**Exception:** Permits issued under Section 105.1.1 (Annual permit) are only valid for a period of 360 days from the date of issuance and cannot be extended.~~

~~**105.5 Time Limits.** City Code Chapter 25-12, Article 13 (Administration of Technical Codes) establishes permit application time limits and requirements applicable to permit expiration and reactivation, including a review fee for expired permits.~~

~~**105.8 Transfer of a permit.** The building official is authorized to establish a building permit transfer policy.~~

~~**106.2.3 Means of egress.** The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. The construction documents shall designate the number of occupants to be accommodated on every floor and in every room or space that is part of an assembly occupancy.~~

106.2.6 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations: and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. For a building or structure involving below-grade construction, the site plan shall show the location of proposed earth retention system components allowed under Section 3202.1.4 (*Earth Retention System Components*) of the Building Code. The code official is authorized to waive or modify the requirement of the site plan when the application for permit is for alteration, repair or change of occupancy when otherwise warranted.

STAFF DRAFT PRE-LAW DEPT REVIEW

~~**107.5 Temporary earth retention systems.** Temporary earth retention system components used to facilitate below grade construction of a building or structure shall conform to Section 1811 (*Earth Retention Systems*) and Section 3202.1.4 (*Earth retention system components*) of the Building Code.~~

~~**108.7 Plan review fees.** An applicant must pay a plan review fee, adopted by separate ordinance, when plans and specifications are submitted for review under Section 106 (*Construction Documents*). The building official shall compute the building plan review fees using the total value of all construction work for which the permit is issued as well as the value of all finish work, painting, roofing, electrical, plumbing, heating, air conditioning, elevators, fire extinguishing systems, and other permanent equipment. The building official shall charge an additional plan review fee if plans are incomplete or changed so as to require additional plan review. The plan review fees referenced in this section are in addition to the permit fees referenced in Section 108.1 (*Payment of fees*).~~

~~**109.3.1 Building pre-construction inspection.** This is the first inspection conducted. The inspector verifies the permits that were issued for work at a site and meets with the contractor or owner at the site to review plans and identify potential issues. The inspector notifies the contractor of the inspector's work hours and identifies required inspections.~~

~~**109.3.1.1 Layout Inspection.** A layout inspection shall be made after all foundation forms have been erected and are in place, but before any concrete is placed.~~

~~**109.3.1.2 Footing and foundation inspection.** Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94, the concrete need not be on the job.~~

~~**109.3.5 Lath, gypsum board and gypsum panel product inspection.** Lath, gypsum board and gypsum panel product inspections shall be made after lathing, gypsum board and gypsum panel products, interior and exterior, are in place, but before any plastering is applied or gypsum board and gypsum panel product joints and fasteners are taped and finished.~~

~~**Exception:** Gypsum board and gypsum panel products that are not part of a fire resistance-rated assembly, a shear assembly, or part of a shower or water closet surround; provided it is limited to a maximum of 32 square feet.~~

~~**110.5 Maintenance of records.** The building owner or the owner's authorized agent must maintain a copy of the certificate of occupancy on the premises and provide it to an authorized official on request.~~

~~**111.3 Authority to disconnect service utilities.** The code building official shall have the authority to authorize disconnection of utility service to the building, structure or service system regulated by this code and the codes referenced under this section.~~

111.3 Authority to Disconnect Service Utilities. City Code Chapter 15-9, Article 7 (Limitation on City's Liability; Release) establishes liability from property damage, personal injury, business damage or other loss resulting from a negligent or non-negligent act of the City.

111.3.1 Circumstances for which utilities may be disconnected. The building official may authorize disconnection of utilities if the building official determines that:

- ~~1. disconnection is necessary to eliminate an immediate hazard to life or property;~~
- ~~2. an owner or occupant is in violation of a stop work order;~~
- ~~3. electrical work has been installed without a permit;~~
- ~~4. plumbing or gas piping has been installed without a permit; or~~
- ~~5. development does not comply with the land development regulations.~~

111.3.2 Notice. This section prescribes notice requirements for disconnection of utilities.

111.3.2.1 Disconnection because of an immediate threat to life or property. If disconnection of utilities is necessary to eliminate an immediate hazard to life, the building official shall notify the serving utility and whenever possible, the owner and occupant of the building, structure, or service system of the decision prior to taking any action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, by certified mail, return receipt requested, as soon as practical thereafter.

111.3.2.2 Disconnection for a reason other than an immediate threat to life or property. If the disconnection of utilities is for a reason other than to eliminate an immediate hazard to life, the building official shall give notice according to this section. Notice shall first be provided for the violation in accordance with the applicable section of Title 25 (Land Development). The notice of violation shall include a statement that the building official may authorize the disconnection of utilities if the violation is not cured within the timeframe established in the notice of violation. If the owner or occupant fails to comply with the notice of violation, the building official may issue a notice to the owner and occupant stating that utilities to the property will be disconnected not less than one week after the date that the notice is mailed. The notice must identify each utility that will be disconnected.

Section 112 Building and Fire Code Board of Appeals. The Building and Fire Code Board of Appeals must comply with Chapter 2-1 (Boards and Commissions).

112 Building and Fire Code Board of Appeals. Regulations regarding the Building and Fire Code Board of Appeals are found in Chapter 2-1 of the City Code.

STAFF DRAFT PRE-LAW DEPT REVIEW

Part 3.

ARTICLE 13. - ADMINISTRATION OF TECHNICAL CODES.

The building and fire code board of appeals (2-21-121) as established by 2-1-3 shall be the board to hear and decide any changes to Article 13 Administration of Technical Codes.

§ 25-12-266 - ~~TIME LIMITATION OF APPLICATION~~ AND APPROVAL.

City Code Chapter 25.-1, Article 4 (Application and Approval) establishes general provisions and requirements for filing and review of a permit application including time limitations. See the Building Criteria Manual for additional rules. An application for a permit for any proposed work expires one year after the date of filing, unless a permit has been issued.

§ 25-12-267 - EXPIRATION.

Except as provided in Section 25-12-268 (*Extension*) and Section 25-12-269 (*Reactivation*), a permit issued per the requirements of chapter 25-12 technical codes expires on the 181st day:

1. after the date that the permit is issued, if the project has received no inspections as required under this Code; or
2. after the date of the last scheduled inspection if that inspection is scheduled before the 181st day and once performed, shows progress towards completion of the project.

Exception: Permits issued under 25-12-1 section 105.1.1 (Annual permit) are only valid for a period of 360 days from the date of issuance and do not qualify for extension or reactivation.

§ 25-12-268 - EXTENSION.

Upon written request submitted prior to the expiration date, the building official may grant a one-time extension for a period not to exceed 180 days. Except as provided in Section 25-12-269 (*Reactivation*), a permit issued per the requirements of chapter 25-12 technical codes expires on the 181st day after the extension is granted if the project has received no inspections as required under this Code.

~~§ 25-12-269 - REACTIVATION.~~

~~(A) The building official may reactivate a permit for a project that has received no inspections for a period of more than 180 days in accordance with the following requirements:~~

- ~~(1) An application to reactivate a permit must be submitted on a form provided by the building official, along with a reactivation fee established by separate ordinance, no later than 180 days after the expiration date provided for under Section 25-12-267 (Expiration) or Subsection (B) of this section~~

STAFF DRAFT PRE-LAW DEPT REVIEW

- ~~(2) The application must include evidence demonstrating that substantial work required to complete the project was commenced in the 180-day period prior to the expiration date provided for under Section 25-12-267 (*Expiration*). The evidence, which must be in a form approved by the building official, may include receipts or invoices for work performed on the project, photographs of work performed on the project, or other evidence acceptable to the building official.~~
- ~~(B) A permit that is reactivated in accordance with this section expires on the 181st day after the date that the permit is reactivated if the project has received no inspections as required under this Code.~~
- ~~(C) No more than one reactivation may be approved for a one- and two-family residential structure, unless the project complies with all codes and ordinances in effect on the date that the application for reactivation is submitted.~~

§ 25-12-269 - REACTIVATION.

- (A) Except as provided in Subsection (C), the building official may reactivate a permit issued pursuant to Chapter 25-12 (*Technical Codes*) for a project that has received no inspections for a period of more than 180 days.
- (B) A permit holder must submit an application to reactivate a permit on a form provided by the building official and pay a reactivation fee established by separate ordinance.
- (C) The building official may not reactivate a permit if the permit:
- (1) was reactivated at least once; and
 - (2) does not comply with the City Code in effect at the time a permit holder requests a reactivation.
- (D) The building official may adopt an administrative rule that establishes additional criteria for reactivating a permit.
- (E) A permit that is reactivated in accordance with this section expires on the 181st day after the date that the permit is reactivated if the project has received no inspections as required under this Code.

§ 25-12-270 - REVIEW FEE FOR EXPIRED PERMITS.

An applicant for a permit under this chapter must pay an expired permit review fee, established by separate ordinance, if the applicant has obtained one or more expired permits that have not been either reactivated in accordance with the requirements of Section 25-12-269 (*Reactivation*) or withdrawn by the property owner, in writing, on a form provided by the building official.

§ 25-12-271 - NOTICE OF APPEAL OR CASE BEFORE BOARD OR COMMISSION UNDER THIS CHAPTER.

Notice of a hearing on an appeal or case before a board or commission created by, or having jurisdiction over, regulations contained in, or enforcement authorized under this chapter, shall be given by mailing notice before the tenth day before the date of the hearing to:

STAFF DRAFT PRE-LAW DEPT REVIEW

- (a) The applicant;
- (b) The notice owner of the subject property, if any;
- (c) All parties to the appeal, including interested parties; and
- (d) For an appeal or case before the Building and Standards Commission, to the record owner, and all lienholders of record on the subject property.