Houston Amendments to the *2015 International Building Code*

Adopted by Ord. No. 2021-1037[1]

Passed December 1, 2021[2]

Effective April 1, 2022[3]

Amended by Ord. No. 2023-64

Passed January 25, 2023

Amended by Ord. No. 2023-151

Passed March 1, 2023

1. The City Secretary shall insert the number of the adopting ordinance.
2. The City Secretary shall insert the date passage and approval of the adopting ordinance.
3. The City Secretary shall insert the effective date of the adopting ordinance.

CHAPTER 1
SCOPE AND ADMINISTRATION

[A] 101.1 Title. These regulations shall be known as the *City of Houston Building Code* ~~of [NAME OF JURISDICTION]~~, hereinafter referred to as "this code~~.~~" and also known as the *Building Code*.

The *Construction Code* collectively includes this volume and certain other codes, pamphlets, specifications and documents that are adopted in or by reference through the adopting ordinance, City of Houston Ordinance No. 2021-1037[4], which appears in the preamble of this code. A predecessor document to this code was known as the *City of Houston Building Code—General Provisions*, and any reference to the *City of Houston Building Code—General Provisions* in other ordinances or documents of the *jurisdiction* shall be construed to mean this code. In certain instances, references to the *Building Code* may be found in ordinances, contracts, and other documents of the *jurisdiction*. In any instance in which it can be determined from the context or scope of the document, that the reference was intended to include one or more of the codes that now collectively constitute the *Construction Code*, then it shall be so construed.

[A] 101.2 Scope. The provisions of this code shall apply to the construction, *alteration*, relocation, enlargement, replacement, *repair*, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures, except work located primarily in a public way, public utility towers and poles, mechanical equipment not specifically regulated in this code, and hydraulic flood control structures.

Exception: Except as noted in Section 101.4.8, detached ~~Detached~~ one- and two-family *dwellings* and multiple single-family *dwellings (townhouses)* not more than three *stories above grade plane* in height with a separate *means of egress*, and their accessory structures not more than three *stories above grade plane* in height, shall comply with the ~~*International*~~ *Residential Code*.

[A] 101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Appendices F, J, K, N, and R, including any amendments thereto adopted by this *jurisdiction*, are hereby adopted, and shall be incorporated into and made part of this code.

[A] 101.3 Intent. The purpose of this code is to establish the minimum requirements to provide a reasonable level of safety, public health and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations. The provisions of this code shall not apply to any activity for which local regulation is preempted by federal or state law.

101.3.1 Landlord/tenant. The terms of this code shall not be construed to alter the terms of any lease or other agreement between landlord and tenant or others relating to property that is subject to this code; provided that no provision of any lease or other agreement shall be construed to excuse compliance with this code by any person, including the construction, maintenance, occupancy, or use of any property in violation of this code. It is the intent of this code to identify the parties this j*urisdiction* will hold responsible for

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compliance with and violations of this code, rather than to determine the rights and liabilities of persons under agreements to which this *jurisdiction* is not a party.

[A] 101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4. 8~~7~~ and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. This code includes numerous references to the *International Codes*, including but not limited to, *Fuel Gas*, *Mechanical*, *Plumbing*, *Property Maintenance, Fire, Residential, Energy Conservation, Existing Buildings,* and *Electrical*. For the sake of convenience and cost savings to the public in the preparation of Houston Amendments pages to this code, those references have not been revised unless the text of the provision in which they appear has otherwise been revised by this *jurisdictio*n. Any such references shall be regarded as references to the corresponding code as adopted by this *jurisdiction* from time to time. This *jurisdiction* reserves the right to adopt codes based upon promulgations of organizations other than the International Code Council, including but not limited to the Uniform Series Codes, to the extent permitted by state law. Any reference to a specific chapter, section, or provision of a code that has not been adopted by this *jurisdiction* shall be construed to mean the corresponding provision of the corresponding code as adopted by this *jurisdiction*.

[A] 101.4.1 Gas. The provisions of the ~~*International Fuel Gas*~~ *Plumbing Code*, as defined in Chapter 2 of this code, shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

Exception: The installation of gas piping and gas appliances governed by the *Residential Code*.

[A] 101.4.2 Mechanical. The provisions of the ~~*International*~~ *Mechanical Code*, as defined in Chapter 2 of this 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.

Exception: The installation, *alterations*, *repairs* and replacement of mechanical systems governed by the *Residential Code*.

[A] 101.4.3 Plumbing. The provisions of the ~~*International*~~ *Plumbing Code*, as defined in Chapter 2 of this code, shall apply to the installation, *alteration*, *repair* and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, ~~and~~ where connected to a water or sewage system, and to all aspects of a medical gas system. ~~The provisions of the *International Private Sewage Disposal Code* shall apply to private sewage disposal systems.~~

Exception: Work governed by the *Residential Code*.

[A] 101.4.4 Property maintenance. Buildings, structures, premises and the equipment and systems installed therein shall be maintained in accordance with the provisions of the code of record under which the building, structure, premise and equipment and system was installed and ~~T~~the provisions of the ~~*International*~~ *Property Maintenance Code*, as defined in Chapter 2 of this code~~, shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of *owners*, operators and occupants; and occupancy of existing premises and structures~~.

[A] 101.4.5 Fire prevention. The provisions of the ~~*International*~~ *Fire Code*, as defined in Chapter 2 of this code, shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, *repair*, *alteration* or removal of fire suppression, *automatic sprinkler systems* and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

[A] 101.4.6 Energy. The provisions of the ~~*International*~~ *Energy Conservation Code*, as defined in Chapter 2 of this code, shall apply to all matters governing the design and construction of buildings for energy efficiency.

[A] 101.4.7 Existing buildings. The provisions of the ~~*International*~~ *Existing Building Code*, as defined in Chapter 2 of this code, shall apply to matters governing the *repair*, *alteration*, change of occupancy, *addition* to and relocation of existing buildings.

[A] 101.4.8 Electrical. The provisions of the *Electrical Code*, as defined in Chapter 2 of this code, shall apply to the installation of electrical systems, including *alterations*, *repairs*, replacement, equipment, appliances, fixtures, fittings, and appurtenances thereto.

[A] 102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall prevail ~~be applicable~~. Where~~,~~ in any specific instance ~~case, different sections of~~ provisions of this code, including adopted appendices, specify different materials, different methods of construction, or other requirements that differ from those provided in the *City Code* or other volumes of the *Construction Code,* including adopted appendices, other than the *Fire Code* and its adopted appendices and standards, the most restrictive shall prevail ~~govern~~. Where, in any specific instance, provisions of this code, including adopted appendices, specify different materials, different methods of construction, or other requirements that differ from those provided in the *Fire Code*, including its adopted appendices and standards, and the *building official* and the *fire marshal* are unable to mutually reconcile the requirements by issuing a written interpretation, then either of them may refer the matter to the General Appeals Board created under this code, which shall conduct a review of the matter and issue a written code interpretation based upon the apparent intent of the codes involved. Notwithstanding any other provision, interpretations that are issued by the General Appeals Board shall not be subject to further appeal.

[A] 102.6 Existing and annexed structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, the ~~*International*~~ *Existing Building Code*, the ~~*International*~~ ~~*Property Maintenance Code*~~ or the ~~*International*~~ *Fire Code*.

[A] 102.6.2 Buildings previously occupied. The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, the ~~*International*~~ *Fire Code*, ~~*International*~~ the *Property Maintenance Code*, or as is deemed necessary by the *building official* for the general safety and welfare of the occupants and the public.

102.6.3 Existing structures. A building in existence within the *jurisdiction* at the time of the adoption of this code may have its existing use and occupancy continued if:

1. Such use or occupancy was legal under a prior version of this code;

2. The building is in compliance with all applicable provisions of Appendix D of the *Existing Building Code*; and

3. The continued use and occupancy are not unsafe pursuant to the provisions of Section 116.

102.6.4 Annexed structures. Any building in existence prior to the annexation into the *jurisdiction* of the land on which it is situated may have its use and occupancy continued if:

1. Such use of occupancy was legal under the building design and construction codes and related laws applicable in the *jurisdiction* in which the building was situated at the time immediately prior to its annexation;

2. The building is in compliance with all applicable provisions of Appendix D of the *Existing Building Code*; and

3. The continued use and occupancy are not unsafe pursuant to the provisions of Section 116.

SECTION 103
~~DEPARTMENT OF~~ BUILDING ~~SAFETY~~ CODE ENFORCEMENT

[A] 103.1 Creation of enforcement agency. ~~The Department of Building Safety~~ Building Code Enforcement is hereby created within Houston Public Works, and the official in charge thereof shall be known as the *building official*.

[A] 103.3 Deputies. In accordance with the prescribed procedures of this *jurisdiction* and with the concurrence of the appointing authority, the *building official* shall have the authority to appoint a deputy building official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the *building official*. For the maintenance of existing properties, see the ~~*International*~~ *Property Maintenance Code*.

[A] 104.2.1 Determination of substantially improved or substantially damaged existing buildings and structures in flood hazard areas. See Chapter 19 of the *City Code*. ~~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 determine if the proposed work constitutes substantial improvement or *repair* of *substantial damage*. Where the *building official* determines that the proposed work constitutes *substantial improvement* or *repair* of *substantial damage*, and where required by this code, the *building official* shall require the building to meet the requirements of Section 1612.~~

[A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *building official* has reasonable cause to believe that there exists in a structure or upon a premises a condition that is contrary to or in violation of this code that makes the structure or premises unsafe, dangerous or hazardous, the *building official* is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the *building*

official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the *building official* or an authorized representative shall have recourse to the remedies provided by law to secure entry.

When, due to an emergency, immediate entry is necessary to make an inspection to protect life or property, or when the *building official* has obtained an inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other person having charge, care of control of any building or premises shall fail or neglect, after request is made as herein provided, to promptly permit entry therein by the *building official* for the purpose of inspection and examination pursuant to this code.

[A] 104.8 Liability. ~~The *building official*, member of the board of appeals or employee charged with the enforcement of this code, while acting for the *jurisdiction* in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be civilly or criminally rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.~~ Except as otherwise provided by law, the *building official* shall not personally be liable in damages for any act or omission arising out of any official action taken to implement and enforce the provisions of this code. Additionally, except as otherwise provided by law, the *building official* shall not personally be liable in damages for any act or omission taken in the course and scope of employment. Where and to the extent consistent with the provisions of Chapter 2, Article X, of the *City Code*, this *jurisdiction* shall provide legal representation and indemnification for any suit or claim brought against the *building official* or any deputies because of acts or omissions performed in the implementation or enforcement of this code.

This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building, structure or system or other construction for any damages to persons or property caused by defects, nor shall the code enforcement agency or the *jurisdiction* be held as assuming any such liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

~~**104.8.1 Legal defense.** Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representatives of the *jurisdiction* until the final termination of the proceedings. The *building official* or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.~~

[A] 104.10 Modifications. Where there are practical difficulties involved in carrying out the provisions of this code, the building official shall have the authority to grant modifications for individual cases, upon application of the owner or the owner's authorized agent, provided that the building official shall first find that special individual reason makes the strict letter of this code impractical, the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety or structural requirements. The details of action granting modifications shall be recorded and entered in the files of Building Code Enforcement ~~the department of building safety~~.

[A] 104.10.1 Flood hazard areas. See Chapter 19 of the *City Code*. ~~The building official shall not grant modifications to any provision required in flood hazard areas as established by Section 1612.3 unless a determination has been made that:~~

~~1. A showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render the elevation standards of Section 1612 inappropriate.~~

~~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, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.~~

~~4. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.~~

~~5. Submission to the applicant of written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that construction below the design flood elevation increases risks to life and property.~~

104.12 Discontinuation of use; notice to vacate. Whenever any building or structure or equipment located therein is being used contrary to the provisions of this code or otherwise is in violation of this code, the *building official* may, by notice to the owner or the owner's representative and to all users of the structure, order that any or all uses of the structure be discontinued or that the structure, or portion thereof, be vacated within such time and for as long as the *building official* reasonably prescribes.

If the use or occupancy of the structure creates a serious and immediate hazard to human life or to property, the *building official* shall order the use discontinued immediately and may order the structure, or portion thereof, vacated immediately.

In the absence of a serious and immediate hazard to human life or to property, the *building official* shall not order a use discontinued and shall not issue an order to vacate until five business days after the *building official* has given the required notice of a right to a hearing pursuant to Sections 104.12.1 and 117. For the purposes of this Section;

1. An "owner" of a structure is the record owner(s) of the structure, according to the official public records of real property maintained by the clerk of the county in which the structure is located;
2. An "owner's representative" is a person whom the *building official* reasonably believes to be a representative of an owner;
3. A "use" of a structure includes its use as a residence or for any commercial purpose; and
4. The "users" of a structure include the structure's residential and commercial tenants but do not include customers of commercial tenants or other persons who have no independent right to enter the structure.

104.12.1 Right to hearing. Whenever pursuant to this code the *building official* orders the discontinuation of the use of all or a portion of a structure or equipment or orders the vacation of all or a portion of a structure, the *building official* shall give notice to the owner

or the owner's representative and to all users of the structure of their right to a hearing pursuant to Section 117.

Upon the request of the owner, the owner's representative, or a user of the structure, the *building official* shall schedule the hearing for a date no later than two weeks after the *building official*'s receipt of the request. If the owner, the owner's representative, or a user of the structure requests that the hearing be conducted within three business days of the request, the hearing shall be so conducted. The owner, owner's representative, user of the structure, or *building official* may postpone the hearing one time where good cause is provided. If the *building official* does not receive a request for a hearing from the owner, the owner's representative, or a user of the structure within 20 days after the date of the *building official*'s order to discontinue a use or to vacate, no hearing need be conducted.

104.12.2 Relocation assistance; right of entry. Upon the *building official*'s issuance of an order to vacate all or a portion of a structure classified as an "R-2 residential occupancy" by Section 310, the *building official* may designate in writing one or more persons to contact residents of the structure to offer the *jurisdiction's* assistance in locating and otherwise making arrangements for alternative housing. The persons so designated are authorized to enter the structure and its grounds at reasonable times to contact residents personally for the purposes of this section. The persons so designated may not require the residents to take any specific action; in particular, the said persons are not authorized to enforce an order to vacate.

[A] 105.1 Required. Any *owner* or owner's authorized agent who intends to construct, enlarge, alter, *repair*, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, *repair*, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the *building official* and obtain the required *permit*, and no person shall cause, suffer or permit the same such work to be done unless a separate permit for each building or structure has first been obtained.

~~**[A] 105.1.2 Annual permit records.** The person to whom an annual *permit* is issued shall keep a detailed record of *alterations* made under such annual *permit*. The *building official* shall have access to such records at all times or such records shall be filed with the *building official* as designated.~~

[A] 105.2 Work exempt from permit. Exemptions from *permit* requirements of this code shall not be deemed to grant exemption from permits required by other codes or ordinances and 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 codes, laws or ordinances of this *jurisdiction*. *Permits* shall not be required for the following:

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, provided the floor area is not greater than 120 square feet (11 m²).
2. Fences not over ~~7~~ 8 feet (~~2134~~ 243.84 cm) high that are not constructed of masonry or concrete and that are not electrically energized, or includes razor wire or barbed wire.

3. Oil derricks.

4. Retaining walls that are not over 4 feet (121.92 cm) 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.

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.

6. ~~Sidewalks and driveways~~ Uncovered decks accessory to a one- or two-family *dwelling*, not more than 30 inches (76.20 cm) above adjacent grade, and not over any basement or *story* below and ~~are~~ not part of an *accessible route*.

7. Minor repair and maintenance of existing structures that include:

   7.1. Painting, tarping, repair or replacement of wall paper~~ing~~, tiling, carpeting, cabinets, counter tops, and similar finish work.

   7.2. Repair to gypsum board (sheetrock or drywall) on existing walls that are not part of a fire-rated assembly and do not exceed an aggregate of 100 square feet (9.29 m^2).

   7.3. Repair, using the same material, of exterior wood fascia, trim and soffits that does not exceed an aggregate of 128 square feet (11.89 m^2).

   7.4. Roof covering that does not exceed an aggregate of 100 square feet (9.29 m^2).

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

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

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

11. Swings and other playground equipment ~~accessory to detached one- and two-family *dwellings*~~ other than those regulated by Section 424.

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. Nonfixed and movable fixtures, cases, racks, counters, and partitions not over 5 feet 9 inches (1,753 mm) in height.

14. Flagpoles that support an appurtenance that weighs less than 150 pounds (68 kg), provided the flagpole complies with all applicable provisions of the *Construction Code* and its proposed location is not specifically regulated by a *City Code* or a code other than this code, and is not more than 75 feet (22,680 mm) tall if mounted on the ground or not more than 25 feet (7,620 mm) taller than the building when mounted on a building.

15. A tower less than 75 feet (22,680 mm) in height that meets the following conditions:

15.1 Tower structures used primarily for the support of amateur and citizens' band radio or private television antennas;

15.2 Tower structures on real property owned, leased, held or used, or dedicated for use by a public utility for rendering its service, such as tower structures used primarily for the transmission of electrical power by a public utility or the conveyance of communications over a telephone wire-line system operated by a public utility;

15.3 High mast tower structures or antennas built on land on, along or adjacent to streets, roads, highways, and bridges maintained by the state or a political subdivision of the state; and

15.4 Tower structures constructed or placed on land or other structures owned, leased, held or dedicated for use by the state or federal government or any political subdivision thereof, which land or other structures are used by the government entity primarily for rendering fire, police or other public protection services or utility services, whether or not the tower structure is used jointly by the governmental entity and any other public or private person or entity for other and additional public or private purposes.

A building permit for any tower structure that is 60 feet (18,288 mm) or more in height and does not meet these exemptions shall not be issued unless a special permit has been obtained pursuant to Section 28-522 of the *City Code*.

16. A "work of art," as defined in Section 202, shall be exempt from obtaining a structural building permit where not regulated by the *Houston Sign Code* and a structural building permit is obtained to address the supporting foundation, primary and secondary structural frame, including the anchorage or structural connections thereto and any proposed façade.

17. To the extent that the state and federal governments are exempt as a matter of law from compliance with the *Construction Code*, neither the state nor the federal government shall be required to obtain a building permit for work undertaken for, by or on the premises of either of them. However, the fees set forth in this code shall be applicable to the extent that the state or the federal government elects to obtain any permit for exempt work.

18. Except for exempt work undertaken for, by or on the premises of the state or the federal government, building permits shall be required for work undertaken for, by or on the premises of any political subdivision or unit of government (including, but not limited to, the *jurisdiction*) in the same manner and to the same extent as for work performed by or for other persons. The fees prescribed in this code shall be applicable to all permits issued to or for governmental agencies.

19. Donation stations and donation boxes as defined in Chapter 28 of the *City Code*.

Counties are required to comply with the provisions of the *Construction Code*. Except as provided by Section 212.903 of the *Texas Local Government Code*, a county shall notify the *building official* of each work project that is undertaken. The *building official* shall, upon request and demonstration of capacity, allow a county to self-permit and self-inspect work that is

performed by or for the county on county-owned buildings and facilities for which a permit is required. No fee shall be imposed hereunder for work that a county is authorized to self-permit and self-inspect.

~~**Electrical:**~~

~~**Repairs and maintenance:** Minor repair work, including the replacement of lamps or the connection of *approved* portable electrical equipment to *approved* permanently installed receptacles.~~

~~**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.~~

~~**Temporary testing systems:** A *permit* shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.~~

~~**Gas:**~~

~~1. Portable heating appliance.~~

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

~~**Mechanical:**~~

~~1. Portable heating appliance.~~

~~2. Portable ventilation equipment.~~

~~3. Portable cooling unit.~~

~~4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.~~

~~5. Replacement of any part that does not alter its approval or make it unsafe.~~

~~6. Portable evaporative cooler.~~

~~7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (0.75 kW) or less.~~

~~**Plumbing:**~~

~~1. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a *permit* shall be obtained and inspection made as provided in this code.~~

~~2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.~~

[A] 105.2.1 Emergency repairs. Where equipment replacements ~~and~~ or any other *repairs* for which permits are required must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the *building official*.

[A] 105.2.2 Repairs. Application or notice to the *building official* is not required for ordinary repairs to structures, replacement of lamps or the connection of *approved* portable electrical equipment to *approved* permanently installed receptacles, and items listed in Section 105.2. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load bearing support, or the removal or change of any required *means of egress*, or rearrangement of parts of a structure affecting the egress requirement; nor shall ordinary repairs include *addition* to, *alteration* of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

[A] 105.3 Application for permit. To obtain a permit, the applicant shall first file an application therefor in writing on a form furnished by Building Code Enforcement ~~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 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.
4. Be accompanied by construction documents and other information as required in Section 107.
5. State the ~~valuation~~ total aggregate square footage of any new structure, addition(s), alteration, and the square footage of new paving, and linear feet of new sidewalks and curbs located within the right-of-way associated with ~~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 building official.

[A] 105.3.2 Time limitation of application. An application for which no permit is issued within 180 days following the date of application shall become inactive, and plans and other data submitted for review thereafter shall be returned to the applicant or destroyed by the *building official*. The *building official* is authorized to grant one or more extensions of time for additional periods not to exceed 180 days each, for a maximum of two years from the date of the original application, upon written request and justifiable cause demonstrated by the applicant. If an application for permit does not result in a permit within two years after the date of original application, the permit application shall expire. In order to renew action on an application after expiration, the applicant shall submit a new permit application and plans and shall pay a new plan review fee. ~~An application for a *permit* for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a *permit* has been issued; except that the *building official* is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.~~

[A] 105.4 Validity of permit. The issuance or granting of a *permit* or approval of plans and specifications shall not be construed to be a *permit* for, or an approval of, any violation of any of the provisions of this code or of any other applicable laws, or ordinances of the *jurisdiction*. *Permits* presuming to give authority to violate or cancel the provisions of this code or other ordinances of the *jurisdiction* shall not be valid.

The issuance of a *permit* based on *construction documents*, specifications, and other data shall not prevent the *building official* from thereafter requiring the correction of errors in the *construction documents*, specifications, and other data, or from. ~~The *building official* is authorized to~~ preventing construction, occupancy or use of a structure when ~~where~~ in violation of this code or of any other applicable law ~~ordinances of this jurisdiction~~.

A permit and all its privileges are issued to the owner of the property for which the permit is issued, regardless of who submits the application or pays the permit fees. A permit shall be valid only for the person listed on the application as performing the work and for the scope of work identified on the permit.

A name change on an application or an existing permit must be obtained if the person performing the work listed on the application or existing permit is no longer responsible for the work performed. Provided that a refund has not been issued, the property owner has not changed, and written authority for the name change has been provided by the property owner to the building official, the building official shall process the request and issue an amended permit. A name change fee and an administrative fee shall be charged as provided in Section 118.1 of the *Building Code* and the city fee schedule.

In the case of the death or dissolution of the original property owner or person performing the work listed on the existing permit, pursuant to a timely name change request within 45 calendar days after such death or dissolution, the permit will be transferred to the new property owner or amended to include the name of the new person performing the work at no fee except for the administrative fee established in Section 118.1.1. of the *Building Code* and the city fee schedule. Failure to apply for a name change within the requisite 45 calendar days shall subject the property owner to applicable permit fees established in Section 118 of the *Building Code* and the city fee schedule based on the scope of work for all remaining construction and uninspected work.

[A] 105.5 Expiration. Every *permit* issued shall become ~~invalid~~ inactive on the 180th day after its issuance unless the work ~~on the site~~ authorized by such *permit* ~~is~~ has commenced and been inspected by a city inspector within 180 days after its issuance, or if the work authorized on the site by such *permit* is suspended or abandoned for a period of 180 days after the ~~time~~ date the work ~~is~~ was commenced. The *building official* is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

If work has not commenced under a *permit* within two years after the date of issuance or is suspended or abandoned at any time for a period of two years, the *permit* shall expire. In order to recommence work associated with an expired *permit*, the permit holder shall re-*permit* the project and pay the full permit fee applicable for any previously uninspected portions of the original scope of work. Where the original plans with *building official* approval are not available for completion of field inspections, a lost plan recheck shall be submitted for *building official* approval. Appropriate plan review fees shall apply.

> **Exception:** For the purpose of issuing a certificate of occupancy or a certificate of compliance, the *building official* may, upon request, reactivate a *permit* and perform a final inspection of work.

[A] 105.6 Suspension or revocation. The *building official* is authorized to suspend or revoke a *permit* issued under the provisions of this code wherever the *permit* is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code. Prior to taking such action, the *building official* shall provide notice to the building owner or to a tenant therein of a right to a hearing on the matter pursuant to Section 117 of this code.

[A] 107.5 Retention of construction documents. One set of *approved construction documents* ~~shall~~ may be retained by the *building official* for a period of not less than 180 days from the date of completion of the permitted work, or as required by state or local laws.

[A] 108.3 Temporary power. The *building official* is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of compliance ~~completion~~ has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat, or power in the *Electrical Code* ~~NFPA 70~~. The temporary power authorization requires compliance with all code requirements applicable to the systems being energized and any additional safety requirements considered necessary by the building official.

[A] 109.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical, and plumbing systems or *alterations* requiring a *permit*, a fee for each *permit* shall be paid as required, in accordance with Section 118 and the city fee schedule ~~as established by the applicable governing authority~~.

[A] 109.3 Building permit fee calculation. The applicant for a *permit* shall provide an estimated *permit* value at time of application. *Permit* valuations shall include total value of work, including materials and labor, for which the *permit* is being issued, such as electrical, gas, mechanical, plumbing equipment, and permanent systems. If, in the opinion of the *building official*, the *valuation* is underestimated on the application, the *permit* shall be denied, unless the applicant can show detailed estimates to meet the approval of the *building official*. Final building *permit valuation* shall be set by the *building official*. The value to be used in computing the permit fee for new structures, additions, alterations, remodeling or repairs shall be the total value of all construction work for which the permit is issued based on the current building valuation data sheet published by the International Code Council on the date of adoption of this code.

Exceptions:

1. The structural building permit fee for new one- and two-family *dwellings* and *townhouses* and their detached *accessory structures* shall be calculated as specified in Section 118.2.1, Tables 118(1) and 118(2), and the *city fee schedule*, based on the total square footage of the *building area* as defined by *this code*.
2. The permit fee for new *additions* to one- and two-family *dwellings* and *townhouses* shall be calculated as required for new residential *buildings*.
3. The permit fee for *repair*, *alterations*, or remodeling of one- and two-family *dwellings* and *townhouses* shall be 20% of the calculated fee for new construction as specified in Section 118.2.1, Tables 118(1) and 118(2), and the *city fee schedule* based, on the total aggregate square footage of the

building area being repaired or altered or the total aggregate square footage of the walls and ceilings being repaired or altered.

[A] 109.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary *permits* shall be subject to an investigation fee established by the *building official* that shall be in addition to the required *permit* fees. The investigation fee shall be equal to the amount of the permit fee required by this code.

[A] 109.6 Refunds. The *building official* ~~is authorized to establish a refund policy~~ may authorize the refund of any fee paid hereunder that was erroneously paid or collected due to an error by one or more city employees. This provision shall not be applicable if the error occurred because of incorrect information provided by the applicant.

The *building official* may authorize a refund of not more than 90 percent of the amount in excess of the minimum permit fee paid when no work has been done under a *permit* issued in accordance with this code. If work has been done under the *permit*, no refund shall be authorized. The originally paid administrative fee and the plan review portion of the permit fee shall be nonrefundable.

The *building official* shall not authorize a refund of any fee paid except on written application filed not later than 180 calendar days after the date of fee payment by the original permit holder or an authorized successor in the event of the death or incapacity of the original permit holder.

[A] 110.3.3 Reserved. ~~**Lowest floor elevation.** In flood hazard areas, upon placement of the lowest floor, including the *basement*, and prior to further vertical construction, the elevation certification required in Section 1612.5 shall be submitted to the *building official*.~~

[A] 110.3.5 Lath, gypsum board and gypsum panel product inspection. Lath, gypsum board and gypsum panel product inspections that are not otherwise exempted from permits including, but not limited to, fire-resistance-rated or shear wall assemblies 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 or a shear assembly.~~

[A] 110.3.7 Energy efficiency inspections. Inspections shall be made to determine compliance with the *Energy Conservation Code* ~~Chapter 13~~ 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.

[A] 110.3.8 Other inspections. In addition to the inspections specified in Section 110.3.1 through 110.3.7, the *building official* is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by ~~the department of building safety~~ Building Code Enforcement.

110.3.11 Reinspection. A reinspection fee may be assessed for each inspection or reinspection when an inspector arrives to perform the work and finds the portion of work for which inspection is called is not complete or when corrections called for in a previous inspection report have not been made.

This section is not to be interpreted as requiring inspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or reinspection.

The building official may assess reinspection fees when the inspection record card is not posted or otherwise available on the work site, when the approved plans are not readily available to the inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans approved by the *building official*.

To obtain a reinspection, the applicant shall make a request and pay the reinspection fee in accordance with Section 118 and the city fee schedule.

In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

[A] 111.1 Use and occupancy. A building or structure or portion thereof, such as an individual business lease space, shall not be used or occupied, and a change in the existing use or occupancy classification of a building or structure or portion thereof shall not be made, until the *building official* has issued a separate certificate of occupancy for each lease space therefor as provided herein. For purposes of this section, a lease space means a leasehold or tenancy held or occupied by an individual or entity for its sole use and may include one or more rooms. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the *jurisdiction*.

Exceptions:

1. Certificates of occupancy are not required for work exempt from *permits* under Section 105.2.
2. A certificate of occupancy is not required for Group U occupancies accessory to single-family dwellings and not containing hazardous materials exceeding the maximum allowable quantity limits (MAQ's) identified in Section 307.

[A] 111.2 Certificate issued. After the *building official* inspects the building or structure and does not find violations of the provisions of this code or other laws that are enforced by ~~the department of building safety~~ Building Code Enforcement, the *building official* shall issue a certificate of occupancy that contains the following:

1. The building *permit* number or project number.
2. The address of the structure.
3. The name and address of the owner, and where applicable, the tenant, and ~~or~~ the owner's authorized agent.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.

6. The name of the *building official*.
7. The edition of the code under which the *permit* was issued.
8. The use and occupancy~~, in accordance with the provisions of Chapter 3~~ of the building or portion thereof.
9. The type of construction as defined in Chapter 6.
10. The design *occupant load*.
11. If a fire alarm system is provided, and whether the fire alarm system is required.
12. If an *automatic sprinkler system* is provided, the type of system provided, and whether the sprinkler system is required.
13. Any special stipulations and conditions of the building *permit*.

[A] 111.4 Revocation. The *building official* is authorized to, in writing, suspend or revoke a certificate of occupancy or compliance ~~completion~~ issued under the provisions of this code after notice of a right to a hearing on the matter pursuant to Section 117 wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

111.5 Posting. The *certificate of occupancy* shall be posted in a conspicuous place on the premises and shall not be removed except by the *building official*. The owner shall maintain the correct information on the *certificate of occupancy*. The *code official* and *fire code official* shall require errors on a *certificate of occupancy* or *certificate of compliance* to be corrected.

[A] 113.1 ~~General.~~ ~~In order to hear and decide appeals of orders, decisions or determinations made by the *building official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.~~ **Organization.** There is hereby created a General Appeals Board consisting of 10 members. Five members at a meeting shall constitute a quorum.

113.1.1 Membership. The positions shall be filled as follows:

Position 1 – By an architect registered as such under the laws of the State of Texas who shall be actively engaged in the practice of architecture of heavy construction works.

Position 2 – By an architect registered as such under the laws of the State of Texas who shall be actively engaged in the practice of architecture of residential works.

Position 3 – By a professional engineer registered as such under the laws of the State of Texas who shall be actively engaged in practice as a structural engineer.

Position 4 – By a professional engineer registered as such under the laws of the State of Texas who shall be actively engaged in practice as a mechanical engineer.

Position 5 – By a person who shall be actively engaged in the business of residential construction.

Position 6 – By a person who shall be actively engaged in the business of general contracting of heavy construction work.

Position 7 – By a well-respected citizen of the *jurisdiction* who shall be chairman of the board.

Position 8 – By the *building official*, who shall also serve as secretary of the board.

Position 9 – By the fire marshal.

Position 10 – By a professional engineer registered as such under the laws of the State of Texas who is actively engaged in practice as an electrical engineer.

The *jurisdiction's* Legal Department shall have an attorney present for each board meeting. The attorney shall advise the board on legal matters relative to topics under the board's authority.

113.1.2 Authorized representatives. The *building official* and the fire marshal, from time to time, may designate in writing a person under the said official's supervision to act as an authorized representative of the said official. Said representative shall enjoy all rights and privileges of the position. A copy of such a designation, specifying the dates any such person shall act as representative of the *building official* or of the fire marshal, shall be filed with the minutes of the board.

113.1.3 Term of appointment. Other than the members in Positions 8 and 9, who shall serve ex officio, members of the board shall be appointed by the mayor, with the approval of the city council, and shall serve for a term of two years. Terms of office for the appointees to Positions 1, 3, 5 and 7 shall expire on the second day of January of each odd-numbered year, and terms of office for the appointees to Positions 2, 4, 6 and 10 shall expire on the second day of January of each even-numbered year; however, each member shall continue in office until the member’s respective successor is appointed and qualified. The adoption of this code shall not terminate the term of office of any person currently serving on the board, and any person who is currently serving on the board shall continue to serve in the position for which the person was appointed and confirmed until a successor is appointed and qualified.

113.1.4 Vacancies. Whenever any appointive position on the board becomes vacant by reason of death, resignation, or removal, said vacancy shall be filled for the unexpired term of the member being replaced. Should a vacancy occur on the board, the mayor shall appoint, subject to confirmation by the city council, another qualified person to serve the remainder of the term of such vacancy.

113.1.5 Removal. Any member of the board may be removed at any time by the mayor without consent of the city council.

113.1.6 Compensation. Each member of the board shall be compensated at the rate of $50.00 per diem for each meeting the member attends at which a quorum is present; provided, however, no member shall be paid for more than three meetings in any one month. A *jurisdiction* employee member of the board shall be paid only for those meetings that the employee attends at which a quorum is present that are held outside of or continue beyond the employee's working hours.

113.1.7 Conflict of interest. In each instance where this code provides for a *jurisdiction* employee to serve as a voting member of any board created by the provisions of this code, such *jurisdiction* employee member shall not vote as a member of such board on any motion, resolution, decision, interpretation or recommendation by the board concerning a decision or interpretation or an appeal from a decision or interpretation of any provision of this code or related ordinances made by the *jurisdiction* employee member.

[A] 113.2 ~~Limitations on authority.~~ ~~An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall not have authority to waive requirements of this code.~~ **Duties of the board.** The duties of the board are to interpret the provisions of this code in appeals from decisions of the *building official*; to settle possible *jurisdiction* disputes among the Plumbing Code Review Board, the Electrical Board, and the Mechanical Code Review Board; and to hear appeals from the *building official* as to the suitability of alternate materials or alternate methods of construction other than those relating to air-conditioning, plumbing, and electrical. The board also may make recommendations to the mayor for amendments to this code. The board shall have no authority to waive requirements of this code.

[A] 113.3 ~~Qualifications.~~ ~~The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the *jurisdiction*.~~ **Procedures.** The board shall adopt reasonable rules and regulations for conduct of its duties. Petitions for hearings before the board shall be made in writing and filed with the *building official* and shall be heard by the board within 30 days after the date filed. A majority of the members of the board present shall determine matters presented to the board. All decisions and findings shall be reduced to writing by the secretary, with copies to the petitioner and all other parties to the hearing. Any interested person aggrieved by a decision of the board may appeal to the city council, provided that written notice to the city council for such appeal is delivered to the city secretary within 10 days after the date that the written decision of the board is mailed to the appellant by the board secretary.

All appeals to the city council are subject to the rules of the city council, which are codified in Section 2-2 of the *City Code*, copies of which are available from the city secretary. Parties wishing to preserve their right of appeal must comply with the rules of the city council, including Rule 12.

113.4 Posting of agenda. The secretary of the board shall prepare and post an agenda for each meeting in the manner provided by Chapter 551 of the *Texas Government Code*.

[A] 114.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, extend, *repair*, move, remove, demolish or occupy any building, structure or equipment regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

Where no specific penalty is otherwise provided in this code, the violation of any provision of this code shall constitute a misdemeanor punishable upon conviction by a fine of not less than $500.00 nor more than $2,000.00. Each day that any violation continues shall constitute and be punishable as a separate offense. Where any such conduct constitutes a violation of state penal law, the offense shall be punishable as provided in the applicable state law. In prosecutions under this code, the various provisions hereof that are designated as an “exception” or “exceptions” shall not be treated as exceptions within the meaning of Section 2.02 of the *Texas Penal Code*, and,

instead, they shall constitute defenses to prosecution within the meaning of Section 2.03 of the *Texas Penal Code*.

[A] 114.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the *approved construction documents* or directive of the *building official*, or of a *permit* or certificate issued under the provisions of this code, shall be subject to penalties as prescribed ~~by law~~ in Section 114.1.

[A] 115.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, the owner's authorized agent, or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work will be permitted to resume.

The building official shall, with the issuance of a stop work order, deliver notice of the right to a hearing on the matter to the person performing the work and the permit holder, if present at the site, or the notice shall be otherwise conspicuously posted at the site. Upon request from the property owner, the owner's authorized agent, or the person doing the work, a hearing shall be held within three business days of receiving the stop work order, unless the permit holder, or person who was doing the work requests an extension of time. Any stop work order that has been issued shall remain in effect pending any hearing that has been requested unless the *building official* withdraws the stop work order.

[A] 116.1 ~~Conditions.~~ ~~Structures or existing equipment that are or hereafter become unsafe, insanitary or deficient because of inadequate *means of egress* facilities, inadequate light and ventilation, or that constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the *building official* deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.~~ **Unsafe buildings or structures.** All buildings or structures regulated by this code that are structurally inadequate or unsafe, or not provided with adequate egress, or that constitute a fire hazard, or are otherwise dangerous to human life are, for the purposes of this section, unsafe buildings or structures. Any use of buildings or structures constituting a hazard to safety, health, or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage, or abandonment is, for the purposes of this section, an unsafe use. Parapet walls, cornices, spires, towers, tanks, statuary and other appendages or structural members that are supported by, attached to, or a part of a building and that are in deteriorated condition or otherwise unable to sustain the design loads that are specified in this code are hereby designated as unsafe building appendages.

All such unsafe buildings, structures or appendages shall be abated, repaired, rehabilitated, demolished, or removed in accordance with the procedures set forth in the *Property Maintenance Code* and Chapter 10, Articles VIII and X of the *City Code*.

In matters of fire safety design and construction, including, but not limited to, egress (corridors, exit numbers, stairs, fire escapes and fire escape signs), wall and ceiling finish, enclosure of vertical shafts, basement access, standpipes and occupancy separation, a building shall not be deemed to be a fire hazard if it is in compliance with the most restrictive of:

1. The provisions of the *Life Safety* Appendix D of the *Existing Building Code*, if applicable;

2. The building code that was applicable when the building was constructed; or

3. If the occupancy classification of the building or a portion thereof has changed since it was constructed, then the applicable building code that was in effect when the occupancy classification was changed.

Any building not situated within the *jurisdiction* at the time of its construction or change of occupancy classification shall be governed by the design and construction code and related laws applicable in the *jurisdiction* in which it was constructed at the time of its construction or change of occupancy and by the provisions of the *Life Safety* Appendix D in the *Existing Building Code*. To the extent of any conflict among the requirements of any applicable codes, the most restrictive will apply. However, compliance with the aforesaid provisions shall not be deemed to excuse life-threatening defects of maintenance, sanitation, repair of casualty damage, security from unauthorized entry, structural stability, electrical systems, gas systems, plumbing systems, heating or cooling systems or other building systems.

Exception: For a building under construction or contract at the time of its annexation by the *jurisdiction*, see the Annexation Ordinance (Ordinance No. 78-2672), a copy of which is published in the preamble of this volume.

~~**[A] 116.2 Record.** The *building official* shall cause a report to be filed on an unsafe condition. The report shall state the occupancy of the structure and the nature of the unsafe condition.~~

~~**[A] 116.3 Notice.** If an unsafe condition is found, the *building official* shall serve on the *owner*, agent or person in control of the structure, a written notice that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition, or that requires the unsafe structure to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the *building official* acceptance or rejection of the terms of the order.~~

~~**[A] 116.4 Method of service.** Such notice shall be deemed properly served if a copy thereof is (a) delivered to the *owner* personally; (b) sent by certified or registered mail addressed to the owner at the last known address with the return receipt requested; or (c) delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice. Service of such notice in the foregoing manner upon the owner's agent or upon the person responsible for the structure shall constitute service of notice upon the *owner*.~~

~~**[A] 116.5 Restoration.** Where the structure or equipment determined to be unsafe by the *building official* is restored to a safe condition, to the extent that repairs, *alterations* or *additions* are made or a change of occupancy occurs during the restoration of the structure, such *repairs*, *alterations*, *additions* and change of occupancy shall comply with the requirements of Section 105.2.2 and the *International Existing Building Code*.~~

SECTION 117
HEARING PROCEDURES

117.1 Hearing notices. Unless otherwise specifically provided, whenever notice is to be given to any person concerning the right to a hearing, the notice may be given by personal hand delivery or by certified mail, return receipt requested.

If notice is being given to a building owner or to a tenant therein and the *building official* is unable to determine the name or address of the person after checking the building and the applicable records of Houston Public Works, the County Appraisal District, the electrical utility company, the gas utility company, and the water utility provider, notice shall be mailed to the billing addresses of the building as shown on the records of the electrical utility company and the gas utility company and shall be posted on or in view of each entrance to the building. Additionally, if any notice is mailed to a building owner or a building tenant and is returned without delivery, notice shall be effective if posted on or in view of each entrance to the building.

117.2 Hearings. Except where otherwise specifically provided, all hearings held pursuant to this code shall be conducted by the director of Houston Public Works or a representative, who shall hereinafter be referred to as the "hearing official." The director shall not designate any person to be a hearing official under this code who has taken any part in the investigation of the matter that is the subject of the hearing or any person who directly supervised the investigation. The hearing official shall consider only the evidence presented at the hearing in rendering a decision. The decision of the hearing official shall be final, shall be set forth in writing, and shall be served on each party in the same manner as a notice of a right to a hearing.

SECTION 118
PERMIT AND INSPECTION FEES

118.1 General. The fees for permits, inspections and licenses established under the *Construction Code* are payable in the amounts set forth in the city fee schedule.

118.1.1 Permit or license. An administrative fee as stated for this provision in the city fee schedule shall be charged upon the preparation of each permit or license issued by the *building official*. This fee shall apply regardless of whether the permit or license is issued pursuant to this code or the *City Code,* and it shall be payable in addition to all other applicable fees for the permit or license. The foregoing administrative fee shall not be applicable if no other fee is provided by law for the permit or license.

118.1.2 Receipt. An administrative fee as stated for this provision in the city fee schedule shall be charged upon the preparation of each receipt for a fee or deposit issued by the *building official*. This fee shall apply regardless of whether the fee or deposit is payable pursuant to this code or the *City Code.* This fee shall be in addition to all other applicable fees or deposits. When paid for a deposit or fee receipt, this fee shall neither constitute nor be refundable as a part of the deposit.

118.1.3 Minimum permit fee. If the fee or fees imposed for any single permit that is issued by the *building official*, whether issued under this code or the *City Code,* do not total more than the minimum permit fee stated for this provision in the city fee schedule, then the minimum permit fee as stated for this provision in the city fee schedule shall be charged for the permit. The foregoing minimum permit fee shall not be applicable if no other fee is provided by law for the permit. The administrative fee assessed pursuant to Section 118.1.1 above shall not be included in the foregoing minimum permit fee calculation, and it shall be payable in addition to the minimum permit fee.

118.1.4 Certificate of occupancy or compliance. The fee stated for this provision in the city fee schedule shall be charged for each certificate of occupancy or compliance issued for a building or structure or portion thereof such as an individual business lease space. When authorized, the *building official* may issue a temporary certificate of occupancy, upon payment of the fee stated for this provision in the city fee schedule for each temporary certificate of occupancy, for a period of not more than 30 days each.

The *building official* is authorized to issue a temporary event permit for facilities having a current certificate of occupancy that is not specifically authorized for the temporary occupancy or use proposed where the following specific life- and fire safety code provisions are addressed.

1. Temporary uses or occupancies requiring automatic fire sprinkler protection based on the proposed use or occupancy as identified in this code shall be provided with a fire watch for the duration of the temporary event. The fire watch shall be provided through the *jurisdiction's* fire department.

Where a temporary certificate of occupancy (TCO) is associated with a temporary event permit, the building official is authorized to issue a maximum of three temporary event TCO's per facility within any given 12-month period. Facilities requesting a fourth temporary event permit within any given 12-month period shall submit complete plans for appropriate code review and upgrade the facility to comply with the code provisions applicable to the proposed temporary use or occupancy.

118.1.5 Reinspection fee. When it becomes necessary to make a reinspection of any work because of faulty materials or workmanship or incomplete work, the permittee shall pay the fee stated for this provision in the city fee schedule for each reinspection, except where a greater fee is specifically required under this code.

118.1.6 Specially requested inspections during working hours. Whenever a person requests that an inspector be present at a site at a specific time, the *jurisdiction* shall provide such inspector upon payment of all applicable fees if doing so would not interfere with the regular duties of the inspector and would not cause a delay in the inspection of other work. The fee, per day, for specially requested inspections conducted during regular working hours is stated for this provision in the city fee schedule and is payable in addition to all other fees required by this code.

A full day's fee must be paid unless the *building official* finds that the request was made as a result of an unforeseeable emergency.

118.1.7 Emergency inspections. Emergency inspections shall be defined as those requested inspections occasioned by virtue of an unforeseeable incident or occurrence that necessitates an immediate inspection. In situations where there is a dispute as to whether an actual emergency occurred, the decision of the *building official* shall be final.

The fees for emergency inspections are stated for this provision in the city fee schedule and are payable in addition to all other fees required by this code.

118.1.8 Inspections and plan reviews outside regular working hours. Whenever a person requests that an inspector make an inspection or a plan analyst review plans at times other than during regular working hours, or on *jurisdiction*-observed holidays or weekends, the *building official* shall provide such plan analyst or inspector upon payment of all applicable fees if such would not interfere with the regular duties of the plan analyst or inspector or create an undue burden on such plan analyst or inspector.

The fees for inspections and plan reviews at times outside regular working hours are stated for this provision in the city fee schedule and are payable in addition to all other fees required by this code.

118.1.9 Inspections outside of *jurisdiction*. The fee for an inspection outside the *jurisdiction* shall be the minimum fee stated for this provision in the city fee schedule, per person, plus the current standard mileage rate as published by the Internal Revenue

Service per vehicle mile. This fee shall not apply to inspections performed under Section 118.1.10.

118.1.10 Approved fabricator or approved agent or agency. Fees shall apply to projects authorized by the city to use an approved fabricator/certifying agent or agency, as follows:

1. An approved agent or agency, as described in Chapter 17, shall pay the fee stated in the city fee schedule for any inspections made by the *building official* for the purpose of approving the agent or agency. The agent or agency shall also reimburse the *jurisdiction* for travel expenses incurred in performing inspections outside Harris or a contiguous county.

2. An approved fabricator as defined in Chapter 2 of this code, shall pay the fee stated in the city fee schedule for each inspection made by the *building official* for the purpose of verifying and approving the fabricator's quality control program. The fabricator shall also reimburse the *jurisdiction* for travel expenses incurred in performing inspections outside Harris or a contiguous county.

118.1.11 Building plan review fee. Plans submitted for a building permit shall be charged a non-refundable plan review fee. This plan review fee shall be charged as a deposit to the building permit fee. The fee shall be calculated at a rate of 25 percent of the estimated building permit fee calculated as provided in Section 118.2.1 and the city fee schedule. This fee shall be paid upon submittal for the initial review of plans. The balance of the building permit fee shall be collected when the permit is issued. In the instance that the building permit is not subsequently issued, the plan review fee deposit remains non-refundable.

118.1.12 Quick start plan review service. Plan review meetings for certain types of construction projects shall be available when approved by the *building official*. The *building official* shall develop guidelines for proper use of this service, determination of qualified projects, and assessment of service fees not specifically noted in this code.

The fee for quick start plan review meetings shall be 65 percent of the building permit fee calculated as provided in the city fee schedule. This fee shall be separate from, and in addition to, the structural permit fee.

Payment of the quick start plan review fee allows review of the plans in the form presented at the time the fee is paid and one additional review in the event the drawings must be corrected to comply with this code or other applicable laws. The payment shall not entitle the applicant to expedited review of any further revisions to the plans.

118.1.13 Name or address changes and duplicate job cards or certificates. The fees for name or address changes on permit applications, existing permits or certificates are stated for this provision in the city fee schedule. When a duplicate job card or certificate of occupancy is requested by the applicant, the fee shall be as set forth for this provision in the city fee schedule.

118.1.14 Request for special approval, alternate method, interpretation, or modification due to practical difficulty. Requests submitted for review by the *building official* will be classified in one of the following categories for processing, and fees will be assessed according to the city fee schedule. Payment will be required prior to processing.

Standard request. A standard request requires a minimal amount of research or consultation to review and grant or deny the request. Standard requests apply to submitted forms promulgated by the *building official*.

Moderate request. A moderate request requires an intermediate amount of research or consultation to review and grant or deny the request. A moderate request submittal is limited to a single-floor level and a maximum of 30 pages. This request is allowed between 2 and 4 hours to complete.

Extensive request. An extensive request requires lengthy research, documentation, data collection, and review time to grant or deny the request. Extensive requests include any submittal containing engineering evaluations, test reports, or requests for areas located on multiple floor levels requiring several plan sheets and details to clearly document the location and scope of the proposed work, including any submittal package exceeding 30-pages.

118.1.15 Investigation fee. An investigation fee stated for this provision in the city fee schedule shall be charged when work has commenced prior to the issuance of the proper permits. This fee shall include one follow-up trip; each additional follow-up trip thereafter shall be charged a separate investigation fee.

118.1.16 Annual fee increase. Notwithstanding any maximum fee established pursuant to the *Construction Code*, the fees in this or in any volume of the *Construction Code*, as adjusted according to this section, shall be automatically increased on the first day of each subsequent calendar year as provided in Section 1-13 of the *City Code*.

118.2 Structural.

118.2.1 Buildings. Building permit fees, payable in the amounts set forth in the city fee schedule, shall be required under this code for new buildings, additions, *alterations*, remodels, conversions, and *repairs*.

For one- and two-family *dwellings*, the building permit fee shall be comprised of two components, the base charge, which shall be determined according to type of construction and size, as shown in Table 118(1), and the incremental charge, which shall be determined according to type of construction and size, as shown in Table 118(2).

TABLE 118(1)
RESIDENTIAL BUILDING PERMIT CONSTRUCTION TYPE AND TIER

Type of Construction	Tier	Square footage greater than	Square footage less than or equal to
IA	1	0	44.9178645
IA	2	44.9178645	962.5256674
IA	3	962.5256674	1,283.3675565
IA	4	1,283.3675565	1,925.0513347
IA	5	1,925.0513347	3,208.4188912
IA	6	3,208.4188912	6,416.8377823
IA	7	6,416.8377823	32,084.1889117
IA	8	32,084.1889117	320,841.8891170
IA	9	320,841.8891170	No maximum
IB	1	0	46.1710969
IB	2	46.1710969	989.3806477
IB	3	989.3806477	1,319.1741970
IB	4	1,319.1741970	1,978.7612954

IB	5	1,978.7612954	3,297.9354924
IB	6	3,297.9354924	6,595.8709848
IB	7	6,595.8709848	32,979.3549238
IB	8	32,979.3549238	329,793.5492382
IB	9	329,793.5492382	No maximum
IIA	1	0	47.3516877
IIA	2	47.3516877	1,014.6790232
IIA	3	1,014.6790232	1,352.9053643
IIA	4	1,352.9053643	2,029.3580464
IIA	5	2,029.3580464	3,382.2634107
IIA	6	3,382.2634107	6,764.5268213
IIA	7	6,764.5268213	33,822.6341067
IIA	8	33,822.6341067	338,226.3410674
IIA	9	338,226.3410674	No maximum
IIB	1	0	48.5807481
IIB	2	48.5807481	1,041.0160316
IIB	3	1,041.0160316	1,388.0213755
IIB	4	1,388.0213755	2,082.0320633
IIB	5	2,082.0320633	3,470.0534388
IIB	6	3,470.0534388	6,940.1068776
IIB	7	6,940.1068776	34,700.5343882
IIB	8	34,700.5343882	347,005.3438823
IIB	9	347,005.3438823	No maximum
IIIA	1	0	50.3814596
IIIA	2	50.3814596	1,079.6027062
IIIA	3	1,079.6027062	1,439.4702749
IIIA	4	1,439.4702749	2,159.2054124
IIIA	5	2,159.2054124	3,598.6756873
IIIA	6	3,598.6756873	7,197.3513747
IIIA	7	7,197.3513747	35,986.7568735
IIIA	8	35,986.7568735	359,867.5687347
IIIA	9	359,867.5687347	No maximum
IIIB	1	0	51.7483551
IIIB	2	51.7483551	1,108.8933245
IIIB	3	1,108.8933245	1,478.5244326
IIIB	4	1,478.5244326	2,217.7866489
IIIB	5	2,217.7866489	3,696.3110815
IIIB	6	3,696.3110815	7,392.6221631
IIIB	7	7,392.6221631	36,963.1108154
IIIB	8	36,963.1108154	369,631.1081541
IIIB	9	369,631.1081541	No maximum
IV (HT)	1	0	49.3931696
IV (HT)	2	49.3931696	1,058.4250635
IV (HT)	3	1,058.4250635	1,411.2334180
IV (HT)	4	1,411.2334180	2,116.8501270
IV (HT)	5	2,116.8501270	3,528.0835450
IV (HT)	6	3,528.0835450	7,056.1670900
IV (HT)	7	7,056.1670900	35,280.8354502
IV (HT)	8	35,280.8354502	352,808.3545018
IV (HT)	9	352,808.3545018	No maximum
VA	1	0	53.8295909
VA	2	53.8295909	1,153.4912335
VA	3	1,153.4912335	1,537.9883113

VA	4	1,537.9883113	2,306.9824669
VA	5	2,306.9824669	3,844.9707782
VA	6	3,844.9707782	7,689.9415564
VA	7	7,689.9415564	38,449.7077822
VA	8	38,449.7077822	384,497.0778222
VA	9	384,497.0778222	No maximum
VB	1	0	57.1615221
VB	2	57.1615221	1,224.8897599
VB	3	1,224.8897599	1,633.1863466
VB	4	1,633.1863466	2,449.7795198
VB	5	2,449.7795198	4,082.9658664
VB	6	4,082.9658664	8,165.9317328
VB	7	8,165.9317328	40,829.6586641
VB	8	40,829.6586641	408,296.5866405
VB	9	408,296.5866405	No maximum

TABLE 118(2)
SQUARE FOOTAGE INCREMENT BY TYPE OF CONSTRUCTION

Type of Construction	Square footage increment, each incurring additional charge
IA	6.4168378
IB	6.5958710
IIA	6.7645268
IIB	6.9401069
IIIA	7.1973514
IIIB	7.3926222
IV (HT)	7.0561671
VA	7.6899416
VB	8.1659317

For all buildings not included in Tables 118(1) and 118(2), the building permit fee shall be based on the valuation, as described in Section 109.3 and the city fee schedule.

Notes:

1. New one- and two-family *dwellings* and townhouses 1,800 square feet or less shall receive a 50 percent discount on permit fees.
2. A historic building that has been designated by the *jurisdiction* as a landmark or that is located within a historic district designated by the *jurisdiction*, or for which designation as a landmark or part of a historic district is pending, shall receive a 50 percent discount on permit fees provided that a certificate of appropriateness approved by the Houston Archaeological and Historical Commission pursuant to Chapter 33 of the *City Code* is submitted with the construction documents.
3. Towers other than sign structures shall be charged in the same manner as new buildings.

Permits shall be required for the following items as described in the city fee schedule:

1. Demolition of any building or structure.
2. Stationary and floating piers.
3. Incinerators (other than domestic outdoor type).
4. Bulkheads and retaining walls not otherwise exempted from permit.
5. Dredging.
6. Prefabricated fireplaces.
7. Sand blasting or water blasting.
8. Grading permit.
9. Loading docks (uncovered).
10. Barricades for pedestrian walkways.
11. Paint spray booths.
12. Heliports and helistops (interdepartmental inspections—health, structure, fire, and aviation safety).

118.2.2 Industrial facilities and chemical plants. Permit fees for petroleum processing installations; nuclear reactor complexes and processing facilities; facilities manufacturing, processing, distributing or storing energy; other facilities processing, storing or manufacturing materials or energy, not otherwise covered by a construction permit shall be charged in the same manner as new buildings as set forth in Section 118.2.1 and the city fee schedule.

118.2.3 Occupancy and inspection of existing buildings. Permit and inspection fees in the amounts stated for these provisions in the city fee schedule apply to occupancy and inspection of existing buildings, when required by the *Existing Building Code* or the *Property Maintenance Code*.

118.2.4 Fences. Permit fees for fences shall be as stated for this provision in the city fee schedule.

118.2.5 Fire escapes. Permit fees for fire escapes shall be as stated for this provision in the city fee schedule.

118.2.6 Public sidewalks, driveway approaches, culverts, curbs, and gutters located in the right-of-way. Permit fees for sidewalks, driveways, culverts, curbs and gutters covered by this code shall be as stated for this provision in the city fee schedule.

118.2.7 Parking lots and paved areas not associated with a one- or two-family dwelling. Permit fees for parking lots (uncovered) and paved areas shall be as stated for this provision in the city fee schedule.

118.2.8 Plan review fees. Plan review fees, other than the building plan review fee provided for in Section 118.1.12, shall be as stated for this provision in the city fee schedule for review of the following:

Manufactured home or recreational vehicle parks.

Residential master plans.

Reexamination of plans or deferred submittal of plans:

Where deferred plans are submitted a fee shall be charged based on the minimum permit fee identified in the city fee schedule.

Where previously approved plans are reexamined or revised, the plan review fee shall be as specified in the city fee schedule or 15 percent of the original building permit fee, whichever is greater. The fee for reexamination of partial plans shall be determined by the *building official* based on the review time involved.

Outside *jurisdiction* plan review fee:

Plan review for buildings located outside the *jurisdiction* shall be 65 percent of the building permit fee as calculated in accordance with Section 118 and the city fee schedule. This service shall only be provided at the building owner's request and subject to the availability of personnel to render the service.

Paving plan review:

Paving, other than that which is covered under Section 118.2.6 or 118.2.7, shall require a plan review, for which the fee amount is stated in the city fee schedule, but shall not require a permit or inspection or associated fees.

Exception: A separate plan review and fee shall not be required when the paving is associated with a driveway approach or building permit.

118.3 HVAC equipment.

118.3.1 General. Fees for permits and inspections for the installation, alteration and inspection of heating, ventilating, air-conditioning and refrigeration systems shall be as stated for this provision in the city fee schedule for the following:

1. Ventilating systems or heating-only systems (other than boilers). Toilet exhaust, outside air makeup, elevator ventilation, stair pressurization, smoke exhaust or residential ventilation fees shall be included in the air-conditioning tonnage fee. The minimum permit fee shall be as stated for this provision in the city fee schedule. (See Section 118.3.3 for local vent fees.)
2. Repairs or alterations (including cooling tower replacement) to an existing heating, ventilating, air-conditioning or refrigeration system.

   Exception: Repairs to ducts and grilles in a single tenant lease space that has a total valuation of less than $500.00 is exempt from permits.
3. Air-handling and duct systems for air-conditioning in buildings that have heating and/or cooling fluid from an external source.
4. Air-conditioning cooling equipment (chillers, compressors and/or absorption units with their auxiliaries) located in a building other than the one being cooled (for instance, a central plant to supply one or more buildings).
5. A complete air-conditioning system where the cooling equipment, the air-handling equipment and duct system are in the same building. For air-conditioning systems that include heating (except boilers), the fee shall be

included in the tonnage or horsepower fee at no extra cost, provided such heating is included on the original permit application.

6. Commercial, manufacturing and industrial process refrigeration systems.

118.3.2 Temporary operation inspection. For inspection of a heating, ventilation, refrigeration or air-conditioning system to be used on a temporary basis, the fee stated for this provision in the city fee schedule shall be paid to the *jurisdiction* by a licensed air-conditioning contractor requesting such inspection. If the system is not approved for temporary operation on the first inspection, the usual reinspection fee will be charged for each subsequent inspection for such purpose.

118.3.3 Local vent permit. The fee stated for this provision in the city fee schedule will be charged for local vent permits, central vacuum system permits, and permits for ventilation fans up to 2,000 cfm. When a licensed air-conditioning contractor includes local vents in a permit, no additional fee will be required.

118.3.4 Self-contained air-conditioning units. The stated for this provision in the city fee schedule shall be paid for buildings using self-contained air-conditioning units.

Exception: Self-contained air-conditioning units in Residential Group R-3 occupancies are exempt.

118.3.5 Manufactured home inspections. For inspection of heating and ductwork of a manufactured home where no state inspection has been made, the fee shall be as stated for this provision in the city fee schedule.

118.3.6 Certificate of approval. In addition to the regular permit fee, the fee stated for this provision in the city fee schedule shall be charged for a certificate of approval of air-conditioning for each permit taken out to add heating and/or air-conditioning to an existing residence. The fee shall be paid for at the time the regular permit fee is paid.

118.4 Boilers. Every person desiring to install, maintain or repair boilers shall file an application for a permit with the *building official*, stating the location and nature of work to be performed, and pay the fees stated in the city fee schedule for the following:

1. For boiler installation based on Btu input and/or HP: base charge plus the fee for each BHP or part thereof. The maximum permit fee for installation of a single boiler in excess of 1,200 BHP is stated for this provision in the city fee schedule.

   Note: For the purpose of this code, 1 BHP equals 33,000 Btu.

2. Annual fee.

3. Repair permit.

118.5 Plumbing.

118.5.1 General. The fees required for permits for the following are set forth in the city fee schedule, with a minimum amount stated in the city fee schedule, where not otherwise specified:

Opening in street (street cut, for purpose of connection with utilities).

(See Chapter 40 of the *City Code* for additional regulations and deposits required.)

Temporary gas inspection.

Gas permit and inspection (up to 4 openings).

Additional gas openings, each.

Manufactured home inspection fee (where no state inspection has been made).

Fire-protection fee (fire sprinkler system separate permit required):

For a fire sprinkler system (any head or group of heads up to 25 that is regulated with a valve for any portion of a building), minimum fee.

For each additional head.

For sprinkler system plan review, per head.

Standpipe system (1 to 25 hose connections).

Each additional hose connection.

Irrigation system (1 to 200 heads) per head.

Each additional head.

118.5.2 Heating gas appliances. The fees stated for this provision in the city fee schedule shall apply to the following:

Furnace (nonduct type)

Each additional furnace to be installed in same building under same permit

Floor furnace (nonduct type)

Incinerators (gas fired) (complete with two burners or more)

Infrared heaters (one or two)

Each additional infrared heater installed under the same permit

118.5.3 Yard lights or barbecue grills. The fees stated for this provision in the city fee schedule shall apply for the following:

First opening.

Each additional opening installed under the same permit.

118.5.4 Permanent appliances. The fees stated for this provision in the city fee schedule shall apply for the following:

Wall heater (bath heaters exempt).

Each additional heater installed under same permit.

Gas steam radiator.

Each additional radiator installed under same permit.

Commercial oven.

Commercial dryer.

Plumbing fixtures (one to three).

Each additional fixture installed under same permit.

Warm-air circulators (nonduct), first three.

Each additional circulator installed under same permit.

Tie to curb inlet-storm sewer.

Manholes, each.

Roof drain or outside downspout connection to drainage system, one or two.

Each additional roof drain or downspout to be installed under the same permit.

Catch basin or outside area drain, one or two.

Each additional catch basin or outside area drain to be installed under same permit.

Sewer connections, each.

Ground in plumbing for shell building, 3,000 square feet (279 m^2) or less floor area.

For each additional 1,000 square feet (93 m^2) or part thereof.

Septic tanks or individual sewage treatment plants, each.

Disconnect and plug main sewer connection.

Tanks (not septic tanks). A permit separate from other permits required for:

Up to and including 1,000 gallons (3,785 L) capacity (including mechanical interceptors).

More than 1,000 through 6,000 gallons (3,785 L through 22,712 L).

More than 6,000 through 15,000 gallons (22,712 L through 56,781 L).

More than 15,000 through 30,000 gallons (56,781 L through 113,562 L).

More than 30,000 gallons (113,562 L).

118.6 Electrical. Fees for the following permits and related inspections required by the *Electrical Code* are stated for Sections 118.6.1 through 118.6.5 and the city fee schedule, with a minimum fee also stated in the city fee schedule where not otherwise specified:

118.6.1 Services.

Meter loop and service.

Up to and including 50 kW.

More than 50 kW through 250 kW.

More than 250 kW.

Panels with eight or more circuits, each panel.

Outlets, each.

Note: All light switches, receptacle openings and bell-ringing transformers are classified as outlets.

Electrical vehicle charging outlets identified in this Section (118.6.1) requiring compliance with Section 511.10(B) and Article 625 include:

Level 1 – charging 120 Volts

Level 2 – charging the NEC including240 Volts

Level 3 – charging 480 Volts

118.6.2 Fixtures and appliances.

Fixtures, each.

Note: Any current-consuming device permanently attached to an outlet for illumination purposes shall be classified as a fixture.

Electrical appliances-domestic.

Range receptacle, each.

Clothes dryer, each.

Stove top, each.

Oven, each.

Garbage disposal, each.

Dishwasher, each.

Window air-conditioning receptacle, each.

118.6.3 Motors.

Motors, permanently installed, each.

Up to and including ≤1 horsepower.

More than 1 horsepower through 10 horsepower.

Each additional horsepower or fraction thereof over 10 horsepower.

Motor control equipment is included in the motor fees. Outlets for future motor installation shall be charged for at one-half of the applicable, regular motor rates. The other one-half shall be paid at the time the motors are installed.

Permanent connection of electrical appliances, equipment and transformers of any nature:

Unless another fee is specified in this section for the apparatus to be installed, the fee shall be based on the kW rating of the apparatus. Each kW shall be considered to be one horsepower, and the fees shall be the same as indicated for “motors, permanently installed,” above.

118.6.4 Signs.

Shop inspection of incandescent electrical signs and gas or vacuum tube signs, each:

0 to k kVA.

Additional for each kVA or fraction thereof exceeding 5 kVA.

Installation inspection of incandescent electrical signs and gas or vacuum tube signs, each:

0 to 5 kVA.

Additional for each kVA or fraction thereof exceeding 5 kVA.

118.6.5 Outdoor and temporary.

Streamers and festoon lighting per circuit.

Ball park and parking lot light poles (no outlet or fixture charge), 1st pole each.

Each additional pole after the 1st.

Temporary installations, such as wood saws, floor surfacing machines, painting/spray apparatus and the like, per installation.

Temporary installation of commercial sound equipment.

Temporary lighting installations.

Temporary installations such as carnivals or similar installations for amusement show display or similar uses shall be charged for on a kVA basis. For the purpose of this classification, 1 horsepower of motor load shall be considered as one kVA.

0 through 10 kVA

Additional for each kVA or fraction thereof exceeding 10 kVA.

Temporary saw poles (per installation).

Temporary cut-in made permanent.

Additions to existing work shall be charged for at the same rate as new work.

Reconnection fee.

118.7 Elevators.

118.7.1 General. Every person proposing to install an elevator, dumbwaiter, escalator, manlift, moving walk, inclined stairway chairlift, personnel hoist or wheelchair lift shall file a written request for a construction permit with the *building official* and pay the installation fees for each unit stated for this provision in the city fee schedule for the following:

New installations and alterations:

Passenger or freight elevator, escalator, manlift, moving walk, inclined stairway chairlift, personnel hoist or wheelchair lift, where the equipment is to be installed in other than a private residence, each:

Up to and including $40,000.00 of valuation.

Each additional $1,000.00 of valuation or fraction thereof.

Personnel hoist-manufacturing design permit (required in addition to above fee if the hoist is not already permitted).

Passenger or freight elevator, escalator, manlift, moving walk, inclined stairway chairlift, personnel hoist or wheelchair lift, where the equipment is to be installed in a private residence, each:

Up to and including $10,000.00 of valuation.

Each additional $1,000.00 of valuation or fraction thereof.

Installation fees for equipment other than personnel hoists include an operating permit for the first year of operation, where applicable.

Installation fees for personnel hoists include a limited permit for the first 90 days of operation.

118.7.2 Inspections. The *building official* shall not be obliged to perform a test or inspection if the *building official* does not then have qualified personnel to perform such tests. Where one or more inspections or tests are necessary to verify compliance with this code, the *building official* may require such inspections or tests to be performed by a city

registered third party inspection agency. If the *jurisdiction* provides the inspections, fees shall be payable to the *building official* as stated for this provision in the city fee schedule for all of the following:

1. Each personnel hoist:

    Acceptance load test* (includes two monthly inspections).

    Periodic test, three months (includes two monthly inspections).

    Addition to tower plus any test fee, single-cage hoist.

    Addition to tower plus any test fee, twin-cage hoist.

2. Acceptance inspection for each elevator (new installation and alteration).

3. Acceptance inspection for each escalator, dumbwaiter, wheelchair lift, manlift or moving walk (new installation or alteration).

4. Annual reinspection for each elevator except where lesser fee is provided elsewhere in Section 118.7:

    Reinspection fee.

5. Escalator annual inspection, each.

6. Moving walk annual inspection, each.

7. Wheelchair lift annual inspection, each.

8. Dumbwaiter annual inspection, each dumbwaiter:

    For 2 through 10 landings.

    For each additional landing.

9. Manlift or inclined stairway chairlift annual inspection, each.

10. Traction elevator maintenance load test*.

    Five-year maintenance load test.

    Counter-weight safeties, add.

    With reduced stroke buffer, add.

    With spring buffer, add.

11. Hydraulic elevator three-year load test*.

12. Rescheduling of test:

    Additional fee if *owner* or elevator company cancels, unless notice is given to the *building official* by at least 1:00 p.m. on the preceding working day.

13. If an elevator test cannot be completed within eight hours because the elevator did not comply with the requirements of this code when the test was begun, there shall be charged the additional fee stated for this provision in the city fee schedule for each additional hour or portion thereof.

* Load test shall be performed by an elevator maintenance/installation company, and the test shall be witnessed by the *building official* or an approved agency.

118.7.3 Reinspection fee. When reinspection of any work is performed because of faulty materials or workmanship or incomplete work, the permittee shall pay the fee stated for this provision in the city fee schedule for each reinspection, except where a greater fee is specifically required under this code.

118.7.4 Operating permit or limited permit. An operating permit or limited permit shall be required for each elevator, dumbwaiter, escalator, manlift, moving walk, inclined stairway chairlift, personnel hoist or wheelchair lift. An operating permit shall be valid for one year, and a limited permit shall be valid for 90 days. Fees stated for this provision in the city fee schedule shall be charged for the following operating permits and limited permits:

Each elevator.

Each escalator or moving walk.

Each dumbwaiter.

Each personnel hoist.

Each wheelchair lift.

Each manlift.

Each inclined stairway chairlift.

Each escalator or moving walk unit powered by one motor shall be considered as a separate unit.

118.8 Signs. Fees stated for this provision in the city fee schedule shall be charged for all signs covered by the *Houston Sign Code* as follows:

1. Site inspections.
2. Electrical inspections – install and final.
3. Reinspection fee:

   Site, hole and electrical, (all).
4. Construction and reconstruction permit:

   For the first 32 square feet (2.9728 m^2) of one sign face or fraction thereof.

   Each square foot or fraction thereof of one sign face exceeding 32 square feet.
5. Operating permit—on-premise signs. An operating permit for an on-premise sign shall be issued as a renewable permit on an annual basis upon payment of the following fees:

   For the first 32 square feet (2.9728 m^2) of one sign face or fraction thereof.

   Each square foot or fraction thereof of one sign face exceeding 32 square feet (2.9728 m^2).
6. Operating permit—off-premise signs. An operating permit for off-premise signs that advertise the sale or rental of real property or direct persons to the location of real property for sale or rent, which signs are limited to 40 square feet (3.7161 m^2) in sign face area, shall be a nonrenewable one-year permit as authorized in Section 4612(b) of the *Houston Sign Code*.

7. Operating permit. An off-premise operating permit for a sign other than as provided in item 6 above shall be issued as a renewable permit on an annual basis.

8. New registration for changeable message signs/high technology signs (per face).

9. Replacement of lost or damaged operating tag.

10. Plan examination fee.

11. Plan reexamination due to alteration of approved plan.

12. Ground sign exceeding 14 feet (4,267 mm).

All other fees required by Section 118 shall be paid in addition to the fees in Section 118.8.

118.9 Medical gas permits. Fees stated for this provision in the city fee schedule shall be charged for each gas outlet, with a minimum fee stated for this provision in the city fee schedule.

118.10 Alarms, detectors, electronic locks, central station security and testing. Fees stated for this provision in the city fee schedule shall be charged for alarms, detectors, central station security and testing.

118.11 High-piled storage review and inspection. The fees stated for this provision in the city fee schedule shall be charged for the plan review and inspection of high-piled storage buildings.

Onsite reinspection fee. If a third onsite reinspection is necessary, the permit holder shall pay the fee stated for this provision in the city fee schedule.

Revisions. The fee stated for this provision in the city fee schedule shall be charged for review of revisions to plans.

118.12 Group H occupancy or tank storage review and inspection. The fees stated for this provision in the city fee schedule shall be charged for the plan review and inspection of Group H occupancy buildings, storage tanks or buildings with tank storage.

Onsite reinspection fee. If a third onsite reinspection is necessary, the permittee shall pay the fee stated for this provision in the city fee schedule.

Revisions. The stated for this provision in the city fee schedule shall be charged for revisions to plans.

SECTION 119
PRIVATE PLAN REVIEW AND INSPECTION SERVICES

119.1 Applicability. The application of this section is limited to those Group R-3 occupancy structures that constitute *dwellings*, as defined in this code, and to those Group U occupancies, such as garages, carports, fences and other structures, that are associated with *dwellings*.

119.2 Scope. This section applies to any permit required under the *Construction Code* for the construction, repair, or renovation of a structure to which this section applies.

119.3 Program established. The *building official* may establish a private plan review and inspection program under which qualified persons who are not city employees may review plans, conduct certain building inspections, and provide related services for structures to which this section applies to assure compliance with all applicable construction codes. The program shall be conducted in accordance with the regulations and forms promulgated by the *building official*, which shall, without limitation, address the following:

1. Qualifications of the firms and individuals authorized to perform plan reviews, conduct inspections, and provide other related permit services. The qualifications shall include licensing requirements in accordance with any applicable laws and regulations and certification requirements in accordance with state or federally recognized standards.

2. Requirement of appropriate liability coverage in an amount of not less than $1,000,000.00, per occurrence, with agreements to hold harmless and indemnify the *jurisdiction* and coverage of the *jurisdiction*, as an additional insured, for the protection of the *jurisdiction* and other persons who may be affected by the performance of any services under the program.

3. Provisions to ensure that the firms and individuals participating in the program will act independently of building owners, contractors, and others so as to avoid conflicts of interest.

4. Provisions for any non-building-code-related review of plans and issuance of permits to applicants who utilize plan review, inspection, and other related services under the program.

5. Provisions regarding the keeping of records and filing of reports with the *building official*.

6. Administrative provisions for the acceptance, suspension, and revocation of the right of a firm or individual to participate in the program, which shall include elements of due process, including a right of appeal to a hearing officer designated by the director of Houston Public Works, whose decision, notwithstanding any other provision of this code, shall be final and not appealable to the General Appeals Board or city council.

7. Provisions to ensure that no firm or individual may be certified to participate in the program unless qualified to conduct plan reviews and inspections under the codes currently enforced by the *jurisdiction* and/or a nationally recognized uniform or international code.

8. Provisions relating to fees charged by any firm or individual for services rendered under the program, including any fees required by law to be paid directly to the *jurisdiction* and remitted by the *building official* to a firm or individual.

9. Provisions prohibiting any private developer, builder, or contractor from employing any firm or individual, including subcontractors, to perform more than 25% of that developer's, builder's or contractor's services under the program in any one calendar year unless a greater amount is approved by the *building official*.

10. Provisions requiring any private developer, builder or contractor utilizing any services under the program and the *building official* to file a report as set forth below:

    10.1. Each private developer, builder or contractor utilizing any services under the program shall file a report with the *building official*, supported by affidavit, containing the following information:

        10.1.1. The total number of permits received during the preceding calendar year for the construction of any residential structure in connection with which services under the program were rendered;

10.1.2. The name of each firm or individual utilized under the program on each residential structure during the reporting period; and

10.1.3. A statement certifying that the developer, builder or contractor has fully complied with all rules and regulations under the program during the reporting period, including, but not limited to, all rules governing the maximum number of plan reviews and inspections permitted to be performed by any firm or individual, including subcontractors, rendering any services under the program.

The report shall be filed with the *building official* not later than the last day of January and July in each calendar year and shall cover the preceding 6-month period ending on the last day of December and June, respectively, in each year.

10.2. The *building official* shall submit a report with the mayor and city council containing the following information:

10.2.1. A listing of the names of all companies or contractors that utilized individuals or firms for services under the program and the name of each firm or individual so utilized;

10.2.2. Names of all firms and individuals approved to perform services under the program;

10.2.3. Total number of plan reviews and inspections performed by firms and individuals for each private developer, builder or contractor operating under the program;

10.2.4. Number of plan rechecks and oversight inspections conducted by the *jurisdiction* for each firm or individual utilized under the program and the percentage of that firm's or individual's work, including subcontractors, so inspected;

10.2.5. The number of code violations found through plan rechecks and oversight inspections, including the name of the firm or individual, including subcontractors, who performed such services;

10.2.6. A list of any firms or individuals removed from the program by the *building official*; and

10.2.7. An assessment of program effectiveness as demonstrated by available data, including comments and complaints received by the *jurisdiction* regarding the program pertaining to work performed by a participating developer, builder or contractor, or any firm or individual, including subcontractors, providing private plan review or inspection services under the program.

The *building official's* report shall be submitted to the mayor and city council not later than the last day of August and February in each calendar year and shall cover the preceding 6-month period ending on the last day of July and January, respectively, in each year and may include such additional information relating to the program as the *building official* may deem appropriate.

11. Provisions prohibiting any private plan reviewer or inspector from being related to building owners, contractors, and other similarly situated individuals or entities within the third degree of consanguinity or within the second degree of affinity.

119.4 Oversight inspections. The provisions of this section do not affect the *jurisdiction* of the *building official* over any work or preclude oversight inspections by the *building official* of structures that are subject to the provision of services under the program. For purposes of quality assurance, the *building official* shall be authorized to recheck plans, perform inspections or reinspections, issue stop work orders, and take any and all actions that are authorized to be taken under the *Construction Code*. No prior notice need be provided to any program firm or individual, contractor, or owner, unless otherwise required by law.

119.5 Fees. To cover administrative costs, including registration of firms and individuals, management of the program, and oversight inspections, the *building official* shall assess fees equal to 25 percent of the amount otherwise payable under this code for any permit, but not less than the minimum fee as required in the city fee schedule. In addition to the reduced permit fees charged in connection with the program, an additional fee as stated in the city fee schedule per payment voucher issued shall be assessed to cover the *jurisdiction's* costs in connection with any fee required to be paid to and remitted by the *jurisdiction*. If any contractor or owner requests an inspection by the *building official* of any structure that is subject to private inspection under this section, then the *building official* may perform the same for the fee stated for this provision in the city fee schedule. The administrative fee that is payable under this code shall be collected in addition to the fees otherwise provided under this section.

CHAPTER 2
DEFINITIONS

201.3 Specific construction and ~~T~~terms defined in other codes. Where specific rules of construction or terms are not addressed or defined in this code and are addressed or defined in the *City Code* or another volume of the *Construction Code* ~~*International Energy Conservation International Fuel Gas Code*, *International Fire Code*, *International Mechanical Code* or *International Plumbing Code*~~, such terms or specific constructions herein shall have the meanings ascribed to them ~~as~~ in those ~~codes~~ other volumes, as applicable to the construction and proposed scope of work hereunder.

SECTION 202
DEFINITIONS

{**EDITORIAL NOTE:** ALL PORTIONS OF SECTION 202 NOT SHOWN REMAIN AS SET FORTH IN THE 2015 IBC.}

ALLEY. A public or private right-of-way that is not used primarily for through traffic and that provides vehicular access to rear entrances to buildings or properties that front on an adjacent street.

[A] ALTERATION. Any construction or renovation to an existing structure other than repair or addition. Also, a change to an existing building, or an electrical, gas, mechanical or plumbing system that involves an extension, addition or change to the arrangement, type or purpose of the original installation that requires a permit.

ANCHOR. Metal rod, wire or strap that secures masonry to its structural support.

APPROVAL. Official acknowledgement from the *building official* that the proposed work or completed work conforms to this code.

[BS] APPROVED FABRICATOR. An established and qualified person, firm or corporation registered and certified with the *jurisdiction* and approved by the *building official* pursuant to Chapter 17 of this code to provide specific products and/or services that document compliance with the *Construction Code*.

AS-GRADED. The extent of surface conditions on completion of grading.

ASME CODE. The current *ASME/ANSI A17.1 Safety Code for Elevators and Escalators*; an American National Standard published by the American Society of Mechanical Engineers. See Section 3001.2.

AUTHORITY HAVING JURISDICTION. The director of Houston Public Works. This definition shall include the *authority having jurisdiction's* authorized representative.

AUTHORIZED COMPANY. An established and registered company regularly engaged in the installation or repair of elevators, escalators, dumbwaiters, or moving walks.

AUTHORIZED INSPECTOR. An inspector who is qualified as QEI-1 and is registered with the *building official*.

BATHING ROOM (BATHROOM). A room fully enclosed by exterior walls and/or interior partitions, which contains one or more shower stalls or bathtubs, and which may or may not also contain one or more toilets or urinals and one or more handwashing sinks.

BEDROCK. In-place solid rock.

BUILDING CODE. The *City of Houston Building Code*, as adopted and amended by this *jurisdiction*.

[A] BUILDING OFFICIAL. The ~~officer or other designated authority charged with the administration and enforcement of this code, or a~~ director of Houston Public Works or the duly authorized representative designated by the director to act as the chief construction code enforcement official of the *jurisdiction*; also known as *chief building official*. The term also includes the Houston Airport Systems building official who may be designated by the building official to perform *Construction Code* permitting and enforcement activities on Houston Airport Systems premises.

BULKHEAD. A retaining wall designed to retard erosion of or prevent sloughing off of the banks along a waterfront or lake.

CERTIFICATE OF COMPLIANCE. A certificate stating that materials and products meet specified standards or that the scope of work under a specific permit was done in compliance with approved construction documents. Any reference in the *Construction Code* to a "CC", certificate of completion, or a certificate of inspection issued by this *jurisdiction*, is a reference to a certificate of compliance as defined herein.

CERTIFYING ORGANIZATION. An independent organization that is competent and widely recognized to accredit elevator inspectors, has been approved by an organization that is nationally recognized, and is approved or recognized by the *building official* as competent to certify elevator inspectors.

CITY CODE. The *Code of Ordinances, City of Houston, Texas.*

CITY ENGINEER. Has the meaning ascribed in Section 1-2 of the *City Code*.

CITY FEE SCHEDULE. The schedule of fees charged by the city for various permits, licenses, authorizations and services, which is maintained on the city's website.

CIVIL ENGINEER. A professional engineer registered with the State of Texas to practice in the field of civil engineering.

CIVIL ENGINEERING. The application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works.

CLEANOUT. An opening to the bottom of a grout space of sufficient size and spacing to allow the removal of debris.

CODE OFFICIAL. The Building Code Enforcement employees, including but not limited to, the *building official*, plan analysts, field inspectors, and other technical staff charged with the administration and enforcement of this code as specifically delegated by the *authority having jurisdiction*. The *code official* is authorized to approve designs, construction, equipment, materials, installations, processes, procedures, practices, and other duties necessary to administer, verify and document compliance with the *Construction Code*, ordinances, and other laws and policies as specifically delegated by the *chief building official, fire chief,* and the *authority having jurisdiction*.

COMMERCIAL PIER. One of more piers, any part of which is used for any of the following:

1. Commercial boat livery.
2. Commercial fishing camp.
3. Public pier.
4. Private club.
5. A pier used by the owner of two or more residential lots for access to the lake.
6. A pier at which access to the lake may be provided for the payment of an admission or membership fee.
7. A pier at which vessel are moored for money or other valuable consideration.
8. A pier at which two or more vessels that have a cab, a toilet or a sewage holding tank are moored.

COMPRESSIVE STRENGTH OF MASONRY. Maximum compressive force resisted per unit of net cross-sectional area of masonry, determined by the testing of masonry prisms.

CONSTRUCTION CODE. Has the meaning ascribed in Section 1-2 of the *City Code*.

CORROSION RESISTANT or NONCORROSIVE. Refers to a material having a corrosion resistance equal to or greater than a hot-dipped galvanized coating of 1.5 ounces of zinc per square foot (457.75 g/m^2) of surface area. When an element is required to be corrosion resistant or noncorrosive, all of its parts, such as screws, nails, wire, dowels, bolts, nuts, washers, shims, anchors, ties and attachments, shall also be corrosion resistant or noncorrosive.

[BS] DANGEROUS. Any building meeting the definition of a dangerous building as defined in Chapter 10, Article IX, of the *City Code* or any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation, or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgement of any portion, member, appurtenance or ornamentation of the building or structure under service loads.

DRIVEWAY. An approved surface on private premises that is designated for motor vehicle use and connected to the driveway approach either directly or by other improved surfaces. (For purposes of Section 3112, the definition of private street shall be the same as the definition of driveway.)

DRIVEWAY APPROACH. An entrance to and exit from private premises that is designated for motor vehicle use and is not open for vehicle traffic except by permission of the owner of such private premises. The approach is located entirely in the right-of-way, between the edge of the roadway paving and the property line. This definition shall also include the term “driveways” as defined in the *Infrastructure Design Manual*.

DUPLEX. An individual free-standing structure containing not more than two dwelling units, single-family dwellings, or households, each containing a separate means of egress.

EARTH MATERIAL. Any rock, natural soil or fill or any combination thereof.

EGRESS COURT. A court or *yard* with a minimum width of 36 inches (914.4 mm) which provides access to a *public way* for one or more exits or emergency escape and rescue openings.

ELECTRICAL CODE. The *City of Houston Electrical Code* as adopted and amended by this *jurisdiction*.

ENERGY CONSERVATION CODE. The *City of Houston Residential Energy Conservation Code* or the *City of Houston Commercial Energy Conservation Code*, both as adopted and amended by this *jurisdiction*.

ENGINEERING GEOLOGIST. A geologist experienced and knowledgeable in engineering geology.

ENGINEERING GEOLOGY. The application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

ENTERPRISE. A use or activity on, or of, a tract of land or within a building or structure, in whole or in part, that includes inside and outside storage or use of hazardous materials exceeding the *maximum allowable quantity limits (MAQs)* per *control area* that constitutes a Group H-1, H-2 or H-3 occupancy as described in Section 307. The term also includes any Group H-4 occupancy, in whole or in part, that includes storage (both interior and exterior) of hazardous materials exceeding the *MAQs* per *control area* as described in Section 307 if any highly toxic material is manufactured, processed, generated, stored or used. Otherwise, Group H-4 occupancies are not included. The term also does not include:

1. Any public water or wastewater treatment facility that is being operated under regulations promulgated by state or federal agencies, including but not limited to the United States Environmental Protection Agency and the Texas Commission on Environmental Quality;
2. Areas or spaces up to 500 square feet (46.4515 m^2) each in research labs operated under the authority of a hospital, college, or university, and classified as H-2, H-3 or H-4, with an aggregate maximum area of ten percent on each floor; or
3. Any area or space containing fuel storage for generators, fire pumps, above or underground fuel storage associated with motor fuel-dispensing facilities.

ENTERPRISE PERMIT. A current license or document issued by the *jurisdiction's* director of planning and development authorizing the holder to operate an enterprise issued under Chapter 28, Article VII of the *City Code*. Except where specific reference is made to a restricted permit or an unrestricted permit, the term "permit" includes a registration of a nonconforming enterprise prior to February 16, 1997.

ESCALATOR SKIRT DEFLECTOR DEVICE. A device that reduces the risk of objects coming into contact with the skirt of the elevator.

EXISTING BUILDING CODE. The *City of Houston Existing Building Code*, as adopted and amended by this *jurisdiction*.

EXISTING STRUCTURE. A structure erected prior to the date of adoption of ~~the appropriate~~ this code, or one for which a legal building *permit* has been issued. For application of provisions in *flood hazard areas*, an existing structure is any building or structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard.

FAIL-SAFE. A design condition associated with an electronic locking device or system that incorporates a feature for automatically counteracting the effect of an anticipated possible power source failure; also, a design condition eliminating or mitigating a hazardous condition by compensating automatically for a system or component malfunction, or power failure.

FIRE APPARATUS ACCESS ROAD. A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access roadway.

FIRE CHIEF. Has the meaning ascribed in Section 34-53 of the *City Code*.

FIRE CODE. The *City of Houston Fire Code*, as adopted and amended by this *jurisdiction*.

FIRE CODE OFFICIAL. The *jurisdiction's* fire marshal, who is charged with the administration and enforcement of the *Fire Code,* or an authorized representative.

FIRE MARSHAL. The fire marshal of this *jurisdiction* or such other person as the fire chief of this *jurisdiction* may designate.

GOOD CONDITION. Describes materials that have been visually inspected by the *building official* and determined to be fit for installation. Materials shall be in sufficient condition to reuse without potential harm to the health, safety, and welfare of the public. Materials shall not have any mold or water damage. Wood products shall not contain any holes other than wire or nail holes. Wood products shall not contain rot, splits, buckling, warpage or other deterioration that would prevent the material from functioning in its intended use. The condition shall be determined by the *building official*.

GRADE, ROUGH. The stage of grading at which the grade approximately conforms to the approved plan.

GRADING. The act of leveling to a smooth horizontal or sloping surface. Also see **SITE GRADING**.

GRADING, ENGINEERED. Any *grading* involving in excess of 1,000 cubic yards (764.5549 m^3) of fill.

GRADING, REGULAR. Any *grading* involving less than or equal to 1,000 cubic yards (764.5549 m^3) of fill.

GRUB OR GRUBBING. To clear vegetation from property by digging up roots and stumps to a depth not exceeding 24 inches (609.6 mm).

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

> **Exception:** For the purpose of establishing a building as a high-rise, the uppermost floor located more than 75 feet above the lowest level of fire department access used for housing building systems mechanical equipment is exempt.

HIGHWAY, STREET OR ROAD. A general term denoting a public way for the purpose of vehicle travel, including the entire area within the right-of-way.

HOUSTON SPECIAL FLOOD HAZARD AREA. The land in the special flood hazard area and in the floodplain within the city that is subject to a 0.2 percent or greater chance of flooding in any

given year and is designated as unnumbered A Zones, AE Zones, AO Zones, AH Zones, A1 through A99 Zones, VO Zones, V1 through V30 Zones, VE Zones, V Zones, or X Shaded Zones.

INFRASTRUCTURE DESIGN MANUAL. The design manual with latest revision at the time of permit application that sets forth the standards for infrastructure design and construction as approved by the Office of the City Engineer in Houston Public Works.

INTERNATIONAL BUILDING CODE. Any reference herein to the *International Building Code* shall be construed as referring to the *City of Houston Building Code*, as adopted and amended by this *jurisdiction*.

INTERNATIONAL ENERGY CONSERVATION CODE. Any reference herein to the *International Energy Conservation Code* shall be construed as referring to the *City of Houston Residential Energy Conservation Code* or the *City of Houston Commercial Energy Conservation Code*, both as adopted and amended by this *jurisdiction*.

INTERNATIONAL EXISTING BUILDING CODE. Any reference herein to the *International Existing Building Code* shall be construed as referring to the *City of Houston Existing Building Code*, as adopted and amended by this *jurisdiction*.

INTERNATIONAL FIRE CODE. Any reference herein to the *International Fire Code* shall be construed as referring to the *City of Houston Fire Code*, as adopted and amended by this *jurisdiction*.

INTERNATIONAL FUEL GAS CODE. Any reference herein to the *International Fuel Gas Code* shall be construed as referring to the *City of Houston Plumbing Code*, as adopted by this *jurisdiction*.

INTERNATIONAL MECHANICAL CODE. Any reference herein to the *International Mechanical Code* shall be construed as referring to the *City of Houston Mechanical Code*, as adopted and amended by this *jurisdiction*.

INTERNATIONAL PLUMBING CODE. Any reference herein to the *International Plumbing Code* shall be construed as referring to the *City of Houston Plumbing Code*, as adopted and amended by this *jurisdiction*.

INTERNATIONAL PROPERTY MAINTENANCE CODE. Any reference herein to the *International Property Maintenance Code* shall be construed as referring to Chapter 10, Article IX, of the *City Code*, which is also known as the *Houston Building Standards Code*.

INTERNATIONAL RESIDENTIAL CODE. Any reference herein to the *International Residential Code* shall be construed as referring to the *City of Houston Residential Code*, as adopted and amended by this *jurisdiction*.

INTERNATIONAL SWIMMING POOL AND SPA CODE. Any reference herein to the *International Swimming Pool and Spa Code* shall be construed as referring to the *City of Houston Swimming Pool and Spa Code*, as adopted and amended by this *jurisdiction*.

JETTY. A permanent structure built into a body of water to direct the current or protect a harbor.

LAKE HOUSTON. Has the meaning ascribed to it by Chapter 23 of the *City Code*. The shoreline of an area bounded on the south by the Lake Houston Dam, on the northwest by the West Lake Houston Parkway Bridge and on the northeast by an imaginary line running generally east to west

that intersects the confluence of Luce Bayou and the East Fork of the San Jacinto River, and is more particularly described as beginning at a point located at 30° 2′ 31.67″ N, 95° 7′ 12.09″ W and running generally west to 30° 2′ 32.02″ N, 95° 7′ 36.14″ W.

LOADING BERTH. A space for the loading, unloading or parking of trucks and motor vehicles other than motor vehicles principally designed for passengers that complies with Section 3112.4.6 and with the requirements of Chapter 26, Article VIII, of the *City Code*.

LOCAL STREET OR ROAD. A street or road primarily intended for access to a residence, business or other abutting property.

MAJOR THOROUGHFARE. (1) A public street that is designated as a principal thoroughfare, a thoroughfare or a major collector on the most recent "Major Thoroughfare and Freeway Plan" approved by the *jurisdiction's* city council; or (2) any street that is designated as an express street pursuant to Section 45-39 of the *City Code* and is shown in the "Express Street Plan" of the *jurisdiction's* traffic engineer.

MANLIFT. A device consisting of a power-driven endless belt provided with steps or platforms and handholds attached to it for transportation of personnel from floor to floor.

MECHANICAL CODE. The *City of Houston Mechanical Code*, as adopted and amended by this *jurisdictio*n.

MOBILE FOOD PREPARATION VEHICLES. Vehicles that contain cooking equipment that produce smoke or grease-laden vapors for the purpose of preparing and serving food to the public including mobile food units as defined in Chapter 20 of the *City Code*. For the purpose of this code, vehicles intended for private recreation shall not be considered a mobile food unit or mobile food preparation vehicles.

MOBILE FOOD UNIT. Has the meaning ascribed in Section 20-18 of the *City Code*.

MULTI-FAMILY RESIDENTIAL STRUCTURE. A structure with three or more attached single-family dwellings, dwelling units, townhouses, apartments or condominiums.

NONABSORBENT MATERIAL. Any material that is used as an applied finish material over sheetrock or other substrate or structure and that maintains its resistance to moisture absorption throughout its thickness even if scratched or chipped. Examples of approved non-absorbent materials shall include, but not be limited to: metal, plastic, FRP, Formica, or similar non-wood veneer sheet goods; and non-absorbent stone, ceramic, porcelain, or similar tile products. Epoxy paint or other similarly-applied surface coating products that can be scratched or chipped to reveal underlying absorbent substrate shall not be considered approved non-absorbent materials.

ONE- AND TWO-FAMILY DWELLING. An individual free-standing structure containing not more than two *dwelling units*, also referred to as a *dwelling, duplex* or single-family dwelling depending on the number of *dwelling units* within.

OPEN BUILDING (For Chapter 9). A building having each wall at least 80 percent open.

PARKING LOT. A paved, surfaced or leveled area designed and ordinarily used for accessory or public parking of motor vehicles, including commercial parking areas available for lease and leased premises available for public parking. The term shall not include parking garages.

PAVING. All firm flat surfaces made of stone, brick, concrete, or other material that are located inside private property and not defined as a driveway or parking lot.

PEDESTRIAN. Any person afoot.

PERSONNEL HOIST. A special-purpose elevator or hoist erected outside a building or structure for transporting workers or materials in connection with the construction, alteration, maintenance or demolition of a building, structure, or other works.

PIER. Any pier, wharf, boat dock, boat shed, gangway or other platform or structure in or adjoining the water to which vessels may be moored, from which vessels may be boarded, or on which persons may walk or sit.

PLUMBING CODE. The *City of Houston Plumbing Code*, as adopted and amended by this *jurisdiction*.

PRIVATE PIER. A pier other than a commercial pier.

PROFESSIONAL INSPECTION. The inspection required by this code to be performed by the civil engineer, soils engineer or engineering geologist. Such inspections include those performed by persons supervised by such engineers or geologists and shall be sufficient to form an opinion relating to the conduct of the work.

PROPERTY MAINTENANCE CODE. Chapter 10, Article IX, of the *City Code* relating to abatement of dangerous buildings, also known as the *Houston Building Standards Code,* as adopted and amended by this *jurisdiction*.

PUBLIC WAY. A street, alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than ~~10~~ 20 feet (~~3048~~ 6,096 mm).

RECYCLING. A series of activities by which materials that would become or otherwise remain waste are diverted from the solid waste stream by collection, separation, and processing and are used as raw materials in the manufacture of goods sold or distributed in commerce or the reuse of such materials as substitutes for goods made of virgin materials.

[A] REPAIR. The reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage using like for like materials.

RESIDENTIAL CODE. The *City of Houston Residential Code*, as adopted and amended by this *jurisdiction*.

RESTROOM. A room fully enclosed by exterior walls and/or interior partitions, which contains one or more toilets or urinals and one or more handwashing sinks, but no shower stall or bathtub.

REUSED MATERIALS. Materials that are used more than once in their original form for their original purpose or for another purpose without any special processing. The term includes materials that contain post-industrial or post-consumer waste as defined by the Federal Trade Commission as well as approved materials identified in Appendix R of this code.

RIGHT-OF-WAY. The entire area between the property boundary lines of every way (including but not limited to roads, streets, alleys, highways, boulevards, bridges, tunnels, or similar thoroughfares), whether acquired by purchase, grant, or dedication by the state or federal government, or acceptance by the *jurisdiction* for public use.

ROADWAY (GENERAL). The portion of a highway, including shoulder, for vehicular use.

SIDEWALK. That portion of a street between the curb lines or the lateral lines of a roadway and the adjacent property lines that is intended for the use of pedestrians.

SIGN CODE. The *Houston Sign Code*, which is Chapter 46 of this code but is published as a separate document.

SINGLE-FAMILY DWELLING. An individual free-standing residential structure intended to serve a single-family, or household, as a dwelling and/or other uses authorized by the *Building Code* and *Residential Code*.

SITE GRADING. Any lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

SLOPE. An inclined ground surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SOIL. Naturally occurring superficial deposits overlying bedrock.

SOILS ENGINEER (GEOTECHNICAL ENGINEER). An engineer experienced and knowledgeable in the practice of soils engineering (geotechnical engineering).

SOILS ENGINEERING (GEOTECHNICAL ENGINEERING). The application of the principles of soils mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection or testing of the construction thereof.

SOUND TRANSMISSION CLASS (STC). An integer rating relating to the quality of sound attenuation for building partitions such as walls, ceilings, doors, and windows.

[BS] SPECIAL INSPECTOR. A qualified person employed or retained by an *approved* agency registered and/or certified with the *jurisdiction* and *approved* by the *building official* as having the competence necessary to inspect a particular type of construction requiring *special inspection.*

STAIRWAY. One or more *flights* of *stairs,* either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another. A stair or ladder used only to attend equipment or to access an attic or window well shall not be considered a stairway.

SWIMMING POOL AND SPA CODE. The *City of Houston Swimming Pool and Spa Code*, as adopted and amended by this *jurisdiction*.

TEXAS ACCESSIBILITY STANDARDS (TAS). The accessibility standards applicable to buildings and facilities constructed within the state of Texas as promulgated by the Texas Department of Licensing and Regulation pursuant to *Texas Government Code* Chapter 469.

TOILET ROOM. A room fully enclosed by exterior walls and/or interior partitions, which contains one or more toilets (water closets) or urinals, but no handwashing sink, shower stall, or bathtub.

TOWER STRUCTURE. A structure other than a building as defined previously in this chapter that has a height normally greater than its largest horizontal dimension. Examples of tower structures include antenna supports, chimneys, tank supports, sign supports, equipment supports, and other structures as determined by the *building official*.

[A] TOWNHOUSE. A multi-family residential structure constructed in a group of three or more attached single-family *dwelling units* ~~constructed in a group of three or more attached units~~ in which each unit extends from ~~the~~ foundation to roof and with ~~open space~~ a *yard* or public way on ~~and least~~ not less than two sides, which may or may not include lot lines or property lines separating each dwelling unit.

TRANSIT SHED. A covered structure erected on a wharf or quay for the temporary storage of goods in transit between ship and land carrier or warehouse.

UL. Means Underwriters Laboratories Inc., a product testing laboratory for safety and performance

UNSAFE. Buildings, structures or equipment that are unsanitary, or that are deficient due to inadequate means of egress facilities, inadequate light and ventilation, or that constitute a fire hazard, or in which the structure or individual structural members meet the definition of "Dangerous," or that are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed unsafe. A vacant structure that is not secured against entry shall be deemed unsafe.

UTILITY OFFICIAL. The director of Houston Public Works and the director's designee. The term primarily relates to those Houston Public Works employees who are engaged in activities relating to the delivery of water and wastewater services.

VALUATION. The total cost of construction to the end user, excluding the land purchase costs and the overhead attributed to the land purchase. The value of donated goods and services is included.

WHEELCHAIR LIFT. A vertical wheelchair lift or an inclined wheelchair lift as governed by the *Elevator Safety Code*, whether in a commercial, multi-family residential, or single-family dwelling.

[BS] WIND-BORNE DEBRIS REGION. Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the coastal mean high-water line where the ultimate design wind speed, V_{ult}, is 130 mph (58 m/s) or greater; or
2. In areas where the ultimate design wind speed is 140 mph (63.6 m/s) or greater; or Hawaii.

For *Risk Category* II buildings and structures and *Risk Category* III buildings and structures, except health care facilities, the wind-borne debris region shall be based on ~~Figure 1609.3.(1)~~ the windspeed associated with *Risk Category* II. For *Risk Category* IV buildings and structures and *Risk Category* III health care facilities, the windborne debris region shall be based on ~~Figure 1609.3(2)~~ the windspeed associated with *Risk Category* III and IV.

WORK OF ART. Paintings, mural decorations, stained glass, statues, bas-reliefs or other sculptures, monuments, fountains, arches or other structures of a permanent or temporary character intended for ornament or commemoration.

CHAPTER 3
USE AND OCCUPANCY CLASSIFICATION

305.3 Specific requirements. Daycare and educational occupancies shall not allow children of second grade or lower above the level of exit discharge unless the following provisions are met:

1. The building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1; and
2. When children above the second grade are located on the same floor level as children of second grade or lower, the children of the second grade or lower shall have access to and exclusive use of at least two means of egress to the exterior.

[F] 307.1.1 Uses other than Group H. An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.

1. Buildings and structures occupied for the application of flammable finishes, provided that such building or areas conform to the requirements of Section 416, NFPA 33, NFPA 34 and the *~~International~~ Fire Code*.
2. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to the *~~International~~ Fire Code*.
3. Closed piping system containing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.
4. Cleaning establishments that utilize combustible liquid solvents having a flash point of 140°F (60°C) or higher in closed systems employing equipment *listed* by an *approved* testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour *fire barriers* constructed in accordance with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 711, or both.
5. Cleaning establishments that utilize a liquid solvent having a flash point at or above 200°F (93°C).
6. Liquor stores and distributors without bulk storage.
7. Refrigeration systems.
8. The storage or utilization of materials for agricultural purposes on the premises.
9. Stationary batteries utilized for facility emergency power, uninterruptable power supply or telecommunication facilities, provided that the batteries are provided with safety venting caps and *ventilation* is provided in accordance with the *~~International~~ Mechanical Code*.
10. Corrosive personal or household products in their original packaging used in retail display.
11. Commonly used corrosive building materials.

12. Buildings and structures occupied for aerosol storage shall be classified as Group S-1, provided that such buildings conform to the requirements of the ~~*International*~~ *Fire Code*.

13. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the maximum allowable quantity per *control area* in Group M or S occupancies complying with Section 414.2.5.

14. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the ~~*International*~~ *Fire Code*.

15. Any building owned by the *jurisdiction*, located on any *jurisdiction* airport, that is leased and used by a certificated air carrier for the in-transit storage of hazardous materials for a period of time that does not exceed 72 hours from the time such hazardous material is placed in the building until it is permanently removed.

NOTES:

1. *Certificated air carrier* is defined as: a U.S. or foreign airline operating scheduled or non-scheduled commercial services pursuant to certificates or exemptions issued by the United States Department of Transportation pursuant to 49 USC Section 40109, 41102, 41103, or 41302, and certificates or exemptions issued by the United States Federal Aviation Administration pursuant to 14 CFR Part 121, 125, 129 or 135.

2. *City airport* is defined in Chapter 9 of the *City Code*.

3. *In-transit storage* is defined as: the storage of materials which will be on-loaded onto or off-loaded from an aircraft owned, leased or operated by a *certificated air carrier*.

[F] 307.1.2 Hazardous materials. Hazardous materials in any quantity shall conform to the requirements of this code, including Section 414, and the ~~*International*~~ *Fire Code*.

Exception: The exempt amounts of hazardous materials stored in any building identified as exempted pursuant to the provisions of Section 307.1.1, Item 15.

307.1.3 Enterprise permit. Businesses and facilities storing or utilizing hazardous materials exceeding the maximum allowable quantity limits per *control area* identified in Section 307 and Tables 307.1(1) and 307.1(2) shall comply with Chapter 28, Article VII, of the *City Code* for a *hazardous enterprise*.

308.3 Institutional Group I-1. Institutional Group I-1 occupancy shall include buildings, structures or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care by persons other than parents or guardians or relatives by blood, marriage or adoption, including but not limited to facilities that provide care to children older than 2½ years of age and younger than 15 years of age. Buildings of Group I-1 shall be classified as one of the occupancy conditions specified in Section 308.3.1 or 308.3.2. This group shall include, but not be limited to, the following:

Alcohol and drug centers

Assisted living facilities

Congregate care facilities

Group homes

Halfway houses

Residential board and care facilities

Social rehabilitation facilities

312.1 General. Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

Agricultural buildings

Aircraft hangars, accessory to a one- or two-family residence (see Section 412.5)

Barns

Carports

Fences (other than masonry) more than ~~6 feet (1 829 mm)~~ 8 feet (2,438 mm) high

Grain silos, accessory to a residential occupancy

Greenhouses

Livestock shelters

Private garages

Retaining walls

Sheds

Stables

Tanks

Towers

312.2 Fences.

312.2.1 Location. Fence location is not restricted on property, but its foundation shall be subject to the same regulations on extensions onto public property as building foundations.

312.2.2 Barbed wire fencing. Barbed wire fencing is prohibited.

Exception: Fences constructed in part of barbed wire shall be permitted where all the barbed-wire is located six-feet or more from any adjacent ground; and provided further, a plot of ground containing one-acre or more may be fenced with barbed wire where such barbed wire does not abut to any extent whatsoever on a sidewalk or on an unimproved path or trail which is used by pedestrians for sidewalk purposes.

312.2.3 Electric fencing. The construction and use of electrified fencing shall be allowed in the city only as provided in this section subject to the following, or the *City Code*, whichever is more restrictive:

1. ***Electrification:***

   1.1 No electrified fence shall be installed or operated with a power source other than a storage battery not exceeding 12 volts direct current, charged primarily with a solar panel; provided, however, in case of inclement weather or other conditions that inhibit the ability of the solar panel to fully recharge the battery, a charging device may be utilized for such purpose, if connected in a manner that ensures that the charging device cannot provide a source of power to the fence. In no case shall an electrified fence be connected to any other electric power source.

   1.2 The electric charge produced by the fence upon contact shall not exceed energizer characteristics set forth in paragraph 22.108 and depicted in Figure 102 of *International Electrotechnical Commission (IEC)Standard No. 60335-2-76*, as such standard exists upon January 30, 2008.

   To the extent that the construction or installation of an electrified fence does not conflict with the requirements of this section, and unless otherwise specified herein, such fence shall be constructed or installed in conformance with the specifications set forth in IEC Standard 60335-2-76, as such standard existed upon January 30, 2008.

2. ***Perimeter fence or wall*:** No electrified fence shall be installed or used unless it is completely surrounded by a non-electrical fence or wall that is not less than six feet and not more than eight feet in height. The perimeter fence or wall shall be separated from the electrified fence by not less than one foot at its closest point, and by not more than five feet at its farthest point, except at gate openings, which shall be installed in conformance with the specifications set forth in Annex CC of *IEC Standard 60335-2-76*, as such standard existed upon January 30, 2008. The area between the perimeter wall or fence and the electrified fence shall be kept completely clear of landscaping, shrubbery, other fences, or any material of any kind. The lowest part of the perimeter fence or wall shall be constructed to follow the natural terrain to prevent penetration of such fence or wall at ground level. No part of a perimeter fence or wall shall be allowed to be in contact with an electrified fence by any means at any time. Perimeter fences adjacent to residential lots at the time of installation of the electric fence shall be either a wood privacy fence, a chain link fence with wood or plastic slats inserted into each weave of the fence, or an equivalent solid barrier fence.

3. ***Location of Electric Fencing:***

   3.1. Limited to commercial outdoor storage areas only.

   3.2. Prohibited within five feet of any public right-of-way or sidewalk, unless the barrier fence is a wood privacy fence, a chain link fence with wood or plastic slats inserted into each weave of the fence, or an equivalent solid barrier fence.

3.3. Prohibited within 25 feet of any outdoor area utilized for the storage, use, or handling of hazardous materials as defined in the *Fire Code*.

4. ***Height:*** Shall be not less than six feet and not more than ten feet in height.

5. ***Signage; other markings:*** Shall be clearly identified with warning signs in English, Spanish and Vietnamese that read: "Warning—Electric Fence" placed along the non-electrical perimeter fence or wall at intervals of not less than 50 feet, however, in no instance may there be less than one sign on each side of the non-electrical perimeter fence or wall. In addition to the required signs, the top or uppermost horizontal frame member of any entry gate providing access to any property upon which an electrified fence is located, shall be marked by the placement or addition of a yellow reflective paint, tape or other permanent weatherproof marking along the full length of the gate frame, which marking shall be at least 3 inches wide and be kept in good condition to ensure its continued visibility.

6. ***Hours of activation:*** Shall not be activated between the hours of 8:00 a.m. and 5:00 p.m., except:

   6.1 On days when the business is closed, such as weekends and holidays; or

   6.2 When security personnel are available on-site to deactivate the electrical fence.

7. ***Key box:*** Shall be installed in accordance with Houston Fire Department Life Safety Bureau Standards.

8. ***Registration:*** Prior to the installation or use of any electrified fence, the property owner or lessee of the property upon which such fencing will be installed or used shall submit a completed registration for such fencing to the fire department using the form promulgated for that purpose by the fire chief. The property owner or lessee shall certify that the energizer of the fence complies with characteristics set forth in paragraph 22.108and depicted in Figure 102 of IEC Standard No. 60335-2-76, as such standard exists upon January 30, 2008. No fee shall be charged in connection with the registration required by this item.

It shall be unlawful for any person to install, maintain, or operate an electrified fence in violation of this section. The provisions of this section shall not be applicable to any fence on zoological gardens owned by a political subdivision of the state.

SECTION 313
CARE FACILITY CLASSIFICATION

313.1 Classification. Adult and child care facilities shall be classified in accordance with Tables 313.1 and 313.2, and Sections 305, 308 and 310, as applicable. **Note:** The following Tables are general requirements and are subordinate to the specific provisions of applicable sections.

TABLE 313.1
CLASSIFICATION OF CARE FACILITIES

	Occupancy									
Attributes			B (Out Patient)	B (ACF)[2]	I-1[1]	I-2[2]	I-4[1]	R-3	R-4	E
	Occupant Load	≤5	X	X	See R-3	See R-3	Primary occupancy or see R-3 in dwelling	X Can use IRC		Primary occupancy or see R-3 in dwelling
		6-16	X	X	See R-4	X	X See R-4		X	X
		>16	X	X	X	X	X			X
	Length of Stay	<24 hrs	X	X			X			X
		≥24 hrs			X	X			X	
	Capability of Care Recipient	Capable of self-preservation	X		X			X	X	
		Incapable of self-preservation		X		>5 See R-3 if ≤5		X		
	Age	<2.5 years					See 308.6.1 for option of E Daycare			See 308.6.1 for option
		≥2.5 years								X

B (ACF) = Group B Ambulatory Care Facilities

1. Custodial Care.
2. Medical Care.

TABLE 313.2
CLASSIFICATION OF CARE FACILITIES
(LESS THAN 24-HOUR CARE)

Type of Care (and/or age)	Capability of Residents	Number of Care Recipients		
		1-5	6-16	Over 16
Medical	**Capable of self-preservation**	B	B	B
Medical	**Incapable of self-preservation**	B (ACF)[1]	B (ACF)	B (ACF)
Personal Care Services				
Over 2½ years	**Capable of self-preservation**	Part of primary occupancy[2]	E[3]	E[3]
Custodial		Part of primary occupancy[2]	I-4[3]	I-4[3]
Custodial				
2½ years or less		Part of primary occupancy[2]	I-4[3] or E[4]	I-4[3] or E[4]

B (ACF) = Group B Ambulatory Care Facilities

1. Group B ambulatory care facilities have certain additional requirements that apply when there are four or more care recipients who are not capable of self-preservation.
2. If located within a dwelling unit: classified as R-3 of comply with IRC.
3. Within places of religious worship, care provided during religious functions shall be classified as part of the primary occupancy.
4. See Section 308.6.1. Child day care for more than five but no more than 100 shall be classified as a Group E where the rooms are located on the level of exit discharge and each care room has an exit door directly to the exterior.

CHAPTER 4
SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

403.5.3.1.1 Stairway communications system re-entry signage. A sign shall be provided directly above the communications system device that shall read: PUSH/LIFT TO CALL FOR RE-ENTRY.

403.5.3.2 Stairway re-entry doors. Stairway re-entry doors in exit enclosures shall be provided on every fifth-floor level, as well as the uppermost (top) floor level. Re-entry stairway doors shall be located on the same floor as each *approved* communications system re-entry sign in accordance with 403.5.3.1.

406.3.4.1 Dwelling unit separation. The private garage shall be separated from the *dwelling unit* and its *attic* area by means of gypsum board, not less than ½ inch (12.7 mm) in thickness, applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than a ⅝-inch (15.9 mm) Type X gypsum board or equivalent and ½-inch (12.7 mm) gypsum board applied to structures supporting the separation from habitable rooms above the garage. Door openings between a private garage and the *dwelling unit* shall be equipped with either solid wood doors or solid or honeycomb core steel doors not less than 1⅜ inches (34.9 mm) in thickness, or doors in compliance with Section 716.5.3 with a fire protection rating of not less than 20 minutes. Doors shall be *self-closing* and self-latching. Attic disappearing stairs may be installed in the garage ceiling provided the garage side exposed panel is not less than ⅜-inch-thick fire retardant-treated plywood, untreated plywood protected with ½-inch-thick gypsum board, or untreated plywood protected with 60-minute rated intumescent paint. In all cases, the opening protection material is applied to the garage side of the plywood.

406.4.9 Garage screening. Any parking garage structure shall provide an exterior cover for each floor of the structure where parking occurs that directly abuts property in use for or restricted to residential use or which is located across the street from property in use for or restricted to residential use. The exterior cover of such a parking garage structure shall be made of an opaque surface or be constructed of other material in a manner that blocks or redirects the light from headlights on vehicles located within the garage, so as to not create light trespass onto adjacent residential property. The exterior cover shall be at least 48 inches (1219.2 mm) in height measured vertically from each finished floor where parking occurs. Where an applicant provides evidence to the building official that a 48 inch exterior cover will require the garage to have a mechanical ventilation system, the applicant may reduce the exterior cover enough to meet open ventilation requirements but in no instance may it be less than 42 inches. For ramps and other sloped surfaces, the exterior cover shall be positioned to block light from headlights from crossing property

lines onto adjacent properties in use for or restricted to residential use or across the street from residentially used properties.

When a parking garage structure abuts a public street or land used for or restricted to residential development, one of the following is required to minimize light trespass from internal garage ceiling lighting:

a. A photometric plan showing all internal garage luminaires, demonstrating that no light trespass occurs beyond the property line that exceeds 0.2-foot candles measured at grade on the property line; or,
b. Screening for the entire height of the garage facing the street or abutting residential development to prevent light trespass beyond the property line that exceeds 0.2-foot candles measured at grade on the property line.

406.9 Repair garages for natural gas- and hydrogen-fueled vehicles. Repair garages used for the repair of natural gas- or hydrogen-fueled vehicles shall be provided with an *approved* mechanical ventilation system. The mechanical ventilation system shall be in accordance with Sections 406.9.1 and 406.9.2.

Exception: Where *approved* by the code official, *natural ventilation* shall be permitted in lieu of mechanical ventilation.

406.9.1 Design. Indoor locations shall be ventilated utilizing air supply inlets and exhaust outlets arranged to provide uniform air movement to the extent practical. Inlets shall be uniformly arranged on exterior walls near floor level. Outlets shall be located at the high point of the room in exterior walls or the roof.

Ventilation shall be by a continuous mechanical ventilation system or by a mechanical ventilation system activated by a continuously monitoring natural gas detection system, or for hydrogen, a continuously monitoring flammable gas detection system, each activating at a gas concentration of 25 percent of the lower flammable limit (LFL). In all cases, the detection system shall shut down the fueling system in the event of failure of the ventilation system. The ventilation rate shall be not less than 1 cubic foot per minute per 12 cubic feet [0.00138 $m^3/(s \cdot m^3)$] of room volume.

406.9.2 Operation. The mechanical ventilation system shall operate continuously.

Exceptions:

1. Mechanical ventilation systems that are interlocked with a gas detection system designed in accordance with the *Fire Code*.
2. Mechanical ventilation systems in garages that are used only for the repair of vehicles fueled by liquid fuels or odorized gases, such as CNG, where the ventilation system is electrically interlocked with the lighting circuit.

407.2.6 Nursing home cooking facilities. In Group I-1, Condition 1, occupancies, rooms or spaces that contain a cooking facility with domestic cooking appliances shall be permitted to be open to the corridor where all of the following criteria are met:

{**EDITORIAL NOTE:** NUMBERED ITEMS NOT LISTED REMAIN AS SET FORTH IN THE 2015 IBC.}

7. A domestic cooking hood installed and ~~constructed~~ ducted in accordance with Section ~~505~~ 504.2 of the ~~*International*~~ *Mechanical Code* is provided over the cooktop or range.

[F] 412.8.3 Means of egress. The *means of egress* from *heliports* and *helistops* shall comply with the provisions of Chapter 10 of this code, except no stairwell, stairway, guardrail or other structure shall be required or allowed to penetrate the take-off and landing area specified for the heliport or helistop. All ~~L~~ landing areas located on buildings or structures shall have two or more *means of egress*. For landing areas less than 60 feet (18,288 mm) in length or less than 2,000 square feet (187 m^2) in area, the second *means of egress* is permitted to be a fire escape, *alternating tread device* or ladder leading to the floor below.

413.1 General. High-piled stock or rack storage in any occupancy group shall comply with the ~~*International*~~ *Fire Code*. A fire apparatus access road that meets applicable provisions of the *Fire Code* shall be provided for buildings used for high-piled combustible storage.

[F] 414.1.4 Tire disposers, chipping and shredding operations screening of property. Tire disposers, chipping and shredding operations shall comply with the provisions of this code and Life Safety Bureau (LSB) Standard No. 17. The entire property shall be surrounded by a fence at least 6 feet in height constructed of noncombustible material or by another suitable means to prevent access of any unauthorized persons. An adequate number of gates as determined by the *fire marshal* shall be provided in the surrounding fence or other barrier to provide ready access for fire apparatuses. Access gates shall be provided in accordance with LSB Standard No. 04, “Access Control Gates.”

[F] 414.6 Outdoor storage, dispensing and use. The outdoor storage, dispensing and use of hazardous materials shall be in accordance with the ~~*International*~~ *Fire Code* and Chapter 28, Article VII, of the *City Code* (the Hazardous Enterprise Ordinance).

[F] 414.6.1 Weather protection. Where weather protection is provided for sheltering outdoor hazardous material storage or use areas, such areas shall be considered outdoor storage or use when the weather protection structure complies with Section 414.6.1.1 through 414.6.1.3.

Exception: For the purpose of applying Chapter 28, Article VII, of the *City Code* (the Hazardous Enterprise Ordinance), and the *fire separation distance* provisions of this code, canopies providing weather protection for quantities of hazardous materials exceeding the maximum allowable quantity limits per control area identified in Section 307 and Tables 307.1(1) and 307.1(2) shall be classified in the appropriate Group H occupancy.

414.7 Enterprise permit. Businesses and facilities storing or utilizing hazardous materials exceeding the *maximum allowable quantity* limits per control area identified in Section 307 and Tables 307.1(1) and 307.1(2) shall comply with Chapter 28, Article VII, of the *City Code* for a *hazardous enterprise*.

[F] 415.2 Definitions. The following terms are defined in Chapter 2:

{**EDITORIAL NOTE:** DEFINITIONS NOT LISTED REMAIN AS SET FORTH IN THE 2015 IBC.}

~~**HPM FLAMMABLE LIQUID.**~~

[F] 421.5 Exhaust ventilation. Hydrogen fuel gas rooms shall be provided with mechanical exhaust ventilation in accordance with the applicable provisions of ~~Section 502.16.1 of~~ the ~~*International*~~ *Mechanical Code* and Section 2307.1 of the *Fire Code*.

[F] 422.6 Electrical systems. In ambulatory care facilities, the essential electrical system for electrical components, equipment and systems shall be designed and constructed in accordance with the provisions of Chapter 27 and NFPA 99.

SECTION 427
REUSE OF BUILDING MATERIALS

427.1 Reuse of building materials. Reuse of building materials shall be allowed in accordance with Appendix R.

SECTION 428
ENERGY SYSTEMS

428.1 General. Energy systems shall be installed in accordance with NFPA 70, 111, and 855 and the most restrictive provisions specified in the most current edition of the *International Codes*.

SECTION 429
MOBILE FOOD UNITS AND OTHER MOBILE FOOD PREPARATION VEHICLES

429.1 General. Mobile food units, and other mobile food preparation vehicles that are equipped with appliances that produce smoke or grease-laden vapors shall comply with Section 319 of the *Fire Code* or appropriate provisions of Chapter 20, Article II, of the *City Code*, whichever is more restrictive.

CHAPTER 5
GENERAL BUILDING HEIGHTS AND AREAS

[F] 501.2 Identifying number. ~~**Address identification.**~~ New and existing buildings and occupancies there under construction shall be provided with *approved* address ~~identification~~ identifying numbers. The ~~address identification~~ identifying numbers shall be legible and placed in a position that is visible from the street or road fronting the property. ~~Address identification characters~~ Identifying numbers shall contrast with their background. ~~Address~~ Identifying numbers shall be Arabic numerals ~~numbers~~ or alphabetical letters. Numbers shall not be spelled out. Each character shall be a minimum of 4 inches (101.6 mm) high with a minimum stroke width of ½ inch (12.7 mm). Where required by the fire code official, ~~address identification~~ identifying numbers shall be provided in additional ~~approved~~ locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure. ~~Address identification~~ Property owners shall maintain identifying numbers in good repair for visibility ~~be maintained~~.

All new and existing buildings are required to be numbered as provided in Chapter 10, Article V, of the *City Code*.

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

OCCUPANCY	A[f], E[f]		I-1[a], I-3, I-4		I-2		R[4]		F-2, S-2[b], U		B[e], F-1, M, S-1		H-1		H-2		H-3, H-4		H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A[f], E[f]	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3	2	NP
I-1[a], I-3, I-4	–	–	N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP	2	NP
I-2	–	–	–	–	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP	2	NP
R[a]	–	–	–	–	–	–	N	N	1[c]	2[c]	1	2	NP	NP	3	NP	2	NP	2	NP
F-2, S-2[b], U	–	–	–	–	–	–	–	–	N	N	1	2	NP	NP	3	4	2	3	2	NP
B[e], F-1, M, S-1	–	–	–	–	–	–	–	–	–	–	N	N	NP	NP	2	3	1	2	1	NP
H-1	–	–	–	–	–	–	–	–	–	–	–	–	N	NP	NP	NP	NP	NP	NP	NP
H-2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N	NP	1	NP	1	NP
H-3, H-4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1[d]	NP	1	NP
H-5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N	NP

S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
N = No separation requirement.
NP = Not permitted.
a. See Section 420.
b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but not to less than 1 hour.
c. See Section 406.3.4.
d. Separation is not required between occupancies of the same classification.
e. See Section 422.2 for ambulatory care facilities.
f. Daycare facilities shall be separated from assembly areas where alcohol is served.

[F] TABLE 509
INCIDENTAL USES

ROOM OR AREA	SEPARATION AND/OR PROTECTION

{EDITORIAL NOTE: PORTIONS OF THIS TABLE NOT SHOWN REMAIN AS WRITTEN IN THE PUBLISHED CODE.}	
Stationary storage battery systems having an energy capacity greater than the threshold quantity specified in Table 1206.2 of the *Fire Code*	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.
Electrical installations and transformers	See Sections 110.26 through 110.34 and Sections 450.8 through 450.48 of NFPA 70 for protection and separation requirements.

510.1 General. The provisions in Sections 510.2 through 510.10 ~~510.9~~ shall permit the use of special conditions that are exempt from, or modify, the specific requirements of this chapter regarding the allowable *building heights and areas* of buildings based on the occupancy classification and type of construction, provided the special condition complies with the provisions specified in this section for such condition and other applicable requirements of this code. The provisions of Sections 510.2 through 510.9 ~~510.8~~ are to be considered independent and separate from each other.

510.9 Basement and first story of open parking garages. Other provisions of this code notwithstanding, a basement or first story located below an open parking garage may be considered as a separate and distinct building for the purpose of occupancy, area limitation and type of construction, when the basement or first story is separated from the open parking garage above with a three-hour occupancy separation and the basement and first floor are protected throughout by an *automatic sprinkler system*.

510.10 Multiple buildings above a horizontal assembly. Where two or more buildings are provided above the *horizontal assembly* separating a Group S-2 parking garage or building below from the buildings above in accordance with the special provisions in Sections 510.2, 510.3 or 510.8, the buildings above the *horizontal assembly* shall be regarded as separate and distinct buildings from each other and shall comply with all other provisions of this code as applicable to each separate and distinct building.

SECTION 511
TRANSIT SHEDS

511.1 Scope. The area of a Type IIB building meeting the definition of a “transit shed” may be increased to 250,000 square feet, provided there is no other building located closer than 200 feet to the building, and there is a paved access road at least 60 feet in width on all sides of the building.

SECTION 512
FOUNDATION ELEVATION

512.1 General. All new buildings constructed within this *jurisdiction* shall have the top of the finished floor of the first-story of the building or structure elevated not less than 12 inches (304.8 mm) above the nearest sanitary sewer manhole rim of the sewer connected to and serving the building, or, where no sewer is available, the top of the finished floor of the first-story of the building or structure shall be elevated not less than 4 inches (101.6 mm) above the crown of the street.

Exception: Buildings located in annexed subdivisions where the following conditions exist:

1. The subdivision was platted and recorded prior to annexation;

2. The sanitary sewer system for the subdivision was installed prior to annexation; and

3. The drainage piping from the building meets the requirements of Section 710 of the *Plumbing Code*.

NOTE: When a greater elevation is required by Chapter 19 of the *City Code*, then Chapter 19 shall govern.

512.2 Plans and applications. All construction plans and applications submitted for construction, sewer connections or septic systems shall reflect the elevations of the finished floor of the building and the elevation of the nearest manhole rim of a sanitary sewer connected to the building or crown of the street, whichever is applicable.

512.3 Damage risk. All permits for connection shall be issued on the condition that the owner take all the risk of damage that may result from water backing up into the premises from the sewer.

512.4 Existing structures. When an existing structure is required to connect with a public or private sewer, it shall have the finished floor a minimum of 12 inches (304.8 mm) above the nearest sanitary sewer manhole rim of a sewer connected to the building.

Exception: Where the public or private sewer is not of sufficient depth, or where structures required to be connected to the sewer cannot meet the minimum requirements of this section and other ordinances, the *building official* may authorize the issuance of a permit for an alternate method of construction or installation when this will not be detrimental to the health, welfare, and safety of the public.

CHAPTER 6
TYPES OF CONSTRUCTION

603.1 Allowable materials. Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

{**EDITORIAL NOTE:** PORTIONS OF SECTION 603.1 NOT SHOWN REMAIN AS SET FORTH IN THE 2015 IBC.}

1. *Fire-retardant-treated wood* shall be permitted in:

   1.1 Nonbearing partitions where the required *fire-resistance rating* is 2 hours or less.

   1.2 Nonbearing *exterior walls* where fire-resistance-rated construction is not required.

   1.3 Roof construction, including girders, trusses, framing and decking.

   Exception: In buildings of Type IA construction exceeding two *stories above grade plane*, *fire-retardant-treated wood* is not permitted in roof construction where the vertical distance from the upper floor to the roof is less than 20 feet (6,096 mm).

   1.4 Roof structures such as walkways, decks, fences, flower boxes or similar appendages.

25. Materials exposed within plenums complying with Section 602.2 of the ~~*International*~~ *Mechanical Code*.

CHAPTER 7
FIRE AND SMOKE PROTECTION FEATURES

714.1.1 Ducts and air transfer openings. Penetrations of fire-resistance-rated walls by ducts that are not protected with *dampers* shall comply with Sections 714.2 through 714.3.3. Penetrations of *horizontal assemblies* not protected with a shaft as permitted by Section 717.6, and not required to be protected with fire *dampers* by other sections of this code, shall comply with Sections 714.4 through 714.5.2. Ducts and air transfer openings that are protected with *dampers* shall comply with Section 717.

Penetrations may be made in gypsum wallboard membranes for one-hour protection for bathroom and clothes dryer exhaust ducts without fire dampers provided:

1. A minimum of 0.019-inch (26 gauge) steel ducts are used continuously from the opening to the exterior or into a rated shaft.
2. Voids around the duct penetration shall be sealed with approved materials to prevent the passage of flame.
3. The maximum size of the bathroom fan assembly shall be 100 square inches (645.16 cm^2).
4. The maximum size of the clothes dryer duct shall be 20 square inches (129.032 cm^2).

717.4 Access and identification. Fire and smoke *dampers* shall be provided with an *approved* means of access that is large enough to *permit* inspection and maintenance of the *damper* and its operating parts in accordance with the *Mechanical Code*. The access shall not affect the integrity of fire-resistance-rated assemblies. The access openings shall not reduce the *fire-resistance rating* of the assembly. Access points shall be permanently identified on the exterior of the duct and at ceiling level by a *label* having letters not less than ½ inch (12.7 mm) in height reading: FIRE/SMOKE DAMPER, SMOKE DAMPER or FIRE DAMPER. Access doors in ducts shall be tight fitting and suitable for the required duct construction.

718.5 Combustible materials in concealed spaces in Type I or II construction. Combustible materials shall not be permitted in concealed spaces of buildings of Type I or II construction.

Exceptions:

{**EDITORIAL NOTE:** PORTIONS OF SECTION 718.5 NOT SHOWN REMAIN AS SET FORTH IN THE 2015 IBC.}

2. Combustible materials exposed within plenums complying with Section 602.2 of the ~~*International*~~ *Mechanical Code*.

CHAPTER 9
FIRE PROTECTION SYSTEMS

901.1 Scope. The provisions of this chapter and the *Fire Code* shall specify where *fire protection systems* are required and shall apply to the design, installation, and operation of *fire protection systems*.

901.4 Threads. Threads provided for fire department connections to sprinkler systems, standpipes, yard hydrants or any other fire hose connection shall be ~~compatible with the connections used by the local fire department~~ National Hose Standard hose threads.

901.5 Acceptance tests. *Fire protection systems* shall be tested in accordance with the requirements of this code and the ~~*International*~~ *Fire Code*. When required, the tests shall be conducted in the presence of the *building official*. Tests required by this code, the ~~*International*~~ *Fire Code* and the standards listed in this code shall be conducted at the expense of the owner or the owner's authorized agent. It shall be unlawful to occupy portions of a structure until the required *fire protection systems* within that portion of the structure have been tested and *approved*.

The location of all fire department connections shall be approved by the fire code official. Inspections of fire-extinguishing systems shall be conducted by the fire code official, and the results of such inspections and reports shall be forwarded to the *building official* for posting to occupancy records. Approval of the fire code official shall be required before any building or structure requiring a fire-extinguishing system may be permanently occupied.

Exception: The *building official* shall have the authority to issue a temporary certificate of occupancy for the use of a portion or portions of a building prior to the completion of the entire structure.

901.6.2 Fire alarm systems. Fire alarm systems ~~required by the provisions of Section 907.2 of this code and Sections 907.2 and 907.9 of the *International Fire Code*~~ shall be monitored by an *approved* supervising station in accordance with Section 907.6.6.

Exceptions:

1. Single- and multiple-station smoke alarms required by Section 907.2.11.
2. Smoke detectors in Group I-3 occupancies.
3. Supervisory service is not required for *automatic sprinkler systems* in one- and two-family dwellings.

901.9 Fire pumps. Fire pumps shall be listed by Factory Mutual, Underwriters Laboratories or another agency approved by the fire code official and shall not deliver less than the required fire flow and pressure in accordance with the listing. Such pumps shall be automatic operation. (See the *Electrical Code* for additional requirements.) The source of supply for such pumps shall be a

minimum 2,500-gallon (9,463.530 L) break tank served by the city main, or a break tank sized as required by NFPA 20, whichever is more restrictive.

901.10 Outside sprinkler control valve. Outside control in the form of a wall post indicator valve or post indicator valve shall be provided for each sprinkler system. An indicating-type gate valve shall be required when sprinkler systems are supplied by the standpipe system.

901.11 Two-way standpipe connections. Class I and Class III standpipe systems shall be equipped with a two-way fire department inlet connection. Systems with three or more standpipes shall be provided with not less than two two-way fire department inlet connections.

901.12 Fire department connections. The location of all FDC (fire department connections) shall be approved by the fire code official, and all such hose connections shall be 2.5 inch.

[F] 903.2 Where required. Approved *automatic sprinkler systems* in new building and structures shall be provided in the locations described in Section 903.2.1 through 903.2.12.

Exceptions:

1. Spaces or areas in telecommunications buildings use exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an *automatic smoke detection system* in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or not less than 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both.
2. In other than Group H occupancies, an automatic sprinkler system shall not be required in open buildings.

[F] 903.2.1.1 Group A-1. An *automatic sprinkler system* shall be provided for *fire areas* containing Group A-1 occupancies and intervening floors of the building where one of the following conditions exists:

1. The *fire area* exceeds 12,000 square feet (1115 m^2).
2. The *fire area* has an *occupant load* of 300 or more.
3. The *fire area* is located on a floor other than a *level of exit discharge* serving such occupancies.
4. The *fire area* contains a multi-theater complex.

Exception: In lieu of a sprinkler system for a temporary use occupancy, the applicant may agree to provide a fire watch program under which one or more fire inspectors of this *jurisdiction* will be present on the premises at all times when the amusement occupancy is open for use. The fire code official shall promulgate regulations regarding the qualifications, deployment and numbers of fire inspectors, which regulations shall be predicated upon public safety for the purpose of preventing fires and allowing safe egress in the event of a fire. The *jurisdiction* shall not be obligated to provide fire inspections for this purpose. See the *Fire Code* for applicable fees and service conditions.

[F] 903.2.1.2 Group A-2. An *automatic sprinkler system* shall be provided for *fire areas* containing Group A-2 occupancies and intervening floors of the building where one of the following conditions exists:

1. The *fire area* exceeds 5,000 square feet (464.5 m^2).
2. The *fire area* has an *occupant load* of 100 or more.
3. The *fire area* is located on a floor other than a *level of exit discharge* serving such occupancies.

Exception: In lieu of a sprinkler system for a temporary use occupancy, the applicant may agree to provide a fire watch program under which one or more fire inspectors of this *jurisdiction* will be present on the premises at all times when the amusement occupancy is open for use. The fire code official shall promulgate regulations regarding the qualifications, deployment and numbers of fire inspectors, which regulations shall be predicated upon public safety for the purpose of preventing fires and allowing safe egress in the event of a fire. The *jurisdiction* shall not be obligated to provide fire inspections for this purpose. See the *Fire Code* for applicable fees and service conditions.

[F] 903.2.1.3 Group A-3. An *automatic sprinkler system* shall be provided for *fire areas* containing Group A-3 occupancies and intervening floors of the building where one of the following conditions exists:

1. The *fire area* exceeds 12,000 square feet (1115 m^2).
2. The *fire area* has an *occupant load* of 300 or more.
3. The *fire area* is located on a floor other than a *level of exit discharge* serving such occupancies.

Exception: In lieu of a sprinkler system for a temporary use occupancy, the applicant may agree to provide a fire watch program under which one or more fire inspectors of this *jurisdiction* will be present on the premises at all times when the amusement occupancy is open for use. The fire code official shall promulgate regulations regarding the qualifications, deployment and numbers of fire inspectors, which regulations shall be predicated upon public safety for the purpose of preventing fires and allowing safe egress in the event of a fire. The *jurisdiction* shall not be obligated to provide fire inspections for this purpose. See the *Fire Code* for applicable fees and service conditions.

[F] 903.2.1.4 Group A-4. An *automatic sprinkler system* shall be provided for *fire areas* containing Group A-4 occupancies and intervening floors of the building where one of the following conditions exists:

1. The *fire area* exceeds 12,000 square feet (1115 m^2).
2. The *fire area* has an *occupant load* of 300 or more.
3. The *fire area* is located on a floor other than a *level of exit discharge* serving such occupancies.

Exception: In lieu of a sprinkler system for a temporary use occupancy, the applicant may agree to provide a fire watch program under which one or more fire inspectors of this *jurisdiction* will be present on the premises at

all times when the amusement occupancy is open for use. The fire code official shall promulgate regulations regarding the qualifications, deployment and numbers of fire inspectors, which regulations shall be predicated upon public safety for the purpose of preventing fires and allowing safe egress in the event of a fire. The *jurisdiction* shall not be obligated to provide fire inspections for this purpose. See the *Fire Code* for applicable fees and service conditions.

[F] 903.2.1.5 Group A-5. An *automatic sprinkler system* shall be provided for Group A-5 occupancies in the following areas: concession stands, retail areas, press boxes and other accessory use areas in excess of 1,000 square feet (93 m^2).

Exception: In lieu of a sprinkler system for a temporary use occupancy, the applicant may agree to provide a fire watch program under which one or more fire inspectors of this *jurisdiction* will be present on the premises at all times when the amusement occupancy is open for use. The fire code official shall promulgate regulations regarding the qualifications, deployment and numbers of fire inspectors, which regulations shall be predicated upon public safety for the purpose of preventing fires and allowing safe egress in the event of a fire. The *jurisdiction* shall not be obligated to provide fire inspections for this purpose. See the *Fire Code* for applicable fees and service conditions.

[F] 903.2.1.6 Assembly occupancies of 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 or 903.3.1.2.

Exception: ~~Open parking garages of Type I or Type II construction.~~ In lieu of a sprinkler system for a temporary use occupancy, the applicant may agree to provide a fire watch program under which one of more fire inspectors of this *jurisdiction* will be present on the premises at all times when the amusement occupancy is open for use. The fire code official shall promulgate regulations regarding the qualifications, deployment and numbers of fire inspectors, which regulations shall be predicated upon public safety for the purpose of preventing fires and allowing safe egress in the event of a fire. The *jurisdiction* shall not be obliged to provide fire inspectors for this purpose. See the *Fire Code* for applicable fees and service conditions.

[F] 903.2.5 Group H. *Automatic sprinkler systems* shall be provided in high-hazard occupancies as required in Sections 903.2.5.1 through 903.2.5.3.

Exception: *Hazardous materials storage* canopies complying with the provisions of Section 414.6.1 for weather protection.

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

Exception: One- or two-family dwellings not part of a multi-family residential structure.

[F] 903.3.1.1.1 Exempt locations. 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. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, where *approved* by the ~~fire code~~ *building* official.
3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a *fire-resistance rating* of not less than 2 hours.
4. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Fire service access elevator machine rooms and machinery spaces.
6. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008.

[F] 904.2.2 Commercial hood and duct systems. Each required commercial kitchen exhaust hood and duct system required by Section 609 of the ~~*International*~~ *Fire Code* or ~~Chapter 5~~ Section 508.1 of the ~~*International*~~ *Mechanical Code* to have a Type I hood shall be protected with an approved automatic fire-extinguishing system installed in accordance with this code.

[F] 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 and arrangement protected. Pre-engineered automatic dry- and wet-chemical extinguishing systems shall be tested in accordance with UL 300 and *listed* and *labeled* for the intended application. Other types of automatic fire-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-extinguishing systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:

{**EDITORIAL NOTE:** PORTIONS OF SECTION 904.12 NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

Exception: Factory-built commercial cooking recirculating systems that are tested in accordance with UL 710B and *listed*, *labeled* and installed in accordance with Section ~~304.1~~ 303.1 and 516 of the ~~*International*~~ *Mechanical Code*.

[F] 905.3.1 Height. Class III standpipe systems shall be installed throughout buildings where the floor level of the highest *story* is located more than 30 feet (9,144 mm) above the lowest level of fire department vehicle access, or where the floor level of the lowest *story* is located more than 30 feet (9,144 mm) below the highest level of fire department vehicle access.

Exceptions:

1. Class I standpipes are allowed in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
2. ~~Class I manual standpipes are allowed in *open parking garages* where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access.~~
3. ~~Class I manual dry standpipes are allowed in *open parking garages* that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5.~~

~~4~~2. Class I standpipes are allowed in basements equipped throughout with an *automatic sprinkler system*.

~~5~~3. In determining the lowest level of fire department vehicle access, it shall not be required to consider either of the following:

~~5~~3.1. Recessed loading docks for four vehicles or less; and

~~5~~3.2. Conditions where topography makes access from the fire department vehicle to the building impractical or impossible.

[F] 905.3.2 Group A. Class I automatic wet standpipes shall be provided in non-sprinklered Group A buildings having an *occupant load* exceeding 1,000 persons.

Exception~~s~~:

1. ~~Open-air-seating spaces without enclosed spaces.~~
2. ~~Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings that are not high-rise buildings.~~

[F] 905.3.4 Stages. Stages greater than 1,000 square feet (93 m^2) in area ~~(93 m^2)~~ shall be equipped with a Class III wet standpipe system with 1½-inch and 2½-inch (38 mm and 64 mm) hose connections on each side of the stage.

Exception: Where the building or area is equipped throughout with an *automatic sprinkler system*, the hose connections are allowed to be supplied from the *automatic sprinkler system* ~~a 1½-inch (38-mm) hose connection shall be installed in accordance with NFPA 13 or in accordance with NFPA 14 for Class II or III standpipes~~.

[F] 905.3.5 Underground buildings. Underground buildings shall be equipped throughout with a Class I automatic wet ~~or manual wet~~ standpipe system.

[F] 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 plane. Hose connections shall be located at ~~an intermediate~~ the main floor landing ~~between stories~~, unless otherwise *approved* by the fire code official.

{**EDITORIAL NOTE:** REMAINDER OF SECTION REMAINS AS IS IN THE 2015 *INTERNATIONAL BUILDING CODE.*}

[F] 905.8 Dry standpipes. Dry standpipes shall not be installed.

~~**Exception:** Where subject to freezing and in accordance with NFPA 14.~~

905.11 Design pressure. Design pressure at the uppermost valve for a Class II standpipe system shall be 35 psi.

[F] 906.2 General requirements. Portable fire extinguishers shall be selected, ~~and~~ installed and maintained in accordance with this section, ~~and~~ NFPA 10 and LSB 1.

Exceptions:

1. The distance of travel to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.
2. In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.

[F] 907.2 Where required—new buildings and structures. An *approved* 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 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

Not fewer than 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 waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Exceptions:

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the fire code official to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event.

Where provided, the manual fire alarm box shall not be located in an area that is accessible to the public.

3. In other than Group H occupancies, a fire alarm system shall not be required in open buildings.

[F] 907.2.2 Group B. A manual fire alarm system shall be installed in Group B occupancies where one of the following conditions exists:

1. The combined Group B *occupant load* of all floors is 500 or more.
2. The Group B *occupant load* is more than 100 persons above or below the lowest *level of exit discharge*.
3. The *fire area* contains an ambulatory care facility.

Exception: In other than high-rise buildings, manual ~~Manual~~ fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

[F] 907.2.3 Group E. A manual and automatic fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When *automatic sprinkler systems* or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

{**EDITORIAL NOTE:** THE EXCEPTIONS TO SECTION 907.2.3 REMAIN AS SET FORTH IN THE 2015 IBC.}

907.2.3.1 Group E educational. Smoke detectors shall be installed in any interior corridor serving as an exit and in storerooms, mechanical rooms, janitorial rooms and similar areas. Smoke detectors shall not be required in toilet rooms, classrooms or offices.

Exception: Approved heat detectors may be installed in lieu of smoke detectors with fire marshal approval.

907.2.3.2 Group E child day care facilities. Unless a fire alarm system is provided meeting the requirements of Section 907.2.3, a smoke alarm shall be provided in each occupiable area of child day care facilities with an *occupant load* of less than 30. Where more than one smoke alarm is required, the smoke alarms shall be interconnected in such a manner that activation of one alarm shall activate all the alarms.

907.2.3.3 Smoke detectors. The distance between smoke detectors shall not exceed a nominal spacing of 30 feet (9,144 mm) and there shall be detectors within a distance of one-half the nominal spacing, measured at right angles from all walls or partitions extending upward to within the top 15 percent of the ceiling height.

907.2.6.4 Group I-4. Group I-4 occupancies shall have a manual fire alarm and an automatic fire detection system installed in accordance with Section 907.2.3.

907.2.11.8 Group E child day care facilities. Unless a fire alarm system is provided meeting the requirements of Section 907.2.3, a smoke alarm shall be provided in each occupiable area of child day care facilities with an *occupant load* of less than 30. Where more than one smoke alarm is required, the smoke alarm interconnection and power source shall be in accordance with Section 907.2.11.5 and 907.2.11.6, and smoke alarms installed in such a manner that activation of one alarm shall activate all the alarms.

[F] 907.5.2.2 Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving *approved* information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404 of the ~~*International*~~ *Fire Code*. In high-rise buildings, the system shall operate on at least the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. *Interior exit stairways*.
3. Each floor.
4. *Areas of refuge* as defined in Chapter 2 of this code.

Alarms shall not sound in elevator groups or exit stairs.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

[F] 909.12.2 Wiring. In addition to meeting requirements of ~~NFPA 70~~ the *Electrical Code*, mechanical smoke control ~~all~~ wiring, regardless of voltage, shall be fully enclosed within continuous raceways. The requirement of this section shall apply only to wiring extending from the fire alarm system control unit that activates any required smoke-control system component such as relays, fans, dampers, or stair pressurization systems.

[F] 909.13.1 Materials. Control-air tubing shall be hard-drawn copper, Type L, ACR in accordance with ASTM B 42, ASTM B 43, ASTM B 68, ASTM B 88, ASTM B 251 and ASTM B 280. Fittings shall be wrought copper or brass, solder type in accordance with ASME B 16.18 or ASME B16.22. Changes in direction shall be made with appropriate tool bends. Brass compression-type fittings shall be used at final connection to devices; other joints shall be brazed using a BCuP-5 brazing alloy with solidus above 1,100˚F (593˚C) and liquids below 1,500˚F (816˚C). Brazing flux shall be used on copper-to-brass joints only.

Exception: Nonmetallic tubing used within control panels and at the final connection to devices provided all of the following conditions are met:

1. Tubing shall comply with the requirements of Section 602.2.3~~1.3~~ of the ~~*International*~~ *Mechanical Code*.

{**EDITORIAL NOTE:** THE REMAINDER OF SECTION 909.13.1 SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

[F] 911.1.1 Location and access. The location and accessibility of the fire command center shall be *approved* by the fire ~~chief~~ code official. The fire command center room shall be on the building floor having street access. Access to the room shall be either directly from the exterior, through an entrance lobby or through a 2-hour rated corridor leading directly to the exterior.

[F] 911.1.6 Required features. The fire command center shall comply with NFPA 72 and shall contain all of the following features:

{**EDITORIAL NOTE:** EXISTING ITEMS 1-18 SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

19. A means to automatically switch an alarm signal to an *approved* central station.

20. Two handsets per each 10 stories in building height.

CHAPTER 10
MEANS OF EGRESS

SECTION 1001
ADMINISTRATION

1001.1 General. Buildings or portions thereof shall be provided with a *means of egress* system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of *means of egress* components required to provide an *approved means of egress* from structures and portions thereof.

1001.1.1 Accessory stairs, ramps, doors and landings. Unless specifically addressed in this code, accessory stairs, ramps, doors and landings that are not components of a *means of egress* system shall meet the appropriate provisions of this code for the application and scope of work proposed, as if they are components of a *means of egress* system.

[F] 1001.3 Maintenance. *Means of egress* shall be maintained in accordance with Section 1031 of the ~~*International*~~ *Fire Code*.

1010.1.9.8 Sensor release of electrically locked egress doors. The electric locks on sensor released doors located in a *means of egress* in ~~buildings with an occupancy in Group A, B, E, I-1, I-2, I-4, M, R-1, or R-2 and entrance doors to tenant spaces in occupancies in Group A, B, E, I-1, I-2, I-4, M, R-1, or R-2~~ any occupancy except Group H are permitted where installed and operated in accordance with all of the following criteria:

1. The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.
2. Loss of power to the lock or locking system shall automatically unlock the doors.
3. The doors shall be arranged to unlock from a manual unlocking device a minimum of 1½ inches (38 mm) in diameter located 40 inches to 48 inches (1,016 mm to 1,219 mm) vertically above the floor and within 5 feet (1,524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads “PUSH TO EXIT.” When operated, the manual unlocking device shall result in direct interruption of power to the lock—independent of other electronics—and the doors shall remain unlocked for not less than 30 seconds.
4. Activation of the building *fire alarm system*, where provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.

5. Activation of the building *automatic sprinkler system* or *fire detection system*, where provided, shall automatically unlock the doors. The doors shall remain unlocked until the *fire alarm system* has been reset.

6. The door locking system units shall be listed in accordance with UL 294.

1010.1.9.9 Electromagnetically locked egress doors. Doors in the *means of egress* in ~~buildings with an occupancy in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2~~ any occupancy except Group H shall be permitted to be locked with an electromagnetic locking system where equipped with hardware that incorporates a built-in switch and where installed and operated in accordance with all of the following:

{**EDITORIAL NOTE:** THE REMAINDER OF THIS SECTION SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

1010.1.9.12 Controlled egress doors from elevator lobbies. Exit doors in the *means of egress* in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved automatic smoke* or *heat detection system* installed in accordance with Section 907 shall be permitted to be locked from the egress side with an electric locking system. The locking system shall be installed and operated in accordance with all of the following:

1. The door locks shall unlock on actuation of the *automatic sprinkler system* or automatic fire detection system.

2. The door locks shall unlock on loss of power controlling the lock or lock mechanism.

3. If the lock is controlled by a relay, removal of power from the relay or any failure of the wiring or other device in the circuit to the lock shall cause the lock to unlock/fail open.

4. The door locks shall be capable of being unlocked upon a signal from the fire command center, if present, or a signal by emergency personnel from a single location inside the main entrance to the building or other *approved* central location that contains the alarm panels.

5. The door locks shall unlock without delay with an emergency release device (direct inline power interrupting switch) such as a manual fire alarm box on the egress side, resettable only by manual use of a key, and the doors shall remain unlocked until the fire alarm system has been reset.

6. A sign shall be provided adjacent to the emergency release device and shall comply with the visual character requirements in ICC A117.1. The sign shall read: "PUSH/PULL TO RELEASE DOOR IN AN EMERGENCY".

7. A building occupant shall not be required to pass through more than two doors equipped with a controlled egress locking system before entering an exit.

8. The doors shall not require more than one operation to unlatch or unlock, which includes the operation of activating the emergency release device.

9. Emergency lighting shall be provided on the egress side of the door.

10. The door locking system units shall be listed in accordance with UL 294.

1010.2.2 Security gates. In locations other than on doors where panic hardware is required, security gates may be installed, provided they remain open when the premises is occupied by anyone other than security personnel.

1011.14.1 Handrails of alternating tread devices. Handrails shall be provided on both sides of alternating tread devices and shall comply with Section ~~1021~~ 1014.

1011.16 Ladders. Permanent ladders shall not serve as a part of the *means of egress* from occupied spaces within a building. Permanent ladders shall be permitted to provide access to the following areas:

{**EDITORIAL NOTE:** PORTIONS OF SECTION 1011.6 NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

6. Ladders shall be constructed in accordance with Section ~~306.5~~ 304.3.1.2 of the ~~*International*~~ *Mechanical Code*.

1016.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

1. *Exit access* through an enclosed elevator lobby is permitted. Access to not less than one of the required *exits* shall be provided without travel through the enclosed elevator lobbies required by Section 3006.2, 3007, or 3008. Where the path of exit access travel passes through an enclosed elevator lobby, the level of protection required for the enclosed elevator lobby is not required to be extended to the *exit* unless direct access to an *exit* is required by other sections of this code.

{**EDITORIAL NOTE:** PORTIONS OF SECTION 1016.2 NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

1023.9 Stairway identification signs. A sign shall be provided at each floor landing in an *interior exit stairway* and *ramp* connecting more than three stories designating the floor level, the terminus of the top and bottom of the *interior exit stairway* and *ramp*, and the identification of the *stairway* or *ramp*. The signage shall also state the store of, and the direction to, the *exit discharge* and the availability of roof access from the *interior exit stairway* and *ramp* for the fire department. The sign shall be located 5 feet (1,524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. In addition to the *stairway* identification sign, a floor-level sign in visual characters, raised characters, and braille complying with *ICC A117.1* shall be located at each floor-level landing adjacent to the door leading from the *interior exit stairway* and *ramp* into the *corridor* to identify the floor level. See Appendix H of the *Fire Code* for sign installation requirements.

Exception: Buildings with existing signs having *building official* and *fire code official approval* may retain those signs until the signs are replaced. The installation of replacement signs shall be in accordance with Appendix H of the *Fire Code*.

1023.9.2 Signs on occupancy side of stairway doors. Stairway identification signs having *building official and fire code official* approval shall be located at each floor level on the occupancy side of all interior vertical exit enclosures, regardless of height of the building. See Appendix H of the *Fire Code* for installation requirements.

> **Exception:** Buildings with existing signs having *building official* and *fire code official approval* may retain those signs until the signs are replaced. The replacement signs shall be installed in accordance with Appendix H of the *Fire Code*.

1023.9.3 Reentry. Where stairway doors may be locked from the stairway side in accordance with this code, provisions for reentry shall be provided. In buildings not provided with an emergency control station or where the control station is not attended at all times while the building is occupied, alternate methods for releasing stairway door locks shall be provided as required by this code and/or the *fire code official, whichever is more restrictive*.

CHAPTER 11
ACCESSIBILITY

{**EDITORIAL NOTE:** THE EXISTING PROVISIONS OF CHAPTER 11 ARE **NOT ADOPTED** AND ARE REPLACED BY THE PROVISIONS BELOW.}

1101.2 Design. Buildings and facilities shall be designed and constructed to be *accessible* in accordance with the provisions of ~~this code~~ the *Texas Accessibility Standards*, and federal law ~~ICC A117.1~~.

1101.3 State law. Accessibility for publicly and privately owned buildings and facilities is governed by state law, including Chapter 469 of the *Texas Government Code* and various regulations, standards and specifications issued thereunder. Any references to provisions of Chapter 11 that occur elsewhere in this code shall be construed to mean that compliance shall be with applicable sections of the *Texas Accessibility Standards* (TAS).

1101.4 Responsibility of owners. It is the responsibility of the owner to ensure compliance with state and federal requirements. As provided by Section 469.102 of the *Texas Government Code*, the applicant for a building permit for an affected building or facility shall provide evidence of registration with the Texas Department of Licensing and Regulation as a part of the building permit application.

1101.5 *Jurisdiction* is not an agent of the state. This *jurisdiction* has not contracted with the state and is not authorized to review plans, grant waivers or modifications, perform inspections, or take any other action with respect to compliance with state or federal accessibility requirements. No action taken by this *jurisdiction* or the *building official* shall be deemed as excusing compliance with state or federal requirements.

{**EDITORIAL NOTE:** THE REMAINDER OF CHAPTER 11 IS **NOT ADOPTED** BY THIS JURISDICTION.}

CHAPTER 12
INTERIOR ENVIRONMENT

1203.1 General. Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the ~~*International*~~ *Mechanical Code*.

Where the air infiltration rate in a *dwelling unit* is less than 5 air changes per hour when tested with a blower door at a pressure 0.2 inch w.c. (50 Pa) in accordance with Section 402.4.1.2 of the ~~*International*~~ *Energy Conservation Code—Residential Provisions*, the *dwelling unit* shall be ventilated by mechanical means in accordance with Section ~~403~~ 402.3 of the ~~*International*~~ *Mechanical Code*. *Ambulatory care facilities* and Group I-2 occupancies shall be ventilated by mechanical means in accordance with ~~Section 407 of~~ the ~~*International*~~ *Mechanical Code* and ASHRAE 170.

1207.1 Scope. This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent *dwelling units* and *sleeping units* or between *dwelling units* and *sleeping units* and adjacent public areas such as halls, *corridors*, *stairways,* or *service areas*. When required by Chapter 9, Article VI, of the *City Code*, sound attenuation shall be provided as specified in Appendix N.

CHAPTER 15
ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

[P] 1503.4 Roof drainage. Design and installation of roof drainage systems shall comply with Section 1503 of this code and Sections ~~1106~~ 1101.12 and ~~1108~~ 1103, as applicable, of the ~~*International*~~ *Plumbing Code*.

[P] 1503.4.1 Secondary (emergency overflow) drains or scuppers. Where roof drains are required, secondary (emergency overflow) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. The installation and sizing of secondary emergency overflow drains, leaders and conductors shall comply with Sections ~~1106~~ 1101.12.2 and ~~1108~~ 1102, as applicable, of the ~~*International*~~ *Plumbing Code*.

1504.8 Aggregate. Aggregate used as surfacing for roof coverings and aggregate, gravel or stone used as ballast shall not be used on the roof of a building ~~located in a hurricane-prone region as defined in Section 202, or on any other building with a mean roof height exceeding that permitted Table 1504.8 based on the exposure category and basic wind speed at the site~~.

TABLE 1505.1[a, b]
MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION

IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
B	B	B	C[c]	B	C[c]	B	B	C[c]

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2.

a. Unless otherwise required in accordance with the *International Wildland-Urban Interface Code* or due to the location of the building within a fire district in accordance with Appendix D.

b. Nonclassified roof coverings shall be permitted on buildings of Group R-3 and Group U occupancies, where there is a minimum fire-separation distance of 6 feet measured from the leading edge of the roof.

c. ~~Buildings that are not more than two stories above grade plane and having not more than 6,000 square feet of projected roof area and where there is a minimum 10-foot fire-separation distance from the leading edge of the roof to a lot line on all sides of the building, except for street fronts or public ways, shall be permitted to have roofs of No. 1 cedar or redwood shakes and No. 1 shingles constructed in accordance with Section 1505.7.~~

1511.1 General. Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15.

Exceptions:

1. ~~1.~~ *Roof replacement* or *roof recover* of existing low-slope roof coverings shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide positive roof drainage.

~~2. Recovering or replacing an existing roof covering shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1503.4 for roofs that provide for positive roof drainage. For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with this code shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1503.4.~~

1511.7 Wood shakes and shingles. Wood shakes and shingles shall not be permitted to be replaced unless they meet the requirements of Section 1505.6.

CHAPTER 16
STRUCTURAL DESIGN

{**EDITORIAL NOTE:** DELETE SECTION 1603.1.7 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

1603.1.7 Flood design data. See Chapter 19 of the *City Code* and the *Infrastructure Design Manual*.

1609.1.1 Determination of wind loads. Wind loads on every building or structure shall be determined in accordance with Chapters 26 to 30 of ASCE 7 or provisions of the alternate all-heights method in Section 1609.6. The type of opening protection required, the ultimate design wind speed, V_{ult}, and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

{**EDITORIAL NOTE:** PORTIONS OF SECTION 1609.1.1 NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

The ~~wind speeds in Figures 1609.3(1), 1609.3(2) and 1609.3(3) are~~ ultimate design wind speeds as determined in accordance with Section 1609.3, V_{ult}, and shall be converted in accordance with Section 1609.3.1 to nominal design wind speeds, V_{asd}, when the provisions of the standards referenced in Exceptions 4 and 5 are used.

1609.3 Ultimate design wind speed. The ultimate design wind speed, V_{ult}, in mph, for the determination of the wind loads shall be determined by entering the physical address of the property where the building will be constructed into the ASCE 7 Windspeed Website: https://hazards.atcouncil.org. The proposed design windspeed for the structure shall be based on the appropriate risk category as determined by Table 1604.5. An applicant shall include a pdf copy of the windspeed determination from the website when submitting the design documents/plans for code compliance verification and permit approval. ~~Figures 1609.3(1), 1609.3(2) and 1609.3(3). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category III and IV buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(3). The ultimate design wind speed, V_{ult}, for the special wind regions indicated near mountainous terrain and near gorges shall be in accordance with local *jurisdiction* requirements. The ultimate design wind speeds, V_{ult}, determined by the local *jurisdiction* shall be in accordance with Section 26.5.1 of ASCE 7.~~

~~In nonhurricane-prone regions, when the ultimate design wind speed, V_{ult}, is estimated from regional climatic data, the ultimate design wind speed, V_{ult}, shall be determined in accordance with Section 26.5.3 of ASCE 7.~~

1609.3.1 Wind speed conversion. When required, the ultimate design wind speeds of ~~Figures 1609.3(1), 1609.3(2) and 1609.3(3)~~ the ASCE 7 Windspeed Website: https://hazards.atcouncil.org shall be converted to nominal design wind speeds, V_{asd}, using Table 1609.3.1 or Equation 16-3.

$V_{asd} = V_{ult} \sqrt{0.6}$ **(Equation 16-33)**

where:

V_{asd} = Nominal design wind speed applicable to methods specified in Exceptions 4 and 5 of Section 1609.1.1.

V_{ult} = Ultimate design wind speeds determined from ~~Figures 1609.3(1), 1609.3(2) or 1609.3(3)~~ the ASCE 7 Windspeed Website: https://hazards.atcouncil.org.

{**EDITORIAL NOTE:** DELETE SECTION 1612 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

1612.1 General. See Chapter 19 of the *City Code* and the *Infrastructure Design Manual*.

1613.3.5 Determination of seismic design category. This *jurisdiction* is classified as Seismic Design Category A. ~~Structures classified as *Risk Category* I, II or III that are located where the mapped spectral response acceleration parameter at 1-second period, S_1, is greater than or equal to 0.75 shall be assigned to *Seismic Design Category* E. Structures classified as *Risk Category* IV that are located where the mapped spectral response acceleration parameter at 1-second period, S_1, is greater than or equal to 0.75 shall be assigned to *Seismic Design Category* F. All other structures shall be assigned to a *seismic design category* based on their *risk category* and the design spectral response acceleration parameters, S_{DS} and S_{D1}, determined in accordance with Section 1613.3.4 or the site-specific procedures of ASCE 7. Each building and structure shall be assigned to the more severe *seismic design category* in accordance with Table 1613.3.5(1) or 1613.3.5(2), irrespective of the fundamental period of vibration of the structure, *T*.~~

1613.6 Ballasted photovoltaic panel systems. Ballasted, roof-mounted *photovoltaic panel systems* shall not be installed on roofs within Houston. All roof-mounted *photovoltaic panel systems* shall conform to Section 1510.7. ~~Ballasted, roof-mounted *photovoltaic panel systems* need not be rigidly attached to the roof or supporting structure. Ballasted nonpenetrating systems shall be designed and installed only on roofs with slopes not more than one unit vertical in 12 units horizontal. Ballasted nonpenetrating systems shall be designed to resist sliding and uplift resulting from lateral and vertical forces as required by Section 1605, using a coefficient of friction determined by acceptable engineering principles. In structures assigned to *Seismic Design Category* C, D, E or F, ballasted nonpenetrating systems shall be designed to accommodate seismic displacement determined by nonlinear response history analysis or shake-table testing, using input motions consistent with ASCE 7 lateral and vertical seismic forces for nonstructural components on roofs.~~

CHAPTER 17
SPECIAL INSPECTIONS AND TESTS

1705.19 Testing systems utilizing electric or electromagnetic locks. Electric and electromagnetic locking systems shall be tested by an *approved* third-party agency. A certification letter/report shall be provided to the *authority having jurisdiction* documenting compliance with the appropriate code provisions of Section 907 and Chapter 10 and NFPA 72, for each specific installation.

1705.19.1 Activation. Electronic and electromagnetic locking systems shall not be activated prior to required plan review, permitting and final on-site approval.

CHAPTER 23
WOOD

2308.2.4 Ultimate wind speed. V_{ult} shall not exceed 130 miles per hour (57 m/s) (3-second gust).

Exceptions:

1. V_{ult} shall not exceed 140 mph (61.6 m/s) (3-second gust) for buildings in Exposure Category B that are not located in a *hurricane-prone region*.
2. Where V_{ult} exceeds 130 mph (3-second gust), the provisions of ~~either~~ Appendix K, AWC WFCM or ICC 600 are permitted to be used.

CHAPTER 29
PLUMBING SYSTEMS

[P] TABLE 2902.1
MINIUMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 2902.1.1 and 2902.2)

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS[f] (URINALS SEE SECTION 2902.7 ~~419.2 OF THE *INTERNATIONAL PLUMBING CODE*~~)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAINS[g] ~~(SEE SECTION 410.1 OF THE *INTERNATIONAL PLUMBING CODE)*~~	OTHER
				Male	Female	Male	Female			
1	Assembly	A-1[d]	Theaters and other buildings for the performing arts and motion pictures	1 per 125	1 per ~~65~~ 60	1 per 200		—	1 per 500	1 service sink[e]
		A-2[d]	Nightclubs, bars, taverns, dance halls and buildings for similar purposes	1 per 40	1 per 40	1 per 75		—	1 per 500	1 service sink
			Restaurants, banquet halls and food courts	1 per 75	1 per 75	1 per 200		—	1 per 500	1 service sink
		A-3[d]	Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums	1 per 125	1 per ~~65~~ 60	1 per 200		—	1 per 500	1 service sink
			Passenger terminals and transport facilities[f]	1 per 500	1 per 500	1 per 750		—	1 per 1,000	1 service sink
			Places of worship and other religious services	1 per 150	1 per 75	1 per 200		—	1 per 1,000	1 service sink
		A-4	Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities	1 per 75 for the first 1,]500 and 1 per 120 for the remainder exceeding 1,500	1 per ~~40~~ 35 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink
		A-5	Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per ~~40~~ 35 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink

(continued)

[P] TABLE 2902.1 – continued
MINIUMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS[f] (URINALS SEE SECTION 2902.7 ~~419.2 OF THE *INTERNATIONAL PLUMBING CODE*~~)		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS[g] ~~(SEE SECTION 410.1 OF THE *INTERNATIONAL PLUMBING CODE*)~~	OTHER
				Male	Female	Male	Female			
2	Business	B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		—	1 per 100	1 service sink[e]
3	Educational	E	Educational facilities	1 per 50		1 per 50		—	1 per 100	1 service sink
			Daycares	1 per 17		1 per 17		—	1 per 100	1 service sink
4	Factory and industrial	F-1 and F-2	Structures in which occupants are engaged in work fabricating, assembly or processing of products or materials	1 per 100		1 per 100		~~See Section 411 of the *International Plumbing Code*~~	1 per 400	1 service sink
5	Institutional	I-1	Residential care	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
		I-2	Hospitals, ambulatory nursing home care recipient[b]	1 per room[c]		1 per room[c]		1 per 15	1 per 100	1 service sink
			Employees, other than residential care[b]	1 per 25		1 per 35		—	1 per 100	—
			Visitors, other than residential care	1 per 75		1 per 100		—	1 per 500	—
		I-3	Prisons[b]	1 per cell		1 per cell		1 per 15	1 per 100	1 service sink
		I-3	Reformatories, detention centers and correctional centers[b]	1 per 15		1 per 15		1 per 15	1 per 100	1 service sink
			Employees[b]	1 per 25		1 per 35		—	1 per 100	—
		I-4	Adult day care and child day care	1 per 15		1 per 15		~~1~~ —	1 per 100	1 service sink
6	Mercantile	M	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per 500		1 per 750		—	1 per 1,000	1 service sink[e]

[P] TABLE 2902.1 – continued
MINIUMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS[f] (URINALS SEE SECTION 2902.7 ~~419.2 OF THE *INTERNATIONAL PLUMBING CODE*~~)		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS[g] ~~(SEE SECTION 410.1 OF THE *INTERNATIONAL PLUMBING CODE*)~~	OTHER
				Male	Female	Male	Female			
7	Residential	R-1	Hotels, motels, boarding houses (transient)	1 per sleeping unit		1 per sleeping unit		1 per sleeping unit	—	1 service sink
		R-2	Dormitories, fraternities, sororities and boarding houses (not transient)	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
		R-2	Apartment house	1 per dwelling unit		1 per dwelling unit		1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per 20 dwelling units
		R-3	One- and two-family dwellings and lodging houses with five or fewer guest rooms	1 per dwelling unit		1 per 10		1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1automatic clothes washer connection per dwelling unit
		R-3	* Congregate living facilities with 16 or fewer persons	1 per 8~~10~~ (*City Code* Sec. 10-362.)		1 per 10		1 per 8	1 per 100	1 service sink
		R-4	~~Congregate living facilities with 16 or fewer persons~~ Residential care/assisted living facilities	1 per 10		1 per 10		1 per 8	1 per 100	1 service sink
8	Storage[h, i]	S-1 S-2	Structures for the storage of goods, warehouses, storehouses and freight depots, low and moderate hazard	1 per 100		1 per 100		~~See Section 411 of the *International Plumbing Code*~~	1 per 1,000	1 service sink

* These are minimum design requirements. The *Building Code* or the *City Code* applies, whichever is more restrictive. See Section 10-362 of the *City Code*.

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by this code.
b. Toilet facilities for employees shall be separate from facilities for inmates or care recipients.
c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient *sleeping units* shall be permitted, provided that each patient *sleeping unit* has direct access to the toilet room and provisions for privacy for the toilet room user are provided.
d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
e. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.
f. Structures used for people awaiting transportation, such as transit centers, shall not be required to install employee and public restroom facilities when all the following conditions apply:
    1. The facility includes no onsite employees or security personnel.
    2. The structure is an open-air structure with no enclosing walls.
    3. The structure is only intended to shelter people awaiting transportation.
g. Buildings where water is served from bottled water coolers and has an occupant load of less than 30 shall not be required to provide drinking fountains.
h. For the purpose of establishing employee and public restrooms and plumbing fixture requirements the design occupant load of a self-storage warehouse facility containing only normally unoccupied rental units provided with direct exterior access for dropping off and picking up storage of personal possessions shall be based on the design occupant load of the occupied office building serving that storage facility. The required employee and public restrooms provided at the office building shall be available to the public and all employees who utilize the on-site storage facilities.
i. One story warehouses and parking garages that are dedicated to a building on site, that do not exceed one story below grade, and include a path of travel to available restroom facilities located within 500 feet located on the same property shall be considered compliant with the provisions of Section 2902.3 for required employee and public restroom facilities.

2902.7 Fixture types. All water closets shall be either a dual flush or a high efficiency water closet. For males, when more than one water closet is required, 50% of the water closets shall be urinals. Urinals shall be of the non-water type or high efficiency urinals.

CHAPTER 30
ELEVATORS AND CONVEYING SYSTEMS

3001.1 Scope. This chapter governs the design, construction, installation, *alteration* and repair of elevators and conveying systems and their components.

The *building official* shall have the authority to adopt and enforce rules and regulations to administer the provisions of this chapter. Such rules and regulations may include, but shall not be limited to, establishing qualifications and other requirements for approval and registration of an approved agency, providing frequency of inspections, and providing for formats of reports, inspection checklists, and other required documents.

The *building official* shall issue such notices or orders as may be necessary to remove illegal or unsafe conditions, to secure necessary safeguards during construction, to enforce compliance with this chapter, to receive required applications, to issue permits and serial numbers, and to furnish the prescribed certificates.

3001.2 ~~Referenced standards.~~ State/ASME/ANSI standards. Except as otherwise provided for in this ~~code, the design, construction, installation, *alteration*, repair and maintenance of elevators and conveying systems and their components shall conform to ASME A17.1/CSA B44, ASME A17.7/CSA B44.7, ASME A90.1, ASME B20.1, ANSI MH29.1, ALI ALCTV and ASCE 24 for construction in flood hazard areas established in Section 1612.3.~~ chapter, all elevators, dumbwaiters, escalators, moving walks, inclined stairway chairlifts, wheelchair lifts and alterations to such conveyances and the installation thereof shall conform to the requirements of ASCE 24 for the purpose of regulations associated with this chapter, and the standards adopted in Chapter 754 of the *Texas Health and Safety Code* and the standards adopted thereunder by the Texas Commissioner of Licensing and Regulation. The term "*Elevator Safety Code*" as used in this code shall mean the foregoing state-adopted standards. Manlifts and alterations and installations thereof shall conform to the *Safety Standards for Manlifts, American National Standards Institute, Publication No. ANSI A90.1*, and the term "*Manlift Safety Code*" as used in this code shall mean the said publication. Personnel hoists and alterations and installations thereof shall conform to the *Safety Requirements for Personnel Hoists, American National Standards Institute, Publication No. ANSI A10.4*, and the term "*Personnel Hoist Safety Code*" as used in this code shall mean the said publication.

3001.2.1 Adoption of state standards. Notwithstanding any provisions of this code that may be construed to the contrary, it is the express intent of this *jurisdiction* that this code be construed as establishing standards of inspection and certification of elevators, escalators, and related equipment and standards for elevator inspection personnel that are no less stringent in any respect than those adopted in or pursuant to Chapter 754 of the *Texas Health and Safety Code*, including but not limited to: ASME A17.1-2007, ASME A17.3-2002, ASME A90.1-2005, ASME B20.1-2015, ASME A18.1-2005, ASME A17.5-2014, ASME A17.4-2015, and QEI-1-2013, which state standards and any amendments hereafter made thereto are adopted and incorporated into this code by reference. To the extent of any inconsistency between the state standards and the other provisions of this code, the more stringent provisions shall prevail.

3001.4 Change in use. A change in use of an elevator from freight to passenger, passenger to freight, or from one freight class to another freight class shall not be made without the approval

of the *building official*. Said approval shall be granted only after it is demonstrated that the installation conforms to the requirements of the *Elevator Safety Code* ~~comply with Section 8.7 of ASME A17.1/CSA B44~~.

3001.5 Definitions. The following terms, for the purposes of this appendix, shall have the meaning ascribed in Chapter 2:

ASME CODE.

APPROVED AGENCY.

AUTHORIZED COMPANY.

AUTHORIZED INSPECTOR.

CERTIFYING ORGANIZATION.

ESCALATOR SKIRT DEFLECTOR DEVICE.

MANLIFT.

PERSONNEL HOIST.

WHEELCHAIR LIFT.

3002.3 Emergency signs. An *approved* pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the *exit stairways* and not to use the elevators in case of fire. The sign shall read: IN ~~CASE OF~~ FIRE EMERGENCY, DO NOT USE ELEVATOR ~~ELEVATORS ARE OUT OF SERVICE~~. USE EXIT STAIRS. The lettering shall be at least ½ inch block letters on a background of contrasting color so that the lettering is clearly visible.

Exceptions:

1. The emergency sign shall not be required for elevators that are part of an *accessible means of egress* complying with Section 1009.4.
2. The emergency sign shall not be required for elevators that are used for occupant self-evacuation in accordance with Section 3008.

3002.9 Plumbing and mechanical systems. Plumbing and mechanical systems shall not be located in an elevator hoistway enclosure.

Exceptions:

1. Floor drains, sumps and sump pumps shall be permitted at the base of the hoistway enclosure provided they are indirectly connected to the plumbing system.
2. All elevator pits shall be provided with a sump pump as per ASME A17.1. The sump pump shall be discharged to the sanitary sewer.

[F] 3003.3 Standardized firefighter's service ~~elevator~~ keys. All elevators shall be equipped to operate with a standardized firefighter's service ~~elevator~~ key in accordance with the ~~*International*~~ *Fire Code*.

3003.4 Emergency hoistway water sensor. Each elevator hoistway and/or each connected bank of elevator hoistways within a structure located within the 100-year and 500-year floodplain, and elevators located outside the floodplain where elevator cabs travel to floor levels below grade level, shall include a water sensor installed in the hoistway below the landing of the lowest floor served by the elevator. The water sensor shall be installed to automatically override and limit the elevator controls to prevent the elevator and elevator equipment from descending into flooded areas and limit the lowest level of elevator cab travel to a designated floor approved by the fire code official until the flooding has receded. The activation of the automatic water sensor override shall activate visual or audio notification to the building's management. Return to normal operation of the elevator control systems shall require a manual reset by a Texas licensed elevator contractor. This code provision shall be retroactive and applicable to all existing and annexed structures having elevators.

3003.4.1 Compliance timeline for existing and annexed structures. On or before December 31, 2026, or within five years after the date of annexation of a building into the *jurisdiction* after [5], each elevator hoistway and/or bank of connected elevator hoistways shall be equipped with an emergency hoistway water sensor installed in accordance with Section 3003.4.

Exception: This section shall not apply to existing elevator systems containing water sensors installed in the hoistway below the landing of the lowest floor level served that automatically remove the elevator from service to a designated floor level approved by the *fire code official* when the hoistway is flooded. These specific systems shall also require a manual reset to return to normal operation as specified by Section 3003.4 of this code.

3004.1 General. Elevators, escalators, dumbwaiters, manlifts, moving walks, conveyors, inclined stairway chairlifts, wheelchair lifts, vertical reciprocating conveyors, personnel hoists and material hoists shall comply with the provisions of Sections 3004.2 through 3004.4.

3004.3 ~~Conveyors~~ Vertical reciprocating conveyors. Vertical reciprocating conveyors shall be installed to comply with ASME B20.1. An installation permit is required before the installation of any vertical reciprocating conveyor. The fees shall be as required for elevators (see Section 118 and the city fee schedule for fees). A one-time final inspection report must be submitted to the *building official* by an approved inspection agency before the vertical reciprocating conveyor is put into operation. The building owner or owner's representative shall be responsible for the safe operation and maintenance of the vertical reciprocating conveyor. ~~Conveyors and conveying systems shall comply with ASME B20.1.~~

~~**3004.3.1 Enclosure.** Conveyors and related equipment connecting successive floors or levels shall be enclosed with *shaft enclosures* complying with Section 713.~~

~~**3004.3.2 Conveyor safeties.** Power-operated conveyors, belts and other material-moving devices shall be equipped with automatic limit switches that will shut off the power in an emergency and automatically stop all operation of the device.~~

3004.5 Escalator skirt deflector devices.

5. The City Secretary shall insert the effective date of the Ordinance to which this document is an exhibit.

3004.5.1 Purpose. The purpose of this section is to improve the overall safety of escalators located within the *jurisdiction* by establishing provisions for the installation of escalator skirt deflector devices on new and existing escalators.

3004.5.2 Compliance program. All escalators installed on or after October 21, 2001, shall be equipped with escalator skirt deflector devices or equivalent protection in accordance with the *ASME A17.1 Safety Code for Elevators and Escalators*. The owners of existing buildings in which one or more escalators were installed prior to October 21, 2001, shall have skirt deflector devices or equivalent protective equipment installed on all escalators no later than January 1, 2011.

3004.5.3 Approval. The *building official* shall have the authority to adopt and enforce rules and regulations to administer approval of the design, construction, configuration and installation of skirt deflector devices for use in this *jurisdiction*. The *building official* shall promulgate such rules and regulations.

3004.5.4 Technical requirements. Escalator skirt deflector devices shall be installed in accordance with the deflector device manufacturer's recommended installation instructions and the *ASME A17.1 Safety Code for Elevators and Escalators*.

3005.2 Venting. Elevator machine rooms, machinery spaces that contain the driving machine, and control rooms or spaces that contain the operation or motion controller for elevator operation shall be provided with a~~n independent~~ *ventilation* or air-conditioning system compliant with the provisions of the *Construction Code* to protect against the overheating of the electrical equipment. The system shall be capable of maintaining temperatures within the range established for the elevator equipment.

3005.5.1 Delay. Upon activation of the heat detector used for elevator power shutdown, there shall be a delay in the activation of the power shunt trip. This delay shall be the time that it takes the elevator cab to travel from the top of the hoistway to the lowest recall level.

SECTION 3009
ELEVATORS FOR HIGH RISE BUILDINGS

3009.1 Elevators. Elevators and elevator lobbies for high rise buildings shall comply with the provisions of section 403 and this chapter.

1. A bank of elevators is a group of elevators or a single elevator controlled by a common operating system; that is, all those elevators that respond to a single call button constitute a bank of elevators. There is no limit on the number of cars that may be in a bank or group, but there may not be more than four cars within a common hoistway. Hoistways shall be separated by a two-hour fire resistive separation.

2. Each elevator lobby shall be provided with at least two smoke detectors with listings from a 3rd party testing laboratory and that are located on the lobby ceiling, one positioned at each opening into the lobby other than the elevator door entrances, or at least one smoke detector with alarm verification sequence per NFPA 72 with listings from a 3rd party testing laboratory. When two detectors, each on a separate initiating circuit, or one alarm sequence verification detector on the same initiating circuit, are activated, elevator cars shall return to a floor providing

direct egress from the building (or to a transfer floor if the cars do not serve an egress floor), and the elevator doors shall open to permit egress of passengers. In the event of a failure of normal electrical service, the standby power system shall have sufficient capacity to return all elevators to the floor of egress on an automatic or manual selective program of one elevator in each bank of elevators simultaneously. An alarm system shall be provided to summon assistance, for instances when the return system is manually activated.

NOTE: Banks of elevators not deactivated by the products of combustion detectors shall remain in normal operation. In the event of a fire on the lowest terminus floor, an elevator call shall stop the elevator car on a floor above the floor of fire involvement.

3. Elevator hoistways shall not be vented through an elevator machine room.

4. An elevator lobby is defined as that portion of a corridor or space within 10 feet of an elevator entrance door. Buildings having banks of elevators serving more than two floors that terminate on an upper floor (sky lobbies) and do not return to a floor level providing direct egress from the building shall have elevator lobbies with a corridor directly connected to an exit stairway. The sky lobbies and connecting corridors shall be separated from the remainder of the building by a two-hour fire resistive occupancy separation.

5. When elevators are returned to the floor of egress due to the activation of the fire detection system, the elevator doors shall open for egress and the elevator shall be shut down. Door open buttons in each car shall remain active. Under this circumstance, facilities shall be provided to permit the operation of any one elevator in an elevator bank by the fire department through the use of a “firefighter’s service key.” The selected elevator shall be manually operated.

6. Elevators serving below the floodplain for the building shall have a water sensor installed in the hoistway below the lowest landing that the elevator serves to prevent the elevator from descending into a flooded area.

SECTION 3010
PERMITS, CERTIFICATES OF INSPECTION

3010.1 Construction permits.

3010.1.1 General. Contractors shall obtain a separate permit before erecting or constructing any new elevator, dumbwaiter, escalator, manlift, moving walk, personnel hoist, vertical reciprocating conveyor, inclined stairway chairlift, personnel hoist or wheelchair lift, or before relocating such existing equipment. The installer of the equipment shall submit an application for such permit accompanied by plans and specifications in accordance with section 107 of this code, in such form as the *building official* may prescribe. When such plans and specifications indicate compliance with this chapter and other provisions of this code, and the fees specified in Section 118 and the city fee schedule have been paid, the *building official* shall issue a construction permit. The plans and specifications shall be stamped "Approved" when the *building official* issues a construction permit where plans are required. Such approved plans and specifications shall not be changed, modified or altered without authorization from the *building official*, and all work shall be done in accordance with the approved plans.

3010.1.2 Notification of completion. It shall be the duty of each person installing, relocating or altering such conveyances to notify the *building official* in writing, at least seven days before completion of the work, and to subject the new, moved or altered portions of the equipment to the acceptance test required by the *Elevator Safety Code*, *Manlift Safety Code* or *Personnel Hoist Safety Code*, as applicable, to show that such equipment meets the requirements specified before placing the equipment into service.

3010.1.3 Acceptance inspections. All acceptance inspections shall be performed by the *building official* or an approved agency.

3010.2 Operating permits.

3010.2.1 General. An operating permit shall be issued by the *building official* for an elevator, dumbwaiter, escalator, manlift, moving walk, personnel hoist, inclined stairway chairlift or wheelchair lift within 10 days following the receipt of an inspection report indicating compliance with this chapter and applicable safety codes and the payment of the fee provided for in Section 118 and the city fee schedule.

No owner or lessee of an elevator, dumbwaiter, escalator, manlift, moving walk, inclined stairway chairlift, personnel hoist, or wheelchair lift shall suffer or permit the same to be operated by any person except under a current and valid operating permit or limited permit that has been issued for the equipment by the *building official*.

Exception: No operating permit or limited permit shall be required for the operation of the conveyance equipment if located in a Group R-3 occupancy or in an individual dwelling unit of a Group R-2 occupancy.

The operating permit shall be issued for a period of one year and shall be valid only for the operation of the equipment at the rated load and speed for such equipment, which shall be stated on the permit. Operating permits shall not be issued for personnel hoists, which shall be subject to operation only under a limited permit.

If an inspection report required by this chapter indicates failure of compliance with applicable requirements of this chapter, or, in the case of new or altered installations, with detailed plans and specifications approved by the *building official*, the *building official* shall give written notice to the owner or lessee or the person or persons filing such plans and specifications of the deficiencies that must be cured for compliance therewith. After the equipment has been brought into conformity, the *building official* shall issue an operating permit.

3010.2.2 Annual operating permit. Permits will show the location, type, and number of units permitted.

3010.2.3 Posting of permits. An operating permit for an elevator, platform lift, automated people mover, personnel hoist, or related equipment must be displayed in one of the following areas:

1. Inside the elevator car enclosure or platform lift, automated people mover, personnel hoist, or related equipment or passenger enclosure, not more than 7 feet (2,133.6 mm) or less than 3 feet (914.4 mm) above the finished car floor;
2. Outside the elevator car enclosure or platform lift or related equipment or passenger enclosure, in the main lobby within 10 feet (3,048 mm) of the call button and not more than 7 feet (2,133.6 mm) or less than 3 feet (914.4 mm) above the finished landing floor; or

3. In a common area lobby or hallway location within the building in which the equipment is located that is:

3.1 Accessible to the public without assistance or permission during all hours in which any equipment is in operation; and

3.2 Identified by a plaque mounted in the elevator car enclosure or passenger enclosure within 10 feet (3,048 mm) of the call button in the main elevator lobby directing the public to the location where the permit is displayed. The font size for letters on the plaque shall be at least 18 points (¼ inch "76.2 mm"), and the plaque must state that the equipment is "Regulated by the Texas Department of Licensing and Regulation (TDLR) and the City of Houston (COH) Elevator Inspections Section" and include the department's and section's telephone numbers "TDLR 1-800-803-9202, COH 832-394-8861" or "Regulated by the City of Houston (COH) Elevator Inspections Section" and include the telephone number "COH 832-394-8861," whichever is applicable, and in either instance listed above include the building management's telephone number. These postings shall be updated by the owner of the property within 30 days if there is a change in the contact information for either TDLR or COH.

3010.2.3.1 Escalators. An operating permit for an escalator or moving sidewalk must be displayed in one of the following areas:

1. In a common area lobby or hallway location not more than 7 feet (2,133.6 mm) or less than 3 feet (914.4 mm) above the finished landing floor and within the building in which the equipment is located accessible to the public without assistance or permission during all hours in which any escalator or moving sidewalk is in operation; or

2. In a common area lobby or hallway location within the building in which the equipment is located that is:

2.1 Accessible to the public without assistance or permission during all hours in which any escalator or moving sidewalk is in operation; and

2.2 Identified by a plaque mounted within 10 feet (3,048 mm) of entry or exit of the escalator or moving sidewalk directing the public to the location where the permit is displayed. The font size for letters on the plaque shall be at least 18 points (¼ inch), and the plaque must state that the equipment is "Regulated by the Texas Department of Licensing and Regulation" and include the department's telephone number 1-800-803-9202 and the building management's telephone number. These postings shall be updated by the owner of the property within 30 days if there is a change in the contact information for TDLR.

3010.2.4 Limited operating permit. The *building official* may issue a limited permit authorizing the temporary use of any elevator, dumbwaiter, escalator, manlift, moving

walk, inclined stairway chairlift, personnel hoist or wheelchair lift for passenger or freight service during its installation or alteration.

In the case of elevators, such limited permit will not be issued until the elevator has been tested with rated load; car safety and terminal stopping equipment have been tested to determine the safety of the equipment; and permanent or temporary guards or enclosures have been placed on the car, around the hoistway and at the landing entrances on each floor. Landing entrance guards shall be provided with locks that can be released from the hoistway side only. Automatic and continuous pressure elevators shall not be placed in temporary operation from the landing push buttons unless door-locking devices and/or interlocks required by the *Elevator Safety Code* are installed and operative. All tests required by this paragraph and reports thereof must indicate compliance with all applicable provisions of the *Elevator Safety Code* before a temporary permit will be issued.

For personnel hoists, a limited permit will not be issued until the hoist has been inspected in accordance with the *Personnel Hoist Safety Code* and has been determined to be in compliance therewith.

3010.2.5 Life of limited permits. Limited permits shall be issued in the same manner as operating permits, provided that they shall be valid for a period not to exceed 90 days. However, any equipment being operated pursuant to a limited permit shall be inspected at intervals not exceeding 30 days by the *building official* or an approved agency.

3010.2.6 Posting of limited permits. Each limited permit shall be conspicuously posted at a place that is near to or visible from each entrance to permitted equipment, and the limited permit shall also include a statement that the equipment has not been finally approved.

3010.2.7 Responsibility. The person installing, relocating, or altering any equipment operating under a limited permit shall be responsible for its operation and maintenance and for all required tests and inspections until the operating permit has been issued by the *building official*.

The owner or owner's representative shall be responsible for the safe operation and proper maintenance of such equipment after the operating permit has been issued and during the period of effectiveness of any limited permit. The owner and owner's representative shall also be responsible for all initial and periodic tests required by this chapter.

3010.2.8 Special permission for employee use. Special permission may be granted by the *building official* for use of freight elevators by employees of the establishment in which they are situated if the *building official* finds that there is compliance with the requirements of Rule 207.4 of the *Elevator Safety Code*. The application therefor shall be made when the operating permit is requested, and the special permission, if granted, shall be noted on the operation permit. Except in accordance with the provisions of a special operating permit granted under this paragraph, it shall be unlawful for any elevator owner or other person in control of a freight elevator to suffer or permit the freight elevator to be used to carry any passengers other than as may be required to operate the elevator and to load and unload freight that is being carried upon the elevator.

3010.3 Approval of personnel hoists.

3010.3.1 General. A manufacturer, distributor, or agent who desires approval of a personnel hoist manufactured or distributed by him or by his principal shall submit a properly completed application meeting the requirements of this section, including proof

of licensure by the state of Texas, all data as hereafter prescribed, and payment of the fee for a manufacturer's design permit as required in Section 118 and the city fee schedule. A manufacturer, distributor, or agent shall submit a separate application, the fee, and complete data for each model varying in tower construction, capacity, speed, or method of operation.

If the *building official* finds that the hoist meets all the requirements of this code, the *Personnel Hoist Safety Code*, and all other applicable statutes and ordinances, he shall issue a permit identifying the make, model, capacity, and type of tower. If the *building official* finds that the hoist does not meet the requirements of this code, the *Personnel Hoist Safety Code*, or any other applicable statute or ordinance, the *building official* shall so notify the applicant in writing.

Manufacturer's data that must accompany the application for approval of new hoists includes:

1. Tower stress analysis, including two copies of structural specifications, drawings, and calculations, proving that the tower and base contain the factors of safety specified in the Requirements for Personnel Hoists, ANSI A10.4.
2. A letter giving the tower serial number, if any, or model description shall accompany the specifications. Such letter shall state the maximum height, wind velocity, car speed and car capacity for which the structure is designed when subjected to strain by operation of the car safety device and the maximum load and striking speed for which the buffers and base structures are designed.
3. A complete description as to the operation of the hoisting equipment and function of safety devices, including a schematic wiring diagram of safety and brake circuits and controller.
4. Periodic maintenance and inspection checklists, which must specify the frequency of each inspection. Among other things, those lists must include maximum safe tolerance of brake clearance, safety jaw clearance, and guide displacement. Any special tools or equipment required in making an inspection shall be shown and described on each list.
5. All data described in the above items 1, 2, 3, and 4 must be approved by a professional engineer registered with the State of Texas.

3010.3.2 Inspections. Inspections will be made at a time convenient to the *building official* or approved agency and the construction job superintendent at least monthly and at such additional frequencies, if any, as are stated in the application for the personnel hoist as approved by the *building official*. The *building official* or approved agency shall immediately and verbally notify the construction job superintendent of any defects that would make the personnel hoist unsafe for continued operation, and the construction job superintendent shall take the personnel hoist out of service immediately and correct any defect that would make the hoist unsafe prior to continued operation. All other defects shall be corrected as soon as is reasonably possible. Within 24 hours after the inspection, the *building official* or an approved agency shall confirm the findings in a written report to the construction superintendent. If the *building official* or approved agency has directed that the personnel hoist be taken out of service pending its repair, then it shall not be returned to service until the *building official* or approved agency has reinspected the equipment and determined that it may safely be returned to service.

3010.3.3 Penalties for violation.

3010.3.3.1 User. It shall be unlawful for any person knowingly to use or to suffer or permit the operation of a personnel hoist that was not issued a permit required by this code or that includes any defect that could make it unsafe for continued operation.

3010.3.3.2 Workers. It shall be the duty of the superintendent of each construction site to ensure that in the car of each hoist on the construction site, other than approved personnel hoists operating under a limited permit, there is conspicuously posted a card, furnished by the *building official*, stating: DO NOT RIDE THIS HOIST. VIOLATORS SUBJECT TO A $200.00 FINE—CITY OF HOUSTON. Except as provided in Section 3010.3.6 below, it shall be unlawful for any person to ride in a car that is so posted.

3010.3.4 Manlifts. Nothing in this code or in the *Personnel Hoist Safety Code* shall be construed to prohibit the use of a manlift during construction.

3010.3.5 Hoist cage platform size. The restrictions in the *Personnel Hoist Safety Code* regarding the cage platform size do not apply if the cage is equipped with an overload safety device.

3010.3.6 Material hoist. Nothing in this chapter shall prohibit the general contractor from assigning a competent attendant to ride a material hoist during the required period of its use. This attendant, when assigned, shall:

1. Prevent passengers from riding the hoist (other than the attendant);
2. Prevent overloading the hoist; and
3. Observe and report unsafe conditions to the construction superintendent.

3010.4 Tests, inspections.

3010.4.1 General. The owner or owner's representative shall be responsible for the safe operation and maintenance of each elevator, dumbwaiter, escalator or moving walk installation and shall cause annual inspections, tests and maintenance to be made on such conveyances as required in this section.

3010.4.2 Periodic inspections and tests. Every elevator, dumbwaiter, escalator, manlift, moving walk, inclined stairway chairlift and wheelchair lift shall be periodically inspected for compliance with the requirements of this chapter and the *Elevator Safety Code* or *Manlift Safety Code*, as applicable, at intervals not exceeding 12 calendar months, provided any such inspection may be made during the month following the last calendar month during which the inspection was due. Such periodic tests shall not be required for any such equipment located in a Group R-3 occupancy or an individual dwelling unit of a Group R-2 occupancy.

3010.4.3 Load tests and inspections. Full load and safety tests shall be performed by an elevator company in the presence of the *building official* or an approved agency. Full load and safety tests and inspections shall be performed at intervals of five years for each traction-type elevator.

3010.4.4 Inspection costs. All costs of such inspections and tests shall be paid by the owner or owner's representative.

3010.4.5 Inspection reports. After each inspection, a full and correct report of such inspection shall be filed by the authorized inspector/approved agency with the *building*

official within 5 days after the completion of the inspection. This report shall be in a format satisfactory to the *building official* and shall, at a minimum, indicate the name of the authorized inspector and the name of the authorized company or approved agency, the date of the inspection, the registration number of both the authorized inspector and the authorized inspecting company, the permanent identification number of the equipment inspected, name of the owner or the owner's representative and the tag number assigned by the *jurisdiction* to the equipment inspected. Tags and report forms shall be obtained from the *building official* by the authorized inspecting company. The report shall certify that the equipment inspected meets the requirements of this chapter and the *Elevator Safety Code* or *Manlift Safety Code*, as applicable, insofar as a thorough and diligent inspection of the equipment as installed allows. The report shall list all items that do not perform in accordance with this chapter or the said safety codes. Every report shall be signed by the persons performing the inspection and witnessing the tests, as applicable.

3010.4.6 Inspections. Inspections shall be performed or witnessed by certified and authorized inspection personnel of an authorized company or approved agency in accordance with criteria set forth by the *jurisdiction*.

3010.4.7 Registration. Each authorized inspector shall meet the qualification requirements of the certifying organization. All authorized inspectors and inspection supervisors shall be certified by an organization accredited by the certifying organization in accordance with requirements of the certifying organization and be annually registered with the *jurisdiction*. The business registration shall be authorization for such business organization to perform inspections and submit inspection reports. Only inspection reports submitted by authorized companies or approved agencies shall be acceptable when applying for a certificate of inspection.

Without limiting the requirements imposed by the *building official*, each approved agency shall be required to demonstrate that it has professional errors and omissions insurance coverage with policy limits of $500,000.00 or more, per occurrence; worker's compensation insurance coverage; and comprehensive general liability insurance coverage with policy limits of $1,000,000.00 or more, per occurrence. The *jurisdiction* shall be designated as an additional insured on the liability coverage, and the coverage shall include a cross-liability endorsement and a provision for 10 days' written notice to the *jurisdiction* prior to any cancellation. The *building official* shall also require an indemnification and hold harmless agreement in a form approved by the city attorney.

All coverage shall be written by an insurance firm with a rating of A or better in the most recent A.M. Best directory.

3010.4.8 Registration revocation. The *building official*, for due cause, may revoke registration of any inspecting organization or inspector. Appeals of revocations may be made to the *jurisdiction* through the *General Appeals Board* using the appeals process as set forth in Chapter 113 of this code.

3010.4.9 Delinquent inspections. Failure of the *building official* to advise the owner or owner’s representative does not alleviate the responsibility of the owner or owner’s representative for annual inspections or load tests as specified in Section 3010.4.2. In the event that any required report of an inspection is not filed with the *building official* by the 30th day after the final date when such equipment should have been inspected or tested, the owner of the equipment or the owner’s representative shall be presumed to be in violation of the requirements of this code.

If, after the 120th day, the owner or the owner's representative has not complied with the requirements of this chapter by providing the information required, the *jurisdiction* shall have the authority to assign inspection of the equipment in question to an authorized inspection organization for completion of the necessary inspections and tests. The costs of such inspections shall be borne by the owner or the owner's representative, and the decision of the *building official* shall be final and binding on the owner or owner's representative.

3010.5 Fees for tests and inspections. Fees shall be required as set forth in Section 118 and the city fee schedule.

3010.6 Unsafe conditions. When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner or owner's representative and the *building official* a full and true report of such inspection and such unsafe condition. If the *building official* finds that the unsafe condition endangers human life, the *building official* shall place on such elevator, dumbwaiter, escalator, manlift, moving walk, inclined stairway chairlift, wheelchair lift or personnel hoist, in a conspicuous place, a notice stating that such conveyance is unsafe. The owner or owner's representative shall ensure that such notice of unsafe condition is legibly maintained where it was placed by the *building official*. The *building official* shall also issue an order in writing to the owner or owner's representative requiring the repairs or alterations to be made to such conveyance that are necessary to render it safe and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A posted notice of unsafe conditions shall be removed only upon authority of the *building official*.

CHAPTER 31
SPECIAL CONSTRUCTION

3103.1.2 Permit required. Temporary structures ~~that cover an area greater than 120 square feet (11.16 m^2), including connection areas or spaces with a common *means of egress* or entrance that are used or intended to be used for the gathering together of 10 or more persons,~~ shall not be erected, operated or maintained for any purpose without obtaining approval and where required a building *permit* from the *building official*. Temporary building shall be compliant with the applicable provisions of this code and be completely removed before 180 days after installation or upon the expiration of the time limit stated in the permit.

Exception: A separate temporary structure permit is not required for a construction trailer or shed used during the construction of a structure when a permit has been obtained for the construction work.

3103.5 Use period. The aggregate time associated with use or existence of temporary structures, including but not limited to tents or air-supported, air-inflated or tensioned membrane structures, shall not be or extend for a period of more than 179 days within a 12-month period on a single premises.

Exception: Buildings complying with this code for the intended use and permitted as a permanent structure are exempt.

3104.4 Reserved. ~~**Contents.** Only materials and decorations *approved* by the *building official* shall be located in the *pedestrian walkway*.~~

{**EDITORIAL NOTE:** DELETE SECTION 3109 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

3109.1 General. The design and construction of swimming pools, spas, and hot tubs shall comply with the requirements of the *City Code* and Chapter 757 of the *Texas Health and Safety Code*.

SECTION 3112
DRIVEWAYS, SIDEWALKS, PARKING LOTS, BUS PADS AND LANDINGS, AND ALLEYS

{**REVIEW NOTE:** SECTION 3112 IS COORDINATED WITH THE CITY ENGINEER ROW STANDARDS AND IS SUBJECT TO CHANGE.}

3112.1 Purpose. This section establishes the minimum regulations governing the design and construction of driveways, sidewalks, parking lots, bus pads and landings, alleys, and paving as required by this code, the *Infrastructure Design Manual* and the *City Code*. The most restrictive provision of applicable codes and ordinances shall prevail.

3112.2 Definitions. The following terms, when used in this section, shall have the meaning ascribed in Chapter 2:

ALLEY.

DRIVEWAY.

DRIVEWAY APPROACH.

HIGHWAY, STREET OR ROAD.

INFRASTRUCTURE DESIGN MANUAL.

LOADING BERTH.

LOCAL STREET OR ROAD.

MAJOR THOROUGHFARE.

PARKING LOT.

PAVING.

PEDESTRIAN.

RIGHT-OF-WAY.

ROADWAY (GENERAL).

SIDEWALK.

3112.3 Paving on private property. Driveways, sidewalks, patios, and other paving not located in the right-of-way, or not dedicated to the *jurisdiction* for the purpose of sidewalk construction, shall comply with this section.

3112.3.1 Driveways. Driveways shall comply with the provisions of Section 3112.3.2 and shall connect to a driveway approach as provided in Section 3112.4.3.

3112.3.2 Paving. All other paving regulated under this section shall meet the minimum slab provisions of Section 1610 and any loads specified in Chapter 16, as applicable. These provisions shall be in addition to any standards required by Chapter 28 of the *City Code* regarding parking in yards. All paving or improved surfaces shall comply with Section 3112.6.

3112.3.3 Parking lots. The construction of parking lots shall be as required this section and Drawings 31-01 and 31-02 of Section 3112.4.5. Parking lots shall be designed to meet the loads as specified in Chapter 16. All driveway approaches and access to the parking lot shall be approved by the Office of the City Engineer in Houston Public Works.

3112.3.3.1 General. When an area is being developed for parking, a plan shall be prepared and submitted to the *building official* showing the boundary, entrances and exits, geometric layout of parking stalls and aisles, operating plan, drainage, and surfacing or paving. The area being developed for parking shall be surfaced with materials that will not permit wind or waterborne erosion from the area.

3112.3.3.2 Exiting from lot. When the parking lot is designed to create a one-way aisle operation, an exit shall be provided to enable the vehicle exiting to enter the street in a head-out position.

3112.3.3.3 Wheel stops. A 6-inch curb/wheel stop shall be installed not less than 2.5 feet from the right-of-way line when property is improved for vehicle use within 3 feet of the right of-way line. Barrier fencing or minimum 4-inch-diameter posts spaced not more than 3 feet apart and not less than 2 feet in height may be installed on the right-of-way line as a substitute for wheel stops. If the improved area is concrete, a permanent 6-inch curb shall be installed in lieu of wheel stops.

3112.4 Work located in the *jurisdiction's* right-of-way. All work in the right-of-way shall be approved by the Office of the City Engineer in Houston Public Works. Construction or repair of any sidewalk, driveway approach, curb, gutter, or bus pad and landing shall comply with this section and Chapter 40, Article III, of the *City Code* and the *Infrastructure Design Manual*.

3112.4.1 *Jurisdiction* approval of plans and specifications. No person shall construct or cause to be constructed any driveway approach, sidewalk, private street, parking lot or alley connecting private property with a public street and there shall be no fill deposited in the right-of-way without prior approval of Houston Public Works.

3112.4.2 Plot plan. A complete site plan shall be prepared to a reasonable scale and submitted to Houston Public Works and the *jurisdiction's* Department of Planning and Development showing the following information:

1. All right-of-way lines and property lines that bound the property planned for improvement.
2. Width and design of all existing driveways, driveway approaches, sidewalks, and media openings as they exist on the ground.
3. Existing conditions between the right-of-way line and the traveled roadway, including curbs, ditches, storm sewer inlets, manholes, utility boxes, utility poles, fire hydrants, trees, etc. If median islands exist, the next median opening on each side of the property and any trees within the median adjacent to the property.
4. If open ditches exist, the diameter size and invert elevation of the nearest existing culvert pipe upstream and downstream.
5. The complete intersection when property planned for improvement fronts a "T" intersecting street.
6. All existing on-site conditions with dimensions when property is being improved with add-on construction, remodeling, accessories, repairs, erection of building parking lots or any other improvements.
7. All proposed driveways and sidewalks, and the existing right-of-way conditions for a minimum 15 feet beyond the property line on each side.

3112.4.3 Driveway approach approval. Upon receipt of an application for a driveway approach permit, the Office of the City Engineer in Houston Public Works shall make a determination, pursuant to the guidelines set out in Section 40-86 of the *City Code*, as to whether the driveway approach applied for is necessary to provide reasonable access to the private property consistent with the safety and convenience of the public.

If after review, the Office of the City Engineer in Houston Public Works finds that the plans comply with all applicable codes and ordinances, the Office of City Engineer shall approve the plans.

3112.4.4 Sidewalks. When required by Chapter 10 of the *Infrastructure Design Manual*, public sidewalks shall be constructed in accordance with the applicable *Infrastructure Design Manual* drawing number for the specified location and site conditions.

3112.4.5 Standards for design and construction. All construction regulated by this section shall be designed and constructed in accordance with the provisions of this section, including the following three drawings and the *Infrastructure Design Manual*, latest revised edition, including the drawings therein. When there is a conflict between this code and the *Infrastructure Design Manual*, the most restrictive provisions shall prevail.

1. PARKING LOT REQUIREMENTS ROW STANDARDS (T&T Drawing. No. 31-01).

2. PARKING LOT REQUIREMENT PRIVATE PROPERTY STANDARDS (T&T Drawing No. 31-02).

3. PARKING LOT REQUIREMENTS PARKING SPACE DIMENSIONS (T&T Drawing No. 31-03).

3112.4.6 Loading berth. In no case shall a "back-in" loading berth be constructed on a major thoroughfare where the vehicle will use the major thoroughfare for maneuvering purposes.

Where off-street "back-out" loading berths are constructed, the loading area shall be sufficiently designed and constructed to store the commercial motor vehicle, truck-tractor, tractor, trailer or semitrailer or combination of such vehicles within private property, and no part of the vehicle shall protrude over the property line or obstruct any public street or sidewalk area in whole or in part.

The depth of the loading berth from the right-of-way line extending into the private property shall be determined based on the types of commercial vehicles using the facility.

3112.4.7 Street curb and gutter replacement. Where construction of driveway approaches and sidewalks will require the removal and replacement of curb and gutter over a continuous run in excess of 25 percent of any one block, the permit applicant shall submit a plan to the Office of the City Engineer in Houston Public Works. In addition to all other applicable requirements in this section, the plans shall comply with the *Infrastructure Design Manual*.

3112.4.8 Alley paving. The requirements for paving a public alley are identical to those for paving a public street. Plan-profile type of drawings prepared by a licensed professional engineer in the State of Texas and approved by all appropriate *jurisdictio*n departments are required. The *Infrastructure Design Manual* will govern the design and construction of alleys. A separate paving permit issued by Houston Public Works and a separate paving bond will be required prior to any construction.

3112.4.9 Driveway approach drainage. In the event an existing curb-type storm sewer inlet falls within the proposed driveway approach area, a new curb-type storm sewer inlet will be required to be constructed on the nearest remaining straight curb line. The existing inlet will be converted to a flat grate-type inlet and connected to the new inlet by a concrete pipe lead of a diameter not less than the existing lead. Failure to show the existing inlets on the plot plan in no way excuses compliance with the above requirement, even though the permit may have been issued. Refer to Houston Public Works Drawings Nos. 02632-03 and 02632-05 of the *Infrastructure Design Manual* (relocation of Type B and B-B inlets).

3112.4.10 Bonded contractor. No permit shall be issued to construct, reconstruct, repair, or regrade any driveway approach, sidewalk, culvert pipe, curb or gutter within the *jurisdiction* unless the applicant shows evidence that he has secured a bond in accordance with Section 40-95 of the *City Code*.

Exception: A homeowner will be issued a permit to install culvert pipe or construct a driveway approach where no curb cut is required in accordance with *jurisdiction* specifications without the bond required above.

3112.4.11 Responsibility of property owners. For responsibility of property owners of abutting public streets relative to construction or repair of sidewalks, driveways, driveway approaches, and culverts, see Section 40-84 of the *City Code*. For *jurisdiction*

requirements relative to altering the grades of driveways, sidewalks, culvert pipes, curbs and gutters, see Section 40-90 of the *City Code*.

3112.4.12 Driveway approaches prohibited. Driveway approaches are prohibited within any of the following areas:

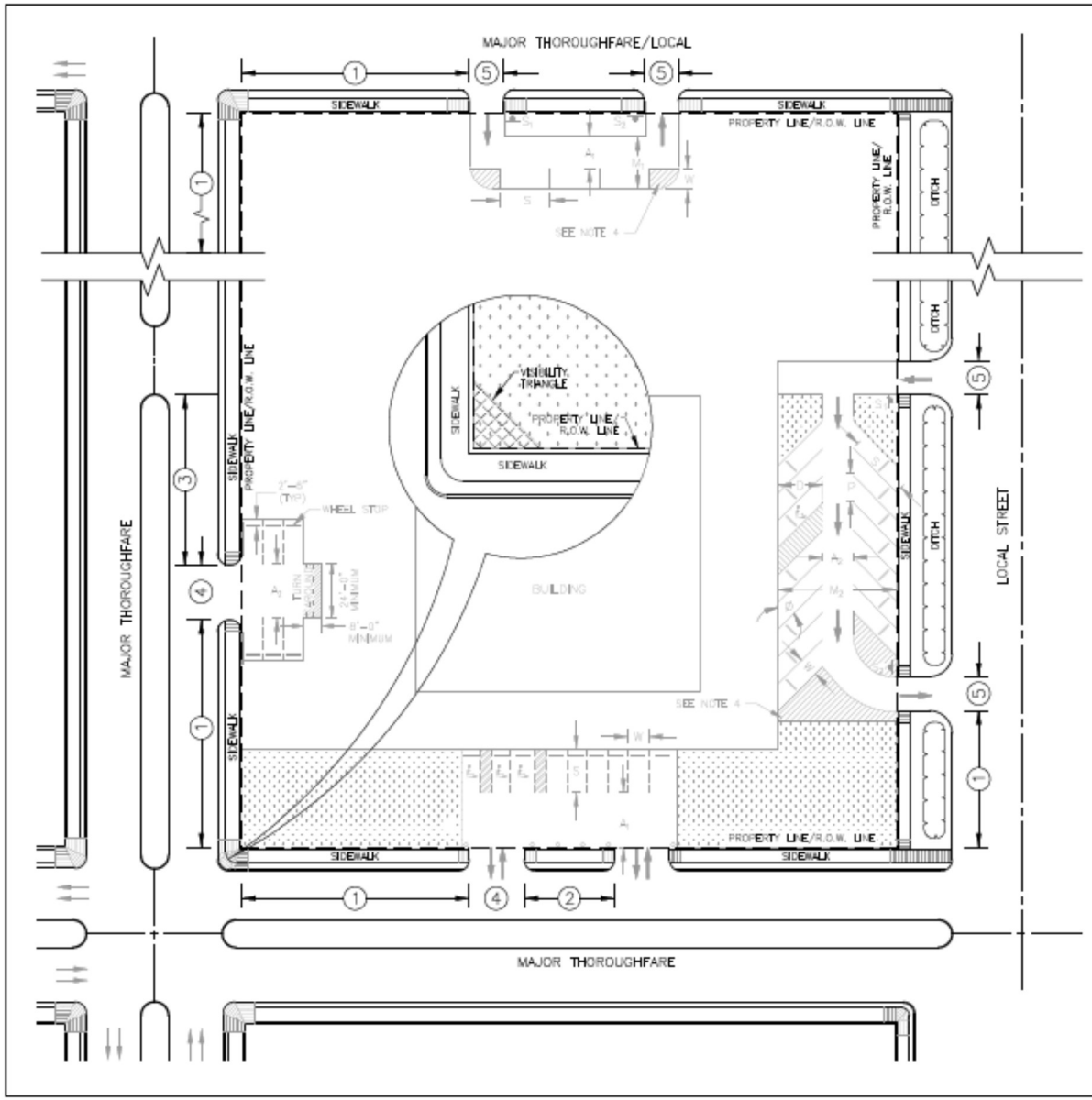
1. The areas set forth by the Texas Department of Transportation as "access denied."
2. The areas designated "access denied" on a recorded subdivision plat or another plat required to be approved by the City of Houston Planning Commission.
3. At the end of any dead-end street not terminating in a cul-de-sac or permanent turnaround and intended to be extended in the future.
4. The limits of any intersection, with the exception that special consideration will be given to major thoroughfares with existing esplanades and streets primarily used for residential use.
5. Abutting a local street where there is less than 20 feet (6,096 mm) of unobstructed depth from the right-of-way line to any obstruction. An overhead door will not be deemed as an obstruction provided that the width of the door is equal to or greater than the width of the driveway and there is also a minimum of 20 feet unobstructed dept on the private property where vehicles can be parked.
6. An area abutting a major thoroughfare where the general design of parking does not provide the necessary depth of 44 feet (13,420 mm) to allow a vehicle when exiting to enter the thoroughfare in a head-out position.
7. Any area where Houston Public Works finds that it would not provide reasonable access to the private property consistent with the safety and convenience of the traveling public.
8. Within areas of unpaved street or alley rights-of-way, except as authorized by Section 40-340 of the *City Code*.
9. Any alley where the proposed driveway approach provides the primary access to any building or structure where required fire department access as specified by the *Fire Code* is not provided.

Where the construction of any building or structure upon a property causes a driveway to no longer comply with items 6 or 7 above, the driveway shall be removed and the area converted so that it conforms to the design of the surrounding area.

3112.5 Off-street parking. No building or structure shall be constructed, altered or moved onto any lot or building site unless off-street parking spaces are provided pursuant to the restrictions or covenants contained in or related to the subdivision plat or development plat for the property and the parking requirements established in Chapter 26 of the *City Code*.

3112.6 Drainage. All paved areas including, but not limited to, alleys, yards, courts and courtyards shall be drained into a storm sewer system where such systems are available; otherwise, they shall be drained to a place of disposal approved by the Office of the City Engineer in the Houston Public Works. For other than single family residential properties, storm water drainage shall not discharge or flow over any public sidewalk or adjoining property. When required by Chapter 9 of the *Infrastructure Design Manual*, detention shall be required.

3112.7 Bus pads and landings. When a right-of-way contains a bus stop, the engineer shall design the bus pad and landing to integrate with the sidewalk in accordance with Chapter 10, Section 10.06.H, item 12 of the *Infrastructure Design Manual*.



LEGEND:

① – DRIVEWAY PLACEMENT

② – DISTANCE BETWEEN DRIVEWAY

③ – DRIVEWAY OFFSET FROM MEDIAN NOSE

④ – TWO WAY COMMERCIAL DRIVEWAY

⑤ – ONE WAY COMMERCIAL DRIVEWAY

NOTES:

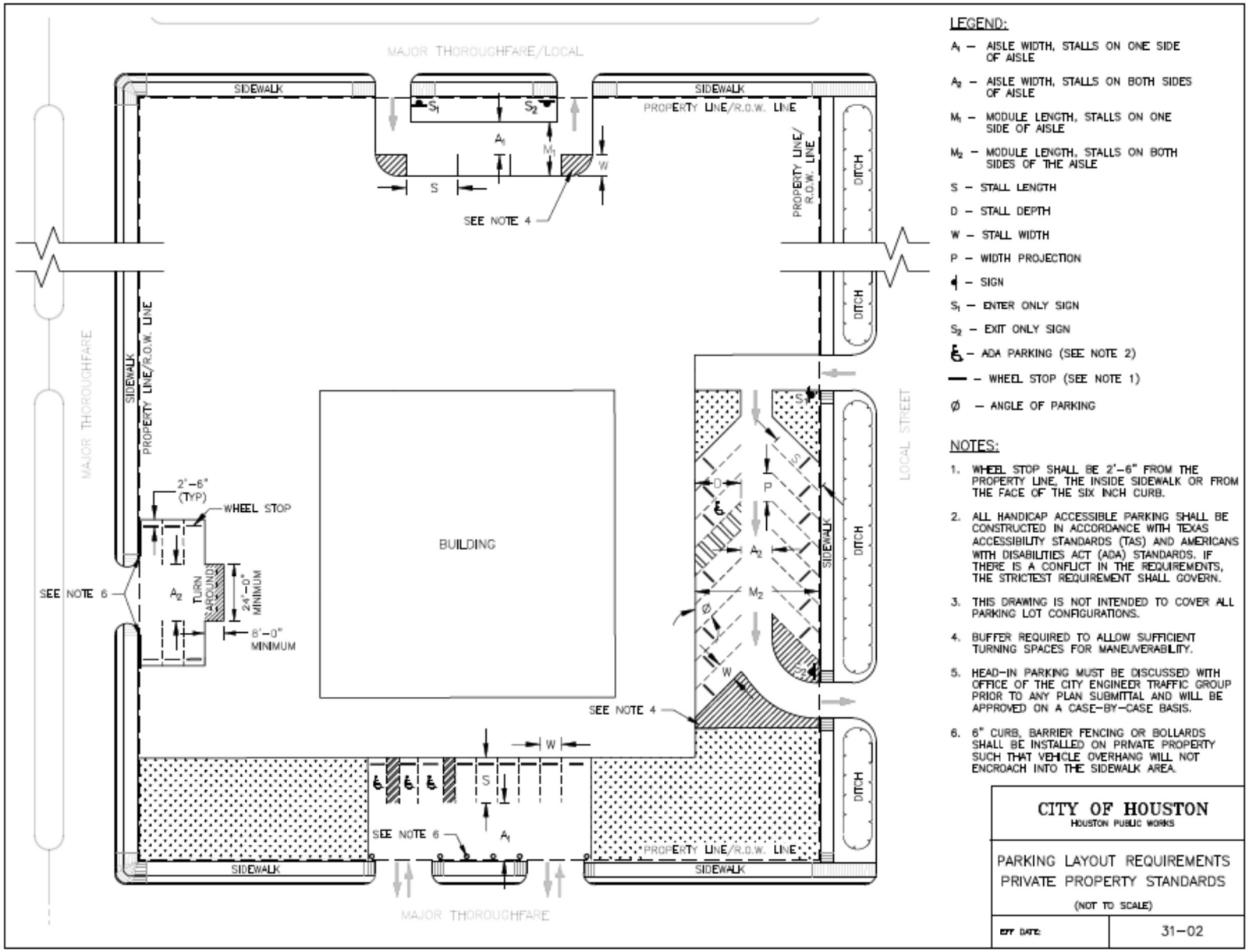
1. FOR LEGEND ITEMS ① – ⑤ REFER TO CITY OF HOUSTON INFRASTRUCTURE DESIGN MANUAL, CHAPTER 15 ACCESS MANAGEMENT STANDARDS.
2. EXISTING DRIVEWAYS ARE NOT GRAND–FATHERED FOR NEW CONSTRUCTION.
3. WHEN CONVERTING AN EXISTING BUILDING'S USE, EXISTING DRIVEWAYS MUST BE DISCUSSED WITH THE OFFICE OF THE CITY ENGINEER TRAFFIC GROUP AND WILL BE APPROVED ON A CASE–BY–CASE BASIS.
4. STREET PAVEMENT AND TRAFFIC SIGN MODIFICATIONS SHALL BE COORDINATED WITH AND APPROVED BY TRANSPORTATION AND DRAINAGE OPERATIONS.
5. THE PLANING AND DEVELOPMENT DEPARTMENT REVIEWS SIDEWALK WIDTH, PLACEMENT, AND APPLICATIONS FOR MODIFICATION WITHIN HOUSTON CITY LIMITS. REFER TO SIDEWALK PEDESTRIAN REALM CHAPTER 40 OF THE CITY OF HOUSTON CODE OF ORDINANCES AND CHAPTER 17 OF THE INFRASTRUCTURE DESIGN MANUAL FOR SIDEWALK DESIGN REQUIREMENTS.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

DRIVEWAY LAYOUT GUIDELINES

(NOT TO SCALE)

EFF DATE:	31–01



LEGEND:

- A_1 – AISLE WIDTH, STALLS ON ONE SIDE OF AISLE
- A_2 – AISLE WIDTH, STALLS ON BOTH SIDES OF AISLE
- M_1 – MODULE LENGTH, STALLS ON ONE SIDE OF AISLE
- M_2 – MODULE LENGTH, STALLS ON BOTH SIDES OF THE AISLE
- S – STALL LENGTH
- D – STALL DEPTH
- W – STALL WIDTH
- P – WIDTH PROJECTION
- – SIGN
- S_1 – ENTER ONLY SIGN
- S_2 – EXIT ONLY SIGN
- – ADA PARKING (SEE NOTE 2)
- – WHEEL STOP (SEE NOTE 1)
- Ø – ANGLE OF PARKING

NOTES:

1. WHEEL STOP SHALL BE 2'-6" FROM THE PROPERTY LINE, THE INSIDE SIDEWALK OR FROM THE FACE OF THE SIX INCH CURB.
2. ALL HANDICAP ACCESSIBLE PARKING SHALL BE CONSTRUCTED IN ACCORDANCE WITH TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENT SHALL GOVERN.
3. THIS DRAWING IS NOT INTENDED TO COVER ALL PARKING LOT CONFIGURATIONS.
4. BUFFER REQUIRED TO ALLOW SUFFICIENT TURNING SPACES FOR MANEUVERABILITY.
5. HEAD-IN PARKING MUST BE DISCUSSED WITH OFFICE OF THE CITY ENGINEER TRAFFIC GROUP PRIOR TO ANY PLAN SUBMITTAL AND WILL BE APPROVED ON A CASE-BY-CASE BASIS.
6. 6" CURB, BARRIER FENCING OR BOLLARDS SHALL BE INSTALLED ON PRIVATE PROPERTY SUCH THAT VEHICLE OVERHANG WILL NOT ENCROACH INTO THE SIDEWALK AREA.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

PARKING LAYOUT REQUIREMENTS
PRIVATE PROPERTY STANDARDS

(NOT TO SCALE)

EFF DATE:	31-02

TABLE 1 – PARALLEL PARKING									
DIMENSIONS		ONE–WAY TRAFFIC				TWO–WAY TRAFFIC			
STALL WIDTH (W)	STALL LENGTH (S)	AISLE WIDTH (A_1)	MODULE LENGTH (M_1)	AISLE WIDTH (A_2)	MODULE LENGTH (M_2)	AISLE WIDTH (A_1)	MODULE LENGTH (M_1)	AISLE WIDTH (A_2)	MODULE LENGTH (M_2)
ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
9.0	22.0	12.0	21.0	12.0	30.0	20.0	29.0	20.0	38.0

TABLE 2 – ANGLED PARKING												
ANGLE	DIMENSIONS				ONE–WAY TRAFFIC				TWO–WAY TRAFFIC (SEE NOTE 1)			
ANGLE OF PARK (ø)	STALL WIDTH (W)	WIDTH PROJECTION (P)	STALL DEPTH (D)	STALL LENGTH (S)	AISLE WIDTH (A_1)	MODULE LENGTH (M_1)	AISLE WIDTH (A_2)	MODULE LENGTH (M_2)	AISLE WIDTH (A_1)	MODULE LENGTH (M_1)	AISLE WIDTH (A_2)	MODULE LENGTH (M_2)
DEGREES	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
45	8.5	12.0	19.4	27.5	12.0	31.4	14.0	52.9	–	–	24.0	62.9
60	8.5	9.8	20.7	23.9	14.0	34.7	16.0	57.4	–	–	24.0	65.4
75	8.5	8.8	20.6	21.3	15.0	36.6	19.0	60.1	–	–	24.0	65.1
90	8.5	8.5	19.0	19.0	18.0	37.0	22.0	60.0	22.0	41.0	24.0	62.0
45	9.0	12.7	19.8	28.0	12.0	31.8	14.0	53.6	–	–	24.0	63.6
60	9.0	10.4	21.0	24.2	14.0	35.0	16.0	57.9	–	–	24.0	65.9
75	9.0	9.3	20.7	21.4	15.0	36.7	19.0	60.4	–	–	24.0	65.4
90	9.0	9.0	19.0	19.0	18.0	37.0	22.0	60.0	22.0	41.0	24.0	62.0
45	9.5	13.4	20.2	28.5	12.0	32.2	14.0	54.3	–	–	24.0	64.3
60	9.5	11.0	21.2	24.5	14.0	35.2	16.0	58.4	–	–	24.0	66.4
75	9.5	9.8	20.8	21.5	15.0	36.8	19.0	60.6	–	–	24.0	65.6
90	9.5	9.5	19.0	19.0	18.0	37.0	22.0	60.0	22.0	41.0	24.0	62.0

LEGEND:

A_1 – AISLE WIDTH, STALLS ON ONE SIDE OF AISLE

A_2 – AISLE WIDTH, STALLS ON BOTH SIDES OF AISLE

M_1 – MODULE LENGTH, STALLS ON ONE SIDE OF AISLE

M_2 – MODULE LENGTH, STALLS ON BOTH SIDES OF THE AISLE

S – STALL LENGTH

D – STALL DEPTH

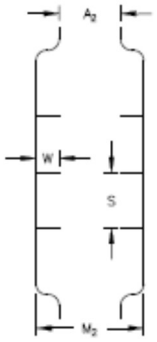
W – STALL WIDTH

P – WIDTH PROJECTION

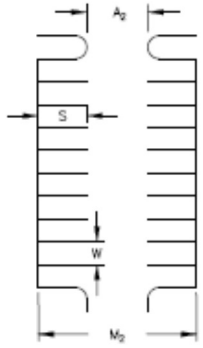
Ø – ANGLE OF PARKING

NOTES:

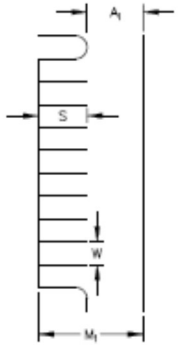
1. TWO–WAY TRAFFIC IS NOT PERMITTED FOR ANGLED PARKING WHEN BOTH THE ANGLE OF PARK IS LESS THAN 90 DEGREES AND PARKING STALLS ARE ONLY ON ONE SIDE OF THE AISLE.



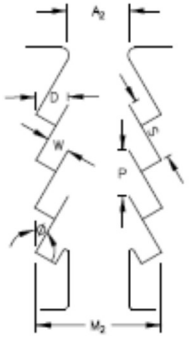
ONE–WAY/TWO–WAY
PARALLEL PARKING



ONE–WAY/TWO–WAY
ANGLED PARKING
90 DEGREE



ONE–WAY/TWO–WAY
ANGLED PARKING
90 DEGREE



ONE–WAY
ANGLED PARKING

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

PARKING LAYOUT DIMENSIONS
PRIVATE PROPERTY STANDARDS

(NOT TO SCALE)

EFF DATE:	31–03

CHAPTER 32

ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY

{**REVIEW NOTE:** CHAPTER 32 IS COORDINATED WITH THE CITY ENGINEER ROW STANDARDS AND IS SUBJECT TO CHANGE.}

3202.1.1 Structural support. A part of a building erected below grade that is necessary for structural support of the building or structure shall not project beyond the *lot lines,* except that the footings of street walls or their supports that are located not less than 8 feet (2,438 mm) below grade shall not project more than ~~12~~ 24 inches (~~305~~ 610 mm) beyond the street *lot line*.

3202.2 Encroachments above grade and below 8 feet in height. Encroachments into the public right-of-way above grade and below 8 feet (2,438 mm) in height shall be prohibited except as provided for in Sections 3202.2.1 through 3202.2.3. ~~Doors and windows shall not open or project into the public right-of-way~~ Projections shall not encroach within the required width of a sidewalk.

3202.2.4 Doors. Power-operated doors and their guide rails shall not project over public property. Other doors, either when fully opened or when opening, shall not project more than 3 feet (915 mm) beyond the property line, except that in alleys no projection beyond the property line is permitted.

Exception: Doors that do not encroach within the required width of a sidewalk and that will not interfere with the sidewalk flow of pedestrian traffic as determined by the *building official* are exempt.

3202.3.1 Awnings, canopies, and marquees ~~and signs~~. *Awnings*, canopies, and marquees ~~and signs~~ shall be constructed so as to support applicable loads as specified in Chapter 16. *Awnings*, canopies, and marquees ~~and signs with less than 15 feet (4 572 mm) clearance above the sidewalk~~ shall not extend into or occupy more than two-thirds the width of the sidewalk measured from the building. Stanchions or columns that support *awnings*, canopies, and marquees ~~and signs~~ shall be located not less than 2 feet (610 mm) in from the curb line.

3202.3.3 ~~Encroachments 15 feet or more above grade.~~ ~~Encroachments 15 feet (4 572 mm) or more above grade shall not be limited.~~ **Entrance-type canopy.** Entrance-type canopies may have combustible coverings supported on noncombustible frames. The lowest part of such frames shall be not less than 8 feet (2,438 mm) above the grade immediately below, and the lowest part of any fringe or material attached to the covering shall be not less than 7 feet (2,133 mm) above the grade immediately below. The horizontal clearance between the entrance-type canopy and curb line shall be not less than 2 feet (610 mm). In any case, where posts may be necessary for support at the street end of such canopies, such posts shall be installed 2 feet (610 mm) from the curb line.

There shall not be any other such post on public property between these outer posts and the property line. Such canopies shall not be wider than 12 feet (3,658 mm).

3202.3.4 Pedestrian walkways. The installation of a pedestrian walkway over a public right-of-way shall be subject to the approval of the applicable governing authority. ~~The vertical clearance from the public right-of-way to the lowest part of a *pedestrian walkway* shall be not less than 15 feet (4 572 mm).~~

~~**3202.4 Temporary encroachments.** Where allowed by the applicable governing authority, vestibules and storm enclosures shall not be erected for a period of time exceeding seven months in any one year and shall not encroach more than 3 feet (914 mm) nor more than one-fourth of the width of the sidewalk beyond the street *lot line*. Temporary entrance *awnings* shall be erected with a clearance of not less than 7 feet (2 134 mm) to the lowest portion of the hood or *awning* where supported on removable steel or other *approved* noncombustible support.~~

CHAPTER 33
SAFEGUARDS DURING CONSTRUCTION

3301.1 Scope. The provisions of this chapter shall govern safety during construction and the protection of adjacent public and private properties, and in accordance with NFPA 241.

3302.2 ~~Manner of removal.~~ ~~Waste materials shall be removed in a manner that prevents injury or damage to persons, adjoining properties and public rights-of-way.~~ **Deconstruction or material removal.** Earth taken from excavations and materials or rubbish taken from buildings from day to day shall not be left upon the sidewalks or streets but shall be removed as rapidly as accumulated. When such materials are dry and likely to produce a dust when handled, they shall be kept moist so as to prevent the wind blowing the same about.

3303.8 Foundation. All concrete slabs shall be removed in conjunction with the demolition of the corresponding structure.

> **Exception:** When a written request is submitted by the applicant and approved by the *building official* to use the foundation for an alternate use.

> **3304.1.5 Permanent excavation.** Permanent excavations shall be protected by permanent means to prevent the movement of the earth of adjoining properties. Such protection shall be provided by the person causing the excavation to be made and shall be on the property and at the expense of the person causing the excavation to be made. The *building official* may require excavations to be protected by the construction of a substantial barricade or fence not less than 6 feet (1,828.8 mm) in height enclosing such excavated area.
>
> **3304.1.6 Protection of adjacent property.** When a lot or plot is graded to a higher or lower finished grade level than the natural grade on adjacent property, the owner of such lot or plot shall provide a retaining wall or walls on his own property, to protect the adjacent property from caving of earth. Approved protection shall be provided to protect the adjacent property from overflow of water.
>
> **3304.1.7 Public property.** The person causing any excavation to be made shall prevent the movement of the earth of adjoining properties and the trees and natural objects thereon or therein and shall be responsible for maintaining or restoring public sidewalks, curbs and pavements, and the properties of public utilities that may be affected by the excavation. The maintenance or restoration of sidewalks, curbs and pavements shall be performed in accordance with the grades, levels and other requirements of Houston Public Works, and the maintenance or restoration of the property of public utilities shall be in accordance with the procedures established by the owners thereof for new construction.

3304.2 Drainage. Whenever the surface of a lot or plot is excavated, filled or graded, catch basins or connected underdrains shall be installed to preclude the accumulation of surface water. Surface water shall not be drained onto adjacent property that is not in the same ownership without written permission from the owner of the adjacent property, and existing natural ground drainage of the ground area surrounding the lot or plot that is excavated, filled, or graded shall

not be obstructed. No condition shall be created, nor any existing condition maintained, whereby there will be upon any lot or plot excavations, depressions, pits, holes, gullies or other depressions that may accumulate and retain surface water. Any such condition shall be promptly abated and protected by filling in or by providing code compliant drainage.

3307.1 Protection required. Adjoining public and private property shall be protected from damage during construction, remodeling and demolition work. Protection shall be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water run-off and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the *owners* of adjoining buildings advising them that the excavation is to be made and how ~~that~~ the adjoining buildings will ~~should~~ be protected. Said notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation. Such notice shall be in writing and shall state the depth and location of the proposed excavation.

3311.4 Temporary standpipes. Temporary standpipes may be provided in place of permanent systems if they are designed to furnish a minimum of 500 gallons (1,893 L) of water per minute at 50 pounds per square inch (345 kPa) pressure with a standpipe size of not less than 4 inches (102 mm). All outlets shall be not less than 2½ inches (63.5 mm). Pumping equipment sufficient to provide this pressure and volume shall be available at all times when the building reaches 150 feet (45,270 mm) above grade.

SECTION 3314
ACCESS FOR FIRE FIGHTING AND E.M.S. OPERATIONS

3314.1 Required access. *Approved* vehicle access for firefighting and emergency medical service shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet (30,480 mm) of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads capable of supporting vehicle loading as required by Section D102.1 of the *Fire Code* under all weather conditions up to the foundation of every structure on the site prior to the start of any vertical construction. Vehicles access shall be maintained until permanent fire apparatus access roads are available.

CHAPTER 35
REFERENCED STANDARDS

{**EDITORIAL NOTE:** PORTIONS OF THIS CHAPTER NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

ASHRAE

ASHRAE 1791 Tullie Circle, NE
Atlanta, GA 30329

Standard Reference number	Title	Referenced in code section number
170—2008	Ventilation of Health Care Facilities	1203.1

ASTM

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

Standard Reference number	Title	Referenced in code section number
B31.3—2012	Process Piping	415.11.6
E 90—09(2016)	Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements	N104.1, N105.1

NFPA

National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

Standard Reference number	Title	Referenced in code section number
70—2014	National Electrical Code	108.3, 415.11.1.8, 904.3.1, 907.6.1, 909.12.2,909.16.3, 1205.4.1, 2701.1, 2702.1.2, G501.4, G1001.6, H106.1, H106.2, K101, K111.1
241—19	Standard for Safeguarding Construction, Alteration, and Demolition Operations	3301.1

CHAPTER 46
HOUSTON SIGN CODE

The Houston Sign Code, which is published as a separate document, constitutes Chapter 46.

CHAPTER 62
LAKE HOUSTON STRUCTURES

SECTION 6201
PURPOSE

6201.1 General. This chapter prescribes design requirements applicable to bulkheads, piers, jetties and pontoon- or raft-type boats constructed in or on Lake Houston as allowed in Chapter 23 of the *City Code*.

A separate permit shall be required for each structure. In addition to the building permit, a yearly license must be obtained as required in Chapter 23, Article IV, Division 2, of the *City Code*.

The *building official shall inspect all* pier, bulkhead, and jetty sites before a permit is issued and after construction is completed. Additionally, the *building official* may require a final inspection of the said sites.

All bulkheads, jetties, and piers shall be designed by and bear the seal of a professional engineer licensed by the State of Texas.

6201.2 Existing structures. All floating structures shall be brought into conformance with the requirements of this chapter. All other structures shall be subject to the requirements of Section 102.6.1 and 115.

6201.3 Definitions. For the purpose of this chapter, these terms are defined in Chapter 2:

BULKHEAD.

COMMERCIAL PIER.

JETTY.

PIER.

PRIVATE PIER.

SECTION 6202
PIER CONSTRUCTION

6202.1 Pier construction. All piers shall comply with the following:

6202.1.1 Projection. No pier may project more than 30 feet (9.144 meters) past the point at which a 5-foot depth of water is encountered when the lake is at spillway level. No pier shall project so as to be closer to another property than that from which it projects, at any point on such pier. No pier may project more than one-third of the distance across any body of water, inlet, bay, channel, stream, or cove. No pier may be located closer than 5 feet to an extended property line. The maximum width of a commercial pier shall not exceed 12 feet, and the maximum width of a private pier shall not exceed 8 feet. No pier shall protrude into a body of water, turn, then return back to the shore of any property. Violations of this section shall be subject to penalties as prescribed in Section 114.1

6202.1.2 Superstructures. Piers may be provided with posts, railings and roofs, but shall be without walls of any kind whatsoever. Upper decks shall be limited to 600 square feet

in total area. The total area for a superstructure, upper deck and boathouse combined shall not exceed 1300 square feet.

Exception: Enclosed storage that does not exceed 40 square feet may be provided to store fishing and boating equipment.

6202.1.3 Electric power. Electrical wiring shall comply with the *Electrical Code*.

6202.1.4 Lumber. Wood piles and all lumber used in pier construction shall be pressure treated with an approved preservative.

6202.1.5 Warning devices. Amber or yellow reflectors with 3-inch-minimum-diameter lenses shall be placed on all piers and other surface installations placed in the lake. Reflectors shall be placed not more than 8 feet apart and shall be 18 inches above the water when the lake is at spillway elevation or elevation 44½ feet above mean sea level.

6202.1.6 Design requirements. Commercial piers shall be designed for at least 100 pounds per square foot live floor load. Private piers shall be designed for at least 50 pounds per square foot live floor load.

Wave action on piers shall be computed by the following formula: $P=125h^2$ (tan angle), in which the point of application is assumed to be at $\frac{3}{8}h$; P=wave pressure, in pounds per linear foot of wave or per square foot of pier area at $\frac{3}{8}h$; h=height of wave in feet (minimum for h shall be 4 feet); and angle=maximum angle between center line of pier and wave front (minimum angle is 15 degrees).

6202.1.7 Plumbing. Plumbing shall comply with the *Plumbing Code*.

6202.1.8 Alternative materials. A pier constructed of alternative materials, when approved by the *building official* in accordance with Section 104.11, shall meet or exceed minimum structural requirements and shall support or resist a surcharge of dead weight or load against it as outlined in Section 6202.1.6 above.

6202.2 Private piers. In lieu of the design requirements in Section 6202.1.6, private piers may be constructed as follows:

6202.2.1 Piles. The minimum diameter of a pile shall be 4 inches. Piles shall be embedded at least 30 inches in firm soil.

6202.2.2 Column action. All piles shall be braced with diagonal braces with not less than 2-inch by 4-inch lumber, pressure treated, and bolted with at least ½-inch galvanized bolts. Two bents (set of diagonal braced piles) in any pier shall be connected with X braces.

6202.2.3 Framing. Ledgers shall be at least 2-inch by 6-inch nominal in size and shall be bolted with at least two ½-inch galvanized bolts.

6202.2.4 Stringers. Stringers shall be at least 2-inch by 8-inch nominal in size and spaced no more than 3 feet on center.

6202.2.5 Decking. Decking must not be less than 2 feet above 44½ feet elevation. Nominal size planks shall not be less than 2-inch by 6-inch No. 2 grade, spaced not less than ¼-inch and not more than 1 inch apart, nailed with at least two 16d galvanized nails at each bearing.

SECTION 6203
FLOATING PIERS

6203.1 Floating piers. The provisions of this section shall not apply to canoes, row boats, sail boats and other boats having a single hull. All floating piers, rafts, houseboats and other structures in use on the waters of Lake Houston shall comply with applicable requirements of Section 6202.2 and the following:

6203.1.1 Flotation. Flotation shall be by properly sealed barrels, drums, tanks or pontoons constructed of marine plywood, cypress, redwood, fiberglass, foam plastic or metal. Ferrous metals shall be covered with a marine rust-resistant coating.

6203.1.2 Fasteners. All barrels, drums, tanks or pontoons used as floats shall be secured in place by means of steel straps, bolts, welds or other fasteners of similar strength and permanency. All fasteners, including bolts, nails and screws used in the floats shall be coated with rust-resistant marine coatings. No strap shall be less than 16 U.S. gauge (1.6 mm) in the least dimension.

6203.1.3 Steel framing. Steel framing members shall meet the requirements of Chapter 22. All steel fasteners shall be covered with a marine rust-resistant coating or be galvanized.

6203.1.4 Wood framing. All timber shall be redwood, cypress, or any other wood that has been pressure treated against decay. The least dimension of a beam or girder shall be 4 inches (101.6 mm) in width, and the depth shall not be less than 8 inches (203.2 mm).

6203.1.5 Flooring. Flooring shall be at least 2 inches (50.8 mm) nominal thickness and shall be cypress, redwood, or any other wood that has been pressure treated against decay.

Exception: Marine or exterior-grade plywood, ¾ inch (19.05 mm) minimum, may be used for flooring if it meets the requirements of Chapter 23.

6203.1.6 Fasteners. All fasteners shall be galvanized or coated with a rust-resistant marine material.

6203.1.7 Superstructures. Rooms, cabins, houses and roofs above the platform level shall meet the requirements of Chapters 22 and 23.

6203.1.8 Projection. Notwithstanding Section 6202.1.1, floating piers shall not exceed 300 square feet (27.87091 m^2) in total area, with a minimum width of 8 feet (2,438.4 mm) and a maximum width of 12 feet (3,657.6 mm).

SECTION 6204
BULKHEAD CONSTRUCTION

6204.1 Bulkhead construction. Bulkheads shall be constructed of wood, steel, concrete or aluminum. All wood used in construction of bulkheads shall be pressure treated with an approved preservative.

All private bulkheads shall be constructed on private property. This chapter shall not prohibit the city from constructing or causing to be constructed retaining walls or bulkheads where there is a hazard to life, limb or property or where there is evidence of pollution on the lake.

6204.2 Wood bulkheads. All bulkheads shall be designed by and bear the seal of a professional engineer licensed by the State of Texas and shall comply with the following.

6204.2.1 Piles. The minimum diameter of a pile shall be 5 inches (127 mm). Piles shall be embedded a minimum of 5 feet (1,524 mm) into firm soil. Piles shall be 1 inch (25.4 mm) larger in diameter and shall be embedded 1 foot (304.8 mm) deeper for each 5 feet (1,524 mm) above ground. Piles shall not be spaced further apart than 6 feet (1,828.8 mm) center to center.

6204.2.2 Horizontal members. Horizontal members shall be of at least 3-inch (76.2 mm) by 8-inch (203.2 mm) lumber. Two horizontal members are required for piles measuring 5 feet (1,524 mm) or less above natural ground. Three horizontal members are required for piles measuring more than 5 feet (1,524 mm) above natural ground. Horizontal members shall be attached to the wood piles with not less than ½-inch (12.7 mm) galvanized bolts, washers and nuts, or not less than two 60d common galvanized nails.

6204.2.3 Vertical members. Vertical members shall be of at least 2-inch (50.8 mm) by 6-inch (152.4 mm) nominal lumber. All vertical members shall be embedded a minimum of 3 feet (914.4 mm) into firm soil. Cracks between members shall not exceed ⅛ inch (3.175 mm). Vertical members shall be attached to each horizontal member with not less than two 16d common galvanized nails.

6204.2.4 Anchors. Anchors shall be at least 8 inches (203.2 mm) wide and not less than 4 feet in length and shall be embedded into firm soil a minimum of 30 inches (762 mm). All piles shall be secured to an anchor. Not more than three piles shall be secured to any one anchor. Anchor ties shall be a minimum of ½-inch (12.7 mm) galvanized cable with two galvanized clamps on each end or a minimum size ½-inch (12.7 mm) rod secured to the bulkhead and anchor. Other types of anchors may be used when approved by the *building official* in accordance with Section 104.11.

6204.3 Concrete bulkheads. Concrete bulkheads shall comply with the following:

6204.3.1 General. All concrete bulkheads shall be of at least four and one-half sack mix and test a minimum of 2,500 lbs./in.^{2} at 28 days. The bulkhead shall be embedded a minimum of 36 inches (914.4 mm) into firm soil and shall not extend more than 30 inches (762 mm) above the grade of the fill behind the bulkhead. The width of the concrete shall be a minimum of 10 inches (254 mm) for the part below grade and at least 6 inches (152.4 mm) for the part above grade.

6204.3.2 Reinforcing. Reinforcement shall consist of reinforcing steel rods of at least No. 3 size placed every 18 inches (457.2 mm) vertically and every 18 inches (457.2 mm) horizontally. All intersecting steel shall be securely tied or welded to ensure position in the foundation.

6204.3.3 Anchors. If anchors are used, they must be of an approved type acceptable to the *building official*.

6204.4 Steel sheet pile bulkheads. Steel sheet pile bulkheads shall comply with the following.

6204.4.1 General. Steel shall meet standards of ASTM A 245. All piles shall be of not less than No. 12 gauge. The depth of crimp shall not be less than 1½ inches (38.1 mm) and the width of the crimp shall not be less than 3½ inches (88.9 mm). Piles shall not have less than 1-inch (25.4 mm) crimped interlocks along both vertical sides. Finished pile width shall not be less than 12 inches (304.8 mm). Piles shall be embedded not less than 4 feet (1,219.2 mm) into firm soil and shall not extend more than 30 inches (762 mm) above grade. A form-fitting driving head or sheet driver shall be used to prevent pile damage.

6204.4.2 Anchors. If anchors are used, they shall be of an approved type acceptable to the *building official*.

6204.5 Alternative materials. A bulkhead constructed of alternative materials shall meet or exceed minimum structural requirements according to accepted engineering practices and shall support or resist a surcharge of dead weight or load against it, as is necessary for it to retain. The alternative material shall also be non-polluting and non-corrosive.

SECTION 6205
JETTY CONSTRUCTION

6205.1 Jetty construction. Jetties may be built wherever a need is determined by and with the written authorization of the director of Houston Public Works where not specifically prohibited by the *City Code*. Jetties must be constructed utilizing one of the approved types of bulkheads listed in Section 6204.

APPENDIX F
RODENTPROOFING

The provisions contained in this appendix are ~~not~~ mandatory ~~unless specifically referenced in the adopting ordinance~~.

{**EDITORIAL NOTE:** ALL OTHER PROVISIONS OF THIS APPENDIX SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

APPENDIX J
EXCAVATION AND GRADING

The provisions contained in this appendix are ~~not~~ mandatory ~~unless specifically referenced in the adopting ordinance~~.

{**EDITORIAL NOTE:** CONTENTS OF APPENDIX J NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}

SECTION J101
GENERAL

J101.1 Scope. The provisions of this ~~chapter~~ appendix apply to grading, excavation and earthwork construction, including fills and embankments; establish the administrative procedure for issuance of permits; and provide for approval of plans and inspection of grading construction. Where conflicts occur between the technical requirements of this ~~chapter~~ appendix and the geotechnical report, the geotechnical report shall ~~govern~~ prevail.

J101.2 Flood hazard areas. All grading, excavation and earthwork construction, including fills and embankments, that is to be performed in a *floodway* or a Houston special *flood hazard area* as defined by FEMA or Chapter 19 of the *City Code* shall be in conformance with Chapter 19 of the *City Code* and the *Infrastructure Design Manual*. ~~Unless the applicant has submitted an engineering analysis, prepared in accordance with standard engineering practice by a *registered design professional*, that demonstrates the proposed work will not result in any increase in the level of the base flood, grading, excavation and earthwork construction, including fills and embankments, shall not be permitted in *floodways* that are in *flood hazard areas* established in Section 1612.3 or in *flood hazard areas* where design flood elevations are specified but *floodways* have not been designated.~~

J102.1 Definitions. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein~~. Refer to~~ and in Chapter 2 of this code ~~for general definitions~~.

APPROVAL.

AS-GRADED.

BEDROCK.

CIVIL ENGINEER.

CIVIL ENGINEERING.

EARTH MATERIAL.

ENGINEERING GEOLOGIST.

ENGINEERING GEOLOGY.

GRADE, ROUGH.

GRADING, ENGINEERED.

GRADING, REGULAR.

PROFESSIONAL INSPECTION.

SITE.

SLOPE.

SOIL.

SOILS ENGINEER (GEOTECHNICAL ENGINEER).

SOILS ENGINEERING (GEOTECHNICAL ENGINEERING).

J103.2 Exemptions. A grading *permit* shall not be required for the following if the work meets the definition of *regular grading*:

1. When approved by the *building official*, grading in an isolated, self-contained area, provided there is no danger to the public and that such grading will not adversely affect adjoining properties.
2. Excavation below finished grade for construction of basements and footings of a building, retaining wall or other structure permitted under this code. This shall not exempt any fill made with the material from such excavation or exempt any excavation having an unsupported height greater than 5 feet (1,524 mm) after the completion of such structure.
3. Cemetery graves.
4. Refuse disposal sites controlled by other regulations.
5. Excavations for wells, tunnels or trenches for utilities.
6. Mining, quarrying, excavating, processing or stockpiling of rock, sand, gravel, aggregate or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on ~~adjoining~~ any adjacent or contiguous properties.
7. Exploratory excavations performed under the direction of ~~a *registered design professional*~~ soil engineers or engineering geologists.

Exemption from the permit requirements of this appendix 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*.

J103.3 State and federal requirements. This appendix is cumulative of all state and federal laws and regulations, including, but not limited to, Chapter 756 of the *Texas Health and Safety Code* and regulations issued thereunder and the U.S. Department of Labor Occupational Safety and Health Administration standards. No provision of this appendix, nor any permit issued hereunder, shall be construed to authorize any work to be performed in a manner inconsistent with state or federal requirements. It is the responsibility of the permit holder to ensure compliance therewith.

{**EDITORIAL NOTE:** DELETE SECTION J104 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

J104.1 Permits required. Except as exempted in Section J103, no person shall do any grading without first obtaining a grading permit from the *building official*. A separate permit shall be obtained for each site, and a single permit may cover both excavations and fills on one site.

J104.1.1 Grading permit fees. Fees shall be assessed in accordance with the provisions of this section, Section 118, and the city fee schedule. A fee for each grading permit shall be paid to the *building official* as set forth in Section 118.2.1. Separate permits and fees shall apply to retaining walls or major drainage structures as required elsewhere in this code. There shall be no separate charge for standard terrace drains and similar facilities.

J104.1.2 Bond required. The *building official* may require bonds in such form and amounts as may be deemed necessary to ensure that the work, if not completed in accordance with the approved plans and specifications, will be corrected to eliminate hazardous conditions.

In lieu of a surety bond, the applicant may file a cash bond or instrument of credit with the *building official* in an amount equal to that which would be required in the surety bond.

J104.2 Application. The provisions of Section 105.3 are applicable to grading. Additionally, the application shall state the estimated quantities of work involved.

J104.3 Grading destination. Grading in excess of 1,000 cubic yards (765 m^3) shall be performed in accordance with an approved grading plan prepared by a Texas professional engineer and shall be designated as "*engineered grading*." Grading involving less than or equal to 1,000 cubic yards (765 m^3) shall be designated "*regular grading*" unless the permittee chooses to have the grading performed as *engineered grading* or the *building official* determines that the property is located in a Houston special flood hazard area as defined in Chapter 19 of the *City Code* and special conditions or unusual hazards exist, in which case *grading* shall conform to the requirements for *engineered grading*.

J104.4 Engineered grading requirements. Application for a *grading* permit shall be accompanied by two sets of plans and specifications, as well as supporting data consisting of a *soils engineering* report and *engineering geology* report. The plans and specifications shall be prepared and signed by a Texas professional engineer.

Specifications shall contain information covering construction and material requirements.

Plans shall be drawn to scale upon substantial paper or cloth and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that they will conform to the provisions of this code and all relevant laws, ordinances, rules and regulations. The first sheet of each set of plans shall display the location of the work, the name and address of the owner, and the name of the person who prepared them.

The plans shall include the following information:

1. General vicinity of the proposed *site*.
2. Property limits and accurate contours of existing ground and details of terrain and area drainage.
3. Limiting dimensions, elevations or finish contours to be achieved by the *grading* and proposed drainage channels and related construction.
4. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work, together with a map showing the drainage area and the estimated runoff of the area served by any drains.
5. Location of any buildings or structures on the *site* upon which the work is to be performed and the location of any buildings or structures on property adjacent to

the site that are within 15 feet (4,572 mm) of the property or that may be affected by the proposed *grading* operations.

6. The dates of *soils engineering* and *engineering geology* reports together with the names, addresses, and phone numbers of the films or individuals who prepared the reports.

Recommendations included in the *soils engineering* report and the *engineering geology* report shall be incorporated in the *grading* plans or specifications. Specific recommendations contained in the *soils* engineering report and the *engineering geology* report that are applicable to the proposed *grading* shall at minimum be included by reference in the *engineered grading* plans.

J104.5 Soils engineering report. The soils engineering report required by Section J104.4 shall include data regarding the nature, distribution, and strength of existing soils; conclusions and recommendations for grading procedures; design criteria for corrective measures, including buttress fills, when necessary; and opinion on adequacy for the intended use of sites to be developed by the proposed grading as affected by soils engineering factors, including the stability of slopes.

J104.6 Engineering geology report. The *engineering geology* report required by Section J104.4 shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinion on the adequacy for the intended use of sites to be developed by the proposed *grading*, as affected by geologic factors.

J104.7 Liquefaction study. The *building official* may require a geotechnical investigation in accordance with Section 1803 when, during the course of an investigation, all of the following conditions are discovered:

1. Shallow ground water, 50 feet (15,240 mm) or less;
2. Unconsolidated sandy alluvium; and
3. Seismic Zones C and D.

The report of the investigation shall address the potential for liquefaction.

J104.8 Regular grading requirements. Each application for a *grading* permit shall be accompanied by a plan in sufficient clarity to indicate the nature and extent of the work. The plans shall give the location of the work, the name of the owner, and the name of the person who prepared the plan. The plan shall include the following information:

1. General vicinity of the proposed *site*;
2. Limiting dimensions and depth of cut and fill; and
3. Location of any buildings or structures on the site upon which the work is to be performed and the location of any buildings or structures within 15 feet (4,572 mm) of the proposed grading.

J104.9 Issuance. The provisions of Section 105.3 are applicable to grading permits. The *building official* may require that grading operations and project designs be modified if delays occur which incur weather-generated problems not considered at the time the permit was issued.

{**EDITORIAL NOTE:** DELETE SECTION J105 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

SECTION J105
GRADING INSPECTIONS

J105.1 General. Grading operations for which a permit is required shall be subject to inspection by the *building official*. Professional inspection of grading operations shall be provided by a Texas professional engineer retained to provide such services in accordance with Section J105.5 for engineered grading and as required by the *building official* for regular grading.

J105.2 Civil engineer. The civil engineer shall provide professional inspection within such engineer's area of technical specialty, which shall consist of observation and review as to the establishment of line, grade and surface drainage of the development area. If revised plans are required by a code official during the course of the work, they shall be prepared by the civil engineer.

J105.3 Soils engineer. The soils engineer shall provide professional inspection within such engineer's area of technical specialty, which shall include observation during grading and testing for required compaction. The soils engineer shall provide sufficient observation during the preparation of the natural ground placement and compaction of the fill to verify that such work is being performed in accordance with the conditions of the approved plan and the appropriate requirements of this appendix. Revised recommendations if any relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the *building official*, and the civil engineer.

J105.4 Engineering geologist. The engineering geologist shall provide professional inspection within such engineer's area of technical specialty, which shall include professional inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations relating to conditions differing from the approved engineering geology report shall be submitted to the soils engineer.

J105.5 Permittee. The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this code. The permittee shall engage consultants, if required, to provide professional inspections on a timely basis. The permittee shall act as a coordinator among the consultants, the contractor, and the *building official*. In the event of changed conditions, the permittee shall be responsible for informing the *building official* of such change and shall provide revised plans for approval.

J105.6 Building official. The *building official* shall inspect the project at the various stages of work requiring approval to determine the adequate control is being exercised by the professional consultants.

J105.7 Notification of noncompliance. If, in the course of fulfilling their respective duties under this appendix, the civil engineer, the soils engineer, or the engineering geologist finds that the work is not being done in conformance with this appendix or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the *building official*.

J105.8 Transfer of responsibility. If the civil engineer, the soils engineer, or the engineering geologist of record is changed during grading, the work shall be stopped until the replacement has agreed in writing to accept responsibility within the area of the consultant's technical competence for approval upon completion of the work. It shall be the duty of the permittee to notify the *building official* in writing of such change prior to the recommencement of such grading.

J105.9 Hazards. Whenever the *building official* determines that any existing excavation, embankment, or fill on private property has become a hazard to life and limb, endangers property, or adversely affects the safety, use, or stability of a public way or drainage channel, the owner or agent in control of the property upon which the excavation or fill is located, upon receipt of notice

in writing from the *building official*, shall within the period specified therein repair or eliminate such excavation or embankment so as to eliminate the hazard and be in conformance with the requirements of this code.

J105.10 Final reports. Upon completion of the rough *grading* work and at the final completion of the work, the following reports and drawings and supplements thereto are required for *engineered grading* or when *professional inspection* is performed for *regular grading*, as applicable.

1. An as-built *grading* plan prepared by the Texas professional engineer engaged to provide such services in accordance with Section J105.5 showing original ground surface elevations, *as-graded* ground surface elevations, lot drainage patterns, and the locations and elevations of surface drainage facilities and of the outlets of subsurface drains. As-constructed locations, elevations and details of subsurface drains shall be shown as reported by the *soils engineer*. A Texas professional engineer shall provide a special inspection report to the field inspector that states, to the best of their knowledge, the work within their area of responsibility was done in accordance with the final approved *grading* plan and applicable provisions of this appendix chapter.
2. A report prepared by the *soils engineer* is engaged to provide such services in accordance with Section J105.5, including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during *grading* and their effect on the recommendations made in the approved *soils engineering* investigation report. *Soils engineers* shall provide a special inspection report to the field inspector that states, to the best of their knowledge, the work within their area of responsibilities is in accordance with the approved *soils engineering* report and applicable provisions of this appendix.
3. A report prepared by the *engineering geologist* is engaged to provide such services in accordance with Section J105.5, including a final description of the geology of the *site* and any new information disclosed during the *grading* and the effect of same on recommendations incorporated in the approved *grading* plan. *Engineering geologists* shall provide a special inspection report to the field inspector that states, to the best of their knowledge, the work within their area of responsibility is in accordance with the approved *engineering geologist* report and applicable provisions of this appendix.

J105.11 Notification of completion. The permittee shall notify the *building official* when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion-control measure have been completed in accordance with the final approved *grading* plan and the required special inspection reports have been submitted.

J106.1 Maximum slope. The slope of cut surfaces shall be no steeper than is safe for the intended use~~,~~ and shall be not more than one unit vertical in two units horizontal (50-percent slope) unless the owner or the owner's authorized agent furnishes a ~~geotechnical report~~ soils engineering or an engineering geology report, or both, ~~justifying a steeper slope~~ stating that the site has been investigated and giving an opinion that a cut at a steeper slope will be stable and not create a hazard to public or private property.

Exceptions:

1. A cut surface shall be permitted to be at a slope of 1.5 units horizontal to one unit vertical (67-percent slope) provided that all of the following are met:
   1.1 It is not intended to support structures or surcharges.
   1.2 It is adequately protected against erosion.
   1.3 It is no more than 8 feet (2,438 mm) in height.
   1.4 It is approved by the building ~~code~~ official.
   1.5 Ground water is not encountered.
2. A cut surface in bedrock shall be permitted to be at a slope of one-unit horizontal to one unit vertical (100-percent slope).

J107.1 General. Unless otherwise recommended in the ~~geotechnical~~ soils engineering report, fills shall comply with the provisions of this section.

In the absence of an approved soils engineering report, these provisions may be waived for minor fills not intended to support structures.

J107.2 Surface preparation. The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials~~,~~ and scarifying the ground to provide a bond with the fill material. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be provided. When fill is to be placed over a cut, the bench under the toe of fill shall be at least 10 feet (3,048 mm) wide, but the cut shall be made before acceptance by the soils engineer or engineering geologist, or both, as a suitable foundation for fill and placement of the fill.

J107.4 Fill material. Fill material shall not include organic, frozen or other deleterious materials. Except as permitted by the *building official*, no rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall be included in fills.

Exception: The *building official* may permit placement of larger rock when the soils engineer properly devises a method of placement and continuously inspects its placement and approves the fill stability. The following conditions shall also apply:

1. Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.
2. Rocks of a size greater than 12 inches (305 mm) in maximum dimension shall be placed 10 feet (3,048 mm) or more below grade, measured vertically.
3. Rocks shall be placed so as to assure filling of all voids with well-graded soil.

J107.6 Maximum slope. The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes steeper than one-unit vertical in two units horizontal (50-percent slope) shall be justified by ~~a geotechnical~~ an approved soils engineering report ~~or engineering data~~.

J108.4 Modification of slope location. The *building official* may approve alternate setbacks. The *building official* may require an investigation and recommendation by a qualified engineer or engineering geologist to demonstrate that the intent of this section has been satisfied.

J109.1 General. Unless otherwise indicated ~~by a *registered design professional*~~ on the approved grading plan, drainage facilities and terracing shall be provided in accordance with the requirements of this section.

Exception: Drainage facilities and terracing need not be provided where the ground slope is not steeper than one unit vertical in three units horizontal (33-percent slope).

J109.5 Subsurface drainage. Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.

J109.6 Disposal. All drainage facilities shall be designed to carry waters to the nearest practicable drainage way approved by the *building official* or other appropriate *jurisdiction* as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of nonerosive downdrains or other devices.

Building pads shall have a drainage gradient of 2 percent toward approved drainage facilities, unless waived by the *building official*.

Exception: The gradient from the building pad may be 1 percent if all of the following conditions exist throughout the permit area:

1. No proposed fills are greater than 10 feet (3,048 mm) in maximum depth.
2. No proposed finish cut or fill slope faces have a vertical height in excess of 10 feet (3,048 mm).
3. No existing slope faces steeper than 1 unit vertical in 10 units horizontal (10% slope) have a vertical height in excess of 10 feet (3,048 mm).

APPENDIX K

{**EDITORIAL NOTE:** DELETE APPENDIX K TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

CONVENTIONAL LIGHT-FRAME WOOD CONSTRUCTION FOR HIGH-WIND AREAS

SECTION K101
GENERAL

K101.1 Scope. This appendix applies to regular-shaped buildings that are not more than three stories in height and are of conventional light-frame construction.

> **Exception:** Detached carports and garages not exceeding 700 square feet (65 m^2) and accessory to Group R-3 occupancies need only comply with the roof-member-to-wall-tie requirements of Section K103.8.

SECTION K102
DEFINITION

K102.1 General. The following terms, for the purposes of this appendix, shall have the meaning ascribed in Chapter 2:

CORROSION RESISTANT or NONCORROSIVE.

SECTION K103
COMPLETE LOAD PATH AND UPLIFT TIES

K103.1 General. Blocking, bridging, straps, approved framing anchors or mechanical fasteners shall be installed to provide continuous ties from the roof to the foundation system. Tie straps shall be 1⅛-inch (28.6 mm) by 0.036-inch (0.91 mm) (No. 20 gage) sheet steel and shall be corrosion-resistant as herein specified. All metal connectors and fasteners used in exposed locations or in areas otherwise subject to corrosion shall be of corrosion-resistant or noncorrosive material. The number of common nails specified is the total required and shall be equally divided on each side of the connection. Nails shall be spaced to avoid splitting of the wood.

> **Exception:** Pre-manufactured connectors that provide equal or greater tie-down capacity may be used, provided that they are installed in compliance with all the manufacturer's specifications.

K103.2 Wall-to-foundation tie. Exterior walls shall be tied to a continuous foundation system or an elevated foundation system in accordance with Section K105.

K103.3 Sills and foundation tie. Foundation plates resting on concrete or masonry foundations shall be bolted to the foundation with not less than ½-inch-diameter (13 mm) anchor bolts with 7-inch-minimum (178 mm) embedment into the foundation and spaced not more than 4 feet (1,219 mm) on center.

K103.4 Floor-to-foundation tie. The lowest-level exterior wall studs shall be connected to the foundation sill plate or an approved elevated foundation system with bent tie straps spaced not more than 48 inches (1,219 mm) on center. Tie straps shall be nailed with a minimum of 4 ten penny nails.

K103.5 Wall framing details. The spacing of studs in exterior walls shall be in accordance with Chapter 23. Mechanical fasteners complying with this appendix shall be installed at a maximum of 32 inches (813 mm) on center as required to connect studs to the sole plates, foundation sill plate and top plates of the wall. The fasteners shall be nailed with a minimum of 8 eight penny nails.

Where openings exceed 32 inches (813 mm) in width, the required tie straps shall be at each edge of the opening and connected to a doubled full-height wall stud. When openings exceed 12 feet (3,658 mm) in width, two ties at each connection or a manufactured fastener designed to prevent uplift shall be provided.

K103.6 Wall sheathing. All exterior walls and required interior main cross-stud partitions shall be sheathed in accordance with Chapter 23.

K103.7 Floor-to-floor tie. Upper-level exterior wall studs shall be aligned and connected to the wall studs below with tie straps placed a minimum of 32 inches (813 mm) on center and connected with a minimum of 6 eight penny nails per strap.

K103.8 Roof-members-to-wall tie. Tie straps shall be provided from the side of the roof-framing member to the supporting member below the roof. Tie straps shall be placed no further apart than every roof-framing member and connected with a minimum of 8 eight penny nails.

K103.9 Ridge ties. Opposing common rafters shall be aligned at the ridge and be connected at the rafters with tie straps spaced a maximum of 32 inches (813 mm) on center and connected with 8 eight penny nails.

K103.10 Gable-end walls. Gable-end wall studs shall be continuous between points of lateral support that are perpendicular to the plane of the wall. Gable-end wall studs shall be attached with approved mechanical fasteners at the top and bottom. Eight 8 penny nails shall be required for each fastener. Fasteners shall be spaced a maximum of 32 inches (813 mm) on center.

SECTION K104
ROOFS

K104.1 Roof sheathing. Solid roof sheathing shall be applied and shall consist of a minimum 1-inch-thick (25.4 mm) nominal lumber applied diagonally or a minimum 15/32-inch-thick (11.9 mm) wood structural panel or particle board (OSB) or other approved sheathing applied with the long dimension perpendicular to supporting rafters. Sheathing shall be nailed to roof framing in an approved manner. The end joints of wood structural panels or particle board shall be staggered and shall occur over blocking, rafters, or other supports.

K104.2 Roof covering. Roof coverings shall be approved and shall be installed and fastened in accordance with Chapter 15 and with the manufacturer's instructions.

K104.3 Roof overhang. The roof eave overhang shall not exceed 3 feet (914 mm) unless an analysis is provided showing that the required resistance is provided to prevent uplift.

The roof overhang at gabled ends shall not exceed 2 feet (610 mm) unless an analysis showing that the required resistance to prevent uplift is provided.

SECTION K105
ELEVATED FOUNDATION

K105.1 General. When approved, elevated foundations supporting not more than one story and meeting the provisions of this section may be used. The *building official* shall require a foundation investigation prior to authorizing the final approval of such work.

K105.2 Material. All exposed wood-framing members shall be treated wood. All metal connectors and fasteners used in exposed locations shall be corrosion-resistant or noncorrosive steel.

K105.3 Wood piles. The spacing of wood piles shall not exceed 8 feet (2,438.4 mm) on center. Square piles shall not be less than 10 inches (254 mm), and tapered piles shall have a tip of not less than 8 inches (203 mm). Eight-inch-round (203 mm) piles shall have a minimum embedment length of 5 feet (1,524 mm) and shall project not more than 8 feet (2,438.4 mm) above undisturbed ground surface. Eight-inch (203 mm) taper piles shall have a minimum embedment length of 6 feet (1,828.8 mm) and shall project not more than 7 feet (2,133.6 mm) above undisturbed ground surface.

K105.4 Girders. Floor girders shall consist of solid sawn timber, built-up 2-inch-thick (51 mm) lumber, or trusses. Splices shall occur over wood piles. The floor girders shall span in the direction parallel to the potential floodwater and wave action.

K105.5 Connections. Wood piles may be notched to provide a shelf for supporting the floor girders. The total notching shall not exceed 50 percent of the pile cross section. Approved bolted connections with ¼-inch (6.4 mm) corrosion-resistant or noncorrosive steel plates and ¾inch-diameter (19 mm) bolts shall be provided. Each end of the girder shall be connected to the piles using a minimum of two ¾-inch-diameter (19 mm) bolts.

APPENDIX L

{**EDITORIAL NOTE:** DELETE APPENDIX L TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

LIFE-SAFETY REQUIREMENTS FOR EXISTING BUILDINGS

L101 GENERAL. Provisions formerly located in Appendix L of this code have been relocated to Appendix D of the *Existing Building Code*. Any reference to Appendix L of this code in any code or pamphlet shall be a reference to Appendix D in the *Existing Building Code* until such document is corrected.

APPENDIX N
AIRPORT SOUND ATTENUATION REQUIREMENTS

SECTION N101
GENERAL

N101.1 Purpose. The purpose of this appendix is to set forth sound attenuation specifications for buildings when such sound attenuation is required by Chapter 9, Article VI, of the *City Code* to achieve an interior sound level of 45 dBA or less.

N101.2 Applicability. These provisions shall apply under circumstances where an airport land use permit is required under Section 9-381(a)(2) and (3) of the *City Code* and are in addition to other applicable building standards set forth elsewhere in this code.

N101.3 Alternate compliance. Alternative means or methods which equal or exceed the standards set forth in these provisions may be used when approved by the *building official* in accordance with Section 104.11.

SECTION N102
DEFINITIONS

N102.1 Definitions. The following terms, for the purposes of this appendix, shall have the meaning ascribed in Chapter 2:

SOUND TRANSMISSION CLASS (STC).

SECTION N103
WALLS

N103.1 General. The specific exterior wall assemblies set forth in Sections N103.2 and N103.3 shall include the interior finishes set forth therein.

> **Exception:** Exterior wall assemblies or materials that have been tested or listed with a minimum STC rating of 40.

N103.2 Brick veneer. When exterior walls are constructed using brick veneer, a minimum of ½-inch gypsum drywall shall be applied as the interior finish.

N103.3 Vinyl or cement sidings. When exterior walls are constructed using vinyl or cement sidings, a minimum of ⅝-inch gypsum drywall shall be applied as the interior finish.

N103.4 Other assemblies and materials. All other exterior wall assemblies or materials shall have a tested or listed minimum STC rating of 40.

SECTION N104
WINDOWS

N104.1 Windows. All windows shall have a minimum STC rating of 40 when tested in accordance with ASTM E 90.

N104.2 Insulation at windows. The cavity between the framing and the window frame shall be insulated with fiberglass or foam insulation to the depth of the window frame.

SECTION N105
DOORS

N105.1 Doors. All exterior doors shall be provided with a minimum STC rating of 40 when tested in accordance with ASTM E 90.

> **Exception:** An exterior door may have a tested or listed STC rating of less than 40 when installed with a storm door which when combined achieve a minimum tested or listed STC rating of 40.

SECTION N106
ROOF/CEILING ASSEMBLIES

N106.1 General. Roof/ceiling assemblies shall be constructed in accordance with the requirements of Section N106.2 or N106.3.

> **Exception:** Roof/ceiling assemblies or materials that have been tested or listed with a minimum STC rating of 40.

N106.2 Ceilings with unconditioned attic space above. Ceilings with unconditioned attic space above shall be insulated with a minimum of ½-inch gypsum drywall on the interior ceiling side covered with a minimum of 12 inches of blown-in fiberglass insulation.

N106.3 Ceilings without attic space above. Ceilings without attic space above shall be insulated with a minimum of ⅝-inch gypsum drywall on the interior side filled with a minimum of 9 inches of fiberglass batt insulation with a 1-inch air space between the roof sheathing and the fiberglass.

APPENDIX R
REUSE OF MATERIALS

SECTION R101
GENERAL

R101.1 Scope. The reuse of materials shall be allowed in accordance with the provisions of this section.

R101.2 Intent. This appendix is intended to encourage the reuse of materials when possible and divert construction debris from landfills. This appendix is not mandatory but specifies parameters for when materials may be considered for reuse where integrity of the materials under consideration has not been compromised.

R101.3 General notice. The user should be vigilant regarding lead, asbestos, radon, PCBs, and other potentially harmful substances that are no longer allowed in buildings. Buildings built before 1978 may have used lead paint. Asbestos may be found in the insulation, fireproofing, floors, walls, or roof. Newer buildings may have asbestos in the floors or roof. Any fluorescent light fixtures manufactured prior to 1979 may contain PCBs; new capacitors should be labeled: NO PCBs.

SECTION R102
DEFINITIONS

R102.1 General. The following terms, for the purposes of this appendix, shall have the meaning ascribed in Chapter 2:

GOOD CONDITION.

RECYCLING.

REUSED MATERIALS.

SECTION R103
ACCEPTABLE APPLICATIONS

R103.1 Acceptable applications. The reused materials are allowed as identified in Table R103.1.

TABLE R103.1
REUSED MATERIALS – ACCEPTABLE APPLICATIONS FOR USED MATERIALS

CODE SECTION	ORIGINAL MATERIAL USE	PERMITTED REUSE APPLICATION	COMMENTS	EXCLUSIONS
CONCRETE ASPHALT				
3112	Asphalt	Reuse for driveways and sidewalks or road base	-	1, 7

3112	Concrete	As fill or aggregate for concrete mix, garden borders, driveways (as gravel), road base	-	**1, 7**
3112	Pilings	See concrete	-	**3**
		MASONRY AND STONE		
-	Brick and stone veneer	Horizontal surfaces on site and interior floors, nonstructural walls, and veneer	-	**3**
-	Pavers	Nonstructural paving or floors and veneer	-	**3**
-	Concrete blocks and products	Finishes, interior walls, low fences, and base for porous paving	Reused in original structural capacity.	**3**
-	Stone-sandstone, slate, granite, and marble	Finishes, roofing (slate)	-	**3**
2103.6, exception	Glass block	Original use	-	**5**
		METALS		
-	Cold-formed metal framing– studs, joists, rafters, purlins and girts	Repetitive members in original capacity, structural if identifiable	Steel with mill test certificates may be reused in original capacity; steel design values for materials manufactured after 1910 can be found in Design Guide 15: *AISC Rehabilitation and Retrofit Guide;* weldability for sections produced prior to the 1950s need testing.	**4**
-	Metal joists	If identifiable, can be used for structure		**4**
Chapter 17	Structural steel– columns, pillars, and posts	Reuse in structural capacity with special inspection		**4**
		WOOD, AGRI-FIBER, AND PLASTIC MATERIALS		
-	Columns, pillars, and posts	Reuse in original capacity.	-	-
-	Dimensional lumber, 4-foot-long minimum unstamped (includes roughhewn)	Install as one dimension higher than required, or: **(1)** Floor plates; **(2)** Second top plates; **(3)** Fillers, fire-blocking, and nailers; and **(4)** Strut-bracing, bridging, and ledgers (if ledger is one dimension larger than what otherwise might be used	For species not easily recognized may need special inspection. [4]	-
-	Dimensional lumber (stud capacity), with original stamp (includes roughhewn)	Reused in original capacity: **(1)** Studs (cripple, trim and jack), joists and rafters; or **(2)** Wind bracing	-	8
-	Glue-laminated beams, I-joists, laminated veneer lumber, parallel strand lumber and oriented strand lumber (unstamped)	Install as per dimensional lumber	-	-
-	Trusses	-	Trusses to be inspected by structural engineer as installed.	4
-	Utility poles (untreated)	-	-	**3**
-	Oriented strand board (OSB) and plywood	Reuse in original capacity	-	**8**
-	Plastic lumber	Reuse in original capacity	-	-
-	Masonite and chipboard	Reuse in original capacity	-	**8**
		WINDOWS DOORS INSULATION SIDING AND ROOFING		

Chapter 7	Insulation– batt, gently used	Reuse in horizontal capacities only, such as attics or sound attenuation in cavities.	25% reduction in R-value to be assumed.	**2**
Chapter 7	Insulation– board, gently used	Reuse in original capacity.	Polyisocyanurate to be reduced by R-2 per board; extruded and/or expanded polystyrene to remain the same R-value and reused in the same orientation (horizontal or vertical).	**2**
-	Windows	Reuse in original capacity or as decor	-	**2**
-	Doors and door assemblies	Reuse in original capacity	-	**2, 5**
-	Glass sheet and plexiglass	Reuse in original capacity or as decor	-	**2**
-	Stained Glass	Reuse in original capacity	-	**2**
-	Siding–cement board, wood, vinyl, metal panels	Reuse in original capacity	-	**5**
-	Soffits–cement board, wood, perforated metal panels, aluminum panels	Reuse in original capacity	-	**5**
-	Roof tiles	Reuse in original capacity, or as fencing or ornamental decoration.	-	-
-	Metal roof panels	Reuse in original capacity	-	-
FINISHES				
Section 803	Acoustical ceiling tiles	Reuse in original capacity	-	**5**
Section 804	Carpet and carpet pad	Reuse in original capacity	-	-
Section 803	Drywall	Reuse in original capacity	-	-
Chapter 8	Flooring–wood	Reuse in original capacity	-	-
-	Cement board	Reuse in original capacity	-	-
-	Hinges and other hardware	Reuse in original capacity	-	**1, 5**

General Exclusions.

1. TAS – Texas Accessibility Standards.

2. Must comply with the *Energy Conservation Code*.

3. For structural reuse applications, review, and stamp of plans by an engineer.

4. For structural reuse of material, the material and its new application must be inspected and certified by an engineer.

5. Not allowed in fire assemblies, unless tested or marked for such use.

6. Energy Policy Act (EPAct) of 1995 (water flush/flow rates).

7. In accordance with *jurisdiction* planning requirements, not permitted in driveway approach or sidewalks located in the right-of-way.

8. Material should be stamped. For structural steel, the material shall be identifiable.