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2012 Houston IBC – Chapter 1 Scope and Administration

2015 Houston IBC – Chapter 1 Scope and Administration

Code Analysis

PART 1 Administration Chapters 1 and 2

■ **Chapter 1 Administration**, ■ **Chapter 2 Definitions**

The provisions of Chapter 1 address the application, enforcement, and administration of subsequent requirements of the code. In addition to establishing the scope of the *International Building Code* (IBC), the chapter identifies which buildings and structures come under its purview. A building code, as with any other code, is intended to be adopted as a legally enforceable document to safeguard health, safety, property and public welfare. A building code cannot be effective without adequate provisions for its administration and enforcement. Chapter 2 provides definitions for terms used throughout the IBC. Codes, by their very nature, are technical documents, and as such, literally every word, term, and punctuation mark can add to or change the meaning of the intended result.

■ **101.2 - Exempt Residential Accessory Structures**; ■ **111.1 - Change of Use or Occupancy**; ■ **202 - Definition of Horizontal Exit**; ■ **202 - Definition of Platform**; ■ **202 - Definition of Private Garage**; ■ **202 - Definition of Treated Wood**;

[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."

The City of Houston 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. 2015-1108, 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 jurisdiction ordinances shall be construed to mean this code. In certain instances, references to the building code will be found in ordinances, contracts, and other documents of the jurisdiction. In any instance in which that reference was intended to encompass the codes that collectively constitute the City of Houston Construction Code, then it shall be so construed.

[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, 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.

City of Houston Amendment

Analysis: Certain minor changes made to this amendment by the legal department to clarify the intent of this section.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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 101.4.7, 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 shall comply with the International Residential Code.

[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.

City of Houston Amendment

Analysis: Modifications to the International Residential Code (IRC) provisions have been reflected in the exception to IBC Section 101.2 such that the limiting height of an IRC structure accessory to a dwelling unit or townhouse has increased from two stories to three stories above grade plane.

CHANGE SIGNIFICANCE: As a general rule, the IBC applies to any structure undergoing construction, alteration, relocation, enlargement, replacement, use and occupancy, repair, maintenance, removal, or demolition. However, the exception to Section 101.2 indicates that the IRC is to be applied to specified residential buildings, along with their accessory structures. The IRC has previously limited the area and height of such accessory structures through the definition of "accessory structure" in Section R202. That definition has been deleted, in effect limiting the height of an IRC accessory structure to the dwelling unit/townhouse limit of three stories above grade plane. The modifications in the IRC provisions have been reflected in the exception to IBC Section 101.2.

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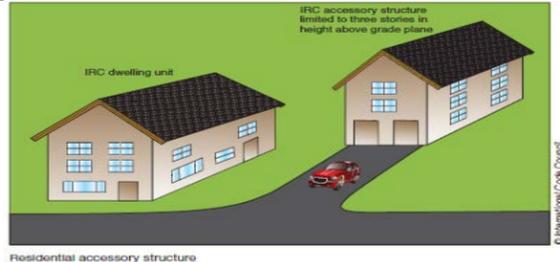
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		 <p>The IRC has previously limited accessory buildings to 3000 square feet and two stories in height. The 2015 IRC no longer contains these limitations, but rather only limits the height of an accessory structure to the scoping height of those dwellings and townhouses regulated by the IRC. As a side note, the IRC no longer places a floor area limitation on accessory structures. It was determined that the more appropriate approach to limiting the size of a residential accessory structure is through local zoning ordinances.</p> <p>Justification: No changes were made to COH amendment. Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Appendices E, K, L, M, 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.</p>	<p>[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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment modified to add Appendix F and J, and to remove Appendix E, L and M.</p> <p>Appendix E (Excavation and Grading) is now Appendix J.</p> <p>Appendix L and M (Life Safety Requirements and Change of Occupancy) have been removed due to the adoption of the <i>Existing Building Code</i>.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 101.3 Intent. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, <i>means of egress</i> 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 safety to fire fighters and emergency responders during emergency operations.</p>	<p>[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, <i>means of egress</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment was added to address state and federal law preemptions.</p> <p>Justification: New amendment added to coordinate with provisions of IFC 101.3. Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed and administered by Building Code enforcement with guidance from the City Legal Department.</p>
<p>N/A</p>	<p>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 jurisdiction will hold</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment was added to address certain contractual agreements between building owners and lease tenants. The provisions of this section is intended to clarify that where this code assigns the responsibility to property owners</p>

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	<p>responsible for 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.</p>	<p>for compliance with this code, a tenant lease agreement does not change that requirement. Justification: New amendment added by city legal to aid with the administration and enforcement of this code. Chapter 1 includes many provisions governed by state law and is separately reviewed by city legal to provide guidance to Building Code Enforcement with the administration of this code.</p>
<p>[A] 101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.67 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.</p>	<p>[A] 101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.67 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 <i>International Codes</i>, including but not limited to, <i>Fuel Gas, Mechanical, Plumbing, Property Maintenance, Fire, Residential, Energy Conservation, Existing Buildings, and Electrical</i>. 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 jurisdiction. 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.</p>	<p>City of Houston Amendment Analysis: COH amendment modifies this section addressing code references and adds a previous amendment provided throughout several sections to address all code references. In addition certain minor changes were added to identify defined terms by using “<i>italics</i>” and following the publishers specific formatting requirements. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 101.4.1 Gas. The provisions of the <i>International Fuel Gas Plumbing Code</i>, as defined in Chapter 2 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. This code includes numerous references to the <i>International Fuel Gas Code</i>. For the sake of convenience and cost savings to the public in the preparation of Houston Supplement 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 jurisdiction. 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. Exception: Work governed by the <i>Residential Code</i>.</p>	<p>[A] 101.4.1 Gas. The provisions of the <i>International Fuel Gas Plumbing Code</i>, 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 <i>Residential Code</i>.</p>	<p>City of Houston Amendment Analysis: Editorial changes were made to the exception which is also a COH amendment. The COH amendment addressing referenced codes was relocated to more appropriate code section “Section 101.4” as a general requirement for all code references. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 101.4.2 Mechanical. The provisions of the <i>International Mechanical Code</i>, as defined in Chapter 2 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. This code includes numerous references to the <i>International Mechanical Code</i>. For the sake of convenience and cost savings to the public in the preparation of Houston Supplement pages to this code, those references have not been revised unless the text of the</p>	<p>[A] 101.4.2 Mechanical. The provisions of the <i>International Mechanical Code</i>, 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 <i>Residential Code</i>.</p>	<p>City of Houston Amendment Analysis: Editorial changes were made to the exception which is also a COH amendment. The COH amendment addressing referenced codes was relocated to more appropriate code section “Section 101.4” as a general requirement for all code references.</p>

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provision in which they appear has otherwise been revised by this jurisdiction. 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.

Exception: Work governed by the Residential Code.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[A] 101.4.3 Plumbing. The provisions of the ~~International Plumbing Code~~, as defined in Chapter 2, 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 all aspects of a medical gas system. ~~The provisions of the International Private Sewage Disposal Code shall apply to private sewage disposal systems. This code includes numerous references to the International Plumbing Code. For the sake of convenience and cost savings to the public in the preparation of Houston Supplement 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 jurisdiction. 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.~~

Exception: Work 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.

City of Houston Amendment

Analysis: Minor editorial changes were made to this section. The COH amendment addressing referenced codes was relocated to more appropriate code section "Section 101.4" as a general requirement for all code references.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[A] 101.4.4 Property maintenance. The provisions of the ~~International Property Maintenance Code~~, as defined in Chapter 2, 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. ~~This code includes a number of references to the International Property Maintenance Code. For the sake of convenience and cost savings to the public in the preparation of Houston Supplement 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 jurisdiction. Any such references shall be regarded as references to the corresponding code as adopted by this jurisdiction from time to time. 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] 101.4.4 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 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.

City of Houston Amendment

Analysis: The existing amendment was reorganized to clarify maintenance requirements based on the code of record and the property maintenance code as defined in this code for any building, equipment, or system. The previous amendment text addressing code references has been relocated to a more appropriate section "Section 101.4".

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.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[A] 101.4.5 Fire prevention. The provisions of the ~~International Fire Code~~, as defined in Chapter 2, 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

[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

City of Houston Amendment

Analysis: Minor editorial changes were made to this COH amendment. The previous amendment text addressing code references has been relocated to a more appropriate section "Section 101.4".

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<p>alarm systems or fire hazards in the structure or on the premises from occupancy or operation. This code includes numerous references to the International Fire Code. For the sake of convenience and cost savings to the public in the preparation of Houston Supplement 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 jurisdiction. 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.</p>	<p>and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.</p>	<p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>101.4.6 Energy. The provisions of the International Energy Conservation Code, as defined in Chapter 2, shall apply to all matters governing the design and construction of buildings for energy efficiency. This code includes a number of references to the International Energy Conservation Code. For the sake of convenience and cost savings to the public in the preparation of Houston Supplement 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 jurisdiction. 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.</p>	<p>[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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes were made to this COH amendment. The previous amendment text addressing code references has been relocated to a more appropriate section "Section 101.4".</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>N/A</p>	<p>[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.</p>	<p>City of Houston Amendment</p> <p>Analysis: This is a new subsection added to the 2015 code. A COH Amendment was added as a pointer to the definition of existing building in Chapter 2.</p> <p>EXISTING BUILDING CODE. <i>The City of Houston Existing Building Code, as adopted by this jurisdiction.</i></p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>101.4.7 Electrical. The provisions of the Electrical Code, as defined in Chapter 2, shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.</p>	<p>[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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes were made to this COH amendment.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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[A] 102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections provisions of the City Code, the Energy Conservation Code, the Residential Code, the Electrical Code, the Mechanical Code, the Plumbing Code, and this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where, in any specific instance, the applicable provisions of this code, the City Code, the Energy Conservation Code, the Residential Code, the Electrical Code, the Mechanical Code, or the Plumbing Code specify different materials, methods of construction, or other requirements than the Fire Code, 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. Wherever in this code reference is made to an appendix, the provisions in the appendix shall not apply unless specifically adopted.

[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.

City of Houston Amendment

Analysis: The previous amendment was reorganized and modified to use defined terms included in this edition of the Houston construction code. The meaning and intent of this section has not changed.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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 is specifically covered in this code, the International Property Maintenance Code or the International Fire Code, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

[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.

City of Houston Amendment

Analysis: The previous amendment was modified to include "the Existing Building Code."

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

Previous COH amendment relocated to 102.6.3 in 2015 IBC

[A] 102.6.1 Buildings not previously occupied. A building or portion of a building that has not been previously occupied or used for its intended purpose in accordance with the laws in existence at the time of its completion shall comply with the provisions of the International Building Code or International Residential Code, as applicable, for new construction or with any current permit for such occupancy.

City of Houston Amendment

Analysis: This is a new subsection added to the model code by ICC to clarify how to address unoccupied facilities.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

Previous COH amendment relocated to 102.6.4 in 2015 IBC

[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, or 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.

City of Houston Amendment

Analysis: This is a new subsection added to the model code by ICC to clarify how to address previously occupied facilities and to provide the building official authority to require corrections or upgrades to an existing building to benefit the general welfare of the occupants and public the safety.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

102.6.1 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:

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 at the time of the adoption of this code;
2. The building is in compliance with all applicable provisions of Appendix L; and
3. The continued use and occupancy is not unsafe pursuant to the provisions of Section 116.

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.

City of Houston Amendment

Analysis: The existing amendment was renumbered and modified to identify Appendix D which was previous Appendix L and to add the defined term "Existing Building Code."

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		<p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>102.6.2 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:</p> <ol style="list-style-type: none"> Such use or 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; The building is in compliance with all applicable provisions of Appendix L; and The continued use and occupancy is not unsafe pursuant to the provisions of Section 116. 	<p>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:</p> <ol style="list-style-type: none"> 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; The building is in compliance with all applicable provisions of Appendix D of the Existing Building Code; and The continued use and occupancy are not unsafe pursuant to the provisions of Section 116. 	<p>City of Houston Amendment</p> <p>Analysis: The existing amendment was renumbered and modified to identify Appendix D which was previous Appendix L and to add the defined term "Existing Building Code."</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>SECTION 103 DEPARTMENT OF BUILDING SAFETY CODE ENFORCEMENT BRANCH</p> <p>[A] 103.1 Creation of enforcement agency. The Department of Building Safety Building Code Enforcement Branch is hereby created within the jurisdiction's Department of Public Works and Engineering, and the official in charge thereof shall be known as the <i>building official</i>.</p>	<p>SECTION 103 DEPARTMENT OF BUILDING SAFETY CODE ENFORCEMENT</p> <p>[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 <i>building official</i>.</p>	<p>City of Houston Amendment</p> <p>Analysis: The existing amendment was modified to reflect the current names of the sections and department identified.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the <i>building official</i> 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 <i>building official</i>. For the maintenance of existing properties, see the International Property Maintenance Code.</p>	<p>[A] 103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the <i>building official</i> 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 <i>building official</i>. For the maintenance of existing properties, see the <u>International Property Maintenance Code.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: The existing amendment includes minor modification to match base code formatting.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>N/A</p>	<p>[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 application for reconstruction, rehabilitation, repair, alteration, addition or other improvement of existing buildings or structures located in flood hazard areas, the <i>building official</i> shall determine if the proposed work constitutes substantial improvement or repair of substantial damage. Where the <i>building official</i> determines that the proposed work constitutes substantial improvement or repair of substantial damage, and where required by this code, the <i>building official</i> shall require the building to meet the requirements of Section 1612.</p>	<p>City of Houston Amendment</p> <p>Analysis: This is a new subsection added to the 2015 IBC. A COH amendment was added to point to Chapter 19 of the City Code.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the <i>building official</i> has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the <i>building official</i> 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 <i>building official</i> 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</p>	<p>[A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the <i>building official</i> 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 <i>building official</i> 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 <i>building official</i> 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 <i>building</i></p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes were made to the COH amendment. The meaning and intent remain the same.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

COLOR CODE INDEX:

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Grey Text = Previous COH Amendment Brought Forward to 2015

refused, the *building official* 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 a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other person having charge, care or control of any building or premises shall fail or neglect, after proper 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.

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 a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other person having charge, care or 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 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. Any suit 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 representative 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. **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 brought against the *building official* because of acts or omissions performed in the 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 or structure for any damages to persons or property caused by defects, nor shall the code enforcement agency or its parent 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.**~~

[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 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. Any suit 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 representative 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. **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 brought against the *building official* 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.~~

City of Houston Amendment

Analysis: The previous COH amendment includes minor editorial modifications. The meaning and intent of this section remain unchanged.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

N/A

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.~~

City of Houston Amendment

Analysis: The provisions of Section 104.8 address legal defense provided by the city to the building official and deputies. The meaning and intent of this section remain unchanged in Section 104.8.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

R104.10 Modifications. Wherever 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, provided the *building official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, life and fire safety or structural requirements.

[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

City of Houston Amendment

Analysis: This section includes minor editorial modifications to correlate with the name of BCE. The meaning and intent of this section remain unchanged.

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The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

granting modifications shall be recorded and entered in the files of **Building Code Enforcement** ~~the department of building safety.~~

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[A] 104.10.1 Flood hazard areas. 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:

[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.

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.

City of Houston Amendment

Analysis: The provisions of Section 104.10.1 address Provisions associated with Flood Hazard areas which are regulated by the Flood Department through Chapter 19 of the city code.

Justification: This section is deleted to prevent a conflict between the city code and the building code.

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.

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.

If the use of 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:

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 Section 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.

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.

City of Houston Amendment

Analysis: No changes were made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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104.12.1 Right to hearing. Whenever pursuant to this code the *building official* orders the discontinuation of a use of a structure or equipment or orders the vacation 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. The hearing may be postponed once for good cause shown. 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. 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 twenty days after the date of the *building official's* order to discontinue a use or to vacate, no hearing need be conducted.

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. 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.

City of Houston Amendment

Analysis: No changes were made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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.

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.

City of Houston Amendment

Analysis: No changes were made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[A] 105.1 Required. Any owner or 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 done, 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 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.

City of Houston Amendment

Analysis: Minor editorial edit to include owners agent is included. The meaning and intent of this section remain the same.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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] 105.1.2 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.

City of Houston Amendment

Analysis: No changes were made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area is not greater than 120 square feet (11 m²).
2. Fences not over 7 8 feet (2134 2439 mm) high that are not constructed of masonry or concrete.

[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).

City of Houston Amendment

Analysis: The existing amendment was modified to include minor editorial changes and fence restriction requirements from city code provisions Sec. 28-8, 28-9 and 28-10 addressing the use of certain materials on fences. Additional information was added to address minor repairs that in practice are exempt from permits. Additional exemptions addressing state and federal projects have been relocated from Section 118 to this section.

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3. Oil derricks.
4. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or 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 (762 mm) above adjacent grade, and not over any basement or story below and ~~are~~ not part of an *accessible route*.
7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
8. Temporary motion picture, television and theater stage sets and scenery.
9. Prefabricated swimming pools accessory to a Group R-3 occupancy that ~~are less than 24 inches (610 mm) deep,~~ are not greater than 5,000 gallons (18 925 L) and are installed entirely above ground.
10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
11. Swings and other playground equipment ~~accessory to detached one- and two-family dwellings~~ **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 (1372 mm) from the exterior wall and do not require additional support.
13. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.
14. **Flagpoles that support an appurtenance that weighs less than 150 pounds (68 kg), provided the flagpole is not more than 75 feet (22 680 mm) tall if mounted on the ground or not more than 25 feet (7620 mm) taller than the building if mounted on a building.**
15. **A tower under 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 governmental 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

2. Fences not over ~~7 8 feet (2134 mm 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, ~~papering,~~ **repair or replacement of wall** papering, 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 m²).**
 - 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 m²).**
 - 7.4. **Roof covering that does not exceed an aggregate of 100 square feet (9.29 m²).**
- 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 (1372 mm) from the *exterior wall* and do not require additional support.
- 13 Nonfixed and movable fixtures, cases, racks, counters, and partitions not over 5 feet 9 inches (1753 mm) in height.
- 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**

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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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.**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 (5 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) 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.

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 facade.

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.

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 antennas.

Gas:

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

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	<p>Mechanical:</p> <ol style="list-style-type: none"> 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. <p>Plumbing:</p> <ol style="list-style-type: none"> 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. 	
<p>[A] 105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the building official.</p>	<p>[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 <i>building official</i>.</p>	<p>City of Houston Amendment</p> <p>Analysis: This section was not deleted from the code as it is used regularly. Minor editorial changes made as an COH amendment.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[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. 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.</p>	<p>[A] 105.2.2 Repairs. Application or notice to the <i>building official</i> is not required for ordinary repairs to structures, replacement of lamps or the connection of <i>approved</i> portable electrical equipment to <i>approved</i> 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 <i>means of egress</i>, or rearrangement of parts of a structure affecting the egress requirement; nor shall ordinary repairs include <i>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.</i></p>	<p>City of Houston Amendment</p> <p>Analysis: This section was not deleted from the code as it is used regularly. Minor editorial changes made as an COH amendment.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 105.2.3 Public service agencies. A permit shall not be required for the installation, alteration or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.</p>	<p>[A] 105.2.3 Public service agencies. A <i>permit</i> shall not be required for the installation, <i>alteration</i> or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH did not delete the provisions of this code section in this edition.</p> <p>* Utilities that supply electricity, gas, water, telephone, television cable, etc., do not require permits for work involving the transmission lines and metering equipment that they own and control; that is, to their point of delivery. Utilities are typically regulated by other laws that give them specific rights and authority in this area. Any equipment or appliances installed or</p>

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		<p>serviced by such agencies that are not owned by them and under their full control are not exempt from a permit.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 105.3 Application for permit. To obtain a <i>permit</i>, the applicant shall first file an application therefor in writing on a form furnished by the department of building safety for that purpose. Such application shall:</p> <ol style="list-style-type: none"> 1. Identify and describe the work to be covered by the <i>permit</i> 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 <i>construction documents</i> and other information as required in Section 107. 5. State the valuation of the proposed work. 6. Be signed by the applicant, or the applicant's authorized agent. 7. Give such other data and information as required by the <i>building official</i>. 	<p>[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 <u>Building Code Enforcement</u> the department of building safety for that purpose. Such application shall:</p> <ol style="list-style-type: none"> 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 <u>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</u> 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. 	<p>City of Houston Amendment</p> <p>Analysis: This section was amended with minor editorial changes to identify the name of the Houston divisions charged to enforce the provisions of the codes "<i>Building Code Enforcement</i>" and to require additional relevant information needed on the permit application to identify the complete scope of work.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 105.3.2 Time limitation of application. An application for a <i>permit</i> 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 <i>permit</i> has been issued; except that the <i>building official</i> 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.</p>	<p>[A] 105.3.2 Time limitation of application. <u>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.</u> 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</p>	<p>City of Houston Amendment</p> <p>Analysis: The provisions of this section have been amended to reflect a new city practice. Recent projects resulted in a requirement for a written request for an extension by the applicant. Sufficient justification must be provided by the owner/applicant and archived on the 550-screen before an extension is provided. This is a procedural change that should be followed up with frequent reminders from plan review supervisors until everyone is following the new process without fail.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 105.4 Validity of permit. The issuance or granting of a <i>permit</i> shall not be construed to be a <i>permit</i> for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. <i>Permits</i> 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 <i>permit</i> based on <i>construction documents</i> and other data shall not prevent the <i>building official</i> from requiring the correction of errors in the <i>construction documents</i> and other data. The <i>building official</i> is also authorized to prevent occupancy or use of a structure where in violation of this code or of any other ordinances of this jurisdiction.</p> <p><u>A permit shall be valid only for work performed under the permit holder on the application. A new permit must be obtained if the permit holder is no longer responsible for the work performed. Provided that a refund has not been issued and</u></p>	<p>[A] 105.4 Validity of permit. The issuance or granting of a <i>permit</i> <u>or approval of plans and specifications</u> shall not be construed to be a <i>permit</i> for, or an approval of, any violation of any of the provisions of this code or of any other <u>applicable laws, or ordinances</u> of the <u>jurisdiction</u>. <i>Permits</i> presuming to give authority to violate or cancel the provisions of this code or other ordinances of the <i>jurisdiction</i> shall not be valid.</p> <p>The issuance of a <i>permit</i> based on <i>construction documents</i>, <u>specifications</u>, and other data shall not prevent the <i>building official</i> from <u>thereafter</u> requiring the correction of errors in the <i>construction documents</i>, <u>specifications</u>, and other data, <u>or from</u>. The building official is authorized to prevent <u>ing construction</u>, occupancy or use of a structure <u>when</u> where in violation of this code or of any other <u>applicable law</u> ordinances of this jurisdiction.</p>	<p>City of Houston Amendment</p> <p>Analysis: This section includes considerable changes that include but is not limited to:</p> <ol style="list-style-type: none"> 1) ownership of construction permits issued by the Houston Permit Center extends to the property owner regardless of who submits an application. 2) requires name change corrections on applications and permits where authorized agents change. 3) Includes updated policy addressing contractor death and required name change within a specific time limit.

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written authority to transfer the permit from the original permit holder has been given, the cost of the new permit shall be charged at the rate listed for the minimum fee stated in the city fee schedule. In the case of the death of the original permit holder, the permit will be transferred to the new permit holder at no fee except for the administrative fee established in the city fee schedule. Applicants who fail to re-permit any applicable work within the time frames established by this code shall be subject to permit fees in the amount stated in the city fee schedule.

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.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[A] 105.5 Expiration. Every permit issued shall become ~~invalid~~ **inactive** unless the work ~~on the site~~ authorized by such permit is commenced 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 the work is 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 is not commenced under a permit within two years after the date of issuance or is abandoned at any time for a period of two years, the permit shall expire. In order to recommence work under an expired permit, the permit holder shall pay the full permit fee applicable and submit plans that comply with this code for the previously uninspected portion of the work.

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] 105.5 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.

City of Houston Amendment

Analysis: This section includes minor editorial edits to reflect current HPC practice and applicable laws associated with permit expirations.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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 of a right to a hearing on the matter pursuant to Section 117.**

[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.**

City of Houston Amendment

Analysis: Minor editorial changes were made to this COH amendment to identify who is given required notice.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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<p>[A] 107.5 Retention of construction documents. One set of <i>approved construction documents</i> shall may be retained by the <i>building official</i> for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.</p>	<p>[A] 107.5 Retention of construction documents. One set of <i>approved construction documents</i> shall may be retained by the <i>building official</i> 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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 108.3 Temporary power. The <i>building official</i> 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 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.</p>	<p>[A] 108.3 Temporary power. The <i>building official</i> 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 <i>Electrical Code NFPA 70</i>. 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.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes were made to this COH amendment to address actual city practice. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 109.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical, and plumbing systems or <i>alterations</i> requiring a <i>permit</i>, a fee for each <i>permit</i> shall be paid as required, in accordance with the schedule as established by the applicable governing authority the city fee schedule.</p>	<p>[A] 109.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical, and plumbing systems or <i>alterations</i> requiring a <i>permit</i>, a fee for each <i>permit</i> shall be paid as required, in accordance with Section 118 and the city fee schedule as established by the applicable governing authority.</p>	<p>City of Houston Amendment Analysis: The previous amendment to this section includes minor edits. The meaning and code intent remain the same. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 109.3 Building permit valuations. The applicant for a <i>permit</i> shall provide an estimated <i>permit</i> value at time of application. <i>Permit</i> valuations shall include total value of work, including materials and labor, for which the <i>permit</i> is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. If, in the opinion of the <i>building official</i>, the <i>valuation</i> is underestimated on the application, the <i>permit</i> shall be denied, unless the applicant can show detailed estimates to meet the approval of the <i>building official</i>. Final building <i>permit valuation</i> shall be set by the <i>building official</i>. The value to be used in computing the permit fee for alterations, remodeling or repairs shall be the total value of all construction work for which the permit is issued.</p>	<p>[A] 109.3 Building permit fee calculation. The applicant for a <i>permit</i> shall provide an estimated <i>permit</i> value at time of application. <i>Permit</i> valuations shall include total value of work, including materials and labor, for which the <i>permit</i> is being issued, such as electrical, gas, mechanical, plumbing equipment, and permanent systems. If, in the opinion of the <i>building official</i>, the <i>valuation</i> is underestimated on the application, the <i>permit</i> shall be denied, unless the applicant can show detailed estimates to meet the approval of the <i>building official</i>. Final building <i>permit valuation</i> shall be set by the <i>building official</i>. 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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 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. 	<p>City of Houston Amendment Analysis: This section is changed to reflect city practice for establishing the total valuation associated with the cost of construction for the Houston area. New provisions have been added to identify square footage area to calculate permit cost for residential one- and two-family dwellings and townhouses for state law compliance.</p> <p>The permit fee for new structures and new additions to existing structures is based on the total square feet of new construction.</p> <p>The permit fee for alterations to portions of existing structures shall be based on the aggregate area of rooms and/or exterior walls altered.</p> <p>NEW Code Word 2015B02 The permit fee calculation method for all single-family residential dwelling construction was changed by ordinance #2021-1037 and became effective as of January 1, 2022. The fee calculations are now based on the combined total square footage of proposed new construction, repairs, and alterations.</p> <p>The structural building permit fee for new single-family dwellings and existing building additions is based on the total aggregate area (square footage) of the new building, and new addition(s) based on the proposed “building area” as defined in the Houston Building Code.</p> <p>The permit fee for residential remodel construction of existing buildings is based on the total aggregate area (square</p>

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		<p>footage) of all interior rooms being altered plus the total aggregate area (square footage) of alterations or repairs associated with vertical exterior walls.</p> <p>Projects proposing both addition(s) (new building area square footage), and alterations or repairs requires the total aggregate areas of both, the new addition(s), and the combined square footage of both alterations and repairs (remodel) for permit fee calculation.</p> <p>NOTE: At the end of Section 118.2 are two notes added to the code that allows the structural building permit to be reduced by 50% to promote construction of new low-income housing, and remodel/repair upgrades of historical buildings and landmarks.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[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 <i>permits</i> shall be subject to an investigation fee established by the <i>building official</i> that shall be in addition to the required <i>permit</i> fees. The investigation fee shall be equal to the amount of the permit fee required by this code.</p>	<p>[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 <i>permits</i> shall be subject to an investigation fee established by the <i>building official</i> that shall be in addition to the required <i>permit</i> fees. The investigation fee shall be equal to the amount of the permit fee required by this code.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to COH amendment that requires the permit fee to be doubled for starting construction without a required permit.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 109.6 Refunds. The <i>building official</i> is authorized to establish a refund policy may authorize refunding 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.</p> <p>The building official may authorize the refunding of not more than 90 percent of the amount in excess of the minimum permit fee stated in the city fee schedule for the 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 plan review portion of the permit fee is nonrefundable.</p> <p>The building official shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment.</p>	<p>[A] 109.6 Refunds. The <i>building official</i> 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.</p> <p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: The previous amendment includes minor editorial edits to reflect city policy/practice associated with permit refunds. The refund provisions have been correlated throughout all the codes that make up the Houston Construction Code for consistency..</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[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 <i>building official</i>.</p>	<p>[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 <i>building official</i>.</p>	<p>City of Houston Amendment</p> <p>Analysis: The previous amendment was brought forward into the 2015 IBC to eliminate possible conflicts with the Houston Flood Ordinance.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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<p>[A] 110.3.5 Lath and gypsum board inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.</p> <p>Exception: Gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly.</p>	<p>[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.</p> <p>Exception: Gypsum board and gypsum panel products that are not part of a fire-resistance-rated assembly or a shear assembly.</p>	<p>City of Houston Amendment</p> <p>Analysis: The previous text of this section and the Houston amendment was modified to add clarity to inspection requirements.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department. Change in amendment needed to ensure the structural building elements are installed according to the engineer's specifications and the fire-resistance rated walls are installed according to the listing requirements.</p>
<p>EDITORIAL NOTE: DELETE AND RESERVE SECTION 110.3.7.</p>	<p>[A] 110.3.7 Energy efficiency inspections. Inspections shall be made to determine compliance with the <u>Energy Conservation Code Chapter 13</u> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Houston amendment no longer deletes the text in this section. A more appropriate reference to the <i>Houston Energy Code</i> is now provided in its place.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 110.3.8 Other inspections. In addition to the inspections specified in Sections 110.3.1 through 110.3.6, 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 <u>Building Code Enforcement</u>.</p>	<p>[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 <u>Building Code Enforcement</u>.</p>	<p>City of Houston Amendment</p> <p>Analysis: Changes were made to the previous COH amendment to include the reference to section 110.3.7 which is now included in the <i>Houston Building Code</i>.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>110.3.11 Reinspection. A reinspection fee may be assessed for each inspection or reinspection when the portion of work for which inspection is called is not complete or when corrections called for are not made.</p> <p>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.</p> <p>Reinspection fees may be assessed 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 requiring the approval of the building official.</p> <p>To obtain a reinspection, the applicant shall make a request and pay the reinspection fee in accordance with the city fee schedule.</p> <p>In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes were made by city legal to the previous COH amendment to provide additional clarity.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 111.1 Use and occupancy. No building or structure or portion thereof, such as an individual business lease space, shall be used or occupied, and no change in the</p>	<p>[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</p>	<p>City of Houston Amendment</p>

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existing occupancy classification of a building or structure or portion thereof shall 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. **Group R-3 and Group U occupancies and individual dwelling units or sleeping units do not require a certificate of occupancy.**

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. **Group R-3 and Group U occupancies and individual dwelling units or sleeping units do not require a certificate of occupancy. 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.**



Outpatient surgery center

© International Code Council

Analysis: A change in a building's use, or a portion of a building's use, with no change in its occupancy classification now requires that a new certification of occupancy be issued by the building official. In addition, a certificate of occupancy is now required for all one- and two-family residences The previous Houston amendment was modified.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

CHANGE SIGNIFICANCE: *The tool that the building official utilizes to control the uses and occupancies of the various buildings and structures within the jurisdiction is the certificate of occupancy. The IBC makes it unlawful to use or occupy a building or structure unless a certificate of occupancy has been issued for that use. The provisions of Section 111.1 have previously only required the issuance of a new certificate of occupancy where the building undergoes a change in occupancy classification.*

Additional code text now specifies that a change in use, without a change in occupancy, also requires that a new certification of occupancy be obtained.

There is a key distinction in the application of the IBC concerning the terms "use" and "occupancy." Most buildings have multiple uses, but often only contain a single occupancy classification. For example, an office building may have business areas, small storage areas, and small assembly uses, as well as support areas such as restrooms and mechanical equipment rooms. Although multiple uses occur in the building, it only contains a single occupancy, Group B. It is anticipated that all of the hazards that are anticipated as part of the building's function can be effectively addressed through classification as a single-occupancy group.

The modification in application of Section 111.1 is not intended to address minor changes in use that are typical when new ownership or tenancy occurs. It will be applicable where change in the use results in a significant change to the hazards involved. As an example, where a Group B business office building undergoes a change of use to a Group B ambulatory care facility, additional fire- and life-safety safeguards are necessary in order to address the increased hazard due to the presence of healthcare recipient's incapable of self-preservation. Although both types of facilities are classified as Group B occupancies, there is a distinct difference in their uses and, as such, a new certificate of occupancy must be issued to address the change in use.

[A] 111.2 Certificate issued. After the *building official* inspects the building or structure and finds no 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.~~
4. A description of that portion of the structure for which the certificate is issued.
- 5.4. 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.
- 6.5. The name of the *building official*.
- 7.6. The edition of the code under which the *permit* was issued.
- 8.7. The use and occupancy, **in accordance with the provisions of Chapter 3 of the building or portion thereof.**

[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 of 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.

City of Houston Amendment

Analysis: This existing amendment was modified to require additional information on every certificate (CO and CC) such as the building owner, tenant, authorized agent, and the type of fire protection and alarms installed in the structure.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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<p>9.8. The type of construction as defined in Chapter 6.</p> <p>10.9. The design <i>occupant load</i>.</p> <p>11.10. If an <i>automatic sprinkler system</i> is provided, whether the sprinkler system is required.</p> <p>12.11. Any special stipulations and conditions of the building <i>permit</i>.</p>	<p>10. The design <i>occupant load</i>.</p> <p>11. <u>If a fire alarm system is provided, and whether the fire alarm system is required.</u></p> <p>12. If an <i>automatic sprinkler system</i> is provided, <u>the type of system provided, and</u> whether the sprinkler system is required.</p> <p>13. Any special stipulations and conditions of the building <i>permit</i>.</p>	
<p>[A] 111.4 Revocation. The <i>building official</i> is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code <u>after notice of a right to a hearing on the matter pursuant to Section 117</u> 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.</p>	<p>[A] 111.4 Revocation. The <i>building official</i> is authorized to, in writing, suspend or revoke a certificate of occupancy or <u>compliance completion</u> issued under the provisions of this code <u>after notice of a right to a hearing on the matter pursuant to Section 117</u> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor changes made to the previous COH amendment to include a Certificate of Compliance (CC).</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>111.5 Posting. <u>The certificate of occupancy shall be posted in a conspicuous place on the premises and shall not be removed except by the <i>building official</i>.</u></p>	<p>111.5 Posting. <u>The certificate of occupancy shall be posted in a conspicuous place on the premises and shall not be removed except by the <i>building official</i>. 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.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: Changes were made to the COH amendment to require correct information to be maintained on all building/lease space certificates of occupancy.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>[A] 113.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the <i>building official</i> 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. <u>There is hereby created a General Appeals Board consisting of 10 members. Five members at a meeting shall constitute a quorum.</u></p>	<p>[A] 113.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the <i>building official</i> 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. <u>There is hereby created a General Appeals Board consisting of 10 members. Five members at a meeting shall constitute a quorum.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to COH amendment.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>113.1.1 Membership. <u>The positions shall be filled as follows:</u></p> <ul style="list-style-type: none"> Position 1 – <u>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.</u> Position 2 – <u>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.</u> Position 3 – <u>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.</u> Position 4 – <u>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.</u> Position 5 – <u>By a person who shall be actively engaged in the business of residential construction.</u> Position 6 – <u>By a person who shall be actively engaged in the business of general contracting of heavy construction work.</u> Position 7 – <u>By a well-respected citizen of the jurisdiction who shall be chairman of the board.</u> Position 8 – <u>By the <i>building official</i>, who shall also serve as secretary of the board.</u> 	<p>113.1.1 Membership. <u>The positions shall be filled as follows:</u></p> <ul style="list-style-type: none"> Position 1 – <u>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.</u> Position 2 – <u>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.</u> Position 3 – <u>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.</u> Position 4 – <u>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.</u> Position 5 – <u>By a person who shall be actively engaged in the business of residential construction.</u> Position 6 – <u>By a person who shall be actively engaged in the business of general contracting of heavy construction work.</u> Position 7 – <u>By a well-respected citizen of the <i>jurisdiction</i> who shall be chairman of the board.</u> Position 8 – <u>By the <i>building official</i>, who shall also serve as secretary of the board.</u> Position 9 – <u>By the fire marshal.</u> 	<p>City of Houston Amendment</p> <p>Analysis: Minor change made to the COH amendment to maintain established code publishers format.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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<p>Position 9 – By the fire marshal.</p> <p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	
<p>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 a duly 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.</p>	<p>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 a duly 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to COH amendment.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to COH amendment.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial change made to the COH amendment. No change in code meaning or intent.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>113.1.5 Removal. Any member of the board may be removed at any time by the Mayor without consent of the City Council.</p>	<p>113.1.5 Removal. Any member of the board may be removed at any time by the mayor without consent of the City Council.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change made to COH amendment.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial change made to the COH amendment to maintain code publisher's format.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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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.

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.

City of Houston Amendment
Analysis: Minor editorial change made to the COH amendment to maintain code publisher's format.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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 have no 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, Electrical, and Mechanical Review Boards; 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.

[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 have no 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 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.**

City of Houston Amendment
Analysis: Minor editorial change to maintain code publishers' format and additional text to clarify duties and limits of the Boards.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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.

[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.

City of Houston Amendment
Analysis: Minor editorial change to maintain code publishers' format along with minor editorial changes from city legal.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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.

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.

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.

City of Houston Amendment
Analysis: Minor editorial change to maintain code publishers' standard format.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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.

[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.

City of Houston Amendment
Analysis: Minor editorial changes made by city legal and to maintain code publishers' standard format.

COLOR CODE INDEX:

Turquoise = NEW or Modified Text by ICC in 2015
Yellow Strikethrough = Text Deleted from the Code by COH

Text Underlined = COH Amendment added (NEW)
Green Text = NEW or Modified Text by COH in 2015

Grey Text = Previous COH Amendment Brought Forward to 2015

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 conduct in violation of this code also 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.

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 or 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 ~~in violation of this code also~~ 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**.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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] 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**.

City of Houston Amendment

Analysis: The existing amendment was not modified.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[A] 115.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing 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.

[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.

City of Houston Amendment

Analysis: Editorial changes made by city legal and ICC for clarity with minor changes by ICC to maintain code publishers' code intent.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

At the time a stop work order is issued, the person performing the work and the permit holder shall be given notice of a right to a hearing on the matter by the *building official*, who shall deliver the notice to the persons performing the work, if present at the site, or otherwise conspicuously post the notice at the site. Upon request, a hearing shall be held within three business days 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 stop work order is withdrawn by the *building official*.

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 which 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 unsafe or not provided with adequate egress, or that constitute a fire hazard, or are otherwise dangerous to human life are, for the purpose of this section, unsafe. 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 purpose 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.

[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 which 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 purpose 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 purpose 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.

City of Houston Amendment

Analysis: Minor editorial changes made to COH amendment to address code publishers standard format requirements and to identify the new locations of current and previously referenced codes or section listed in this section.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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All such unsafe buildings, structures or appendages shall be abated, repaired, rehabilitated, demolished or removed in accordance with the procedures set forth in Chapter 10, Articles VIII, IX, 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 Appendix L, 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 building code that was applicable 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 Appendix L to this code. To the extent of any conflict among the requirements of any of the foregoing codes that are applicable to any building, 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.

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, ~~IX~~, 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 building code that was in effect applicable 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] 116.2 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.

City of Houston Amendment

Analysis: No changes made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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] 116.3 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.

City of Houston Amendment

Analysis: No changes made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

[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

[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.

City of Houston Amendment

Analysis: No changes made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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<p>upon the person responsible for the structure shall constitute service of notice upon the owner.</p>		
<p>[A] 116.5 Restoration. The structure or equipment determined to be unsafe by the <i>building official</i> is permitted to be restored to a safe condition. To the extent that repairs, <i>alterations</i> or <i>additions</i> are made or a change of occupancy occurs during the restoration of the structure, such repairs, <i>alterations</i>, <i>additions</i> or change of occupancy shall comply with the requirements of Section 105.2.2 and Chapter 34.</p>	<p>[A] 116.5 Restoration. Where the structure or equipment determined to be unsafe by the <i>building official</i> is restored to a safe condition, to the extent that repairs, <i>alterations</i> or <i>additions</i> are made or a change of occupancy occurs during the restoration of the structure, such repairs, <i>alterations</i>, <i>additions</i> and change of occupancy shall comply with the requirements of Section 105.2.2 and the <i>International Existing Building Code</i>.</p>	<p>City of Houston Amendment Analysis: No changes made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p style="text-align: center;">SECTION 117 HEARING PROCEDURES</p> <p>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 delivery or by certified mail, return receipt requested.</p> <p>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 such person after checking the building and the applicable records of the jurisdiction's Department of Public Works and Engineering, 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 company and the gas 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.</p>	<p style="text-align: center;">SECTION 117 HEARING PROCEDURES</p> <p>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.</p> <p>If notice is being given to a building owner or to a tenant therein and the <i>building official</i> is unable to determine the name or address of such person after checking the building and the applicable records 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.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes for clarity and to correct the department name was made to the COH amendment. No change to the code intent. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>117.2 Hearings. Except where otherwise specifically provided, all hearings held pursuant to this code shall be conducted by the jurisdiction's Director of Public Works and Engineering 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 set forth in writing and shall be served on each party in the same manner as a notice of a right to a hearing.</p>	<p>117.2 Hearings. Except where otherwise specifically provided, all hearings held pursuant to this code shall be conducted by the <i>jurisdiction's</i> Director of Houston Public Works and Engineering 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.</p>	<p>City of Houston Amendment Analysis: No changes made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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**SECTION 118
 PERMIT AND INSPECTION FEES**

118.1 General.

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.

**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

City of Houston Amendment

Analysis: Minor editorial changes made to COH amendment.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

City of Houston Amendment

Analysis: No changes were made to COH amendment.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

City of Houston Amendment

Analysis: No changes were made to COH amendment.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

City of Houston Amendment

Analysis: COH amendment has been modified to include limits identifying the maximum number of TCO's authorized in any 12-month period. Specific fire watch requirements identified for temporary events that would require fire sprinkler protection based on the Building Code and the proposed temporary use.
Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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	<p>complete plans for appropriate code review and upgrade the facility to comply with the code provisions applicable to the proposed temporary use or occupancy.</p>	
<p>118.1.5 Reinspection fee. In case 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.</p>	<p>118.1.5 Reinspection fee. When in case 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.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment. No change to code meaning or intent. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 <i>building official</i> finds that the request was made as a result of an unforeseeable emergency.</p>	<p>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 <i>building official</i> finds that the request was made as a result of an unforeseeable emergency.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment to maintain code publisher's standard format. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 <i>building official</i> 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.</p>	<p>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 <i>building official</i> 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.</p>	<p>City of Houston Amendment Analysis: No changes made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 <i>building official</i> 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.</p>	<p>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 <i>building official</i> 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.</p>	<p>City of Houston Amendment Analysis: No changes made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 118.1.11.</p>	<p>118.1.9 Inspections outside of jurisdiction. The fee 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.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment to maintain code publisher's standard format. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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118.1.10 Exemption from permits and fees. To the extent that the state and the 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.

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.

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.

The code provisions from the 2012 IBC Houston Amendments have been relocated to 2015 IBC Houston amendments to section: [A] 105.2 Work exempt from permit. (Items No. 17 and 18.)

City of Houston Amendment

Analysis: This COH amendment from the 2012 IBC was relocated to Section 105.2 Items #17 and 18 in the 2015 IBC Amendments.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

118.1.11 Approved fabricators/certifying agent or agency. Permit fees shall apply to an approved fabricator/certifying agent or agency, as follows:

1. An approved certifying agent or agency, as described in Chapter 17, shall pay the fee stated in the city fee schedule for any inspection made 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, shall pay the fee stated in the city fee schedule for each inspection made 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.

118.1.10 Approved fabricators/certifying agent or agency. Permit fees shall apply to 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 inspection 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 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.

City of Houston Amendment

Analysis: Minor editorial changes made to COH amendment to maintain code publisher's standard format. No change to code meaning or intent.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

118.1.12 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.

118.1.11 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.

City of Houston Amendment

Analysis: The COH amendment was renumbered and relocated from 113.1.12.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

118.1.13 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.

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.

City of Houston Amendment

Analysis: The COH amendment was renumbered and relocated from 113.1.13.

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<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.1.14 Name or address changes and duplicate job cards or certificates. The fees for name or address changes for 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: The COH amendment was renumbered minor edits included to identify that name changes on permit applications are subject to the same fee as a name change for an existing permit of certificate. This section is also renumbered to 118.1.13 to coincide with the format of the 2015 IBC code amendments.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.1.15 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.</p> <p>Standard request. Requests that require a minimal amount of research or consultation to grant or deny the request. Typically, standard requests are submitted on a form promulgated by the building official.</p> <p>Moderate request. Requests that require a moderate amount of research or consultation to grant or deny the request, typically between 2 - 4 hours of time.</p> <p>Extensive request. Requests that require extensive research, documentation, and data collection and review to grant or deny the request.</p>	<p>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.</p> <p>Standard request. A standard R requests that requires a minimal amount of research or consultation to review and grant or deny the request. Typically, sStandard requests are apply to submitted forms promulgated by the building official.</p> <p>Moderate request. A moderate R requests that requires an intermediate amount of research or consultation to review and grant or deny the request. Typically, 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 of time to complete.</p> <p>Extensive request. An extensive R requests that requires lengthy research, documentation, and 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: The COH amendment was renumbered and to coincide with the 2015 IBC amendments and relocated from 118.1.15. The amendment was updated to more clearly identify when the fee for each level is of review is applied. This update clarifies the provisions of this section and its intended application.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.1.16 Minimum 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: The COH amendment was renumbered and relocated from 118.1.16.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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118.1.17 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*.

118.1.16 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*.

City of Houston Amendment

Analysis: The COH amendment was renumbered and relocated from 118.1.17.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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

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

City of Houston Amendment

Analysis: Minor change deletes the text in this section leaving only the title of Section 118.2 in this COH amendment in an effort to eliminate duplication. The text is already located in the charging provisions of Section 118.2.1.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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

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).

Notes:

1. New single-family homes with a valuation of \$115,000 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.
5. Dredging.
6. Prefabricated fireplaces.
7. Sand blasting or water blasting.
6. Grading permit.
7. Loading docks (uncovered).
8. Barricades for pedestrian walkways.
9. Paint spray booths.
10. Heliports and helistops (interdepartmental inspections—health, structure, fire and aviation safety).

**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

City of Houston Amendment

Analysis: The text in the previous COH amendment was rearranged, renumbered, and extensively modified to now include a new one- and two-family residential dwelling fee calculation method based on square footage instead of valuation, in addition to renumbering to the correct sequence.

This new calculation method was mandated by state law adoption of HB 852.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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	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

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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 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

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

City of Houston Amendment

Analysis: Minor editorial changes made to existing COH amendment clarify the code in this provision.

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<p>shall be charged in the same manner as new buildings as set forth in Section 118.2.1 and the city fee schedule.</p>	<p>permit shall be charged in the same manner as new buildings as set forth in Section 118.2.1 and the city fee schedule.</p>	<p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 Appendix L. A certificate of occupancy or a life safety compliance inspection and certificate(s) (for compliance with Appendix L) includes initial compliance inspection, final inspection, and issuance of certificate. It does not include fees for permits where work is required.</p>	<p>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 Appendix L the Existing Building Code or the Property Maintenance Code. A certificate of occupancy or a life safety compliance inspection and certificate(s) (for compliance with Appendix L) includes initial compliance inspection, final inspection, and issuance of certificate. It does not include fees for permits where work is required.</p>	<p>City of Houston Amendment Analysis: The existing amendment was modified to reference the applicable code for occupancy inspections of existing buildings. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.2.4 Fences. Permit fees for fences shall be as stated for this provision in the city fee schedule.</p>	<p>118.2.4 Fences. Permit fees for fences shall be as stated for this provision in the city fee schedule.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.2.5 Fire escapes. Permit fees for fire escapes shall be as stated for this provision in the city fee schedule.</p>	<p>118.2.5 Fire escapes. Permit fees for fire escapes shall be as stated for this provision in the city fee schedule.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 or 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.</p>	<p>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</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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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 118.2 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.

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 118.2 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: Ducts and grilles in a lease space, where total valuation is less than \$500.00
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 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 ~~D~~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.

City of Houston Amendment

Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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.

118.3.2 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.

City of Houston Amendment

Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No changes made to this COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.3.4 Self-contained air-conditioning units. The fee stated for this provision in the city fee schedule shall be paid for buildings using self-contained air-conditioning units. Exception: Group R-3 occupancies.</p>	<p>118.3.4 Self-contained air-conditioning units. The stated fee 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.</p>	<p>City of Houston Amendment Analysis: Minor changes made to this COH amendment for clarification. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.3.5 Manufactured home inspections. For a manufactured home inspection of heating and ductwork where no state inspection has been made, the fee shall be as stated for this provision in the city fee schedule.</p>	<p>118.3.5 Manufactured home inspections. For inspection of heating and ductwork of a manufactured home inspection of heating and ductwork of where no state inspection has been made, the fee shall be as stated for this provision in the city fee schedule.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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.</p>	<p>118.3.6 Certificate of approval. In addition to the regular permit fee, the fee started 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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.4 Boilers. Every person desiring to install, maintain or repair boilers shall file an application for a permit with the <i>building official</i>, stating the location and nature of work to be performed, and pay the fees stated in the city fee schedule for the following:</p> <ol style="list-style-type: none"> 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. Annual fee. Repair permit. 	<p>118.4 Boilers. Every person desiring to install, maintain or repair boilers shall file an application for a permit with the <i>building official</i>, stating the location and nature of work to be performed, and pay the fees stated in the city fee schedule for the following:</p> <ol style="list-style-type: none"> 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. Annual fee. Repair permit. 	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.5 Plumbing.</p> <p>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:</p> <ul style="list-style-type: none"> Opening in street (street cut, for purpose of connection with utilities). (See Chapter 40, <i>City Code</i>, for additional regulations and deposits required.) Temporary gas inspection Gas permit and inspection (up to 4 openings) Additional gas openings, each 	<p>118.5 Plumbing.</p> <p>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:</p> <ul style="list-style-type: none"> Opening in street (street cut, for purpose of connection with utilities). (See Chapter 40, <i>City Code</i>, 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). 	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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<p>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</p>	<p>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.</p>	
<p>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</p>	<p>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</p>	
<p>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 same permit</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 or less floor area For each additional 1,000 square feet or part thereof Septic tanks or individual sewage treatment plants, each</p>	<p>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 m²) or less floor area. For each additional 1,000 square feet (93 m²) or part thereof.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment for clarity. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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<p><u>Disconnect and plug main sewer connection</u> <u>Tanks (not septic tanks). A permit separate from other permits required:</u> <u>Up to and including 1,000 gallons capacity (including mechanical interceptors)</u> <u>1,001 through 6,000 gallons</u> <u>6,001 through 15,000 gallons</u> <u>15,001 through 30,000 gallons</u> <u>Over 30,000 gallons</u></p>	<p><u>Septic tanks or individual sewage treatment plants, each.</u> <u>Disconnect and plug main sewer connection.</u> <u>Tanks (not septic tanks). A permit separate from other permits required:</u> <u>Up to and including 1,000 gallons (3,785 L) capacity (including mechanical interceptors).</u> <u>More than 1,000 through 6,000 gallons (3,785 L through 22,712 L).</u> <u>More than 6,000 through 15,000 gallons (22,712 L through 56,781 L).</u> <u>More than 15,000 through 30,000 gallons (56,781 L through 113,562 L).</u> <u>More than 30,000 gallons (113,562 L).</u></p>	
<p>118.6 Electrical. Fees for the following permits and related inspections required by the <i>Electrical Code</i> are stated for this provision in the city fee schedule, with a minimum fee also stated for this provision in the city fee schedule where not otherwise specified:</p>	<p>118.6 Electrical. Fees for the following permits and related inspections required by the <i>Electrical Code</i> 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:</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.6.1 Services. <u>Meter loop and service</u> <u>Up to and including 50 kW</u> <u>51 kW through 250 kW</u> <u>Over 250 kW</u> <u>Panels with eight or more circuits, each</u> <u>Outlets, each</u> Note: All light switches and receptacle openings and bell-ringing transformers are classified as outlets. <u>Electrical vehicle charging outlets</u> <u>Level 1</u> <u>Level 2</u> <u>Level 3</u></p>	<p>118.6.1 Services. <u>Meter loop and service.</u> <u>Up to and including 50 kW.</u> <u>More than 50 kW through 250 kW.</u> <u>More than 250 kW.</u> <u>Panels with eight or more circuits, each panel.</u> <u>Outlets, each.</u> Note: All light switches, receptacle openings and bell-ringing transformers are classified as outlets. <u>Electrical vehicle charging outlets identified in this Section (118.6.1) requiring compliance with Section 511.10(B) and Article 625 include:</u> <u>Level 1 – charging 120 Volts</u> <u>Level 2 – charging the NEC including 240 Volts</u> <u>Level 3 – charging 480 Volts</u></p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.6.2 Fixtures and Appliances. <u>Fixtures, each</u> Note: Any current-consuming device permanently attached to an outlet for illumination purposes shall be classified as a fixture. <u>Electrical appliances-domestic</u> <u>Range receptacle, each</u> <u>Clothes dryer, each</u> <u>Stove top, each</u> <u>Oven, each</u> <u>Garbage disposal, each</u> <u>Dishwasher, each</u> <u>Window air-conditioner receptacle, each</u></p>	<p>118.6.2 Fixtures and appliances. <u>Fixtures, each.</u> Note: Any current-consuming device permanently attached to an outlet for illumination purposes shall be classified as a fixture. <u>Electrical appliances-domestic.</u> <u>Range receptacle, each.</u> <u>Clothes dryer, each.</u> <u>Stove top, each.</u> <u>Oven, each.</u> <u>Garbage disposal, each.</u> <u>Dishwasher, each.</u> <u>Window air-conditioning receptacle, each.</u></p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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<p>118.6.3 Motors.</p> <p>Motors, permanently installed, each Up to and including 1 horsepower Over 1 horsepower through 10 horsepower Each additional horsepower 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 connections 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.</p>	<p>118.6.3 Motors.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.6.4 Signs.</p> <p>Shop 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 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</p>	<p>118.6.4 Signs.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.6.5 Outdoor and temporary.</p> <p>Streamers and festoon lighting per circuit, each Ball park and parking lot light poles (no outlet or fixture charge), 1st pole each Each additional pole over 1 Temporary installations, such as wood saws, floor surfacing machines, painting/spraying 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</p>	<p>118.6.5 Outdoor and temporary.</p> <p>Streamers and festoon lighting per circuit. Ball park and parking lot light poles (no outlet or fixture charge), 1st pole each. Each additional pole over 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.7 Elevators.</p> <p>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 <i>building official</i> and pay the installation fees for each unit stated for this provision in the city fee schedule for the following: New installations and alterations:</p>	<p>118.7 Elevators.</p> <p>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 <i>building official</i> and pay the installation fees for each unit stated for this provision in the city fee schedule for the following: New installations and alterations:</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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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 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)
 Same equipment 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.

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).
 Same equipment 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 the test or inspection if the building official does not then have qualified personnel to perform it. 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 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 inspection for each elevator except where lesser fee is provided below
 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. Reschedule 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.

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 below:
 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. Reschedule 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

City of Houston Amendment

Analysis: Minor changes made to COH amendment to include requirements for 3rd party inspections when required by the Building Official.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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* 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.

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. In the event it becomes necessary to make a reinspection of work or equipment due to deficiencies in order to issue an approved inspection report, the applicant shall pay to the *building official* for each reinspection the fee stated for this provision in the city fee schedule.

118.7.3 Reinspection fee. In the event it becomes necessary to make a reinspection of work or equipment due to deficiencies in order to issue an approved inspection report, the applicant shall pay to the *building official* for each reinspection the fee stated for this provision in the city fee schedule.

City of Houston Amendment

Analysis: No changes were made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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:

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.

- 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 power by one motor shall be considered as a separate unit.

City of Houston Amendment

Analysis: No changes were made to COH amendment.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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

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 or reconstruction permit
 - For the first 32 square feet 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-premises signs. An operating permit for on-premises shall be issued as a renewable permit on an annual basis upon payment of the following fees:
 - For the first 32 square feet of sign face or fraction thereof
 - Each square foot of sign face or fraction thereof exceeding 32 square feet
6. Operating permit. 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 in sign face area shall be a nonrenewable one-year permit as authorized in Section 4612 (b) of the *Sign Code*.
7. Operating permit. An off-premise operating permit for a sign other than as provided above shall be issued as a renewable permit on an annual basis.
8. New registration for changeable message signs/high technology signs (per face)

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 m²) 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 m²) of one sign face or fraction thereof.
 - Each square foot or fraction thereof of one sign face exceeding 32 square feet (2.9728 m²).
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 m²) 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.

City of Houston Amendment

Analysis: Minor editorial changes made to COH amendment. No change to the code requirements or code intent.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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<p>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 All other fees required by Section 118 shall be paid in addition to the fees in Section 118.8.</p>	<p>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.</p>	
<p>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</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 re-inspection fee. If a third onsite re-inspection is necessary, the permittee 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 revisions to plans.</p>	<p>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 permittee 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 revisions to plans.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>118.12 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 H occupancy buildings or buildings with tank storage. Onsite re-inspection fee. If a third onsite re-inspection is necessary, the permittee 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 revisions to plans.</p>	<p>118.12 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 H occupancy buildings 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.</p>	<p>City of Houston Amendment Analysis: No changes were made to COH amendment. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>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 within the definitions of this code and to those Group U occupancies, such as garages, carports, fences and other structures, that are associated with dwellings.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment for clarity. No change to the meaning or intent of the code requirements. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>119.2 Scope. This section applies to any permit required under this code, the Electrical Code, Plumbing Code, or the Mechanical Code for the construction, repair, or renovation of a structure to which this section applies.</p>	<p>119.2 Scope. This section applies to any permit required under this code, the Electrical Code, Plumbing Code, or the Mechanical Code the Construction Code for the construction, repair, or renovation of a structure to which this section applies.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment for clarity. No change to the meaning or intent of the code requirements.</p>

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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 in accordance with any applicable laws and regulations and certification in accordance with state or federally recognized standards.
2. Requirement of appropriate liability coverage in an amount of not less than \$1,000,000, per occurrence, with indemnity agreements 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 jurisdiction's Director of Public Works and Engineering, 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:

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 in accordance with any applicable laws and regulations and certification 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 indemnity agreements and coverage of to hold harmless and indemnify 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. Provision 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 jurisdiction's 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, building, 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

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

City of Houston Amendment

Analysis: Minor editorial changes made to COH amendment for clarity. No change to the meaning or intent of the code requirements.

Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.

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a. 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:

- (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;
- (2)** The name of each firm or individual utilized under the program on each residential structure during the reporting period; and
- (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.

b. The *building official* shall file a report with the Mayor and City Council containing the following information:

- (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;
- (2)** Names of all firms and individuals approved to perform services under the program;
- (3)** Total number of plan reviews and inspections performed by firms and individuals for each private developer, builder or contractor operating under the program;
- (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 or individual's work, including subcontractors, so inspected;
- (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;
- (6)** A list of any firms or individuals removed from the program by the *building official*; and
- (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 filed with 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 he may deem appropriate.

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 file 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 filed with 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.

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<p>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.</p>		
<p>119.4 Oversight inspections. The provisions of this section do not affect the jurisdiction of the <i>building official</i> over any work or preclude oversight inspections by the <i>building official</i> of structures that are subject to the provision of services under the program. For purposes of quality assurance, the <i>building official</i> 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 this code, the <i>Electrical Code</i>, the <i>Plumbing Code</i>, or the <i>Mechanical Code</i>. No prior notice need be provided to any program firm or individual, contractor, or owner, unless otherwise required by law.</p>	<p>119.4 Oversight inspections. The provisions of this section do not affect the <i>jurisdiction</i> of the <i>building official</i> over any work or preclude oversight inspections by the <i>building official</i> of structures that are subject to the provision of services under the program. For purposes of quality assurance, the <i>building official</i> 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 <u>this code, the <i>Electrical Code</i>, the <i>Plumbing Code</i>, or the <i>Mechanical Construction Code</i></u>. No prior notice need be provided to any program firm or individual, contractor, or owner, unless otherwise required by law.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes made to COH amendment for clarity. No change to the meaning or intent of the code requirements.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p>119.5. Fees. To cover administrative costs, including registration of firms and individuals, management of the program, and oversight inspections, the <i>building official</i> 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 <i>building official</i> of any structure that is subject to private inspection under this section, then the <i>building official</i> 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.</p>	<p>119.5 Fees. To cover administrative costs, including registration of firms and individuals, management of the program, and oversight inspections, the <i>building official</i> 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 <u>jurisdiction's</u> costs in connection with any fee required to be paid to and remitted by the <u>jurisdiction</u>. If any contractor or owner requests an inspection by the <i>building official</i> of any structure that is subject to private inspection under this section, then the <i>building official</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Minor editorial changes made to COH amendment for clarity. No change to the meaning or intent of the code requirements.</p> <p>Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>

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2012 Houston IBC – Chapter 2 Definitions	2015 Houston IBC – Chapter 2 Definitions	Code Analysis
<p>201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the International Energy Conservation Code, International Fuel Gas Code, Electrical Code, Residential Code, International Fire Code, International Mechanical Code or International Plumbing Code, such terms shall have the meanings ascribed to them as in those codes.</p>	<p>201.3 Specific construction and 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.</p>	<p>City of Houston Amendment Analysis: Minor editorial changes made to COH amendment for clarity. No change to the meaning or intent of the code requirements. Justification: Chapter 1 is the legal administration and enforcement chapter governed by state law and separately reviewed by the City Legal Department.</p>
<p style="text-align: center;">SECTION 202* DEFINITIONS</p> <p>(Section 3112.2 – Definitions) 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. ALTERATION Any construction or renovation to an existing structure other than repair or addition. ANCHOR. Metal rod, wire or strap that secures masonry to its structural support. APPROVAL – N/A APPROVED FABRICATOR. An established and qualified person, firm or corporation approved by the <i>building official</i> pursuant to Chapter 17 of this code. AS-GRADED – N/A ASME CODE – N/A AUTHORITY HAVING JURISDICTION – N/A AUTHORIZED COMPANY – N/A AUTHORIZED INSPECTOR – N/A</p>	<p style="text-align: center;">SECTION 202 DEFINITIONS</p> <p>(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. <i>(NOTE: Relocated from Section 3112.2 of 2012 IBC)</i> [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 <i>building official</i> 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 <i>building official</i> 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 <i>authority having jurisdiction's</i> 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 <i>building official</i>.</p>	<p>City of Houston Amendment Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The city has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local interpretations, practice, and policy for clarity. ANCHOR. CHANGE TYPE: Clarification. CHANGE SUMMARY: This definition was deleted by the ICC from the Building Code. It was felt that having the definition in the Building code was beneficial to users of the code and assisted in providing clarification during the application of the code. CHANGE SIGNIFICANCE: <i>As established by its definition, a means of egress consists of three separate and distinct parts: the exit access, the exit, and the exit discharge. The "exit" portion of the means-of-egress system can include a number of different components, one of which is a horizontal exit. The definition of "horizontal exit" has been modified to more accurately describe its role as an exit component.</i> <i>The previous definition indicated that a horizontal exit was a path of egress travel, which was not accurate. In fact, the horizontal exit concept is based upon the creation of a refuge area where exit travel is no longer independently regulated for the individuals passing through the horizontal exit's fire-resistance-rated separation. The definition now focuses on the compartmentalization aspect of using a horizontal exit, with the recognition that a fire-resistance-rated separation and appropriate opening protectives are keys to its use as an exit component. In addition, the portion of the definition that described travel to and from areas on approximately the same level has been deleted because the specifics of the various acceptable building configurations are best addressed in Section 1026.</i> Justification: This amendment is needed to provide clarity during application of certain code provisions and to ensure conformity with state and local government policy.</p>

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BATHING ROOM (BATHROOM) – N/A

BEDROCK – N/A

BUILDING CODE – N/A

BUILDING OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code jurisdiction's Director of Public Works and Engineering, or a duly authorized representative.

BULKHEAD – N/A

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.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.

CERTIFICATE OF COMPLIANCE. A certificate stating that materials and products meet specified standards or that work was done in compliance with approved construction documents.

CERTIFYING ORGANIZATION – N/A

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

CITY ENGINEER – N/A

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

(Section E105 – Definitions)

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

CIVIL ENGINEERING – N/A

CLEANOUT – N/A

CODE OFFICIAL – N/A

COMMERCIAL PIER – N/A

COMPRESSIVE STRENGTH OF MASONRY – N/A

CONSTRUCTION CODE. The City of Houston Construction Code, consisting of the Building Code, Electrical Code, Mechanical Code, Plumbing Code, Residential Code, Commercial Energy Conservation Code, and Residential Energy Conservation Code.

CORROSION RESISTANT or NONCORROSIVE – N/A

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, and that 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:

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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	<p>1. Commercial boat livery.</p> <p>2. Commercial fishing camp.</p> <p>3. Public pier.</p> <p>4. Private club.</p> <p>5. A pier used by the owner of two or more residential lots for access to the lake.</p> <p>6. A pier at which access to the lake may be provided for the payment of an admission or membership fee.</p> <p>7. A pier at which vessel are moored for money or other valuable consideration.</p> <p>8. A pier at which two or more vessels that have a cab, a toilet or a sewage holding tank are moored.</p> <p>COMPRESSIVE STRENGTH OF MASONRY. Maximum compressive force resisted per unit of net cross-sectional area of masonry, determined by the testing of masonry prisms.</p> <p>CONSTRUCTION CODE. Has the meaning ascribed in Section 1-2 of the <i>City Code</i> The City of Houston Construction Code, consisting of the Building Code, Electrical Code, Mechanical Code, Plumbing Code, Residential Code, Commercial Energy Conservation Code, and Residential Energy Conservation Code.</p> <p>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/m²) 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.</p>	
<p>(2012 IBC Section 116.1 Unsafe buildings or structures.)</p> <p>DANGEROUS – N/A</p> <p>(Section 3112.2 Definitions)</p> <p>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 this section, the definition of private street shall be the same as the definition of driveway.)</p> <p>(Section 3112.2 Definitions)</p> <p>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 <i>Infrastructure Design Manual</i>.</p> <p>DUPLEX – N/A</p>	<p>[BS] DANGEROUS. Any building meeting the definition of a dangerous building as defined in Chapter 10, Article IX, of the <i>City Code</i> or any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:</p> <ol style="list-style-type: none"> 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. <p>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.)</p> <p>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 <i>Infrastructure Design Manual</i>.</p> <p>DUPLEX. An individual free-standing structure containing only two dwellings, single-family residences, or households, each containing a separate means of egress.</p>	<p>City of Houston Amendment</p> <p>Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy. New definition needed to clearly differentiate between a single-family residence/a duplex and a townhouse or congregate residence. Legal Dept. help needed.</p>
<p>EARTH MATERIAL – N/A</p> <p>EGRESS COURT. A court or yard which provides access to a public way for one or more exits.</p>	<p>EARTH MATERIAL. Any rock, natural soil or fill or any combination thereof</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where</p>

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ELECTRICAL CODE. ~~The National Electrical Code promulgated by the National Fire Protection Association, as adopted by this jurisdiction, and the City of Houston Electrical Code. See Section 101.4.7.~~

ENERGY CONSERVATION CODE. ~~The City of Houston Residential Energy Conservation Code or the City of Houston Commercial Energy Conservation Code, both based on the International Energy Conservation Code, as adopted by the State of Texas, or on an alternate code that has been determined to be more stringent than the International Energy Conservation Code, as provided in Chapter 388 of the Texas Health & Safety Code, both as adopted and amended by this jurisdiction. See Section 101.4.6.~~

(Section E105 – Definitions)

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

(Section E105 – Definitions)

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.~~

~~(Hazardous Enterprise Ordinance Chapter 28, Article VII of the City Code)~~

~~ENTERPRISE – N/A~~

~~(Hazardous Enterprise Ordinance Chapter 28, Article VII of the City Code)~~

~~ENTERPRISE PERMIT – N/A~~

~~EXISTING BUILDING CODE – N/A~~

EXISTING STRUCTURE (For Chapter 34). 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.

EXIT, HORIZONTAL. A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the same building, which affords safety from fire and smoke from the area of incidence and areas communicating therewith.

ELECTRICAL CODE. ~~The City of Houston Electrical Code as adopted and amended by this jurisdiction promulgated by the National Fire Protection Association, as adopted by this jurisdiction, and the City of Houston Electrical Code. See Section 101.4.7.~~

ENERGY CONSERVATION CODE. ~~The City of Houston Residential Energy Conservation Code or the City of Houston Commercial Energy Conservation Code, both based on the International Energy Conservation Code, as adopted by the State of Texas, or on an alternate code that has been determined to be more stringent than the International Energy Conservation Code, as provided in Chapter 388 of the Texas Health & Safety Code, both as adopted and amended by this jurisdiction. See Section 101.4.6.~~

ENGINEERING GEOLOGIST. ~~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.~~

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 m²) 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 by this jurisdiction.~~

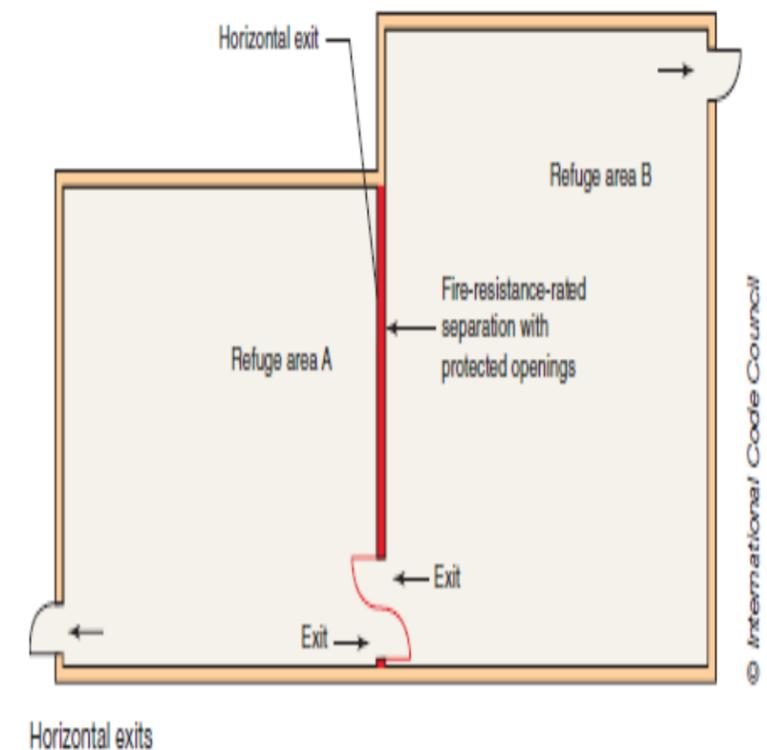
EXISTING STRUCTURE. ~~A structure erected prior to the date of adoption of the appropriate this code, or one for which a legal building permit has been issued. For application of provisions in flood hazard areas, an existing structure is any building or~~

necessary these new definitions have been amended to match state and local policy.

CHANGE SIGNIFICANCE: *As established by its definition, a means of egress consists of three separate and distinct parts: the exit access, the exit, and the exit discharge. The "exit" portion of the means-of-egress system can include a number of different components, one of which is a horizontal exit. The definition of "horizontal exit" has been modified to more accurately describe its role as an exit component.*

The previous definition indicated that a horizontal exit was a path of egress travel, which was not accurate. In fact, the horizontal exit concept is based upon the creation of a refuge area where exit travel is no longer independently regulated for the individuals passing through the horizontal exit's fire-resistance-rated separation. The definition now focuses on the compartmentalization aspect of using a horizontal exit, with the recognition that a fire-resistance-rated separation and appropriate opening protectives are keys to its use as an exit component. In addition, the portion of the definition that described travel to and from areas on approximately the same level has been deleted because the specifics of the various acceptable building configurations are best addressed in Section 1026.

Justification: This amendment is needed to ensure conformity with state and local government policy. Modify definition of egress court to address specific exterior egress (exit discharge) requirements needed for all exits and emergency escape and rescue openings for residential structures that contain sleeping rooms. Coordinated with the IRC and IFC.



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	<p>structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard.</p> <p>Exit, Horizontal. A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the same building, which affords safety from fire and smoke from the area of incidence and areas communicating therewith.</p> <p>Horizontal Exit. An exit component consisting of fire-resistance rated construction and opening protectives intended to compartmentalize portions of a building thereby creating refuge areas that afford safety from the fire and smoke from the area of fire origin.</p>	
<p>FAIL-SAFE – N/A</p> <p>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.</p> <p>FIRE CHIEF – N/A</p> <p>FIRE CODE. The <i>City of Houston Fire Code</i>, as adopted by this jurisdiction. See Section 101.4.5.</p> <p>FIRE CODE OFFICIAL. The fire marshal or a duly authorized representative charged with the administration and enforcement of the <i>Fire Code</i>.</p> <p>FIRE MARSHAL. The fire marshal of this jurisdiction or such other person as the fire chief of this jurisdiction may designate.</p> <p>FULL CUTOFF FIXTURE. A light fixture that prevents more than ten percent of the light it emits from emitting at all angles beginning at 80 degrees up from the nadir to less than 90 degrees, and no light from emitting at 90 degrees (horizontal plane) and above. This applies to all horizontal angles around the light fixture.</p> <p>FULL CUTOFF FIXTURE – N/A (See Houston Electrical Code)</p>	<p>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.</p> <p>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.</p> <p>FIRE CHIEF. Has the meaning ascribed in Section 34-53 of the <i>City Code</i>.</p> <p>FIRE CODE. The <i>City of Houston Fire Code</i>, as adopted by this jurisdiction. See Section 101.4.5.</p> <p>FIRE CODE OFFICIAL. The <i>jurisdiction's</i> fire marshal or a duly authorized representative, who is charged with the administration and enforcement of the <i>Fire Code</i>, or an authorized representative.</p> <p>FIRE MARSHAL. The fire marshal of this <i>jurisdiction</i> or such other person as the fire chief of this <i>jurisdiction</i> may designate.</p> <p>FULL CUTOFF FIXTURE. A light fixture that prevents more than ten percent of the light it emits from emitting at all angles beginning at 80 degrees up from the nadir to less than 90 degrees, and no light from emitting at 90 degrees (horizontal plane) and above. This applies to all horizontal angles around the light fixture.</p>	<p>City of Houston Amendment</p> <p>Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>GOOD CONDITION – N/A</p> <p>GRADE, ROUGH – N/A</p> <p>GRADING – N/A</p> <p>GRADING, ENGINEERED – N/A</p> <p>GRADING, REGULAR – N/A</p> <p>GRUB OR GRUBBING – N/A</p>	<p>GOOD CONDITION. Describes materials that have been visually inspection by the <i>building official</i> 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 <i>building official</i>.</p> <p>GRADE, ROUGH. The stage of grading at which the grade approximately conforms to the approved plan.</p> <p>GRADING. The act of leveling to a smooth horizontal or sloping surface. Also see SITE GRADING.</p> <p>GRADING, ENGINEERED. Any <i>grading</i> involving in excess of 1,000 cubic yards (764.5549 m³) of fill.</p>	<p>City of Houston Amendment</p> <p>Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>

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GRADING, REGULAR. Any grading involving less than or equal to 1,000 cubic yards (764.5549 m³) 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 floor 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 BUILDING STANDARDS CODE. Article IX of Chapter 10 of the City Code relating to abatement of dangerous buildings, also known as the "Dangerous Building Code."

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.

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

(Section 3112.2 Definitions)

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 BUILDING STANDARDS CODE. Article IX of Chapter 10 of the City Code relating to abatement of dangerous buildings, also known as the "Dangerous Building Code."

HOUSTON SPECIAL FLOOD HAZARD AREA – N/A

EXIT, HORIZONTAL. A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the same building, which affords safety from fire and smoke from the area of incidence and areas communicating therewith.

Horizontal Exit – N/A

HIGH-RISE BUILDING. A building with an occupied floor 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.

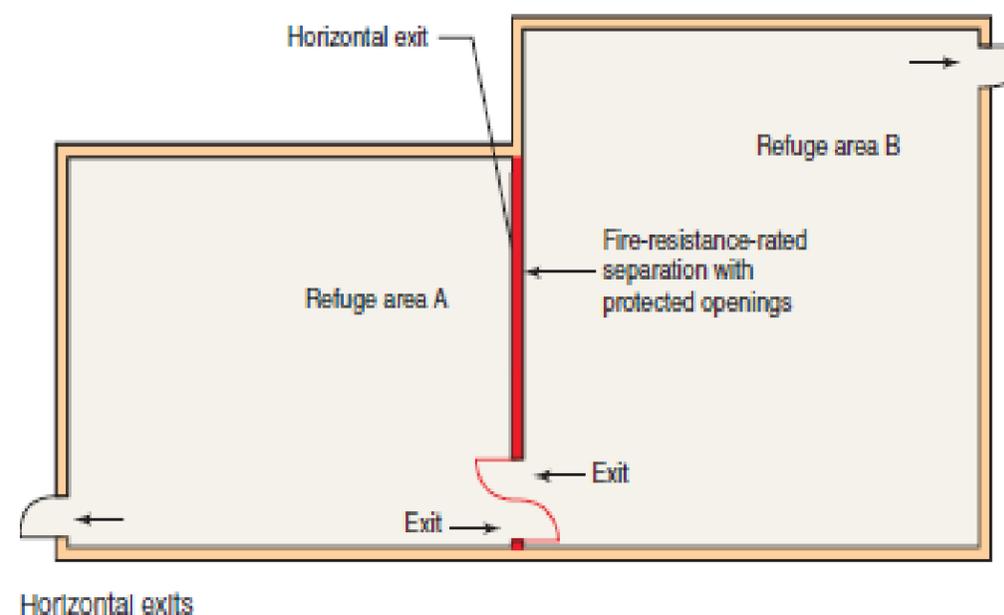
HIGHWAY, STREET OR ROAD. A general term denoting a public way for the purpose of vehicle travel, including the entire area within the right-of-way.

HOUSTON BUILDING STANDARDS CODE. Article IX of Chapter 10 of the City Code relating to abatement of dangerous buildings, also known as the "Dangerous Building Code."

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.

Exit, Horizontal. A path of egress travel from one building to an area in another building on approximately the same level, or a path of egress travel through or around a wall or partition to an area on approximately the same level in the same building, which affords safety from fire and smoke from the area of incidence and areas communicating therewith.

Horizontal Exit. An exit component consisting of fire-resistance rated construction and opening protectives intended to compartmentalize portions of a building thereby creating refuge areas that afford safety from the fire and smoke from the area of fire origin.



City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local interpretation, practice and policy.

CHANGE SUMMARY: The alteration of the definition of High-Rise is intended to clarify the requirements and intent of the building and Fire codes adopted by the city and to eliminate building owners attempting to skirt the requirement for installing fire sprinkler protection required by the retroactive high-rise sprinkler ordinance.

The ICC updated definition for "horizontal exit" now focuses on the compartmentalization aspect of using a horizontal exit, rather than on the path of egress travel. This clarifies the requirements, intent and application of the code for this term.

CHANGE SIGNIFICANCE: As established by its definition, a means of egress consists of three separate and distinct parts: the exit access, the exit, and the exit discharge. The "exit" portion of the means-of-egress system can include a number of different components, one of which is a horizontal exit. The definition of "horizontal exit" has been modified to more accurately describe its role as an exit component.

The previous definition indicated that a horizontal exit was a path of egress travel, which was not accurate. In fact, the horizontal exit concept is based upon the creation of a refuge area where exit travel is no longer independently regulated for the individuals passing through the horizontal exit's fire-resistance-rated separation. The definition now focuses on the compartmentalization aspect of using a horizontal exit, with the recognition that a fire-resistance-rated separation and appropriate opening protectives are keys to its use as an exit component. In addition, the portion of the definition that described travel to and from areas on approximately the same level has been deleted because the specifics of the various acceptable building configurations are best addressed in Section 1026.

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INTERNATIONAL ENERGY CONSERVATION CODE. ~~The City of Houston Residential Energy Conservation Code or the City of Houston Commercial Energy Conservation Code, both based on the International Energy Conservation Code, as adopted by the State of Texas, or on an alternate code that has been determined to be more stringent than the International Energy Conservation Code, as provided in Chapter 388 of the Texas Health & Safety Code, both as adopted and amended by this jurisdiction. See Section 101.4.6.~~

INTERNATIONAL EXISTING BUILDING CODE – N/A

INTERNATIONAL FIRE CODE. ~~The City of Houston Fire Code, as adopted by this jurisdiction. See Section 101.4.5.~~

INTERNATIONAL FUEL GAS CODE. ~~The City of Houston Plumbing Code, as adopted by this jurisdiction. See Section 101.4.1.~~

INTERNATIONAL MECHANICAL CODE. ~~The City of Houston Mechanical Code, as adopted by this jurisdiction. See Section 101.4.2.~~

INTERNATIONAL PLUMBING CODE. ~~The City of Houston Plumbing Code, as adopted by this jurisdiction. See Section 101.4.3.~~

INTERNATIONAL PROPERTY MAINTENANCE CODE. ~~Chapter 10 of the City Code, which includes the Houston Building Standards Code. See Section 101.4.4.~~

INTERNATIONAL RESIDENTIAL CODE. ~~The City of Houston Residential Code, based on the International Residential Code for One- and Two-Family Dwellings, as adopted by the State of Texas in Subchapter G of Chapter 214 of the Texas Local Government Code, with amendments adopted by this jurisdiction. See Section 101.2.~~

INTERNATIONAL SWIMMING POOL AND SPA CODE – N/A (Houston Swimming Pool and Spa Code Based on the State of Texas Health Code)

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. The City of Houston Residential Energy Conservation Code or the City of Houston Commercial Energy Conservation Code, both based on the International Energy Conservation Code, as adopted by the State of Texas, or on an alternate code that has been determined to be more stringent than the International Energy Conservation Code, as provided in Chapter 388 of the Texas Health & Safety Code, both as adopted and amended by this jurisdiction. See Section 101.4.6.~~

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 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. See Section 101.4.5.~~

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. See Section 101.4.1.~~

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. See Section 101.4.2.~~

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. See Section 101.4.3.~~

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, based on the International Residential Code for One- and Two-Family Dwellings, as adopted by the State of Texas in Subchapter G of Chapter 214 of the Texas Local Government Code, with amendments adopted and amended by this jurisdiction. See Section 101.2.~~

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.~~

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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(Houston Building Code Section 6201.3 – Definitions)

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

[A] JURISDICTION. The governmental unit that has adopted this code under due legislative authority.

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

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.

(Previously located in Chapter 23 of the City Code)

LAKE HOUSTON OR LAKE means that area in northeast Harris County known as Lake Houston and described as the first, second, and third parcels in Section 3 of Ordinance No. 3351, passed on the fourth and final reading by the City Council of the City of Houston, Texas, on the 31st day of December, 1956, which ordinance is recorded in the annexation book and the original of which is on file, both as public records, in the office of the city secretary in the City Hall, and all adjoining waters maintaining the same level.

(2012 Houston Building Code Chapter 31 – Definitions)

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.

(2012 Houston Building Code Chapter 31 – Definitions)

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

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.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.

(2012 Houston Building Code Section 3112)

{REVIEW NOTE – SECTION 3112 IS COORDINATED WITH THE CITY ENGINEER ROW STANDARDS AND IS SUBJECT TO CHANGE.}

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 Traffic Engineer.

(2012 Houston Building Code Section 3101.4)

MANLIFT is 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 by this jurisdiction. See Section 101.4.2.

(Previously located in Chapter 20 of the City Code)

Mobile food unit shall mean a food service establishment that is vehicle-mounted or wheeled and is capable of being readily moveable.

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 jurisdiction. See Section 101.4.2.

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.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local interpretation, enforcement practice, and policy.

Two additional Houston definitions have been added to the building code to correlate with certain provisions of the City Code.

A new definition for multi-family residential structure is now included in the Houston building and residential codes to clarify the code construction requirements based on its intent. This new definition will assist all with a better understanding of the code intent and proper application of specific code and construction requirements.

Justification: This amendment is needed to ensure conformity with appropriate application of state and local code construction requirements and clarify expected code application of specific code and construction requirements.

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NON-ABSORBENT MATERIAL – N/A

NON-ABSORBENT MATERIAL. Any material 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.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with the proper application of the code based on the code intent.

ONE- AND TWO-FAMILY DWELLING – N/A

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

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.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with the proper application of the code based on the code intent.

(2012 Houston Building Code Section 3112.3.3)

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.

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.

(2012 Houston Building Code Section 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 purpose of sidewalk construction, shall comply with this section.

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.

(2012 Houston Building Code 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.

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.

(2012 Houston Building Code Section 3112.3.2)

Paving. All other paving regulated under this section shall meet the minimum slab provisions of Section 1910 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.

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, based on the Uniform Plumbing Code and the International Fuel Gas Code as adopted by this jurisdiction. See Section 101.4.3.

(2012 Houston Building Code Section 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 jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering.

PLATFORM. A raised area within a building used for worship, the presentation of music, plays or other entertainment; the head table for special guests; the raised area for lecturers and speakers; boxing and wrestling rings; theater-in-the-round stages; and similar purposes wherein, other than horizontal sliding curtains, there are no overhead hanging curtains, drops, scenery or stage effects other than lighting and sound. A temporary platform is one installed for not more than 30 days.

PRIVATE GARAGE. A building or portion of a building in which motor vehicles used by the tenants of the building or buildings on the premises are stored or kept, without provisions for repairing or servicing such vehicles for profit.

PRIVATE PIER. A pier other than a commercial pier.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: These amendments are needed to ensure conformity with state and local government policy.

PLATFORM

CHANGE SUMMARY: A Clarification. By definition, horizontal sliding curtains are now specifically permitted on a raised performance area regulated as a platform.

CHANGE SIGNIFICANCE: The distinctions between the definitions of a stage and a platform are very important because of the requirements applicable to each element. The primary difference between a stage and a platform is the presence of overhead hanging curtains, drops, scenery, and other effects that a stage contains. The amount of combustible materials associated with a platform is typically much less than for a stage. Thus, the fire-severity potential is much lower. The allowance for horizontal sliding curtains at platforms has been clarified, as they are now specifically permitted by definition.

In order to be regulated as a platform, a raised performance area cannot have overhead hanging curtains. It has previously been unclear as to whether or not horizontal sliding curtains are included in this prohibition. Although it has been widely interpreted that horizontal sliding curtains are not considered as overhead hanging curtains, it was deemed important for consistency in application that the issue be addressed directly. Therefore, the definition of a platform now clearly states that horizontal sliding curtains are permitted.

PRIVATE GARAGE.

PLATFORM. A raised area within a building used for worship, the presentation of music, plays or other entertainment; the head table for special guests; the raised area

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for lecturers and speakers; boxing and wrestling rings; theater-in-the-round stages; and similar purposes wherein, there are no overhead hanging curtains, drops, scenery or stage effects other than lighting and sound. A temporary platform is one installed for not more than 30 days.

PRIVATE GARAGE – N/A

(Houston Building Code Section 6201.3 – Definitions)

PRIVATE PIER. A pier other than a commercial pier.

(Houston Building Code Section E105)

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 – N/A

PLUMBING CODE. The City of Houston Plumbing Code, as adopted by this jurisdiction. See Section 101.4.3.

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 ~~40~~ 20 feet (3048-6,096 mm).



Platform with horizontal sliding curtains

© International Code Council

CHANGE SUMMARY: Addition. Motor vehicles stored in a “private garage” are now limited through a new definition to only those vehicles used by tenants of the building or buildings on the same premises as the garage.

CHANGE SIGNIFICANCE: There are fundamentally two types of parking garages regulated by the IBC, private garages and public garages. Although there has previously been no specific definition for either type of garage, the basis for both classifications has been Section 406.3 addressing private garages and carports. Those parking structures that fell outside of the scope of Section 406.3 were then considered as public parking garages. The primary difference between private and public garages has been the size of the facility, rather than the use. With the new definition of “private garage,” the use of the garage is now also a determining factor in how a garage is to be classified.

A private garage, in addition to its limit on floor area, is now limited as to its use. Motor vehicles stored in a private garage are limited to only those vehicles used by tenants of the building or buildings on the same premises as the garage. In addition, the repair and/or servicing of vehicles for business purposes cannot occur within a private garage.

While the new definition places additional restrictions on those structures classified as Group U private garages, the controlling factor in their classification will typically continue to be their size. Additional changes to the provisions regulating private garages and carports are addressed in the discussion of significant changes to Section 406.3.

(Houston Building Code Appendix R)

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.

RESIDENTIAL CODE. The City of Houston Residential Code, based on the International Residential Code for One- and Two-Family Dwellings, as adopted by the State of Texas in Subchapter G of Chapter 214 of the Texas Local Government Code, including amendments adopted by this jurisdiction. See Section 101.2.

(Houston Building Code Appendix R)

REUSED MATERIALS. Materials that are reused more than once in their original form for their original purpose or for another purpose without any special processing.

(Houston Building Code Chapter 31)

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,

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, based on the International Residential Code for One- and Two-Family Dwellings, as adopted by the State of Texas in Subchapter G of Chapter 214 of the Texas Local Government Code, including amendments adopted and amended by this jurisdiction. See Section 101.2.

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 stalls or bathtubs.

REUSED MATERIALS. Materials that are reused 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.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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tunnels, or similar thoroughfares), whether acquired by purchase, grant, or dedication and acceptance by the jurisdiction or by the public.
ROADWAY (GENERAL). The portion of a highway, including shoulder, for vehicular use.

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.

(Houston Building Code Chapter 31)

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.

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*, Chapter 46 of this code, which is published as a separate document.

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

(Houston Building Code Appendix E)

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

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.

SOIL. Naturally occurring superficial deposits overlying bedrock.

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

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

SOIL. Naturally occurring superficial deposits overlying bedrock.

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.

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.

(Houston Building Code Appendix N)

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

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

SPECIAL INSPECTOR. A qualified person employed or retained by an approved agency and approved by the building official as having the competence necessary to inspect a particular type of construction requiring special inspection.

[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. **Stairs or ladders used only to attend equipment or to access an attic or window well are not considered a stairway.**

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.

TAS – N/A

Toilet Room – N/A

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.

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*.

TREATED WOOD. Wood and wood-based materials products that use vacuum-pressure impregnation processes are conditioned to enhance fire retardant or preservative properties.

FIRE-RETARDANT-TREATED WOOD. Pressure-treated lumber and plywood Wood products that, when impregnated with chemicals by a pressure process or other means

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy. Add new definition to clearly differentiate between a Group R3 single-family residence, duplex, and townhouse.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

CHANGE SIGNIFICANCE: Treated wood is frequently mandated where wood materials are used in various applications. Both fire-retardant treated wood and

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TOWNHOUSE. A single-family dwelling unit constructed in a group of three or more attached units in which each unit extends from the foundation to roof and with open space on at least two sides, **where units are separated by a property line.**

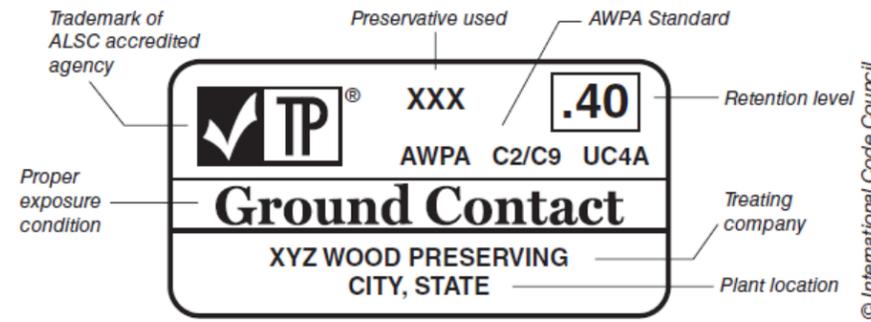
TRANSIT SHED. A covered structure erected on a wharf or quay for the temporary storage of goods in transit between ship and land carrier or warehouse.

TYPE A UNIT. A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with this code and the provisions for Type A units in ICC A117.1.

TYPE B UNIT. A dwelling unit or sleeping unit designed and constructed for accessibility in accordance with this code and the provisions for Type B units in ICC A117.1, consistent with the design and construction requirements of the federal Fair Housing Act.

during manufacture, exhibit reduced surface-burning characteristics and resist propagation of fire.

PRESERVATIVE-TREATED WOOD. ~~Pressure-treated~~ Wood products that, **conditioned with chemicals by a pressure process or other means,** exhibit reduced susceptibility to damage by fungi, insects or marine borers.



Example of treated wood quality mark

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.

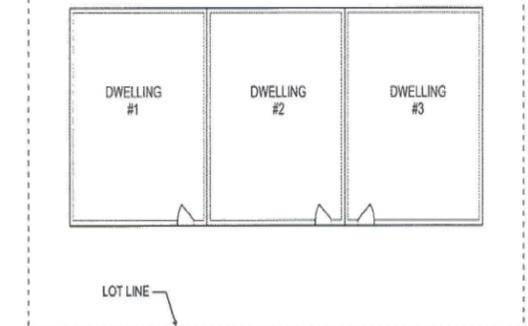
TRANSIT SHED. A covered structure erected on a wharf or quay for the temporary storage of goods in transit between ship and land carrier or warehouse.

preservative-treated wood are specified throughout the IBC. By definition, treated wood has previously been described as wood and wood-based materials that are enhanced through the process of vacuum pressure impregnation. However, pressure treatment is not the only method permitted by the code for treated wood. Sections 2303.2 and 2303.2.2 both indicate that means other than pressure treatment are acceptable for fire-retardant-treated wood. Preservative-treated wood can be pressure treated or treated by a number of other methods indicated in the AWPA standards referenced in Section 2303.1.9. The new definitions now provide consistency with conditions established in Chapter 23.

Justification: This amendment is needed to ensure conformity with state and local government policy. Modify definition of townhouse to clearly indicate a townhouse structure is a multi-family building containing three or more dwelling units and is not a one- or two-family dwelling.

In Figure 7, a three-unit row-style dwelling project with no lot line separation is proposed. Does it meet the definition of Townhouse? Yes, it has three or more units, and each dwelling unit has a yard or public way on at least two sides.

Figure 7: Three-unit Townhouse with Lot Line Separation between Dwelling Units



UL – N/A
(Houston Building Code Section 116.1)
UNSAFE
(Previously Located in the City Code)
UTILITY OFFICIAL

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.

City of Houston Amendment

Analysis: For clarity of the code and its appropriate application many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council or the City of Houston. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy. Modify definition of townhouse to clearly indicate a townhouse structure is a multi-family building containing three or more dwelling units and is not a one- or two-family dwelling.

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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.

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.

City of Houston Amendment

Analysis: Many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.

(Houston Building Code Chapter 30)

WHEELCHAIR LIFT is a vertical wheelchair lift or an inclined wheelchair lift as governed by the Elevator Safety Code, whether of a public building or residential type.

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.

City of Houston Amendment

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, *Vult*, 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.

[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, *Vult*, 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.

Analysis: For clarity of the code and its appropriate application many new definitions have been relocated to chapter 2 and added to the 2015 IBC by the International Code Council or the City of Houston. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

For *Risk Category II* buildings and structures and *Risk Category III* buildings and structures, except health care facilities, the windborne debris region shall be based on Figure 1609A. For *Risk Category IV* buildings and structures and *Risk Category III* health care facilities, the windborne debris region shall be based on Figure 1609B.

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*.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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.

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.

This amendment is proposed to restrict the wind-borne debris (WBD) requirements to structures located within 1-mile of the mean coastal water line. And to eliminate the WBD provisions for certain typical structures classified as Risk Category 3, which would cause additional construction requirement to meet the WBD code provisions.

{EDITORIAL NOTE: ALL OTHER PORTIONS OF SECTION 202 TO REMAIN AS SET FORTH IN THE 2012 INTERNATIONAL BUILDING CODE.}

2012 Houston IBC – Chapter 3 Use and Occupancy Classification

2015 Houston IBC – Chapter 3 Use and Occupancy Classification

Code Analysis

PART 2 – Building Planning Chapters 3 through 6

■ Chapter 3 Use and Occupancy Classification, ■ Chapter 4 Special Detailed Requirements, Based on Use and Occupancy, ■ Chapter 5 General Building Heights and Areas, ■ Chapter 6 Types of Construction

The application of the *International Building Code* to a structure is typically initiated through the provisions of Chapters 3, 5, and 6. Chapter 3 establishes one or more occupancy classifications based upon the anticipated uses of a building. The appropriate classifications are necessary to properly apply many of the code's non-structural provisions. The requirements of Chapter 6 deal with classification as to construction type, based on a building's materials of construction and the level of fire resistance provided by such materials. Limitations on a building's height and area, set forth in Chapter 5, are directly related to the occupancies it houses and its type of construction. Chapter 5 also provides the various methods available to address conditions in which multiple uses or occupancies occur within the same building. Chapter 4 contains special detailed requirements based on unique conditions or uses that are found in some buildings.

■ 304.1-Food Processing Facilities and Commercial Kitchens; 304.1-Training and Skill Development Facilities; 306.2-Food Processing Facilities and Commercial Kitchens; 308.3-Group I-1 Occupancy Classification; 308.4-Group I-2 Occupancy Classification; 310.5-Group R-3 Lodging Houses; 310.6-Group R-4 Occupancy Classification; 311.1.1-Classification of Accessory Storage Spaces; 403.1, EXCEPTION ITEMS 3 AND 5 Applicability of High-Rise Provisions; 404.5, Exception Atrium Smoke Control in Group I Occupancies; 404.9, 404.10-Egress Travel through an Atrium; Tables 504.3, 504.4-Building Height and Number of Stories; 505.2.3, Exception 2 Mezzanine Openness; Table 506.2-Building Area; 507.1-Basements in Unlimited Area Buildings; 507.9-Group H-5 in Unlimited Area Buildings; Table 509-Fire Protection from Incidental Uses; 510.2-Horizontal Building Separation; Table 601, Footnote d One-Hour Substitution; 602.4-Type IV Member Size Equivalencies; 602.4.2-Cross-Laminated Timber in Exterior Walls; 603.1,-Item 2 6 Wall Construction of Freezers and Coolers ■

304.1 Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Analysis: Two code change proposals were submitted to ICC for consideration. No Houston changes were made to these updated code provisions.

FOOD PROCESSING ESTABLISHMENTS

Airport traffic control towers

Airport traffic control towers

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Ambulatory care facilities
 Animal hospitals, kennels and pounds
 Banks
 Barber and beauty shops
 Car wash
 Civic administration
Clinic, outpatient
 Dry cleaning and laundries: pick-up and delivery stations and self-service
 Educational occupancies for students above the 12th grade
 Electronic data processing
 Laboratories: testing and research
 Motor vehicle showrooms
 Post offices
 Print shops
 Professional services (architects, attorneys, dentists, physicians, engineers, etc.)
 Radio and television stations
 Telephone exchanges
 Training and skill development not within a school or academic program

Ambulatory care facilities
 Animal hospitals, kennels and pounds
 Banks
 Barber and beauty shops
 Car wash
 Civic administration
 Clinic, outpatient
 Dry cleaning and laundries: pickup and delivery stations and self-service
 Educational occupancies for students above the 12th grade
 Electronic data processing
Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities not more than 2,500 square feet (232 m²) in area.
 Laboratories: testing and research
 Motor vehicle showrooms
 Post offices
 Print shops
 Professional services (architects, attorneys, dentists, physicians, engineers, etc.)
 Radio and television stations
 Telephone exchanges
 Training and skill development not in a school or academic program **(this shall include, but not be limited to, tutoring centers, martial arts studios, gymnastics and similar uses regardless of the ages served, and where not classified as a Group A occupancy).**

CHANGE SUMMARY: Modification – Small food processing establishments and commercial kitchens not associated with dining facilities are now considered as Group B occupancies.

CHANGE SIGNIFICANCE: Facilities used for food processing and/or preparation have traditionally been considered as Group F-1 occupancies unless directly related to a dining activity. The Group F-1 classification has been applied to large-scale operations, such as food processing plants; moderate-scale uses, such as catering operations; and small-scale establishments, such as bakeries, carry-out pizza tenants and other uses that are open to the public. It is not uncommon for such small-scale food processing facilities to occur in mixed-occupancy buildings with retail sales, offices and restaurant tenants.

For this reason, these establishments have sometimes been classified as Group M retail sales or Group B business occupancies. Classifying such establishments as Group F-1 occupancies is now considered inappropriate where the floor area of the building or tenant space is relatively small. In addition, a Group M classification is considered not fully representative of the hazards involved with the food processing/public occupancy activity. Therefore, a Group B classification is to be applied where the facility does not exceed 2500 square feet in floor area. This classification also assumes the facility is not used for assembly purposes, such as a café or bar. This allowance is also extended to commercial kitchens such as those used for catering operations. Where the floor area exceeds the 2500-square-foot threshold, then a classification of Group F-1 continues to be appropriate.

Justification: The original code change proponents provided the following justifications for these modifications:

(FOOD PROCESSING ESTABLISHMENTS) It is not uncommon to have catering services, bakeries, takeout pizza, and other food prep establishments in retail strip centers. Calling such uses an F-1 actually invokes change of use provisions that are not necessary. To avoid this, many jurisdictions will just call them "retail sales". However, they actually are more closely related to a small café and should be considered as such. Or, they should be listed under Group M, with 200 sq. ft. per person occupant load calculation, 25 occupants equates to 5,000 sq. ft. **Cost Impact:** This code change proposal will not increase the cost of construction but could reduce the cost of unnecessary change of use. **Committee Action:** Originally disapproved the request based on the following:

Committee Reason: This proposal was disapproved for several reasons. First it was considered too high of an occupant load which would basically allow a 5000 square foot kitchen. It was suggested that it might be better to simply limit the square footage instead of basing upon an occupant load. A square footage of 2500 square feet was offered as a suggestion. Additionally, the committee noted that correlation with Group F occupancies was necessary.

The proponent submitted a necessary public comment to address committee concerns resulting in the updated code provision.

TRAINING FACILITIES

CHANGE SUMMARY: Clarification - The Group B classification for training and skill development uses has been clarified to address the ages of the occupants using the facility, the occupant load limitation where the facility is used for assembly purposes, and the types of permitted uses.

CHANGE SIGNIFICANCE: Various types of facilities are designed to teach and train persons outside of an academic school program. These types of uses, classified as Group B occupancies, include various skills, trades and technical programs for persons with a business, as well as those outside of a formal business setting that are not a part of a school or a degree program. Although the nature of the uses may cause consideration as Group E or Group M occupancies, the degree of anticipated hazards is most accurately addressed under the Group B classification.

The scope of such facilities assigned the Group B classification has previously been inconsistently applied regarding three key issues: (1) the ages of the occupants using the facility, (2) the occupant load limitation where the facility is used for assembly purposes, and (3) the types of uses considered to be classified as Group B. Additional code language now clarifies the original intent of the classification criteria.

Many skill development facilities are devoted to the training of children of various ages. The question of whether or not such training should fall under the Group E classification has

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		<p>now been specifically addressed by expressing that the Group B classification is to be applied regardless of age. Where the number of occupants in an assembly setting, of any age, is such that the occupant load triggers a Group A classification, typically 50 or more occupants, then the Group B classification is inappropriate.</p> <p>Training rooms and similar assembly rooms typically classified as Group A occupancies will maintain that classification. The types of uses anticipated in this classification category include tutoring centers, martial arts studios and gymnastics studios, as well as music and art development facilities.</p> <p>(TRAINING FACILITIES) The 2012 International Building Code defines a Group E occupancy as the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. There are a variety of local interpretations on whether a tutoring center falls into a Group B or Group E classification. This code proposal is intended to classify tutoring centers and similar transient occupancies that cater to children as Group B occupancies per section 304.1. Enforcing Group E regulations greatly increases the cost to tutoring centers, in particular, as other similar uses clearly do not fall into the academic provisions of the Group E occupancies, i.e. martial arts, gymnastics, etc. The majority of tutoring centers are placed in multi-unit, Type V structures. Placing a Group E occupancy in a Type V building requires either a one-hour or two-hour wall between adjoining occupancies depending on fire sprinkler coverage. In addition, a manual fire alarm system is required in all Group E occupancies having an occupant load of more than 30, unless provided with fire sprinklers.</p> <p>Cost Impact: The code change proposal will not increase the cost of construction</p> <p>Committee Action: Approved as Submitted Committee Reason: This proposal was preferred over G29-12 as it better described the smaller scale intention of the application. More specifically the statement "not classified as Group A Occupancies" clarifies that it is not intended to apply to larger classroom settings as discussed in G29-12.</p>
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<p>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.</p> <ol style="list-style-type: none"> The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1; and When children above the second grade are located on the same level, the children of the second grade or lower shall have at least two means of egress to the exterior for the exclusive use of those children. 	<p>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.</p> <ol style="list-style-type: none"> The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1; and When children above the second grade are located on the same level, the children of the second grade or lower shall have at least two means of egress to the exterior for the exclusive use of those children. 	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is intended to insure an additional level of fire- and life-safety for younger children in daycare and educational occupancies which is "above minimum code standards" as protection to insure safe egress from buildings where older children and adults are present and have presented problems and caused injuries to younger children who often take more time need additional oversight to ensure safe egress through to the rally point location.</p>
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<p>306.2 Moderate-hazard factory industrial, Group F-1. Factory industrial uses which are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> Aircraft (manufacturing, not to include repair) Appliances Athletic equipment Automobiles and other motor vehicles Bakeries Beverages: over 16-percent alcohol content Bicycles Boats Brooms or brushes Business machines Cameras and photo equipment Canvas or similar fabric Carpets and rugs (includes cleaning) Clothing 	<p>306.2 Moderate-Hazard Factory Industrial, Group F-1. Factory industrial uses which that are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> Aircraft (manufacturing, not to include repair) Appliances Athletic equipment Automobiles and other motor vehicles Bakeries Beverages: over 16-percent alcohol content Bicycles Boats Brooms or brushes Business machines Cameras and photo equipment Canvas or similar fabric Carpets and rugs (includes cleaning) Clothing 	<p>Analysis: One code change proposal was submitted to ICC for consideration. No Houston changes were made to these updated code provisions.</p> <p>FOOD PROCESSING ESTABLISHMENTS</p> <p>CHANGE SUMMARY: Modification; A classification of Group F-1 is now applied only to larger-sized food processing facilities and commercial kitchens not associated with dining facilities.</p> <p>CHANGE SIGNIFICANCE: Food processing facilities and commercial kitchens not directly associated with dining facilities have traditionally been considered as Group F-1 occupancies due to the moderate-level hazards that are often encountered. Establishments where food is prepared in a commercial kitchen for carry-out purposes have also been sometimes considered as Group F-1 occupancies. Consistent with a modification to the Group B classification category, the floor area of the facility is now the determining factor in the proper occupancy classification of the use. Where the food processing facility or establishment, or where the commercial kitchen not directly associated with dining activities, has a floor area exceeding 2500 square feet, a Group F-1 classification is warranted. Where the floor area of such a use does not exceed the 2500-square-foot limitation, a Group B classification is to be applied.</p>
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Construction and agricultural machinery
 Disinfectants
 Dry cleaning and dyeing
 Electric generation plants
 Electronics
 Engines (including rebuilding)
 Food processing and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities
 Furniture
 Hemp products
 Jute products
 Laundries
 Leather products
 Machinery
 Metals
 Millwork (sash and door)
 Motion pictures and television filming (without spectators)
 Musical instruments
 Optical goods
 Paper mills or products
 Photographic film
 Plastic products
 Printing or publishing
 Recreational vehicles
 Refuse incineration
 Shoes
 Soaps and detergents
 Textiles
 Tobacco
 Trailers
 Upholstering
 Wood; distillation
 Woodworking (cabinet)

Construction and agricultural machinery
 Disinfectants
 Dry cleaning and dyeing
 Electric generation plants
 Electronics
 Engines (including rebuilding)
 Food processing **establishments** and commercial kitchens not associated with restaurants, cafeterias, and similar dining facilities **more than 2500 square feet (232 m²) in area**
 Furniture
 Hemp products
 Jute products
 Laundries
 Leather products
 Machinery
 Metals
 Millwork (sash and door)
 Motion pictures and television filming (without spectators)
 Musical instruments
 Optical goods
 Paper mills or products
 Photographic film
 Plastic products
 Printing or publishing
 Recreational vehicles
 Refuse incineration
 Shoes
 Soaps and detergents
 Textiles
 Tobacco
 Trailers
 Upholstering
 Wood; distillation
 Woodworking (cabinet)

Justification: The original code change proponents provided the following justifications for these modifications:

(FOOD PROCESSING ESTABLISHMENTS) It is not uncommon to have catering services, bakeries, takeout pizza, and other food prep establishments in retail strip centers. Calling such uses an F-1 actually invokes change of use provisions that are not necessary. To avoid this, many jurisdictions will just call them "retail sales". However, they actually are more closely related to a small café and should be considered as such. Or, they should be listed under Group M. with 200 sq. ft. per person occupant load calculation, 25 occupants equates to 5,000 sq. ft. Cost Impact: This code change proposal will not increase the cost of construction but could reduce the cost of unnecessary change of use. Committee Action: Originally disapproved the request based on the following:

Committee Reason: This proposal was disapproved for several reasons. First it was considered too high of an occupant load which would basically allow a 5000 square foot kitchen. It was suggested that it might be better to simply limit the square footage instead of basing upon an occupant load. A square footage of 2500 square feet was offered as a suggestion. Additionally, the committee noted that correlation with Group F occupancies was necessary. The proponent submitted a necessary public comment to address committee concerns resulting in the updated code provision.

Final Hearing Results: Approved as Modified by Public Comment

[F] 307.1 High-hazard Group H. High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in *control areas* complying with Section 414, based on the maximum allowable quantity limits for *control areas* set forth in Tables 307.1(1) and 307.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this section, the requirements of Section 415 and the **International Fire Code**. Hazardous materials stored, or used on top of roofs or canopies shall be classified as outdoor storage or use and shall comply with the **International Fire Code**.

Exceptions: The following shall not be classified as Group H, but shall be classified as the occupancy that they most nearly resemble.

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416, **NFPA 33, NFPA 34** and the **International Fire Code**.

[F] 307.1 High-hazard Group H.

High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in *control areas* complying with Section 414, based on the maximum allowable quantity limits for *control areas* set forth in Tables 307.1(1) and 307.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this section, the requirements of Section 415 and the *International Fire Code*. Hazardous materials stored, or used on top of roofs or ~~canopies~~ **canopies**, shall be classified as outdoor storage or use and shall comply with the *International Fire Code*.

Exceptions: The following shall not be classified as Group H, but shall be classified as the occupancy that they most nearly resemble.

1. ~~Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 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.~~

City of Houston Amendment

Analysis: IBC model code was updated and the list of code provisions identified in this section of the 2012 IBC relocated to Section 307.1.1 of the 2015 IBC. The code provisions of 2012 IBC Section 307.1 and the Houston amendments are now located in 2015 IBC Section 307.1.1. No changes to amendment. Previous amendment for 307.1.1 Hazardous Materials is now located in Section 307.1.2.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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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. Corrosives shall not include personal or household products in their original packaging used in retail display or commonly used building materials.
11. 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.
12. 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.
13. 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.

14. Any building owned by the jurisdiction, located on any city 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 seventy-two 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.

- ~~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. Code.~~
- ~~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. Corrosives shall not include personal or household products in their original packaging used in retail display or commonly used building materials.~~
- ~~11. 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.~~
- ~~12. 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.~~
- ~~13. 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.~~

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[F] 307.1 High-hazard Group H. High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in *control areas* complying with Section 414, based on the maximum allowable quantity limits for *control areas* set forth in Tables 307.1(1) and 307.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this section, the requirements of Section 415 and the **International Fire Code**. Hazardous materials stored, or used on top of roofs or canopies shall be classified as outdoor storage or use and shall comply with the **International Fire Code**.

Exceptions: The following shall not be classified as Group H, but shall be classified as the occupancy that they most nearly resemble.

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings 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. Corrosives shall not include personal or household products in their original packaging used in retail display or commonly used building materials.
11. 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**.
12. 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.
13. 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**.

14. Any building owned by the jurisdiction, located on any city airport, that is leased and used by a certificated air carrier for the in-transit storage of

[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

City of Houston Amendment

Analysis: IBC model code was updated and the list of code provisions identified in this section of the 2012 IBC relocated to Section 307.1.1 of the 2015 IBC. The code provisions of 2012 IBC Section 307.1 and the Houston amendments are now located in 2015 IBC Section 307.1.1. No changes to amendment. Previous amendment for 307.1.1 Hazardous Materials is now located in Section 307.1.2.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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hazardous materials for a period of time that does not exceed seventy-two hours from the time such hazardous material is placed in the building until it is permanently removed.

NOTES:

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

- certificates or exemptions issued by the United States Federal Aviation Administration pursuant to 14 CFR Part 121, 125, 129 or 135.
- City airport** is defined in Chapter 9 of the *City Code*.
- 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] TABLE 307.1(1)
 MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD a, j, m, n, p**

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEMS ^b			USE-OPEN SYSTEMS ^b	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet at NTP)	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet at NTP)	Solid pounds (cubic feet)	Liquid gallons (pounds)
Combustible dust	N/A	H-2	See Note q	N/A	N/A	See Note q	N/A	N/A	See Note q	N/A
Combustible fiber ^g	Loose Baled ^o	H-3	(100) (1,000)	N/A	N/A	(100) (1,000)	N/A	N/A	(20) (200)	N/A
Combustible liquid ^{c, i}	II IIIA IIIB	H-2 or H-3 N/A	N/A	120 ^{d, e} 330 ^{d, e} 13,200 ^{e, f}	N/A	N/A	120 ^d 330 ^d 13,200 ^f	N/A	N/A	30 ^d 80 ^d 3,300 ^f
Consumer fireworks	1.4G	H-3	125 ^{g, e, l}	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cryogenics, flammable	N/A	H-2	N/A	45 ^d	N/A	N/A	45 ^d	N/A	N/A	10 ^d
Cryogenics, inert	N/A	N/A	N/A	NL	N/A	N/A	NL	N/A	N/A	N/A
Cryogenics, oxidizing	N/A	H-3	N/A	45 ^d	N/A	N/A	45 ^d	N/A	N/A	10 ^d
Explosives	Division 1.1	H-1	1 ^{e, g}	(1) ^{e, g}	N/A	0.25 ^g	(0.25) ^g	N/A	0.25 ^g	(0.25) ^g
	Division 1.2	H-1	1 ^{e, g}	(1) ^{e, g}	N/A	0.25 ^g	(0.25) ^g	N/A	0.25 ^g	(0.25) ^g
	Division 1.3	H-1 or H-2	5 ^{e, g}	(5) ^{e, g}	N/A	1 ^g	(1) ^g	N/A	1 ^g	(1) ^g
	Division 1.4	H-3	50 ^{e, g}	(50) ^{e, g}	N/A	50 ^g	(50) ^g	N/A	50 ^g	(50) ^g
	Division 1.4G	H-3	125 ^{d, e, l}	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Division 1.5	H-1	1 ^{e, g}	(1) ^{e, g}	N/A	0.25 ^g	(0.25) ^g	N/A	0.25 ^g	(0.25) ^g
Division 1.6	H-1	1 ^{d, e, g}	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Flammable gas	Gaseous Liquefied	H-2	N/A (150) ^{d, e}	N/A	1,000 ^{d, e} N/A	N/A (150) ^{d, e}	N/A	1,000 ^{d, e} N/A	N/A	N/A
Flammable liquid ^d	IA IB and IC	H-2 or H-3	N/A	30 ^{d, e} 120 ^{d, e}	N/A	30 ^d 120 ^d	N/A	N/A	10 ^d 30 ^d	
Flammable liquid, combination (IA, IB, IC)	N/A	H-2 or H-3	N/A	120 ^{d, e, h}	N/A	120 ^{d, h}	N/A	N/A	30 ^{d, h}	

(continued)

City of Houston Amendment

Analysis: ICC rearranged two rows and completed several minor editorial changes throughout the Table for clarify. ICC also include an additional item in footnote "p" to address alcohol-based hand sanitizers classified as Class I or II liquids in dispensers located within buildings. No COH amendment added.

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[F] TABLE 307.1(1)—(continued)

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEMS ^b			USE-OPEN SYSTEMS ^b	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet at NTP)	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet at NTP)	Solid pounds (cubic feet)	Liquid gallons (pounds)
Flammable solid	N/A	H-3	125 ^{d,e}	N/A	N/A	125 ^d	N/A	N/A	25 ^d	N/A
Inert gas	Gaseous	N/A	N/A	N/A	NL	N/A	N/A	NL	N/A	N/A
	Liquefied	N/A	N/A	N/A	NL	N/A	N/A	NL	N/A	N/A
Organic peroxide	UD	H-1	1 ^{e,g}	(1) ^{e,g}	N/A	0.25 ^h	(0.25) ^h	N/A	0.25 ^h	(0.25) ^h
	I	H-2	5 ^{d,e}	(5) ^{d,e}	N/A	1 ^d	(1) ^d	N/A	1 ^d	(1) ^d
	II	H-3	50 ^{d,e}	(50) ^{d,e}	N/A	50 ^d	(50) ^d	N/A	10 ^d	(10) ^d
	III	H-3	125 ^{d,e}	(125) ^{d,e}	N/A	125 ^d	(125) ^d	N/A	25 ^d	(25) ^d
	IV	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL
Oxidizer	V	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL
	4	H-1	1 ^{e,g}	(1) ^{e,g}	N/A	0.25 ^h	(0.25) ^h	N/A	0.25 ^h	(0.25) ^h
	3 ^k	H-2 or H-3	10 ^{d,e}	(10) ^{d,e}	N/A	2 ^d	(2) ^d	N/A	2 ^d	(2) ^d
	2	H-3	250 ^{d,e}	(250) ^{d,e}	N/A	250 ^d	(250) ^d	N/A	50 ^d	(50) ^d
	1	N/A	4,000 ^{d,e,f}	(4,000) ^{d,e,f}	N/A	4,000 ^f	(4,000) ^f	N/A	1,000 ^f	(1,000) ^f
Oxidizing gas	Gaseous	N/A	N/A	N/A	1,500 ^{d,e}	N/A	N/A	1,500 ^{d,e}	N/A	N/A
Pyrophoric material	Liquefied	H-3	N/A	(150) ^{d,e}	N/A	N/A	(150) ^{d,e}	N/A	N/A	N/A
	N/A	H-2	4 ^{e,g}	(4) ^{e,g}	50 ^{e,g}	1 ^h	(1) ^h	10 ^h	0	0
Unstable (reactive)	4	H-1	1 ^{e,g}	(1) ^{e,g}	10 ^h	0.25 ^h	(0.25) ^h	2 ^{e,g}	0.25 ^h	(0.25) ^h
	3	H-1 or H-2	5 ^{d,e}	(5) ^{d,e}	50 ^{d,e}	1 ^d	(1) ^d	10 ^d	1 ^d	(1) ^d
	2	H-3	50 ^{d,e}	(50) ^{d,e}	250 ^{d,e}	50 ^d	(50) ^d	250 ^{d,e}	10 ^d	(10) ^d
Water reactive	1	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL
	3	H-2	5 ^{d,e}	(5) ^{d,e}	N/A	5 ^d	(5) ^d	N/A	1 ^d	(1) ^d
	2	H-3	50 ^{d,e}	(50) ^{d,e}	N/A	50 ^d	(50) ^d	N/A	10 ^d	(10) ^d
Water reactive	1	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL

For SI: 1 cubic foot = 0.028 m³, 1 pound = 0.454 kg, 1 gallon = 3.785 L.

NL = Not Limited; N/A = Not Applicable; UD = Unclassified Detonable.

a. For use of control areas, see Section 414.2.

b. The aggregate quantity in use and storage shall not exceed the quantity listed for storage.

c. The quantities of alcoholic beverages in retail and wholesale sales occupancies shall not be limited provided the liquids are packaged in individual containers not exceeding 1.3 gallons. In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs, consumer or industrial products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.

d. Maximum allowable quantities shall be increased 100 percent in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Where Note e also applies, the increase for both notes shall be applied cumulatively.

e. Maximum allowable quantities shall be increased 100 percent when stored in approved storage cabinets, day boxes, gas cabinets or exhausted enclosures or in listed safety cans in accordance with Section 5003.9.10 of the *International Fire Code*. Where Note d also applies, the increase for both notes shall be applied cumulatively.

f. The permitted quantities shall not be limited in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

g. Permitted only in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

h. Containing not more than the maximum allowable quantity per control area of Class IA, IB or IC flammable liquids.

i. The maximum allowable quantity shall not apply to fuel oil storage complying with Section 603.3.2 of the *International Fire Code*.

j. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column.

k. A maximum quantity of 200 pounds of solid or 20 gallons of liquid Class 3 oxidizers is allowed when such materials are necessary for maintenance purposes, operation or sanitation of equipment. Storage containers and the manner of storage shall be approved.

l. Net weight of the pyrotechnic composition of the fireworks. Where the net weight of the pyrotechnic composition of the fireworks is not known, 25 percent of the gross weight of the fireworks, including packaging, shall be used.

m. For gallons of liquids, divide the amount in pounds by 10 in accordance with Section 5003.1.2 of the *International Fire Code*.

n. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with Section 414.2.5, see Tables 414.2.5(1) and 414.2.5(2).

o. Densely packed baled cotton that complies with the packing requirements of ISO 8115 shall not be included in this material class.

p. The following shall not be included in determining the maximum allowable quantities:

1. Liquid or gaseous fuel in fuel tanks on vehicles.
2. Liquid or gaseous fuel in fuel tanks on motorized equipment operated in accordance with this code.
3. Gaseous fuels in piping systems and fixed appliances regulated by the *International Fuel Gas Code*.
4. Liquid fuels in piping systems and fixed appliances regulated by the *International Mechanical Code*.

q. Where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3.

Flammable solid	N/A	H-3	125 d, e	N/A	N/A	125 d	N/A	N/A	25 d	N/A
Inert gas	Gaseous	N/A	N/A	N/A	NL	N/A	N/A	NL	N/A	N/A
	Liquefied	N/A	N/A	N/A	NL	N/A	N/A	NL	N/A	N/A
Organic peroxide	UD	H-1	1 e, g	(1) e, g	N/A	0.25 g	(0.25) g	N/A	0.25 g	(0.25) g
	I	H-2	5 d, e	(5) d, e	N/A	1 d	(1) d	N/A	1 d	(1) d
	II	H-3	50 d, e	(50) d, e	N/A	50 d	(50) d	N/A	10 d	(10) d
	III	H-3	125 d, e	(125) d, e	N/A	125 d	(125) d	N/A	25 d	(25) d
	IV	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL
Oxidizer	V	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL
	4	H-1	1 e, g	(1) e, g	N/A	0.25 g	(0.25) g	N/A	0.25 g	(0.25) g
	3 k	H-2 or H-3	10 d, e	(10) d, e	N/A	2 d	(2) d	N/A	2 d	(2) d
	2	H-3	250 d, e	(250) d, e	N/A	250 d	(250) d	N/A	50 d	(50) d
	1	N/A	4,000 e, f	(4,000) e, f	N/A	4,000 f	(4,000) f	N/A	1,000 f	(1,000) f
Oxidizing gas	Gaseous	N/A	N/A	N/A	1,500 d, e	N/A	N/A	1,500 d, e	N/A	N/A
Pyrophoric	Liquefied	H-3	N/A	(150) d, e	N/A	N/A	(150) d, e	N/A	N/A	N/A
	N/A	H-2	4 e, g	(4) e, g	50 e, g	1 g	(1) g	10 e, g	0	0
Unstable (reactive)	4	H-1	1 e, g	(1) e, g	10 e, g	0.25 g	(0.25) g	2 e, g	0.25 g	(0.25) g
	3	H-1 or H-2	5 d, e	(5) d, e	50 d, e	1 d	(1) d	10 d, e	1 d	(1) d
	2	H-3	50 d, e	(50) d, e	750 d, e	50 d	(50) d	2750 d, e	10 d	(10) d
Water reactive	1	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL
	3	H-2	5 d, e	(5) d, e	N/A	5 d	(5) d	N/A	1 d	(1) d
Water reactive	2	H-3	50 d, e	(50) d, e	N/A	50 d	(50) d	N/A	10 d	(10) d
	1	N/A	NL	NL	N/A	NL	NL	N/A	NL	NL

For SI: 1 cubic foot = 0.028 m³, 1 pound = 0.454 kg, 1 gallon = 3.785 L.

NL = Not Limited; NA = Not Applicable; UD = Unclassified Detonable.

a. For use of control areas, see Section 414.2.

b. The aggregate quantity in use and storage shall not exceed the quantity listed for storage.

c. The quantities of alcoholic beverages in retail and wholesale sales occupancies shall not be limited provided the liquids are packaged in individual containers not exceeding 1.3 gallons. In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs or consumer or industrial products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.

d. Maximum allowable quantities shall be increased 100 percent in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Where Note e also applies, the increase for both notes shall be applied cumulatively.

e. Maximum allowable quantities shall be increased 100 percent when stored in approved storage cabinets, day boxes, gas cabinets, gas rooms or exhausted enclosures or in listed safety cans in accordance with Section 5003.9.10 of the *International Fire Code*. Where Note d also applies, the increase for both notes shall be applied cumulatively.

f. The permitted quantities shall not be limited in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

g. Allowed Permitted only in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

h. Containing not more than the maximum allowable quantity per control area of Class IA, IB or IC flammable liquids.

i. The maximum allowable quantity shall not apply to fuel oil storage complying with Section 603.3.2 of the *International Fire Code*.

j. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column.

k. A maximum quantity of 200 pounds of solid or 20 gallons of liquid Class 3 oxidizers is allowed when such materials are necessary for maintenance purposes, operation or sanitation of equipment, when the storage containers and the manner of storage are approved.

l. Net weight of the pyrotechnic composition of the fireworks. Where the net weight of the pyrotechnic composition of the fireworks is not known, 25 percent of the gross weight of the fireworks, including packaging, shall be used.

m. For gallons of liquids, divide the amount in pounds by 10 in accordance with Section 5003.1.2 of the *International Fire Code*.

n. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with Section 414.2.5, see Tables 414.2.5(1) and 414.2.5(2).

o. Densely packed baled cotton that complies with the packing requirements of ISO 8115 shall not be included in this material class.

p. The following shall not be included in determining the maximum allowable quantities:

1. Liquid or gaseous fuel in fuel tanks on vehicles.
2. Liquid or gaseous fuel in fuel tanks on motorized equipment operated in accordance with this the *International Fire Code*.
3. Gaseous fuels in piping systems and fixed appliances regulated by the *International Fuel Gas Code*.
4. Liquid fuels in piping systems and fixed appliances regulated by the *International Mechanical Code*.

5. Alcohol-based hand rubs classified as Class I or II liquids in dispensers that are installed in accordance with Sections 5705.5 and 5705.5.1 of the *International Fire Code*. The location of the alcohol-based hand rub (ABHR) dispensers shall be provided in the construction documents.

q. Where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3.

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<p>307.1.1 Hazardous materials. Hazardous materials in any quantity shall conform to the requirements of this code, including Section 414, and the <i>International Fire Code</i>.</p> <p>Exception: Hazardous materials stored in any building exempted pursuant to Section 307.1, Exception 14.</p>	<p>[F] 307.1.2 Hazardous materials. Hazardous materials in any quantity shall conform to the requirements of this code, including Section 414, and the <i>International Fire Code</i>.</p> <p>Exception: The exempt amounts of hazardous materials stored in any building exempted pursuant to Section 307.1.1, Item 15.</p>	<p>City of Houston Amendment</p> <p>Analysis: The COH amendment was renumbered to reflect a new location in the 2015 IBC. Minor editorial changes to amendment including renumber sections referenced. Previous amendment for 307.1.1 Hazardous Materials is now located in Section 307.1.2.</p> <p>Justification: This amendment is needed to ensure conformity with DOT, state law and local government policy. This Houston amendment reference is intended to address the Houston amendment applicable to IAH DOT in transit HazMat storage item 15.</p>
<p>N/A</p>	<p>307.1.3 Enterprise Permit. Businesses and facilities storing or utilizing hazardous materials exceeding the Maximum Allowed Quantities identified in Tables 307.1(1) and 307.1(2) of this code shall comply with Chapter 28, Article VII, of the <i>City Code for a hazardous enterprise</i>.</p>	<p>City of Houston Amendment</p> <p>Analysis: New code amendment in the 2015 IBC due to recent <i>City Code</i> modification.</p> <p>CHANGE TYPE: New Houston amendment.</p> <p>CHANGE SUMMARY: Correlating IFC amendment added to the Fire Code as Section 5001.7 to coordinate Ch. 18 of the <i>City Code</i> requirements into the construction codes.</p>
<p>308.3 Institutional Group I-1. This occupancy shall include buildings, structures or portions thereof for more than 16 persons who reside on a 24 hour basis in a supervised environment and receive <i>custodial care</i>. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> Alcohol and drug centers Assisted living facilities Congregate care facilities Convalescent facilities Group homes Halfway houses Residential board and <i>custodial care</i> facilities Social rehabilitation facilities <p>308.3.1 Five or fewer persons receiving care. A facility such as the above with five or fewer persons receiving such care shall be classified as Group R-3 or shall comply with the <i>International Residential Code</i> provided an <i>automatic sprinkler system</i> is installed in accordance with Section 903.3.1.3 or with Section P2904 of the <i>International Residential Code</i>.</p> <p>308.3.2 Six to sixteen persons receiving care. A facility such as above, housing not fewer than six and not more than 16 persons receiving such care, shall be classified as Group R-4.</p>	<p>308.3 Institutional Group I-1. This 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 <i>custodial care</i> by persons other than parents or guardians, relatives by blood, marriage or adoption, including but not limited to facilities that provide care to children greater than 2 ½ to 15 years of age. The persons receiving care are capable of self preservation. 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:</p> <ul style="list-style-type: none"> Alcohol and drug centers Assisted living facilities Congregate care facilities Convalescent care facilities Group homes Halfway houses Residential board and care facilities Social rehabilitation facilities <p>308.3.1 Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care who, without any assistance, are capable of responding to an emergency situation to complete building evacuation.</p> <p>308.3.2 Condition 2. This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.</p> <p>308.3.3 Six to 16 persons receiving custodial care. A facility, housing not fewer than six and not more than 16 persons receiving custodial care shall be classified as Group R-4.</p> <p>308.3.4 Five or fewer persons receiving custodial care. A facility with five or fewer persons receiving custodial care shall be classified as Group R-3 or shall comply with the <i>International Residential Code</i> provided an automatic sprinkler</p>	<p>Analysis: Houston proposes an amendment to this ICC modified code provisions in the 2015 IBC.</p> <p>CHANGE TYPE: Modification and Houston clarification.</p> <p>CHANGE SUMMARY: The uses permitted in a Group I-1 custodial care facility have been expanded to include care recipients who may need a limited degree of verbal or physical assistance if responding to a fire or other emergency situation. A Houston amendment was included in this section to more clearly identify when a Group I1 occupancy classification is assigned to a facility where specific parameters or services are provided. The clarification intended by this amendment was established in coordination with City Legal and State law.</p> <p>CHANGE SIGNIFICANCE: <i>Institutional Group I-1 occupancies include those uses where individuals receiving custodial care on a 24-hour basis live in a residential environment. Historically, the Group I-1 classification identified those facilities where the care recipients do not require any staff assistance should a fire or other emergency exist that would require the occupants to evacuate the building or relocate within the building. Types of uses included in this category include halfway houses, assisted living facilities and group homes. The uses permitted in a Group I-1 occupancy have been expanded to include care recipients who may need a limited degree of verbal or physical assistance if responding to a fire or other emergency situation.</i></p> <p><i>Most state custodial care licensing agencies allow for the housing of occupants in assisted living facilities, residential care facilities and group homes even though such occupants may require some limited assistance with evacuation. In order to gain consistency between the IBC and what the various states allow, the custodial care provisions of the IBC have been modified. The revised provisions allow both care recipients who require limited assistance with evacuation, as well as those who do not, to reside in a Group I-1 custodial care facility. Through the use of "Condition" classifications 1 and 2, the differences in the evacuation capabilities of the residents can be appropriately addressed.</i></p> <p><i>Condition 1</i> custodial care facilities reflect the 2012 IBC Group I-1 classification where the residents are capable of responding to an emergency without the assistance of others. <i>Condition 2</i> has been added to address facilities where the residents are receiving custodial</p>

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	<p>system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code.</p>	<p>care but may require some assistance with evacuation. Four more stringent requirements addressing story limitations, smoke barriers, sprinkler protection and smoke detection have been instituted for Condition 2 occupancies due to the concerns regarding evacuation potential. It is anticipated that most Group I-1 custodial care facilities will be classified as Condition 2 unless the permit application or submittal documents identify the applicable licensing regulations that limit the resident type to Condition 1. Similar changes occurred addressing custodial care facilities with a limited number of care recipients as regulated under the Group R-4 occupancy classification.</p> <p>An additional revision to the list of Group I-1 occupancies is the deletion of the term "convalescent facilities." The term was deemed to be outdated and was similarly deleted from the listing of Group R-4 uses.</p>
<p>308.4 Institutional Group I-2. This occupancy shall include buildings and structures used for <i>medical care</i> on a 24-hour basis for more than five persons who are <i>incapable of self-preservation</i>.</p> <p>This group shall include, but not be limited to, the following:</p> <p><i>Foster care facilities</i> <i>Detoxification facilities</i> <i>Hospitals</i> <i>Nursing homes</i> <i>Psychiatric hospitals</i></p> <p>308.4.1 Five or fewer persons receiving care. A facility such as the above with five or fewer persons receiving such care shall be classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or with Section P2904 of the International Residential Code.</p>	<p>308.4 Institutional Group I-2. Institutional Group I-2 occupancy shall include buildings and structures used for <i>medical care</i> on a 24-hour basis for more than five persons who are <i>incapable of self-preservation</i>. This group shall include, but not be limited to, the following:</p> <p><i>Foster care facilities</i> <i>Detoxification facilities</i> <i>Hospitals</i> <i>Nursing homes</i> <i>Psychiatric hospitals</i></p> <p>308.4.1 Occupancy conditions. Buildings of Group I-2 shall be classified as one of the occupancy conditions specified in Section 308.4.1.1 or 308.4.1.2.</p> <p>308.4.1.1 Condition 1. This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification, including but not limited to nursing homes and foster care facilities.</p> <p>308.4.1.2 Condition 2. This occupancy condition shall include facilities that provide nursing and medical care and could provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification, including but not limited to hospitals.</p> <p>308.4.2 Five or fewer persons receiving medical care. A facility with five or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: ICC modified code provisions and COH amendment was omitted.</p> <p>CHANGE SUMMARY: Two basic conditions of Group I-2 medical care uses that have previously been regulated together as a single category have been created, dividing the classification into short-term care facilities, such as hospitals, and long-term care facilities, such as nursing homes.</p> <p>CHANGE SIGNIFICANCE: Group I-2 occupancies have historically been considered as facilities used for medical care on a 24-hour basis, where the care recipients are typically incapable of self-preservation. A "protect-in-place" philosophy is applied to these occupancies due to the inability of the occupants to evacuate efficiently and under their own control. Hospitals and nursing homes are the two primary types of facilities that are regulated under the Group I-2 classification. The revision to Section 308.4 now provides two categories of medical care uses that have previously been regulated together as a single category.</p> <p>Due to the diversification of how medical care is provided in the five characteristic uses as established in Section 308.4, the Group I-2 classification has now been subdivided into two basic categories: Condition 1, long-term care (nursing homes), and Condition 2, short-term care (hospitals).</p> <p>Changes in how care is delivered include a general increase in the ratio of floor area per patient in hospitals due to the increase in diagnostic equipment and the movement toward single-occupant patient rooms, as well as a trend to provide more residential-type arrangements in nursing homes, such as group/suite living and cooking facilities. Although most applicable code requirements will continue to apply to both medical care conditions classified as Group I-2, the division of uses does allow for varying provisions based upon the type of care being provided. Detoxification facilities and those facilities where patients receive psychiatric treatment will also be classified as either Condition 1 or 2, depending upon the extent of care provided.</p> <p>Justification: Group I occupancies were updated to address specific concerns associated with various levels of care. There was not appropriate justification to provide a Houston amendment to this section to address the previous change.</p>
<p>308.6.5 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.</p> <ol style="list-style-type: none"> The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1; and When children above the second grade are located on the same level, the children of the second grade or lower shall have at least two means of egress to the exterior for the exclusive use of those children. 	<p>308.6.5 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.</p> <ol style="list-style-type: none"> The building is equipped throughout with an <i>automatic sprinkler system</i> in accordance with Section 903.3.1.1; and, When children above the second grade are located on the same level, the children of the second grade or lower shall have at least two means of egress to the exterior for the exclusive use of those children. 	<p>City of Houston Amendment</p> <p>Analysis: There are no changes made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>

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310.5 Residential Group R-3. Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

- Buildings that do not contain more than two *dwelling units*
- Boarding houses (nontransient) with 16 or fewer occupants
- Boarding houses (*transient*) with 10 or fewer occupants
- Care facilities that provide accommodations for five or fewer persons receiving care
- Congregate living facilities (nontransient) with 16 or fewer occupants
- Congregate living facilities (*transient*) with 10 or fewer Occupants

310.5.1 Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or with Section P2904 of the *International Residential Code*.

310.5 Residential Group R-3. Residential **Group R-3** occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

- Buildings that do not contain more than two *dwelling units*
- Boarding houses (nontransient) with 16 or fewer occupants
- Boarding houses (*transient*) with 10 or fewer occupants
- Care facilities that provide accommodations for five or fewer persons receiving care
- Congregate living facilities (nontransient) with 16 or fewer occupants
- Congregate living facilities (*transient*) with 10 or fewer occupants
- Lodging houses with five or fewer guest rooms**

310.5.1 Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code*.

310.5.2 Lodging houses. Owner-occupied *lodging houses* with five or fewer guest rooms shall be permitted to be constructed in accordance with the *International Residential Code*.

Analysis: There are no changes made to the COH amendment.

CHANGE SUMMARY: Modification; Lodging houses are now specifically defined in Chapter 2 and are typically permitted to be constructed in accordance with the *International Residential Code* (IRC) if they contain no more than five guest rooms.

CHANGE SIGNIFICANCE: Residential uses, both transient and nontransient, are considered as Group R occupancies. Common characteristics of Group R buildings include use by persons for living and sleeping purposes, relatively low potential fire severity and the worst fire record of all structure fires. Lodging houses are now specifically defined in Chapter 2 and are typically permitted to be constructed in accordance with the IRC if they contain no more than five guest rooms and are owner-occupied.

Two new definitions have been added to Chapter 2 related to the classification of lodging houses. A lodging house is defined as a single-family dwelling where at least one of the occupants is a permanent resident and guest rooms are available for payment. A guest room is simply a room used for transient sleeping and/or living purposes. The most common example of such a use is a small bed-and-breakfast facility.

Lodging houses with more than five guest rooms will typically continue to be classified as Group R-1 occupancies as transient living facilities with more than 10 occupants. Where there are 10 or fewer occupants, or where there are five or fewer guest rooms, a classification of Group R-3 is appropriate. The primary change in application occurs where the lodging house is owner-occupied. Although by definition a lodging house will be occupied by a permanent resident, it does not specify that the permanent occupant be the owner of the building. New Section 310.5.2 now permits lodging houses with five or fewer guest rooms to be constructed in accordance with the IRC where the single-family residence is occupied by the owner.

The allowance provided by new provisions recognizes that single-family dwellings with limited guests create little if any additional hazard beyond those structures regulated under the IRC. Although a similar allowance was introduced to the scoping provisions of the 2012 IRC, it did not extend to the 2012 IBC, which continued to regulate such buildings as Group R-3 occupancies. Section 310.5.2 now provides consistency between the IBC and IRC.

Justification: This amendment is needed to ensure conformity with state and local government policy.

310.6 Residential Group R-4. This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive *custodial care*. The persons receiving care are capable of self-preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes
- Halfway houses
- Residential board and *custodial care* facilities
- Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code.

310.6 Residential Group R-4. Residential **Group R-4** occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive *custodial care*. Buildings of Group R-4 shall be classified as one of the occupancy conditions specified in Section 310.6.1 or 310.6.2. 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

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code.

310.6.1 Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

310.6.2 Condition 2. This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or

Analysis: There are no changes made to the COH amendment.

CHANGE SUMMARY: Modification; The uses permitted in a Group R-4 custodial care facility have been expanded to include care recipients who may need a limited degree of verbal or physical assistance while responding to a fire or other emergency situation.

CHANGE SIGNIFICANCE: Residential Group R-4 occupancies include those uses where individuals receiving custodial care on a 24-hour basis live in a residential environment. They differ from those facilities classified as Group I-1 occupancies in only one aspect: there are fewer individuals receiving custodial care in the facility. Group R-4 occupancies have no more than 16 individuals receiving care in a supervised residential environment. Historically, the Group R-4 classification was limited to those facilities where the care recipients require no staff assistance should a fire or other emergency exist that would require evacuation or relocation of the occupants. Types of uses included in this category are halfway houses, assisted living facilities, residential board and care facilities, alcohol and drug centers, social rehabilitation facilities and group homes. The uses permitted in a Group R-4 occupancy have been expanded to include care recipients who may need a limited degree of verbal or physical assistance while responding to a fire or other emergency situation.

Through the use of the "Condition 1" and "Condition 2" classifications, the differences in the evacuation capabilities of the residents can be appropriately addressed. Condition 1 custodial care facilities reflect the 2012 IBC Group R-4 classification where the residents are capable of responding to an emergency without the assistance of others. Condition 2 has been added to address facilities where the residents are receiving custodial care but may require

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311.1 Storage Group S. Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

physical assistance while responding to an emergency situation to complete building evacuation.

311.1 Storage Group S. Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

311.1.1 Accessory storage spaces. A room or space used for storage purposes that is less than 100 square feet (9.3 m2) in area and accessory to another occupancy shall be classified as part of that occupancy. The aggregate area of such rooms or spaces shall not exceed the allowable area limits of Section 508.2.

Example: Office suite with several small storage rooms

Accessory storage spaces

© International Code Council

some assistance with evacuation. Further information can be found in the discussion of significant changes to Section 308.3.

Analysis: There are no changes made to the COH amendment.

CHANGE SUMMARY: Modification; Storage rooms less than 100 square feet in floor area are not to be classified as Group S, but rather as the same occupancy as the portion of the building to which they are accessory.

CHANGE SIGNIFICANCE: *The classification approach to storage rooms is similar to that of other support areas within a building. Where the hazard level within the storage area is such that the provisions for the general building use do not adequately address the risks posed by the storage use, the storage room is to be classified as a Group S occupancy, typically Group S-1. There has been a historic consensus that small storage areas pose a limited concern above that anticipated due to the major use of the building, thus allowing such small storage spaces to be included as part of the major classification. However, there has never been a specific threshold established in the code addressing this issue. The code now recognizes that storage rooms less than 100 square feet in floor area are not to be classified as Group S, but rather as the same occupancy as the portion of the building to which they are accessory.*

It is important to note that Section 311.1 does not mandate that storage rooms of 100 square feet or more be classified as Group S occupancies. The classification of a storage room, much like other uses within a building, continues to be based upon the need to classify uses based upon the hazard level they pose. It continues to be acceptable for the building official to classify storage spaces of 100 square feet or more as part of the occupancy in which they are located based upon the hazard level created. However, where the storage space is less than 100 square feet, it is now clear that a Group S classification is inappropriate.

The reference to the allowable area limits of Section 508.2 is somewhat vague, but it can be assumed that it is intended that the aggregate of all storage rooms that are less than 100 square feet in floor area cannot exceed 10 percent of the floor area of the story nor more than the tabular allowable area for nonsprinklered buildings as established in Section 508.2.08.3.

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 412.3)
- Barns
- Carports
- Fences **more than 6 feet (1829 mm) high**
- Grain silos, accessory to a residential occupancy
- Greenhouses
- Livestock shelters
- Private garages
- Retaining walls
- Sheds
- Stables
- Tanks
- Towers

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 (1829 mm)** **8 feet (2438 mm)** high
- Grain silos, accessory to a residential occupancy
- Greenhouses
- Livestock shelters
- Private garages
- Retaining walls
- Sheds
- Stables
- Tanks
- Towers

City of Houston Amendment

Analysis: The existing amendment was modified.

Justification: The amendment was modified to reflect the maximum height of fences that are exempt from permit. Additional changes made during City Legal review.

312.2 Fences.

312.2 Fences.

City of Houston Amendment

Analysis: The existing amendment was modified.

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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. Barbed wire for fences shall be allowed only 6 feet above ground except as otherwise allowed by the *City Code*.

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

Justification: The amendment was modified to reference the governing portions of City Code for electric fencing.

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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 22.108 and 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.

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N/A

**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**

Attributes		Occupancy							
		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		>6 See R-3 if ≤6		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				

City of Houston Amendment

Analysis: New COH amendment for care facility classification. The new tables are for reference only and the applicable code sections govern the code requirements over the tables.

Justification: The new amendment and tables for care facility classification were created utilizing previous IBC tables showcasing the different variations of care facilities.

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	<table border="1" style="margin: auto;"> <tr> <td style="padding: 2px;">2½ years or less</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">Part of primary occupancy²</td> <td style="padding: 2px;">L-4³ or E⁴</td> <td style="padding: 2px;">L-4³ or E⁴</td> </tr> </table> <p>B (ACF) = Group B Ambulatory Care Facilities</p> <ol style="list-style-type: none"> 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 or 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. 	2½ years or less		Part of primary occupancy²	L-4³ or E⁴	L-4³ or E⁴	
2½ years or less		Part of primary occupancy²	L-4³ or E⁴	L-4³ or E⁴			

2012 Houston IBC – Chapter 4 Special Detailed Requirements Based on Use and Occupancy	2015 Houston IBC – Chapter 4 Special Detailed Requirements Based on Use and Occupancy	Code Analysis
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<p>403.1 Applicability. <i>High-rise buildings</i> shall comply with Sections 403.2 through 403.6.</p> <p>Exception: The provisions of Sections 403.2 through 403.6 shall not apply to the following buildings and structures:</p> <ol style="list-style-type: none"> 1. Airport traffic control towers in accordance with Section 412.3. 2. <i>Open parking garages</i> in accordance with Section 406.5. 3. Buildings with a Group A-5 occupancy in accordance with Section 303.6. 4. Special industrial occupancies in accordance with Section 503.1.1. 5. Buildings with a Group H-1, H-2 or H-3 occupancy in accordance with Section 415. 	<p>403.1 Applicability. <i>High-rise buildings</i> shall comply with Sections 403.2 through 403.6.</p> <p>Exception: The provisions of Sections 403.2 through 403.6 shall not apply to the following buildings and structures:</p> <ol style="list-style-type: none"> 1. Airport traffic control towers in accordance with Section 412.3. 2. <i>Open parking garages</i> in accordance with Section 406.5. 3. The portion of a building containing a Group A-5 occupancy in accordance with Section 303.6. 4. Special industrial occupancies in accordance with Section 503.1.1. 5. Buildings with: <ol style="list-style-type: none"> 5.1. A Group H-1 occupancy; 5.2. A Group H-2 occupancy in accordance with Section 415.8, 415.9.2, 415.9.3 or 426.1; or, 5.3. A Group H-3 occupancy in accordance with Section 415.8. 	<p>Analysis: ICC clarification with no COH amendment added.</p> <p>CHANGE SUMMARY: Clarification; Clarified code text now indicates that Group H-1 occupancies, as well as several specified types of Group H-2 and H-3 occupancies, are not required to comply with the high-rise provisions.</p> <p>CHANGE SIGNIFICANCE: <i>Special fire- and life-safety requirements are applicable to those buildings of moderate or greater height that meet the definition of "high-rise buildings" in Chapter 2 of the IBC. The hazards created by the unique characteristics of high-rise buildings are addressed through a set of general and specific provisions that are applicable to buildings of considerable height. Certain buildings have traditionally been exempted from compliance with the high-rise provisions, among them buildings that contain a Group H-1, H-2 or H-3 occupancy. The code does not prohibit those specific occupancies from being in a high-rise building, but rather simply exempts them from compliance with Sections 403.2 through 403.6. The modification does not alter this application of the code, but it does directly indicate that only Group H-1 occupancies, as well as those specified types of Group H-2 and H-3 occupancies, are not required to comply with the high-rise provisions.</i></p> <p><i>Group H-1 occupancies must be in a building used for no other purposes; therefore, a mixed-occupancy condition is prohibited. They are also limited to one story in height. For these reasons, it has been recognized that the special provisions of Section 403 have little, if any, relationship to buildings classified as Group H-1, and therefore need not apply. The reference to Section 415.8 for Group H-2 and H-3 occupancies addresses the need for such occupancies to be in detached buildings where specified hazardous materials are expected to exceed specified amounts. Consistent with the limits placed on Group H-1 occupancies, detached buildings classified as Group H-2 or H-3 are limited to one story in height, and as such, the high-rise building provisions have no real application.</i></p> <p><i>Buildings containing one of three special types of Group H-2 occupancies are also exempted from compliance with the special high-rise requirements of Sections 403.2 through 403.6. Included are buildings where grain processing and storage conditions produce combustible dusts, liquefied petroleum gas facilities, and dry cleaning plants. The reasoning for the exemptions is consistent with that for the other listed Group H occupancies.</i></p>
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<p>403.5.3.1 Stairway communication system. A telephone or other two-way communications system connected to an <i>approved constantly attended station</i> shall be provided at not less than every fifth floor in each <i>stairway</i> where the doors to the <i>stairway</i> are locked.</p>	<p>403.5.3.1 Stairway communication system. A telephone or other two-way communications system connected to an <i>approved constantly attended station</i> shall be provided at not less than every fifth floor in each <i>stairway</i> where the doors to the <i>stairway</i> are locked.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: A COH amendment was added to the Building Code to clarify needed signage for Building owners and occupant expectations to address fire code requirements during the building design phase of construction.</p> <p>Justification: The committee recommends adding this amendment to correlate with existing fire code regulations and to provide clear instructions for occupants.</p>
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<p>N/A</p>	<p>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 top occupiable floor level. Re-entry stairway doors shall be located on the same floor as each approved communications system in accordance with 403.5.3.1.</p>	<p>City of Houston Amendment Analysis: A COH amendment was added to the Building Code to clarify needed signage for Building owners and occupant expectations to address fire code requirements during the building design phase of construction. Justification: The committee recommends adding this amendment to correlate with existing fire code regulations and to provide clear instructions for occupants.</p>
<p>404.5 Smoke control. A smoke control system shall be installed in accordance with Section 909. Exception: Smoke control is not required for atriums that connect only two stories.</p>	<p>404.5 Smoke Control. A smoke control system shall be installed in accordance with Section 909. Exception: In other than Group I-2, and Group I-1, Condition 2, smoke control is not required for atriums that connect only two stories.</p>	<p>City of Houston Amendment Analysis: ICC clarification with no COH amendment added. CHANGE SUMMARY: Modification: Smoke control is now required in atriums in Group I-2 occupancies, as well as those in Group I-1 occupancies classified as Condition 2, that connect two stories. CHANGE SIGNIFICANCE: A major component of the life-safety system for an atrium is the required smoke control system. The control of any smoke that may be present in the atrium is important in maintaining a tenable environment for those occupants who may enter the atrium during means-of-egress travel. An exception had previously eliminated the requirement for smoke control in those atriums that connect only two stories. The exception has now been modified in a manner where it no longer applies to atriums in Group I-2 occupancies, as well as those Group I-1 occupancies classified as Condition 2. Although the concept of omitting smoke control protection for two-story atriums is consistent with other provisions throughout the code that provide allowances for two-story conditions, it has now been deemed as unacceptable in specific healthcare applications. The exposure of care recipients who are incapable of self-preservation to a large unprotected vertical opening condition is seen as an unacceptable risk. The restriction also provides consistency with federal requirements that would not allow such an opening without either smoke control or passive separation. The exception is applicable to Group I-1, Condition 2 occupancies, as well as those uses classified as Group I-2. Persons in buildings classified in one of these groups are expected to need some degree of assistance from others in order to respond effectively to an emergency situation. This need for assistance often results in delayed relocation or evacuation for the care recipients, justifying the requirement for smoke control where two-story atriums occur in these two types of institutional occupancies.</p>
<p>404.9 Travel distance. In other than the lowest level of the atrium, where the required means of egress is through the atrium space, the portion of exit access travel distance within the atrium space shall be not greater than 200 feet (60 960 mm). The travel distance requirements for areas of buildings open to the atrium and where access to the exits is not through the atrium, shall comply with the requirements of Section 1016.</p>	<p>404.9 Exit access travel distance. Exit access travel distance for areas open to an atrium shall comply with the requirements of this section. 404.9.1 Egress not through the atrium. Where required access to the exits is not through the atrium, exit access travel distance shall comply with Section 1017. 404.9.2 Exit access travel distance at the level of exit discharge. Where the path of egress travel is through an atrium space, exit access travel distance at the level of exit discharge shall be determined in accordance with Section 1017. 404.9.3 Exit access travel distance at other than the level of exit discharge. Where the path of egress travel is not at the level of exit discharge from the atrium, that portion of the total permitted exit access travel distance that occurs within the atrium shall be not greater than 200 feet (60 960 mm). 404.10 Interior exit stairways. A maximum of 50 percent of interior exit stairways are permitted to egress through an atrium on the level of exit discharge in accordance with Section 1028.</p>	<p>Analysis: ICC clarification with no COH amendment added. CHANGE SUMMARY: Clarification; The three distinct travel distance conditions that could potentially occur for areas open to an atrium are now each addressed individually in order to clarify their application. CHANGE SIGNIFICANCE: Of the special requirements in Section 404 applicable to atriums, there is limited focus on means-of-egress issues. The general provisions of Chapter 10 have been applicable under all conditions except for travel distance limitations on egress travel that occurs within the atrium space at other than the atrium level. Although there are no technical changes to the provisions, Section 404.9 has been reformatted to clarify the intent. The three distinct travel distance conditions that could potentially occur are now each addressed individually. Where travel does not occur through the atrium, or where travel within the atrium occurs only at the level of exit discharge, the general provisions of Section 1017 continue to apply. Where means-of-egress travel occurs at other than the level of exit discharge, the limitation of 200 feet of travel within the atrium also continues to apply. A new provision addresses the extension of interior exit stairways through an atrium at the level of exit discharge. It has been clarified that if the atrium complies with the interior exit discharge provisions established in Exception 1 of Section 1028, a maximum of 50 percent of the interior exit stairways may egress through the atrium space at the discharge level.</p>

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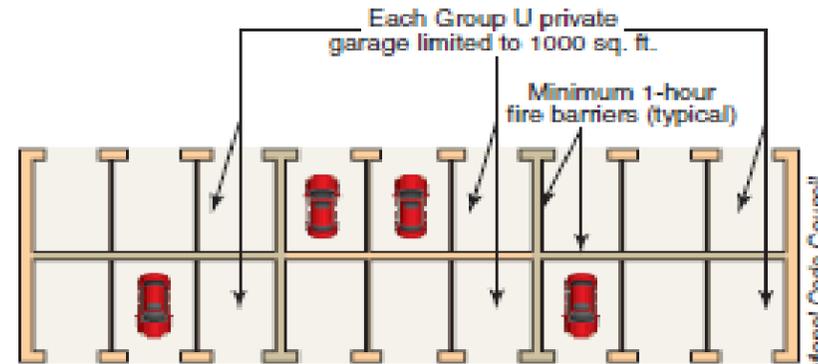
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406.3 Private garages and carports. Private garages and carports shall comply with Sections 406.3.1 through 406.3.5.

406.3.1 Classification. Buildings or parts of buildings classified as Group U occupancies because of the use or character of the occupancy shall be not greater than 1,000 square feet (93 m2) in area or one story in height except as provided in Section 406.3.2. Any building or portion thereof that exceeds the limitations specified in this section shall be classified in the occupancy group other than Group U that it most nearly resembles.

406.3 Private garages and carports. Private garages and carports shall comply with Sections 406.3.1 through 406.3.6.

406.3.1 Classification. Private garages and carports shall be classified as Group U occupancies. Each private garage shall be not greater than 1,000 square feet (93 m2) in area. Multiple private garages are permitted in a building where each private garage is separated from the other private garages by 1-hour fire barriers in accordance with Section 707, or 1-hour horizontal assemblies in accordance with Section 711, or both.



Example: If non-sprinklered building of Type VB construction, total allowable area limited to 5500 sq. ft. plus any applicable frontage increase

Private garage floor-area limits

Analysis: ICC clarification with no COH amendment added.

CHANGE SUMMARY: Modification: A Group U private garage is now limited to a maximum floor area of 1000 square feet; however, multiple Group U private garages are permitted in the same building where they are compartmentalized by minimum 1-hour fire separations.

CHANGE SIGNIFICANCE: Although uncommon, fire hazards related to motor vehicle parking are a concern. Where the amount of floor area devoted to vehicle parking is relatively small, the code recognizes the limited hazard level by establishing a limited set of safeguards. Several significant issues have been addressed in the modifications to these provisions as they address private garages and carports.

An important factor in the revised application of the private garage provisions is the new definition of "private garage" in Section 202. In order to apply the provisions of Section 406.3, the garage must house motor vehicles used by the tenants of a building on the same premises. A more comprehensive review of the new definition can be found in the discussion of significant changes to Section 202. In addition to the new scoping limit provided by the definition, there are a number of other technical modifications applicable in the regulation of private garages.

A Group U private garage is now limited to a maximum floor area of 1000 square feet. Although the 1000-square-foot limit has always been the base requirement, an often-utilized area increase to a maximum of 3000 square feet was previously permitted. The allowance for an area increase has been deleted, effectively capping the permissible floor area at 1000 square feet per garage. A new provision establishes a method for multiple Group U private garages to be located in the same building. Where each private garage is separated from the other private garages in the building by minimum 1-hour fire barriers, 1-hour horizontal assemblies or both, multiple garages are permitted provided the total floor area of the building does not exceed the allowable building area for a Group U occupancy as established in Sections 503 and 506. As a part of the code revisions, carports are no longer limited in floor area by Section 406.3. As a Group U occupancy, they will, however, continue to be limited based on the general allowable area provisions of Chapter 5.

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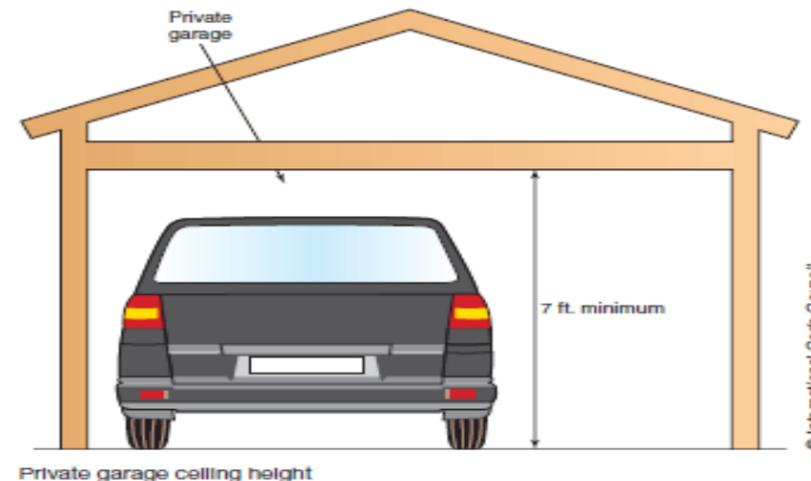
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406.4.1 Clear height. The clear height of each floor level in vehicle and pedestrian traffic areas shall be not less than 7 feet (2134 mm). Vehicle and pedestrian areas accommodating van-accessible parking shall comply with Section 1106.5.

406.3.2 Clear height. In private garages and carports, the clear height in vehicle and pedestrian traffic areas shall be not less than 7 feet (2134 mm). Vehicle and pedestrian areas accommodating van-accessible parking shall comply with Section 1106.5.



Analysis: ICC clarification with no COH amendment added.
CHANGE SUMMARY: Modification: The allowance for a 7-foot ceiling height previously permitted for public garages has now been extended to private garages and carports.

CHANGE SIGNIFICANCE: Occupiable spaces require a minimum ceiling height of 7 feet 6 inches based upon the interior space dimension provisions of Section 1208.2. In addition, Section 1003.2 also mandates a minimum 7-foot, 6-inch ceiling height for any portion of the means of egress. Although Exception 7 to Section 1003.2 permits a reduction in minimum height in vehicular and pedestrian traffic areas in parking garages, the exception has previously only been applicable to public garages. Section 406.4.1 requires a minimum clear height of 7 feet in open parking garages and enclosed parking garages. The allowance for a 7-foot ceiling height has now been extended to private garages and carports.

Special provisions applicable to private garages and carports are provided in Section 406.3. In the past, a minimum required ceiling height was not established for these limited-size parking facilities. Therefore, the general height of 7 feet 6 inches was the default requirement for minimum clear ceiling height. The new provisions for private garages and carports are now fully consistent with those for public garages, allowing for a minimum ceiling height of 7 feet. Reference is also made to Section 1106.5 for minimum ceiling heights at vehicle and pedestrian traffic areas accommodating van accessible parking.

406.3.4 Separation. Separations shall comply with the following:

- The private garage shall be separated from the dwelling unit and its attic area by means of gypsum board, not less than 1/2 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 5/8-inch (15.9 mm) Type X gypsum board or equivalent and 1/2-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 1 3/8 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. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Doors shall be self-closing and self-latching. Attic disappearing stairs may be installed in the garage ceiling provided the exposed panel is not less than 3/8-inch thick fire retardant-treated plywood, covered with a minimum of 16 gage sheet metal, untreated plywood protected with 1/2 inch thick gypsum board, or untreated plywood protected with intumescent paint. In all cases, the opening protection material is applied to the garage side of the plywood.

406.3.4 Separation. For other than private garages adjacent to have a fire-resistance rating and dwelling units, the area separation of openings private garages from other occupancies shall not be limited where the fire separation distance is 5 feet (1524 mm) or more, comply with Section 508. Separation of private garages from dwelling units shall comply with Sections 406.3.4.1 through 406.3.4.3.

406.3.4.1 Dwelling unit separation. The private garage shall be permitted to be in separated from the same structure, provided each 3,000-square-foot (279 m²) dwelling unit and its attic area is by means of gypsum board, not less than 1/2-inch (12.7 mm) in thickness, applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by fire walls complying not less than a 5/8-inch (15.9 mm) Type X gypsum board or equivalent and 1/2-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 13/8 inches (34.9 mm) in thickness, or doors in compliance with Section 706.716.5.3 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 exposed panel is not less than 3/8-inch thick fire retardant-treated plywood, untreated plywood protected with 1/2 inch thick gypsum board, or untreated plywood protected

City of Houston Amendment

Analysis: The COH amendment was omitted.

Justification: The COH Code development committee recommends relocating the previous amendment to the end of the newly reformatted 406.3.4.1.

Reason: Consistency and coordination among the International Codes is one of the cornerstones of the ICC Code Development process. The ICC Board established the ICC Building Code Action Committee (BCAC) to act as a forum to deal with complex issues ahead of the Code Development Process, identify emerging issues and draft proposed code changes. This proposed change is a result of the BCAC's work.

Part 1 of this code proposal adds a definition for private garage that is needed in the Code that clarifies the differences between a private garage, an open parking garage and an enclosed parking garage. This new definition for the IBC is modified from two of the legacy codes (1997 UBC Section 208 and 1999 BOCA Section 407.2. The SBC did not define a private garage.) and will serve well for the clarification of the Code that a private garage can be provided in other occupancies beside residential occupancies.

Part 2 of this code proposal is the revision of Section 406.3.1 and the deletion of Section 406.3.2 which were carry-overs from one of the legacy codes (1997 UBC Sections 312.2.1 & 312.2.2) that are really not applicable to the fire protection/life safety requirements in the IBC that address U occupancies in separated or mixed occupancies in a more defined manner than the previous legacy code from which these requirements were taken from. The retaining of a maximum size of 1000 square feet private garage (roughly a 20' x 50' floor area) is a

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2. Ducts in a private garage and ducts penetrating the walls or ceilings separating the dwelling unit, including its attic area, from the garage shall be constructed of sheet steel of not less than 0.019 inches (0.48 mm), in thickness and shall have no openings into the garage.

3. A separation is not required between a Group R-3 and U carport, provided the carport is entirely open on two or more sides and there are not enclosed areas above.

with intumescent paint. In all cases, the opening protection material is applied to the garage side of the plywood.

~~406.3.3 Garages and carports. 406.3.4.2 Openings prohibited. Carports shall be open on no fewer than two sides. Carport floor surfaces shall be of approved noncombustible material. Carports not open on at least two sides shall be considered Openings from a private garage and shall comply with the provisions of this section directly into a room used for garages. sleeping purposes shall not be permitted.~~

Exception: Asphalt surfaces ~~406.3.4.3 Ducts. 2-~~Ducts in a private garage and ducts penetrating the walls or ceilings separating the dwelling unit, from the garage, including its attic area, shall be permitted at ground level constructed of sheet steel of not less than 0.019 inch (0.48 mm), in carports thickness and shall have no openings into the garage.

~~3. A separation is not required between a Group R-3 and U carport, provided the carport is entirely open on two or more sides and there are not enclosed areas above.~~

reasonable limitation for a private garage before such a Group U occupancy would be required to be designed as a S-2 parking garage or a S-1 repair garage, as applicable. Such a maximum square footage for a private garage works out well when using IMC Section 402.2 requirement for natural ventilation in a private garage since the typical garage door is a minimum of 8' x 8' (64 sq. ft.), and the minimum natural ventilation required for ventilation is 4% of the floor area being ventilated (i.e. maximum 1000 sq. ft. x 0.04 = minimum 40 sq. ft. opening required < the minimum 64 sq. ft. overhead garage door). Such a garage door will provide an additional (24/40 =) 60% safety factor on the natural ventilation of the space under the Code.

Section 406.3.3 has been modified by breaking it into two sections and matching the language to the IRC language for clarity and correlation. (IRC Section R309 for reference).

This proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 3 open meetings and over 15 workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: <http://www.iccsafe.org/cs/BCAC/Pages/default.aspx>.

Cost: This proposal will decrease the cost of construction by clarifying the requirements for private garage separation and increasing coordination of the language with the IRC.

Commenter's Reason: This public comment is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 5 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: <http://www.iccsafe.org/cs/BCAC/Pages/default.aspx>.

This public comment resolves the concern noted in the Code Development Committee's reason statement. This code modification just places the requirements in the 2012 IBC Section 406.3.2(2) into the appropriate footnotes in Tables 602 & 705.8.

406.4.9 Garage screening. Any part of an abutting development, as defined by Section 42-1 of the City Code, used as a parking garage structure shall provide an exterior cover for each floor of the structure where parking occurs that directly faces property in use for or restricted to single family residential use. The exterior cover shall be made of an opaque surface or screen mesh material of sufficient rating to block headlights as defined in this Code. The exterior cover shall be at least 42 inches in height measured from the finished floor where parking occurs and shall not be required on any floor of the parking garage structure which has a finished floor over 50 feet in height from grade. For ramps and other sloped surfaces, the exterior cover shall be positioned to block headlights from emitting any light into adjacent properties in use for or restricted to single-family residential use.

406.4.9 Garage screening. Any part of an abutting development, as defined by Section 42-1 of the City Code, used as a parking garage structure shall provide an exterior cover for each floor of the structure where parking occurs that directly faces property in use for or restricted to single family residential use. The exterior cover shall be made of an opaque surface or screen mesh material of sufficient rating to block headlights as defined in this Code. The exterior cover shall be at least 42 inches in height measured from the finished floor where parking occurs and shall not be required on any floor of the parking garage structure which has a finished floor over 50 feet in height from grade. For ramps and other sloped surfaces, the exterior cover shall be positioned to block headlights from emitting any light into adjacent properties in use for or restricted to single-family residential use.

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with local government ordinances.

N/A

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

City of Houston Amendment

Analysis: This is a COH amendment added to the Building Code to correlate with the ventilation requirements specified in Section 2311.7.1 of the 2015 IFC model code.

Justification: This amendment is needed to ensure conformity with state and local government policy and to correlate with the fire code.

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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 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 m³/(s • m³)] of room volume.

406.9.2 Operation. The mechanical ventilation system shall operate continuously.

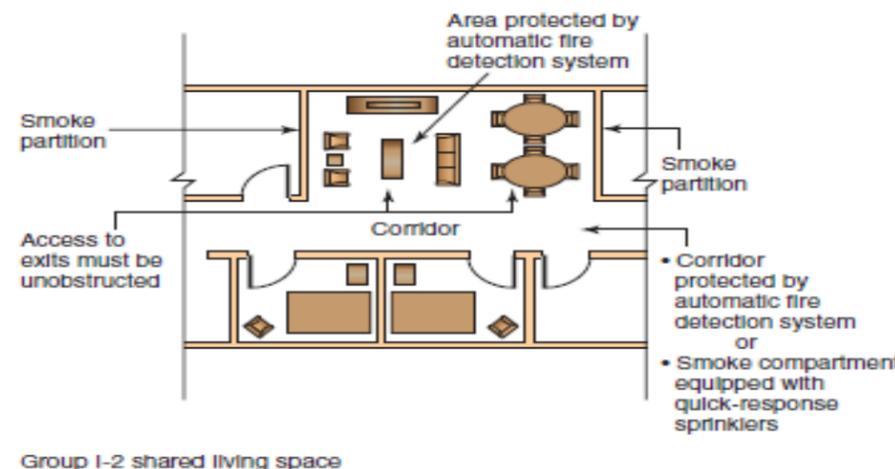
Exceptions:

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.

N/A

407.2.5 Nursing home housing units. In Group I-2, Condition 1, occupancies, in areas where nursing home residents are housed, shared living spaces, group meeting or multipurpose therapeutic spaces shall be permitted to be open to the *corridor*, where all of the following criteria are met:

1. The walls and ceilings of the space are constructed as required for *corridors*.
2. The spaces are not occupied as resident sleeping rooms, treatment rooms, incidental uses in accordance with Section 509, or hazardous uses.
3. The open space is protected by an automatic fire detection system installed in accordance with Section 907.
4. The *corridors* onto which the spaces open, in the same *smoke compartment*, are protected by an automatic fire detection system installed in accordance with Section 907, or the *smoke compartment* in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
5. The space is arranged so as not to obstruct access to the required *exits*.



Analysis: ICC clarification with no COH amendment added.

CHANGE SUMMARY: Addition: Shared living spaces, group meeting areas, and multipurpose therapeutic spaces are now permitted to be open to corridors in Group I-2, Condition 1 nursing homes provided five specific conditions are met.

CHANGE SIGNIFICANCE: *Corridors in Group I-2 occupancies are intended to provide a direct egress path adequately separated from hazards in adjoining spaces by smoke partitions. Such protection is intended to provide a relatively smoke-free environment for the relocation of patients during a fire emergency. However, in hospitals, nursing homes and other Group I-2 occupancies, necessary modifications have been provided to facilitate the primary functioning of these types of healthcare facilities. These modifications recognize the special needs of these occupancies to provide the most efficient and effective healthcare services. An additional allowance applicable only to Group I-2, Condition 1 nursing homes has been included in the 2015 IBC, which now permits shared living spaces, group meeting areas or multipurpose therapeutic spaces to be open to the corridor provided five specific conditions are met.*

In nursing home environments, residents are encouraged to spend time outside of their rooms. By providing a variety of shared living spaces open to the circulation/means-of-egress system, socialization and interaction are encouraged. Further, being able to preview activities that are occurring helps to encourage joining and allows reluctant participants to join at their own pace. Finally, a more open plan allows staff to more easily monitor residents throughout the day. For these reasons, the required physical separation of shared resident spaces from corridors has been eliminated.

In order to address the concerns of having common resident spaces open to the corridor system, several conditions have been established. The walls and ceilings of the shared spaces must be constructed in the same manner as required for corridor construction. This will result in surrounding construction equivalent to smoke partitions as set forth in Section 710. The shared spaces are limited in use, as they cannot be occupied as sleeping rooms, treatment rooms, incidental uses or hazardous uses. As expected, access to the required exits cannot be obstructed due to the arrangement of the spaces.

From a fire protection standpoint, the open space must be protected by an automatic fire detection system. In addition, the corridors into which the space open, within the same smoke compartment, must also be protected by an automatic fire detection system, or, as an alternative, the entire smoke compartment in which the spaces are located is to be protected throughout with quick-response sprinklers. Through the application of these conditions, the openness desired for Group I-2, Condition 1 nursing homes can be safely achieved.

N/A

407.2.6 Nursing home cooking facilities. In Group I-1, Condition 1, occupancies, rooms or spaces that contain a cooking facility with domestic

City of Houston Amendment

Analysis: A COH amendment was added.

COLOR CODE INDEX:

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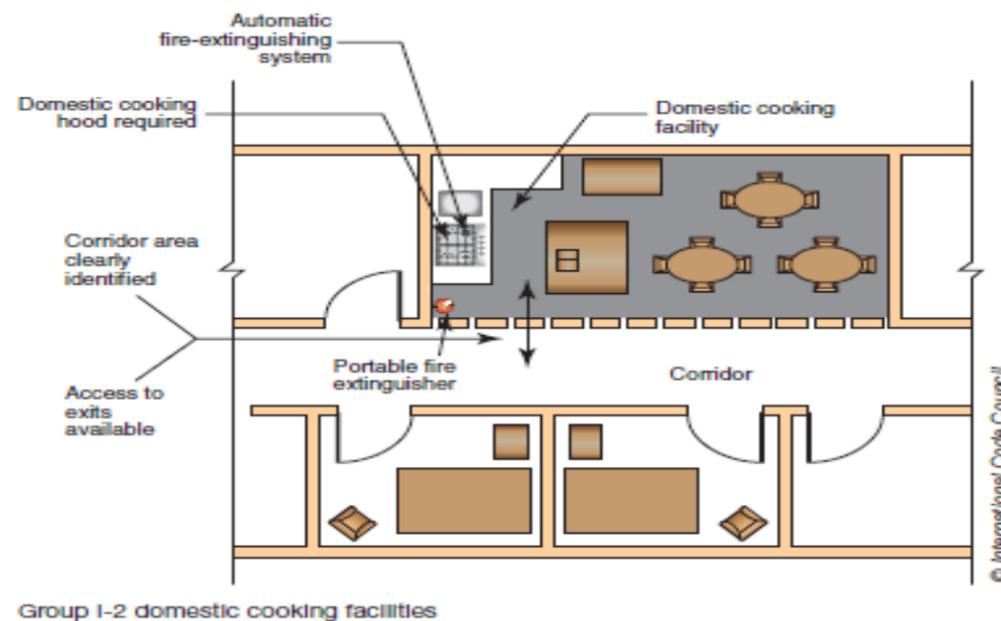
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cooking appliances shall be permitted to be open to the corridor where all of the following criteria are met:

(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.



CHANGE SUMMARY: Addition: A room or space containing a cooking facility with domestic cooking appliances is now permitted to be open to the corridor in a Group I-2, Condition 1 nursing home provided 13 specific conditions are met.

CHANGE SIGNIFICANCE: Nursing home means-of-egress corridors are intended to provide a direct egress path adequately separated from hazards in adjoining spaces through the use of smoke partitions, providing for a relatively smoke-free environment during the relocation of patients during a fire emergency. However, necessary modifications have been provided to facilitate the primary functioning of nursing homes and other types of healthcare facilities. These modifications recognize the special needs of these occupancies to provide the most efficient and effective healthcare services possible. An additional allowance applicable to Group I-2, Condition 1 nursing homes has been included in the 2015 IBC, which now permits a room or space containing a cooking facility with domestic cooking appliances to be open to the corridor provided 13 specific conditions are met.

As nursing homes transition from traditional models, the need for open and shared resident spaces is very important. A part of that group environment is a functioning kitchen that can also serve as the hearth of the home. Instead of a large, centralized, institutional kitchen where all meals are prepared and delivered to a central dining room or the resident's room, the new "household model" nursing home uses de-centralized kitchens and small dining areas to create the focus and feeling of home. Allowing kitchens that serve a small, defined group of residents to be open to common spaces and corridors is viewed as critically important to enhancing the feeling and memories of home for older adults. The code now allows spaces that contain domestic cooking facilities to be open to the corridor system provided 13 specific conditions are met.

Because unattended cooking equipment is a leading cause of fires in residential facilities, it is important that necessary safeguards be put in place to address the hazards involved. In addition, limitations on occupancy are necessary to allow for efficient egress should an emergency condition occur. It is expected that each smoke compartment functions as a distinct residential cooking and dining unit; therefore, no more than 30 care recipients can be housed in the smoke compartment or served by the cooking facility. Only one cooking facility is permitted in each such smoke compartment and it is limited to domestic ovens, cooktops, ranges, warmers and microwave ovens.

It is important that the means of egress within and through the cooking area be unobstructed, obvious and easily identifiable. Some means shall be provided at the floor surface to clearly identify the path of travel through the cooking area, such as a contrasting floor pattern, material or color. In addition, access to required exits shall be maintained by arranging the cooking space in a manner that will not obstruct egress travel.

Additional conditions deal primarily with the fire protection and mechanical systems related to the cooking activity. An IMC-compliant domestic hood must be installed over the cooktop or range, protected by an appropriate fire-extinguishing system. A manual actuation device, along with an interlock device, shall be provided for the hood suppression system. Other safeguards required include the installation of an emergency shutoff for the fuel and electrical power supply, a timer that automatically deactivates the cooking appliances and the installation of a portable fire extinguisher.

Justification: The International Code Council added language to the 2015 IBC that addresses nursing home cooking facilities. We have amended the language to refer to the applicable code that covers these types of facilities.

412.7.3 Means of egress. The means of egress from heliports and helistops shall comply with the provisions of Chapter 10, except no stairwell, stairway, guardrail or other structure shall be required or allowed to penetrate the take-off and landing area specified for the helistop. All 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 m²) in area, the second means of egress is permitted to be a fire escape, alternating tread device or ladder leading to the floor below.

[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 helistop. All 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 m²) in area, the second means of egress is permitted to be a fire escape, alternating tread device or ladder leading to the floor below.

City of Houston Amendment

Analysis: The COH amendment from Section 412.7.3 of the 2012 IBC has been relocated to 2015 IBC Section 412.8.3.

Justification: This amendment is needed to ensure an uninterrupted means of egress and to ensure conformity with state and local government policy.

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<p>413.1 General. High-piled stock or rack storage in any occupancy group shall comply with the <u>International Fire Code</u>. A <u>fire apparatus access road shall be provided for buildings used for high-piled combustible storage and shall meet applicable provisions of the Houston Fire Code.</u></p>	<p>413.1 General. High-piled stock or rack storage in any occupancy group shall comply with the <u>International Fire Code</u>. A <u>fire apparatus access road shall be provided for buildings used for high-piled combustible storage and shall meet applicable provisions of the Fire Code.</u></p>	<p>City of Houston Amendment Analysis: The existing COH amendment was not modified. Justification: The amendment was modified to refer to the fire code.</p>
<p>N/A</p>	<p>[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".</p>	<p>City of Houston Amendment Analysis: New COH amendment added for tire disposers, chipping and shredding operations. Justification: To clarify the requirements for these types of facilities and reference the HFD's LSB Standards.</p>
<p>[F] 414.6 Outdoor storage, dispensing and use. The outdoor storage, dispensing and use of hazardous materials shall be in accordance with the <u>International Fire Code</u>.</p> <p>[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 Sections 414.6.1.1 through 414.6.1.3.</p> <p>[F] 414.6.1.1 Walls. Walls shall not obstruct more than one side of the structure.</p> <p>Exception: Walls shall be permitted to obstruct portions of multiple sides of the structure, provided that the obstructed area is not greater than 25 percent of the structure's perimeter.</p>	<p>[F] 414.6 Outdoor storage, dispensing and use. The outdoor storage, dispensing and use of hazardous materials shall be in accordance with the <u>International Fire Code</u> and <u>Chapter 28, Article VII, of the City Code (the Hazardous Enterprise Ordinance).</u></p> <p>[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.</p> <p>Exception: For the purpose of applying Chapter 28, Article VII, of the City Code (the Hazardous Enterprise Ordinance), and the <u>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.</u></p>	<p>City of Houston Amendment Analysis: New COH amendment added. Justification: Amendment needed to provide clarity on storage of hazardous materials and to correlate with the Fire Code.</p>
<p>N/A</p>	<p>414.7 Enterprise permit. <u>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.</u></p>	<p>City of Houston Amendment Analysis: New COH amendment added. Justification: Amendment needed to provide clarity on storage of hazardous materials and to correlate with the Fire Code.</p>
<p>[F] 415.2 Definitions. The following terms are defined in Chapter 2:</p> <p>CONTINUOUS GAS DETECTION SYSTEM. DETACHED BUILDING. EMERGENCY CONTROL STATION. EXHAUSTED ENCLOSURE. FABRICATION AREA. FLAMMABLE VAPORS OR FUMES. GAS CABINET. GASROOM. HAZARDOUS PRODUCTION MATERIAL (HPM). HPM FLAMMABLE LIQUID. HPM ROOM. IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH). LIQUID.</p>	<p>[F] 415.2 Definitions. The following terms are defined in Chapter 2:</p> <p>[EDITORIAL NOTE: DEFINITIONS NOT LISTED REMAIN AS SET FORTH IN THE 2015 IBC.]</p> <p>HPM FLAMMABLE LIQUID.</p>	<p>City of Houston Amendment Analysis: A COH amendment was added. Justification: The committee recommends adding this amendment to coordinate with other amendments to the code.</p>

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<p>LIQUID STORAGE ROOM. LIQUID USE, DISPENSING AND MIXING ROOM. LOWER FLAMMABLE LIMIT (LFL). NORMAL TEMPERATURE AND PRESSURE (NTP). PHYSIOLOGICAL WARNING THRESHOLD LEVEL. SERVICE CORRIDOR. SOLID. STORAGE, HAZARDOUS MATERIALS. USE (MATERIAL). WORKSTATION.</p>		
<p>N/A</p>	<p>[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.</p>	<p>City of Houston Amendment Analysis: A COH amendment was added. Justification: This amendment was added to refer to the appropriate code sections in the Fire Code that cover exhaust ventilation in hydrogen fuel gas rooms.</p>
<p>N/A</p>	<p>[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.</p>	<p>City of Houston Amendment Analysis: A COH amendment was added. Justification: This amendment was added to refer to the appropriate code sections that cover ambulatory care facility electrical systems.</p>
<p>SECTION 426 REUSE OF BUILDING MATERIALS 426.1 Reuse of building materials. Reuse of building materials shall be allowed in accordance with Appendix R.</p>	<p>SECTION 427 REUSE OF BUILDING MATERIALS 427.1 Reuse of building materials. Reuse of building materials shall be allowed in accordance with Appendix R.</p>	<p>City of Houston Amendment Analysis: This COH amendment has been renumbered to correlate with changes to the 2015 IBC. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>N/A</p>	<p>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 <i>International Codes</i>.</p>	<p>City of Houston Amendment Analysis: New COH amendment referencing NFPA for energy systems and mobile food preparation vehicles. Justification: This amendment is needed to provide reference to newer NFPA standards and Fire Code provisions that govern the installation of energy systems and mobile food preparation vehicles.</p>
<p>N/A</p>	<p>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 <i>Fire Code</i> or appropriate provisions of Chapter 20, Article II, of the <i>City Code</i>, whichever is more restrictive.</p>	<p>City of Houston Amendment Analysis: New COH amendment addressing mobile food units and their requirements identified in Section 319 of chapter 20 of the City Code. Justification: This amendment is needed to provide identify the location of ordinance requirements associated with these types of businesses.</p>
<p>2012 Houston IBC – Chapter 5 General Building Heights and Areas</p>	<p>2015 Houston IBC – Chapter 5 General Building Heights and Areas</p>	<p>Code Analysis</p>
<p>[F] 501.2 Identifying number. Address identification. New and existing buildings and occupancies there under construction shall be provided with approved address</p>	<p>[F] 501.2 Identifying number. Address identification. New and existing buildings and occupancies there under construction shall be provided with approved address</p>	<p>City of Houston Amendment</p>

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numbers or letters. Each character shall be not less than 4 inches (102 mm) in height and not less than 0.5 inch (12.7 mm) in width. They shall be installed on a contrasting background and be plainly visible from the street or road fronting the property. When required by the fire code official, address numbers shall be provided in additional *approved* locations to facilitate emergency response. Where access is by means of a private road 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 numbers shall be maintained.

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

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 1/8 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.

Analysis: Amendment was modified during City Legal review to include the added changes.

Justification: This amendment is needed to ensure conformity with state and local government policy.

**TABLE 508.4
 REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

OCCUPANCY	A, E ^a		I-1 ^a , I-3, I-4		I-2		R ^a		F-2, S-2 ^b , U		B, 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, E ^a	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, 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	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 to not less than 1 hour.
- c. See Section 406.3.4.
- d. Separation is not required between occupancies of the same classification.
- e. Daycare facilities shall be separated from assembly areas where alcohol is served.

**TABLE 508.4
 REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

OCCUPANCY	A, E		I-1 ^a , I-3, I-4		I-2		R ^a		F-2, S-2 ^b , U		B ^a , 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, E	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 ^a , 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	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.

City of Houston Amendment

Analysis: The existing amendment was renumbered due to ICC added footnote.

Justification: The table from the 2012 amendments contained a footnote “e” that mandated that daycare occupancies be separated from occupancies serving alcohol. This footnote was moved to “f” due to changes in the 2015 base code.

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.

510.1 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.

City of Houston Amendment

Analysis: The existing amendment carried over to reference correct code sections.

Justification: The amendment was modified to reflect numbering changes in the base code.

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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.

510.9 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*.

City of Houston Amendment**Analysis:** No changes were made to the COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.

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.

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.

City of Houston Amendment**Analysis:** No changes were made to the COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.**{EDITORIAL NOTE: RENUMBER 510.9 IN 2012 IBC TO 510.10.}****SECTION 511
TRANSIT SHEDS**

511.1 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 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.

City of Houston Amendment**Analysis:** No changes were made to the COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.**SECTION 512
FOUNDATION ELEVATION**

512.1 General. All new buildings constructed within this jurisdiction shall have the finished floor of the building not less than 12 inches above the nearest sanitary sewer manhole rim of the sewer connected to the building, or, where no sewer is available, the finished floor shall not be less than 4 inches above the crown of the street.

**SECTION 512
FOUNDATION ELEVATION**

512.1 General. All new buildings constructed within this jurisdiction shall have the finished floor of the building not less than 12 inches above the nearest sanitary sewer manhole rim of the sewer connected to the building, or, where no sewer is available, the finished floor shall not be less than 4 inches 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 a 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.

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 a 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.

City of Houston Amendment**Analysis:** No changes were made to the COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.

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.

512.2 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.

City of Houston Amendment**Analysis:** No changes were made to the COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.

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.

512.3 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.

City of Houston Amendment**Analysis:** No changes were made to the COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.

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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 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.

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 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.

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy.

2012 Houston IBC – Chapter 6 Types of Construction

2015 Houston IBC – Chapter 6 Types of Construction

Code Analysis

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:

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

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).

{EDITORIAL NOTE: ALL OTHER PORTIONS OF SECTION 603.1 REMAIN AS SET FORTH IN THE 2012 IBC.}

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:

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 building 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*.

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

City of Houston Amendment

Analysis: The existing amendment includes minor editorial changes.

Justification: The amendment was modified to clarify the appropriate codes that are relevant to this section.

2012 Houston IBC – Chapter 7 Fire and Smoke Protection Features

2015 Houston IBC – Chapter 7 Fire and Smoke Protection Features

Code Analysis

PART 3 – Fire Protection Chapters 7 through 9

■ Chapter 7 Fire and Smoke Protection, Features, ■ Chapter 8 Interior Finishes, No changes addressed, ■ Chapter 9 Fire Protection Systems

The fire protection provisions of the *International Building Code* (IBC) are found primarily in Chapters 7 through 9. There are two general categories of fire protection: active and passive. The fire and smoke resistance of building elements and systems in compliance with Chapter 7 provides for passive protection. Chapter 9 contains requirements for various active systems often utilized in the creation of a safe building environment, including automatic sprinkler systems, standpipe systems and fire alarm systems. To further address the rapid spread of fire, the provisions of Chapter 8 are intended to regulate interior-finish materials, such as wall and floor coverings. ■

■ 704.4-Protection of Secondary Members, 705.2-Projections at Exterior Walls, 705.2.3-Combustible Projections, 705.3-Buildings on the Same Lot, 705.6-Structural Element Bracing of Exterior Walls, 705.8.5-Vertical Separation of Openings, 706.2-Structural Stability of Fire Walls, 709.4-Continuity of Smoke Barriers, 711 and 712-Horizontal Assemblies and Vertical Openings, 714.4. 2-Membrane Penetrations; 717.1.1-Ducts Transitioning between Shafts; 717.3, 717.5-Corridor Dampers; 903.2.1.6-Sprinkler Systems—Assembly Occupancies; 903.2.1.7-Multiple Fire Areas; 903.2.8-Sprinkler Systems—Group R Occupancies; 903.3.1.1.2-Exempt Locations for NFPA 13 Sprinklers; 903.3.1.2.2-Open-Ended Corridors; 903.3.8-Limited Area Sprinkler Systems; 904.1.3-Domestic Cooking Systems in Group I-2 Condition 1; 907.2.3-Fire Alarms—Group E Occupancies; 907.2.9.3-Alarm Systems—Group R-2 College and University Buildings; 907.2.11.3, 907.2.11.4-Smoke Alarms Near Cooking Appliances and Bathrooms; 909.21.1-Elevator Hoistway Pressurization; 910-Smoke and Heat Removal; 915-Carbon Monoxide Detection ■

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 714.4.2.2. Ducts and air transfer openings that are protected with *dampers* shall comply with Section 717.

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.

City of Houston Amendment

Analysis: Amendment modified by City Legal during review. Modification is to include metric system measurements.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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<p>Penetrations may be made in gypsum wallboard membranes for one-hour protection for bathroom and clothes dryer exhaust ducts without fire dampers provided:</p> <ol style="list-style-type: none"> 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. 4. The maximum size of the clothes dryer duct shall be 20 square inches. 	<p>Penetrations may be made in gypsum wallboard membranes for one-hour protection for bathroom and clothes dryer exhaust ducts without fire dampers provided:</p> <ol style="list-style-type: none"> 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 cm²). 4. The maximum size of the clothes dryer duct shall be 20 square inches (129.032 cm²). 	
<p>717.4 Access and identification. Fire and smoke dampers shall be provided with an approved means of access, which 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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: The existing amendment was modified. Justification: The amendment was modified to clarify the appropriate codes that are relevant to this section and to remove additional language that is no longer necessary due to changes in base code.</p>
<p>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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Combustible materials in accordance with Section 603. 2. Combustible materials exposed within plenums complying with Section 602 of the International Mechanical Code. 3. Class A interior finish materials classified in accordance with Section 803. 4. Combustible piping within partitions or shaft enclosures installed in accordance with the provisions of this code. 	<p>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.</p> <p>Exceptions:</p> <p>{EDITORIAL NOTE: PORTIONS OF SECTION 718.5 NOT SHOWN REMAIN AS SET FORTH IN THE 2015 IBC.}</p> <ol style="list-style-type: none"> 2. Combustible materials exposed within plenums complying with Section 602.2 of the International Mechanical Code. 	<p>City of Houston Amendment Analysis: Minor COH amendment added, No change to code or code intent. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>

2012 Houston IBC – Chapter 9 Fire Protection Systems	2015 Houston IBC – Chapter 9 Fire Protection Systems	Code Analysis
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No changes were made to the COH amendment. Justification: This amendment is needed to reference the appropriate codes that are relevant to this section.</p>
<p>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 Standard hose threads.</p>	<p>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 Standard hose threads.</p>	<p>City of Houston Amendment Analysis: No changes were made to the COH amendment. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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 representative. It shall be</p>	<p>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</p>	<p>City of Houston Amendment Analysis: No changes were made to the COH amendment. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>

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<p>unlawful to occupy portions of a structure until the required <i>fire protection systems</i> within that portion of the structure have been tested and <i>approved</i>.</p> <p>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 such inspection and reports shall be forwarded to the building official for posting to occupancy records. No building or structure requiring a fire-extinguishing system shall be permanently occupied without first obtaining the fire code official's approval.</p> <p>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.</p>	<p>portions of a structure until the required <i>fire protection systems</i> within that portion of the structure have been tested and <i>approved</i>.</p> <p><u>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 such inspection and reports shall be forwarded to the building official for posting to occupancy records. No building or structure requiring a fire-extinguishing system shall be permanently occupied without first obtaining the fire code official's approval.</u></p> <p><u>Exception:</u> <u>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.</u></p>	
<p>901.6.2 Fire alarm systems. Fire alarm systems required by the provisions of Section 907.2 of this code and Section 907.2 and 907.9 of the International Fire Code shall be monitored by an <i>approved</i> supervising station in accordance with Section 907.6.5.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 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 <i>automatic sprinkler systems</i> in one- and two-family dwellings. 	<p>901.6.2 Fire alarm systems. Fire alarm systems required by the provisions of Section 907.2 of this code and Section 907.2 and 907.9 of the International Fire Code shall be monitored by an <i>approved</i> supervising station in accordance with Section 907.6.6.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 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 <i>automatic sprinkler systems</i> in one- and two-family dwellings. 	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>901.9 Fire pumps. Fire pumps shall be listed by Factory Mutual, Underwriters Laboratories or another approved agency 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.) When such pumps are not approved for direct connection to the city main, the source of supply for such pumps shall be a minimum 2500-gallon break tank served from the city main.</p>	<p>901.9 Fire pumps. <u>Fire pumps shall be listed by Factory Mutual, Underwriters Laboratories or another approved agency 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.)</u> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Section 901.9 was amended during the Public Comment Period by a submission from Rob Hicks.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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.</p>	<p>901.10 Outside sprinkler control valve. <u>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.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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.</p>	<p>901.11 Two-way standpipe connections. <u>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.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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.</p>	<p>901.12 Fire department connections. <u>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.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 903.2 Where required. Approved <i>automatic sprinkler systems</i> in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12.</p> <p>Exceptions:</p>	<p>[F] 903.2 Where required. Approved <i>automatic sprinkler systems</i> in new building and structures shall be provided in the locations described in Section 903.2.1 through 903.2.12.</p> <p>Exceptions:</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p>

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<p>1. Spaces or areas in telecommunications buildings used 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 <i>fire barriers</i> constructed in accordance with Section 707 or not less than 2-hour <i>horizontal assemblies</i> constructed in accordance with Section 711, or both.</p> <p>2. <u>In other than Group H occupancies, a sprinkler system shall not be required in open buildings.</u></p>	<p>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 <i>automatic smoke detection system</i> in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour <i>fire barriers</i> constructed in accordance with Section 707 or not less than 2-hour <i>horizontal assemblies</i> constructed in accordance with Section 711, or both.</p> <p>2. <u>In other than Group H occupancies, a sprinkler system shall not be required in open buildings.</u></p>	<p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 903.2.1.1 Group A-1. An <i>automatic sprinkler system</i> shall be provided for Group A-1 occupancies where one of the following conditions exists:</p> <ol style="list-style-type: none"> The <i>fire area</i> exceeds 12,000 square feet (1115 m²); The <i>fire area</i> has an <i>occupant load</i> of 300 or more; The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies; or The <i>fire area</i> contains a multitheater complex. 	<p>[F] 903.2.1.1 Group A-1. An <i>automatic sprinkler system</i> shall be provided <u>for fire areas containing Group A-1 occupancies and intervening floors of the building</u> where one of the following conditions exists:</p> <ol style="list-style-type: none"> The <i>fire area</i> exceeds 12,000 square feet (1115m²); The <i>fire area</i> has an <i>occupant load</i> of 300 or more; The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies; <u>or</u>; The <i>fire area</i> contains a multitheater complex. <p>Exception: <u>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 <i>Fire Code</i> for applicable fees and service conditions.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: A COH Amendment was added to allow the use of a fire watch in lieu of a required fire sprinkler system for temporary use or occupancy.</p> <p>Justification: This amendment was added to ensure that the code complies with fire department policy.</p>
<p>[F] 903.2.1.2 Group A-2. An <i>automatic sprinkler system</i> shall be provided for Group A-2 occupancies where one of the following conditions exists:</p> <ol style="list-style-type: none"> The <i>fire area</i> exceeds 5,000 square feet (464.5 m²); The <i>fire area</i> has an <i>occupant load</i> of 100 or more; or The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies. 	<p>[F] 903.2.1.2 Group A-2. An <i>automatic sprinkler system</i> shall be provided <u>for fire areas containing Group A-2 occupancies and intervening floors of the building</u> where one of the following conditions exists:</p> <ol style="list-style-type: none"> The <i>fire area</i> exceeds 5,000 square feet (464.5 m²). The <i>fire area</i> has an <i>occupant load</i> of 100 or more. The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies. <p>Exception: <u>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 <i>Fire Code</i> for applicable fees and service conditions.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: A COH Amendment was added to allow the use of a fire watch in lieu of a required fire sprinkler system for temporary use or occupancy.</p> <p>Justification: This amendment was added to ensure that the code complies with fire department policy.</p>
<p>[F] 903.2.1.3 Group A-3. An <i>automatic sprinkler system</i> shall be provided for Group A-3 occupancies where one of the following conditions exists:</p> <ol style="list-style-type: none"> The <i>fire area</i> exceeds 12,000 square feet (1115 m²); The <i>fire area</i> has an <i>occupant load</i> of 300 or more; or 	<p>[F] 903.2.1.3 Group A-3. An <i>automatic sprinkler system</i> shall be provided <u>for fire areas containing Group A-3 occupancies and intervening floors of the building</u> where one of the following conditions exists:</p> <ol style="list-style-type: none"> The <i>fire area</i> exceeds 12,000 square feet (1115 m²); The <i>fire area</i> has an <i>occupant load</i> of 300 or more; 	<p>City of Houston Amendment</p> <p>Analysis: A COH Amendment was added to allow the use of a fire watch in lieu of a required fire sprinkler system for temporary use or occupancy.</p>

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<p>3. The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies.</p> <p>Exception: <u>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 fighters 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 fighters, 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 fighters for this purpose. See the <i>Fire Code</i> for applicable fees and service conditions.</u></p>	<p>3. The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies.</p> <p>Exception: <u>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 <i>Fire Code</i> for applicable fees and service conditions.</u></p>	<p>Justification: This amendment was added to ensure that the code complies with fire department policy.</p>
<p>[F] 903.2.1.4 Group A-4. An <i>automatic sprinkler system</i> shall be provided for Group A-4 occupancies where one of the following conditions exists:</p> <ol style="list-style-type: none"> 1. The <i>fire area</i> exceeds 12,000 square feet (1115 m²); 2. The <i>fire area</i> has an <i>occupant load</i> of 300 or more; or 3. The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies. 	<p>[F] 903.2.1.4 Group A-4. An <i>automatic sprinkler system</i> shall be provided for <i>fire areas</i> containing Group A-4 occupancies and intervening floors of the building where one of the following conditions exists:</p> <ol style="list-style-type: none"> 1. The <i>fire area</i> exceeds 12,000 square feet (1115 m²); 2. The <i>fire area</i> has an <i>occupant load</i> of 300 or more; 3. The <i>fire area</i> is located on a floor other than a <i>level of exit discharge</i> serving such occupancies. <p>Exception: <u>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 <i>Fire Code</i> for applicable fees and service conditions.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: A COH Amendment was added to allow the use of a fire watch in lieu of a required fire sprinkler system for temporary use or occupancy.</p> <p>Justification: This amendment was added to ensure that the code complies with fire department policy.</p>
<p>[F] 903.2.1.5 Group A-5. An <i>automatic sprinkler system</i> 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 m²).</p>	<p>[F] 903.2.1.5 Group A-5. An <i>automatic sprinkler system</i> 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 m²).</p> <p>Exception: <u>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 <i>Fire Code</i> for applicable fees and service conditions.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: A COH Amendment was added to allow the use of a fire watch in lieu of a required fire sprinkler system for temporary use or occupancy.</p> <p>Justification: This amendment was added to ensure that the code complies with fire department policy.</p>
<p>N/A</p>	<p>[F] 903.2.1.6 Assembly occupancies of roofs. Where an occupied roof has an assembly occupancy with an <i>occupant load</i> exceeding 100 for Group A-2 and 300 for other Group A occupancies, all floors between the occupied roof and the <i>level of exit discharge</i> shall be equipped with an <i>automatic sprinkler system</i> in accordance with Section 903.3.1.1 or 903.3.1.2.</p> <p>Exception: <u>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 or more fire inspectors of this jurisdiction will be present on the premises at all times when the amusement occupancy is open for</u></p>	<p>City of Houston Amendment</p> <p>Analysis: A COH Amendment was added to allow the use of a fire watch in lieu of a required fire sprinkler system for temporary use or occupancy.</p> <p>Justification: This amendment was added to ensure that the code complies with fire department policy.</p>

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	<p>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 <i>Fire Code</i> for applicable fees and service conditions.</p>	
<p>[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.</p>	<p>[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.</p> <p>Exception: Hazardous materials storage canopies complying with the provisions of Section 414.6.1 for weather protection.</p>	<p>City of Houston Amendment</p> <p>Analysis: New COH amendment exempting hazardous materials weather protection from required fire sprinkler protection.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[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.</p> <p>Exception: One- or two-family dwellings.</p>	<p>[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.</p> <p>Exception: One- or two-family dwellings.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[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 any room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.</p> <ol style="list-style-type: none"> Any room where the application of water, or flame and water, constitutes a serious life or fire hazard. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire code building official. 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. Rooms or areas that are of noncombustible construction with wholly noncombustible contents. Fire service access elevator machine rooms and machinery spaces. Machine rooms and machinery spaces associated with occupant evacuation elevators designed in accordance with Section 3008. 	<p>[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.</p> <ol style="list-style-type: none"> Any room where the application of water, or flame and water, constitutes a serious life or fire hazard. Any room or space where sprinklers are considered undesirable because of the nature of the contents, where approved by the fire code building official. 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. Rooms or areas that are of noncombustible construction with wholly noncombustible contents. Fire service access elevator machine rooms and machinery spaces. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008. 	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to reference the appropriate codes that are relevant to this section.</p>
<p>N/A</p>	<p>[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.</p>	<p>City of Houston Amendment</p> <p>Analysis: A COH amendment was added.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>N/A</p>	<p>[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. Preengineered 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: A COH amendment was added.</p> <p>Justification: This amendment is needed to reference the appropriate codes that are relevant to this section.</p>

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	<p>Automatic fire-extinguishing systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:</p> <p>EDITORIAL NOTE: PORTIONS OF 904.12 NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.</p> <p>Exception: Factory-built commercial cooking recirculating systems that are tested in accordance with UL 710B and <i>listed, labeled</i> and installed in accordance with Section 304.4 303.1 and 516 of the <i>International Mechanical Code</i>.</p>	
<p>[F] 905.3.1 Height. Class III standpipe systems shall be installed throughout buildings where the floor level of the highest <i>story</i> is located more than 30 feet (9144 mm) above the lowest level of fire department vehicle access, or where the floor level of the lowest <i>story</i> is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> Class I standpipes are allowed in buildings equipped throughout with an <i>automatic sprinkler system</i> in accordance with Section 903.3.1.1 or 903.3.1.2. 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. 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. Class I standpipes are allowed in basements equipped throughout with an <i>automatic sprinkler system</i>. In determining the lowest level of fire department vehicle access, it shall not be required to consider: <ol style="list-style-type: none"> Recessed loading docks for four vehicles or less; and Conditions where topography makes access from the fire department vehicle to the building impractical or impossible. 	<p>[F] 905.3.1 Height. Class III standpipe systems shall be installed throughout buildings where the floor level of the highest <i>story</i> is located more than 30 feet (9144 mm) above the lowest level of fire department vehicle access, or where the floor level of the lowest <i>story</i> is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> Class I standpipes are allowed in buildings equipped throughout with an <i>automatic sprinkler system</i> in accordance with Section 903.3.1.1 or 903.3.1.2. 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. 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. Class I standpipes are allowed in basements equipped throughout with an <i>automatic sprinkler system</i>. In determining the lowest level of fire department vehicle access, it shall not be required to consider: <ol style="list-style-type: none"> Recessed loading docks for four vehicles or less; and Conditions where topography makes access from the fire department vehicle to the building impractical or impossible. 	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 905.3.2 Group A. Class I automatic wet standpipes shall be provided in nonsprinklered Group A buildings having an <i>occupant load</i> exceeding 1,000 persons.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> Open-air-seating spaces without enclosed spaces. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings that are not high-rise buildings. 	<p>[F] 905.3.2 Group A. Class I automatic wet standpipes shall be provided in nonsprinklered Group A buildings having an <i>occupant load</i> exceeding 1,000 persons.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> Open-air-seating spaces without enclosed spaces. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings that are not high-rise buildings. 	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 905.3.4 Stages. Stages greater than 1,000 square feet in area (93 m²) shall be equipped with a Class III II wet standpipe system with 1½ -inch and 2½ -inch (38 mm and 64 mm) hose connections on each side of the stage.</p> <p>Exception: Where the building or area is equipped throughout with an <i>automatic sprinkler system</i>, the hose connections are allowed to be supplied from the <i>automatic sprinkler system</i>. 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.</p>	<p>[F] 905.3.4 Stages. Stages greater than 1,000 square feet in area (93 m²) shall be equipped with a Class III wet standpipe system with 1½ -inch and 2½ -inch (38mm and 64mm) hose connections on each side of the stage.</p> <p>Exception: Where the building or area is equipped throughout with an <i>automatic sprinkler system</i>, the hose connections are allowed to be supplied from the <i>automatic sprinkler system</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>

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<p>[F] 905.3.5 Underground buildings. Underground buildings shall be equipped throughout with a Class I automatic wet or manual wet standpipe system.</p>	<p>[F] 905.3.5 Underground buildings. Underground buildings shall be equipped throughout with a Class I automatic wet or manual wet standpipe system.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:</p> <ol style="list-style-type: none"> 1. In every required <i>stairway</i>, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise <i>approved</i> by the fire code official. 2. On each side of the wall adjacent to the <i>exit</i> opening of a <i>horizontal exit</i>. <p>Exception: Where floor areas adjacent to a <i>horizontal exit</i> are reachable from <i>exit stairway</i> hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the <i>horizontal exit</i>.</p>	<p>[F] 905.4 Location of Class I standpipe hose connections. Class I standpipe hose connection shall be provided in all of the following locations:</p> <ol style="list-style-type: none"> 1. In every required <i>interior exit stairway</i>, 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 <i>approved</i> be the fire code official. <p>EDITORIAL NOTE: REMAINDER OF SECTION REMAINS AS IS IN THE 2015 INTERNATIONAL BUILDING CODE.</p>	<p>City of Houston Amendment</p> <p>Analysis: New amendment accepted during the Public Comment Period and submitted by Rob Hicks.</p> <p>Justification: This amendment provides more up-to-date requirements for hose connections and is based on newer versions of the IFC.</p>
<p>[F] 905.8 Dry standpipes. Dry standpipes shall not be installed.</p> <p>Exception: Where subject to freezing and in accordance with NFPA 14.</p>	<p>[F] 905.8 Dry standpipes. Dry standpipes shall not be installed.</p> <p>Exception: Where subject to freezing and in accordance with NFPA 14.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 905.11 Design pressure. Design pressure at the uppermost valve for a Class II standpipe system shall be 35 psi.</p>	<p>905.11 Design pressure. Design pressure at the uppermost valve for a Class II standpipe system shall be 35 psi.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 906.2 General requirements. Portable fire extinguishers shall be selected and installed in accordance with this section and NFPA 10.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. The travel distance 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. 	<p>[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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 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. 	<p>City of Houston Amendment</p> <p>Analysis: A COH amendment was added.</p> <p>Justification: The amendment was modified to clarify the appropriate codes that are relevant to this section.</p>
<p>[F] 907.2 Where required – new buildings and structures. An <i>approved</i> 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.</p> <p>A minimum of one manual fire alarm box shall be provided in an <i>approved</i> 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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service. 	<p>[F] 907.2 Where required—new buildings and structures. An <i>approved</i> 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.</p> <p>Not fewer than one manual fire alarm box shall be provided in an <i>approved</i> 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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service. 	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>

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<p>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.</p> <p>3. In other than Group H occupancies, a fire alarm system shall not be required in open buildings.</p>	<p>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.</p> <p>3. <u>In other than Group H occupancies, a fire alarm system shall not be required in open buildings.</u></p>	
<p>[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:</p> <ol style="list-style-type: none"> 1. The combined Group B <i>occupant load</i> of all floors is 500 or more. 2. The Group B <i>occupant load</i> is more than 100 persons above or below the lowest <i>level of exit discharge</i>. 3. The <i>fire area</i> contains an ambulatory care facility. <p>Exception: In other than high rise buildings, manual Manual fire alarm boxes are not required where the building is equipped throughout with an <i>automatic sprinkler system</i> installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler waterflow.</p>	<p>[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:</p> <ol style="list-style-type: none"> 1. The combined Group B <i>occupant load</i> of all floors is 500 or more. 2. The Group B <i>occupant load</i> is more than 100 persons above or below the lowest <i>level of exit discharge</i>. 3. The <i>fire area</i> contains an ambulatory care facility. <p>Exception: In other than high-rise buildings, manual Manual fire alarm boxes are not required where the building is equipped throughout with an <i>automatic sprinkler system</i> installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes were made to the COH amendment.</p> <p>Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 907.2.3 Group E. A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When <i>automatic sprinkler systems</i> or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. A manual fire alarm system is not required in Group E occupancies with an <i>occupant load</i> of 30 or less. 2. Manual fire alarm boxes are not required in Group E occupancies where all of the following apply: <ol style="list-style-type: none"> 2.1. Interior <i>corridors</i> are protected by smoke detectors. 2.2. Auditoriums, cafeterias, gymnasiums and similar areas are protected by <i>heat detectors</i> or other <i>approved</i> detection devices. 2.3. Shops and laboratories involving dusts or vapors are protected by <i>heat detectors</i> or other <i>approved</i> detection devices. 3. Manual fire alarm boxes shall not be required in Group E occupancies where the building is equipped throughout with an <i>approved automatic sprinkler system</i> installed in accordance with Section 903.3.1.1, the emergency voice/alarm communication system will activate on sprinkler water flow and manual activation is provided from a normally occupied location. 	<p>[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 <i>automatic sprinkler systems</i> or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.</p> <p>EDITORIAL NOTE: THE EXCEPTIONS TO 907.2.3 REMAIN AS SET FORTH IN THE 2015 IBC.</p>	<p>City of Houston Amendment</p> <p>Analysis: A COH amendment was added.</p> <p>Justification: An amendment was added to clarify the type of fire alarm system required by COH.</p>
<p>[F] 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.</p> <p>Exception: Approved heat detectors may be installed in lieu of smoke detectors in mechanical rooms, janitorial rooms and similar areas.</p>	<p><u>907.2.3.1 Group E educational.</u> <u>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.</u></p> <p>Exception: <u>Approved heat detectors may be installed in lieu of smoke detectors with fire marshal approval.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: The existing amendment was modified.</p> <p>Justification: The amendment was modified to give approval power for this type of smoke detector installation to the Fire Marshal.</p>

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<p>[F] 907.2.3.2 Group E child care with an occupant load of 30 or more. Smoke detectors shall be installed in corridors, in common areas and in occupiable areas.</p>	<p>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 <i>occupant load</i> 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.</p>	<p>of Houston Amendment Analysis: The existing amendment was modified. Justification: The amendment was modified to give approval power for this type of fire alarm system installation to the Fire Marshal.</p>
<p>[F] 907.2.3.3 Group E child care with an occupant load of less than 30. Smoke detectors shall be installed in each occupiable area. All such detectors shall be interconnected in such a way that the activation of any detector shall automatically activate the alarm of all detectors, unless provided with a fire alarm system in accordance with Section 907.2.3.</p>	<p>907.2.3.3 Smoke detectors. The distance between smoke detectors shall not exceed a nominal spacing of 30 feet (9144 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.</p>	<p>of Houston Amendment Analysis: The existing amendment was modified. Justification: The amendment was modified to give approval power for this type of smoke detector installation to the Fire Marshal.</p>
<p>[F] 907.2.3.4 Manual fire alarm boxes. Where required in Group E occupancies, manual fire alarm boxes shall be located in accordance with Section 907.3.</p>	<p>[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 <i>automatic sprinkler systems</i> or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system. [EDITORIAL NOTE: THE EXCEPTIONS TO 907.2.3 REMAIN AS SET FORTH IN THE 2015 IBC.]</p>	<p>City of Houston Amendment Analysis: The COH amendment was omitted for application of model code requirements found in Section 907.2.3. Justification: The committee recommends omitting this amendment as it's no longer needed.</p>
<p>[F] 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 907.2.3.</p>	<p>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 907.2.3.</p>	<p>City of Houston Amendment Analysis: No changes were made to the COH amendment. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>[F] 907.2.11.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual <i>dwelling unit</i> or <i>sleeping unit</i> in Group R or I-1 occupancies, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.</p>	<p>[F] 907.2.11.5 Interconnection. Where more than one smoke alarm is required to be installed within an individual <i>dwelling unit</i> or <i>sleeping unit</i> in Group R or I-1 occupancies, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.</p>	<p>City of Houston Amendment Analysis: Previous 2012 IBC code provisions for interconnections has been relocated to section 907.2.11.5 in the 2015 IBC. Justification: Changes to the model code required that the amendment be moved.</p>
<p>[F] 907.2.11.4-5 Power source. In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. Exception: Smoke alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system.</p>	<p>[F] 907.2.11.6 Power source. In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system in accordance with Section 2702. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. Exception: Smoke alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system that complies with Section 2702.</p>	<p>City of Houston Amendment Analysis: The COH amendment for Power Source was omitted due to ICC changes and section renumbering. Justification: The committee recommends omitting this amendment.</p>
<p>N/A</p>	<p>[F] 907.2.11.7 Smoke detection system. Smoke detectors listed in accordance with UL 268 and provided as part of the building <i>fire alarm system</i> shall be an acceptable alternative to single- and multiple-station <i>smoke alarms</i> and shall comply with the following:</p>	<p>City of Houston Amendment Analysis: ICC added new provisions to address Smoke detection systems for Dwelling units.</p>

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	<ol style="list-style-type: none"> 1. The <i>fire alarm system</i> shall comply with all applicable requirements in Section 907. 2. Activation of a smoke detector in a <i>dwelling unit</i> or <i>sleeping unit</i> shall initiate alarm notification in the <i>dwelling unit</i> or <i>sleeping unit</i> in accordance with Section 907.5.2. 3. Activation of a smoke detector in a <i>dwelling unit</i> or <i>sleeping unit</i> shall not activate alarm notification appliances outside of the <i>dwelling unit</i> or <i>sleeping unit</i>, provided that a supervisory signal is generated and monitored in accordance with Section 907.6.6. 	Justification: Changes to the base code.
<p>[F] 907.2.11.3 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.</p>	<p>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 <i>occupant load</i> of less than 30. Where more than one smoke alarm is required, the smoke alarm <u>interconnection and power source shall be in accordance with Section 907.2.11.5 and 907.2.11.6 and smoke alarms installed</u> in such a manner that activation of one alarm shall activate all the alarms.</p>	<p>City of Houston Amendment</p> <p>Analysis: Previous COH amendment was relocated to Section 907.2.11.8.</p> <p>Justification: Changes to the model code required that the amendment be moved.</p>
<p>[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 <i>approved</i> 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 <u>International Fire Code</u>. In high-rise buildings, the system shall operate on <u>a minimum of</u> 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:</p> <ol style="list-style-type: none"> 1. Elevator groups. 2. <i>Exit stairways</i>. 3. Each floor. 4. <i>Areas of refuge</i> as defined in Section 1002.1. <p><u>Alarms shall not sound in elevator groups or exit stairs.</u></p> <p>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.</p>	<p>[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 <i>approved</i> 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 <u>International Fire Code</u>. In high-rise buildings, the system shall operate on a minimum of 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:</p> <ol style="list-style-type: none"> 1. Elevator groups. 2. <u>Interior</u> <i>exit stairways</i>. 3. Each floor. 4. <i>Areas of refuge</i> as defined in Chapter 2. <p><u>Alarms shall not sound in elevator groups or exit stairs.</u></p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No changes to COH amendment.</p> <p>Justification: Maintains conformance to local and state policies.</p>
<p>[F] 909.12.1 Wiring. In addition to meeting requirements of <u>NFPA-70 the Electrical Code, mechanical smoke control</u> <u>all</u> wiring, regardless of voltage, shall be fully enclosed within continuous raceways. <u>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.</u></p>	<p>[F] 909.12.2 Wiring. In addition to meeting requirements of <u>NFPA-70 the Electrical Code, mechanical smoke control</u> <u>all</u> wiring, regardless of voltage, shall be fully enclosed within continuous raceways. <u>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.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: Amendment moved from 2012 Section 909.12.1; no changes to COH amendment.</p> <p>Justification: Maintains conformance to local and state policies and references the Houston Electrical Code.</p>
<p>[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.</p> <p>Exception: Nonmetallic tubing used within control panels and at the final connection to devices provided all of the following conditions are met:</p>	<p>[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.</p> <p>Exception: Nonmetallic tubing used within control panels and at the final connection to devices provided all of the following conditions are met:</p>	<p>City of Houston Amendment</p> <p>Analysis: New COH amendment; provides updated reference to Houston Mechanical Code.</p> <p>Justification: Maintains conformance to local and state policies and provides specific Mechanical Code reference.</p>

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<p>1. Tubing shall comply with the requirements of Section 602.2.1.3 of the International Mechanical Code.</p> <p>[EDITORIAL NOTE: THE REMAINDER OF SECTION 909.13.1 SHALL REMAIN AS SET FORTH IN THE 2015 IBC.]</p>	<p>1. Tubing shall comply with the requirements of Section 602.2.31.3 of the International Mechanical Code.</p> <p>[EDITORIAL NOTE: THE REMAINDER OF SECTION 909.13.1 SHALL REMAIN AS SET FORTH IN THE 2015 IBC.]</p>	
<p>909.20 Smokeproof enclosures. Where required by Section 1022.10, a smokeproof enclosure shall be constructed in accordance with this section. A smokeproof enclosure shall consist of an enclosed interior <i>exit stairway</i> that conforms to Section 1022.2 and an open exterior balcony or ventilated vestibule meeting the requirements of this section. Where access to the roof is required by Section 1009.16.1 the International Fire Code, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.</p>	<p>909.20 Smokeproof enclosures. Where required by Section 1022.10 1023.11, a smokeproof enclosure shall be constructed in accordance with this section. A smokeproof enclosure shall consist of an enclosed interior <i>exit stairway</i> or ramp that conforms to is enclosed in accordance with the applicable provisions of Section 1022.2 1023 and an open exterior balcony or ventilated vestibule meeting the requirements of this section. Where access to the roof is required by the <i>International Fire Code</i>, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.</p>	<p>City of Houston Amendment</p> <p>Analysis: ICC model code changes to provide clarity. Previous amendment not carried forward.</p> <p>Justification: No justification to keep amendment; provisions covered in base code IBC/IFC.</p>
<p>[F] 911.1.1 Location and access. The location and accessibility of the fire command center shall be <i>approved</i> 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.</p>	<p>[F] 911.1.1 Location and access. The location and accessibility of the fire command center shall be <i>approved</i> 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 1-hour rated corridor leading directly to the exterior.</p>	<p>City of Houston Amendment</p> <p>Analysis: Rated construction reduced to 1-hour; remainder of amendment remains unchanged.</p> <p>Justification: Change in rated construction needed to conform to the requirements of base code IBC/IFC.</p>
<p>[F] 911.1.2 Separation. The fire command center shall be separated from the remainder of the building by not less than a 1 2-hour <i>fire barrier</i> constructed in accordance with Section 707 or <i>horizontal assembly</i> constructed in accordance with Section 711, or both.</p>	<p>[F] 911.1.2 Separation. The fire command center shall be separated from the remainder of the building by not less than a 1-hour <i>fire barrier</i> constructed in accordance with Section 707 or <i>horizontal assembly</i> constructed in accordance with Section 711, or both.</p>	<p>City of Houston Amendment</p> <p>Analysis: Previous amendment not carried forward.</p> <p>Justification: No justification to keep amendment; provisions covered in base code IBC/IFC.</p>
<p>[F] 911.1.5 Required Features. The fire command center shall comply with NFPA 72 and shall contain the following features:</p> <p>1. The emergency voice/alarm communication system control unit....</p> <p>[EDITORIAL NOTE: KEEP EXISTING ITEMS 1-18 HERE WITHOUT AMENDMENT.]</p> <p>19. A means to automatically switch an alarm signal to an approved central station.</p> <p>20. Two handsets per each 10 stories in building height.</p>	<p>[F] 911.1.6 Required features. The fire command center shall comply with NFPA 72 and shall contain all of the following features:</p> <p>1. The emergency voice/alarm communication control unit.</p> <p>[EDITORIAL NOTE: EXISTING ITEMS 1-18 SHALL REMAIN AS SET FORTH IN THE 2015 IBC.]</p> <p>19. A means to automatically switch an alarm signal to an approved central station.</p> <p>20. Two handsets per each 10 stories in building height.</p>	<p>City of Houston Amendment</p> <p>Analysis: Amendment moved from 911.1.5; no changes to COH amendment.</p> <p>Justification: Maintain conformity to local and state requirements regarding the IFC.</p>

2012 Houston IBC – Chapter 10 Means of Egress

2015 Houston IBC – Chapter 10 Means of Egress

Code Analysis

Means of Egress – Chapter 10

■ **Chapter 10 Means of Egress**

The criteria set forth in Chapter 10 regulating the design of the means of egress are established as the primary method for protection of people in buildings. Both prescriptive and performance language is utilized in the chapter to provide for a basic approach in the determination of a safe exiting system for all occupancies. Chapter 10 addresses all portions of the egress system and includes design requirements as well as provisions regulating individual components. A zonal approach to egress provides a general basis for the chapter’s format through regulation of the exit access, exit, and exit discharge portions of the means of egress. ■

■ **Chapter 10-Means of Egress:** Sections **1004.1.1**-Cumulative Occupant Loads; **Table 1004.1.2**-Occupant Load Factors; **1006**, **1007**-Numbers of Exits and Exit Access Doorways; **1007.1**-Exit and Exit Access Doorway Configuration; **1009.8**-Two-Way Communication Systems **1010.1.9**-Door Operations—Locking Systems; **1011.15**, **1011.16**-Ladders; **1014.8**-Handrail Projections; **1016.2**-Egress through Intervening Spaces; **1017.2.2**-Travel Distance Increase for Groups F-1 and S-1; **1018.3**-Aisles in Groups B and M; **1020.2**-Corridor Width and Capacity; **1023.3.1**-Stairway Extension; **1029.13.2.2.1**-Stepped Aisle Construction Tolerances. ■

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 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 address in this code, accessory stairs, ramps, doors and landings that are not~~

City of Houston Amendment

Analysis: New amendment addressing minimum code provisions for construction of certain building elements that may resemble components of a means of egress system but may not be part of a required means of egress. Clear guidance is

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	<p>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.</p>	<p>needed in the code to identify minimum construction requirements for such building elements. Justification: The addition of this amendment is needed to ensure a minimal level of safety for certain building elements that could be mistaken for components of a means of egress system such as stairs, ramps, doors and landings from rooms and area.</p>
<p>[F] 1001.3 Maintenance. Means of egress shall be maintained in accordance with the <i>International Fire Code</i>.</p>	<p>[F] 1001.3 Maintenance. Means of egress shall be maintained in accordance with Section 1031 of the <i>International Fire Code</i>.</p>	<p>City of Houston Amendment Analysis: New COH amendment. Justification: Amendment needed to provide specific reference to the IFC for certain means of egress provisions.</p>
<p>1003.3 Reserved. Protruding objects. Protruding objects shall comply with the requirements of Sections 1003.3.1 through 1003.3.4.</p> <p>1003.3.1 Headroom. Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 provided a minimum headroom of 80 inches (2032 mm) shall be provided for any walking surface, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.</p> <p>Exception: Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).</p> <p>A barrier shall be provided where the vertical clearance is less than 80 inches (2032 mm) high. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the floor.</p> <p>1003.3.2 Post-mounted objects. A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2032 mm) minimum above the finished floor or ground.</p> <p>Exception: These requirements shall not apply to sloping portions of handrails between the top and bottom riser of stairs above the ramp run.</p> <p>1003.3.3 Horizontal projections. Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 mm) and 80 inches (2032 mm) above the walking surface.</p> <p>Exception: Handrails are permitted to protrude 4½ inches (114 mm) from the wall.</p> <p>1003.3.4 Clear width. Protruding objects shall not reduce the minimum clear width of accessible routes.</p>	<p>1003.3 Protruding objects. Protruding objects on circulation paths shall comply with the requirements of Sections 1003.3.1 through 1003.3.4.</p> <p>1003.3.1 Headroom. Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 provided where a minimum headroom of 80 inches (2,032 mm) shall be is provided for over any walking surface, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.</p> <p>Exception: Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).</p> <p>A barrier shall be provided where the vertical clearance is less than 80 inches (2,032 mm) high. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the floor.</p> <p>1003.3.2 Post-mounted objects. A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2,032 mm) above the walking surface. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2,032 mm) minimum above the finished floor or ground.</p> <p>Exception: These requirements shall not apply to sloping portions of handrails between the top and bottom riser of stairs and above the ramp run.</p> <p>1003.3.3 Horizontal projections. Structural elements, fixtures or furnishings shall not project horizontally from either side. Objects with leading edges more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 (685 mm) and not more than 80 inches (2032 (2,030 mm) above the walking surface. floor shall not project horizontally more than 4 inches (102 mm) into the circulation path.</p> <p>Exception: Handrails are permitted to protrude 4 ½-inches (114 mm) from the wall.</p> <p>1003.3.4 Clear width. Protruding objects shall not reduce the minimum clear width of accessible routes.</p>	<p>City of Houston Amendment Analysis: Previous amendment not carried forward. Justification: No justification for this section being stricken; will move forward with base code.</p>

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1003.7 Elevators, escalators and moving walks. Elevators, escalators and moving walks shall not be used as a component of a required *means of egress* from any other part of the building.

Exception: Elevators used as an *accessible means of egress* in accordance with Section 1007.4.

1003.7 Elevators, escalators and moving walks. Elevators, escalators and moving walks shall not be used as a component of a required *means of egress* from any other part of the building.

Exception: Elevators used as an *accessible means of egress* in accordance with Section 1009.4.

City of Houston Amendment

Analysis: Previous amendment not carried forward.

Justification: No justification for striking base code; will move forward with base code.

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SECTION 1007

ACCESSIBLE MEANS OF EGRESS

{EDITORIAL NOTE: DELETE AND RESERVE ENTIRE SECTION.}

**SECTION 1007
EXIT AND EXIT ACCESS
DOORWAY CONFIGURATION**

1007.1 General. Exits, exit access doorways, and exit access stairways and ramps serving spaces, including individual building stories, shall be separated in accordance with the provisions of this section.

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

Exceptions:

1. Where interior exit stairways or ramps are interconnected by a 1-hour fire-resistance-rated corridor conforming to the requirements of Section 1020, the required exit separation shall be measured along the shortest direct line of travel within the corridor.
2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance shall be not less than one-third of the length of the maximum overall diagonal dimension of the area served.

1007.1.1.1 Measurement point. The separation distance required in Section 1007.1.1 shall be measured in accordance with the following:

1. The separation distance to exit or exit access doorways shall be measured to any point along the width of the doorway.
2. The separation distance to exit access stairways shall be measured to the closest riser.
3. The separation distance to exit access ramps shall be measured to the start of the ramp run.

1007.1.2 Three or more exits or exit access doorways. Where access to three or more exits is required, not less than two exit or exit access doorways shall be arranged in accordance with the provisions of Section 1007.1.1. Additional required exit or exit access doorways shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available.

1007.1.3 Remoteness of exit access stairways or ramps. Where two exit access stairways or ramps provide the required means of egress to exits at another story, the required separation distance shall be maintained for all portions of such exit access stairways or ramps.

1007.1.3.1 Three or more exit access stairways or ramps. Where more than two exit access stairways or ramps provide the required means of egress, not less than two shall be arranged in accordance with Section 1007.1.3.

City of Houston Amendment

Analysis: Previous amendment eliminated to revert back to model code provisions addressing appropriate egress discharge to the public way.

Justification: No justification for this section being stricken; will move forward with base code.

1008.1.7 Thresholds. Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height above the finished floor or landing for sliding doors serving dwelling units or 1/2 inch (12.7 mm) above the finished floor or landing for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

1010.1.7 Thresholds. Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height above the finished floor or landing for sliding doors serving dwelling units or 1/2 inch (12.7 mm) above the finished floor or landing for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exceptions:

City of Houston Amendment

Analysis: Previous amendment eliminated.

Justification: No justification for striking base code; will move forward with base code.

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<p>Exception: In occupancy Group R-2 or R-3, threshold heights for sliding and side-hinged exterior doors shall be permitted to be up to 7¾ inches (197 mm) in height if all of the following apply:</p> <ol style="list-style-type: none"> 1. The door is not part of the required <i>means of egress</i>. 2. The door is not part of an accessible route as required by Chapter 11. 3. The door is not part of an Accessible unit, Type A unit or Type B unit. 	<ol style="list-style-type: none"> 1. In occupancy Group R-2 or R-3, threshold heights for sliding and side-hinged exterior doors shall be permitted to be up to 7-3/4 inches (197 mm) in height if all of the following apply: <ol style="list-style-type: none"> 1.1. The door is not part of the required <i>means of egress</i>. 1.2. The door is not part of an <i>accessible route</i> as required by Chapter 11. 1.3. The door is not part of an <i>Accessible unit, Type A unit or Type B unit</i>. 	
<p>1008.1.8 Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between doors.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm). 2. Storm and screen doors serving individual <i>dwelling units</i> in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door. 3. Doors within individual <i>dwelling units</i> in Groups R-2 and R-3 other than within Type A dwelling units. 	<p>1010.1.8 Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm). 2. Storm and screen doors serving individual <i>dwelling units</i> in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door. 3. Doors within individual <i>dwelling units</i> in Groups R-2 and R-3 other than within <i>Type A dwelling units</i>. 	<p>City of Houston Amendment</p> <p>Analysis: Previous amendment eliminated.</p> <p>Justification: No justification for striking base code; will move forward with base code.</p>
<p>1008.1.9 Door operations. Except Whenever a building or space is occupied, except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.</p>	<p>1010.1.9 Door operations. Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.</p>	<p>City of Houston Amendment</p> <p>Analysis: Previous amendment eliminated.</p> <p>Justification: No justification for striking base code; will move forward with base code.</p>
<p>1008.1.9.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:</p> <ol style="list-style-type: none"> 1. Places of detention or restraint. 2. In buildings in occupancy Group A having an <i>occupant load</i> of 300 or less, Groups B, F, M and S, and in <i>places of religious worship</i>, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided: <ol style="list-style-type: none"> 2.1. The locking device is readily distinguishable as locked; 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background; and 2.3. The use of the key-operated locking device is revokable revocable by the <i>building official</i> for due cause. 3. Where egress doors are used in pairs, <i>approved</i> automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware. 4. Doors from individual <i>dwelling or sleeping units</i> of Group R occupancies having an <i>occupant load</i> of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. 5. <i>Fire doors</i> after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures. 6. In buildings in occupancy Group B that have an occupant load of 10 or less, doors may be equipped with a manually operated deadbolt in addition to a door latch. 	<p>1010.1.9.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exist:</p> <ol style="list-style-type: none"> 1. Places of detention or restraint. 2. In buildings in occupancy Group A having an <i>occupant load</i> of 300 or less, Groups B, F, M and S, and in <i>places of religious worship</i>, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided: <ol style="list-style-type: none"> 2.1. The locking device is readily distinguishable as locked. 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS BUILDING SPACE IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background; and 2.3. The use of the key-operated locking device is revokable by the <i>building official</i> for due cause. 3. Where egress doors are used in pairs, <i>approved</i> automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no does not have a doorknob or surface-mounted hardware. 4. Doors from individual <i>dwelling or sleeping units</i> of Group R occupancies having an <i>occupant load</i> of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool. 5. <i>Fire doors</i> after the minimum elevated temperature has disabled the unlatching mechanism in accordance with <i>listed fire door</i> test procedures. 	<p>City of Houston Amendment</p> <p>Analysis: Previous amendment eliminated.</p> <p>Justification: No justification for striking base code; will move forward with base code.</p>

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1008.1.9.4 Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.
3. Where a pair of doors serves an *occupant load* of less than 50 persons in a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. The inactive leaf shall contain no doorknobs, panic bars or similar operating hardware.
4. Where a pair of doors serves a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf provided such inactive leaf is not needed to meet egress width requirements and the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. The inactive leaf shall contain no doorknobs, panic bars or similar operating hardware.
5. Where a pair of doors serves patient care rooms in Group I-2 occupancies, self-latching edge- or surface-mounted bolts are permitted on the inactive leaf provided that the inactive leaf is not needed to meet egress width requirements and the inactive leaf contains no doorknobs, panic bars or similar operating hardware.
6. **In buildings in occupancy Group B that have an occupant load of 10 or less, doors may be equipped with a manually operated deadbolt in addition to a door latch.**

1010.1.9.4 Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

1. On doors not required for egress in individual *dwelling units* or *sleeping units*.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.
3. Where a pair of doors serves an *occupant load* of less than 50 persons in a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. The inactive leaf shall not contain doorknobs, panic bars or similar operating hardware.
4. Where a pair of doors serves a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf provided such inactive leaf is not needed to meet egress **width capacity** requirements and the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. The inactive leaf shall not contain doorknobs, panic bars or similar operating hardware.
5. Where a pair of doors serves patient care rooms in Group I-2 occupancies, self-latching edge- or surface-mounted bolts are permitted on the inactive leaf provided that the inactive leaf is not needed to meet egress **width capacity** requirements and the inactive leaf **shall not** contain ~~no~~ doorknobs, panic bars or similar operating hardware.

City of Houston Amendment**Analysis:** Previous amendment not carried forward.**Justification:** No justification to keep previous amendment; new provisions for locks covered in 1010.1.9.8.

1008.1.9.8 Access-controlled egress doors. The entrance doors in a *means of egress* in buildings with an occupancy in Groups A, B, E, I-2, M, R-1 or R-2, and entrance doors to tenant spaces in occupancies in Groups A, B, E, I-2, M, R-1 or R-2, are permitted to be equipped with an *approved* entrance and egress access control system, listed in accordance with UL 294, which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided 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 that part of the access control system which locks the doors shall automatically unlock the doors.
3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 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 the access control system electronics*—and the doors shall remain unlocked for a minimum of 30 seconds.
4. Activation of the building fire alarm system, if 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 or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.

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 (1016 mm to 1219 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.

City of Houston Amendment**Analysis:** New COH amendment.**Justification:** Amendment has been updated to the 2018 provisions to provide more up to date requirements for e-lock doors. Change requested by the Occupancy Group.

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<p>6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.</p>		
<p>1008.1.9.9 Electromagnetically locked egress doors. Doors in the <i>means of egress</i> in buildings with an occupancy in Group A, B, E, M, R-1 or R-2, and doors to tenant spaces in Group A, B, E, M, R-1 or R-2, shall be permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch and meet the requirements below:</p> <ol style="list-style-type: none"> 1. The listed hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions. 2. The listed hardware is capable of being operated with one hand. 3. Operation of the listed hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately. 4. Loss of power to the listed hardware automatically unlocks the door. 5. Where panic or <i>fire exit hardware</i> is required by Section 1008.1.10, operation of the listed panic or <i>fire exit hardware</i> also releases the electromagnetic lock. 	<p>1010.1.9.9 Electromagnetically locked egress doors. Doors in the <i>means of egress</i> 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 <u>any occupancy except Group H</u> 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:</p> <p>(EDITORIAL NOTE: THE REMAINDER OF THIS SECTION SHALL REMAIN AS SET FORTH IN THE 2015 IBC.)</p>	<p>City of Houston Amendment</p> <p>Analysis: New COH amendment to update the charging statement to the updated code provisions of the 2018 IBC.</p> <p>Justification: Amendment has been updated to the 2018 provisions to provide more up to date requirements for e-lock doors. Change requested by Occupancy Group.</p>
<p>N/A</p>	<p>1010.1.9.12 Controlled egress doors from elevator lobbies. Exit doors in the <i>means of egress</i> in buildings that are equipped throughout with an <i>automatic sprinkler system</i> in accordance with Section 903.3.1.1 or an <i>approved automatic smoke or heat detection system</i> 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:</p> <ol style="list-style-type: none"> 1. The door locks shall unlock on actuation of the <i>automatic sprinkler system</i> or <i>automatic fire detection system</i>. 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 <i>approved</i> 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. 	<p>City of Houston Amendment</p> <p>Analysis: New COH amendment allowing electronic locking devise on elevator lobby doors.</p>
<p>N/A</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: New COH amendment allowing electronic locking devise on security gate / doors.</p>

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		Justification: Amendment has been added to provide more up to date requirements for e-lock doors. Change requested by Occupancy Group.
1011.3 Illumination. Exit signs shall be internally or externally illuminated. Exception: Tactile signs required by Section 1011.4 need not be provided with illumination.	1013.3 Illumination. Exit signs shall be internally or externally illuminated. Exception: Tactile signs required by Section 1013.4 need not be provided with illumination.	City of Houston Amendment Analysis: Previous Section 1011.3 amendment not carried forward. Additionally, the provisions of this section have been relocated to Section 1013.3 in the 2015 IBC. No change to code requirements or code intent. Justification: No justification for striking base code; will move forward with base code.
1011.4 Reserved. Raised character and Braille exit signs. A sign stating EXIT in raised characters and Braille and complying with ICC A117.1 shall be provided adjacent to each door to an <i>area of refuge</i> , an exterior area for assisted rescue, an <i>exit stairway</i> , an <i>exit ramp</i> , an <i>exit passageway</i> and the <i>exit discharge</i> .	1013.4 Raised character and braille exit signs. A sign stating EXIT in visual characters, raised characters and braille and complying with ICC A117.1 shall be provided adjacent to each door to an <i>area of refuge</i> , an exterior area for assisted rescue, an <i>exit stairway</i> or <i>ramp</i> , an <i>exit passageway</i> and the <i>exit discharge</i> .	City of Houston Amendment Analysis: Previous Section 1011.4 amendment not carried forward. Additionally, the provisions of this section have been relocated to Section 1013.4 in the 2015 IBC. No change to code requirements or code intent. Justification: No justification for striking base code; will move forward with base code.
1009.13.1 Handrails of alternating tread devices. Handrails shall be provided on both sides of <i>alternating tread devices</i> and shall comply with Section 1012.	1011.14.1 Handrails of alternating tread devices. Handrails shall be provided on both sides of alternating tread devices and shall comply with Section 1024 1014 .	City of Houston Amendment Analysis: New COH amendment. Justification: Amendment needed to provide correct reference to tread device handrail provisions.
N/A	1011.16 Ladders. Permanent ladders shall not serve as a part of the <i>means of egress</i> from occupied spaces within a building. Permanent ladders shall be permitted to provide access to the following areas: {EDITORIAL NOTE: PORTIONS OF 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 <i>International Mechanical Code</i> .	City of Houston Amendment Analysis: New COH amendment. Justification: Amendment needed to provide correct reference to the Mechanical Code for ladder construction.
1014.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section. 1. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an <i>exit</i> . Exception: <i>Means of egress</i> are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy when the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group. {EDITORIAL NOTE: THE REMAINDER OF THIS SECTION SHALL REMAIN AS SET FORTH IN THE 2012 IBC.}	1016.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section. 1. <i>Exit access</i> through an enclosed elevator lobby is permitted. Access to not less than one of the required <i>exits</i> shall be provided without travel through the enclosed elevator lobbies required by Section 3006.2, 3007 or 3008 . Where the path of <i>exit access</i> 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 <i>exit</i> unless direct access to an <i>exit</i> is required by other sections of this code. {EDITORIAL NOTE: THE REMAINDER OF THIS SECTION SHALL REMAIN AS SET FORTH IN THE 2015 IBC.}	City of Houston Amendment Analysis: New COH amendment to correlate with other sections. Justification: Amendment needed to provide correct reference for egress in intervening spaces.
1022.9 Stairway identification signs. A sign shall be provided at each floor landing in an <i>interior exit stairway</i> and <i>ramp</i> connecting more than three stories designating the floor level, the terminus of the top and bottom of the <i>interior exit stairway</i> and	1023.9 Stairway identification signs. A sign shall be provided at each floor landing in an <i>interior exit stairway</i> and <i>ramp</i> connecting more than three stories designating the floor level, the terminus of the top and bottom of the <i>interior exit stairway</i> and <i>ramp</i> , and	City of Houston Amendment

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ramp and the identification of the *stair* or *ramp*. The signage shall also state the story 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 (1524 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 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.

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 (1524 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.**

Analysis: New COH amendment addressing existing stairway signage amendment.
Justification: Amendment needed to coordinate the IBC with code provisions of the IFC.

Exception: Building with previously approved signs may retain those signs until the signs are replaced. The replacement signs shall be installed in accordance with Appendix H of the Fire Code.

N/A

1023.9.2 Signs on occupancy side of stairway doors. Approved 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: Building with previously approved signs having building code 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.

City of Houston Amendment

Analysis: New COH amendment.
Justification: Amendment needed to coordinate the IBC with code provisions of the IFC.

2012 Houston IBC – Chapter 11 Accessibility

2015 Houston IBC – Chapter 11 Accessibility

Code Analysis

PART 5 Accessibility – Chapter 11

■ **Chapter 11 Accessibility**

Chapter 11 is intended to address the accessibility and usability of buildings and their elements to persons having physical disabilities. The provisions within the chapter are generally considered as scoping requirements that state what and where accessibility is required or how many accessible features or elements must be provided. The technical requirements, addressing how accessibility is to be accomplished, are found in ICC A117.1, as referenced by Chapter 11. The concept of the code is to initially mandate that all buildings and building elements be accessible and then to reduce the required accessibility where logical and reasonable. ■

1103.2.8-Areas in Places of Religious Worship; **1104.4**-Multistory Buildings and Facilities; **1107.3**, **1107.4**-Accessible Spaces and Routes; **1107.5.1.1**, **1107.6.4.1**-Accessible Units in Assisted Living Facilities; **1107.6.1.1**-Group R—Accessible Units; **1109.2**-Accessible Water Closet Compartments; **1109.2.3**-Accessible Lavatories; **1110**-Recreational Facilities

{EDITORIAL NOTE: DELETE CHAPTER 11 IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}

**SECTION 1101
GENERAL**

1101.1 State law. Accessibility issues for certain publicly and privately-owned buildings and facilities are governed by state law and regulations, including Chapter 469 of the Texas Government Code and various regulations, standards and specifications issued thereunder.

1101.2 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.

{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-A117.4.

1101.3 State law. Accessibility for publicly and privately owned buildings and facilities are governed by state law and regulations, including Chapter 469 of the Texas Government Code and various regulations, standards and specifications issued thereunder. Any references to provisions from Chapter 11 of this code 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

City of Houston Amendment

Analysis: COH amendment contains new references to TAS; other amendments remain unchanged. Review and enforcement of state TAS and federal architectural barrier requirements rest with Texas registered TAS contractors and inspectors and federal inspectors.

Justification: Amendment required to show accessibility requirements fall with TAS and applicable federal policies.

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1101.3 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.

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 of 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.}

2012 Houston IBC – Chapter 12 Interior Environment

2015 Houston IBC – Chapter 12 Interior Environment

Code Analysis

PART 6 ■ Building Envelope, Structural Systems, and Construction Materials – Chapters 12 through 26

■ Chapter 12 Interior Environment No changes addressed; ■ Chapter 13 Energy Efficiency No changes addressed; ■ Chapter 14 Exterior Walls; ■ Chapter 15 Roof Assemblies and Rooftop Structures No changes addressed; ■ Chapter 16 Structural Design; ■ Chapter 17 Structural Tests and Special Inspections; ■ Chapter 18 Soils and Foundations; ■ Chapter 19 Concrete; ■ Chapter 20 Aluminum No changes addressed; ■ Chapter 21 Masonry; ■ Chapter 22 Steel; ■ Chapter 23 Wood; ■ Chapter 24 Glass and Glazing; ■ Chapter 25 Gypsum Board and Plaster; ■ Chapter 26 Plastic

The interior environment provisions of Chapter 12 include requirements for lighting, ventilation, and sound transmission. Chapter 13 provides a reference to the *International Energy Conservation Code* for provisions governing energy efficiency. Regulations governing the building envelope are located in Chapters 14 and 15, addressing exterior wall coverings and roof coverings, respectively. Structural systems are regulated through the structural design provisions of Chapter 16, whereas structural testing and special inspections are addressed in Chapter 17. The provisions of Chapter 18 apply to soils and foundation systems. The requirements for materials of construction, both structural and non-structural, are located in Chapters 19 through 26. Structural materials regulated by the code include concrete, lightweight metals, masonry, steel, and wood. Glass and glazing, gypsum board, plaster, and plastics are included as regulated non-structural materials. ■

■ 1405.3-Vapor Retarders; 1602.1-Definitions and Notations; 1603-Construction Documents; 1603.1.7-Flood Design Data; 1603.1.3-Serviceability; 1604.5-Risk Category; 1607.5-Partition Loads; 1607.9-Impact Loads for Façade Access Equipment; 1607.10.2-Alternative Uniform Live Load Reduction; 1607.12-Roof Loads; 1607.12.5-Photovoltaic Panel Systems; 1609.1.1-Determination of Wind Loads; 1613.3.1-Mapped Acceleration Parameters; 1613.5-Amendments to ASCE 7; 1613.6-Ballasted Photovoltaic Panel Systems; 1704.5-Submittals to the Building Official; 1705.2-Steel Construction; 1705-Open Web Steel Joists and Joist Girders; Table 1705.3-Required Special Inspections of Concrete Construction; 1705.11-Special Inspection for Wind Resistance; 1705.12-Special Inspection for Seismic Resistance; 1708.3.2-Static Load Testing; 1709.5-Exterior Window and Door Assemblies; 1711-Material and Test Standards; 1803.5-Investigated Conditions; 1804.1-Excavation Near Foundations; 1808.3-Design Surcharge Loads; 1810.2.5-Group Effects; 1810.3-Design and Detailing; 1901.3-Anchoring to Concrete; 1901.4-Composite Structural Steel and Concrete Structures; 1904-Durability Requirements; 1905.1.3-Modifications to ACI 318, Section 18.5; 1905.1.8-Modifications to ACI 318, Section 17.2.3; 2101.2-Masonry Design Methods; 2103-Masonry Construction Materials; 2104-Masonry Construction; 2105-Quality Assurance; 2111, 2113-Masonry Fireplaces and Chimneys; 2210-Cold-Formed Steel; 2211-Cold-Formed Steel Light-Frame Construction; 2303.1.4-Structural Glued Cross-Laminated Timber; 2303.1.13-Engineered Wood Rim Board; 2304.6-Exterior Wall Sheathing; 2304.10.6-Load Path; 2304.12-Protection Against Decay and Termites; 2308-Conventional Light-Frame Construction; 2308.2.5-Allowable Roof Span; 2308.7-Roof and Ceiling Framing; 2309-Wood Frame Construction Manual; 2406.4.7-Safety Glazing Adjacent to Bottom Stair Landing; Chapter 25 Gypsum Panel Products; 2612-Plastic Composites ■

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 R402.4.1.2 of the *International Energy Conservation Code—Residential Provisions*, the *dwelling unit* shall be ventilated by mechanical means in accordance with Section 403 of the *International Mechanical Code*.

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.*

City of Houston Amendment

Analysis: New text by ICC and COH amendment to correlate with other applicable Houston codes.

Justification: Amendment needed to provide correct references to the Mechanical and Energy codes, as well as ASHRAE 170.

1203.3.2 Exceptions. The following are exceptions to Sections 1203.3 and 1203.3.1:

1. Where warranted by climatic conditions, ventilation openings to the outdoors are not required if ventilation openings to the interior are provided.
2. The total area of ventilation openings is permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is covered with a Class 1 treated with an approved vapor retarder material and the required openings are placed so as to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited.
3. Ventilation openings are not required where continuously operated mechanical ventilation is provided at a rate of 1.0 cubic foot per minute (cfm) for each 50 square feet (1.02 L/s for each 10 m²) of crawlspace floor area and the ground surface is covered with a Class 1 an approved vapor retarder.
4. Ventilation openings are not required where the ground surface is covered with a Class 1 an approved vapor retarder, the perimeter walls are insulated and the

1203.3.2 Exceptions. The following are exceptions to Sections 1203.4 and 1203.4.1:

1. Where warranted by climatic conditions, ventilation openings to the outdoors are not required if ventilation openings to the interior are provided.
2. The total area of ventilation openings is permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is covered with a Class 1 vapor retarder material and the required openings are placed so as to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited.
3. Ventilation openings are not required where continuously operated mechanical ventilation is provided at a rate of 1.0 cubic foot per minute (cfm) for each 50 square feet (1.02 L/s for each 10 m²) of crawl space floor area and the ground surface is covered with a Class 1 vapor retarder.
4. Ventilation openings are not required where the ground surface is covered with a Class 1 vapor retarder, the perimeter walls are insulated and the space is conditioned in accordance with the *International Energy Conservation Code*.

City of Houston Amendment

Analysis: Previous amendment will not be carried forward.

Justification: No justification to keep amendment; provisions covered in 2015 base code.

2012 Houston IBC Amendments

2015 Houston IBC Amendments

Code Change Summary

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<p>space is conditioned in accordance with the International Energy Conservation Code.</p> <p>5. For buildings in flood hazard areas as established in Section 1612.3, the openings for under-floor ventilation shall be deemed as meeting the flood opening requirements of ASCE 24 provided that the ventilation openings are designed and installed in accordance with ASCE 24.</p>	<p>5. For buildings in flood hazard areas as established in Section 1612.3, the openings for under-floor ventilation shall be deemed as meeting the flood opening requirements of ASCE 24 provided that the ventilation openings are designed and installed in accordance with ASCE 24.</p>	
<p>+1207.1 Scope. This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent <i>dwelling units</i> or between <i>dwelling units</i> and adjacent public areas such as halls, <i>corridors</i>, <i>stairs</i> or service areas. <u>When required by Chapter 9, Article VI, of the City Code, sound attenuation shall be provided as specified in Appendix N.</u></p>	<p>1207.1 Scope. This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent <i>dwelling units</i> and <i>sleeping units</i> or between <i>dwelling units</i> and <i>sleeping units</i> and adjacent public areas such as halls, <i>corridors</i>, <i>stairways</i> or <i>service areas</i>. <u>When required by Chapter 9, Article VI, of the City Code, sound attenuation shall be provided as specified in Appendix N.</u></p>	<p>City of Houston Amendment Analysis: No changes to COH amendment. Justification: Amendment needed to maintain conformity to local and state policies.</p>
<p>1209.2 Attic spaces. An opening not less than 20 inches by 30 inches (559 mm by 762 mm) shall be provided to any <i>attic</i> area having a clear height of over 30 inches (762 mm). Clear headroom of not less than 30 inches (762 mm) shall be provided in the <i>attic</i> space at or above the access opening. <u>When the opening is located in a one-hour rated assembly, the opening shall be 3/4 inch Type X gypsum or permitted to be constructed as in Section 406.3.4 for <i>attic</i> disappearing stairs.</u></p>	<p>1209.2 Attic spaces. An opening not less than 20 inches by 30 inches (559 mm by 762 mm) shall be provided to any <i>attic</i> area having a clear height of over 30 inches (762 mm). Clear headroom of not less than 30 inches (762 mm) shall be provided in the <i>attic</i> space at or above the access opening.</p>	<p>City of Houston Amendment Analysis: Previous amendment will not be carried forward. Justification: No justification to keep amendment; provisions covered in 2015 base code.</p>

2012 Houston IBC – Chapter 14 Exterior Walls	2015 Houston IBC – Chapter 14 Exterior Walls	Code Analysis
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<p>1403.6 Flood resistance. For buildings in flood hazard areas as established in Section 1612.3, exterior walls extending below the elevation required by Section 1612 shall be constructed with flood-damage-resistant materials. Wood shall be pressure-preservative treated in accordance with AWPA U1 for the species, product and end use using a preservative listed in Section 4 of AWPA U1 or decay-resistant heartwood of redwood, black locust or cedar.</p>	<p>[BS] 1403.6 Flood resistance. For buildings in flood hazard areas as established in Section 1612.3, exterior walls extending below the elevation required by Section 1612 shall be constructed with flood-damage-resistant materials. <u>Wood shall be pressure-preservative treated in accordance with AWPA U1 for the species, product and end use using a preservative listed in Section 4 of AWPA U1 or decay-resistant heartwood of redwood, black locust or cedar.</u></p>	<p>City of Houston Amendment Analysis: Previous amendment will not be carried forward. Justification: No justification to keep strikethrough of base code.</p>
<p>1403.7 Flood resistance for high-velocity wave action areas. For buildings in flood hazard areas subject to high velocity wave action as established in Section 1612.3, electrical, mechanical and plumbing system components shall not be mounted on or penetrate through exterior walls that are designed to break away under flood loads.</p>	<p>[BS] 1403.7 Flood resistance for coastal high-hazard areas and coastal A zones. <u>For buildings in coastal high-hazard areas and coastal A zones as established in Section 1612.3, electrical, mechanical and plumbing system components shall not be mounted on or penetrate through exterior walls that are designed to break away under flood loads.</u></p>	<p>City of Houston Amendment Analysis: ICC changes added for clarity. Previous amendment will not be carried forward. Justification: No justification to keep strikethrough of base code.</p>

2012 Houston IBC – Chapter 15 Roof Assemblies and Rooftop Structures	2015 Houston IBC – Chapter 15 Roof Assemblies and Rooftop Structures	Code Analysis
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<p>[P] 1503.4 Roof drainage. Design and installation of roof drainage systems shall comply with Section 1503 of this code and Sections 1106 and 1108, as applicable, of and the <i>International Plumbing Code</i>.</p>	<p>[P] 1503.4 Roof drainage. Design and installation of roof drainage systems shall comply with Section 1503 of this code and Sections 1106 <u>1101.12</u> and 1108 <u>1103</u>, as applicable, of the <i>International Plumbing Code</i>.</p>	<p>City of Houston Amendment Analysis: New COH amendment. Justification: Amendment required to provide correct references to Plumbing Code for roof drainage.</p>
<p>[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 and 1108, as applicable, of the <i>International Plumbing Code</i>.</p>	<p>[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 <u>1101.12.2</u> and 1108 <u>1102</u>, as applicable, of the <i>International Plumbing Code</i>.</p>	<p>City of Houston Amendment Analysis: New COH amendment to correlate with other Houston code provisions. Justification: Amendment required to provide correct references to Plumbing Code for roof drainage.</p>
<p>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</p>	<p>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</p>	<p>City of Houston Amendment Analysis: No change to COH amendment.</p>

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roof height exceeding that permitted by Table 1504.8 based on the exposure category and basic wind speed at the site.

{EDITORIAL NOTE: DELETE TABLE 1504.8 IN ITS ENTIRETY.}

TABLE 1505.1^{a,b}
MINIMUM ROOF COVERING CLASSIFICATION
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 m².

- ~~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.~~

roof height exceeding that permitted Table 1504.8 based on the exposure category and basic wind speed at the site.

{EDITORIAL NOTE: DELETE TABLE 1504.8 IN ITS ENTIRETY.}

TABLE 1505.1^{a, b, c}
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 m².

- 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.

Justification: Amendment needed to maintain conformity with local and state policies.

City of Houston Amendment

Analysis: Footnotes “a” and “b” are no longer stricken.

Justification: No justification for striking footnotes “a” and “b”. Leaving footnote “a” does not imply requirement to comply with IWUIC because we do not adopt that code.

1510.1 General. Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15.

Exception: Reroofing 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.

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

Exceptions:

- ~~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.~~

City of Houston Amendment

Analysis: Minor ICC changes to text with section renumbering no changes to COH amendment.

Justification: Amendment needed to ensure structural and life-safety; could potentially block drainage and result in roof collapse.

1510.7 Wood shakes and shingles. Wood shakes and shingles shall not be permitted to be replaced unless they meet the requirements of Section 1505.6.

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.

City of Houston Amendment

Analysis: Houston amendment renumbered to correlate with 2015 IBC section numbering. No change to COH amendment.

Justification: Amendment needed to maintain conformity to local policies and ordinances preventing wood shingles from being used.

1603.1.7 Flood design data. See Chapter 19 of the *City Code*. For buildings located in whole or in part in flood hazard areas as established in Section 1612.3, the

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

City of Houston Amendment

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documentation pertaining to design, if required in Section 1612.5, shall be included and the following information, referenced to the datum on the community's Flood Insurance Rate Map (FIRM), shall be shown, regardless of whether flood loads govern the design of the building:

1. In flood hazard areas not subject to high-velocity wave action, the elevation of the proposed lowest floor, including the basement.
2. In flood hazard areas not subject to high-velocity wave action, the elevation to which any nonresidential building will be dry flood proofed.
3. In flood hazard areas subject to high-velocity wave action, the proposed elevation of the bottom of the lowest horizontal structural member of the lowest floor, including the basement.

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

Analysis: No change to COH amendment.
Justification: Amendment needed to maintain conformity to local policies and ordinances.

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, **Vult**, 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.

Exceptions:

1. Subject to the limitations of Section 1609.1.1.1, the provisions of ICC 600 shall be permitted for applicable Group R-2 and R-3 buildings.
2. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AF&PA WFCM.
3. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AISI S230.
4. Designs using NAAMM FP 1001.
5. Designs using TIA-222 for antenna-supporting structures and antennas, provided the horizontal extent of Topographic Category 2 escarpments in Section 2.6.6.2 of TIA-222 shall be 16 times the height of the escarpment.
6. Wind tunnel tests in accordance with Chapter 31 of ASCE 7.

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, **Vult**, 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 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, **Vult**, and shall be converted in accordance with Section 1609.3.1 to nominal design wind speeds, **Vasd**, when the provisions of the standards referenced in Exceptions 4 and 5 are used.

City of Houston Amendment

Analysis: New COH amendment.
Justification: Amendment created to reference ASCE 7 website for wind speed requirements.

1609.3 Basic wind speed. The ultimate design wind speed, **Vult**, in mph, for the determination of the wind loads shall be determined by Figures 1609A, 1609B and 1609C. The ultimate design wind speed, **Vult** for use in the design of Risk Category II buildings and structures shall be **139 mph** obtained from Figure 1609A. The ultimate design wind speed, **Vult**, for use in the design of Risk Category III and IV buildings and structures shall be **150 mph** obtained from Figure 1609B. The ultimate design wind speed, **Vult**, for use in the design of Risk Category I buildings and structures shall be **130 mph** obtained from Figure 1609C. The ultimate design wind speed, **Vult**, 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, **Vult**, 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, **Vult**, is estimated from regional climatic data, the ultimate design wind speed, **Vult**, shall be determined in accordance with Section 26.5.3 of ASCE 7.

1609.3 Ultimate design wind speed. The ultimate design wind speed, **Vult**, 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: <http://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, **Vult**, 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, **Vult**, 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, **Vult**, 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, **Vult**, 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, **Vult**, determined by the local jurisdiction shall be in accordance with Section 26.5.1 of ASCE 7.

City of Houston Amendment

Analysis: New COH amendment.
Justification: Amendment created to reference ASCE 7 website for wind speed requirements.

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	<p>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.</p>	
<p>1609.3.1 Wind speed conversion. When required, the ultimate design wind speeds of Figures 1609A, 1609B and 1609C shall be converted to nominal design wind speeds, V_{asd}, using Table 1609.3.1 or Equation 16-33. (Equation 16-33) where: V_{asd} = nominal design wind speed applicable to methods specified in Exceptions 1 through 5 of Section 1609.1.1. V_{ult} = ultimate design wind speeds determined from Figures 1609A, 1609B or 1609C.</p>	<p>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) from the ASCE 7 Windspeed Website: http://hazards.atcouncil.org shall be converted to nominal design wind speeds, V_{asd}, using Table 1609.3.1 or Equation 16-33. $V_{asd} = V_{ult} \sqrt{0.6}$ (Equation 16-33) where: V_{asd} = Nominal design wind speed applicable to methods specified in Exceptions 4 and through 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: http://hazards.atcouncil.org.</p>	<p>City of Houston Amendment Analysis: New COH amendment. Justification: Amendment created to reference ASCE 7 website for wind speed requirements.</p>
<p>SECTION 1612 FLOOD LOADS {EDITORIAL NOTE: DELETE SECTION 1612 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.} 1612.1 General. (See Chapter 19 of the City Code).</p>	<p>SECTION 1612 FLOOD LOADS {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.</p>	<p>City of Houston Amendment Analysis: Minor modification to the Houston amendment to include a reference to the IDM for storm water requirements. Justification: Amendment needed to maintain conformity to local policies and ordinances.</p>
<p>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_{1s}, 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_{1s}, 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 1613.5.5(2), irrespective of the fundamental period of vibration of the structure, T.</p>	<p>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_{1s}, 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_{1s}, 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 1613.4 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.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment needed to maintain conformity to local policies and ordinances.</p>
<p>N/A</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: New COH amendment. Justification: Amendment needed to maintain conformity to local policies and ordinances and prevent the use of photovoltaic systems within the City.</p>

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2012 Houston IBC – Chapter 17 Special Inspections and Tests | **2015 Houston IBC – Chapter 17 Special Inspections and Tests** | **Code Analysis**

1705.1.1 Special cases. *Special inspections* and tests shall be required for proposed work that is, in the opinion of the building official, unusual in its nature, such as, but not limited to, the following examples:

1. Construction materials and systems that are alternatives to materials and systems prescribed by this code.
2. Unusual design applications of materials described in this code.
3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code or in standards referenced by this code.

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 of the *Building Code*, 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.

Exception: Temporary field observations of associated installation testing.

City of Houston Amendment

Analysis: New COH amendment to specifically address a requirement for 3rd party special inspections of electric and electromagnetic locks.

Justification: Amendment created to allow for special inspections of electronic locks and systems. COH amendment coincides with other e-lock amendments.

2012 Houston IBC – Chapter 23 Wood | **2015 Houston IBC – Chapter 23 Wood** | **Code Analysis**

2308.2.1 Nominal design wind speed greater than 100 mph (3-second gust). Where *V_{asd}* as determined in accordance with Section 1609.3.1 exceeds 100 mph (3-second gust), the provisions of either **Appendix K**, AF&PA WFCM or ICC 600 are permitted to be used. Wind speeds in Figures 1609A, 1609B, and 1609C shall be converted in accordance with Section 1609.3.1 for use with AF&PA WFCM or ICC 600.

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.

City of Houston Amendment

Analysis: New location and layout to these code provisions added by ICC. COH amendment reference to prescriptive provisions of Houston Appendix K for Hurricane clips remains.

Justification: Amendment created to reference updated Houston Appendix K for wind speeds exceeding a certain criterion.

PART 7 Building Services, Special Devices, and Special Conditions Chapters 27 through 34

■ **Chapter 27** Electrical **No changes addressed**; ■ **Chapter 28** Mechanical Systems **No changes addressed**; ■ **Chapter 29** Plumbing Systems; ■ **Chapter 30** Elevators and Conveying Systems; ■ **Chapter 31** Special Construction **No changes addressed**; ■ **Chapter 32** Encroachments into the Public Right-of-Way **No changes addressed**; ■ **Chapter 33** Safeguards during Construction **No changes addressed**; ■ **Chapter 34** Existing Structures

Although building services such as electrical systems (Chapter 27), mechanical systems (Chapter 28) and plumbing systems (Chapter 29) are regulated primarily through separate and distinct codes, limited provisions are set forth in the *International Building Code*. Chapter 30 regulates elevators and similar conveying systems to a limited degree, as most requirements are found in American Society of Mechanical Engineers (ASME) standards. The special construction provisions of Chapter 31 include those types of elements or structures that are not conveniently addressed in other portions of the code. By "special construction," the code is referring to membrane structures, pedestrian walkways, tunnels, awnings, canopies, marquees, and similar building features that are unregulated elsewhere. Chapter 32 governs the encroachment of structures into the public right-of-way, and Chapter 33 addresses safety during construction and the protection of adjacent public and private properties. ■

■ **2902.3**-Public Toilet Facilities; **3004**-Elevator Hoistway Venting; **3006**-Elevator Lobbies; **Chapter 34**-Existing Structures ■

2012 Houston IBC – Chapter 29 Plumbing Systems | **2015 Houston IBC – Chapter 29 Plumbing Systems** | **Code Analysis**

[P] Table 2902.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES a
 (See Sections 2902.2 and 2902.3)

NO	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2 OF THE INTERNATIONAL PLUMBING CODE)		LAVATORIES		BATHTUBS / SHOWERS	DRINKING FOUNTAINS e, f (SEE SECTION 410.1 OF THE INTERNATIONAL PLUMBING CODE)	OTHER
				Male	Female	Male	Female			
1	Assembly	A-1 d	Theaters and other buildings for	1 per 125	1 per 65	1 per 200	—	—	1 per 500	1 service sink

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

NO	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS SEE SECTION 419.2 OF THE INTERNATIONAL PLUMBING CODE)		LAVATORIES		BATHTUBS / SHOWERS	DRINKING FOUNTAINS (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	1 per 125	1 per 65	1 per 200	—	—	1 per 500	1 service sink

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: Minor updates occurred from 2012 to 2015 base code; amendment and intent remain unchanged.

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	the performing arts and motion pictures								
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 50	1 per 200	—	1 per 500	1 service sink		
	Passenger terminals and transport facilities	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	

	performing arts and motion pictures								
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 50	1 per 200	—	1 per 500	1 service sink		
	Passenger terminals and transport facilities	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)

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(continued)

[P] Table 2902.1 – continued

MINIUMUM NUMBER OF REQUIRED PLUMBING FIXTURES a

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS ^h (URINALS SEE SECTION 419.2 OF THE INTERNATIONAL PLUMBING CODE)		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS e, f ^g (SEE SECTION 410.1 OF THE INTERNATIONAL PLUMBING CODE)	OTHER
				Male	Female	Male	Female			
2	Business	B	Building 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 ^g
3	Educational	E	Educational facilities	1 per 50		1 per 50		—	1 per 100	1 service sink
3	Educational		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 per room ^c		1 per 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

[P] Table 2902.1 – continued

MINIUMUM NUMBER OF REQUIRED PLUMBING FIXTURES a

NO.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS ^h (URINALS SEE SECTION 419.2 OF THE INTERNATIONAL PLUMBING CODE)		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS e, f ^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
3	Educational		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 per room ^c		1 per 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

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		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			I-3	Reformatories, detention centers and correctional centers b	1 per 15	1 per 15	1 per 15	1 per 100	1 service sink			
		I-3	Employees b	1 per 25	1 per 35	—	1 per 100	—			I-3	Employees b	1 per 25	1 per 35	—	1 per 100	—			
		I-4	Adult day care and child care	1 per 15	1 per 15	4	1 per 100	1 service sink			I-4	Adult day care and child day care	1 per 15	1 per 15	4	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 9		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 9		
		R-1	Hotels, motels, boarding houses (transient)	1 per sleeping unit	1 per sleeping unit	1 per sleeping unit	—	1 service sink			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 house (not transient)	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink		7	Residential	R-2	Dormitories, fraternities, sororities and boarding house (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-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	1 per dwelling unit	1 per 10	1 per dwelling unit	—	1 kitchen sink per dwelling unit; 1 automatic clothes washer connection per dwelling unit			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; 1 automatic clothes washer connection per dwelling unit			
		R-3	Congregate living facilities with 16 or fewer persons	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink		7	Residential	R-3	Congregate living facilities with 16 or fewer persons	1 per 10	1 per 10	1 per 8	1 per 100	1 service sink		

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		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 l, k	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

		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

h, i 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 where such room is provided with direct access from each patient sleeping unit and with provisions for privacy.
- d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
- e. The minimum number of required drinking fountains shall comply with Table 2902.1 and Chapter 14.
- f. Drinking fountains are not required for an occupant load of 15 or fewer.
- g. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.
- h.** Structures used for people awaiting transportation, such as transit centers, shall not be required to install plumbing facilities when the following conditions occur:
 - 1. No employees or security personnel remain on the premises unless in transit or providing temporary maintenance.
 - 2. The structure is an open-air structure with no enclosing walls.
 - 3. The structure is only intended to shelter people awaiting transportation.
- i.** Buildings where water is served from bottled water coolers or buildings having an occupant load of less than 30 shall not be required to provide drinking fountains.
- j.** Self-storage warehouses containing only unoccupied rental units for storing personal possessions and that are vehicle access buildings may waive the restroom requirement when the property has an office with available restroom facilities on site.
- k.** Warehouses and parking garages that are dedicated to a building on site, with a path of travel to available restroom facilities located within 500 feet, and located on the same property shall be permitted to waive the restroom requirement.

- 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.

2902.3.4 Pay facilities. Where pay facilities are installed, such facilities shall be in excess of the required minimum facilities. Required facilities shall be free of charge.

[P] 2902.3.4 Pay facilities. Where pay facilities are installed, such facilities shall be in excess of the required minimum facilities. Required facilities shall be free of charge.

City of Houston Amendment

Analysis: Previous amendment not carried forward.

Justification: No justification to continue strikethrough of provision; will move forward with base code.

2902.6 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.

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.

City of Houston Amendment

Analysis: Previous amendment moved from 2012 Section 2902.6; is now located in 2902.7. No changes to COH amendment or code intent.

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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. 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, ANSI 17.3, ASME A10.4, ASME A90.1, ASME B20.1, ALI ALCTV, and ASCE 24 for construction in flood hazard areas established in Section 1612.3. **State/ASME/ANSI Standards.** Except as otherwise provided in this 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 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 A1034, and the term "Personnel Hoist Safety Code" as used in this code shall mean the said publication.

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 provision 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: **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 QE1-1-2013, 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 apply.

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.

3001.4 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.

City of Houston Amendment**Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state policies.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state policies.**City of Houston Amendment****Analysis:** COH amendment has been modified.**Justification:** Amendment modified to include updated ASME references for elevators.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state policies.

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3001.5 Definitions. For purposes of this chapter, certain terms are defined in the Elevator Safety Code and read as follows:

ASME CODE is 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.

APPROVED AGENCY is an established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved.

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

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

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

MANLIFT is 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.

PERSONNEL HOIST is 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.

WHEELCHAIR LIFT is a vertical wheelchair lift or an inclined wheelchair lift as governed by the Elevator Safety Code, whether of a public building or residential type.

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.

INSTALLATION DATE.

MANLIFT.

PERSONNEL HOIST.

WHEELCHAIR LIFT.

City of Houston Amendment

Analysis: Previous amendment has been modified slightly and all definitions relocated to Chapter 2 of the code.

Justification: Amendment intent remains unchanged; definitions have been moved to Ch. 2.

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 1007.4.
2. The emergency sign shall not be required for elevators that are used for occupant self-evacuation in accordance with Section 3008.

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.

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: Amendment needed to maintain conformity to local and state policies.

3002.9 Elevator pits. All elevator pits shall be provided with a sump pump as per ASME 17.1. The sump pump shall be discharged to the sanitary sewer.

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 17.1. The

City of Houston Amendment

Analysis: Base code section has been modified and updated; COH amendment remains unchanged.

Justification: Amendment needed to maintain conformity to local and state policies.

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	<p><u>sump pump shall be discharged to the sanitary sewer.</u></p>	
<p>[F] 3003.3 Standardized fire <u>fighter's</u> service <u>elevator</u> keys. All elevators shall be equipped to operate with a standardized fire <u>fighter's</u> service <u>elevator</u> key in accordance with the <u>International Fire Code</u>.</p>	<p>[F] 3003.3 Standardized fire <u>fighter's</u> service <u>elevator</u> keys. All elevators shall be equipped to operate with a standardized fire <u>fighter's</u> service <u>elevator</u> key in accordance with the <u>International Fire Code</u>.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment needed to maintain conformity to local and state policies.</p>
<p>N/A</p>	<p>3003.4 Emergency Hoistway Water Sensor. <u>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.</u></p>	<p>City of Houston Amendment Analysis: New COH amendment requiring hoistway elevator sensors. Previously only section 3009.1 (#6) of the building code required water sensors in the elevator pits of high-rise buildings. Section 3003.4 is new to the code and applies to all buildings with elevators that travel below grade or are subject to flooding. This requirement is retroactive and includes a compliance timeline. Justification: Amendment was proposed by TRIAD and members of the elevator community to provide life-safety during potential water events. Amendment to indicate the designated floor shall be identified/approved by the Fire Code Official. NOTE: The designated floor should also be included in the buildings emergency management information included in the HFD Fire Command Center or designated managers office approved by the Fire Code Official so first responders know where the elevator cab is located during a flood event.</p>
<p>N/A</p>	<p>3003.4.1 Compliance timeline for existing and annexed structures. <u>On or before December 31, 2026, or within five years after the date of annexation of the building into the jurisdiction after April 1, 2022⁵, 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.</u></p> <p>Exception: <u>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 designed 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.</u></p>	<p>City of Houston Amendment Analysis: New COH amendment requiring hoistway elevator sensors. Justification: Amendment was proposed by TRIAD and members of the elevator community to provide life-safety during potential water events.</p>
<p>SECTION 3005 CONVEYING SYSTEMS</p> <p>3005.1 General. <u>Elevators, escalators, dumbwaiters, manlifts, moving walks, conveyors, inclined stairway chairlifts, wheelchair lifts, vertical reciprocating conveyors</u> personnel hoists and material hoists shall comply with the provisions of Sections 3005.2 through 3005.4.</p>	<p>SECTION 3004 CONVEYING SYSTEMS</p> <p>3004.1 General. <u>Elevators, escalators, dumbwaiters, manlifts, moving walks, conveyors, inclined stairway chairlifts, wheelchair lifts, vertical reciprocating conveyors</u>, personnel hoists and material hoists shall comply with the provisions of Section 3004.2 through 3004.4.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment; base code has been renumbered. Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3005.3 Vertical reciprocating conveyors. <u>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 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</u></p>	<p>3004.3 Conveyors Vertical reciprocating conveyors. <u>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 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</u></p>	<p>City of Houston Amendment Analysis: No change to COH amendment; base code has been renumbered. Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>

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vertical reciprocating conveyor. Conveyors and conveying systems shall comply with ASME B20.1.	maintenance of the vertical reciprocating conveyor. Conveyors and conveying systems shall comply with ASME B20.1.	
<p>3005.3.1 Enclosure. Conveyors and related equipment connecting successive floors or levels shall be enclosed with shaft enclosures complying with Section 713.</p> <p>3005.3.2 Conveyor safeties. Power-operated conveyors, belts and other material-moving devices shall be equipped with automatic limit switches which will shut off the power in an emergency and automatically stop all operation of the device.</p>	<p>3004.3.1 Enclosure. Conveyors and related equipment connecting successive floors or levels shall be enclosed with shaft enclosures complying with Section 713.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; base code has been renumbered.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3005.5 Escalator skirt deflector devices.</p> <p>3005.5.1 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.</p>	<p>3004.5 Escalator skirt deflector devices.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; base code has been renumbered.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3005.5.3 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 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.</p>	<p>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 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; base code has been renumbered.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3005.5.4 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; base code has been renumbered.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3005.5.5 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; base code has been renumbered.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3006.2 Venting. Elevator machine rooms that contain solid-state equipment for elevator operation shall be provided with an approved independent ventilation or air-conditioning system 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.</p>	<p>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 an 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.</p>	
<p>3006.5.1 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: Previous amendment moved to 3004.5; current amendment moved from 3006.5.1.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>

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3009.1 Elevators. Elevators and elevator lobbies for high rise buildings shall comply with the provisions in this section and the other provisions of 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 approved listed smoke detectors located on the lobby ceiling, one positioned at each opening into the lobby other than elevator door entrances, or at least one approved listed smoke detector with alarm verification sequence per NFPA 72. 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. If the return system is manually actuated, an alarm system shall be provided to summon assistance.
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, the elevator call shall stop 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 flood plane 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 3009**ELEVATORS FOR HIGH RISE BUILDINGS**

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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 approved smoke detectors with listings from a 3rd party testing laboratory that are located on the lobby ceiling, one positioned at each opening into the lobby other than 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, the elevator call shall stop 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.

City of Houston Amendment**Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state elevator policies.

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SECTION 3010**PERMITS, CERTIFICATES OF INSPECTION****3010.1 Construction permits.**

3010.1.1 General. A separate permit shall be required before erecting or constructing any new elevator, dumbwaiter, escalator, manlift, moving walk, vertical reciprocating conveyor, inclined stairway chairlift, personnel hoist or wheelchair lift, or relocating such existing equipment. The installer of the equipment shall submit an application for such permit accompanied by plans and specifications in duplicate, 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 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.

SECTION 3010**PERMITS, CERTIFICATES OF INSPECTION****3010.1 Construction permits.**

3010.1.1 General. A separate permit shall be required before erecting or constructing any new elevator, dumbwaiter, escalator, manlift, moving walk, vertical reciprocating conveyor, inclined stairway chairlift, personnel hoist or wheelchair lift, or 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 in 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.

City of Houston Amendment**Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state elevator policies.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state elevator policies.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state elevator policies.

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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, 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 in 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. Permits shall be posted in conspicuous locations that are readily accessible to the *building official*.

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, 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 18 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, or related equipment must be displayed in one of the following areas:

1. Inside the elevator car enclosure or platform lift, automated people mover, or related equipment passenger enclosure, not more than 7 feet or less than 3 feet above the finished car floor;
2. Outside the elevator car enclosure or platform lift or related equipment passenger enclosure, in the main lobby within 10 feet of the call button not more than 7 feet or less than 3 feet 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 of the call button in the main elevator lobby directing the public to the location where the permit(s) is displayed. The font size for letters on the plaque shall be at least 18

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: Amendment needed to maintain conformity to local and state elevator policies.

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: Amendment needed to maintain conformity to local and state elevator policies.

City of Houston Amendment

Analysis: COH amendment has been updated and modified according to state elevator law.

Justification: Amendment needed to maintain conformity to local and state elevator policies.

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	<p>points (1/4 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 TDLR 1-800-803-9202, and the building management's telephone number 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 of there is a change in the contact information for either TDLR or COH.</p>	
<p>N/A</p>	<p>3010.2.3.1 Escalators. An operating permit for an escalator or moving sidewalk must be displayed in one of the following areas:</p> <ol style="list-style-type: none"> 1. In a common area lobby or hallway location not more than 7 feet or less than 3 feet 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: <ol style="list-style-type: none"> 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 of entry or exit of the escalator or moving sidewalk directing the public to the location where the permit(s) is displayed. The font size for letters on the plaque shall be at least 18 points (1/4 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. 	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified according to state elevator law.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>

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<p>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.</p>	<p><u>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.</u></p>	
<p>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 <i>building official</i> or an approved agency.</p> <p>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.</p> <p>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 <i>building official</i>.</p> <p>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 or owner's representative shall also be responsible for all initial and periodic tests required by this chapter.</p>	<p><u>3010.2.5 Life of limited permits.</u> 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 <i>building official</i> or an approved agency.</p> <p><u>3010.2.6 Posting of limited permits.</u> 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.</p> <p><u>3010.2.7 Responsibility.</u> 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 <i>building official</i>.</p> <p><u>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.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3010.2.8 Special permission for employee use. Special permission may be granted by the <i>building official</i> for use of freight elevators by employees of the establishment in which they are situated if the <i>building official</i> 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.</p>	<p><u>3010.2.8 Special permission for employee use.</u> Special permission may be granted by the <i>building official</i> for use of freight elevators by employees of the establishment in which they are situated if the <i>building official</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>

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3010.3.1 General. A manufacturer, distributor, or agent who desires approval of a hoist manufactured or distributed by him or by his principal shall submit a properly completed application meeting the requirements of this section, all data as hereafter prescribed, and payment of the fee for a manufacturer's design permit as required in 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, a permit shall be issued 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 in 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

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, a permit shall be issued 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

City of Houston Amendment**Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state elevator policies.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** Amendment needed to maintain conformity to local and state elevator policies.

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<p>directed that the personnel hoist be taken out of service pending its repair, then it shall not be returned to service until the <i>building official</i> or approved agency has reinspected the equipment and determined that it may safely be returned to service.</p>	<p>directed that the personnel hoist be taken out of service pending its repair, then it shall not be returned to service until the <i>building official</i> or approved agency has reinspected the equipment and determined that it may safely be returned to service.</p>	
<p>3010.3.3 Penalties for violation.</p> <p>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 with any defect that could make it unsafe for continued operation.</p> <p>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 <i>building official</i>, 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.</p>	<p>3010.3.3 Penalties for violation.</p> <p>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.</p> <p>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 <i>building official</i>, 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>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:</p> <ol style="list-style-type: none"> 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. 	<p>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:</p> <ol style="list-style-type: none"> 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. 	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3010.4 Tests, inspections.</p> <p>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.</p>	<p>3010.4 Tests, inspections.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3010.4.3 Load tests and inspections. Full load and safety tests shall be performed by an elevator company in the presence of the <i>building official</i> or an</p>	<p>3010.4.3 Load tests and inspections. Full load and safety tests shall be performed by an elevator company in the presence of the <i>building official</i> or an</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p>

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<p><u>approved agency. Full load and safety tests and inspections shall be performed at intervals of five years for each traction-type elevator.</u></p> <p>3010.4.4 Inspection costs. All costs of such inspections and tests shall be paid by the owner or owner's representative.</p>	<p><u>approved agency. Full load and safety tests and inspections shall be performed at intervals of five years for each traction-type elevator.</u></p> <p>3010.4.4 Inspection costs. All costs of such inspections and tests shall be paid by the owner or owner's representative.</p>	<p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>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 <i>building official</i> within 5 days after the completion of the inspection. This report shall be in a format satisfactory to the <i>building official</i> 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 <i>building official</i> 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.</p>	<p>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 <i>building official</i> within 5 days after the completion of the inspection. This report shall be in a format satisfactory to the <i>building official</i> 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 <i>building official</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3010.4.6 Inspections. Inspections shall be performed and/or witnessed by certified and authorized inspection personnel of an authorized company or approved agency in accordance with criteria set forth by the jurisdiction.</p>	<p>3010.4.6 Inspections. Inspections shall be performed and/or witnessed by certified and authorized inspection personnel of an authorized company or approved agency in accordance with criteria set forth by the jurisdiction.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>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.</p> <p>Without limiting the <i>building official's</i> requirements, 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 <i>building official</i> shall also require an indemnity and hold harmless agreement in a form approved by the City Attorney.</p> <p>All coverage shall be written by an insurance firm with a rating of A or better in the most recent A.M. Best directory.</p>	<p>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.</p> <p>Without limiting the <i>building official's</i> requirements, 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 <i>building official</i> shall also require an indemnity and hold harmless agreement in a form approved by the City Attorney.</p> <p>All coverage shall be written by an insurance firm with a rating of A or better in the most recent A.M. Best directory.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>

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<p>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 appropriate appeals process.</p>	<p>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 appropriate appeals process as set forth in Chapter 113 of this code.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3010.4.9 Delinquent inspections. Failure of the building official to advise the owner or owner's representative does not reduce the responsibility of the owner's 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.</p> <p>If, after a 120-day period, 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 binding on the owner or owner's representative.</p>	<p>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.</p> <p>If, after a 120-day period, 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 binding on the owner or owner's representative.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>3010.5 Fees for tests and inspections. Fees shall be required as set forth in the city fee schedule.</p>	<p>3010.5 Fees for tests and inspections. Fees shall be required as set forth in Section 118 and the city fee schedule.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment needed to maintain conformity to local and state elevator policies.</p>

2012 Houston IBC – Chapter 31 Special Construction	2015 Houston IBC – Chapter 31 Special Construction	Code Analysis
<p>3103.1.1 Permit required. Temporary structures that cover an area greater than 120 square feet (11.16 m²), including connecting areas or spaces with a common means of egress or entrance which 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 a permit from the building official. Temporary buildings shall be completely removed upon the expiration of the time limit stated in the permit.</p>	<p>3103.1.2 Permit required. Temporary structures that cover an area greater than 120 square feet (11.16 m²), 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.</p>	<p>City of Houston Amendment Analysis: New text added to address structural and fire-separation provisions of the building code associated with temporary tents historically regulated by HFD. Justification: It has come to the attention of the Building Department that certain temporary tents are being erected that do not meet the minimum requirements of the Houston Building</p>

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<p>Exception: A separate 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.</p>	<p>Exception: A separate <u>temporary structure</u> 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.</p>	<p>Code where permit exemptions are permitted by Section 3103 and the Fire code. In all cases where a structure is exempt from permits the applicable provisions of the Building Code always apply and shall be met. This amendment is needed to clarify the code intent and maintain conformity to local and state policies regarding public safety.</p>
<p>N/A</p>	<p>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.</p> <p>Exception: Buildings complying with this code for the intended use and permitted as a permanent structure are exempt.</p>	<p>City of Houston Amendment</p> <p>Analysis: New section added IBC to address allotted time limits for associated temporary structures.</p> <p>Justification: Because of repeated violations of time limits associated with temporary structures this amendment is needed to coordinate with the base code provisions of the Houston Fire Code Section 3103.5 and clarify the code intent of the Building Code and maintain conformity to local and state policies regarding public safety.</p>
<p>3104.4 Reserved. Contents. Only materials and decorations approved by the building official shall be located in the pedestrian walkway.</p>	<p>3104.4 Reserved. Contents. Only materials and decorations approved by the building official shall be located in the pedestrian walkway.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment needed to maintain conformity to local and state policies.</p>
<p>3109.1 General. Swimming pools shall comply with the requirements of Sections 3109.2 through 3109.5 the City Code and Chapter 757 of the Texas Health & Safety Code, and other applicable sections of this code.</p> <p>EDITORIAL NOTE: DELETE THE REMAINDER OF THIS SECTION IN ITS ENTIRETY.</p>	<p>EDITORIAL NOTE: DELETE SECTION 3109 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified.</p> <p>Justification: Amendment needed to provide reference to the City Code for swimming pools provisions.</p>
<p>SECTION 3112 DRIVEWAYS, SIDEWALKS, PARKING LOTS AND ALLEYS</p> <p>REVIEW NOTE – SECTION 3112 IS COORDINATED WITH THE CITY ENGINEER ROW STANDARDS AND IS SUBJECT TO CHANGE.</p> <p>3112.1 Purpose. This section establishes minimum regulations governing the design and construction of driveways, sidewalks, parking lots, alleys, and paving.</p>	<p>SECTION 3112 DRIVEWAYS, SIDEWALKS, PARKING LOTS, BUS PADS AND LANDINGS, AND ALLEYS</p> <p>REVIEW NOTE: SECTION 3112 IS COORDINATED WITH THE CITY ENGINEER ROW STANDARDS AND IS SUBJECT TO CHANGE.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified.</p> <p>Justification: Amendment updated to include bus pads and landings to coincide with local policies and ordinances.</p>
<p>3112.2 Definitions. The following words and phrases, when used in this section, have the meanings respectively ascribed to them herein:</p> <p>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.</p> <p>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 this section, the definition of private street shall be the same as the definition of driveway.)</p> <p>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</p>	<p>3112.2 Definitions. The following terms, when used in this section, shall have the meaning ascribed in Chapter 2:</p> <p>ALLEY.</p> <p>DRIVEWAY.</p> <p>DRIVEWAY APPROACH.</p> <p>HIGHWAY, STREET OR ROAD.</p> <p>INFRASTRUCTURE DESIGN MANUAL.</p> <p>LOADING BERTH.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified. All definitions relocated to Chapter 2.</p> <p>Justification: Definitions have been relocated to chapter 2. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.</p>

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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.

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.

INFRASTRUCTURE DESIGN MANUAL (IDM). The design manual with latest revisions at the time of permit application that sets forth the standards for infrastructure design and construction as approved by the jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering.

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 Traffic Engineer.

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.

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 and acceptance by the jurisdiction or by the public.

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.

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 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 1910 and any loads specified in Chapter 16, as applicable. These provisions shall be in addition to any standards required by

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.

City of Houston Amendment

Analysis: COH amendment has been updated and modified.

Justification: Amendment required to maintain conformity to local policies and ordinances.

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<p>Chapter 28 of the <i>City Code</i> regarding parking in yards. All paving or improved surfaces shall comply with Section 3112.6.</p>		
<p>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 jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering.</p> <p>3112.3.3.1 General. When an area is being developed for parking, a plan shall be prepared and submitted to the <i>building official</i> 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.</p> <p>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.</p> <p>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.</p>	<p>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.</p> <p>3112.3.3.1 General. When an area is being developed for parking, a plan shall be prepared and submitted to the <i>building official</i> 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.</p> <p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>3112.4 Work located in the jurisdiction's right-of-way. All work in the right-of-way shall be approved by the jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering. Construction or repair of any sidewalk, driveway approach, curb or gutter shall comply with this section and Chapter 40, Article III, of the <i>City Code</i> and the IDM.</p> <p>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 the jurisdiction's Department of Public Works and Engineering.</p>	<p>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 <i>City Code</i> and the <i>Infrastructure Design Manual</i>.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>3112.4.2 Plot plan. A complete site plan shall be prepared to a reasonable scale and submitted to the jurisdiction's Department of Public Works and Engineering and the jurisdiction's Department of Planning and Development showing the following information:</p> <ol style="list-style-type: none"> All right-of-way lines and property lines that bound the property planned for improvement. Width and design of all existing driveways, driveway approaches, sidewalks, and median openings as they exist on the ground. 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. If open ditches exist, the diameter size and invert elevation of the nearest existing culvert pipe upstream and downstream. 	<p>3112.4.2 Plot plan. A complete site plan shall be prepared to a reasonable scale and submitted to Houston Public Works and the <i>jurisdiction's</i> Department of Planning and Development showing the following information:</p> <ol style="list-style-type: none"> All right-of-way lines and property lines that bound the property planned for improvement. Width and design of all existing driveways, driveway approaches, sidewalks, and media openings as they exist on the ground. 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. If open ditches exist, the diameter size and invert elevation of the nearest existing culvert pipe upstream and downstream. 	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>

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<p>5. The complete intersection when property planned for improvement fronts a "T" intersecting street.</p> <p>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.</p> <p>7. All proposed driveways and sidewalks, and the existing right-of-way conditions for a minimum fifteen feet beyond the property line on each side.</p>	<p>5. The complete intersection when property planned for improvement fronts a "T" intersecting street.</p> <p>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.</p> <p>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.</p>	
<p>3112.4.3 Driveway approach approval. Upon receipt of an application for a driveway approach permit, the jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering shall make a determination, pursuant to the guidelines set out in Section 40-86 of the <i>City Code</i>, 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.</p> <p>If after review the jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering finds that the plans comply with all applicable codes and ordinances, the Office of City Engineer shall approve the plans.</p> <p>3112.4.4 Sidewalks. When required by chapter 10 of the IDM, public sidewalks shall be constructed in accordance the applicable Public Works drawing number for the specified location and site conditions.</p>	<p>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 <i>City Code</i>, 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.</p> <p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>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 two-page drawing, and the IDM, latest revised edition, including the drawings therein.</p> <p>1. Space Requirements for Off-street Parking (T&T Dwg. No. 2157).</p>	<p>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.</p> <p>1. PARKING LOT REQUIREMENTS ROW STANDARDS (T&T Drawing. No. 31-01).</p> <p>2. PARKING LOT REQUIREMENT PRIVATE PROPERTY STANDARDS (T&T Drawing No. 31-02).</p> <p>3. PARKING LOT REQUIREMENTS PARKING SPACE DIMENSIONS (T&T Drawing No. 31-03).</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated and modified.</p> <p>Justification: Amendment has been updated to include Infrastructure Design Manual drawings for parking lot requirements.</p>
<p>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.</p> <p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>

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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, a plan shall be submitted to the jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering. In addition to all other applicable requirements in this section, the plans shall comply with the IDM.

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 jurisdiction departments are required. Figure 10.06-10 and 10.06-11 of the IDM will govern the design and construction of alleys. A separate paving permit issued by the jurisdiction's Department of Public Works and Engineering 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 Public Works Drawings Nos. 02632-03 and 02632-05 of the IDM (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/she 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 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 recorded a subdivision plat or another plat required to be approved by the City of Houston Planning Commission.

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 jurisdiction 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

City of Houston Amendment**Analysis:** COH amendment has been updated and modified.**Justification:** Amendment required to maintain conformity to local policies and ordinances.**City of Houston Amendment****Analysis:** COH amendment has been updated and modified.**Justification:** Amendment required to maintain conformity to local policies and ordinances.**City of Houston Amendment****Analysis:** COH amendment has been updated and modified.**Justification:** Amendment required to maintain conformity to local policies and ordinances.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** Amendment required to maintain conformity to local policies and ordinances.

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<p>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.</p> <p>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.</p> <p>5. Abutting a local street where there is less than 20 feet 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 depth on the private property where vehicles can be parked.</p> <p>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.</p> <p>7. Any area where the jurisdiction's Department of Public Works and Engineering finds that it would not provide reasonable access to the private property consistent with the safety and convenience of the traveling public.</p> <p>8. Within areas of unpaved street or alley rights-of-way, except as authorized by Section 40-340 of the <i>City Code</i>.</p> <p>Where the construction of any building or structure upon a property causes a driveway to no longer comply with item 6 or 7 above, the driveway shall be removed and the area converted so that it conforms to the design of the surrounding area.</p>	<p>permanent turnaround and intended to be extended in the future.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>8. Within areas of unpaved street or alley rights-of-way, except as authorized by Section 40-340 of the <i>City Code</i>.</p> <p>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 <i>Fire Code</i> is not provided.</p> <p>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.</p>	
<p>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 <i>City Code</i>.</p>	<p>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 <i>City Code</i>.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>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 jurisdiction's Office of the City Engineer in the Department of Public Works and Engineering. 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 IDM detention shall be required.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>N/A</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: New COH amendment.</p> <p>Justification: New amendment added to include bus pads and landings and is required to maintain conformity to local policies and ordinances.</p>

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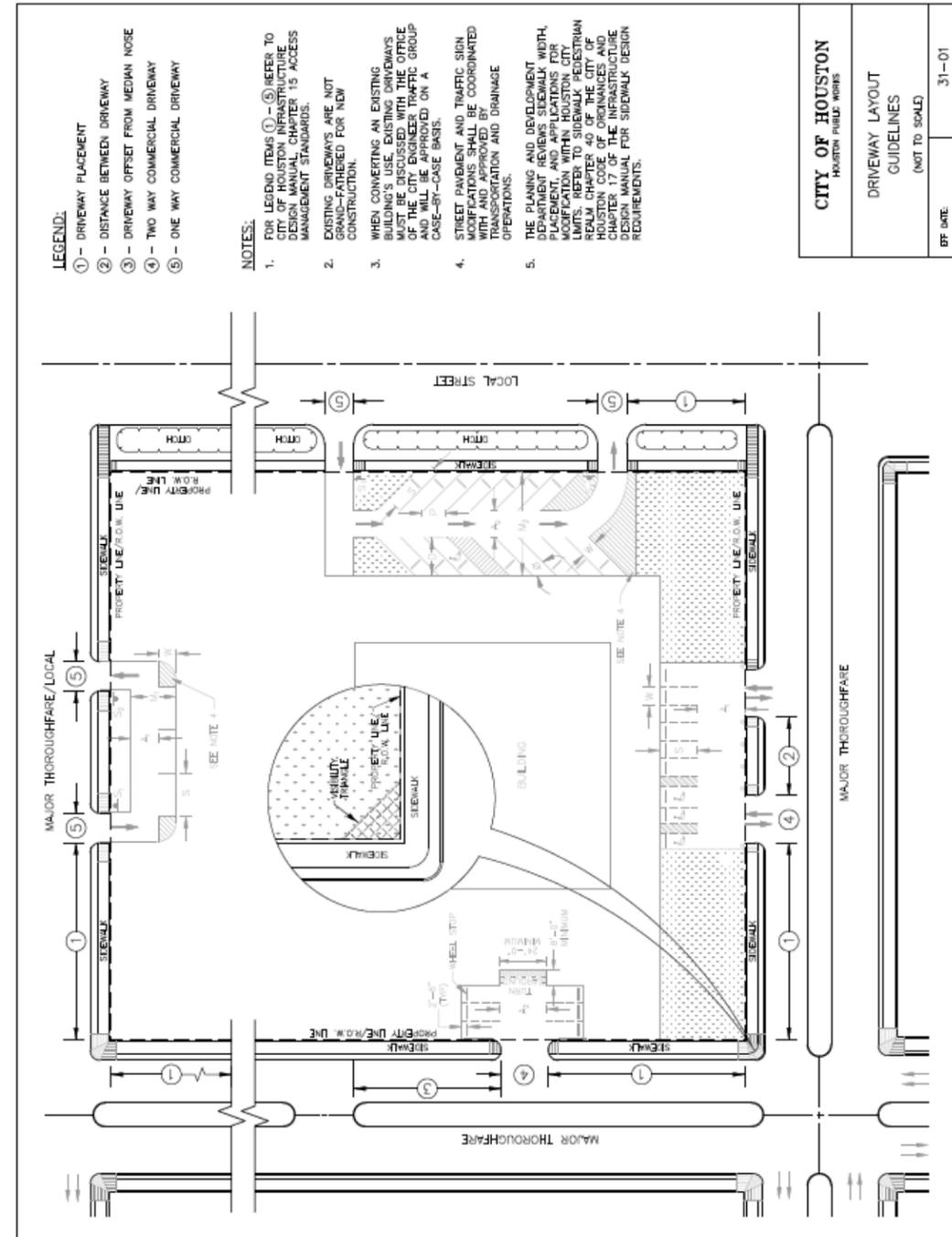
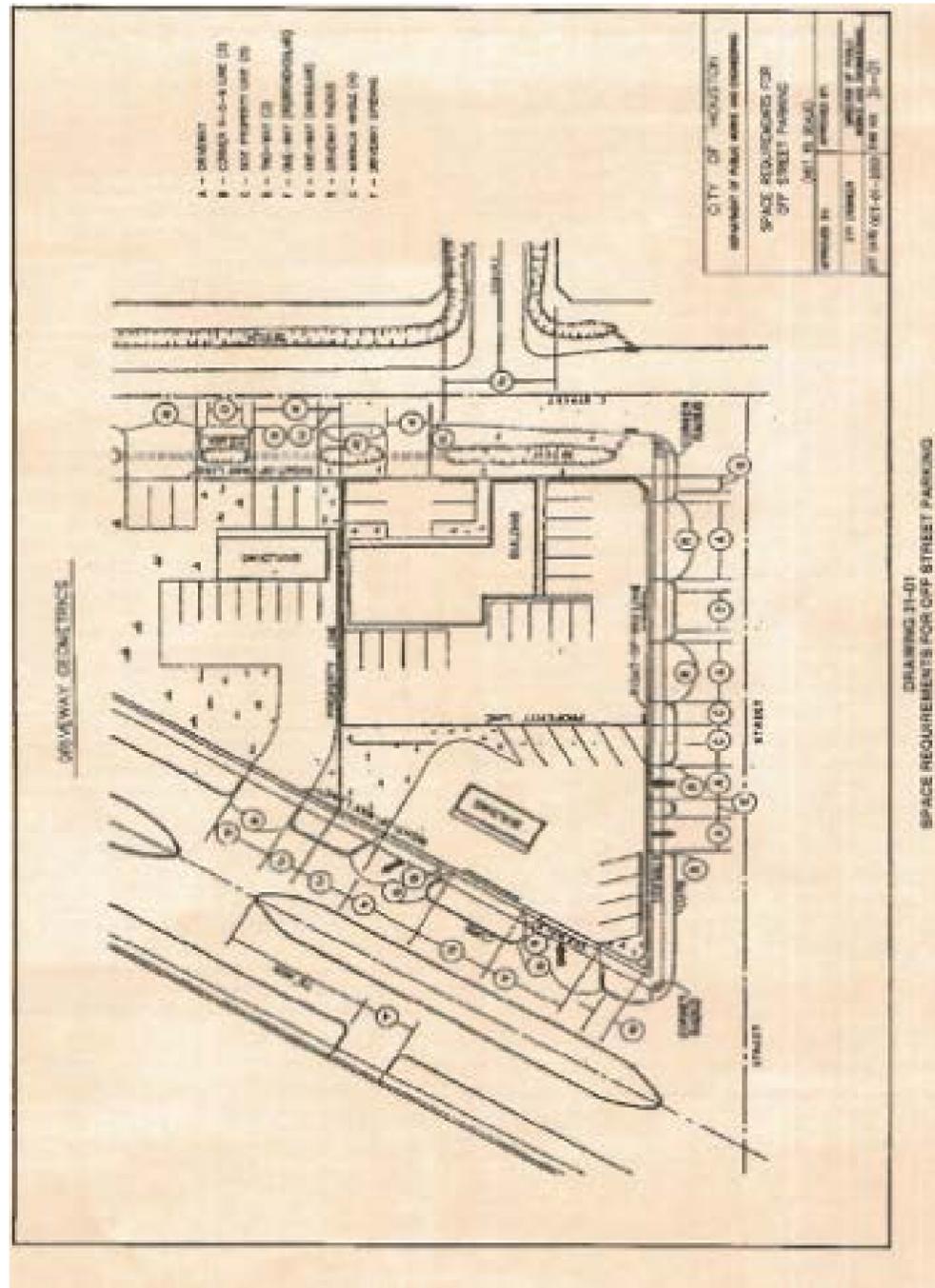
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City of Houston Amendment

Analysis: COH amendment for off street parking layout has been updated to national standards by OCE.

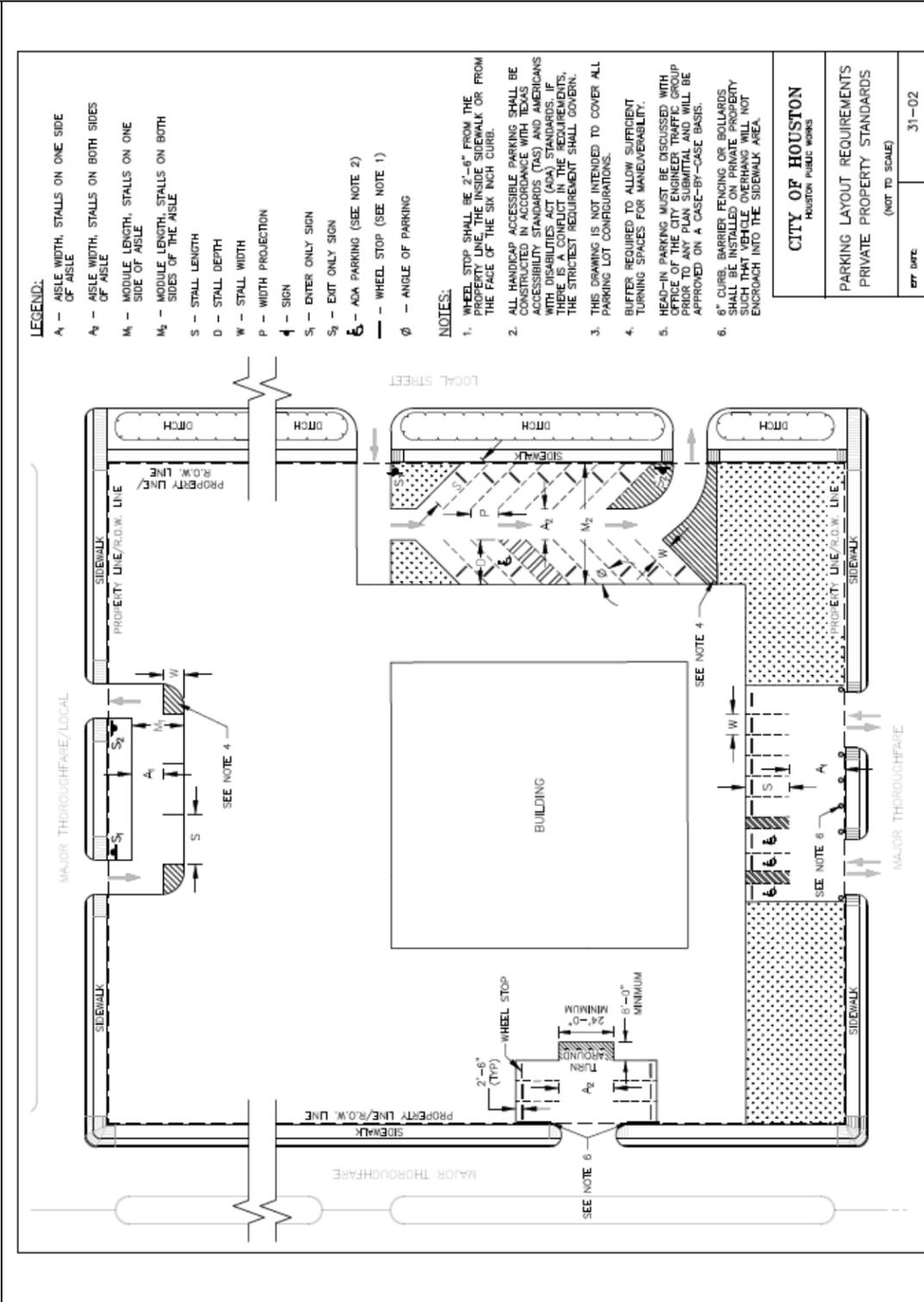
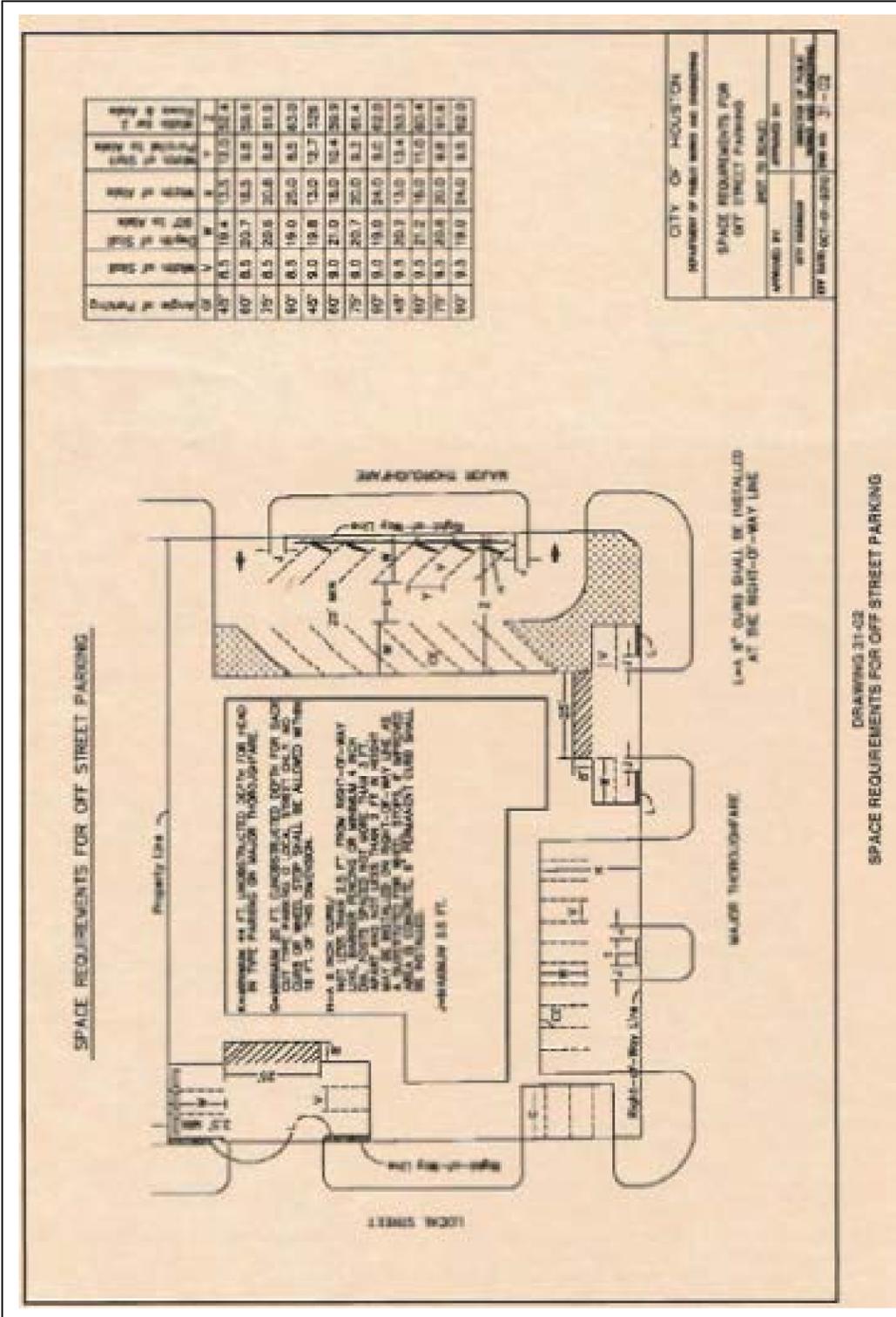
Justification: Amendment has been updated to include Infrastructure Design Manual drawings for parking lot requirements.

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City of Houston Amendment

Analysis: COH amendment for off street parking layout has been updated to national standards by OCE.

Justification: Amendment has been updated to include Infrastructure Design Manual drawings for parking lot requirements.

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<p>{REVIEW NOTE: CHAPTER 32 IS COORDINATED WITH THE CITY ENGINEER ROW STANDARDS AND IS SUBJECT TO CHANGE.}</p> <p>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 <i>lot lines</i>, except that the footings of street walls or their supports which are located not less than 8 feet (2438 mm) below grade shall not project more than 12 24 inches (305 610 mm) beyond the street <i>lot line</i>.</p>	<p>{REVIEW NOTE: CHAPTER 32 IS COORDINATED WITH THE CITY ENGINEER ROW STANDARDS AND IS SUBJECT TO CHANGE.}</p> <p>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 <i>lot lines</i>, 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 <i>lot line</i>.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>3202.2 Encroachments above grade and below 8 feet in height. Encroachments into the public right-of-way above grade and below 8 feet (2438 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>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 (4572 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>3202.3.3 Encroachments 15 feet or more above grade. Encroachments 15 feet (4572 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 (2438 mm) above the grade immediately below, and the lowest part of any fringe attached to the covering shall be not less than 7 feet (2133 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 (3658 mm).</p>	<p>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).</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>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 (4572 mm).</p>	<p>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).</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>

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~~**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 (2134 mm) to the lowest portion of the hood or awning where supported on removable steel or other approved noncombustible support.~~

~~**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 (2134 mm) to the lowest portion of the hood or awning where supported on removable steel or other approved noncombustible support.~~

City of Houston Amendment

Analysis: No change to COH amendment.
Justification: Amendment required to maintain conformity to local policies and ordinances.

2012 Houston IBC – Chapter 33 Safeguards During Construction

2015 Houston IBC – Chapter 33 Safeguards During Construction

Code Analysis

**SECTION 3301
GENERAL**

3301.1 Scope. The provisions of this chapter shall govern safety during construction and the protection of adjacent public and private properties.

**SECTION 3301
GENERAL**

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.**

City of Houston Amendment

Analysis: New COH amendment.
Justification: Amendment added to provide reference to NFPA 241: Safeguarding Construction, Alteration, and Demolition operations. This standard will provide more safety during the construction process.

~~**3302.2 Manner of removal.** Waste materials shall be removed in a manner which prevents injury or damage to persons, adjoining properties and public rights-of-way. **Construction or demolishing privileges.** 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.~~

~~**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.~~

City of Houston Amendment

Analysis: COH amendment has been modified.
Justification: Amendment required to maintain conformity to local policies and ordinances.

~~**3303.8 Foundation.** All concrete slabs shall be removed in conjunction with the demolition of the corresponding structure.~~

~~**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.~~

~~**Exception:** When a written request is submitted by the applicant and approved by the building official to use the foundation for an alternate use.~~

City of Houston Amendment

Analysis: No change to COH amendment.
Justification: Amendment required to maintain conformity to local policies and ordinances.

~~**3304.1.5 Permanent excavation.** Permanent excavations shall be protected by permanent means where necessary to prevent the movement of the earth of adjoining properties. Such protection shall be provided by the person causing the excavations 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 that are not otherwise protected to be protected by the construction of a substantial barricade or fence not less than 6 feet (1829 mm) in height enclosing the excavated area.~~

~~**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.~~

City of Houston Amendment

Analysis: COH amendment has been modified.
Justification: Amendment required to maintain conformity to local policies and ordinances.

~~**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/her 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.~~

~~**3304.1.6 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.~~

City of Houston Amendment

Analysis: No change to COH amendment.
Justification: Amendment required to maintain conformity to local policies and ordinances.

~~**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~~

~~**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~~

City of Houston Amendment

Analysis: COH amendment has been modified to reflect the New Houston Public Works name.

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<p><u>maintenance or restoration of sidewalks, curbs and pavements shall be performed in accordance with the grades, levels and other requirements of the jurisdiction's Department of Public Works and Engineering, 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.</u></p>	<p><u>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.</u></p>	<p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>3304.2 Drainage. <u>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 drainage as set forth above.</u></p>	<p>3304.2 Drainage. <u>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.</u></p>	<p>City of Houston Amendment Analysis: COH amendment has been modified. Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>3307.1 Protection required. Adjoining public and private property shall be protected from damage during construction, remodeling and demolition work. Protection must 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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>3311.4 Temporary standpipes. <u>Temporary standpipes may be provided in place of permanent systems if they are designed to furnish a minimum of 500 gallons (1893 L) of water per minute at 50 pounds (345 kPa) per square inch 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.</u></p>	<p>3311.4 Temporary standpipes. <u>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.</u></p>	<p>City of Houston Amendment Analysis: COH amendment has been modified. Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>N/A</p>	<p style="text-align: center;">SECTION 3314 ACCESS FOR FIRE FIGHTING AND E.M.S. OPERATIONS</p> <p>3314.1 Required access. <u>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 <i>Fire Code</i> 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.</u></p>	<p>City of Houston Amendment Analysis: New amendment clarifying the extent of required emergency vehicle access road(s) to conduct emergency EMS rescues and fire-fighting operations when needed. Justification: Recent construction fire and emergency rescue events identified needed guidance and clarity in the code to ensure appropriate emergency vehicle access is provided to all construction sites for life- and fire-safety rescues and fire-fighting operations where time is a critical factor. Amendment needed to ensure fire and life-safety, and conformity with local policies.</p>
<p>2012 Houston IBC – Chapter 34 Existing Buildings and Structures</p>	<p>2015 Houston IBC – Chapter 34 Reserved</p>	<p>Code Analysis</p>

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2012 Houston IBC Amendments	2015 Houston IBC Amendments	Code Change Summary
<p style="text-align: center;">CHAPTER 34 EXISTING BUILDINGS AND STRUCTURES</p> <p style="text-align: center;">SECTION 3403 ADDITIONS, ALTERATIONS AND REPAIRS</p> <p>3403.2 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3, any addition that constitutes substantial improvement of the existing structure, as defined in Section 202, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.</p> <p>For buildings and structures in flood hazard areas established in Section 1612.3, any additions that do not constitute substantial improvement of the existing structure, as defined in Section 202, are not required to comply with the flood design requirements for new construction.</p>	<p>The provision of this section is relocated to the amendments to the 2015 Existing Building Code Section 104.2.1.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3403.3 Existing structural elements carrying gravity load. Any existing gravity load-carrying structural element for which an addition and its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented, replaced or otherwise altered as needed to carry the increased gravity load required by this code for new structures. Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased shall be considered an altered element subject to the requirements of Section 3404.3. Any existing element that will form part of the lateral load path for any part of the addition shall be considered an existing lateral load-carrying structural element subject to the requirements of Section 3403.4.</p>	<p>The provision of this section is relocated to the amendments to the 2015 Existing Building Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3403.3.1 Design live load. Where the addition does not result in increased design live load, existing gravity load-carrying structural elements shall be permitted to be evaluated and designed for live loads approved prior to the addition. If the approved live load is less than that required by Section 1607, the area designed for the nonconforming live load shall be posted with placards of approved design indicating the approved live load. Where the addition does result in increased design live load, the live load required by Section 1607 shall be used.</p>	<p>The provision of this section is relocated to the amendments to the 2015 Existing Building Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3403.4 Existing structural elements carrying lateral load. Where the addition is structurally independent of the existing structure, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the addition is not structurally independent of the existing structure, the existing structure and its addition acting together as a single structure shall be shown to meet the requirements of Sections 1609 and 1613.</p> <p>Exception: Any existing lateral load-carrying structural element whose demand capacity ratio with the addition considered is no more than 10 percent greater than its demand capacity ratio with the addition ignored shall be permitted to remain unaltered. For purposes of calculating demand capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613. For purposes of this exception, comparisons of demand capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.</p>	<p>The provision of this section is relocated to the amendments to the 2015 Existing Building Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>

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3403.2 When allowed. Additions, alterations, and repairs may be made to any building or structure without requiring the existing building or structure to comply with all the requirements of this code, provided the addition, alteration, or repair conforms to those required for a new building or structure.

Additions, alterations or repairs shall not be made to an existing building or structure that will cause the existing building or structure to be in violation of any of the provisions of this code, and such additions or alterations shall not cause the existing building or structure to become unsafe. An unsafe condition shall be deemed to have been created if an addition or alteration will cause the existing building or structure to become structurally unsafe or overloaded, will not provide adequate egress in compliance with the provisions of this code or will obstruct existing exits, will create a fire hazard, will reduce required fire resistance, or will otherwise create conditions dangerous to human life. Any building so altered, which involves a change in use or occupancy, shall not exceed the height, number of stories and area permitted for new buildings. Any building plus new additions shall not exceed the height, number of stories and area specified for new buildings.

Additions, alterations or repairs shall not be made to an existing building or structure when such existing building or structure is not in full compliance with the provisions of this code except when such addition, alteration or repair will result in the existing building or structure being no more hazardous based on life safety, fire safety and sanitation, than before such additions, alterations, or repairs are undertaken.

Exception: Alterations of existing structural elements, or additions of new structural elements, which are not required by this code and are initiated for the purpose of increasing the lateral-force-resisting strength or stiffness of an existing structure, need not be designed for forces conforming to these regulations provided that an engineering analysis is submitted to show that:

1. The capacity of existing structural elements required to resist forces is not reduced;
2. The lateral loading to required existing structural elements is not increased beyond their capacity;
3. New structural elements are detailed and connected to the existing structural elements as required by these regulations;
4. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by these regulations; and
5. An unsafe condition as defined above is not created.

The provision of this section is relocated to the amendments to the 2015 Existing Building Code.

City of Houston Amendment

Analysis: COH amendment will not be carried forward.

Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.

3403.3 5 Smoke alarms in existing portions of a building. Where an addition is made to a building or structure of a Group R or I-1 occupancy, the existing building shall be provided with *smoke alarms* in accordance with ~~the Section 1103.8 of the International Fire Code.~~ *Individual sleeping units and individual dwelling units in Group R and I-1 occupancies shall be provided with smoke alarms in accordance with the Fire Code*

[EDITORIAL NOTE: DELETE SECTION 3404 IN ITS ENTIRETY.]

The provision of this section is relocated to the amendments to the 2015 Existing Building Code.

City of Houston Amendment

Analysis: COH amendment will not be carried forward.

Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.

**SECTION 3405
 REPAIRS TO DAMAGED BUILDINGS**

3405.2.3 Extent of repair for noncompliant buildings. If the evaluation does not establish compliance of the pre-damage building in accordance with Section **3403.2 3404.2.1**, then the building shall be rehabilitated to comply with applicable

See Chapter 6 Existing Building Code

City of Houston Amendment

Analysis: COH amendment will not be carried forward.

Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of

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<p>provisions of this code for load combinations that include wind or seismic loads. The wind loads for the repair shall be as required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be as required by this code. Earthquake loads for this rehabilitation design shall be those required for the design of the pre-damage building, but not less than 75 percent of those prescribed in Section 1613. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.</p>		<p>Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3405.5 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3, any repair that constitutes substantial improvement of the existing structure, as defined in Section 202, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.</p> <p>For buildings and structures in flood hazard areas established in Section 1612.3, any repairs that do not constitute substantial improvement or repair of substantial damage of the existing structure, as defined in Section 202, are not required to comply with the flood design requirements for new construction.</p>	<p>The provision of this section is relocated to the amendments to the 2015 Existing Building Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3408.1 Conformance. No change shall be made in the use or occupancy of any building that would place the building in a different division of the same group of occupancies or in a different group of occupancies, unless such building is made to comply with the requirements of this code for such division or group of occupancies. Subject to the approval of the building official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all the requirements of this code for those groups, provided the new or proposed use is equally or less hazardous, based on life and fire risk, than the existing use and meets the minimum standards of Appendix M.</p>	<p>The provision of this section is relocated to the amendments to the 2015 Existing Building Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3409.1 Historic buildings. The provisions of this code relating to the construction, repair, alteration, addition, restoration and movement of structures, and change of occupancy shall not be mandatory for historic buildings where such buildings are judged by the building official to not constitute a distinct life safety hazard. Repairs, alterations and additions necessary for the preservation, restoration, rehabilitation or continued use of a building or structure may be made without conformance to all the requirements of this code when authorized by the building official, provided:</p> <ol style="list-style-type: none"> 1. The building or structure has been designated as having special historical or architectural significance by the City Council of this jurisdiction as a landmark or is a contributing structure within a historic district as designated by the City Council of this jurisdiction. The foregoing designations shall be as provided in Chapter 33, Article VII, of the City Code. 2. Any unsafe conditions described in this code are corrected. 3. The restored building or structure will be no more hazardous based on life safety, fire safety, and sanitation than the existing building. 	<p>See Chapter 12 Existing Building Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3409.2 Flood hazard areas. Within flood hazard areas established in accordance with Section 1612.3, where the work proposed constitutes substantial improvement as defined in Section 202, the building shall be brought into compliance with Section 1612.</p>	<p>The provision of this section is relocated to the amendments to the 2015 Existing Building Code.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment will not be carried forward.</p> <p>Justification: The COH will be adopting the 2015 International</p>

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<p>Exception: Historic buildings that are:</p> <ol style="list-style-type: none"> 1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places; 2. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or 3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior. 		<p>Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>{EDITORIAL NOTE: DELETE SECTION 3411 IN ITS ENTIRETY AND RESERVE.}</p>	<p>Moved to the Existing Building Code</p>	<p>City of Houston Amendment Analysis: COH amendment will not be carried forward. Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>
<p>3412.2.1 Change in occupancy. Where an existing building is changed to a new occupancy classification and this section is applicable, the provisions of this section for the new occupancy shall be used to determine compliance with this code.</p> <p>Exception: <u>Change in occupancy in existing buildings, or portions of buildings, that comply with Appendix M.</u></p>	<p>SEE Existing Building Code Section 407 - Change of Occupancy</p>	<p>City of Houston Amendment Analysis: COH amendment will not be carried forward. Justification: The COH will be adopting the 2015 International Existing Building Code and will no longer need the provisions of Ch. 34. All pertinent COH amendments have been carried forward to the IEBC.</p>

2012 Houston IBC – Chapter 35 Referenced Standards	2015 Houston IBC – Chapter 35 Referenced Standards	Code Analysis
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<p>N/A</p>	<p>CHAPTER 35 REFERENCED STANDARDS</p> <p>EDITORIAL NOTE: PORTIONS OF THIS CHAPTER NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.</p> <p>ASHRAE ASHRAE 1791 Tullie Circle, NE Atlanta, GA 30329</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Standard Reference number</th> <th style="text-align: left;">Title</th> <th style="text-align: right;">Referenced in code section number</th> </tr> </thead> <tbody> <tr> <td>170—2008</td> <td>Ventilation of Health Care Facilities</td> <td style="text-align: right;">1203.1</td> </tr> </tbody> </table> <p>ASTM ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428-2959</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Standard Reference number</th> <th style="text-align: left;">Title</th> <th style="text-align: right;">Referenced in code section number</th> </tr> </thead> <tbody> <tr> <td>B31.3—2012</td> <td>Process Piping</td> <td style="text-align: right;">415.11.6</td> </tr> <tr> <td>E 90—09(2016)</td> <td>Standard Test Method for Laboratory Measurement of Airborne Sound</td> <td></td> </tr> </tbody> </table>	Standard Reference number	Title	Referenced in code section number	170—2008	Ventilation of Health Care Facilities	1203.1	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		<p>City of Houston Amendment Analysis: New COH amendment. Justification: The reference standards have been updated to include the most up-to-date ASHRAE 170 to provide provisions for ventilation of healthcare facilities.</p>
Standard Reference number	Title	Referenced in code section number															
170—2008	Ventilation of Health Care Facilities	1203.1															
Standard Reference number	Title	Referenced in code section number															
B31.3—2012	Process Piping	415.11.6															
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	<p>N105.1</p> <p>NFPA National Fire Protection Association 1 Batterymarch Park Quincy, MA 02169-7471</p> <hr/> <table border="0"> <tr> <td>Standard Reference number</td> <td>Title</td> <td>Referenced in code section number</td> </tr> <tr> <td>70—2014</td> <td>National Electrical Code</td> <td>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</td> </tr> </table> <p>241—19 Operations 3301.1 Standard for Safeguarding Construction, Alteration, and Demolition</p>	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	
Standard Reference number	Title	Referenced in code section number						
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2012 Houston IBC – Chapter 46 Houston Sign Code	2015 Houston IBC – Chapter 46 Houston Sign Code	Code Analysis
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<p>CHAPTER 46 HOUSTON SIGN CODE</p> <p><i>The Houston Sign Code, which is published as a separate document, constitutes Chapter 46 of this code.</i></p>	<p>CHAPTER 46 HOUSTON SIGN CODE</p> <p><i>The Houston Sign Code, which is published as a separate document, constitutes Chapter 46.</i></p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
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2012 Houston IBC – Chapter 62 Lake Houston Structures	2015 Houston IBC – Chapter 62 Lake Houston Structures	Code Analysis
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<p>CHAPTER 62 LAKE HOUSTON STRUCTURES</p> <p>SECTION 6201 PURPOSE</p> <p>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 <i>City Code</i>.</p> <p>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 II, Division 2, of the <i>City Code</i>.</p> <p>All pier, bulkhead, and jetty sites will be inspected before a permit is issued and after construction is completed and shall be subject to final inspection.</p> <p>All bulkheads, jetties, and piers shall be designed by and bear the seal of a professional engineer licensed by the State of Texas.</p>	<p>CHAPTER 62 LAKE HOUSTON STRUCTURES</p> <p>SECTION 6201 PURPOSE</p> <p>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 <i>City Code</i>.</p> <p>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 <i>City Code</i>.</p> <p>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.</p> <p>All bulkheads, jetties, and piers shall be designed by and bear the seal of a professional engineer licensed by the State of Texas.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been modified.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
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<p>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 Sections 102.6.1 and 115.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
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6201.3 Definitions. For the purpose of this chapter, certain terms are defined as follows:

BULKHEAD. A retaining wall designed to retard erosion of and prevent the banks of a lake from sloughing off.

COMMERCIAL PIER. One or 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(s) 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 vessels 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.

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

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.

PRIVATE PIER. A pier other than a commercial pier.

6201.3 Definitions. For the purpose of this chapter, these terms are defined in Chapter 2:

BULKHEAD.

COMMERCIAL PIER.

JETTY.

PIER.

PRIVATE PIER.

City of Houston Amendment

Analysis: COH amendment has been modified and all definitions relocated to Chapter 2.

Justification: Definitions have been relocated to chapter 2. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

**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 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.

**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

City of Houston Amendment

Analysis: COH amendment has been modified.

Justification: Amendment required to maintain conformity to local policies and ordinances.

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.

6202.1.2 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.

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: Amendment required to maintain conformity to local policies and ordinances.

6202.1.3 Electric power. Electric wiring shall comply with the *Electrical Code*.

6202.1.3 Electric power. Electrical wiring shall comply with the *Electrical Code*.

City of Houston Amendment

Analysis: No change to COH amendment.

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<p>6202.1.4 Lumber. Wood piles and all lumber used in pier construction shall be pressure treated with an approved preservative.</p> <p>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.</p>	<p>6202.1.4 Lumber. Wood piles and all lumber used in pier construction shall be pressure treated with an approved preservative.</p> <p>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.</p>	<p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>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.</p> <p>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).</p>	<p>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.</p> <p>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).</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>6202.1.7 Plumbing. Plumbing shall comply with the <i>Plumbing Code</i>.</p> <p>6202.1.8 Alternative materials. A pier constructed of alternative materials 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.</p>	<p>6202.1.7 Plumbing. Plumbing shall comply with the <i>Plumbing Code</i>.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been modified.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>6202.2 Private piers. In lieu of the design requirements in Section 6202.1.6, private piers may be constructed as follows:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>6202.2 Private piers. In lieu of the design requirements in Section 6202.1.6, private piers may be constructed as follows:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>SECTION 6203 FLOATING PIERS</p> <p>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:</p>	<p>SECTION 6203 FLOATING PIERS</p> <p>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:</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment.</p> <p>Justification: Amendment required to maintain conformity to local policies and ordinances.</p>

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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 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 in width, and the depth shall not be less than 8 inches.

6203.1.5 Flooring. Flooring shall be at least 2 inches nominal thickness and shall be cypress, redwood, or any other wood that has been pressure treated against decay.

Exception: Marine or exterior-grade plywood, 3/4 inch 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 in total area, with a minimum width of 8 feet and a maximum width of 12 feet.

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, 3/4 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 m²) 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).

City of Houston Amendment

Analysis: COH amendment has been modified.

Justification: Amendment required to maintain conformity to local policies and ordinances.

**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.

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City of Houston Amendment

Analysis: No change to COH amendment.

Justification: Amendment required to maintain conformity to local policies and ordinances.

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-inch tops. Piles shall be embedded a minimum of 5 feet into firm soil. Piles shall be 1 inch larger in diameter and shall be embedded 1 foot deeper for each 5 feet

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.

City of Houston Amendment

Analysis: COH amendment has been modified.

Justification: Amendment required to maintain conformity to local policies and ordinances.

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above ground. Piles shall not be spaced further apart than 6 feet center to center.

6204.2.2 Horizontal members. Horizontal members shall be of at least 3-inch by 8-inch lumber. Two horizontal members are required for piles less than 5 feet above natural ground. Three horizontal members are required for piles over 5 feet above natural ground. Horizontal members shall be attached to the wood piles with not less than ½-inch 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 by 6-inch nominal lumber. All vertical members shall be embedded a minimum of 3 feet into firm soil. Cracks between members shall not exceed ¼ inch. 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 wide and not less than 4 feet in length and shall be embedded into firm soil a minimum of 30 inches. 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 galvanized cable with two galvanized clamps on each end or a minimum size ½-inch rod secured to the bulkhead and anchor. Other types of anchors may be used when approved by the *building official*.

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 ¼ 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 2500 lbs./in.² at 28 days. The bulkhead shall be embedded a minimum of 36 inches into firm soil and shall not extend more than 30 inches above the grade of the fill behind the bulkhead. The width of the concrete shall be a minimum of 10 inches for the part below grade and at least 6 inches 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 vertically and every 18 inches 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.

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 and the width of the crimp shall not be less than 3½ inches. Piles shall not have less than 1-inch crimped interlocks along both vertical sides. Finished pile width shall not be less than 12 inches. Piles shall be embedded not less than 4 feet into firm soil and shall not extend more than 30 inches 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.

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*.

City of Houston Amendment**Analysis:** COH amendment has been modified.**Justification:** Amendment required to maintain conformity to local policies and ordinances.**City of Houston Amendment****Analysis:** COH amendment has been modified.**Justification:** Amendment required to maintain conformity to local policies and ordinances.

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<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: Amendment required to maintain conformity to local policies and ordinances.</p>
<p>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 Public Works and Engineering. Jetties must be constructed utilizing one of the approved types of bulkheads listed in Section 6204.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: COH amendment has been modified. Justification: Amendment required to maintain conformity to local policies and ordinances.</p>

2012 Houston IBC	2015 Houston IBC – Appendix F Rodent proofing	Code Analysis
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<p>N/A</p>	<p>APPENDIX F RODENTPROOFING <i>The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.</i> EDITORIAL NOTE: ALL OTHER PROVISIONS OF THIS APPENDIX SHALL REMAIN AS SET FORTH IN THE 2015 IBC.</p>	<p>City of Houston Amendment Analysis: New Appendix adopted by COH. Justification: The appendix is being adopted in order to provide guidelines and provisions on rodentproofing.</p>
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2012 Houston IBC APPENDIX E	2015 Houston IBC – Appendix J Excavation and Grading	Code Analysis
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<p>APPENDIX E EDITORIAL NOTE: DELETE ENTIRE APPENDIX E (SUPPLEMENTARY ACCESSIBILITY REQUIREMENTS) AND REPLACE WITH THE FOLLOWING. EXCAVATION AND GRADING</p>	<p>APPENDIX J EXCAVATION AND GRADING <i>The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.</i> EDITORIAL NOTE: CONTENTS OF APPENDIX J NOT SHOWN SHALL REMAIN AS SET FORTH IN THE 2015 IBC.</p>	<p>City of Houston Amendment Analysis: New amendment providing administrative procedures for excavation and grading. Justification: “Appendix E” 2012 IBC Amendments is now “Appendix J” 2015 IBC Amendments.</p>
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<p>SECTION E101 PURPOSE E101.1 General. The purpose of this appendix is to safeguard life, limb, property, and the public welfare by regulating grading on private property.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: New amendment providing administrative procedures for grading construction. Justification: Amendment needed to ensure conformity with local policies and provide means to issue permits for grading. “Appendix E” 2012 IBC Amendments is now “Appendix J” 2015 IBC Amendments.</p>
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<p>SECTION E102 SCOPE E102.1 General. This appendix sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading construction.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: New amendment to reference City Code in regard to flood hazard areas. Justification: Amendment needed to ensure conformity with local policies. “Appendix E” 2012 IBC Amendments is now “Appendix J” 2015 IBC Amendments.</p>
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DEFINITIONS**

E105.1 General. For the purposes of this appendix, the definitions listed hereunder shall be construed as specified in this section.

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

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

BEDROCK. In-place solid rock.

BENCH. A relatively level step excavated into earth material on which fill is to be placed.

BORROW. Earth material acquired from an off-site location for use in grading on a site.

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

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.

COMPACTION. The densification of a fill by mechanical means.

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

ENGINEERED GRADING. Any grading in excess of 1,000 cubic yards.

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.

EROSION. The wearing away of the ground surface as a result of the movement of wind, water or ice.

EXCAVATION. The mechanical removal of earth material.

FILL. A deposit of earth material placed by artificial means.

GEOTECHNICAL ENGINEER. See "soils engineer."

GRADE. The vertical location of the ground surface.

Existing Grade. The grade prior to grading

Finish Grade. The final grade of the site that conforms to the approved plan.

Rough Grade. The stage at which the grade approximately conforms to the approved plan.

GRADING. Any excavating or filling or combination thereof.

KEY. Designed compacted fill placed in a trench excavated in earth material beneath the toe of a proposed fill slope.

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.

REGULAR GRADING. Any grading less than or equal to 1,000 cubic yards.

SITE. 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

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).

City of Houston Amendment

Analysis: COH amended definitions added to section; definitions located in Ch. 2.

Justification: Amendment needed to ensure conformity with local policies by providing definitions.

Definitions have been relocated to chapter 2. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy. "Section E105" 2012 IBC Amendments is now "Section J102.1" 2015 IBC Amendments.

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<p>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. TERRACE. A relatively level step constructed in the face of graded slope surface for drainage and maintenance purposes.</p>		
<p>E103.2 Exempted work. A grading permit is not required for the following if they meet the definition of regular grading:</p> <ol style="list-style-type: none"> 1. When approved by the <i>building official</i>, grading in an isolated, self-contained area where there is no danger to private or public property. 2. An excavation below finished <i>grade</i> for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. 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 (1524 mm) after the completion of such structure. 3. Cemetery graves. 4. Refuse disposal sites controlled by other regulations. 5. Excavations for wells, tunnels, or utilities. 6. Mining, quarrying, excavating, processing or stockpiling of rock, sand, gravel, aggregate or clay where established and provided for by law, provided such operations do not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous property. 7. Exploratory excavations under the direction of soil engineers or engineering geologists. 8. An excavation that: (1) is less than 2 feet (610 mm) in depth or (2) does not create a cut slope greater than 5 feet (1524 mm) in height and steeper than 1 unit vertical in 1½ units horizontal (66.7% slope). 9. A fill less than 1 foot (305 mm) in depth and placed on natural terrain with a slope flatter than 1 unit vertical in 5 units horizontal (20% slope), or less than 3 feet (914 mm) in depth, not intended to support structures, that does not exceed 50 cubic yards (38.3 m³) on any one lot and does not obstruct a drainage course. <p>Exemption from the permit requirements of this chapter shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this chapter or any other laws or ordinances.</p>	<p>J103.2 Exemptions. A grading permit shall not be required for the following <u>if the work meets the definition of regular grading</u>:</p> <ol style="list-style-type: none"> 1. <u>When approved by the building official</u>, 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 <u>below finished grade</u> for construction of <u>basements and footings of a building, retaining wall or other structure</u> permitted under this code. <u>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.</u> 3. Cemetery graves. 4. Refuse disposal sites controlled by other regulations. 5. Excavations for wells, <u>tunnels</u> or trenches for utilities. 6. Mining, quarrying, excavating, processing or stockpiling <u>of</u> 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 <u>adjoining</u> any adjacent or contiguous properties. 7. Exploratory excavations performed under the direction of <u>a registered design professional</u> soil engineers or engineering geologists. <p>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 <i>jurisdiction</i>.</p>	<p>City of Houston Amendment Analysis: Base code has been updated to include previous 2012 Appendix E requirements for permits. Justification: Amendment needed to ensure conformity with local policies. <u>OCE wants these items deleted and a permit required for all grading and fill. With a separate permit required for Clearing and Grubbing.</u> "Section E103.2" 2012 IBC Amendments is now "Section J103.2" 2015 IBC Amendments.</p>
<p>E103.3 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 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.</p>	<p>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 <i>Texas Health and Safety Code</i> 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.</p>	<p>City of Houston Amendment Analysis: No change to COH amendment; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E103.3" 2012 IBC Amendments is now "Section J103.3" 2015 IBC Amendments.</p>
<p style="text-align: center;">SECTION E103 PERMITS REQUIRED</p> <p>E103.1 Permits required. Except as specified in Section E103.2, no person shall do any grading without first having obtained a grading permit from the <i>building official</i>.</p>	<p>EDITORIAL NOTE: <u>DELETE SECTION J104 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.</u></p> <p>J104.1 Permits required. Except as exempted in Section J103, no person shall do any grading without first obtaining a grading permit from the <i>building official</i>. A separate permit</p>	<p>City of Houston Amendment Analysis: No change to COH amendment; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies.</p>

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	shall be obtained for each site, and a single permit may cover both excavations and fills on one site.	
<p align="center">SECTION E107 GRADING FEES</p> <p>E107.1 General. Fees shall be assessed in accordance with the provisions of this section or shall be as set forth in the city fee schedule.</p> <p>E107.2 Grading permit fees. A fee for each grading permit shall be paid to the <i>building official</i> 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.</p>	<p>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 <i>building official</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment has been updated to include reference to city fee schedule; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies and provide guidance on fees. "Section E107.1 and E107.2" 2012 IBC Amendments are now "Section J104.1.1" 2015 IBC Amendments.</p>
<p align="center">SECTION E108 BONDS</p> <p>E108.1 Bond required. The <i>building official</i> 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.</p> <p>In lieu of a surety bond, the applicant may file a cash bond or instrument of credit with the <i>building official</i> in an amount equal to that which would be required in the surety bond.</p>	<p>J104.1.2 Bond required. The <i>building official</i> 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.</p> <p>In lieu of a surety bond, the applicant may file a cash bond or instrument of credit with the <i>building official</i> in an amount equal to that which would be required in the surety bond.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E108.1" 2012 IBC Amendments is now "Section J104.1.2" 2015 IBC Amendments.</p>
<p>E106.2 Application. The provisions of Section 105.3 are applicable to grading. Additionally, the application shall state the estimated quantities of work involved.</p>	<p>J104.2 Application. The provisions of Section 105.3 are applicable to grading. Additionally, the application shall state the estimated quantities of work involved.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E106.2" 2012 IBC Amendments is now "Section J104.2" 2015 IBC Amendments.</p>
<p>E106.3 Grading designation. Grading in excess of 1,000 cubic yards (765 m³) shall be performed in accordance with an approved grading plan prepared by a professional engineer licensed in the State of Texas and shall be designated as "engineered grading." Grading involving less than or equal to 1,000 cubic yards (765 m³) shall be designated "regular grading" unless the permittee chooses to have the grading performed as engineered grading, or the city engineer or building official determines that property is located in a Houston special flood hazard area as defined in Chapter 19 of the City Code, special conditions or unusual hazards exist, in which case grading shall conform to the requirements for engineered grading.</p>	<p>J104.3 Grading destination. Grading in excess of 1,000 cubic yards (765 m³) 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 m³) shall be designated "regular grading" unless the permittee chooses to have the grading performed as engineered grading or the <i>building official</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to update reference section; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E106.3" 2012 IBC Amendments is now "Section J104.3" 2015 IBC Amendments.</p>
<p>E106.4 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 <i>soils engineering</i> report and <i>engineering geology</i> report. The plans and specifications shall be prepared and signed by a professional engineer licensed in the State of Texas.</p> <p>Specifications shall contain information covering construction and material requirements.</p> <p>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</p>	<p>J104.4 Engineered grading requirements. Application for a <i>grading</i> permit shall be accompanied by two sets of plans and specifications, as well as supporting data consisting of a <i>soils engineering</i> report and <i>engineering geology</i> report. The plans and specifications shall be prepared and signed by a Texas professional engineer.</p> <p>Specifications shall contain information covering construction and material requirements.</p> <p>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</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to update reference section; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E106.4" 2012 IBC Amendments is now "Section J104.4" 2015 IBC Amendments.</p>

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<p>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.</p> <p>The plans shall include the following information:</p> <ol style="list-style-type: none"> 1. General vicinity of the proposed <i>site</i>. 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 <i>grading</i> 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 <i>site</i> upon which the work is to be performed and the location of any buildings or structures on property adjacent to the <i>site</i> that are within 15 feet (4,572 mm) of the property or that may be affected by the proposed <i>grading</i> operations. 6. The dates of the <i>soils engineering</i> and <i>engineering geology</i> reports together with the names, addresses, and phone numbers of the firms or individuals who prepared the reports. <p>Recommendations included in the <i>soils engineering</i> report and the <i>engineering geology</i> report shall be incorporated in the <i>grading</i> plans or specifications. Specific recommendations contained in the <i>soils engineering</i> report and the <i>engineering geology</i> report that are applicable to the proposed <i>grading</i> shall at minimum be included by reference in the <i>engineered grading plans</i>.</p>	<p>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.</p> <p>The plans shall include the following information:</p> <ol style="list-style-type: none"> 1. General vicinity of the proposed <i>site</i>. 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 <i>grading</i> 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 <i>site</i> upon which the work is to be performed and the location of any buildings or structures on property adjacent to the <i>site</i> that are within 15 feet (4,572 mm) of the property or that may be affected by the proposed <i>grading</i> operations. 6. The dates of <i>soils engineering</i> and <i>engineering geology</i> reports together with the names, addresses, and phone numbers of the firms or individuals who prepared the reports. <p>Recommendations included in the <i>soils engineering</i> report and the <i>engineering geology</i> report shall be incorporated in the <i>grading</i> plans or specifications. Specific recommendations contained in the <i>soils engineering</i> report and the <i>engineering geology</i> report that are applicable to the proposed <i>grading</i> shall at minimum be included by reference in the <i>engineered grading plans</i>.</p>	
<p>E106.5 Soils engineering report. The soils engineering report required by Section E106.4 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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: COH amendment changed to update reference section; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E106.5" 2012 IBC Amendments is now "Section J104.5" 2015 IBC Amendments.</p>
<p>E106.6 Engineering geology report. The engineering geology report required by Section E106.4 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.</p>	<p>J104.6 Engineering geology report. The <i>engineering geology</i> 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 <i>grading</i>, as affected by geologic factors.</p>	<p>City of Houston Amendment Analysis: COH amendment changed to update reference section; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E106.6" 2012 IBC Amendments is now "Section J104.6" 2015 IBC Amendments.</p>
<p>E106.7 Liquefaction study. The <i>building official</i> may require a geotechnical investigation in accordance with Section 1802.4 when, during the course of an investigation, all of the following conditions are discovered:</p> <ol style="list-style-type: none"> 1. Shallow ground water, 50 feet (15,240 mm) or less. 2. Unconsolidated sandy alluvium. 	<p>J104.7 Liquefaction study. The <i>building official</i> may require a geotechnical investigation in accordance with Section 1803 when, during the course of an investigation, all of the following conditions are discovered:</p> <ol style="list-style-type: none"> 1. Shallow ground water, 50 feet (15,240 mm) or less; 2. Unconsolidated sandy alluvium; and 	<p>City of Houston Amendment Analysis: COH amendment changed to update reference section; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E106.7" 2012 IBC Amendments is now</p>

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<p>3. Seismic Zones C and D.</p> <p>The report of the investigation shall address the potential for liquefaction.</p>	<p>3. Seismic Zones C and D.</p> <p>The report of the investigation shall address the potential for liquefaction.</p>	<p>"Section J104.7" 2015 IBC Amendments.</p>
<p>E106.8 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:</p> <ol style="list-style-type: none"> 1. General vicinity of the proposed site. 2. Limiting dimensions and depth of cut and fill. 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 (4572 mm) of the proposed grading. 	<p>J104.8 Regular grading requirements. Each application for a <i>grading</i> 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:</p> <ol style="list-style-type: none"> 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. 	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E106.8" 2012 IBC Amendments is now "Section J104.8" 2015 IBC Amendments.</p>
<p>E106.9 Issuance. The provisions of Section 105.3 are applicable to <i>grading</i> permits. The <i>building official</i> may require that <i>grading</i> operations and project designs be modified if delays occur which incur weather-generated problems not considered at the time the permit was issued.</p> <p>The <i>building official</i> may require <i>professional inspection</i> and testing by a soils engineer. When the <i>building official</i> has cause to believe that geologic factors may be involved, the <i>grading</i> will be required to conform to the requirements for <i>engineered grading</i>.</p>	<p>J104.9 Issuance. The provisions of Section 105.3 are applicable to grading permits. The <i>building official</i> 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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E106.9" 2012 IBC Amendments is now "Section J104.9" 2015 IBC Amendments.</p>
<p style="text-align: center;">SECTION E114 GRADING INSPECTION</p> <p>E114.1 General. <i>Grading</i> operations for which a permit is required shall be subject to inspection by the <i>building official</i>. <i>Professional inspection</i> of <i>grading</i> operations shall be provided by the <i>professional engineer</i> licensed in the State of Texas retained to provide such services in accordance with Section E114.5 for <i>engineered grading</i> and as required by the <i>building official</i> for <i>regular grading</i>.</p>	<p>EDITORIAL NOTE: DELETE SECTION J105 TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.</p> <p style="text-align: center;">SECTION J105 GRADING INSPECTIONS</p> <p>J105.1 General. Grading operations for which a permit is required shall be subject to inspection by the <i>building official</i>. <i>Professional inspection</i> 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 <i>building official</i> for regular grading.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to update reference section; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.1" 2012 IBC Amendments is now "Section J105.1" 2015 IBC Amendments.</p>
<p>E114.2 Civil engineer. The civil engineer shall provide <i>professional inspection</i> 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 during the course of the work they shall be prepared by the civil engineer.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to update reference section; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.2" 2012 IBC Amendments is now "Section J105.2" 2015 IBC Amendments.</p>
<p>E114.3 Soils engineer. The soils engineer shall provide <i>professional inspection</i> 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 and 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 chapter. Revised recommendations relating to conditions differing from the approved soils engineering and engineering geology reports shall be submitted to the permittee, the <i>building official</i>, and the civil engineer.</p>	<p>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 <i>building official</i>, and the civil engineer.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to update reference section; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.3" 2012 IBC Amendments is now "Section J105.3" 2015 IBC Amendments.</p>

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<p>E114.4 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.4" 2012 IBC Amendments is now "Section J105.4" 2015 IBC Amendments.</p>
<p>E114.5 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.5" 2012 IBC Amendments is now "Section J105.5" 2015 IBC Amendments.</p>
<p>E114.6 Building official. The building official shall inspect the project at the various stages of work requiring approval to determine that adequate control is being exercised by the professional consultants.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.6" 2012 IBC Amendments is now "Section J105.6" 2015 IBC Amendments.</p>
<p>E114.7 Notification of noncompliance. If, in the course of fulfilling their respective duties under this chapter, the civil engineer, the soils engineer or the engineering geologist finds that the work is not being done in conformance with this chapter or the approved grading plans, the discrepancies shall be reported immediately in writing to the permittee and to the building official.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.7" 2012 IBC Amendments is now "Section J105.7" 2015 IBC Amendments.</p>
<p>E114.8 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E114.8" 2012 IBC Amendments is now "Section J105.8" 2015 IBC Amendments.</p>
<p style="text-align: center;">SECTION E104 - HAZARDS</p> <p>E104.1 General. 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.</p>	<p>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.</p>	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E104.1" 2012 IBC Amendments is now "Section J105.9" 2015 IBC Amendments.</p>
<p>E115.1 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</p>	<p>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</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to update reference</p>

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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 professional engineer licensed in the State of Texas retained to provide such services in accordance with Section E114.5 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*. The professional engineers licensed in the State of Texas 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 chapter.
2. A report prepared by the *soils engineer* retained to provide such services in accordance with Section E114.5, 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 chapter.
3. A report prepared by the *engineering geologist* retained to provide such services in accordance with Section E114.5, 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 chapter.

E115.2 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 measures have been completed in accordance with the final approved *grading* plan, and the required special inspection reports have been submitted.

E109.2 Slope. The slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than 1 unit vertical in 2 units horizontal (50% slope) unless the permittee furnishes a soils engineering or an engineering geology report, or both, 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.

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.

section; appendix number has changed.

Justification: Amendment needed to ensure conformity with local policies. "Section E115.1" 2012 IBC Amendments is now "Section J105.10" 2015 IBC Amendments.

City of Houston Amendment

Analysis: COH amendment changed to update reference section; appendix number has changed.

Justification: Amendment needed to ensure conformity with local policies. "Section E115.2" 2012 IBC Amendments is now "Section J105.11" 2015 IBC Amendments.

City of Houston Amendment

Analysis: Base code has been updated to limit slope; COH amendment changed to include soils engineering/geology report.

Justification: Amendment needed to ensure conformity with local policies. "Section E109.2" 2012 IBC Amendments is now "Section J106.1" 2015 IBC Amendments.

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	<p>1.5 Ground water is not encountered.</p> <p>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).</p>	
<p>E110.1 General. Unless otherwise recommended in the approved soils engineering report, fills shall conform to the provisions of this section.</p> <p>In the absence of an approved soils engineering report, these provisions may be waived for minor fills not intended to support structures.</p>	<p>J107.1 General. Unless otherwise recommended in the <u>geotechnical</u> soils engineering report, fills shall comply with the provisions of this section.</p> <p>In the absence of an approved soils engineering report, these provisions may be waived for minor fills not intended to support structures.</p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to include soils engineering report.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E110.1" 2012 IBC Amendments is now "Section J107.1" 2015 IBC Amendments.</p>
<p>E110.2 Preparation of ground. Fill slopes shall not be constructed on natural slopes steeper than 1 unit vertical in 2 units horizontal (50% slope). The ground surface shall be prepared to receive fill by removing vegetation, noncomplying fill, topsoil and other unsuitable materials; scarifying to provide a bond with the new fill; and where slopes are steeper than 1 unit vertical in 5 units horizontal (20% slope) and the height is greater than 5 feet (1524 mm), by benching into sound bedrock or other competent material as determined by the soils engineer. The bench under the toe of a fill on a slope steeper than 1 unit vertical in 5 units horizontal (20% slope) shall be at least 10 feet (3048 mm) wide. 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 (3048 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.</p>	<p>J107.2 Surface preparation. Fill slopes shall not be constructed on natural slopes steeper than 1 unit vertical in 2 units horizontal (50% slope). 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. <u>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.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: COH amendment changed to include soils engineering report.</p> <p>Justification: Amendment needed to ensure conformity with local policies.</p> <p>"Section E110.2" 2012 IBC Amendments is now "Section J107.2" 2015 IBC Amendments.</p>
<p>E110.3 Fill material. Detrimental amounts of organic material shall not be permitted in fills. Except as permitted by the <i>building official</i>, no rock or similar irreducible material with a maximum dimension greater than 12 inches (305 mm) shall be buried or placed in fills.</p> <p>Exception: The <i>building official</i> 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:</p> <ol style="list-style-type: none"> 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 (3048 mm) or more below grade, measured vertically. 3. Rocks shall be placed so as to assure filling of all voids with well-graded soil. 	<p>J107.4 Fill material. Fill material shall not include organic, frozen or other deleterious materials. <u>Except as permitted by the <i>building official</i>, no rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall be included in fills.</u></p> <p>Exception: <u>The <i>building official</i> 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:</u></p> <ol style="list-style-type: none"> 1. <u>Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.</u> 2. <u>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.</u> 3. <u>Rocks shall be placed so as to assure filling of all voids with well-graded soil.</u> 	<p>City of Houston Amendment</p> <p>Analysis: No change to COH amendment; appendix number has changed.</p> <p>Justification: Amendment needed to ensure conformity with local policies. "Section E110.3" 2012 IBC Amendments is now "Section J107.4" 2015 IBC Amendments.</p>
<p>E110.5 Slope. The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes shall be no steeper than 1 unit vertical in 2 units horizontal (50% slope).</p>	<p>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 <u>a geotechnical an approved soils engineering report or engineering data.</u></p>	<p>City of Houston Amendment</p> <p>Analysis: New amendment providing administrative procedures for maximum slope on fills.</p> <p>Justification: Amendment needed to ensure conformity with local policies.</p>

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<p>E111.4 Modification of slope location. <u>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.</u></p>	<p>J108.4 Modification of slope location. <u>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.</u></p>	<p>City of Houston Amendment Analysis: No change to COH amendment; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E111.4" 2012 IBC Amendments is now "Section J108.4" 2015 IBC Amendments.</p>
<p>SECTION E112 DRAINAGE AND TERRACING</p> <p>E112.1 General. <u>Unless otherwise indicated on the approved grading plan, drainage facilities and terracing shall conform to the provisions of this section for cut or fill slopes steeper than 1 unit vertical in 3 units horizontal (33.3% slope).</u></p>	<p>J109.1 General. Unless otherwise indicated <u>by a registered design professional on the approved grading plan,</u> drainage facilities and terracing shall be provided in accordance with the requirements of this section.</p> <p>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).</p>	<p>City of Houston Amendment Analysis: COH amendment changed to update reference section; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E112.1" 2012 IBC Amendments is now "Section J109.1" 2015 IBC Amendments.</p>
<p>E112.3 Subsurface drainage. <u>Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.</u></p>	<p>J109.5 Subsurface drainage. <u>Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.</u></p>	<p>City of Houston Amendment Analysis: No change to COH amendment; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E112.3" 2012 IBC Amendments is now "Section J109.5" 2015 IBC Amendments.</p>
<p>E112.4 Disposal. <u>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.</u></p> <p><u>Building pads shall have a drainage gradient of 2 percent toward approved drainage facilities, unless waived by the building official.</u></p> <p>Exception: <u>The gradient from the building pad may be 1 percent if all of the following conditions exist throughout the permit area:</u></p> <ol style="list-style-type: none"> <u>No proposed fills are greater than 10 feet (3048 mm) in maximum depth.</u> <u>No proposed finish cut or fill slope faces have a vertical height in excess of 10 feet (3048 mm).</u> <u>No existing slope faces steeper than 1 unit vertical in 10 units horizontal (10% slope) have a vertical height in excess of 10 feet (3048 mm).</u> 	<p>J109.6 Disposal. <u>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.</u></p> <p><u>Building pads shall have a drainage gradient of 2 percent toward approved drainage facilities, unless waived by the building official.</u></p> <p>Exception: <u>The gradient from the building pad may be 1 percent if all of the following conditions exist throughout the permit area:</u></p> <ol style="list-style-type: none"> <u>No proposed fills are greater than 10 feet (3,048 mm) in maximum depth.</u> <u>No proposed finish cut or fill slope faces have a vertical height in excess of 10 feet (3,048 mm).</u> <u>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).</u> 	<p>City of Houston Amendment Analysis: No change to COH amendment; appendix number has changed. Justification: Amendment needed to ensure conformity with local policies. "Section E112.4" 2012 IBC Amendments is now "Section J109.6" 2015 IBC Amendments.</p>

<p>2012 Houston IBC – Appendix K Conventional Light-Frame Wood Construction for High-Wind Areas</p>	<p>2015 Houston IBC – Appendix K Conventional Light-Frame Wood Construction for High-Wind Areas</p>	<p>Code Analysis</p>
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<p>APPENDIX K</p> <p>{EDITORIAL NOTE: DELETE ENTIRE APPENDIX K (ADMINISTRATIVE PROVISIONS) AND REPLACE WITH THE FOLLOWING.}</p> <p>CONVENTIONAL LIGHT-FRAME WOOD CONSTRUCTION FOR HIGH-WIND AREAS</p>	<p>APPENDIX K</p> <p>{EDITORIAL NOTE: DELETE APPENDIX K TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING.}</p> <p>CONVENTIONAL LIGHT-FRAME WOOD CONSTRUCTION FOR HIGH-WIND AREAS</p>	<p>City of Houston Amendment Analysis: No change to COH amendment. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
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GENERAL****K101.1 Scope.** This chapter 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 m²) and accessory to Group R-3 occupancies need only comply with the roof-member-to-wall-tie requirements of Section K103.8.**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 m²) and accessory to Group R-3 occupancies need only comply with the roof-member-to-wall-tie requirements of Section K103.8.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.**SECTION K102
DEFINITION****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 (4 g/m²) 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.**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.****City of Houston Amendment****Analysis:** The existing amendment was modified.

Definitions have been relocated to chapter 2. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy.**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 1½-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.**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 1½-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.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.**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.**K103.2 Wall-to-foundation tie.** Exterior walls shall be tied to a continuous foundation system or an elevated foundation system in accordance with Section K105.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.**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 (1219 mm) on center.**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.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.**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 (1219 mm) on center. Tie straps shall be nailed with a minimum of 4 ten penny nails.**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.**City of Houston Amendment****Analysis:** No change to COH amendment.**Justification:** This amendment is needed to ensure conformity with state and local government policy.

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K103.5 Wall framing details. The spacing of studs in exterior walls shall be in accordance with Chapter 23. Mechanical fasteners complying with this chapter 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 (3658 mm) in width, two ties at each connection or a manufactured fastener designed to prevent uplift shall be provided.

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.

City of Houston Amendment

Analysis: The existing amendment was modified.

Justification: This amendment is needed to ensure conformity with state and local government policy.

K103.6 Wall sheathing. All exterior walls and required interior main cross-stud partitions shall be sheathed in accordance with Chapter 23.

K103.6 Wall sheathing. All exterior walls and required interior main cross-stud partitions shall be sheathed in accordance with Chapter 23.

City of Houston Amendment

Analysis: The existing amendment was modified.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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.

K103.7 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.

City of Houston Amendment

Analysis: The existing amendment was modified.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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.

K103.8 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.

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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.

K103.9 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.

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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.

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.

City of Houston Amendment

Analysis: No change to COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy.

**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.

**SECTION K104
ROOFS**

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City of Houston Amendment

Analysis: No change to COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy.

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.

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City of Houston Amendment

Analysis: No change to COH amendment.

Justification: This amendment is needed to ensure conformity

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<p>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.</p>	<p>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.</p>	<p>with state and local government policy. City of Houston Amendment Analysis: No change to COH amendment. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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. A foundation investigation may be required by the building official.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: The existing amendment was modified. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: The existing amendment was modified. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>K105.3 Wood piles. The spacing of wood piles shall not exceed 8 feet (2438 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-square (51613 mm²) piles shall have a minimum embedment length of 5 feet (1524 mm) and shall project not more than 8 feet (2438 mm) above undisturbed ground surface. Eight-inch (203 mm) taper piles shall have a minimum embedment length of 6 feet (1828 mm) and shall project not more than 7 feet (2134 mm) above undisturbed ground surface.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: The existing amendment was modified. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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.</p>	<p>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.</p>	<p>City of Houston Amendment Analysis: The existing amendment was modified. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>
<p>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 ¾-inch-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.</p>	<p>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 ¾-inch-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.</p>	<p>City of Houston Amendment Analysis: The existing amendment was modified. Justification: This amendment is needed to ensure conformity with state and local government policy.</p>

<p>2012 Houston IBC – Appendix L Life-Safety Requirements for Existing Buildings</p>	<p>2015 Houston IBC – Appendix L Life-Safety Requirements for Existing Buildings</p>	<p>Code Analysis</p>
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<p>APPENDIX L LIFE SAFETY REQUIREMENTS FOR EXISTING BUILDINGS</p>	<p>NOTE: IBC Appendix L is relocated to: APPENDIX D HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE APPENDIX L EDITORIAL NOTE: DELETE APPENDIX L TEXT IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING. LIFE-SAFETY REQUIREMENTS FOR EXISTING BUILDINGS</p>	<p>City of Houston Amendment Analysis: The COH amendment has been moved. See appendix D of the Houston amendments to the 2015 Existing Building Code Justification: This amendment has been relocated to appendix D of the Existing Building Code.</p>
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EDITORIAL NOTE: DELETE ENTIRE APPENDIX L (EARTHQUAKE RECORDING INSTRUMENTATION) AND REPLACE WITH THE FOLLOWING.

**SECTION L101
 GENERAL**

L101.1 Purpose. The purpose of this appendix chapter is to provide a reasonable degree of safety to persons occupying existing buildings by providing for alterations to such existing buildings that do not conform with the minimum requirements of this code. This appendix chapter shall apply to and the term "existing building" shall be construed to mean any building existing within the corporate limits of the city on January 1, 1986, and any building annexed into the corporate limits after that date.

Exception: Group U, R-3 occupancies, and Group B, F, M, and S-1 or S-2 occupancies (other than motor vehicle repair garages) that are single-story buildings without basements.

L101.2 Compliance program. The owners of existing buildings shall apply for inspection by December 31, 1991, or one year from the date of annexation of the building into the jurisdiction, whichever is later. The *building official* shall determine the relative hazard category of each application and shall schedule inspections starting with the highest hazard category.

In situations where the jurisdiction or any other regulatory authority requires a valid certificate of occupancy prior to licensing a use and no certificate of occupancy was issued at the time of construction, a Life Safety Compliance Certificate shall satisfy the requirements for an existing building. Inspections that are required for permitting or licensing shall be given priority over other inspections provided that the applicant advises the *building official* of the need. An application for inspection under this appendix chapter shall be regarded as an application for a certificate of occupancy for purpose of Section 10-3.1 of the *City Code*, and each application must be accompanied by the affidavit specified therein.

Hazard categories (from highest to lowest group):

1. Group A, Divisions 1 and 2; Group E; Group I; Group H, Divisions 1 and 2
2. Group A, Divisions 3, 4, and 5
3. Group R, Divisions 1 and 2; Group B, dining and drinking establishments; Group H other than Divisions 1 and 2.
4. Group B other than dining and drinking establishments and Groups F, M, and S.

The *building official* shall notify the building owner or the owner's agent of the scheduled inspections at least 30 days in advance. Within 15 days following notification of the inspection date, the owner or agent shall pay the applicable fees established in the city fee schedule. Following the inspection, the *building official* shall issue a Life Safety Compliance Certificate if there are no deficiencies. Where deficiencies are found, the owner or agent shall be advised in writing of the nature of the observed deficiencies that require correction. Such written notice shall not be construed to excuse compliance with any defects that may not have been observed or noted by the inspectors, and it shall be the duty of the owner to determine and correct all violations of this appendix chapter. It shall be the duty of the owner or agent to bring the building into full compliance with this appendix chapter within six months from the date that notice is given of deficiencies of inspection except to the extent that an extension of time has been granted as provided in Section L109.

NOTE: IBC Appendix L is relocated to:

**APPENDIX D
 HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE**

City of Houston Amendment

Analysis: The COH amendment has been moved. **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.

**SEE APPENDIX D
 HOUSTON AMENDMENTS TO THE 2015 EXISTING
 BUILDING CODE**

Justification: This amendment has been relocated to appendix D of the Existing Building Code.

NOTE: IBC Appendix L is relocated to:

**APPENDIX D
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City of Houston Amendment

Analysis: The COH amendment has been moved.

**SEE APPENDIX D
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Justification: This amendment has been relocated to appendix D of the Existing Building Code.

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Promptly after the *building official's* receipt of notice from the owner that the building is in full compliance with this appendix chapter, the *building official* shall inspect the building. Upon confirmation that the building is in full compliance with this appendix chapter, the *building official* shall issue a Life Safety Compliance Certificate for the building.

L101.3 Unsafe or hazardous conditions. Any condition in a building or building system, including, but not limited to, electrical, mechanical and plumbing systems, that is found to be unsafe, unsanitary or hazardous during a life safety compliance inspection shall be corrected as a part of the owner's compliance plan.

L101.4 Alternate materials and methods. Alternate materials and methods may be used, provided such materials or methods are found by the *building official* to be, for the purpose intended, at least the equivalent of that prescribed in this chapter in suitability, strength, effectiveness, fire resistance, durability and safety. The *building official* may permit alternates in conformance with Section 104.11.

L101.5 Dangerous buildings. The provisions of this appendix chapter shall not be construed to authorize the maintenance, use or keeping of any building in such condition that it constitutes a dangerous building under the *Houston Building Standards Code*, or to excuse or extend the time given for compliance with any order issued thereunder by the hearing officer.

**SECTION L102
EXITS**

L102.1 Number of means of egress. Every floor above the first story used for human occupancy shall have at least two separate means of egress, one of which may be an exterior fire escape complying with Section L102.4. Subject to the approval of the *building official*, an approved exit ladder device may be used in lieu of a fire escape when the construction feature or location of the building on the property makes the installation of a fire escape impracticable.

Exception: In all occupancies, second stories with an occupant load of 10 or less may have one means of egress.

An exit ladder device, when used in lieu of a fire escape, shall conform with UBC Standard 10-3. The use of an exit ladder device shall be permitted under the following conditions:

1. The device shall serve an occupant load of 10 or fewer, a single dwelling, or guest room.
2. The building does not exceed three stories in height.
3. Access to the device is adjacent to an opening as specified for emergency egress or rescue from a balcony.
4. The device, when operated, shall not pass in front of any building opening below the unit being served.
5. The means of activating the device for the ladder is accessible only from the opening or balcony served.
6. The device shall be installed so that it will not cause a person using it to be within 6 feet (1829 mm) of exposed electrical wiring.

L102.2 Stair construction. All required stairs shall have a minimum run of 9 inches (229 mm) and a maximum rise of 8 inches (203 mm) and shall have a minimum width of 30 inches (762 mm) exclusive of handrails. Every stairway shall have at least one handrail. A landing having a minimum 30-inch (762 mm) run in the

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City of Houston Amendment

Analysis: The COH amendment has been moved.

Justification: This amendment has been relocated to appendix D of the Existing Building Code.

City of Houston Amendment

Analysis: The COH amendment has been moved.

Justification: This amendment has been relocated to appendix D of the Existing Building Code.

City of Houston Amendment

Analysis: The COH amendment has been moved.

Justification: This amendment has been relocated to appendix

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direction of travel shall be provided at each point of access to the stairway.
Exception: Fire escapes as provided for in this section.
 Exterior stairs shall be of noncombustible construction.
Exception: On buildings of Types III, IV and V construction, provided the exterior stairs are constructed of wood of not less than 2-inch (51 mm) nominal thickness.

D of the Existing Building Code.

L102.3 Corridors. Corridors serving as an exit for an occupant load of 30 or more shall have walls and ceilings of not less than one-hour fire-resistive construction as required by this code. Existing walls surfaced with wood lath and plaster in good condition or ½-inch (12.7 mm) gypsum wallboard or openings with fixed wired glass set in metal frames are permitted for corridor walls and ceilings and occupancy separations when approved. Doors opening into such corridors shall be protected by 20-minute fire assemblies or solid wood doors not less than 1¾ inches (45 mm) thick. Where the existing frame will not accommodate a 1¾-inch-thick (45 mm) door, a 1¾-inch-thick (35 mm) solid bonded wood-core door or equivalent insulated steel door shall be permitted. Except for Group I occupancy patient rooms, treatment rooms and emergency rooms, doors shall be self-closing or automatic closing by smoke detection. Transoms and openings other than doors from corridors to rooms shall comply with Section 714 or be covered with a minimum of ½-inch (12.7 mm) gypsum wallboard or equivalent material on the room side.
Exception: Existing corridor walls, ceilings and opening protection not in compliance with the above may be continued when such buildings are protected with an approved automatic sprinkler system throughout the floor or when such existing corridors are at least 10 feet (3048 mm) or more in width.

NOTE: IBC Appendix L is relocated to:
APPENDIX D
HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE

City of Houston Amendment
Analysis: The COH amendment has been moved.
Justification: This amendment has been relocated to appendix D of the Existing Building Code.

L102.4 Fire escapes.
L102.4.1 Use as required exit. Existing fire escapes that, in the opinion of the building official, comply with the intent of this section may be used as one of the required exits. The location and anchorage of fire escapes shall be of approved design and construction.
L102.4.2 General requirements. Fire escapes shall comply with the following:
 1. Access from a corridor shall not be through an intervening room.
 2. All openings within 10 feet (3048 mm) shall be protected by ¾ hour fire assemblies. When located within a recess or vestibule, adjacent enclosure walls shall be of not less than one-hour fire-resistive construction.
 3. Egress from the building shall be by a clear opening having a minimum dimension of not less than 29 inches (737 mm). Such openings shall be openable from the inside without the use of a key or special knowledge or effort. The sill of an opening giving access shall not be more than 30 inches (762 mm) above the floor of the building or balcony.
 4. Fire escape stairways and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot (4.79 kN/m²) and shall be provided with a top and intermediate handrail on each side. The pitch of the stairway shall not exceed 60 degrees with a minimum width of 18 inches (457 mm). Treads shall be not less than 4 inches (102 mm) in width and the rise between treads shall not exceed 10 inches (254 mm). All stair and balcony railings shall support a horizontal force of not less than 50 pounds per lineal foot (729.5 N/m) of railing.

NOTE: IBC Appendix L is relocated to:
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City of Houston Amendment
Analysis: The COH amendment has been moved.
Justification: This amendment has been relocated to appendix D of the Existing Building Code.

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<p>5. Balconies shall be not less than 44 inches (1118 mm) in width with no floor opening, other than the stairway opening, greater than 3/4 inch (16 mm) in width. Stairway openings in such balconies shall be not less than 22 inches by 44 inches (599 mm by 1118 mm). The balustrade of each balcony shall be not less than 36 inches (914 mm) high with not more than 9 inches (229 mm) between balusters.</p> <p>6. Fire escapes shall extend to the roof or provide an approved gooseneck ladder between the top floor landing and the roof when serving buildings four or more stories in height having roofs with a slope of less than 4 units vertical in 12 units horizontal (33.3 % slope). Fire escape ladders shall be designed and connected to the building to withstand a horizontal force of 100 pounds per lineal foot (1459 N/m); each rung shall support a concentrated load of 500 pounds (2224 N) placed anywhere on the rung. All ladders shall be at least 15 inches (381 mm) wide, located within 12 inches (305 mm) of the building and shall be placed flatwise relative to the face of the building. Ladder rungs shall be 3/4 inch (19 mm) in diameter and shall be located 12 inches (305 mm) on center. Openings for roof access ladders through cornices and similar projections shall have minimum dimensions of 30 inches by 33 inches (762 mm by 838 mm).</p> <p>7. The lowest balcony shall be not more than 18 feet (5486 mm) from the ground. Fire escapes shall extend to the ground or be provided with counterbalanced stairs reaching to the ground.</p> <p>8. Fire escapes shall not take the place of stairways required by the codes under which the building was constructed.</p> <p>9. Fire escapes shall be kept clear and unobstructed at all times and maintained in good working order.</p>		
<p>L102.5 Exit and fire escape signs. Exit signs shall be provided as required by this code.</p> <p>Exception: The use of existing exit signs may be continued when found by the building official to provide adequate direction to the exits in emergency situations.</p> <p>All doors or windows providing access to a fire escape shall be provided with fire escape signs.</p> <p>L102.6 Exit illumination. Exits shall be illuminated as required by Section 1006.</p>	<p>NOTE: IBC Appendix L is relocated to: APPENDIX D HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment</p> <p>Analysis: The COH amendment has been moved.</p> <p>Justification: This amendment has been relocated to appendix D of the Existing Building Code.</p>
<p>SECTION L103 ENCLOSURE OF VERTICAL SHAFTS</p> <p>L103.1 Enclosure of vertical shafts. Interior vertical shafts, including but not limited to stairways, elevator hoistways, and service and utility shafts, shall be enclosed by a minimum one-hour fire-resistive construction. All openings into such shafts shall be protected with one-hour fire assemblies that shall be maintained self-closing or be automatic closing by smoke detection. All other openings shall be fire protected in an approved manner. Existing fusible link-type automatic door closing devices may be permitted if the fusible link rating does not exceed 135°F (57.2°C).</p> <p>Exceptions:</p> <ol style="list-style-type: none"> In other than Group I occupancies, an enclosure will not be required for openings serving only one adjacent floor. Stairways need not be enclosed in a continuous vertical shaft if each story is separated from other stories by one-hour fire resistive construction or 	<p>NOTE: IBC Appendix L is relocated to: APPENDIX D HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment</p> <p>Analysis: The COH amendment has been moved.</p> <p>Justification: This amendment has been relocated to appendix D of the Existing Building Code.</p>

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<p>approved wired-glass set in steel frames. In addition, all exit corridors shall be sprinklered, and each opening between the corridor and any occupant space shall have at least one sprinkler head above the opening on the tenant side. The sprinkler system may be supplied from the domestic water supply if of adequate volume and pressure.</p> <p>3. Vertical openings need not be protected if the building is protected by an approved automatic sprinkler system.</p>		
<p style="text-align: center;">SECTION L104 BUILDING ACCESS OR SPRINKLER PROTECTION</p> <p>L104.1 Building access or sprinkler protection. An approved automatic sprinkler system shall be provided throughout a basement or a story that:</p> <ol style="list-style-type: none"> Exceeds 1,500 square feet (139.3 m²) in area; and Does not have a minimum of 20 square feet (1.86 m²) of opening entirely above the adjoining ground level in each 50 lineal feet (15 240 mm), or fraction thereof, of exterior wall on at least one side of the building. Openings shall have a minimum clear dimension of 30 inches (762 mm). <p>Additionally, and notwithstanding the application of the foregoing criteria, if any portion of a basement is located more than 75 feet (22 860 mm) from required openings, the basement shall be provided with an approved automatic sprinkler system throughout. The distance of 75 feet shall be as measured in a straight line without regard to intervening walls or other objects.</p> <p>Exception: Existing parking garages with no other occupancies may substitute an automatic fire alarm system utilizing "rate-of-rise" detectors when coupled with a smoke-removal system capable of six air changes per hour.</p>	<p style="text-align: center;">NOTE: IBC Appendix L is relocated to: APPENDIX D HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment has been moved. Justification: This amendment has been relocated to appendix D of the Existing Building Code.</p>
<p style="text-align: center;">SECTION L105 STANDPIPES</p> <p>L105.1 Standpipes. Any building over four stories in height shall be provided with an approved Class I or Class III standpipe system.</p>	<p style="text-align: center;">NOTE: IBC Appendix L is relocated to: APPENDIX D HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment has been moved. Justification: This amendment has been relocated to appendix D of the Existing Building Code.</p>
<p style="text-align: center;">SECTION L106 SMOKE DETECTORS</p> <p>L106.1 General. Day-care centers, dwelling units, and guest rooms in hotels or lodging houses that are used for sleeping purposes shall be provided with smoke detectors installed in accordance with the requirements of the <i>Fire Code</i>.</p> <p>L106.2 Power source. Smoke detectors may be battery operated or may receive their primary power from the building wiring when such wiring is served from a commercial source. Wiring shall be permanent and without disconnecting switches other than those required for over current protection.</p> <p>L106.3 Location within dwelling units. In dwelling units, detectors shall be mounted on the ceiling or wall at a point centrally located in the corridor or area giving access to each separate sleeping area. Where sleeping units are on an upper level, the detector shall be placed at the center of the ceiling directly above the stairway. Detectors shall also be installed in the basements of dwelling units having stairways that open from the basement into the dwelling. Detectors shall sound an alarm audible in all sleeping areas of the dwelling unit in which they are located.</p> <p>L106.4 Location in efficiency dwelling units and hotels. In efficiency dwelling units, hotel suites and hotel sleeping units, detectors shall be located on the ceiling</p>	<p style="text-align: center;">NOTE: IBC Appendix L is relocated to: APPENDIX D HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment has been moved. Justification: This amendment has been relocated to appendix D of the Existing Building Code.</p>

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or wall of the main room or hotel sleeping unit. When sleeping units within an efficiency dwelling unit or hotel suite are on an upper level, the detector shall be placed at the center of the ceiling directly above the stairway. When actuated, the detector shall sound an alarm audible within the sleeping area of the dwelling unit, hotel suite, or sleeping unit in which it is located.

**SECTION L107
SEPARATION OF OCCUPANCIES**

L107.1 General. Occupancy separations shall be provided as specified in Section 508. When approved by the *building official*, existing wood lath and plaster in good condition or ½ inch (12.7 mm) gypsum wallboard may be acceptable where one-hour occupancy separations are required.

**SECTION L108
FIRE ALARMS**

L108.1 General. High-rise buildings as defined in Section 403 shall be equipped with an approved manual fire alarm system that will provide an audible signal at a constantly attended location within the building.

Exception: Systems that are connected to a central, proprietary, or remote station service.

**SECTION L109
EXTENSION OF TIME**

L109.1 Application. The owner of a building may apply to the *building official* for an extension of time to comply with any requirement of this appendix chapter. The owner of the building shall set forth the following information on such an application:

1. The specific requirements of this chapter for which the owner is seeking an extension of time;
2. The period of time the owner believes is necessary to meet the requirements; and
3. The reasons why the owner believes such an extension of time is necessary.

The application shall be accompanied by documents (examples of which include affidavits, photographs, receipts, loan applications, and contracts with third parties) demonstrating that the owner has made substantial and timely attempts to bring the building into full compliance with this appendix chapter.

The owner of the building shall swear to the accuracy of all facts stated in the application.

L109.2 Approval. No request for an extension of time shall be granted unless the *building official* finds that such an extension of time is reasonably necessary to perform the work and that granting such an extension of time will not result in an unreasonable risk to the safety of the occupants of the building or to others.

L109.3 Denial. If the *building official* denies any request for an extension of time under this section, the owner of the building may appeal such a decision to the General Appeals Board. If the General Appeals Board upholds the decision of the *building official* on the matter, the board's decision may be appealed to City Council, if notice of appeal, addressed to City Council, is delivered to the office of the City Secretary within 10 days of the date of the board's decision. Appeals shall be subject

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City of Houston Amendment

Analysis: The COH amendment has been moved.

Justification: This amendment has been relocated to appendix D of the Existing Building Code.

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Justification: This amendment has been relocated to appendix D of the Existing Building Code.

City of Houston Amendment

Analysis: The COH amendment has been moved.

Justification: This amendment has been relocated to appendix D of the Existing Building Code.

COLOR CODE INDEX:

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to City Council Rule 12 (see Section 2-2 of the *City Code*).

**SECTION L110
EXCEPTIONS**

L110.1 Application. The owner of a building may apply to the General Appeals Board for an exception from any requirement of this appendix chapter. The owner of the building shall set forth the following information on such application:

1. The specific requirements for which the owner is seeking an exception; and
2. The reasons the owner believes that an exception should be granted.

An application shall be sworn to by the owner of the building.

L110.2 Approval. No request for an exception shall be granted under this section unless the General Appeals Board finds that:

1. The application of certain requirements of this chapter is not reasonably necessary to protect the safety of the occupants of the building or other persons; or
2. Literal application of certain requirements of this chapter would have an unduly harsh impact so as to substantially destroy the value of the property to its owner after considering the totality of the circumstances.

L110.3 Denial. If the General Appeals Board denies any request for an exception under this section, the owner of the building may appeal such a decision to the City Council, if notice of the appeal, addressed to City Council, is delivered to the office of the City Secretary within 10 days of the date of the board's decision. Appeals shall be subject to City Council Rule 12 (see Section 2-2 of the *City Code*).

NOTE: IBC Appendix L is relocated to:

**APPENDIX D
HOUSTON AMENDMENTS TO THE 2015 EXISTING BUILDING CODE**

City of Houston Amendment:

Analysis: The COH amendment has been moved.

Justification: This amendment has been relocated to appendix D of the Existing Building Code.

2012 Houston IBC – Appendix M Minimum Provisions for Change of Occupancy

2015 Houston IBC

Code Analysis

APPENDIX M

{EDITORIAL NOTE: DELETE ENTIRE APPENDIX M (TSUNAMI-GENERATED FLOOD HAZARD) AND REPLACE WITH THE FOLLOWING.}

MINIMUM PROVISIONS FOR CHANGE OF OCCUPANCY

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment:

Analysis: The COH amendment was omitted.

Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

**SECTION M101
GENERAL**

M101.1 Change of occupancy. The character of the occupancy of existing buildings and structures may be changed, provided the building or structure meets the requirements of this appendix and the requirements of this code for new construction.

Every change of occupancy to one classified in a different group or a different division of the same group shall require a new certificate of occupancy, regardless of whether any alterations to the building are required by this appendix.

If the building or portion thereof does not conform to the requirements of this appendix for the proposed occupancy group or division, the building or portion thereof shall be made to conform to all requirements of this code as for new construction.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment:

Analysis: The COH amendment was omitted.

Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

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M101.2 Special uses or occupancies. Where the character or use of an existing building or part of an existing building is changed to one of the following special use or occupancy categories, the building or structure shall comply with all requirements of this code as for new construction.

1. Covered mall buildings.
2. Atriums.
3. Motor-vehicle-related occupancies.
4. Aircraft-related occupancies.
5. Motion picture projection rooms.
6. Stages and platforms.
7. Special amusement buildings.
8. Incidental use areas.
9. Hazardous materials.
10. Underground buildings.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

M101.3 Hazard category classification tables. The relative degree of hazard between different occupancy groups or between divisions of the same group is set forth in the hazard category classifications in Tables M103 through M105. An existing building may have its occupancy changed to an occupancy within the same hazard group or to an occupancy in a lesser hazard group without complying with all the provisions of this code regarding Heights and Areas in Table M103, Life Safety in Table M104, and Exterior Walls in Table M105.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

**SECTION M102
 STRUCTURAL SAFETY**

M102 Vertical loads. Buildings and structures shall comply with the requirements for vertical load for new construction.

Exceptions:

1. Analysis and test methods for evaluation of existing materials may be conducted using the methods specified in the code under which the building was constructed, or other standards as approved by the *building official*.
2. Existing roofs may be retained, provided that:
 - 2.1 Any unsafe or overloaded conditions are corrected; and
 - 2.2 The roof dead load is not increased by use, reroofing or added equipment.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

**SECTION M103
 HEIGHTS AND AREAS**

M103.1 Heights and areas of buildings and structures shall meet all the requirements of this code for the new occupancy as for new construction.

Exception: Existing buildings exceeding the maximum allowable heights and areas permitted for new buildings may undergo a change of occupancy if the hazard level of the new occupancy is equal to or less than the existing hazard group as shown in Table M 103.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

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<p>TABLE M103 HAZARD CATEGORIES AND CLASSIFICATIONS, HEIGHTS AND AREAS</p> <table border="1"> <thead> <tr> <th>RELATIVE HAZARD</th> <th>OCCUPANCY CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>H (highest hazard group)</td> </tr> <tr> <td>2</td> <td>A-1, A-2, A-3, A-4, I, R-1, R-2, R-4</td> </tr> <tr> <td>3</td> <td>E, F-1, S-1, M</td> </tr> <tr> <td>4</td> <td>B, F-2, S-2, A-5, R-3, U (lowest hazard group)</td> </tr> </tbody> </table>	RELATIVE HAZARD	OCCUPANCY CLASSIFICATION	1	H (highest hazard group)	2	A-1, A-2, A-3, A-4, I, R-1, R-2, R-4	3	E, F-1, S-1, M	4	B, F-2, S-2, A-5, R-3, U (lowest hazard group)	<p>SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment was omitted. Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.</p>
RELATIVE HAZARD	OCCUPANCY CLASSIFICATION											
1	H (highest hazard group)											
2	A-1, A-2, A-3, A-4, I, R-1, R-2, R-4											
3	E, F-1, S-1, M											
4	B, F-2, S-2, A-5, R-3, U (lowest hazard group)											
<p>SECTION M104 LIFE SAFETY AND EXITS</p> <p>M104.1 General. When a change of occupancy is made to a higher hazard group as shown in Table M104, all elements of the exit system shall comply with all of the requirements of this code as for new construction.</p> <p>Exception: Existing corridors and stairways meeting all of the requirements of Appendix L may be used.</p>	<p>SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment was omitted. Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.</p>										
<p>M104.2 Existing means of egress systems. Existing means of egress systems complying with Appendix L shall be accepted if the occupancy change is to an equal or lesser hazard group when evaluated in accordance with Table M104.</p> <p>M104.3 Separation of occupancies. When approved by the <i>building official</i>, existing wood lath and plaster in good condition or ½-inch-thick (12.7 mm) gypsum wallboard may be accepted where a one-hour fire barrier is required.</p>	<p>SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment was omitted. Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.</p>										
<p>M104.4 Vertical shafts.</p> <p>M104.4.1 Enclosure of shafts. Vertical shafts may be designed to meet either the requirements of atria as required by this code for new construction or the requirements of this section.</p>	<p>SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment was omitted. Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.</p>										
<p>M104.4.2 Stairways. Interior stairways shall be enclosed as required by this code for new construction when a change of occupancy is made to a higher hazard group as shown in Table M104.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> In other than Group I occupancies, an enclosure will not be required for openings serving only one adjacent floor and not connected with corridors or stairways serving other floors. Existing stairways not enclosed need not be enclosed in a continuous vertical shaft if each story is separated from other stories by one-hour fire-resistive construction or approved wired glass set in steel frames and all exit corridors are sprinklered. The openings between the corridor and occupant space shall have at least one sprinkler head above the openings on the tenant side. The sprinkler system may be supplied from the domestic water-supply system, provided the system is of adequate pressure, capacity and sizing for the combined domestic and sprinkler requirements. 	<p>SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE</p>	<p>City of Houston Amendment Analysis: The COH amendment was omitted. Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.</p>										

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M104.4.3 Other vertical shafts. Interior vertical shafts, including, but not limited to, elevator hoistways and service and utility shafts, shall be enclosed with a minimum of one-hour fire-resistive construction.

Exceptions:

1. Vertical openings other than stairways need not be enclosed if the entire building is provided with an approved automatic sprinkler system.
2. Where one-hour fire-resistive floor construction is required, vertical shafts need not be enclosed when such shafts are blocked at every floor level by the installation of not less than 2 full inches (51 mm) of solid wood or equivalent construction.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

M104.4.4 Openings into vertical enclosures. All openings into vertical shafts shall be protected by fire assemblies having a fire-protection rating of not less than one hour and shall be maintained self-closing or shall be automatic closing by actuation of a smoke detector. All other openings shall be fire protected in an approved manner. Existing fusible link-type automatic door-closing devices may be permitted if the fusible link rating does not exceed 135°F (57°C).

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

TABLE M104

HAZARD CATEGORIES AND CLASSIFICATIONS, LIFE SAFETY AND EXITS

RELATIVE HAZARD	OCCUPANCY CLASSIFICATION
1	H (highest hazard group)
2	I-2, I-3, I-4
3	A, E, I-1, M, R-1, R-2, R-4
4	B, F-1, R-3, S-1
5	F-2, S-2
6	U (lowest hazard group)

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

SECTION M105

EXTERIOR WALLS AND STAIRWAY ENCLOSURES

M105.1 Fire resistance of walls. Exterior walls shall have fire resistance and opening protection as set forth in this code for new construction. This provision shall not apply to walls at right angles to the property line.

Exceptions:

1. Where a fire-resistive rating greater than two hours is required for a building of any type of construction, existing noncombustible exterior walls having a fire-resistive rating equivalent to two hours, as determined by Section 720.1, may be accepted, provided:
 - 1.1. The building is classified as Group A, B, F, M or S; and
 - 1.2. The building does not exceed three stories in height.
2. Existing exterior walls shall be accepted if the occupancy is changed to a hazard group that is equal to or less than the existing occupancy as defined in Table M105.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

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M105.2 Opening protection. Openings in exterior walls shall be protected as required for new construction. When openings in the exterior walls are required to be protected due to distance from the property line, the sum of the area of such openings shall not exceed 50 percent of the total area of the wall in each story.

Exceptions:

1. Protected openings shall not be required for Group R-1 occupancies that do not exceed three stories in height and are located not less than 3 feet (914 mm) from the property line.
2. Where opening protection is required, an automatic fire-extinguishing system throughout may be substituted for opening protection.
3. Opening protection may be omitted when the change of occupancy is to an equal or lower hazard classification in accordance with Table M105.

SEE HOUSTON AMENDED 2015 EXISTING BUILDING CODE

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

**TABLE M105
 HAZARD CATEGORIES AND CLASSIFICATIONS OF EXTERIOR WALLS AND STAIRWAY ENCLOSURES**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATION
1	H (highest hazard group)
2	F-1, M, S-1
3	A, B, E, I, R
4	F-2, S-2, U (lowest hazard group)

City of Houston Amendment

Analysis: The COH amendment was omitted.
Justification: This amendment is no longer needed since Change of Occupancy is now part of chapter 10 of the Existing Building Code.

2012 Houston IBC – Appendix N Airport Sound Attenuation Requirements

2015 Houston IBC – Appendix N Airport Sound Attenuation Requirements

Code Analysis

**APPENDIX N
 AIRPORT SOUND ATTENUATION REQUIREMENTS**

**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.

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.

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.

City of Houston Amendment

Analysis: The existing amendment was modified.
Justification: This amendment is necessary to continue established life safety requirements.

**SECTION N201
 DEFINITIONS**

N201.1 Definitions. For purposes of these provisions, the following words shall have the meanings shown herein.

SOUND TRANSMISSION CLASS (STC). An integer rating relating to the quality of

**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).

City of Houston Amendment

Analysis: The existing amendment was modified.
 Definitions have been relocated to chapter 2. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new

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sound attenuation for building partitions such as walls, ceilings, doors, and windows.

definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from N201 to N102.

**SECTION N301
WALLS**

N301.1 General. The specific exterior wall assemblies set forth in N301.2 and N301.3 shall include the interior finishes set forth therein.

**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.

Exception: Exterior wall assemblies or materials that have been tested or listed with a minimum STC rating of 40.

N301.2 Brick veneer. When exterior walls are constructed using brick veneer, a minimum of ½ inch gypsum drywall shall be applied as the interior finish.

N103.2 Brick veneer. When exterior walls are constructed using brick veneer, a minimum of ½-inch gypsum drywall shall be applied as the interior finish.

N301.3 Vinyl or cement sidings. When exterior walls are constructed using vinyl or cement sidings, a minimum of 5/8 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 5/8-inch gypsum drywall shall be applied as the interior finish.

N301.4 Other assemblies and materials. All other exterior wall assemblies or materials shall have a tested or listed minimum STC rating of 40.

N103.4 Other assemblies and materials. All other exterior wall assemblies or materials shall have a tested or listed minimum STC rating of 40.

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from N301 to N103.

**SECTION N401
WINDOWS**

N401.1 Windows. All windows shall have a minimum STC rating of 40 when tested in accordance with ASTM E 90.

**SECTION N104
WINDOWS**

N104.1 Windows. All windows shall have a minimum STC rating of 40 when tested in accordance with ASTM E 90.

N401.2 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.

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.

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from N401 to N104.

**SECTION N501
DOORS**

N501.1 Doors. All exterior doors shall be provided with a minimum STC Rating of 40 when tested in accordance with ASTM E 90.

**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.

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.

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from N501 to N105.

**SECTION N601
ROOF/CEILING ASSEMBLIES**

N601.1 General. Roof/ceiling assemblies shall be constructed in accordance with the requirements of N601.2 or N601.3.

**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.

Exception: Roof/ceiling assemblies or materials that have been tested or listed with a minimum STC rating of 40.

N601.2 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.

N106.2 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

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from N601 to N106.

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N601.3 Ceilings without attic space above. Ceilings without attic space above shall be insulated with a minimum of 5/8-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.

insulated with a minimum of 5/8-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.

2012 Houston IBC – Appendix R Reuse of Materials

2015 Houston IBC – Appendix R Reuse of Materials

Code Analysis

**APPENDIX R
REUSE OF MATERIALS**

**APPENDIX R
REUSE OF MATERIALS**

**SECTION R101
GENERAL**

**SECTION R101
GENERAL**

R101.1 Scope. The reuse of materials shall be allowed in accordance with the provisions of this section.

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 when materials may be considered for reuse where integrity of the materials under consideration has not been compromised.

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.

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.

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy.

**SECTION R201
DEFINITIONS**

R201.1 General. The following words and terms shall, for the purposes of this appendix, have the meanings shown herein.

DOWN CYCLED MATERIALS. Material that may be used more than once, but that cannot be used for the same purpose for which it was originally intended. This material would require some special processing. For example, re-using crushed concrete as an aggregate for more concrete.

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 code official.

IRREGULAR MATERIALS. Materials that have been made by a manufacturer, but do not meet the exact specifications of the product and cannot be sold for their specific purpose. These materials can be down-cycled. For example, an irregular paver meant for commercial use could be used for residential purposes.

RECOVERABLE RESOURCES. Materials that have useful physical or chemical properties after serving their original purposes. Recoverable resources

**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.

City of Houston Amendment

Analysis: The existing amendment has been modified.

Definitions have been relocated to chapter 2. The City has attempted to maintain the ICC format of all definitions being located to Chapter 2 in all the codes. Where necessary these new definitions have been amended to match state and local policy.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from R201.1 to R102.1.

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can be re-used or recycled for the same or for other purposes.

RECYCLABLE MATERIALS. Materials that normally have been or would be discarded (such as scrap and waste) and materials that may be reused after undergoing some kind of physical or chemical processing. Recyclable materials may include materials that have been used and deformed prior to demolition or deconstruction. Recyclable materials do not include those items that may be used again for their original purposes or functions without any special processing.

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.

RECYCLED MATERIALS. Materials that contain post-industrial or post-consumer waste as defined by the Federal Trade Commission.

REUSED MATERIALS. Materials that are reused more than once in their original form for their original purpose or for another purpose without any special processing.

**SECTION R301
ACCEPTABLE APPLICATIONS**

R301.1 Acceptable applications. The reused materials are allowed as identified in Table R301.1.

**SECTION R103
ACCEPTABLE APPLICATIONS**

R103.1 Acceptable applications. The reused materials are allowed as identified in Table R103.1.

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from R301.1 to R103.1.

**TABLE R301.1
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	Repetitive members in original capacity, structural if identifiable	Steel with mill test certificates may be reused	4

**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	4
	Metal joists	If identifiable, can be used for structure		4

City of Houston Amendment

Analysis: No changes were made to the COH amendment.

Justification: This amendment is needed to ensure conformity with state and local government policy. Section has been changed from R301.1 to R103.1.

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	<u>purlins and girts</u>		in original capacity; steel design values for materials manufactured after 1910 can be found in Design Guide 15: <u>AISC Rehabilitation and Retrofit Guide</u> ; weldability for sections produced prior to the 1950s need testing.	
	<u>Metal joists</u>	<u>if identifiable, can be used for structure</u>		<u>4</u>
<u>Chapter 17</u>	<u>Structural steel— columns, pillars and posts</u>	<u>Reuse in structural capacity with special inspection</u>		<u>4</u>
WOOD, AGRI-FIBER, AND PLASTIC MATERIALS				
	<u>Columns, pillars and posts</u>	<u>Reuse in original capacity.</u>		
	<u>Dimensional lumber, 4-foot-long minimum unstamped (includes roughhewn)</u>	<u>Install as one dimension higher than required, or:</u> <u>(1) Floor plates;</u> <u>(2) Second top plates;</u> <u>(3) Fillers, fire-blocking and nailers; and</u> <u>(4) Strut-bracing, bridging, and ledgers (if ledger is one dimension larger than what otherwise might be used)</u>	<u>For species not easily recognized may need special inspection.</u>	
	<u>Dimensional lumber (stud capacity), with original stamp (includes roughhewn)</u>	<u>Reused in original capacity.</u> <u>(1) Studs (cripple, trim and jack), joists and rafters; or</u> <u>(2) Wind bracing</u>		<u>8</u>
	<u>Glue-laminated beams, I-joists, laminated veneer lumber, parallel strand lumber and oriented strand lumber (unstamped)</u>	<u>Install as per dimensional lumber</u>		
	<u>Trusses</u>		<u>Trusses to be inspected by structural engineer as installed.</u>	<u>4</u>
	<u>Utility poles (untreated)</u>			<u>3</u>
	<u>Oriented strand board (OSB) and plywood</u>	<u>Reuse in original capacity</u>		<u>8</u>
	<u>Plastic lumber</u>	<u>Reuse in original capacity</u>		
	<u>Masonite and chipboard</u>	<u>Reuse in original capacity</u>		<u>8</u>
WINDOWS DOORS INSULATION SIDING AND ROOFING				
<u>Chapter 7</u>	<u>Insulation— batt, gently used</u>	<u>Reuse in horizontal capacities only, such as attics or sound attenuation in cavities.</u>	<u>25% reduction in R-value to be assumed.</u>	<u>2</u>
<u>Chapter 7</u>	<u>Insulation— board, gently used</u>	<u>Reuse in original capacity.</u>	<u>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).</u>	<u>2</u>
	<u>Windows</u>	<u>Reuse in original capacity or as decor</u>		<u>2</u>
	<u>Doors and door assemblies</u>	<u>Reuse in original capacity</u>		<u>2, 5</u>
	<u>Glass sheet and plexiglass</u>	<u>Reuse in original capacity or as decor</u>		<u>2</u>
	<u>Stained Glass</u>	<u>Reuse in original capacity</u>		<u>2</u>
	<u>Siding— cement board, wood, vinyl, metal panels</u>	<u>Reuse in original capacity</u>		<u>5</u>
	<u>Soffits— cement board, wood, perforated metal panels, aluminum panels</u>	<u>Reuse in original capacity</u>		<u>5</u>
	<u>Roof tiles</u>	<u>Reuse in original capacity, or as fencing or ornamental decoration.</u>		
	<u>Metal roof panels</u>	<u>Reuse in original capacity</u>		
FINISHES				
<u>Section 803</u>	<u>Acoustical ceiling tiles</u>	<u>Reuse in original capacity</u>		<u>5</u>
<u>Section 804</u>	<u>Carpet and carpet pad</u>	<u>Reuse in original capacity</u>		
<u>Section 803</u>	<u>Drywall</u>	<u>Reuse in original capacity</u>		

<u>Chapter 17</u>	<u>Structural steel— columns, pillars, and posts</u>	<u>Reuse in structural capacity with special inspection</u>	<u>be found in Design Guide 15: <u>AISC Rehabilitation and Retrofit Guide</u>; weldability for sections produced prior to the 1950s need testing.</u>	<u>4</u>
WOOD, AGRI-FIBER, AND PLASTIC MATERIALS				
	<u>Columns, pillars, and posts</u>	<u>Reuse in original capacity.</u>		
	<u>Dimensional lumber, 4-foot-long minimum unstamped (includes roughhewn)</u>	<u>Install as one dimension higher than required, or:</u> <u>(1) Floor plates;</u> <u>(2) Second top plates;</u> <u>(3) Fillers, fire-blocking, and nailers; and</u> <u>(4) Strut-bracing, bridging, and ledgers (if ledger is one dimension larger than what otherwise might be used)</u>	<u>For species not easily recognized may need special inspection.</u>	
	<u>Dimensional lumber (stud capacity), with original stamp (includes roughhewn)</u>	<u>Reused in original capacity.</u> <u>(1) Studs (cripple, trim and jack), joists and rafters; or</u> <u>(2) Wind bracing</u>		<u>8</u>
	<u>Glue-laminated beams, I-joists, laminated veneer lumber, parallel strand lumber and oriented strand lumber (unstamped)</u>	<u>Install as per dimensional lumber</u>		
	<u>Trusses</u>		<u>Trusses to be inspected by structural engineer as installed.</u>	<u>4</u>
	<u>Utility poles (untreated)</u>			<u>3</u>
	<u>Oriented strand board (OSB) and plywood</u>	<u>Reuse in original capacity</u>		<u>8</u>
	<u>Plastic lumber</u>	<u>Reuse in original capacity</u>		
	<u>Masonite and chipboard</u>	<u>Reuse in original capacity</u>		<u>8</u>
WINDOWS DOORS INSULATION SIDING AND ROOFING				
<u>Chapter 7</u>	<u>Insulation— batt, gently used</u>	<u>Reuse in horizontal capacities only, such as attics or sound attenuation in cavities.</u>	<u>25% reduction in R-value to be assumed.</u>	<u>2</u>
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	<u>Windows</u>	<u>Reuse in original capacity or as decor</u>		<u>2</u>
	<u>Doors and door assemblies</u>	<u>Reuse in original capacity</u>		<u>2, 5</u>
	<u>Glass sheet and plexiglass</u>	<u>Reuse in original capacity or as decor</u>		<u>2</u>
	<u>Stained Glass</u>	<u>Reuse in original capacity</u>		<u>2</u>
	<u>Siding— cement board, wood, vinyl, metal panels</u>	<u>Reuse in original capacity</u>		<u>5</u>
	<u>Soffits— cement board, wood, perforated metal panels, aluminum panels</u>	<u>Reuse in original capacity</u>		<u>5</u>
	<u>Roof tiles</u>	<u>Reuse in original capacity, or as fencing or ornamental decoration.</u>		
	<u>Metal roof panels</u>	<u>Reuse in original capacity</u>		
FINISHES				
<u>Section 803</u>	<u>Acoustical ceiling tiles</u>	<u>Reuse in original capacity</u>		<u>5</u>
<u>Section 804</u>	<u>Carpet and carpet pad</u>	<u>Reuse in original capacity</u>		
<u>Section 803</u>	<u>Drywall</u>	<u>Reuse in original capacity</u>		

	<u>Windows</u>	<u>Reuse in original capacity or as decor</u>		<u>2</u>
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	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.

Chapter 8	Flooring—wood	Reuse in original capacity		
	Cement board	Reuse in original capacity		
	Hinges and other hardware	Reuse in original capacity		1, 5

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