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2012 International Fire Code®

First Printing: May 2011

ISBN: 978-1-60983-046-5 (soft-cover edition)
ISBN: 978-1-60983-045-8 (loose-leaf edition)

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PRINTED IN THE U.S.A.

PREFACE

Introduction

Internationally, code officials recognize the need for a modern, up-to-date fire code addressing conditions hazardous to life and property from fire, explosion, handling or use of hazardous materials and the use and occupancy of buildings and premises. The *International Fire Code*®, in this 2012 edition, is designed to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small.

This comprehensive fire code establishes minimum regulations for fire prevention and fire protection systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new system designs. This 2012 edition is fully compatible with all of the *International Codes*® (I-Codes®) published by the International Code Council (ICC)®, including the *International Building Code*®, *International Energy Conservation Code*®, *International Existing Building Code*®, *International Fuel Gas Code*®, *International Green Construction Code*™ (to be available March 2012), *International Mechanical Code*®, *ICC Performance Code*®, *International Plumbing Code*®, *International Private Sewage Disposal Code*®, *International Property Maintenance Code*®, *International Residential Code*®, *International Swimming Pool and Spa Code*™ (to be available March 2012), *International Wildland-Urban Interface Code*® and *International Zoning Code*®.

The *International Fire Code* provisions provide many benefits, among which is the model code development process that offers an international forum for fire safety professionals to discuss performance and prescriptive code requirements. This forum provides an excellent arena to debate proposed revisions. This model code also encourages international consistency in the application of provisions.

Development

The first edition of the *International Fire Code* (2000) was the culmination of an effort initiated in 1997 by a development committee appointed by ICC and consisting of representatives of the three statutory members of the International Code Council: Building Officials and Code Administrators International, Inc. (BOCA), International Conference of Building Officials (ICBO) and Southern Building Code Congress International (SBCCI). The intent was to draft a comprehensive set of fire safety regulations consistent with and inclusive of the scope of the existing model codes. Technical content of the latest model codes promulgated by BOCA, ICBO and SBCCI was utilized as the basis for the development, followed by public hearings in 1998 and 1999 to consider proposed changes. This 2012 edition presents the code as originally issued, with changes reflected in the 2003, 2006 and 2009 editions and further changes approved through the ICC Code Development Process through 2010. A new edition such as this is promulgated every three years.

This code is founded on principles intended to establish provisions consistent with the scope of a fire code that adequately protects public health, safety and welfare; provisions that do not unnecessarily increase construction costs; provisions that do not restrict the use of new materials, products or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

Adoption

The *International Fire Code* is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction's laws. At the time of adoption, jurisdictions should insert the appropriate information in provisions requiring specific local information, such as the name of the adopting jurisdiction. These locations are shown in bracketed words in small capital letters in the code and in the sample ordinance. The sample adoption ordinance on page xxi addresses several key elements of a code adoption ordinance, including the information required for insertion into the code text.

Maintenance

The *International Fire Code* is kept up-to-date through the review of proposed changes submitted by code enforcing officials, industry representatives, design professionals and other interested parties. Proposed changes are carefully considered through an open code development process in which all interested and affected parties may participate.

The contents of this work are subject to change both through the Code Development Cycles and the governmental body that enacts the code into law. For more information regarding the code development process, contact the Code and Standard Development Department of the International Code Council.

While the development procedure of the *International Fire Code* assures the highest degree of care, ICC, its members and those participating in the development of this code do not accept any liability resulting from compliance or noncompliance with the provisions because ICC and its founding members do not have the power or authority to police or enforce compliance with the contents of this code. Only the governmental body that enacts the code into law has such authority.

Code Development Committee Responsibilities (Letter Designations in Front of Section Numbers)

In each code development cycle, proposed changes to the code are considered at the Code Development Hearings by the International Fire Code Development Committee, whose action constitutes a recommendation to the voting membership for final action on the proposed change. Proposed changes to a code section that has a number beginning with a letter in brackets are considered by a different code development committee. For example, proposed changes to code sections that have [B] in front of them (e.g. [B] 607.2) are considered by the appropriate International Building Code Development Committee (IBC-Means of Egress) at the code development hearings.

The content of sections in this code that begin with a letter designation is maintained by another code development committee in accordance with the following:

- [B] = International Building Code Development Committee (IBC-Fire Safety, General, Means of Egress or Structural);
- [EB] = International Existing Building Code Development Committee;
- [FG] = International Fuel Gas Code Development Committee;
- [M] = International Mechanical Code Development Committee; and
- [P] = International Plumbing Code Development Committee.

Note that for the development of the 2015 edition of the I-Codes, there will be two groups of code development committees and they will meet in separate years. The groupings are as follows:

Group A Codes (Heard in 2012, Code Change Proposals Deadline: January 3, 2012)	Group B Codes (Heard in 2013, Code Change Proposals Deadline: January 3, 2013)
International Building Code	Administrative Provisions (Chapter 1 all codes except IRC and ICCPC, administrative updates to currently referenced standards, and designated definitions)
International Fuel Gas Code	International Energy Conservation Code
International Mechanical Code	International Existing Building Code
International Plumbing Code	International Fire Code
International Private Sewage Disposal Code	International Green Construction Code
	ICC Performance Code
	International Property Maintenance Code
	International Residential Code
	International Swimming Pool and Spa Code
	International Wildland-Urban Interface Code
	International Zoning Code

Code change proposals submitted for code sections that have a letter designation in front of them will be heard by the respective committee responsible for such code sections. Because different committees will meet in different years, it is possible that some proposals for this code will be heard by a committee in a different year than the year in which the primary committee for this code meets.

For example, Section 907.2.13.1.2 of this code (and the IBC) is designated as the responsibility of the International Mechanical Code Development Committee. This committee will conduct its code development hearings in 2012 to consider code change proposals in its purview, which includes any proposals to Section 907.2.13.1.2.

Note also that every section of Chapter 1 of this code is designated as the responsibility of the Administrative Code Development Committee, and that committee is part of the Group B portion of the hearings. This committee will conduct its code development hearings in 2013 to consider all code change proposals for Chapter 1 of this code and proposals for Chapter 1 of all I-Codes. Therefore, any proposals received for Chapter 1 of this code will be deferred for consideration in 2013 by the Administrative Code Development Committee.

It is very important that anyone submitting code change proposals understand which code development committee is responsible for the section of the code that is the subject of the code change proposal. For further information on the code development committee responsibilities, please visit the ICC web site at www.iccsafe.org/scoping.

Marginal Markings

Solid vertical lines in the margins within the body of the code indicate a technical change from the requirements of the 2009 edition. Deletion indicators in the form of an arrow (➡) are provided in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.

A single asterisk [*] placed in the margin indicates that text or a table has been relocated within the code. A double asterisk [**] placed in the margin indicates that the text or table immediately following it has been relocated there from elsewhere in the code.

The following table indicates such relocations in the 2012 *International Fire Code*:

2012 LOCATION (**)	2009 LOCATION (*)
109.2	107.5
1004.1.1.2	1004.6
1008.1.9.8	1008.1.4.4
1028.10.1	1017.4
1028.10.1.1	1017.4.1
1028.10.1.2	1017.4.3
1103.2	510.3

Note that these * and ** margin markings are not shown for the Chapter reorganization of the IFC in this 2012 edition. For information on this reorganization, please see page vii.

Coordination between the International Building and Fire Codes

Because the coordination of technical provisions is one of the benefits of adopting the ICC family of model codes, users will find the ICC codes to be a very flexible set of model documents. To accomplish this flexibility some technical provisions are duplicated in some of the model code documents. While the *International Codes* are provided as a comprehensive set of model codes for the built environment, documents are occasionally adopted as a stand-alone regulation. When one of the model documents is adopted as the basis of a stand-alone code, that code should provide a complete package of requirements with enforcement assigned to the entity for which the adoption is being made.

The model codes can also be adopted as a family of complementary codes. When adopted together there should be no conflict of any of the technical provisions. When multiple model codes are adopted in a jurisdiction it is important for the adopting authority to evaluate the provisions in each code document and determine how and by which agency(ies) they will be enforced. It is important, therefore, to understand that where technical provisions are duplicated in multiple model documents that enforcement duties must be clearly assigned by the local adopting jurisdiction. ICC remains committed to providing state-of-the-art model code documents that, when adopted locally, will reduce the cost to government of code adoption and enforcement and protect the public health, safety and welfare.

Italicized Terms

Selected terms set forth in Chapter 2, Definitions, are italicized where they appear in code text. Such terms are not italicized where the definition set forth in Chapter 2 does not impart the intended meaning in the use of the term. The terms selected have definitions which the user should read carefully to facilitate better understanding of the code.

Effective Use of the International Fire Code

The *International Fire Code*® (IFC®) is a model code that regulates minimum fire safety requirements for new and existing buildings, facilities, storage and processes. The IFC addresses fire prevention, fire protection, life safety and safe storage and use of hazardous materials in new and existing buildings, facilities and processes. The IFC provides a total approach of controlling hazards in all buildings and sites, regardless of the hazard being indoors or outdoors.

The IFC is a design document. For example, before one constructs a building, the site must be provided with an adequate water supply for fire-fighting operations and a means of building access for emergency responders in the event of a medical emergency, fire or natural or technological disaster. Depending on the building's occupancy and uses, the IFC regulates the various hazards that may be housed within the building, including refrigeration systems, application of flammable finishes, fueling of motor vehicles, high-piled combustible storage and the storage and use of hazardous materials. The IFC sets forth minimum requirements for these and other hazards and contains requirements for maintaining the life safety of building occupants, the protection of emergency responders, and to limit the damage to a building and its contents as the result of a fire, explosion or unauthorized hazardous material discharge.

Arrangement and Format of the 2012 IFC

Before applying the requirements of the IFC it is beneficial to understand its arrangement and format. The IFC, like other codes published by the International Code Council, is arranged and organized to follow sequential steps that generally occur during a plan review or inspection. The 2012 IFC has been reorganized into 7 Parts as illustrated in the tables below. Each Part represents a broad subject matter and includes the chapters that logically fit under the subject matter of each Part. It is also foreseeable that additional chapters will need to be added in the future as regulations for new processes or operations are developed. Accordingly, the reorganization was designed to accommodate such future chapters by providing reserved (unused) chapters in several of the Parts. This will allow the subject matter parts to be conveniently and logically expanded without requiring a major renumbering of the IFC chapters.

2012 REORGANIZATION OF THE IFC	
Parts and Chapters	Subject Matter
Part I – Chapters 1 and 2	Administrative and definitions
Part II – Chapters 3 and 4	General safety provisions
Part III – Chapters 5 through 11	Building and equipment design features
Part III - Chapters 12 through 19	Reserved for future use
Part IV – Chapters 20 through 36	Special occupancies and operations
Part IV – Chapters 37 through 49	Reserved for future use
Part V – Chapters 50 through 67	Hazardous materials
Part V – Chapters 68 through 79	Reserved for future use
Part VI – Chapter 80	Referenced standards
Part VII - Appendices A through J	Adoptable and informational appendices

2012 IFC CHAPTER REORGANIZATION		
CHAPTER NUMBER 2009	CHAPTER NUMBER 2012	CHAPTER TITLE
1	1	Scope and Administration
2	2	Definitions
3	3	General Requirements
4	4	Emergency Planning and Preparedness
5	5	Fire Service Features
6	6	Building Services and Systems
7	7	Fire-Resistance-Rated Construction
8	8	Interior Finish, Decorative Materials and Furnishings
9	9	Fire Protection Systems
10	10	Means Of Egress
11	20	Aviation Facilities
12	21	Dry Cleaning
13	22	Combustible Dust-Producing Operations
14	33	Fire Safety during Construction and Demolition
15	24	Flammable Finishes
16	25	Fruit and Crop Ripening
17	26	Fumigation and Insecticidal Fogging
18	27	Semiconductor Fabrication Facilities
19	28	Lumber Yards and Woodworking Facilities
20	29	Manufacture of Organic Coatings
21	30	Industrial Ovens
22	23	Motor Fuel-Dispensing Facilities and Repair Garages
23	32	High-Piled Combustible Storage
24	31	Tents and Other Membrane Structures
25	34	Tire Rebuilding and Tire Storage
26	35	Welding and Other Hot Work
27	50	Hazardous Materials—General Provisions
28	51	Aerosols
29	52	Combustible Fibers
30	53	Compressed Gases
31	54	Corrosive Materials
32	55	Cryogenic Fluids
33	56	Explosives and Fireworks
34	57	Flammable and Combustible Liquids
35	58	Flammable Gases and Flammable Cryogenic Fluids
36	59	Flammable Solids
37	60	Highly Toxic and Toxic Materials
38	61	Liquefied Petroleum Gases
39	62	Organic Peroxides

(continued)

2012 IFC CHAPTER REORGANIZATION—continued		
CHAPTER NUMBER 2009	CHAPTER NUMBER 2012	CHAPTER TITLE
40	63	Oxidizers, Oxidizing Gases and Oxidizing Cryogenic Fluids
41	64	Pyrophoric Materials
42	65	Pyroxylin (Cellulose Nitrate) Plastics
43	66	Unstable (Reactive) Materials
44	67	Water-Reactive Solids and Liquids
45	36	Marinas
46	11	Construction Requirements for Existing Buildings
47	80	Referenced Standards
Appendix A-J	Appendix A-J	No changes in reorganization

The IFC requirements for fire-resistive construction, interior finish, fire protection systems, means of egress and construction safeguards are directly correlated to the chapters containing parallel requirements in the IBC, as follows:

IFC Chapter	Subject
7	Fire-resistance-rated construction
8	Interior finish, decorative materials and furnishings
9	Fire protection systems
10	Means of egress
33	Fire safety during construction and demolition

The following is a chapter-by-chapter synopsis of the scope and intent of the provisions of the *International Fire Code*:

PART I—ADMINISTRATIVE

Chapter 1 Scope and Administration. This chapter contains provisions for the application, enforcement and administration of subsequent requirements of the code. In addition to establishing the scope of the code, Chapter 1 identifies which buildings and structures come under its purview. Chapter 1 is largely concerned with maintaining “due process of law” in enforcing the regulations contained in the body of the code. Only through careful observation of the administrative provisions can the code official reasonably expect to demonstrate that “equal protection under the law” has been provided.

Chapter 2 Definitions. All terms that are defined in the code are listed alphabetically in Chapter 2. While a defined term may be used in one chapter or another, the meaning provided in Chapter 2 is applicable throughout the code.

Where understanding of a term’s definition is especially key to or necessary for understanding of a particular code provision, the term is shown in *italics* wherever it appears in the code. This is true only for those terms that have a meaning that is unique to the code. In other words, the generally understood meaning of a term or phrase might not be sufficient or consistent with the meaning prescribed by the code; therefore, it is essential that the code-defined meaning be known.

Guidance regarding tense, gender and plurality of defined terms as well as guidance regarding terms not defined in this code are also provided.

PART II—GENERAL SAFETY PROVISIONS

Chapter 3 General Requirements. The open burning, ignition source, vacant building, miscellaneous storage, roof gardens and landscaped roofs and hazards to fire fighters requirements and precautions, among other general regulations, contained in this chapter are intended to improve premises safety for everyone, including construction workers, tenants, operations and maintenance personnel and emergency response personnel. As with other chapters of the *International Fire Code*, Section 302 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 4 Emergency Planning and Preparedness. This chapter addresses the human contribution to life safety in buildings when a fire or other emergency occurs. The requirements for continuous training and scheduled fire, evacuation and lockdown drills can be as important as the required periodic inspections and maintenance of built-in fire protection features. The level of preparation by the occupants also improves the emergency responders’ abilities during an emergency. The *International Building Code* (IBC) focuses on built-in fire protection features, such as automatic sprinkler systems, fire-resistance-rated construction and properly designed egress systems whereas this chapter fully addresses the human element. As with other chapters of the *International Fire Code*, Section 402 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

PART III—BUILDING AND EQUIPMENT DESIGN FEATURES

Chapter 5 Fire Service Features. The requirements of this chapter apply to all buildings and occupancies and pertain to access roads; access to building openings and roofs; premises identification; key boxes; fire protection water supplies; fire command centers; fire department access to equipment and emergency responder radio coverage in buildings. As with other chapters of the *International Fire Code*, Section 502 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 6 Building Services and Systems. This chapter focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. This chapter brings together all building system- and service-related issues for convenience and provides a more systematic view of buildings. The following building services and systems are addressed: fuel-fired appliances (Section 603), emergency and standby power systems (Section 604), electrical equipment, wiring and hazards (Section 605), mechanical refrigeration (Section 606), elevator recall and maintenance (Section 607), stationary storage battery systems (Section 608) and commercial kitchen hoods (Section 609). As with other chapters of the *International Fire Code*, Section 602 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 7 Fire-resistance-rated Construction. The maintenance of assemblies required to be fire-resistance rated is a key component in a passive fire protection philosophy. Chapter 7 sets forth requirements to maintain required fire-resistance ratings of building elements and limit fire spread. The required maintenance of fire-resistance-rated assemblies and opening protectives is described in Section 703 while Section 704 covers the enclosure requirements for shafts in existing buildings. As with other chapters of the *International Fire Code*, Section 702 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 8 Interior Finish, Decorative Materials and Furnishings. The overall purpose of Chapter 8 is to regulate interior finishes, decorative materials and furnishings in new and existing buildings so that they do not significantly add to or create fire hazards within buildings. The provisions tend to focus on occupancies with specific risk characteristics, such as vulnerability of occupants, density of occupants, lack of familiarity with the building and societal expectations of importance. This chapter is consistent with Chapter 8 of the *International Building Code* (IBC), which regulates the interior finishes of new buildings. As with other chapters of the *International Fire Code*, Section 802 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 9 Fire Protection Systems. Chapter 9 prescribes the minimum requirements for active systems of fire protection equipment to perform the functions of detecting a fire, alerting the occupants or fire department of a fire emergency, controlling smoke and controlling or extinguishing the fire. Generally, the requirements are based on the occupancy, the height and the area of the building, because these are the factors that most affect fire-fighting capabilities and the relative hazard of a specific building or portion thereof. This chapter parallels and is substantially duplicated in Chapter 9 of the *International Building Code*; however, this chapter also contains periodic testing criteria that are not contained in the IBC. In addition, the special fire protection system requirements based on use and occupancy found in Chapter 4 of the IBC are duplicated in Chapter 9 of the IFC as a user convenience. As with other chapters of the *International Fire Code*, Section 902 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 10 Means of Egress. The general 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 by allowing timely relocation or evacuation of building occupants. Both prescriptive and performance language is utilized in this chapter to provide for a basic approach in the determination of a safe exiting system for all occupancies. It addresses all portions of the egress system (i.e., exit access, exits and exit discharge) and includes design requirements as well as provisions regulating individual components. The requirements detail the size, arrangement, number and protection of means of egress components. Functional and operational characteristics also are specified for the components that will permit their safe use without special knowledge or effort. The means of egress protection requirements work in coordination with other sections of the code, such as protection of vertical openings (see Chapter 7), interior finish (see Chapter 8), fire suppression and detection systems (see Chapter 9) and numerous others, all having an impact on life safety. Sections 1002 through 1029 are duplicated text from Chapter 10 of the IBC; however, the IFC contains an additional Section 1030 on maintenance of the means of egress system in existing buildings. Retroactive minimum means of egress requirements for existing buildings are now found in Chapter 11 (which was formerly Chapter 46). As with other chapters of the *International Fire Code*, Section 1002 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 11 Construction Requirements for Existing Buildings. Chapter 11 (which was formerly Chapter 46) applies to existing buildings constructed prior to the adoption of the code and intends to provide a minimum degree of fire and life safety to persons occupying existing buildings by providing for alterations to such buildings that do not comply with the minimum requirements of

the *International Building Code*. Prior to the 2009 edition, its content existed in the IFC but in a random manner that was neither efficient nor user-friendly. In the 2007/2008 code development cycle, a code change (F294-07/08) was approved that consolidated the retroactive elements of IFC/2006 Sections 607, 701, 704, 903, 905, 907 and 3406 (then 2506) and all of then-Section 1027 (Means of Egress for Existing Buildings) into a single chapter for easier and more efficient reference and application to existing buildings. As with other chapters of the *International Fire Code*, Section 1102 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapters 12 through 19. Reserved for future use.

PART IV—SPECIAL OCCUPANCIES AND OPERATIONS

Chapter 20 Aviation Facilities. Chapter 20 (which was formerly Chapter 11) specifies minimum requirements for the fire-safe operation of airports, heliports and helistops. The principal nonflight operational hazards associated with aviation involve fuel, facilities and operations. Therefore, safe use of flammable and combustible liquids during fueling and maintenance operations is emphasized. Availability of portable Class B:C-rated fire extinguishers for prompt control or suppression of incipient fires is required. As with other chapters of the *International Fire Code*, Section 2002 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 21 Dry Cleaning. The provisions of Chapter 21 (which was formerly Chapter 12) are intended to reduce hazards associated with use of flammable and combustible dry cleaning solvents. These materials, like all volatile organic chemicals, generate significant quantities of static electricity and are thus readily ignitable. Many flammable and nonflammable dry cleaning solvents also possess health hazards when involved in a fire. As with other chapters of the *International Fire Code*, Section 2102 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 22 Combustible Dust-producing Operations. The requirements of Chapter 22 (which was formerly Chapter 13) seek to reduce the likelihood of dust explosions by managing the hazards of ignitable suspensions of combustible dusts associated with a variety of operations including woodworking, mining, food processing, agricultural commodity storage and handling and pharmaceutical manufacturing, among others. Ignition source control and good housekeeping practices in occupancies containing dust-producing operations are emphasized. As with other chapters of the *International Fire Code*, Section 2202 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 23 Motor Fuel-dispensing Facilities and Repair Garages. This chapter (which was formerly Chapter 22) provides provisions that regulate the storage and dispensing of both liquid and gaseous motor fuels at public and private automotive, marine and aircraft motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities and repair garages. As with other chapters of the *International Fire Code*, Section 2302 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 24 Flammable Finishes. Chapter 24 (which was formerly Chapter 15) requirements govern operations where flammable or combustible finishes are applied by spraying, dipping, powder coating or flow-coating processes. As with all operations involving flammable or combustible liquids and combustible dusts or vapors, controlling ignition sources and methods of reducing or controlling flammable vapors or combustible dusts at or near these operations are emphasized. As with other chapters of the *International Fire Code*, Section 2402 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 25 Fruit and Crop Ripening. Chapter 25 (which was formerly Chapter 16) provides guidance that is intended to reduce the likelihood of explosions resulting from improper use or handling of ethylene gas used for crop-ripening and coloring processes. This is accomplished by regulating ethylene gas generation; storage and distribution systems and controlling ignition sources. Design and construction of facilities for this use are regulated by the *International Building Code* to reduce the impact of potential accidents on people and buildings.

Chapter 26 Fumigation and Insecticidal Fogging. This chapter (which was formerly Chapter 17) regulates fumigation and insecticidal fogging operations which use toxic pesticide chemicals to kill insects, rodents and other vermin. Fumigants and insecticidal fogging agents pose little hazard if properly applied; however, the inherent toxicity of all these agents and the potential flammability of some makes special precautions necessary when they are used. Requirements of this chapter are intended to protect both the public and fire fighters from hazards associated with these products. As with other chapters of the *International Fire Code*, Section 2602 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 27 Semiconductor Fabrication Facilities. The requirements of this chapter (which was formerly Chapter 18) are intended to control hazards associated with the manufacture of electrical circuit boards or microchips, commonly called semiconductors. Though the finished product possesses no unusual hazards, materials commonly associated with semiconductor manufacturing are often quite hazardous and include flammable liquids, pyrophoric and flammable gases, toxic substances and corrosives. The requirements of this chapter are concerned with both life safety and property protection. However, the fire code official should recognize that the risk of extraordinary property damages is far more common than the risk of personal injuries from fire. As with other chapters of the *International Fire Code*, Section 2702 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 28 Lumber Yards and Woodworking Facilities. Provisions of this chapter (which was formerly Chapter 19) are intended to prevent fires and explosions, facilitate fire control and reduce exposures to and from facilities storing, selling or processing wood and forest products, including sawdust, wood chips, shavings, bark mulch, shorts, finished planks, sheets, posts, poles, timber and raw logs and the hazard they represent once ignited. This chapter requires active and passive fire protection features to reduce on- and off-site exposures, limit fire size and development and facilitate fire fighting by employees and the fire service. As with other chapters of the *International Fire Code*, Section 2802 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 29 Manufacture of Organic Coatings. This chapter (which was formerly Chapter 20) regulates materials and processes associated with the manufacture of paints as well as bituminous, asphaltic and other diverse compounds formulated to protect buildings, machines and objects from the effects of weather, corrosion and hostile environmental exposures. Paint for decorative, architectural and industrial uses comprises the bulk of organic coating production. Painting and processes related to the manufacture of nonflammable and noncombustible or water-based products are exempt from the provisions of this chapter. The application of organic coatings is covered by Chapter 24. Elimination of ignition sources, maintenance of fire protection equipment and isolation or segregation of hazardous operations are emphasized. As with other chapters of the *International Fire Code*, Section 2902 contains a term that is defined in Chapter 2 and is applicable to the chapter contents.

Chapter 30 Industrial Ovens. This chapter (which was formerly Chapter 21) addresses the fuel supply, ventilation, emergency shutdown equipment, fire protection and the operation and maintenance of industrial ovens, which are sometimes referred to as industrial heat enclosures or industrial furnaces. Compliance with this chapter is intended to reduce the likelihood of fires involving industrial ovens which are usually the result of the fuel in use or volatile vapors given off by the materials being heated or to manage the impact if a fire should occur. As with other chapters of the *International Fire Code*, Section 3002 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 31 Tents and Other Membrane Structures. The requirements in this chapter (which was formerly Chapter 24) are intended to protect temporary as well as permanent tents and air-supported and other membrane structures from fire by regulating structure location and access, anchorage, egress, heat-producing equipment, hazardous materials and operations, combustible vegetation, ignition sources, waste accumulation and requiring regular inspections and certifying continued compliance with fire safety regulations. As with other chapters of the *International Fire Code*, Section 3102 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 32 High-piled Combustible Storage. This chapter (which was formerly Chapter 23) provides guidance for reasonable protection of life from hazards associated with the storage of combustible materials in closely packed piles or on pallets, in racks or on shelves where the top of storage is greater than 12 feet in height. It provides requirements for identifying various classes of commodities; general fire and life safety features including storage arrangements, smoke and heat venting, fire department access and housekeeping and maintenance requirements. The chapter attempts to define the potential fire severity and, in turn, determine fire and life safety protection measures needed to control, and in some cases suppress, a potential fire. This chapter does not cover miscellaneous combustible materials storage regulated in Section 315. As with other chapters of the *International Fire Code*, Section 3202 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 33 Fire Safety During Construction and Demolition. Chapter 33 (which was formerly Chapter 14) outlines general fire safety precautions for all structures and all occupancies during construction and demolition operations. In general, these requirements seek to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. Features regulated include fire protection systems, fire fighter access to the site and building, means of egress, hazardous materials storage and use and temporary heating equipment and other ignition sources. With the 2012 reorganization, this chapter now correlates with Chapter 33 of the IBC.

Chapter 34 Tire Rebuilding and Tire Storage. The requirements of Chapter 34 (which was formerly Chapter 25) are intended to prevent or control fires and explosions associated with the remanufacture and storage of tires and tire byproducts. Additionally, the requirements are intended to minimize the impact of indoor and outdoor tire storage fires by regulating pile volume and location, segregating the various operations, providing for fire department access and a water supply and controlling ignition sources.

Chapter 35 Welding and Other Hot Work. This chapter (which was formerly Chapter 26) covers requirements for safety in welding and other types of hot work by reducing the potential for fire ignitions that usually result in large losses. Several different types of hot work would fall under the requirements found in Chapter 35, including both gas and electric arc methods and any open-torch operations. Many of the activities of this chapter focus on the actions of the occupants. As with other chapters of the *International Fire Code*, Section 3502 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 36 Marinas. Chapter 36 (which was formerly Chapter 45) addresses the fire protection and prevention requirements for marinas. It was developed in response to the complications encountered by a number of fire departments responsible for the protection of marinas as well as fire loss history in marinas that lacked fire protection. Compliance with this chapter intends to establish safe practices in marina areas, provide an identification method for mooring spaces in the marina, provide fire fighters with safe operational areas and fire protection methods to extend hose lines in a safe manner. As with other chapters of the *International Fire Code*, Section 3602 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapters 37 through 49. Reserved for future use.

PART V—HAZARDOUS MATERIALS

Chapter 50 Hazardous Materials—General Provisions. This chapter (which was formerly Chapter 27) contains the general requirements for all hazardous chemicals in all occupancies. Hazardous chemicals are defined as those that pose an unreasonable risk to the health and safety of operating or emergency personnel, the public and the environment if not properly controlled during handling, storage, manufacture, processing, packaging, use, disposal or transportation. The general provisions of this chapter are intended to be companion provisions with the specific requirements of Chapters 51 through 67 (which were formerly Chapters 28 through 44) regarding a given hazardous material. As with other chapters of the *International Fire Code*, Section 5002 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 51 Aerosols. Chapter 51 (which was formerly Chapter 28) addresses the prevention, control and extinguishment of fires and explosions in facilities where retail aerosol products are displayed or stored. It is concerned with both life safety and property protection from a fire; however, historically, aerosol product fires have caused property loss more frequently than loss of life. Requirements for storing aerosol products are dependent on the level of aerosol product, level of sprinkler protection, type of storage condition and quantity of aerosol products. As with other chapters of the *International Fire Code*, Section 5102 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 52 Combustible Fibers. Chapter 52 (which was formerly Chapter 29) establishes the requirements for storage and handling of combustible fibers, including animal, vegetable and synthetic fibers, whether woven into textiles, baled, packaged or loose. Operations involving combustible fibers are typically associated with salvage, paper milling, recycling, cloth manufacturing, carpet and textile mills and agricultural operations, among others. The primary hazard associated with these operations is the abundance of materials and their ready ignitability. As with other chapters of the *International Fire Code*, Section 5202 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 53 Compressed Gases. This chapter (which was formerly Chapter 30) regulates the storage, use and handling of all flammable and nonflammable compressed gases, such as those that are used in medical facilities, air separation plants, industrial plants, agricultural equipment and similar occupancies. Standards for the design, construction and marking of compressed gas cylinders and pressure vessels are referenced. Compressed gases used in welding and cutting, cryogenic liquids and liquefied petroleum gases are also regulated under Chapters 35, 55 and 61, respectively. Compressed gases that are classified as hazardous materials are also regulated in Chapter 50, which includes general requirements. As with other chapters of the *International Fire Code*, Section 5302 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 54 Corrosive Materials. Chapter 54 (which was formerly Chapter 31) addresses the hazards of corrosive materials that have a destructive effect on living tissues. Though corrosive gases exist, most corrosive materials are solid and classified as either acids or bases (alkalis). These materials may pose a wide range of hazards other than corrosivity, such as combustibility, reactivity or oxidizing hazards, and must conform to the requirements of the code with respect to all their known hazards. The focus of this chapter is on materials whose primary hazard is corrosivity; that is, the ability to destroy or irreparably damage living tissue on contact. As with other chapters of the *International Fire Code*, Section 5402 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 55 Cryogenic Fluids. This chapter (which was formerly Chapter 32) regulates the hazards associated with the storage, use and handling of cryogenic fluids through regulation of such things as pressure relief mechanisms and proper container storage. These hazards are in addition to the code requirements that address the other hazards of cryogenic fluids such as flammability and toxicity. These other characteristics are dealt with in Chapter 50 and other chapters, such as Chapter 58 dealing with flammable gases. Cryogens are hazardous because they are held at extremely low temperatures and high pressures. Many cryogenic fluids, however, are actually inert gases and would not be regulated elsewhere in the code. Cryogens are used for many applications but specifically have had widespread use in the biomedical field and in space programs. As with other chapters of the *International Fire Code*, Section 5502 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 56 Explosives and Fireworks. This chapter (which was formerly Chapter 33) prescribes minimum requirements for the safe manufacture, storage, handling and use of explosives, ammunition and blasting agents for commercial and industrial occupancies. These provisions are intended to protect the general public, emergency responders and individuals who handle explosives. Chapter 56 also regulates the manufacturing, retail sale, display and wholesale distribution of fireworks, establishing the requirements for obtaining approval to manufacture, store, sell, discharge or conduct a public display, and references national standards for regulations governing manufacture, storage and public displays. As with other chapters of the *International Fire Code*, Section 5602 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 57 Flammable and Combustible Liquids. The requirements of this chapter (which was formerly Chapter 34) are intended to reduce the likelihood of fires involving the storage, handling, use or transportation of flammable and combustible liquids. Adherence to these practices may also limit damage in the event of an accidental fire involving these materials. These liquids are used for fuel, lubricants, cleaners, solvents, medicine and even drinking. The danger associated with flammable and combustible liquids is that the vapors from these liquids, when combined with air in their flammable range, will burn or explode at temperatures near normal living and working environment. The protection provided by the code is to prevent the flammable and combustible liquids from being ignited. As with other chapters of the *International Fire Code*, Section 5702 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 58 Flammable Gases and Flammable Cryogenic Fluids. Chapter 58 (which was formerly Chapter 35) sets requirements for the storage and use of flammable gases. For safety purposes, there is a limit on the quantities of flammable gas allowed per control area. Exceeding these limitations increases the possibility of damage to both property and individuals. The principal hazard posed by flammable gas is its ready ignitability, or even explosivity, when mixed with air in the proper proportions. Consequently, occupancies storing or handling large quantities of flammable gas are classified as Group H-2 (high hazard) by the *International Building Code*. As with other chapters of the *International Fire Code*, Section 5802 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 59 Flammable Solids. This chapter (which was formerly Chapter 36) addresses general requirements for storage and handling of flammable solids, especially magnesium; however, it is important to note that several other solid materials, primarily metals including, but not limited to, such metals as titanium, zirconium, hafnium, calcium, zinc, sodium, lithium, potassium, sodium/potassium alloys, uranium, thorium and plutonium which, under the right conditions, can be explosion hazards. Some of these metals are almost exclusively laboratory materials but because of where they are used, fire service personnel must be trained to handle emergency situations. Because uranium, thorium and plutonium are also radioactive materials, they present still more specialized problems for fire service personnel. As with other chapters of the *International Fire Code*, Section 5902 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 60 Highly Toxic and Toxic Materials. The main purpose of this chapter (which was formerly Chapter 37) is to protect occupants, emergency responders and those in the immediate area of the building and facility from short-term, acute hazards associated with a release or general exposure to toxic and highly toxic materials. This chapter deals with all three states of toxic and highly toxic materials: solids, liquids and gases. The code does not address long-term exposure effects of these materials which are addressed by agencies such as the Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA). As with other chapters of the *International Fire Code*, Section 6002 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 61 Liquefied Petroleum Gases. Chapter 61 (which was formerly Chapter 38) establishes requirements for the safe handling, storing and use of LP-gas to reduce the possibility of damage to containers, accidental releases of LP-gas and exposure of flammable concentrations of LP-gas to ignition sources. LP-gas (notably Propane) is well known as a camping fuel for cooking, lighting, heating and refrigerating and also remains a popular standby fuel supply for auxiliary generators as well as being widely used as an alternative motor vehicle fuel. Its characteristic as a clean-burning fuel having resulted in the addition of propane dispensers to service stations throughout the country. As with other chapters of the *International Fire Code*, Section 6102 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 62 Organic Peroxides. This chapter (which was formerly Chapter 39) addresses the hazards associated with the storage, handling and use of organic peroxides and intends to manage the fire and oxidation hazards of organic peroxides by preventing their uncontrolled release. These chemicals possess the characteristics of flammable or combustible liquids and are also strong oxidizers. This unusual combination of properties requires special storage and handling precautions to prevent uncontrolled release, contamination, hazardous chemical reactions, fires or explosions. The requirements of this chapter pertain to industrial applications in which significant quantities of organic peroxides are stored or used; however, smaller quantities of organic peroxides still pose a significant hazard and, therefore, must be stored and used in accordance with the applicable provisions of this chapter and Chapter 50. As with other chapters of the *International Fire Code*, Section

6202 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 63 Oxidizers, Oxidizing Gases and Oxidizing Cryogenic Fluids. Chapter 63 (which was formerly Chapter 40) addresses the hazards associated with solid, liquid, gaseous and cryogenic fluid oxidizing materials, including oxygen in home use, and establishes criteria for their safe storage and protection in indoor and outdoor storage facilities, minimizing the potential for uncontrolled releases and contact with fuel sources. Although oxidizers themselves do not burn, they pose unique fire hazards because of their ability to support combustion by breaking down and giving off oxygen. As with other chapters of the *International Fire Code*, Section 6302 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 64 Pyrophoric Materials. This chapter (which was formerly Chapter 41) regulates the hazards associated with pyrophoric materials, which are capable of spontaneously igniting in the air at or below a temperature of 130°F (54°C). Many pyrophoric materials also pose severe flammability or reactivity hazards. This chapter addresses only the hazards associated with pyrophoric materials. Materials that pose multiple hazards must conform to the requirements of the code with respect to all hazards. As with other chapters of the *International Fire Code*, Section 6402 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 65 Pyroxylin (Cellulose Nitrate) Plastics. This chapter (which was formerly Chapter 42) addresses the significant hazards associated with pyroxylin (cellulose nitrate) plastics, which are the most dangerous and unstable of all plastic compounds. The chemically bound oxygen in their structure permits them to burn vigorously in the absence of atmospheric oxygen at a rate 15 times greater than comparable common combustibles. Strict compliance with the provisions of this chapter, along with proper housekeeping and storage arrangements, help to reduce the hazards associated with pyroxylin (cellulose nitrate) plastics in a fire or other emergencies.

Chapter 66 Unstable (Reactive) Materials. This chapter (which was formerly Chapter 43) addresses the hazards of unstable (reactive) liquid and solid materials as well as unstable (reactive) compressed gases. In addition to their unstable reactivity, these materials may pose other hazards, such as toxicity, corrosivity, explosivity, flammability or oxidizing potential. This chapter, however, intends to address those materials whose primary hazard is unstable reactivity. Materials that pose multiple hazards must conform to the requirements of the code with respect to all hazards. Strict compliance with the provisions of this chapter, along with proper housekeeping and storage arrangements, help to reduce the exposure hazards associated with unstable (reactive) materials in a fire or other emergency. As with other chapters of the *International Fire Code*, Section 6602 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapter 67 Water-reactive Solids and Liquids. This chapter (which was formerly Chapter 44) addresses the hazards associated with water-reactive materials that are solid or liquid at normal temperatures and pressures. In addition to their water reactivity, these materials may pose a wide range of other hazards, such as toxicity, flammability, corrosiveness or oxidizing potential. This chapter addresses only those materials whose primary hazard is water reactivity. Materials that pose multiple hazards must conform to the requirements of the code with respect to all hazards. Strict compliance with the requirements of this chapter, along with proper housekeeping and storage arrangements, helps to reduce the exposure hazards associated with water-reactive materials in a fire or other emergency. As with other chapters of the *International Fire Code*, Section 6702 contains a list of terms that are defined in Chapter 2 and are applicable to the chapter contents.

Chapters 68 through 79. Reserved for future use.

PART VI—REFERENCED STANDARDS

Chapter 80 Referenced Standards. The code contains several references to standards that are used to regulate materials and methods of construction. Chapter 80 (which was formerly Chapter 47) contains a comprehensive list of all standards that are referenced in the code. The standards are part of the code to the extent of the reference to the standard (see Section 102.7). Compliance with the referenced standard is necessary for compliance with this code. By providing specifically adopted standards, the construction and installation requirements necessary for compliance with

the code can be readily determined. The basis for code compliance is, therefore, established and available on an equal basis to the code official, contractor, designer and owner.

Chapter 80 is organized in a manner that makes it easy to locate specific standards. It lists all of the referenced standards, alphabetically, by acronym of the promulgating agency of the standard. Each agency's standards are then listed in either alphabetical or numeric order based upon the standard identification. The list also contains the title of the standard; the edition (date) of the standard referenced; any addenda included as part of the ICC adoption; and the section or sections of this code that reference the standard.

PART VII—APPENDICES

Appendix A Board of Appeals. This appendix contains optional criteria that, when adopted, provides jurisdictions with detailed appeals, board member qualifications and administrative procedures to supplement the basic requirements found in Section 108 of the code. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

Appendix B Fire-flow Requirements for Buildings. This appendix provides a tool for the use of jurisdictions in establishing a policy for determining fire-flow requirements in accordance with IFC Section 507.3. The determination of required fire flow is not an exact science, but having some level of information provides a consistent way of choosing the appropriate fire flow for buildings throughout a jurisdiction. The primary tool used in this appendix is a table which presents fire flow based on construction type and building area based on the correlation of the Insurance Services Office (ISO) method and the construction types used in the *International Building Code*. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

Appendix C Fire Hydrant Locations and Distribution. This appendix focuses on the location and spacing of fire hydrants which is important to the success of fire-fighting operations. The difficulty with determining the spacing of fire hydrants is that every situation is unique and has unique challenges. Finding one methodology for determining hydrant spacing is difficult. This particular appendix gives one methodology based on the required fire flow that fire departments can work with to set a policy for hydrant distribution around new buildings and facilities in conjunction with IFC Section 507.5. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

Appendix D Fire Apparatus Access Roads. This appendix contains more detailed elements for use with the basic access requirements found in IFC Section 503 which gives some minimum criteria, such as a maximum length of 150 feet and a minimum width of 20 feet, but in many cases does not state specific criteria. This appendix, like Appendices B and C, is a tool for jurisdictions looking for guidance in establishing access requirements and includes criteria for multiple-family residential developments, large one- and two-family subdivisions, specific examples for various types of turn-arounds for fire department apparatus and parking regulatory signage. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

Appendix E Hazard Categories. This appendix contains guidance for designers, engineers, architects, code officials, plans reviewers and inspectors in the classifying of hazardous materials so that proposed designs can be evaluated intelligently and accurately. The descriptive materials and explanations of hazardous materials and how to report and evaluate them on a Material Safety Data Sheet (MSDS) that are contained in this appendix are intended to be instructional as well as informative. Note that this appendix is for information purposes and is not intended for adoption.

Appendix F Hazard Ranking. The information in this appendix is intended to be a companion to the specific requirements of Chapters 51 through 67 which regulate the storage, handling and use of all hazardous materials classified as either physical or health hazards. These materials pose diverse hazards, including instability, reactivity, flammability, oxidizing potential or toxicity; therefore, identifying them by hazard ranking is essential. This appendix lists the various hazardous mate-

materials categories that are defined in the code, along with the NFPA 704 hazard ranking for each. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

Appendix G Cryogenic Fluids—Weight and Volume Equivalents. This appendix gives the fire code official and design professional a ready reference tool for the conversion of the liquid weight and volume of cryogenic fluid to their corresponding volume of gas and vice versa and is a companion to the provisions of Chapter 55 of the code. Note that this appendix is for information purposes and is not intended for adoption.

Appendix H Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) Instructions. This appendix is intended to assist businesses in establishing a Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) based on the classification and quantities of materials that would be found on site in storage and/or use. The sample forms and available Material Safety Data Sheets (MSDS) provide the basis for the evaluations. It is also a companion to IFC Sections 407.5 and 407.6 which provide the requirement that the HMIS and HMMP be submitted when required by the fire code official. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

Appendix I Fire Protection Systems—Noncompliant Conditions. The purpose of this IFC appendix, which was developed by the ICC Hazard Abatement in Existing Buildings Committee, is to provide the fire code official with a list of conditions that are readily identifiable by the inspector during the course of an inspection utilizing the *International Fire Code*. The specific conditions identified in this appendix are primarily derived from applicable NFPA standards and pose a hazard to the proper operation of the respective systems. While these do not represent all of the conditions that pose a hazard or otherwise may impair the proper operation of fire protection systems, their identification in this adoptable appendix will provide a more direct path for enforcement by the fire code official. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

Appendix J Building Information Sign. This new appendix replaces the emergency responder communications facilities provisions which previously occupied Appendix J and that have been relocated to Section 510 in the 2012 edition. It provides design, installation and maintenance requirements for a Building Information Sign (BIS), a fire service tool to be utilized in the crucial, initial response of fire fighters to a structure fire. The BIS placard is designed to be utilized within the initial response time frame of an incident to assist fire fighters in their tactical size-up of a situation as soon as possible after arrival on the scene of a fire emergency. The BIS design is in the shape of a fire service Maltese Cross symbol and includes five spaces (the four wings plus the centerpiece of the cross symbol) in which information is placed about the tactical considerations of construction type and hourly rating, fire protection systems, occupancy type, content hazards and special features which could affect tactical decisions and operations. Note that the provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance (see sample ordinance on page xxi).

LEGISLATION

The *International Codes* are designed and promulgated to be adopted by reference by legislative action. Jurisdictions wishing to adopt the 2012 *International Fire Code* as an enforceable set of regulations for the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises should ensure that certain factual information is included in the adopting legislation at the time adoption is being considered by the appropriate governmental body. The following sample adoption legislation addresses several key elements, including the information required for insertion into the code text.

SAMPLE LEGISLATION FOR ADOPTION OF THE *INTERNATIONAL FIRE CODE* ORDINANCE NO. _____

A[N] [ORDINANCE/STATUTE/REGULATION] of the [NAME OF JURISDICTION] adopting the 2012 edition of the *International Fire Code*, regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises in the [NAME OF JURISDICTION]; providing for the issuance of permits and collection of fees therefor; repealing [ORDINANCE/STATUTE/REGULATION] No. _____ of the [NAME OF JURISDICTION] and all other ordinances or parts of laws in conflict therewith.

The [GOVERNING BODY] of the [NAME OF JURISDICTION] does ordain as follows:

Section 1. That a certain document, three (3) copies of which are on file in the office of the [TITLE OF JURISDICTION'S KEEPER OF RECORDS] of [NAME OF JURISDICTION], being marked and designated as the *International Fire Code*, 2012 edition, including Appendix Chapters [FILL IN THE APPENDIX CHAPTERS BEING ADOPTED] (see *International Fire Code* Section 101.2.1, 2012 edition), as published by the International Code Council, be and is hereby adopted as the Fire Code of the [NAME OF JURISDICTION], in the State of [STATE NAME] regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises as herein provided; providing for the issuance of permits and collection of fees therefor; and each and all of the regulations, provisions, penalties, conditions and terms of said Fire Code on file in the office of the [NAME OF JURISDICTION] are hereby referred to, adopted, and made a part hereof, as if fully set out in this legislation, with the additions, insertions, deletions and changes, if any, prescribed in Section 2 of this ordinance.

Section 2. That the following sections are hereby revised:

Section 101.1. Insert: [NAME OF JURISDICTION]

Section 109.4. Insert: [OFFENSE, DOLLAR AMOUNT, NUMBER OF DAYS]

Section 111.4. Insert: [DOLLAR AMOUNT IN TWO LOCATIONS]

Section 3. That the geographic limits referred to in certain sections of the 2012 *International Fire Code* are hereby established as follows:

Section 5704.2.9.6.1 (geographic limits in which the storage of Class I and Class II liquids in above-ground tanks outside of buildings is prohibited): [JURISDICTION TO SPECIFY]

Section 5706.2.4.4 (geographic limits in which the storage of Class I and Class II liquids in above-ground tanks is prohibited): [JURISDICTION TO SPECIFY]

Section 5806.2 (geographic limits in which the storage of flammable cryogenic fluids in stationary containers is prohibited): [JURISDICTION TO SPECIFY]

Section 6104.2 (geographic limits in which the storage of liquefied petroleum gas is restricted for the protection of heavily populated or congested areas): [JURISDICTION TO SPECIFY]

Section 4. That [ORDINANCE/STATUTE/REGULATION] No. _____ of [NAME OF JURISDICTION] entitled [FILL IN HERE THE COMPLETE TITLE OF THE LEGISLATION OR LAWS IN EFFECT AT THE PRESENT TIME SO THAT THEY WILL BE REPEALED BY SPECIFIC REFERENCE] and all other ordinances or parts of laws in conflict herewith are hereby repealed.

Section 5. That if any section, subsection, sentence, clause or phrase of this legislation is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The [GOVERNING BODY] hereby declares that it would have passed this law, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

Section 6. That nothing in this legislation or in the Fire Code hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 4 of this law; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this legislation.

Section 7. That the [JURISDICTION'S KEEPER OF RECORDS] is hereby ordered and directed to cause this legislation to be published. (An additional provision may be required to direct the number of times the legislation is to be published and to specify that it is to be in a newspaper in general circulation. Posting may also be required.)

Section 8. That this law and the rules, regulations, provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full force and effect [TIME PERIOD] from and after the date of its final passage and adoption.

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Part I—Administrative

CHAPTER 1

SCOPE AND ADMINISTRATION

PART 1—GENERAL PROVISIONS

SECTION 101 SCOPE AND GENERAL REQUIREMENTS

[A] **101.1 Title.** These regulations shall be known as the *Fire Code* of [NAME OF JURISDICTION], hereinafter referred to as “this code.”

[A] **101.2 Scope.** This code establishes regulations affecting or relating to structures, processes, premises and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems; and
5. Conditions affecting the safety of fire fighters and emergency responders during emergency operations.

[A] **101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically adopted.

[A] **101.3 Intent.** The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety to fire fighters and emergency responders during emergency operations.

[A] **101.4 Severability.** If a section, subsection, sentence, clause or phrase of this code is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

[A] **101.5 Validity.** In the event any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions hereof, which are determined to be legal; and it shall be presumed that this code would have been adopted without such illegal or invalid parts or provisions.

SECTION 102 APPLICABILITY

[A] **102.1 Construction and design provisions.** The construction and design provisions of this code shall apply to:

1. Structures, facilities and conditions arising after the adoption of this code.
2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code.
3. Existing structures, facilities and conditions when required in Chapter 11.
4. Existing structures, facilities and conditions which, in the opinion of the *fire code official*, constitute a distinct hazard to life or property.

[A] **102.2 Administrative, operational and maintenance provisions.** The administrative, operational and maintenance provisions of this code shall apply to:

1. Conditions and operations arising after the adoption of this code.
2. Existing conditions and operations.

[A] **102.3 Change of use or occupancy.** No change shall be made in the use or occupancy of any structure that would place the structure in a different division of the same group or occupancy or in a different group of occupancies, unless such structure is made to comply with the requirements of this code and the *International Building Code*. Subject to the approval of the *fire code official*, the use or occupancy of an existing structure shall be allowed to be changed and the structure is allowed to be occupied for purposes in other groups without conforming to all of the requirements of this code and the *International Building Code* for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

[A] **102.4 Application of building code.** The design and construction of new structures shall comply with the *International Building Code*, and any alterations, additions, changes in use or changes in structures required by this code, which are within the scope of the *International Building Code*, shall be made in accordance therewith.

[A] **102.5 Application of residential code.** Where structures are designed and constructed in accordance with the *Interna-*

tional Residential Code, the provisions of this code shall apply as follows:

1. Construction and design provisions: Provisions of this code pertaining to the exterior of the structure shall apply including, but not limited to, premises identification, fire apparatus access and water supplies. Where interior or exterior systems or devices are installed, construction permits required by Section 105.7 of this code shall also apply.
2. Administrative, operational and maintenance provisions: All such provisions of this code shall apply.

[A] 102.6 Historic buildings. The provisions of this code relating to the construction, *alteration*, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as historic buildings when such buildings or structures do not constitute a distinct hazard to life or property. Fire protection in designated historic buildings and structures shall be provided in accordance with an *approved* fire protection plan.

[A] 102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 80, and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.7.1 and 102.7.2.

[A] 102.7.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

[A] 102.7.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

[A] 102.8 Subjects not regulated by this code. Where no applicable standards or requirements are set forth in this code, or are contained within other laws, codes, regulations, ordinances or bylaws adopted by the jurisdiction, compliance with applicable standards of the National Fire Protection Association or other nationally recognized fire safety standards, as *approved*, shall be deemed as *prima facie* evidence of compliance with the intent of this code. Nothing herein shall derogate from the authority of the *fire code official* to determine compliance with codes or standards for those activities or installations within the *fire code official's* jurisdiction or responsibility.

[A] 102.9 Matters not provided for. Requirements that are essential for the public safety of an existing or proposed activity, building or structure, or for the safety of the occupants thereof, which are not specifically provided for by this code, shall be determined by the *fire code official*.

[A] 102.10 Conflicting provisions. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in a spe-

cific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

[A] 102.11 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

[A] 102.12 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

PART 2—ADMINISTRATIVE PROVISIONS

SECTION 103 DEPARTMENT OF FIRE PREVENTION

[A] 103.1 General. The department of fire prevention is established within the jurisdiction under the direction of the *fire code official*. The function of the department shall be the implementation, administration and enforcement of the provisions of this code.

[A] 103.2 Appointment. The *fire code official* shall be appointed by the chief appointing authority of the jurisdiction; and the *fire code official* shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the appointing authority.

[A] 103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the *fire code official* shall have the authority to appoint a deputy *fire code official*, other related technical officers, inspectors and other employees.

[A] 103.4 Liability. The *fire code official*, member of the board of appeals, officer 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 all personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.

[A] 103.4.1 Legal defense. Any suit instituted against any 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 the legal representative of the jurisdiction until the final termination of the proceedings. The *fire code official* or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer of the department of fire prevention, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.

SECTION 104

GENERAL AUTHORITY AND RESPONSIBILITIES

[A] **104.1 General.** The *fire code official* is hereby authorized to enforce the provisions of this code and shall have the authority to render interpretations of this code, and to adopt policies, procedures, rules and regulations in order to clarify the application of its provisions. Such interpretations, policies, procedures, rules and regulations shall be in compliance with the intent and purpose of this code and shall not have the effect of waiving requirements specifically provided for in this code.

[A] **104.2 Applications and permits.** The *fire code official* is authorized to receive applications, review *construction documents* and issue permits for construction regulated by this code, issue permits for operations regulated by this code, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

[A] **104.3 Right of entry.** Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the *fire code official* has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code which make the building or premises unsafe, dangerous or hazardous, the *fire code official* shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the *fire code official* by this code. If such building or premises is occupied, the *fire code official* shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the *fire code official* shall first make a reasonable effort to locate the *owner* or other person having charge or control of the building or premises and request entry. If entry is refused, the *fire code official* has recourse to every remedy provided by law to secure entry.

[A] **104.3.1 Warrant.** When the *fire code official* has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an *owner* or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to permit entry therein by the *fire code official* for the purpose of inspection and examination pursuant to this code.

[A] **104.4 Identification.** The *fire code official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

[A] **104.5 Notices and orders.** The *fire code official* is authorized to issue such notices or orders as are required to affect compliance with this code in accordance with Sections 109.1 and 109.2.

[A] **104.6 Official records.** The *fire code official* shall keep official records as required by Sections 104.6.1 through 104.6.4. Such official records shall be retained for not less than five years or for as long as the structure or activity to which such records relate remains in existence, unless otherwise provided by other regulations.

[A] **104.6.1 Approvals.** A record of approvals shall be maintained by the *fire code official* and shall be available

for public inspection during business hours in accordance with applicable laws.

[A] **104.6.2 Inspections.** The *fire code official* shall keep a record of each inspection made, including notices and orders issued, showing the findings and disposition of each.

[A] **104.6.3 Fire records.** The fire department shall keep a record of fires occurring within its jurisdiction and of facts concerning the same, including statistics as to the extent of such fires and the damage caused thereby, together with other information as required by the *fire code official*.

[A] **104.6.4 Administrative.** Application for modification, alternative methods or materials and the final decision of the *fire code official* shall be in writing and shall be officially recorded in the permanent records of the *fire code official*.

[A] **104.7 Approved materials and equipment.** All materials, equipment and devices *approved* by the *fire code official* shall be constructed and installed in accordance with such approval.

[A] **104.7.1 Material and equipment reuse.** Materials, equipment and devices shall not be reused or reinstalled unless such elements have been reconditioned, tested and placed in good and proper working condition and *approved*.

[A] **104.7.2 Technical assistance.** To determine the acceptability of technologies, processes, products, facilities, materials and uses attending the design, operation or use of a building or premises subject to inspection by the *fire code official*, the *fire code official* is authorized to require the *owner* or agent to provide, without charge to the jurisdiction, a technical opinion and report. The opinion and report shall be prepared by a qualified engineer, specialist, laboratory or fire safety specialty organization acceptable to the *fire code official* and shall analyze the fire safety properties of the design, operation or use of the building or premises and the facilities and appurtenances situated thereon, to recommend necessary changes. The *fire code official* is authorized to require design submittals to be prepared by, and bear the stamp of, a registered design professional.

[A] **104.8 Modifications.** Whenever there are practical difficulties involved in carrying out the provisions of this code, the *fire code official* shall have the authority to grant modifications for individual cases, provided the *fire code 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 requirements. The details of action granting modifications shall be recorded and entered in the files of the department of fire prevention.

[A] **104.9 Alternative materials and methods.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. The *fire code official* is autho-

ized to approve an alternative material or method of construction where the *fire code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, *fire resistance*, durability and safety.

[A] **104.9.1 Research reports.** Supporting data, when necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

[A] **104.9.2 Tests.** Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the *fire code official* shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the *fire code official* shall approve the testing procedures. Tests shall be performed by an *approved* agency. Reports of such tests shall be retained by the *fire code official* for the period required for retention of public records.

[A] **104.10 Fire investigations.** The *fire code official*, the fire department or other responsible authority shall have the authority to investigate the cause, origin and circumstances of any fire, explosion or other hazardous condition. Information that could be related to trade secrets or processes shall not be made part of the public record, except as directed by a court of law.

[A] **104.10.1 Assistance from other agencies.** Police and other enforcement agencies shall have authority to render necessary assistance in the investigation of fires when requested to do so.

[A] **104.11 Authority at fires and other emergencies.** The fire chief or officer of the fire department in charge at the scene of a fire or other emergency involving the protection of life or property, or any part thereof, shall have the authority to direct such operation as necessary to extinguish or control any fire, perform any rescue operation, investigate the existence of suspected or reported fires, gas leaks or other hazardous conditions or situations, or take any other action necessary in the reasonable performance of duty. In the exercise of such power, the fire chief is authorized to prohibit any person, vehicle, vessel or thing from approaching the scene, and is authorized to remove, or cause to be removed or kept away from the scene, any vehicle, vessel or thing which could impede or interfere with the operations of the fire department and, in the judgment of the fire chief, any person not actually and usefully employed in the extinguishing of such fire or in the preservation of property in the vicinity thereof.

[A] **104.11.1 Barricades.** The fire chief or officer of the fire department in charge at the scene of an emergency is authorized to place ropes, guards, barricades or other obstructions across any street, alley, place or private property in the vicinity of such operation so as to prevent acci-

dents or interference with the lawful efforts of the fire department to manage and control the situation and to handle fire apparatus.

[A] **104.11.2 Obstructing operations.** No person shall obstruct the operations of the fire department in connection with extinguishment or control of any fire, or actions relative to other emergencies, or disobey any lawful command of the fire chief or officer of the fire department in charge of the emergency, or any part thereof, or any lawful order of a police officer assisting the fire department.

[A] **104.11.3 Systems and devices.** No person shall render a system or device inoperative during an emergency unless by direction of the fire chief or fire department official in charge of the incident.

SECTION 105 PERMITS

[A] **105.1 General.** Permits shall be in accordance with Sections 105.1.1 through 105.7.16.

[A] **105.1.1 Permits required.** Any property owner or authorized agent who intends to conduct an operation or business, or install or modify systems and equipment which is regulated by this code, or to cause any such work to be done, shall first make application to the *fire code official* and obtain the required permit.

[A] **105.1.2 Types of permits.** There shall be two types of permits as follows:

1. Operational permit. An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 105.6 for either:
 - 1.1. A prescribed period.
 - 1.2. Until renewed or revoked.
2. Construction permit. A construction permit allows the applicant to install or modify systems and equipment for which a permit is required by Section 105.7.

[A] **105.1.3 Multiple permits for the same location.** When more than one permit is required for the same location, the *fire code official* is authorized to consolidate such permits into a single permit provided that each provision is listed in the permit.

[A] **105.2 Application.** Application for a permit required by this code shall be made to the *fire code official* in such form and detail as prescribed by the *fire code official*. Applications for permits shall be accompanied by such plans as prescribed by the *fire code official*.

[A] **105.2.1 Refusal to issue permit.** If the application for a permit describes a use that does not conform to the requirements of this code and other pertinent laws and ordinances, the *fire code official* shall not issue a permit, but shall return the application to the applicant with the refusal to issue such permit. Such refusal shall, when requested, be in writing and shall contain the reasons for refusal.



[A] 105.2.2 Inspection authorized. Before a new operational permit is *approved*, the *fire code official* is authorized to inspect the receptacles, vehicles, buildings, devices, premises, storage spaces or areas to be used to determine compliance with this code or any operational constraints required.

[A] 105.2.3 Time limitation of application. An application for a permit for any proposed work or operation shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been diligently prosecuted or a permit shall have been issued; except that the *fire code official* is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

[A] 105.2.4 Action on application. The *fire code official* shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the *construction documents* do not conform to the requirements of pertinent laws, the *fire code official* shall reject such application in writing, stating the reasons therefor. If the *fire code official* is satisfied that the proposed work or operation conforms to the requirements of this code and laws and ordinances applicable thereto, the *fire code official* shall issue a permit therefor as soon as practicable.

[A] 105.3 Conditions of a permit. A permit shall constitute permission to maintain, store or handle materials; or to conduct processes which produce conditions hazardous to life or property; or to install equipment utilized in connection with such activities; or to install or modify any *fire protection system* or equipment or any other construction, equipment installation or modification in accordance with the provisions of this code where a permit is required by Section 105.6 or 105.7. Such permission shall not be construed as authority to violate, cancel or set aside any of the provisions of this code or other applicable regulations or laws of the jurisdiction.

[A] 105.3.1 Expiration. An operational permit shall remain in effect until reissued, renewed or revoked, or for such a period of time as specified in the permit. Construction permits shall automatically become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Before such work recommences, a new permit shall be first obtained and the fee to recommence work, if any, shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

[A] 105.3.2 Extensions. A permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced

within the time required by this section for good and satisfactory reasons. The *fire code official* is authorized to grant, in writing, one or more extensions of the time period of a permit for periods of not more than 180 days each. Such extensions shall be requested by the permit holder in writing and justifiable cause demonstrated.

[A] 105.3.3 Occupancy prohibited before approval. The building or structure shall not be occupied prior to the *fire code official* issuing a permit and conducting associated inspections indicating the applicable provisions of this code have been met.

[A] 105.3.4 Conditional permits. Where permits are required and upon the request of a permit applicant, the *fire code official* is authorized to issue a conditional permit to occupy the premises or portion thereof before the entire work or operations on the premises is completed, provided that such portion or portions will be occupied safely prior to full completion or installation of equipment and operations without endangering life or public welfare. The *fire code official* shall notify the permit applicant in writing of any limitations or restrictions necessary to keep the permit area safe. The holder of a conditional permit shall proceed only to the point for which approval has been given, at the permit holder's own risk and without assurance that approval for the occupancy or the utilization of the entire premises, equipment or operations will be granted.

[A] 105.3.5 Posting the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the *fire code official*.

[A] 105.3.6 Compliance with code. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on *construction documents* and other data shall not prevent the *fire code official* from requiring the correction of errors in the *construction documents* and other data. Any addition to or alteration of *approved construction documents* shall be *approved* in advance by the *fire code official*, as evidenced by the issuance of a new or amended permit.

[A] 105.3.7 Information on the permit. The *fire code official* shall issue all permits required by this code on an *approved* form furnished for that purpose. The permit shall contain a general description of the operation or occupancy and its location and any other information required by the *fire code official*. Issued permits shall bear the signature of the *fire code official* or other *approved* legal authorization.

[A] 105.3.8 Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinances of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction

shall not be valid. The issuance of a permit based on *construction documents*, operational documents and other data shall not prevent the *fire code official* from requiring correction of errors in the documents or other data.

[A] 105.4 Construction documents. *Construction documents* shall be in accordance with this section.

[A] 105.4.1 Submittals. *Construction documents* and supporting data shall be submitted in two or more sets with each application for a permit and in such form and detail as required by the *fire code official*. The *construction documents* shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

Exception: The *fire code official* is authorized to waive the submission of *construction documents* and supporting data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of *construction documents* is not necessary to obtain compliance with this code.

[A] 105.4.1.1 Examination of documents. The *fire code official* shall examine or cause to be examined the accompanying *construction documents* and shall ascertain by such examinations whether the work indicated and described is in accordance with the requirements of this code.

[A] 105.4.2 Information on construction documents. *Construction documents* shall be drawn to scale upon suitable material. Electronic media documents are allowed to be submitted when *approved* by the *fire code official*. *Construction documents* shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations as determined by the *fire code official*.

[A] 105.4.2.1 Fire protection system shop drawings. Shop drawings for the fire protection system(s) shall be submitted to indicate compliance with this code and the *construction documents*, and shall be *approved* prior to the start of installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.

[A] 105.4.3 Applicant responsibility. It shall be the responsibility of the applicant to ensure that the *construction documents* include all of the fire protection requirements and the shop drawings are complete and in compliance with the applicable codes and standards.

[A] 105.4.4 Approved documents. *Construction documents approved* by the *fire code official* are *approved* with the intent that such *construction documents* comply in all respects with this code. Review and approval by the *fire code official* shall not relieve the applicant of the responsibility of compliance with this code.

[A] 105.4.4.1 Phased approval. The *fire code official* is authorized to issue a permit for the construction of part of a structure, system or operation before the *construction documents* for the whole structure, system or

operation have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for parts of a structure, system or operation shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure, system or operation will be granted.

[A] 105.4.5 Corrected documents. Where field conditions necessitate any substantial change from the *approved construction documents*, the *fire code official* shall have the authority to require the corrected *construction documents* to be submitted for approval.

[A] 105.4.6 Retention of construction documents. One set of *construction documents* shall be retained by the *fire code official* 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. One set of *approved construction documents* shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

[A] 105.5 Revocation. The *fire code official* is authorized to revoke a permit issued under the provisions of this code when it is found by inspection or otherwise that there has been a false statement or misrepresentation as to the material facts in the application or *construction documents* on which the permit or approval was based including, but not limited to, any one of the following:

1. The permit is used for a location or establishment other than that for which it was issued.
2. The permit is used for a condition or activity other than that listed in the permit.
3. Conditions and limitations set forth in the permit have been violated.
4. There have been any false statements or misrepresentations as to the material fact in the application for permit or plans submitted or a condition of the permit.
5. The permit is used by a different person or firm than the name for which it was issued.
6. The permittee failed, refused or neglected to comply with orders or notices duly served in accordance with the provisions of this code within the time provided therein.
7. The permit was issued in error or in violation of an ordinance, regulation or this code.

[A] 105.6 Required operational permits. The *fire code official* is authorized to issue operational permits for the operations set forth in Sections 105.6.1 through 105.6.46.

[A] 105.6.1 Aerosol products. An operational permit is required to manufacture, store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight.

[A] 105.6.2 Amusement buildings. An operational permit is required to operate a special amusement building.

[A] 105.6.3 Aviation facilities. An operational permit is required to use a Group H or Group S occupancy for aircraft servicing or repair and aircraft fuel-servicing vehicles. Additional permits required by other sections of this code include, but are not limited to, hot work, hazardous materials and flammable or combustible finishes.

[A] 105.6.4 Carnivals and fairs. An operational permit is required to conduct a carnival or fair.

[A] 105.6.5 Cellulose nitrate film. An operational permit is required to store, handle or use cellulose nitrate film in a Group A occupancy.

[A] 105.6.6 Combustible dust-producing operations. An operational permit is required to operate a grain elevator, flour starch mill, feed mill, or a plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing *combustible dusts* as defined in Chapter 2.

[A] 105.6.7 Combustible fibers. An operational permit is required for the storage and handling of *combustible fibers* in quantities greater than 100 cubic feet (2.8 m³).

Exception: A permit is not required for agricultural storage.

[A] 105.6.8 Compressed gases. An operational permit is required for the storage, use or handling at *normal temperature and pressure* (NTP) of *compressed gases* in excess of the amounts listed in Table 105.6.8.

Exception: Vehicles equipped for and using *compressed gas* as a fuel for propelling the vehicle.

TABLE 105.6.8
PERMIT AMOUNTS FOR COMPRESSED GASES

TYPE OF GAS	AMOUNT (cubic feet at NTP)
Corrosive	200
Flammable (except cryogenic fluids and liquefied petroleum gases)	200
Highly toxic	Any Amount
Inert and simple asphyxiant	6,000
Oxidizing (including oxygen)	504
Pyrophoric	Any Amount
Toxic	Any Amount

For SI: 1 cubic foot = 0.02832 m³.

[A] 105.6.9 Covered and open mall buildings. An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid- or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.

[A] 105.6.10 Cryogenic fluids. An operational permit is required to produce, store, transport on site, use, handle or

dispense *cryogenic fluids* in excess of the amounts listed in Table 105.6.10.

Exception: Permits are not required for vehicles equipped for and using *cryogenic fluids* as a fuel for propelling the vehicle or for refrigerating the lading.

TABLE 105.6.10
PERMIT AMOUNTS FOR CRYOGENIC FLUIDS

TYPE OF CRYOGENIC FLUID	INSIDE BUILDING (gallons)	OUTSIDE BUILDING (gallons)
Flammable	More than 1	60
Inert	60	500
Oxidizing (includes oxygen)	10	50
Physical or health hazard not indicated above	Any Amount	Any Amount

For SI: 1 gallon = 3.785 L.

[A] 105.6.11 Cutting and welding. An operational permit is required to conduct cutting or welding operations within the jurisdiction.

[A] 105.6.12 Dry cleaning. An operational permit is required to engage in the business of dry cleaning or to change to a more hazardous cleaning solvent used in existing dry cleaning equipment.

[A] 105.6.13 Exhibits and trade shows. An operational permit is required to operate exhibits and trade shows.

[A] 105.6.14 Explosives. An operational permit is required for the manufacture, storage, handling, sale or use of any quantity of *explosives*, *explosive materials*, fireworks or pyrotechnic special effects within the scope of Chapter 56.

Exception: Storage in Group R-3 occupancies of smokeless propellant, black powder and small arms primers for personal use, not for resale and in accordance with Section 5606.

[A] 105.6.15 Fire hydrants and valves. An operational permit is required to use or operate fire hydrants or valves intended for fire suppression purposes which are installed on water systems and accessible to a fire apparatus access road that is open to or generally used by the public.

Exception: A permit is not required for authorized employees of the water company that supplies the system or the fire department to use or operate fire hydrants or valves.

[A] 105.6.16 Flammable and combustible liquids. An operational permit is required:

1. To use or operate a pipeline for the transportation within facilities of flammable or *combustible liquids*. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.
2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10

gallons (37.9 L) outside of a building, except that a permit is not required for the following:

- 2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the *fire code official*, would cause an unsafe condition.
- 2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.
3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.
4. To store, handle or use Class IIIB liquids in tanks or portable tanks for fueling motor vehicles at motor fuel-dispensing facilities or where connected to fuel-burning equipment.
Exception: Fuel oil and used motor oil used for space heating or water heating.
5. To remove Class I or II liquids from an underground storage tank used for fueling motor vehicles by any means other than the *approved*, stationary on-site pumps normally used for dispensing purposes.
6. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and *combustible liquids* are produced, processed, transported, stored, dispensed or used.
7. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or *combustible liquid* tank.
8. To change the type of contents stored in a flammable or *combustible liquid* tank to a material that poses a greater hazard than that for which the tank was designed and constructed.
9. To manufacture, process, blend or refine flammable or *combustible liquids*.
10. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.
11. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, marine craft and other special equipment at commercial, industrial, governmental or manufacturing establishments.

[A] 105.6.17 Floor finishing. An operational permit is required for floor finishing or surfacing operations exceed-

ing 350 square feet (33 m²) using Class I or Class II liquids.

[A] 105.6.18 Fruit and crop ripening. An operational permit is required to operate a fruit- or crop-ripening facility or conduct a fruit-ripening process using ethylene gas.

[A] 105.6.19 Fumigation and insecticidal fogging. An operational permit is required to operate a business of fumigation or insecticidal fogging, and to maintain a room, vault or chamber in which a toxic or flammable fumigant is used.

[A] 105.6.20 Hazardous materials. An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed in Table 105.6.20.

[A] 105.6.21 HPM facilities. An operational permit is required to store, handle or use hazardous production materials.

[A] 105.6.22 High-piled storage. An operational permit is required to use a building or portion thereof as a *high-piled storage area* exceeding 500 square feet (46 m²).

[A] 105.6.23 Hot work operations. An operational permit is required for hot work including, but not limited to:

1. Public exhibitions and demonstrations where hot work is conducted.
2. Use of portable hot work equipment inside a structure.

Exception: Work that is conducted under a construction permit.

3. Fixed-site hot work equipment, such as welding booths.
4. Hot work conducted within a wildfire risk area.
5. Application of roof coverings with the use of an open-flame device.
6. When *approved*, the *fire code official* shall issue a permit to carry out a hot work program. This program allows *approved* personnel to regulate their facility's hot work operations. The *approved* personnel shall be trained in the fire safety aspects denoted in this chapter and shall be responsible for issuing permits requiring compliance with the requirements found in Chapter 35. These permits shall be issued only to their employees or hot work operations under their supervision.

[A] 105.6.24 Industrial ovens. An operational permit is required for operation of industrial ovens regulated by Chapter 30.

[A] 105.6.25 Lumber yards and woodworking plants. An operational permit is required for the storage or processing of lumber exceeding 100,000 board feet (8,333 ft³) (236 m³).

[A] 105.6.26 Liquid- or gas-fueled vehicles or equipment in assembly buildings. An operational permit is required to display, operate or demonstrate liquid- or gas-fueled vehicles or equipment in assembly buildings.

TABLE 105.6.20
PERMIT AMOUNTS FOR HAZARDOUS MATERIALS

TYPE OF MATERIAL	AMOUNT
Combustible liquids	See Section 105.6.16
Corrosive materials	
Gases	See Section 105.6.8
Liquids	55 gallons
Solids	1000 pounds
Explosive materials	See Section 105.6.14
Flammable materials	
Gases	See Section 105.6.8
Liquids	See Section 105.6.16
Solids	100 pounds
Highly toxic materials	
Gases	See Section 105.6.8
Liquids	Any Amount
Solids	Any Amount
Oxidizing materials	
Gases	See Section 105.6.8
Liquids	
Class 4	Any Amount
Class 3	1 gallon ^a
Class 2	10 gallons
Class 1	55 gallons
Solids	
Class 4	Any Amount
Class 3	10 pounds ^b
Class 2	100 pounds
Class 1	500 pounds
Organic peroxides	
Liquids	
Class I	Any Amount
Class II	Any Amount
Class III	1 gallon
Class IV	2 gallons
Class V	No Permit Required
Solids	
Class I	Any Amount
Class II	Any Amount
Class III	10 pounds
Class IV	20 pounds
Class V	No Permit Required
Pyrophoric materials	
Gases	Any Amount
Liquids	Any Amount
Solids	Any Amount
Toxic materials	
Gases	See Section 105.6.8
Liquids	10 gallons
Solids	100 pounds
Unstable (reactive) materials	
Liquids	
Class 4	Any Amount
Class 3	Any Amount
Class 2	5 gallons
Class 1	10 gallons
Solids	
Class 4	Any Amount
Class 3	Any Amount
Class 2	50 pounds
Class 1	100 pounds

(continued)

TABLE 105.6.20—continued
PERMIT AMOUNTS FOR HAZARDOUS MATERIALS

TYPE OF MATERIAL	AMOUNT
Water-reactive materials	
Liquids	
Class 3	Any Amount
Class 2	5 gallons
Class 1	55 gallons
Solids	
Class 3	Any Amount
Class 2	50 pounds
Class 1	500 pounds

For SI: 1 gallon = 3.785 L, 1 pound = 0.454 kg.

- a. 20 gallons when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 20 gallons or less.
- b. 200 pounds when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 200 pounds or less.

[A] 105.6.27 LP-gas. An operational permit is required for:

1. Storage and use of LP-gas.

Exception: A permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less or multiple container systems having an aggregate quantity not exceeding 500 gallons (1893 L), serving occupancies in Group R-3.

2. Operation of cargo tankers that transport LP-gas.

[A] 105.6.28 Magnesium. An operational permit is required to melt, cast, heat treat or grind more than 10 pounds (4.54 kg) of magnesium.

[A] 105.6.29 Miscellaneous combustible storage. An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m³) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.

[A] 105.6.30 Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road, or other public or private ground. Instructions and stipulations of the permit shall be adhered to.

Exception: *Recreational fires.*

[A] 105.6.31 Open flames and torches. An operational permit is required to remove paint with a torch; or to use a torch or open-flame device in a wildfire risk area.

[A] 105.6.32 Open flames and candles. An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.

[A] 105.6.33 Organic coatings. An operational permit is required for any organic-coating manufacturing operation producing more than 1 gallon (4 L) of an organic coating in one day.

[A] 105.6.34 Places of assembly. An operational permit is required to operate a place of assembly.

[A] **105.6.35 Private fire hydrants.** An operational permit is required for the removal from service, use or operation of private fire hydrants.

Exception: A permit is not required for private industry with trained maintenance personnel, private fire brigade or fire departments to maintain, test and use private hydrants.

[A] **105.6.36 Pyrotechnic special effects material.** An operational permit is required for use and handling of pyrotechnic special effects material.

[A] **105.6.37 Pyroxylin plastics.** An operational permit is required for storage or handling of more than 25 pounds (11 kg) of cellulose nitrate (pyroxylin) plastics, and for the assembly or manufacture of articles involving pyroxylin plastics.

[A] **105.6.38 Refrigeration equipment.** An operational permit is required to operate a mechanical refrigeration unit or system regulated by Chapter 6.

[A] **105.6.39 Repair garages and motor fuel-dispensing facilities.** An operational permit is required for operation of repair garages, and automotive, marine and fleet motor fuel-dispensing facilities.

[A] **105.6.40 Rooftop heliports.** An operational permit is required for the operation of a rooftop heliport.

[A] **105.6.41 Spraying or dipping.** An operational permit is required to conduct a spraying or dipping operation utilizing flammable or *combustible liquids*, or the application of combustible powders regulated by Chapter 24.

[A] **105.6.42 Storage of scrap tires and tire byproducts.** An operational permit is required to establish, conduct or maintain storage of scrap tires and tire byproducts that exceeds 2,500 cubic feet (71 m³) of total volume of scrap tires, and for indoor storage of tires and tire byproducts.

[A] **105.6.43 Temporary membrane structures and tents.** An operational permit is required to operate an air-supported temporary membrane structure or a tent having an area in excess of 400 square feet (37 m²).

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Tents open on all sides, which comply with all of the following:
 - 2.1. Individual tents having a maximum size of 700 square feet (65 m²).
 - 2.2. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m²) total.
 - 2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

[A] **105.6.44 Tire-rebuilding plants.** An operational permit is required for the operation and maintenance of a tire-rebuilding plant.

[A] **105.6.45 Waste handling.** An operational permit is required for the operation of wrecking yards, junk yards and waste material-handling facilities.

[A] **105.6.46 Wood products.** An operational permit is required to store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m³).

[A] **105.7 Required construction permits.** The *fire code official* is authorized to issue construction permits for work as set forth in Sections 105.7.1 through 105.7.16.

[A] **105.7.1 Automatic fire-extinguishing systems.** A construction permit is required for installation of or modification to an automatic fire-extinguishing system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

[A] **105.7.2 Battery systems.** A permit is required to install stationary storage battery systems having a liquid capacity of more than 50 gallons (189 L).

[A] **105.7.3 Compressed gases.** When the compressed gases in use or storage exceed the amounts listed in Table 105.6.8, a construction permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a *compressed gas* system.

Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

[A] **105.7.4 Cryogenic fluids.** A construction permit is required for installation of or *alteration* to outdoor stationary *cryogenic fluid* storage systems where the system capacity exceeds the amounts listed in Table 105.6.10. Maintenance performed in accordance with this code is not considered an *alteration* and does not require a construction permit.

[A] **105.7.5 Emergency responder radio coverage system.** A construction permit is required for installation of or modification to emergency responder radio coverage systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

[A] **105.7.6 Fire alarm and detection systems and related equipment.** A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

[A] **105.7.7 Fire pumps and related equipment.** A construction permit is required for installation of or modifica-

tion to fire pumps and related fuel tanks, jockey pumps, controllers and generators. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

[A] 105.7.8 Flammable and combustible liquids. A construction permit is required:

1. To install, repair or modify a pipeline for the transportation of flammable or *combustible liquids*.
2. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and *combustible liquids* are produced, processed, transported, stored, dispensed or used.
3. To install, alter, remove, abandon or otherwise dispose of a flammable or *combustible liquid* tank.

[A] 105.7.9 Hazardous materials. A construction permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a storage facility or other area regulated by Chapter 50 when the hazardous materials in use or storage exceed the amounts listed in Table 105.6.20.

Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

[A] 105.7.10 Industrial ovens. A construction permit is required for installation of industrial ovens covered by Chapter 30.

Exceptions:

1. Routine maintenance.
2. For repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

[A] 105.7.11 LP-gas. A construction permit is required for installation of or modification to an LP-gas system.

[A] 105.7.12 Private fire hydrants. A construction permit is required for the installation or modification of private fire hydrants.

[A] 105.7.13 Solar photovoltaic power systems. A construction permit is required to install or modify solar photovoltaic power systems.

[A] 105.7.14 Spraying or dipping. A construction permit is required to install or modify a spray room, dip tank or booth.

[A] 105.7.15 Standpipe systems. A construction permit is required for the installation, modification or removal from service of a standpipe system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

[A] 105.7.16 Temporary membrane structures and tents. A construction permit is required to erect an air-sup-

ported temporary membrane structure or a tent having an area in excess of 400 square feet (37 m²).

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains, or extensions attached thereto, when used for funeral services.
3. Tents and awnings open on all sides, which comply with all of the following:
 - 3.1. Individual tents shall have a maximum size of 700 square feet (65 m²).
 - 3.2. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m²) total.
 - 3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.

SECTION 106 INSPECTIONS

[A] 106.1 Inspection authority. The *fire code official* is authorized to enter and examine any building, structure, marine vessel, vehicle or premises in accordance with Section 104.3 for the purpose of enforcing this code.

[A] 106.2 Inspections. The *fire code official* is authorized to conduct such inspections as are deemed necessary to determine the extent of compliance with the provisions of this code and to approve reports of inspection by *approved* agencies or individuals. All reports of such inspections shall be prepared and submitted in writing for review and approval. Inspection reports shall be certified by a responsible officer of such *approved* agency or by the responsible individual. The *fire code official* is authorized to engage such expert opinion as deemed necessary to report upon unusual, detailed or complex technical issues subject to the approval of the governing body.

[A] 106.2.1 Inspection requests. It shall be the duty of the holder of the permit or their duly authorized agent to notify the *fire code official* when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

[A] 106.2.2 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the *fire code official*. The *fire code official*, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected, and such portion shall not be covered or concealed until authorized by the *fire code official*.



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[A] **106.3 Concealed work.** It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Whenever any installation subject to inspection prior to use is covered or concealed without having first been inspected, the *fire code official* shall have the authority to require that such work be exposed for inspection. Neither the *fire code official* nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

[A] **106.4 Approvals.** Approval as the result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel provisions of this code or of other ordinances of the jurisdiction shall not be valid.

SECTION 107 MAINTENANCE

[A] **107.1 Maintenance of safeguards.** Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, or any other feature is required for compliance with the provisions of this code, or otherwise installed, such device, equipment, system, condition, arrangement, level of protection, or other feature shall thereafter be continuously maintained in accordance with this code and applicable referenced standards.

[A] **107.2 Testing and operation.** Equipment requiring periodic testing or operation to ensure maintenance shall be tested or operated as specified in this code.

[A] **107.2.1 Test and inspection records.** Required test and inspection records shall be available to the *fire code official* at all times or such records as the *fire code official* designates shall be filed with the *fire code official*.

[A] **107.2.2 Reinspection and testing.** Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made so as to achieve compliance with this code. The work or installation shall then be resubmitted to the *fire code official* for inspection and testing.

[A] **107.3 Supervision.** Maintenance and testing shall be under the supervision of a responsible person who shall ensure that such maintenance and testing are conducted at specified intervals in accordance with this code.

[A] **107.4 Rendering equipment inoperable.** Portable or fixed fire-extinguishing systems or devices, and fire-warning systems, shall not be rendered inoperative or inaccessible, except as necessary during emergencies, maintenance, repairs, alterations, drills or prescribed testing.

[A] **107.5 Overcrowding.** Overcrowding or admittance of any person beyond the *approved* capacity of a building or a portion thereof shall not be allowed. The *fire code official*, upon finding any overcrowding conditions or obstructions in aisles, passageways or other *means of egress*, or upon finding any condition which constitutes a life safety hazard, shall be authorized to cause the event to be stopped until such condition or obstruction is corrected.

SECTION 108 BOARD OF APPEALS

[A] **108.1 Board of appeals established.** In order to hear and decide appeals of orders, decisions or determinations made by the *fire code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The *fire code official* shall be an ex officio member of said board but shall have no vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *fire code official*.

[A] **108.2 Limitations on authority.** An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent method of protection or safety is proposed. The board shall have no authority to waive requirements of this code.

[A] **108.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to hazards of fire, explosions, hazardous conditions or *fire protection systems*, and are not employees of the jurisdiction.

SECTION 109 VIOLATIONS

[A] **109.1 Unlawful acts.** It shall be unlawful for a person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize a building, occupancy, premises or system regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

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[A] **109.2 Owner/occupant responsibility.** Correction and abatement of violations of this code shall be the responsibility of the *owner*. If an occupant creates, or allows to be created, hazardous conditions in violation of this code, the occupant shall be held responsible for the abatement of such hazardous conditions.

[A] **109.3 Notice of violation.** When the *fire code official* finds a building, premises, vehicle, storage facility or outdoor area that is in violation of this code, the *fire code official* is authorized to prepare a written notice of violation describing the conditions deemed unsafe and, when compliance is not immediate, specifying a time for reinspection.

[A] **109.3.1 Service.** A notice of violation issued pursuant to this code shall be served upon the *owner*, operator, occupant or other person responsible for the condition or violation, either by personal service, mail or by delivering the same to, and leaving it with, some person of responsibility upon the premises. For unattended or abandoned locations, a copy of such notice of violation shall be posted on the premises in a conspicuous place at or near the entrance to such premises and the notice of violation shall be mailed by certified mail with return receipt requested or a certificate of mailing, to the last known address of the *owner*, occupant or other person.



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[A] **109.3.2 Compliance with orders and notices.** A notice of violation issued or served as provided by this code shall be complied with by the *owner*, operator, occupant or other person responsible for the condition or violation to which the notice of violation pertains.

[A] **109.3.3 Prosecution of violations.** If the notice of violation is not complied with promptly, the *fire code official* is authorized to request the legal counsel of the jurisdiction to institute the appropriate legal proceedings at law or in equity to restrain, correct or abate such violation or to require removal or termination of the unlawful occupancy of the structure in violation of the provisions of this code or of the order or direction made pursuant hereto.

[A] **109.3.4 Unauthorized tampering.** Signs, tags or seals posted or affixed by the *fire code official* shall not be mutilated, destroyed or tampered with, or removed, without authorization from the *fire code official*.

[A] **109.4 Violation penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the *approved construction documents* or directive of the *fire code official*, or of a permit or certificate used under provisions of this code, shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

[A] **109.4.1 Abatement of violation.** In addition to the imposition of the penalties herein described, the *fire code official* is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.

SECTION 110 UNSAFE BUILDINGS

[A] **110.1 General.** If during the inspection of a premises, a building or structure, or any building system, in whole or in part, constitutes a clear and inimical threat to human life, safety or health, the *fire code official* shall issue such notice or orders to remove or remedy the conditions as shall be deemed necessary in accordance with this section, and shall refer the building to the building department for any repairs, alterations, remodeling, removing or demolition required.

[A] **110.1.1 Unsafe conditions.** Structures or existing equipment that are or hereafter become unsafe or deficient because of inadequate *means of egress* or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or which involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. A vacant structure which is not secured against unauthorized entry as required by Section 311 shall be deemed unsafe.

[A] **110.1.2 Structural hazards.** When an apparent structural hazard is caused by the faulty installation, operation

or malfunction of any of the items or devices governed by this code, the *fire code official* shall immediately notify the building code official in accordance with Section 110.1.

[A] **110.2 Evacuation.** The *fire code official* or the fire department official in charge of an incident shall be authorized to order the immediate evacuation of any occupied building deemed unsafe when such building has hazardous conditions that present imminent danger to building occupants. Persons so notified shall immediately leave the structure or premises and shall not enter or re-enter until authorized to do so by the *fire code official* or the fire department official in charge of the incident.

[A] **110.3 Summary abatement.** Where conditions exist that are deemed hazardous to life and property, the *fire code official* or fire department official in charge of the incident is authorized to abate summarily such hazardous conditions that are in violation of this code.

[A] **110.4 Abatement.** The *owner*, operator or occupant of a building or premises deemed unsafe by the *fire code official* shall abate or cause to be abated or corrected such unsafe conditions either by repair, rehabilitation, demolition or other *approved* corrective action.

SECTION 111 STOP WORK ORDER

[A] **111.1 Order.** Whenever the *fire code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code, or in a dangerous or unsafe manner, the *fire code official* is authorized to issue a stop work order.

[A] **111.2 Issuance.** A stop work order shall be in writing and shall be given to the *owner* of the property, 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 is authorized to resume.

[A] **111.3 Emergencies.** Where an emergency exists, the *fire code official* shall not be required to give a written notice prior to stopping the work.

[A] **111.4 Failure to comply.** Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.

SECTION 112 SERVICE UTILITIES

[A] **112.1 Authority to disconnect service utilities.** The *fire code official* shall have the authority to authorize disconnection of utility service to the building, structure or system in order to safely execute emergency operations or to eliminate an immediate hazard. The *fire code official* shall notify the serving utility and, whenever possible, the *owner* and occu-

pant of the building, structure or service system of the decision to disconnect prior to taking such action if not notified prior to disconnection. The *owner* or occupant of the building, structure or service system shall be notified in writing as soon as practical thereafter.

SECTION 113 FEES

[A] **113.1 Fees.** A permit shall not be issued until the fees have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

[A] **113.2 Schedule of permit fees.** A fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.

[A] **113.3 Work commencing before permit issuance.** Any person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be subject to an additional fee established by the applicable governing authority, which shall be in addition to the required permit fees.

[A] **113.4 Related fees.** The payment of the fee for the construction, *alteration*, removal or demolition of work done in connection to or concurrently with the work or activity authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

[A] **113.5 Refunds.** The applicable governing authority is authorized to establish a refund policy.

CHAPTER 2

DEFINITIONS

SECTION 201 GENERAL

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Building Code*, *International Fuel Gas Code*, *International Mechanical Code* or *International Plumbing Code*, such terms shall have the meanings ascribed to them as in those codes.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies. *Merriam Webster's Collegiate Dictionary, 11th Edition*, shall be considered as providing ordinarily accepted meanings.

SECTION 202 GENERAL DEFINITIONS

[B] 24-HOUR CARE. The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours.

[B] ACCESSIBLE MEANS OF EGRESS. A continuous and unobstructed way of egress travel from any *accessible* point in a building or facility to a *public way*.

[B] ACCESSIBLE ROUTE. A continuous, unobstructed path that complies with Chapter 11 of the *International Building Code*.

AEROSOL. A product that is dispensed from an aerosol container by a propellant.

Aerosol products shall be classified by means of the calculation of their chemical heats of combustion and shall be designated Level 1, Level 2 or Level 3.

Level 1 aerosol products. Those with a total chemical heat of combustion that is less than or equal to 8,600 British thermal units per pound (Btu/lb) (20 kJ/g).

Level 2 aerosol products. Those with a total chemical heat of combustion that is greater than 8,600 Btu/lb (20 kJ/g), but less than or equal to 13,000 Btu/lb (30 kJ/g).

Level 3 aerosol products. Those with a total chemical heat of combustion that is greater than 13,000 Btu/lb (30 kJ/g).

AEROSOL CONTAINER. A metal can, or a glass or plastic bottle designed to dispense an aerosol. Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).

AEROSOL WAREHOUSE. A building used for warehousing aerosol products.

AGENCY. Any emergency responder department within the jurisdiction that utilizes radio frequencies for communication. This could include, but not be limited to, various public safety agencies such as fire departments, emergency medical services and law enforcement.

AGENT. A person who shall have charge, care or control of any structure as *owner*, or agent of the *owner*, or as executor, executrix, administrator, administratrix, trustee or guardian of the estate of the *owner*. Any such person representing the actual *owner* shall be bound to comply with the provisions of this code to the same extent as if that person was the *owner*.

[B] AGRICULTURAL BUILDING. A structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.

[B] AIR-INFLATED STRUCTURE. A structure that uses air-pressurized membrane beams, arches or other elements to enclose space. Occupants of such a structure do not occupy the pressurized areas used to support the structure.

[B] AIR-SUPPORTED STRUCTURE. A structure wherein the shape of the structure is attained by air pressure, and occupants of the structure are within the elevated pressure area. Air supported structures are of two basic types:

Double skin. Similar to a single skin, but with an attached liner that is separated from the outer skin and provides an airspace which serves for insulation, acoustic, aesthetic or similar purposes.

Single skin. Where there is only the single outer skin and the air pressure is directly against that skin.

AIRCRAFT MOTOR-VEHICLE FUEL-DISPENSING FACILITY. That portion of property where flammable or *combustible liquids* or gases used as motor fuels are stored and dispensed from fixed automotive-type equipment into the fuel tanks of aircraft.

AIRCRAFT OPERATION AREA (AOA). Any area used or intended for use for the parking, taxiing, takeoff, landing or other ground-based aircraft activity.

AIRPORT. An area of land or structural surface that is used, or intended for use, for the landing and taking off of aircraft with an overall length greater than 39 feet (11.9 m) and an overall exterior fuselage width greater than 6.6 feet (2.01 m).

DEFINITIONS

mm), and any appurtenant areas that are used or intended for use for airport buildings and other airport facilities.

[B] AISLE. An unenclosed *exit access* component that defines and provides a path of egress travel.

[B] AISLE ACCESSWAY. That portion of an *exit access* that leads to an *aisle*.

ALARM, NUISANCE. See “Nuisance alarm.”

ALARM DEVICE, MULTIPLE STATION. See “Multiple Station Alarm Device.”

ALARM NOTIFICATION APPLIANCE. A fire alarm system component such as a bell, horn, speaker, light or text display that provides audible, tactile or visible outputs, or any combination thereof. See also “Audible Alarm Notification Appliance” or “Visible Alarm Notification Appliance.”

ALARM SIGNAL. A signal indicating an emergency requiring immediate action, such as a signal indicative of fire.

ALARM VERIFICATION FEATURE. A feature of automatic fire detection and alarm systems to reduce unwanted alarms wherein smoke detectors report alarm conditions for a minimum period of time, or confirm alarm conditions within a given time period, after being automatically reset, in order to be accepted as a valid alarm-initiation signal.

ALCOHOL-BASED HAND RUB. An alcohol-containing preparation designed for application to the hands for reducing the number of viable microorganisms on the hands and containing ethanol or isopropanol in an amount not exceeding 95-percent by volume.

ALCOHOL-BLENDED FUELS. Flammable liquids consisting of 10-percent or greater, by volume, ethanol or other alcohols blended with gasoline.

[A] ALTERATION. Any construction or renovation to an existing structure other than a repair or addition.

[B] ALTERNATING TREAD DEVICE. A device that has a series of steps between 50 and 70 degrees (0.87 and 1.22 rad) from horizontal, usually attached to a center support rail in an alternating manner so that the user does not have both feet on the same level at the same time.

[B] AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less-than-24-hour basis to persons who are rendered incapable of self-preservation by the services provided.

AMMONIUM NITRATE. A chemical compound represented by the formula NH_4NO_3 .

ANNUNCIATOR. A unit containing one or more indicator lamps, alphanumeric displays or other equivalent means in which each indication provides status information about a circuit, condition or location.

[A] APPROVED. Acceptable to the *fire code official*.

[B] AREA, BUILDING. The area included within surrounding *exterior walls* (or *exterior walls* and *fire walls*) exclusive of vent shafts and *courts*. Areas of the building not provided with surrounding walls shall be included in the building area

if such areas are included within the horizontal projection of the roof or floor above.

[B] AREA OF REFUGE. An area where persons unable to use *stairways* can remain temporarily to await instructions or assistance during emergency evacuation.

ARRAY. The configuration of storage. Characteristics considered in defining an array include the type of packaging, flue spaces, height of storage and compactness of storage.

ARRAY, CLOSED. A storage configuration having a 6-inch (152 mm) or smaller width vertical flue space that restricts air movement through the stored commodity.

[B] ATRIUM. An opening connecting two or more stories other than enclosed *stairways*, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or mezzanines that comply with Section 505 of the *International Building Code*.

[B] ATTIC. The space between the ceiling beams of the top story and the roof rafters.

AUDIBLE ALARM NOTIFICATION APPLIANCE. A notification appliance that alerts by the sense of hearing.

AUTOMATED RACK STORAGE. Automated rack storage is a stocking method whereby the movement of pallets, products, apparatus or systems are automatically controlled by mechanical or electronic devices.

AUTOMATIC. As applied to fire protection devices, a device or system providing an emergency function without the necessity for human intervention and activated as a result of a predetermined temperature rise, rate of temperature rise or combustion products.

AUTOMATIC FIRE-EXTINGUISHING SYSTEM. An *approved* system of devices and equipment which automatically detects a fire and discharges an *approved* fire-extinguishing agent onto or in the area of a fire.

AUTOMATIC SMOKE DETECTION SYSTEM. A fire alarm system that has initiation devices that utilize smoke detectors for protection of an area such as a room or space with detectors to provide early warning of fire.

AUTOMATIC SPRINKLER SYSTEM. An *automatic sprinkler system*, for fire protection purposes, is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply. The portion of the system above the ground is a network of specially sized or hydraulically designed piping installed in a structure or area, generally overhead, and to which automatic sprinklers are connected in a systematic pattern. The system is usually activated by heat from a fire and discharges water over the fire area.

AUTOMOTIVE MOTOR FUEL-DISPENSING FACILITY. That portion of property where flammable or *combustible liquids* or gases used as motor fuels are stored and dispensed from fixed equipment into the fuel tanks of motor vehicles.

AVERAGE AMBIENT SOUND LEVEL. The root mean square, A-weighted sound pressure level measured over a 24-hour period, or the time any person is present, whichever time period is less.

[B] AWNING. An architectural projection that provides weather protection, identity or decoration and is partially or wholly supported by the building to which it is attached. An awning is comprised of a lightweight frame structure over which a covering is attached.

BALED COTTON. See "Cotton."

BALED COTTON, DENSELY PACKED. See "Cotton."

BARRICADE. A structure that consists of a combination of walls, floor and roof, which is designed to withstand the rapid release of energy in an explosion and which is fully confined, partially vented or fully vented; or other effective method of shielding from *explosive materials* by a natural or artificial barrier.

Artificial barricade. An artificial mound or revetment with a minimum thickness of 3 feet (914 mm).

Natural barricade. Natural features of the ground, such as hills, or timber of sufficient density that the surrounding exposures that require protection cannot be seen from the magazine or building containing *explosives* when the trees are bare of leaves.

BARRICADED. The effective screening of a building containing *explosive materials* from the magazine or other building, railway or highway by a natural or an artificial barrier. A straight line from the top of any sidewall of the building containing *explosive materials* to the eave line of any magazine or other building or to a point 12 feet (3658 mm) above the center of a railway or highway shall pass through such barrier.

[B] BASEMENT. A story that is not a story above grade plane.

BATTERY SYSTEM, STATIONARY LEAD ACID. A system which consists of three interconnected subsystems:

1. A lead-acid battery.
2. A battery charger.
3. A collection of rectifiers, inverters, converters and associated electrical equipment as required for a particular application.

BATTERY TYPES.

Lithium-ion battery. A storage battery that consists of lithium ions embedded in a carbon graphite or nickel metal-oxide substrate. The electrolyte is a carbonate mixture or a gelled polymer. The lithium ions are the charge carriers of the battery.

Lithium metal polymer battery. A storage battery that is comprised of nonaqueous liquid or polymerized electrolytes, which provide ionic conductivity between lithiated positive active material electrically separated from metallic lithium or lithiated negative active material.

Nickel cadmium (Ni-Cd) battery. An alkaline storage battery in which the positive active material is nickel

oxide, the negative contains cadmium and the electrolyte is potassium hydroxide.

Nonrecombinant battery. A storage battery in which, under conditions of normal use, hydrogen and oxygen gases created by electrolysis are vented into the air outside of the battery.

Recombinant battery. A storage battery in which, under conditions of normal use, hydrogen and oxygen gases created by electrolysis are converted back into water inside the battery instead of venting into the air outside of the battery.

Stationary storage battery. A group of electrochemical cells interconnected to supply a nominal voltage of DC power to a suitably connected electrical load, designed for service in a permanent location. The number of cells connected in a series determines the nominal voltage rating of the battery. The size of the cells determines the discharge capacity of the entire battery. After discharge, it may be restored to a fully charged condition by an electric current flowing in a direction opposite to the flow of current when the battery is discharged.

Valve-regulated lead-acid (VRLA) battery. A lead-acid battery consisting of sealed cells furnished with a valve that opens to vent the battery whenever the internal pressure of the battery exceeds the ambient pressure by a set amount. In VRLA batteries, the liquid electrolyte in the cells is immobilized in an absorptive glass mat (AGM cells or batteries) or by the addition of a gelling agent (gel cells or gelled batteries).

Vented (flooded) lead-acid battery. A lead-acid battery consisting of cells that have electrodes immersed in liquid electrolyte. Flooded lead-acid batteries have a provision for the user to add water to the cell and are equipped with a flame-arresting vent which permits the escape of hydrogen and oxygen gas from the cell in a diffused manner such that a spark, or other ignition source, outside the cell will not ignite the gases inside the cell.

BIN BOX. A five-sided container with the open side facing an aisle. Bin boxes are self-supporting or supported by a structure designed so that little or no horizontal or vertical space exists around the boxes.

BLAST AREA. The area including the blast site and the immediate adjacent area within the influence of flying rock, missiles and concussion.

BLAST SITE. The area in which *explosive materials* are being or have been loaded and which includes all holes loaded or to be loaded for the same blast and a distance of 50 feet (15 240 mm) in all directions.

BLASTER. A person qualified in accordance with Section 3301.4 to be in charge of and responsible for the loading and firing of a blast.

BLASTING AGENT. A material or mixture consisting of fuel and oxidizer, intended for blasting provided that the finished product, as mixed for use or shipment, cannot be detonated by means of a No. 8 test detonator when unconfined. Blasting agents are labeled and placarded as Class 1.5 material by US DOTn.

DEFINITIONS

[B] BLEACHERS. Tiered seating supported on a dedicated structural system and two or more rows high and is not a building element (see “*Grandstands*”).

[B] BOARDING HOUSE. A building arranged or used for lodging for compensation, with or without meals, and not occupied as a single-family unit.

BOILING POINT. The temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch absolute (psia) (101 kPa) or 760 mm of mercury. Where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for the purposes of this classification, the 20-percent evaporated point of a distillation performed in accordance with ASTM D 86 shall be used as the boiling point of the liquid.

BONFIRE. An outdoor fire utilized for ceremonial purposes.

BRITISH THERMAL UNIT (BTU). The heat necessary to raise the temperature of 1 pound (0.454 kg) of water by 1°F (0.5565°C).

[A] BUILDING. Any structure used or intended for supporting or sheltering any use or occupancy.

[B] BUILDING AREA. See “Area, Building.”

[B] BUILDING HEIGHT. See “Height, Building.”

[A] BUILDING OFFICIAL. The officer or other designated authority charged with the administration and enforcement of the *International Building Code*, or a duly authorized representative.

BULK OXYGEN SYSTEM. An assembly of equipment, such as oxygen storage containers, pressure regulators, safety devices, vaporizers, manifolds and interconnecting piping, that has a storage capacity of more than 20,000 cubic feet (566 m³) of oxygen at *normal temperature and pressure (NTP)* including unconnected reserves on hand at the site. The bulk oxygen system terminates at the point where oxygen at service pressure first enters the supply line. The oxygen containers can be stationary or movable, and the oxygen can be stored as a gas or liquid.

BULK PLANT OR TERMINAL. That portion of a property where flammable or *combustible liquids* are received by tank vessel, pipelines, tank car or tank vehicle and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline, tank car, tank vehicle, portable tank or container.

BULK TRANSFER. The loading or unloading of flammable or *combustible liquids* from or between tank vehicles, tank cars or storage tanks.

BULLET RESISTANT. Constructed so as to resist penetration of a bullet of 150-grain M2 ball ammunition having a nominal muzzle velocity of 2,700 feet per second (fps) (824 mps) when fired from a 30-caliber rifle at a distance of 100 feet (30 480 mm), measured perpendicular to the target.

CANOPY. A structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and may be structurally independent or supported by attachment to a building

on one end and by not less than one stanchion on the outer end.

CARBON DIOXIDE EXTINGUISHING SYSTEM. A system supplying carbon dioxide (CO₂) from a pressurized vessel through fixed pipes and nozzles. The system includes a manual- or automatic-actuating mechanism.

[B] CARE SUITE. A group of treatment rooms, care recipient sleeping rooms and their associated support rooms or spaces and circulation space within Group I-2 occupancies where staff are in attendance for supervision of all care recipients within the suite, and the suite is in compliance with the requirements of Section 1014.2.2 through 1014.2.6.

CARTON. A cardboard or fiberboard box enclosing a product.

CEILING LIMIT. The maximum concentration of an airborne contaminant to which one may be exposed. The ceiling limits utilized are those published in DOL 29 CFR Part 1910.1000. The ceiling Recommended Exposure Limit (REL-C) concentrations published by the U.S. National Institute for Occupational Safety and Health (NIOSH), Threshold Limit Value-Ceiling (TLV-C) concentrations published by the American Conference of Governmental Industrial Hygienists (ACGIH), Ceiling Workplace Environmental Exposure Level (WEEL-Ceiling) Guides published by the American Industrial Hygiene Association (AIHA), and other *approved*, consistent measures are allowed as surrogates for hazardous substances not listed in DOL 29 CFR Part 1910.1000.

[EB] CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.

CHEMICAL. An element, chemical compound or mixture of elements or compounds or both.

CHEMICAL NAME. The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry, the Chemical Abstracts Service rules of nomenclature, or a name which will clearly identify a chemical for the purpose of conducting an evaluation.

[M] CHIMNEY. A primarily vertical enclosure containing one or more passageways for conveying flue gases to the outside atmosphere.

CLEAN AGENT. Electrically nonconducting, volatile or gaseous fire extinguishant that does not leave a residue upon evaporation.

[B] CLINIC-OUTPATIENT. Buildings or portions thereof used to provide medical care on a less-than-24-hour basis to persons who are not rendered incapable of self-preservation by the services provided.

CLOSED CONTAINER. A container sealed by means of a lid or other device such that liquid, vapor or dusts will not escape from it under ordinary conditions of use or handling.

CLOSED SYSTEM. The use of a solid or liquid hazardous material involving a closed vessel or system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal