MINNESOTA RULES, CHAPTER 7511
MINNESOTA STATE FIRE CODE

7511.0010 PURPOSE.

The purpose of this chapter is to adopt uniform fire safety standards consistent with nationally recognized good practice for the safeguarding to a reasonable degree of life and property from the hazards of fire and explosion arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises.

7511.0020 SCOPE.

The scope of this chapter is intended to be consistent with Minnesota Statutes, section 299F.011.

7511.0090 RULES AND STANDARDS INCORPORATED BY REFERENCE.

For purposes of this chapter, "IFC" means the 2006 edition of the International Fire Code as promulgated by the International Code Council, Inc., Falls Church, Virginia. The IFC is incorporated by reference and made a part of Minnesota Rules pursuant to statutory authority, subject to the alterations and amendments in this chapter. Portions of this chapter reproduce text and tables from the IFC. The IFC is not subject to frequent change and is available at the office of the commissioner of the Department of Labor and Industry and at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155. The IFC is copyright 2006 by the International Code Council, Inc. All rights reserved.

7511.0101 SECTION 101, GENERAL.

Subpart 1. **IFC Section 101.1.** IFC Section 101.1 is amended to read:

101.1 Title. This code shall be known as the Minnesota State Fire Code, may be cited as such, and will be referred to herein as "Fire Code" or "this code."

Subp. 2. **IFC Section 101.** IFC Section 101 is amended by adding sections to read:

101.6 Local government amendments to Chapter 1. Any jurisdiction that adopts this code is authorized to make amendments to Chapter 1 of this code to provide a system for enforcement and administration within the jurisdiction. These amendments shall be equal to, in addition to, or more stringent than this code. None of the existing provisions of Chapter 1 shall be changed nor shall any amendment be made that interferes with the intent of the existing provisions nor the state fire marshal's duties and powers thereunder.

101.6.1 Local government rules. Any jurisdiction that adopts this code is authorized to adopt rules for the prevention and control of fires and fire hazards as may be necessary from time to time, to carry out the intent of this code, and that may be more restrictive than this code when the rules are necessary to protect life or property in the community. The governing body may adopt this code by ordinance. One certified copy of the ordinance containing the rules shall be filed with the clerk of the jurisdiction and shall be in effect immediately thereafter, and additional copies shall be kept in the office of the fire department for distribution to the public.

7511.0102 SECTION 102, APPLICABILITY.

Subpart 1. **IFC Section 102.1.** IFC Section 102.1 is amended, and sections added, to read:

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 when identified in specific sections of this code.

3. Existing structures, facilities and conditions that, in the opinion of the code official, constitute a distinct hazard to life and property.

102.1.1 Existing building features - application. Existing construction and design features that exceed the requirements for existing structures or facilities but are less than the requirements for new structures or facilities shall not be further diminished. Existing construction and design features that exceed the requirements for new structures or facilities are allowed to be removed. (See section 901.6 concerning maintenance of fire protection systems.)

Subp. 2. **IFC Section 102.2.** IFC Section 102.2 is amended by adding a section to read:

102.2.1 Operational provisions - defined. The operational provisions of this code are those operations defined in Sections 105.6.1 through 105.6.46.

Subp. 3. **IFC Section 102.6.** IFC Section 102.6 is amended by adding a section to read:

102.6.1 References to ICC codes. The references to the codes and standards promulgated by the International Code Council (listed under ICC in Chapter 45) are modified as follows:

1. Wherever this code references the ICC Electrical Code, it means the Electrical Code, Minnesota Rules, chapter 1315.

2. Wherever this code references the International Building Code, it means the Minnesota State Building Code adopted pursuant to Minnesota Statutes, section 16B.61, subdivision 1.

3. Wherever this code references the International Fuel Gas Code, it means the Minnesota State Mechanical Code adopted pursuant to Minnesota Statutes, section 16B.61.

4. Wherever this code references the International Mechanical Code, it means the Minnesota State Mechanical Code adopted pursuant to Minnesota Statutes, section 16B.61.

5. Wherever this code references the International Plumbing Code, it means the Minnesota Plumbing Code, Minnesota Rules, chapter 4715.

6. Wherever this code references the International Property Maintenance Code, it means the housing maintenance code or property maintenance code adopted by the jurisdiction (see Appendix J).

7. Wherever this code references the International Residential Code, it means the Minnesota State Building Code adopted pursuant to Minnesota Statutes, section 16B.61, subdivision 1.

8. Wherever this code references the International Existing Building Code, it means the Minnesota Building Conservation Code adopted pursuant to

Minnesota Statutes, section 16B.61, subdivision 1.

Subp. 4. **IFC Section 102.** IFC Section 102 is amended by adding sections to read:

102.10 Standards for existing Group I occupancies. The provisions of protection in existing Group I-2 occupancies, and in existing Group I-3 occupancies used as detention and correctional facilities, shall be in accordance with the applicable provisions of the Life Safety Code, ANSI/NFPA 101, referred to as Standard No. 101, issued by the National Fire Protection Association (Quincy, Massachusetts, 2000). Standard No. 101 is incorporated by reference, is not subject to frequent change and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155.

Construction provisions of Standard No. 101 that are more restrictive than those found in the Building Code shall not be applicable. For the purposes of Section 102.10, construction provisions shall include those relating to type of construction, automatic fire-extinguishing and standpipe systems, fire alarm and detection systems, vertical opening protection, escape windows, exits, smoke barriers, handicapped accessibility and hazardous area separations.

102.10.1 Standard 101 modified. Sections 23.3.7 through 23.3.7.3 of Standard No. 101 are deleted.

102.11 Mixed occupancies. Where a building is occupied for two or more uses not included in the same occupancy, the building or portion thereof shall be classified as a mixed occupancy. The mixed occupancy shall be further classified as either nonseparated uses or separated uses according to the Building Code. Areas of Group H shall only be as separated uses as permitted by the Building Code.

102.11.1 Separated uses. Each portion of the building shall be individually classified as to use. Each fire area shall comply with the Fire Code based on the use of that space. Provisions for egress between different occupancies shall be in accordance with Chapter 10.

102.11.2 Nonseparated uses. Each portion of the building shall be individually classified as to use. The most restrictive provisions of the Fire Code shall apply to the nonseparated uses. Provisions for egress between different occupancies shall be in accordance with Chapter 10.

7511.0104 SECTION 104, GENERAL AUTHORITY AND RESPONSIBILITIES.

IFC Section 104.9 is amended by adding sections to read:

104.9.1 Performance-based fire and life safety design. The code official is authorized to approve performance-based fire and life safety designs where the code official finds that the proposed design has been conducted by an approved method. Approved performance-based designs shall be deemed as evidence of compliance with the intent of this code. Approvals under the authority herein contained shall be subject to the approval of the building code official whenever the design involves matters regulated by the Building Code. Sections 104.9.1.1 through 104.9.1.4 shall apply to performance-based designs.

104.9.1.1 Goals, objectives and acceptance criteria. Design goals, objectives and performance criteria shall be approved by the code official prior to the submission of a performance-based design report, calculations or analysis results. As a minimum, an approved performance-based design shall address the following objectives: life safety of occupants, firefighter safety, property protection, continuity of operations and safeguarding of the environment.

104.9.1.2 Peer review. To determine the acceptability of the performance-based design, the code official is authorized to request technical assistance in accordance with Section 104.7.2.

104.9.1.3 Engineer of record. Performance-based designs shall be prepared by, and bear the stamp of, a licensed design professional competent in the area of work. The design professional shall provide written confirmation to the code official before a certificate of occupancy is issued that the performance-based design has been properly implemented, that the operation or use of the building is within the limitations of the design and that adequate controls are in place to maintain compliance with the conditions of the design throughout the life of the building.

104.9.1.4 Annual recertification of performance-based design. Where a performance-based design has been approved and used, the property owner shall annually certify that the design features and systems have been maintained in accordance with the approved original performance-based design and assumptions and any subsequent approved changes or modifications to the original performance-based design.

7511.0106 SECTION 106, INSPECTIONS.

IFC Section 106 is amended by adding a section to read:

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.

7511.0108 SECTION 108, BOARD OF APPEALS.

Subpart 1. **IFC Section 108.1.** IFC Section 108.1 is amended to read:

SECTION 108
APPEALS

108.1 Appeals to state fire marshal. As outlined in Minnesota Statutes, section 299F.011, subdivisions 5 and 5b, any person may appeal an order issued to them by the state fire marshal or action taken by the local governing body on issues regulated by this code. Appeals can be made to determine the suitability of alternate materials and types of construction, to provide for reasonable interpretations of the provisions of this code, and to grant variances from orders issued by representatives of the state fire marshal. Persons wishing to present matters for appeal shall do so in writing and, in the case of persons who have received written orders, applications for variances shall be made prior to the expiration of the orders. Orders shall not be considered to be expired until any time extensions granted by the state fire marshal have elapsed. The state fire marshal shall not accept applications for variances after criminal action for noncompliance has been initiated pursuant to Minnesota Statutes, section 299F.011, subdivision 6.

Subp. 2. **IFC Sections 108.2 and 108.3.** IFC Sections 108.2 and 108.3 are deleted.

7511.0109 SECTION 109, VIOLATIONS.

IFC Section 109.3 is amended to read:

109.3 Violation penalties. A person who violates a provision of this code shall be guilty of a misdemeanor.

7511.0201 SECTION 201, GENERAL.

IFC Section 201.4 is amended to read:

201.4 Terms not defined. When terms are not defined, they shall have their ordinary accepted

meanings within the context with which they are used. The Merriam-Webster Collegiate Dictionary, available on the Internet at www.m-w.com, shall be considered as providing ordinarily accepted meanings. The dictionary is incorporated by reference, is subject to frequent change, and is available through the Minitex interlibrary loan system.

7511.0202 SECTION 202, GENERAL DEFINITIONS.

IFC Section 202 is amended by adding or amending definitions to read:

ADULT DAY CARE CENTER. A facility, licensed by the Department of Human Services under Minnesota Rules, parts 9555.9600 to 9555.9730, that provides a program of adult day care services to functionally impaired adults for periods of less than 24 hours per day in a setting other than a participant's home or the residence of the facility's operator.

AISLE. See Section 1002.1.

AUTHORITY HAVING JURISDICTION. Any municipal fire code official serving a particular jurisdiction or the state fire marshal or any of their authorized representatives.

BUILDING CODE. The Minnesota State Building Code adopted pursuant to Minnesota Statutes, section 16B.61, subdivision 1.

CHIEF. See FIRE CHIEF.

CORRIDOR. See Section 1002.1.

DECORATIVE MATERIALS. Combustible materials used for decorative effects such as curtains; draperies; streamers; surface coverings applied over building interior finishes for decorative, acoustical or other effect; cloth; cotton batting; paper; plastics; vegetation; hay; split bamboo; straw; vines; leaves; trees; moss; and similar materials used for decorative effect. Decorative materials do not include educational materials that are displayed in an approved manner, ordinary window shades, floor coverings, interior finish materials used as surface coverings (See Chapter 8 for regulations of such materials) and materials 1/28 inch (0.9 mm) or less in thickness applied directly to a noncombustible backing.

FAMILY ADULT DAY SERVICES. A program providing services for up to eight functionally impaired adults for less than 24 hours per day in the license holder's primary residence in accordance with Minnesota Statutes, section 245A.143. This includes programs located in residences licensed by the Department of Human Services for adult foster care, provided not more than eight adults, excluding staff, are present in the residence at any time.

FAMILY DAY CARE HOME. A residence, licensed by the Department of Human Services under Minnesota Rules, parts 9502.0315 to 9502.0445, in which no more than ten children at any one time receive care, maintenance and supervision by other than their relatives or legal guardians for less than 24 hours per day.

FIRE CHIEF. The chief officer of the fire department serving the jurisdiction or the chief's authorized representatives. For purposes of enforcing this code, the term fire chief also includes the state fire marshal and the state fire marshal's representatives.

GROUP DAY CARE HOME. A residence, licensed by the Department of Human Services under Minnesota Rules, parts 9502.0315 to 9502.0445, in which at least 11 but not more than 14 children receive care, maintenance and supervision by other than their relatives or legal guardians for less than 24 hours per day.

GUEST ROOM. A room or rooms used or intended to be used for sleeping purposes. Every 100 square feet of superficial floor area

in a dormitory shall be considered to be a guest room.

JURISDICTION. Any municipality, district, or other political subdivision adopting this code for use in its jurisdictional area.

JURISDICTIONAL AREA. The territory of the municipality, district, or other political subdivision adopting this code.

MECHANICAL CODE. The Minnesota State Mechanical Code as adopted pursuant to Minnesota Statutes, section 16B.61.

MUNICIPALITY. Any statutory or home rule charter city, county or town meeting the requirements of Minnesota Statutes, section 368.01, subdivision 1, the University of Minnesota, or the state for public buildings.

OCCUPANCY CLASSIFICATION. This definition is amended by modifying the definitions of Educational Group E; Institutional Groups I-1 and I-2; Institutional Group I-4; and Residential Groups R-1, R-3 and R-4, to read:

> **Educational Group E.** Educational Group E occupancy includes any building used for educational purposes through the 12th grade by six or more persons for more than 12 hours per week or four hours in any one day.
>
> **Child day care.** The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than 2-1/2 years of age shall be classified as an E occupancy.
>
> **Adult day care.** An adult day care center serving more than five ambulatory and mobile persons who are capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions shall be classified as an E occupancy. See part 7510.3675 for the protection requirements for facilities serving both participants who are capable and not capable of taking appropriate action for self-preservation.

Institutional Group I.

Group I-1. This occupancy shall include buildings, structures, or parts thereof housing more than 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following: residential board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers and convalescent facilities. A facility such as the above with five or fewer persons shall be classified as Group R-3. A facility such as the above housing at least six and not more than 16 persons, shall be classified as Group R-4.

Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following: hospitals, nursing homes (both intermediate-care facilities and skilled nursing facilities), mental hospitals and detoxification facilities. A facility such as the above with five or fewer persons shall be classified as Group R-3.

Child care facility. A child care facility that provides care on a 24-hour basis to more than five children 2-1/2 years of age or less shall be classified as Group I-2.

Group I-4, Day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. A facility such as the above with five or fewer persons shall be classified as Group R-3. Places of worship during religious functions are not included.

Adult care facility. A facility that provides accommodations for less than 24 hours for more than five unrelated adults and provides supervision and personal care services shall be classified as Group I-4.

Exception: Where the occupants are capable of responding to an emergency situation without physical assistance from the staff the facility shall be classified as Group A-3.

Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children 2-1/2 years of age or less shall be classified as Group I-4.

Exception: A child day care facility which provides care for more than five but no more than 100 children 2-1/2 years or less of age, when the rooms where such children are cared for are located on the level of exit discharge and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

Residential Group R.

Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I. Residential occupancies shall include the following:

R-1. Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including:

Boarding houses (transient)

Hotels (transient)

Motels (transient)

Bed and breakfast facilities with six or more guest rooms. A facility with less than six guest rooms shall be classified as a Group R-3 occupancy.

R-2. Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including:

Apartment houses

Boarding houses (not transient)

Convents

Dormitories

Fraternities and sororities

Hotels (not transient)

Monasteries

Motels (not transient)

Vacation time-share properties

Congregate living facilities with 16 or fewer occupants are permitted to comply

with construction that complies with the requirements for Group R-3.

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

Buildings that do not contain more than two dwelling units

Adult facilities that provide accommodations for five or fewer persons of any age for less than 24 hours

Child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours

Congregate living facilities with 16 or fewer persons

Adult and child care facilities

R-4. Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff. Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except as otherwise provided for in this code.

OUTPATIENT CLINIC. A building or part thereof used to provide, on an outpatient basis, surgical treatment requiring general anesthesia or other treatment of patients that would render them incapable of unassisted self-preservation under emergency conditions. This would include outpatient surgical centers and kidney dialysis units, but does not include doctors' and dentists' offices or clinics for the practice of medicine or the delivery of primary care.

PERFORMANCE-BASED DESIGN. An engineering approach to design elements of a building based on agreed-upon performance goals and objectives, engineering analysis and quantitative assessment of alternatives against the design goals and objectives using accepted engineering tools, methodologies and performance criteria.

POWER TAP. A device that is connected to an electrical receptacle, has built-in overcurrent protection and allows connection of one or more electrical plugs to supply electricity to other devices and equipment.

REQUIRED BY THE FIRE CHIEF. Determined by the fire chief to be directly related to safeguarding life and property from the hazards of fire, and uniform for each class or kind of building, structure or property covered.

RESIDENTIAL HOSPICE FACILITY. A facility located in a residential area that directly provides 24-hour residential and support services in a home-like setting for not more than 12 persons who have been diagnosed as terminally ill with a probable life expectancy of under one year.

ROOM. A space or area bounded by any obstructions over 6 feet in height which at any time enclose more than 80 percent of the perimeter of the area. In computing the unobstructed perimeter, openings less than 3 feet in clear width and less than 6 feet 8 inches high shall not be considered. Aisles and corridors shall not be construed to form rooms.

STATE FIRE MARSHAL. The Minnesota state fire marshal or the state fire marshal's authorized representatives.

SUPERVISED LIVING FACILITY. A facility in which supervision, lodging, meals, and, in accordance with the rules of the Department of Human Services and the Department of Health, counseling and developmental habilitative or rehabilitative services are provided to persons who are

mentally retarded, chemically dependent, adult mentally ill, or physically handicapped.

Class A-1 supervised living facility. A supervised living facility for six or fewer ambulatory or mobile disabled persons who are capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions.

Class A-2 supervised living facility. A supervised living facility for more than six ambulatory or mobile disabled persons who are capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions.

Class B-1 supervised living facility. A supervised living facility for six or fewer ambulatory or nonambulatory, mobile or nonmobile persons who are not mentally or physically capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions.

Class B-2 supervised living facility. A supervised living facility for seven to 16 ambulatory or nonambulatory, mobile or nonmobile persons who are not mentally or physically capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions.

Class B-3 supervised living facility. A supervised living facility for 17 or more ambulatory or nonambulatory, mobile or nonmobile persons who are not mentally or physically capable of taking appropriate action for self-preservation under emergency conditions as determined by program licensure provisions.

7511.0304 SECTION 304, COMBUSTIBLE WASTE MATERIAL.

IFC Section 304.3.2 is deleted.

7511.0307 SECTION 307, OPEN BURNING AND RECREATIONAL FIRES.

IFC Sections 307.1 through 307.2.1 and IFC Sections 307.4 through 307.4.1 are deleted.

7511.0308 SECTION 308, OPEN FLAMES.

IFC Sections 308.3.1 through 308.3.1.1 are deleted.

7511.0315 SECTION 315, MISCELLANEOUS COMBUSTIBLE MATERIALS STORAGE.

Subpart 1. **IFC Section 315.2.1.** IFC Section 315.2.1 is amended by adding a paragraph to read:

Where more restrictive clearances between sprinkler head deflectors and storage are required by the sprinkler listing or NFPA 13, the more restrictive clearances shall apply.

Subp. 2. **IFC Section 315.2.3.** IFC Section 315.2.3 is amended, and sections added, to read:

315.2.3 Equipment rooms. Combustible storage in boiler rooms, mechanical rooms, electrical equipment rooms and elevator equipment rooms shall be in accordance with sections 315.2.3.1 through 315.2.3.2. Storage not in conformance with these sections shall be removed or the condition abated. For purposes of sections 315.2.3 through 315.2.3.5, storage does not include materials necessary for the

construction, maintenance, or operation of the equipment.

315.2.3.1 Boiler rooms. Storage in boiler and furnace rooms shall be neat and orderly. Access to electrical panels shall be maintained in accordance with Section 605.3. At least 36 inches (914 mm) shall be maintained for access to equipment. Combustible storage in boiler and furnace rooms shall be in accordance with Section 315.2.3.1.1 or 315.2.3.1.2.

315.2.3.1.1 Boiler rooms with equipment at 400,000 BTU's per hour input or less. Combustible storage is allowed in boiler and furnace rooms equipped throughout with an approved automatic fire-extinguishing system and where the fuel-fired equipment is 400,000 BTU's per hour input or less. No combustible storage shall be within 36 inches (914 mm) of fuel-fired equipment.

315.2.3.1.2 Boiler rooms with equipment over 400,000 BTU's per hour input. Combustible storage is allowed in boiler and furnace rooms equipped throughout with an approved automatic fire-extinguishing system and where the fuel-fired equipment exceeds 400,000 BTU's per hour input. No storage shall be within 10 feet (3048 mm) of the boiler.

315.2.3.2 Mechanical rooms. Combustible storage is allowed in mechanical rooms with or without fuel-fired equipment when equipped throughout with an approved automatic fire-extinguishing system. Storage shall be neat and orderly. A 3-foot aisle shall be maintained to all equipment. No storage shall be allowed within 3 feet of fuel-fired equipment. Access to electrical service panels shall be maintained per Section 605.3.

315.2.3.3 Electrical equipment rooms. No combustible storage or any other type of storage shall be allowed in electrical distribution equipment rooms.

315.2.3.4 Elevator equipment rooms. No combustible storage or any other type of storage shall be allowed in elevator equipment rooms or elevator machine rooms.

315.2.3.5 Shafts. No combustible storage shall be allowed in mechanical rooms such as penthouses with shafts open to multiple floors.

7511.0316 SECTION 316, CLEARANCE OF VEGETATION FROM STRUCTURES.

IFC Chapter 3 is amended by adding a section to read:

SECTION 316
CLEARANCE OF VEGETATION FROM STRUCTURES

316.1 General. Land that is covered with grass, grain brush, or forest, whether privately or publicly owned, which is so situated or is of such inaccessible location that a fire originating upon the land would present an abnormally difficult job of suppression or would result in great and unusual damage through fire or resulting erosion shall comply with Section 316.2.

316.2 Fire breaks. Persons owning, leasing, controlling, operating or maintaining buildings or structures in, upon or adjoining land covered with grass, grain brush or forest, and persons owning, leasing or controlling land adjacent to such buildings or structures, shall comply at all times with all of the following requirements:

1. Maintain an effective fire break by removing and clearing away flammable vegetation and combustible growth from areas within 30 feet (9144 mm) of such buildings or structures.

Exception: Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided they do

not form a means of rapidly transmitting fire from the native growth to any structure.

2. Maintain additional fire protection or firebreak by removing brush, flammable vegetation and combustible growth located from 30 feet to 100 feet (9144 mm to 30 480 mm) from such buildings or structures, when required by the fire chief because of extrahazardous conditions causing a firebreak of only 30 feet (9144 mm) to be insufficient to provide reasonable fire safety.

Exception: Grass and other vegetation located more than 30 feet (9144 mm) from buildings or structures and less than 18 inches (457 mm) in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

3. Remove portions of trees that extend within 10 feet (3048 mm) of the outlet of a chimney.

4. Maintain trees adjacent to or overhanging a building free of deadwood.

5. Maintain the roof of a structure free of leaves, needles or other dead vegetative growth.

7511.0405 SECTION 405, EMERGENCY EVACUATION DRILLS.

IFC Section 405.7 is amended by adding an exception to read:

Exception: In Group A and R-1 occupancies where only employees are required to participate in drills as specified in Table 405.2.

7511.0408 SECTION 408, USE AND OCCUPANCY-RELATED REQUIREMENTS.

Subpart 1. **IFC Section 408.6.** IFC Section 408.6 is amended by deleting the last sentence.

Subp. 2. **IFC Section 408.10.4.** IFC Section 408.10.4 is amended by deleting the last sentence.

Subp. 3. **IFC Section 408.11.3.** IFC Section 408.11.3 is amended by adding sections to read:

408.11.3.1 Minimum mall width. The minimum width of the mall area in covered mall buildings shall be maintained in conformance with the Building Code.

408.11.3.2 Kiosks. Kiosks and similar structures, whether temporary or permanent, located in covered mall buildings shall be constructed, protected and located in conformance with the Building Code.

7511.0508 SECTION 508, FIRE PROTECTION WATER SUPPLIES.

IFC Section 508.5.1 is amended to read:

508.5.1 Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 300 feet (91.5 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 400 feet (122 m).

2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 400 feet (122 m).

7511.0603 SECTION 603, FUEL-FIRED APPLIANCES.

Subpart 1. **IFC Section 603.5.** IFC Section 603.5 is amended, and sections added, to read:

603.5 Heating appliances. Heating appliances shall be listed and shall comply with this section.

Exception: Unlisted appliances may be installed where permitted by the code official, provided clearance from combustibles is maintained in accordance with the Mechanical Code.

603.5.1 Guard against contact. The heating element or combustion chamber shall be permanently guarded so as to prevent accidental contact by persons or material.

603.5.2 Heating appliance installation and maintenance. Heating appliances shall be installed and maintained in accordance with the manufacturer's instructions, the International Building Code, the International Mechanical Code, the International Fuel Gas Code and the ICC Electrical Code.

603.5.3 Heating appliance clearance to combustible materials. Clearances between heat-producing appliances and combustibles shall be in accordance with this section. Where specific manufacturer's instructions or listings allow a reduction from the distances specified in this section, those distances are allowed. Clearance reductions permitted by the Mechanical Code are allowed.

603.5.3.1 Gas heaters. A minimum of 18 inches (457 mm) shall be maintained between gas heat-producing appliances and combustible materials.

603.5.3.2 Solid fuel-burning heaters. A minimum of 36 inches (914 mm) shall be maintained between solid fuel-burning appliances and combustible materials.

Subp. 2. **IFC Section 603.8.** IFC Section 603.8 and all subsections are deleted.

7511.0604 SECTION 604, EMERGENCY AND STANDBY POWER SYSTEMS.

IFC Section 604.2.1 is deleted.

7511.0605 SECTION 605, ELECTRICAL EQUIPMENT, WIRING AND HAZARDS.

IFC Section 605.10.4 is deleted.

7511.0607 SECTION 607, ELEVATOR RECALL AND MAINTENANCE.

IFC Section 607 is deleted.

7511.0610 SECTION 610, MEZZANINES.

IFC Chapter 6 is amended by adding a section 610 to read:

SECTION 610
MEZZANINES

610.1 Conform to Building Code. Mezzanines in buildings shall conform to the requirements of the Building Code.

7511.0611 SECTION 611, PEDESTRIAN WALKWAYS AND PEDESTRIAN TUNNELS.

IFC Chapter 6 is amended by adding a section 611 to read:

SECTION 611
PEDESTRIAN WALKWAYS AND PEDESTRIAN TUNNELS

611.1 Installation and maintenance. New pedestrian walkways and tunnels shall be constructed and maintained in conformance with the Building Code. Existing pedestrian walkways and pedestrian tunnels shall comply with the following:

1. Unless all buildings connected to them are protected throughout by approved automatic fire-extinguishing systems, pedestrian walkways and pedestrian tunnels shall, at a minimum, be separated from the interior of buildings by walls and self-closing doors constructed to form a barrier to limit the transfer of smoke.

2. The unobstructed width of pedestrian walkways and pedestrian tunnels shall not be less than 44 inches (1118 mm).

3. No combustible materials or decorations shall be located in pedestrian walkways or pedestrian tunnels. Interior wall, ceiling, and floor finishes shall comply with Chapter 8.

4. Pedestrian walkways and pedestrian tunnels that serve as required means of egress from attached buildings shall comply with Sections 1026 and 1027.

5. Pedestrian walkways and pedestrian tunnels exceeding 400 feet (122 m) in length shall be provided with means of egress so arranged that the maximum length of exit access travel to reach an exit does not exceed 200 feet (60,960 mm).

6. Means of egress from pedestrian walkways and pedestrian tunnels shall not be locked unless provisions for emergency egress are provided.

7511.0704 SECTION 704, FLOOR OPENINGS AND SHAFTS.

IFC Section 704 is amended by adding a section to read:

704.3 Compliance alternative. Protection of vertical openings that do not serve as part of the required means of egress conforming to the requirements of NFPA 101 (Life Safety Code) shall be deemed to be in compliance with this code.

7511.0705 SECTION 705, SEPARATION OF OCCUPANCIES AND HAZARDOUS AREAS.

IFC Chapter 7 is amended by adding a section to read:

SECTION 705
SEPARATION OF OCCUPANCIES AND HAZARDOUS AREAS

705.1 General. Mixed occupancies within the same building and hazardous areas shall be separated in accordance with Sections 705.2 through 705.3.

705.2 Occupancy separations. Occupancy separations shall be provided in buildings containing Group I and Group R occupancies as specified in Sections 705.2.1 through 705.2.3. These separations shall be constructed and maintained in accordance with the Building Code. Existing wood lath and plaster in good condition or 1/2-inch (12.7 mm) gypsum wallboard is acceptable where one-hour occupancy separations are required.

Exception: Where one-hour fire-resistant construction is required, openings shall be protected by listed fire doors, insulated steel doors, 1-3/8-inch thick (35 mm) or 1-3/4-inch thick (45 mm) solid wood doors, or fixed wired glass set in steel frames. Doors shall be self-closing or automatic-closing by smoke detection.

705.2.1 Group I-1 and Group I-2 occupancies. Group I-1 and Group I-2 occupancies shall be separated from other occupancies as specified in the Building Code.

705.2.2 Group I-3 occupancies. Group I-3 occupancies shall be separated from other occupancies as specified in the Building Code.

Exceptions:

1. In buildings that are protected throughout by an approved automatic sprinkler system, one-hour fire-resistance-rated construction is permitted.

2. In buildings that are protected throughout by an approved automatic sprinkler system, openings for the passage of materials between the Group I-3 and adjacent occupancies are not required to be fire-resistance rated when such openings are not more than 4 feet (1219 mm) above the floor and are provided with a metal cover or door.

705.2.3 Group R occupancies. Group R occupancies and the exits therefrom shall be separated from Group A, B, M, S and U occupancies by at least one-hour fire-resistance-rated construction. Group R occupancies shall be separated from all other occupancies as specified in the Building Code.

Exceptions:

1. In buildings that are protected throughout by an approved automatic sprinkler system, one-hour occupancy separations need not be provided.

2. An occupancy separation need not be provided between Group A and Group R occupancies if the building is provided with a fire alarm system having automatic smoke detection throughout the Group A occupancy.

3. Fire-resistance-rated opening protection need not be provided between Group A and Group R occupancies when such openings are designed to resist the passage of smoke and the openings are protected by an approved automatic sprinkler system.

4. An occupancy separation need not be provided where two or more occupancies occur in the same building or structure and are so intermingled that separations are impracticable provided that the exit provisions and protection requirements for the more restrictive occupancy are provided.

5. An occupancy separation need not be provided between a Group R-3 occupancy with sleeping accommodations for ten or fewer persons and Group B or Group M occupancies which are accessory if interconnected smoke detectors are provided.

At least one smoke detector shall be located in the Group B or Group M occupancy and additional detectors may be needed in accordance with manufacturer's instructions. Smoke detectors in the sleeping areas shall be located as specified in Section 907.2.10 and shall be audible in all sleeping areas.

705.3 Incidental use areas. Incidental use areas shall be separated from the rest of the building in accordance with this section. Incidental use areas are defined as shops, laboratories containing hazardous materials, storage rooms exceeding 100 square feet in size, laundry rooms exceeding 100 square feet in size and rooms containing boilers or central heating plants where the largest piece of fuel equipment exceeds 400,000 BTU per hour input.

705.3.1 Separation required. Incidental use areas in Groups A, B, E, F, H, I, M, R-1, R-2 and S occupancies shall be separated from the rest of the building by not less than a one-hour fire barrier. Existing wood lath and plaster in good condition or 1/2-inch (12.7 mm) gypsum wallboard is acceptable where one-hour fire barriers are required. Storage rooms need not be separated in Groups F, M or S occupancies.

705.3.2 Sprinkler protection in lieu of separation. Incidental use areas in Groups A, B, E, F, H, M and S occupancies need not be separated when the incidental use area is protected with automatic sprinklers.

705.3.2.1 Groups I and R occupancies. Incidental use areas in Groups I and R occupancies need not be separated when the incidental use area is protected with automatic sprinklers and the construction of such areas is capable of resisting the passage of smoke. Doors to such areas shall be a minimum of one-hour fire-rated, solid-core wood doors or insulated steel doors. Doors shall be self-closing or automatic-closing by smoke detection.

7511.0801 SECTION 801, GENERAL.

IFC Section 801.1 is amended by adding a section to read:

801.1.1 Newly installed interior finish. Newly installed interior floor, wall and ceiling finishes shall be in accordance with the Building Code.

7511.0807 SECTION 807, DECORATIVE MATERIALS OTHER THAN DECORATIVE VEGETATION IN NEW AND EXISTING BUILDINGS.

Subpart 1. **IFC Section 807.1.** IFC Section 807.1 is amended to read:

807.1 General. In Group A occupancies, curtains, drapes, hangings and other decorative materials suspended from any wall or ceiling, where the suspended materials exceed 20 percent of the wall or ceiling surface, shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807.2 or shall be noncombustible.

In Group I-2 and I-3 occupancies, curtains, drapes, hangings, and other decorative materials suspended from any wall or ceiling, where the suspended materials exceed 10 square feet (0.9 m^2) for every 50 lineal feet (4.6 m^2) of the wall or ceiling surface, shall be flame resistant in accordance with Section 807.2 or shall be noncombustible.

Fixed or movable walls and partitions, paneling, wall pads and crash pads, applied structurally or for decoration, acoustical correction, surface insulation or other purposes, shall be considered interior finish if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered decorative materials or furnishings.

In Group B and M occupancies, fabric partitions suspended from the ceiling and not supported by the floor shall meet the flame propagation performance criteria in accordance with Section 807.2 and NFPA 701 or shall be noncombustible.

Subp. 2. **IFC Sections 807.1.1, 807.1.2.** IFC Sections 807.1.1 and 807.1.2 are deleted.

Subp. 3. **IFC Section 807.4.3.1.** IFC Section 807.4.3.1 is amended by deleting Exception 2.

Subp. 4. **IFC Section 807.4.4.1.** IFC Section 807.4.4.1 is amended by deleting Exception 2.

7511.0901 SECTION 901, GENERAL.

Subpart 1. **IFC Section 901.6.1.** IFC Section 901.6.1 is amended by adding an exception to read:

> **Exception:** Fire alarm and automatic fire-extinguishing systems shall be inspected and tested at least annually. Inspections and testing shall be conducted in accordance with the procedures specified in the referenced standards listed in Table 901.6.1.

Subp. 2. **IFC Section 901.10.** IFC Section 901 is amended by adding sections to read:

901.10 Fire sprinklers and fire detectors - ceilings. In buildings protected by automatic sprinklers or automatic fire detectors, suspended or removable ceiling tiles shall be maintained in place to prevent the delay in sprinkler or detector activation.

> **Exception:** When additional sprinklers or detectors are installed in the space above the suspended ceiling.

901.10.1 Open-grid ceilings. Open-grid ceilings shall not be installed beneath sprinklers.

> **Exception:** Open-grid ceilings are allowed when the requirements of NFPA 13 for open-grid ceilings are met.

901.10.2 Drop-out ceilings. Drop-out ceilings shall be permitted to be installed beneath sprinklers when all requirements of NFPA 13 for drop-out ceilings have been met.

7511.0903 SECTION 903, AUTOMATIC SPRINKLER SYSTEMS.

Subpart 1. **IFC Section 903.2.7.** IFC Section 903.2.7 is amended, and a section added, to read:

903.2.7 Group R. An automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2, or 903.3.1.3 shall be provided throughout all buildings containing a Group R occupancy where one of the following conditions exists:

> 1. The combined area on all floors, including mezzanines, exceeds 9,250 square feet (859.3 m^2); or
>
> 2. The Group R fire area is located more than three stories above grade plane.
>
> **Exceptions:**
>
> 1. Group R-3 single dwelling unit buildings.
>
> 2. Group R-3 or R-4 occupancies containing a facility licensed by the state of Minnesota shall be provided with a fire suppression system as required by the applicable licensing provision or this section, whichever is more restrictive.
>
> 3. Group R-3 attached garages need not be sprinklered throughout if a dry sprinkler is installed within 5 feet (1524 mm) of the door opening between the garage and attached residence.

For the purposes of this section, fire walls, party walls, or attached multiple fire-resistive exterior walls shall not constitute separate buildings.

> **Exception:** Fire walls, party walls or attached multiple fire-resistive exterior walls separating other occupancies not accessory to the Group R.

903.2.7.1 Residential hospice facilities. An automatic sprinkler system installed in accordance with NFPA 13 shall be provided throughout all buildings with a Group R-3 or Group R-4 fire area containing a residential hospice facility.

Exception: An automatic sprinkler system installed in accordance with Section 903.3.1.2 or 903.3.1.3 shall be allowed, provided that all habitable spaces and closets are sprinklered.

Subp. 2. **IFC Section 903.2.12.1.** IFC Section 903.2.12.1 is amended to read:

903.2.12.1 Fire protection for exhaust systems. Any portion of an exhaust system utilizing combustible components or having the potential for combustible residue build-up on the inside or where required by other sections of this code, where the duct cross-sectional area is greater than or equal to 75 square inches (480 cm^2), shall be provided with an automatic extinguishing system within the duct and at the duct intake, hood, enclosure or canopy, or shall be constructed of material listed for use without sprinkler protection. When sprinkler protection is installed, means shall be provided to prevent water accumulation in the duct or the flow of water back to a process where the application of water constitutes a serious life or fire hazard.

Subp. 3. **IFC Section 903.3.1.2.1.** IFC Section 903.3.1.2.1 is amended to read:

903.3.1.2.1 Protection of decks and balconies. Decks and balconies greater than 6 feet (1.8 m) above grade, greater than 4 feet (1.2 m) deep, with an area greater than 40 square feet (3.72 m^2), and attached to new Group R-1 and R-2 occupancy buildings protected in accordance with Section 903.3.1.2 that are three or more stories in height and with 30 or more units, shall be protected with sprinklers under the balcony or deck framing and under attic eaves when both of the following two conditions exist:

1. The building has an unsprinklered attic; and

2. The building has combustible siding.

Subp. 4. **IFC Section 903.3.1.** IFC Section 903.3.1 is amended by adding sections to read:

903.3.1.4 Buildings of undetermined use. When fire sprinkler systems are required in buildings of undetermined use, they shall be designed and installed to have a sprinkler density of not less than that required for an Ordinary Hazard Group 2 use with a minimum design area of 3,000 square feet (279 m^2).

Use is considered undetermined if not specified at the time a permit is issued.

Where a subsequent occupancy requires a system with greater capability, it shall be the responsibility of the owner to upgrade the system to the required density for the new hazard, use or occupancy.

903.3.1.5 Special sprinkler design criteria. When fire sprinkler systems are required in areas containing the following uses, they shall be designed and installed to have a sprinkler density of not less than that required for an Ordinary Hazard Group 2 use:

1. Chemistry labs; or

2. Wrestling or gymnastic rooms.

903.3.1.6 Modifications to sprinkler standards. The sprinkler installation standards as referenced in Sections 903.3.1.1, 903.3.1.2, and 903.3.1.3 are modified as follows:

903.3.1.6.1 Hose stream requirements. When, in the opinion of the fire chief, an adequate alternate water supply for hose stream requirements is provided or available, the water supply requirements for the sprinkler system hose stream demands may be modified.

903.3.1.6.2 Elevator shafts and equipment. Sprinkler protection shall not be

installed in elevator shafts, elevator pits or elevator machine rooms.

903.3.1.6.3 Swimming pools. Sprinkler protection need not be provided on the ceiling of rooms containing swimming pools when the pool area is used exclusively for swimming purposes and when sprinklers are provided around the perimeter of the pool area.

903.3.1.6.4 NFPA 13 modifications. Sections 8.6.4.1.4.2, 8.6.4.1.4.3, 8.14.8.2, and 8.16.2.5 of NFPA 13 are amended to read:

8.6.4.1.4.2 Combustible spaces; installation near peak. Sprinklers under a roof or ceiling in combustible concealed spaces of wood joist or wood truss construction with members 3 feet (0.9 m) or less on center and a slope having a pitch of four in 12 or greater shall be installed so that a row of sprinklers is installed within 12 inches (305 mm) horizontally of the peak and 1-12 inches (25.4-305 mm) down from the bottom of the top chord member.

8.6.4.1.4.3 Combustible spaces; installation along eave. Sprinklers under a roof or ceiling in combustible concealed spaces of wood joist or wood truss construction with members 3 feet (0.9 m) or less on center and a slope having a pitch of four in 12 or greater shall be installed so that the sprinklers installed along the eave are located not less than 5 feet (1.5 m) from the intersection of the truss cords.

8.14.8.2 Linen closets and pantries. Sprinklers are not required in linen closets and pantries within dwelling units that meet the following conditions:

1. The area of the space does not exceed 12 square feet (1.1 m^2).

2. The least dimension does not exceed 3 feet (0.9 m).

3. The walls and materials are surfaced with noncombustible or limited combustible materials.

4. The closet or pantry contains no mechanical equipment, electrical equipment or electrical appliances.

8.16.2.5 Valves.

8.16.2.5.1 Fire department connection. A listed check valve shall be installed in each fire department connection.

8.16.2.5.1.1 Maximum pipe length. There shall be a maximum of 25 feet (7.6 m) of pipe between the check valve and the fire department connection inlet.

Exception: This maximum shall not apply to the check valve serving a free-standing fire department connection.

8.16.2.5.1.2 Check valve location. The check valve shall be located to minimize freezing potential.

Subp. 5. **IFC Section 903.3.8.** IFC Section 903.3 is amended by adding a section to read:

903.3.8 Sprinkler system design pressure safety margin. For new sprinkler systems or additions to existing sprinkler systems, the available water supply shall exceed the sprinkler system demand, including hose stream requirements, by 5 psi (0.34 bars) or more.

Subp. 6. **IFC Section 903.4.** IFC Section 903.4 is amended by adding an exception to read:

8. For existing sprinkler systems, monitoring is required when the number of sprinklers is 100 or more.

Subp. 7. **IFC Section 903.4.4.** IFC Section 903.4 is amended by adding a section to read:

903.4.4 Valve security. All valves controlling water supplies for automatic sprinklers shall be locked or secured in the open position.

> **Exception:** Valves located in a room or space when access is limited to essential personnel only.

Subp. 8. **IFC Section 903.6.** IFC Section 903.6 is amended by adding sections to read:

903.6.2 Basement access or sprinkler protection. An approved automatic sprinkler system shall be provided in the following basements when such areas exceed 2,500 square feet (232.3 m^2) in size and do not have 20 square feet (1.86 m^2) of opening entirely above the adjoining ground level in each 50 lineal feet (15 240 mm) or fraction thereof of exterior wall on at least one side of the building:

1. Group A occupancies used as commercial drinking and dining establishments.

2. Group A occupancies used as bowling alleys.

3. Group E occupancies used for student occupancy.

4. Group I occupancies.

5. Group R-1 and R-2 occupancies having dwelling units or guest rooms.

Openings required by this section shall have a minimum dimension of 30 inches (762 mm).

If any portion of the basement is located more than 75 feet (22.86 m) from required openings, the basement shall be provided with an approved automatic sprinkler system throughout.

903.6.3 Existing rubbish and linen chutes. Existing rubbish and linen chutes shall be protected with automatic sprinklers installed and maintained in conformance with Section 903.2.12.2.

7511.0904 SECTION 904, ALTERNATIVE AUTOMATIC FIRE-EXTINGUISING SYSTEMS.

IFC Section 904.2.1 is amended by adding a section to read:

904.2.1.1 Protection of existing cooking equipment. Approved automatic fire-extinguishing systems shall be provided for the protection of existing commercial-type cooking equipment that produces grease-laden vapors.

7511.0905 SECTION 905, STANDPIPE SYSTEMS.

Subpart 1. **IFC Section 905.2.** IFC Section 905.2 is amended by adding sections to read:

905.2.1 Modification to standards. In buildings other than high rise that are protected throughout by an automatic sprinkler system installed in accordance with Sections 903.3.1.1 and 903.3.1.2, a Class I or III standpipe system need only meet the pressure requirements for the sprinkler system when such systems comply with Sections 905.2.1.1 through 905.2.1.5.

905.2.1.1 Municipal water supply. A municipal water supply capable of supplying the required standpipe flow rate with a residual pressure not less than 20 psi (1.4 bars) through a fire hydrant shall be provided. A fire hydrant shall be located within 300 feet (91 m) of the building's fire department connection.

905.2.1.2 System testing and pipe size. The standpipe system shall be able to provide the pressure and flow rate required by NFPA 14 when the standpipe system is supported by local fire department apparatus through the fire department connection as verified with hydraulic calculations. The hydraulic calculations are to be performed between the hydraulically most demanding standpipe hose connection and the fire department connection. Pipe sizes shall not be less than the minimum requirements in NFPA 14.

905.2.1.3 Design pressure. A maximum design pressure of 150 psi (10.3 bars) is permitted at the fire department connection when the standpipe is supported by local fire department apparatus.

905.2.1.4 Hose connection. At least one 2-1/2 inch (64 mm) hose connection shall be provided on the exterior of the building at the fire department connection for each 250 gpm (980 L/min) of required standpipe flow.

905.2.1.5 Automatic sprinkler system demand. The automatic sprinkler system demand, including the inside hose stream demand from NFPA 13, is to be provided by the municipal water supply system without requiring fire department pumping into the system.

Subp. 2. **IFC Section 905.3.2.1.** IFC Section 905.3.2 is amended by adding a section to read:

905.3.2.1 Group A exhibition. Class III automatic standpipes shall be provided in Group A-3 occupancies where the floor area used for exhibition exceeds 12,000 square feet (1,115 m^2).

Subp. 3. **IFC Sections 905.3.4, 905.3.4.1.** IFC Sections 905.3.4 and 905.3.4.1 are amended by deleting the sections in their entirety.

Subp. 4. **IFC Section 905.3.** IFC Section 905.3 is amended by adding sections to read:

905.3.8 Detention and correctional facilities. Regardless of the height of the building or number of stories, every building in a Group I-3 detention and correctional facility, where 50 or more persons are under restraint or security under Occupancy Condition 3, 4 or 5, shall be provided with a Class III automatic wet or semiautomatic dry standpipe system.

> **Exception:** Combined systems meeting the provisions of Section 905.2 may be used.

When acceptable to the fire chief, fire department connections may be located inside all security walls or fences on the property.

Standpipes shall be located in accordance with Section 905. In addition, standpipes shall be located so that it will not be necessary to extend hose lines through smoke barriers. When located in cell complexes, standpipes may be located in secured pipe chases.

905.3.9 Group R-2 occupancies. Class III wet standpipes shall be installed in Group R-2 occupancies three or more stories in height where any portion of the building's interior area is more than 200 feet (60,960 mm) of travel, vertically or horizontally, from the nearest point of fire department vehicle access. Standpipes required by this section shall be installed in enclosed stairways.

Subp. 5. **IFC Section 905.5.1.** IFC Section 905.5.1 is deleted.

7511.0906 SECTION 906, PORTABLE FIRE EXTINGUISHERS.

IFC Section 906.1 is amended to read:

906.1 Where required. Portable fire extinguishers shall be installed in the following locations:

1. In all Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

Exception: In all Group A, B and E occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Sections 903.3.1.1 and 903.3.1.2, fire extinguishers shall be required only in laundry rooms, boiler and furnace rooms, mechanical and electrical rooms, garages, stages, projection booths, shops, laboratories, kitchens, locker rooms, janitors' closets, trash-collection rooms, storage rooms and similar areas.

2. Within 30 feet (9144 mm) of commercial cooking equipment.

3. In areas where flammable or combustible liquids are stored, used or dispensed.

4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 1415.1.

5. Where required by the sections indicated in Table 906.1.

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.

7. R-3 occupancies used as family day care, group family day care, foster care, adult family day services and residential hospices.

7511.0907 SECTION 907, FIRE ALARM AND DETECTION SYSTEMS.

Subpart 1. **IFC Section 907.1.3.** IFC Section 907.1 is amended by adding a section to read:

907.1.3 Protection of control units. In areas that are not continuously occupied, automatic fire detection shall be provided at the location of each new fire alarm control unit, fire alarm notification circuit power extender and supervising station transmitting equipment to provide notification of fire at that location.

Exception: Additional detection is not required in buildings sprinklered in accordance with Section 903.3.1.1 or 903.3.1.2.

Subp. 2. **IFC Section 907.2.** IFC Section 907.2 is amended to read:

907.2 Where required in new buildings and occupancies. An approved manual, automatic, or manual and automatic fire alarm system shall be provided in new buildings and occupancies in accordance with Sections 907.2.1 through 907.2.24 and NFPA 72. For the purposes of Sections 907.2.1 through 907.2.24, fire barrier walls or fire walls shall not define separate buildings. In buildings containing mixed occupancies that are designed as separated uses (see Section 102.11), fire alarm and detection systems need only be installed in those occupancies where required by this section.

Exception: In areas protected by an approved, supervised automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, automatic fire detectors required by Section 907.2 need not be provided. Where Section 907.2 requires smoke detectors, such protection shall be installed.

Subp. 3. **IFC Section 907.2.1.** IFC Section 907.2.1 is amended, and sections added, to read:

907.2.1 Group A, general. A fire alarm system shall be installed in accordance with Sections 907.2.1 through 907.2.1.3 in Group A

occupancies having an occupant load of 300 or more.

Exceptions:

1. Assembly areas used solely for worship purposes.

2. A fire alarm system is not required when an approved automatic fire-extinguishing system is installed throughout the building.

3. Group A occupancy portions of Group E occupancies are allowed to have alarms as required for the Group E occupancy.

4. Group A-5 occupancies.

See also Section 907.2.11.

907.2.1.1 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be installed in laundry rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, kitchens, trash-collection rooms, storage rooms and similar areas.

907.2.1.2 Notification. The required fire alarm system shall activate an audible and visible notification appliance at a constantly attended location within the building for the purposes of initiating emergency action. A presignal feature and positive alarm sequencing in accordance with NFPA 72 are permitted.

Occupant notification shall be by means of voice announcements, either live or prerecorded, initiated by the person in the constantly attended location.

Exception: Where no constantly attended location exists, an automatic fire alarm system providing a general evacuation signal or an approved emergency voice/alarm communications system is permitted.

907.2.1.3 System initiation in Group A occupancies with occupant load of 1,000 or more. Activation of the fire alarm system in Group A occupancies with an occupant load of 1,000 or more shall immediately initiate an approved prerecorded message announcement using an approved emergency voice/alarm communications system in accordance with NFPA 72.

Exception: Where approved, the prerecorded announcement is allowed to be manually deactivated for a period of time, not to exceed three minutes, for the sole purpose of allowing a live voice announcement from an approved, constantly attended location.

Subp. 4. **IFC Section 907.2.2.** IFC Section 907.2.2 is amended, and sections added, to read:

907.2.2 Group B, general. A fire alarm system shall be installed in accordance with Sections 907.2.2 through 907.2.2.3 in Group B occupancies if:

1. The building has an occupant load of 500 or more persons; or

2. The building has an occupant load of more than 100 persons above or below the lowest level of exit discharge; or

3. The building contains an outpatient clinic.

When automatic sprinkler systems or automatic fire detectors are installed in outpatient clinics, such systems or detectors shall be connected to the building fire alarm system.

Exception: In other than outpatient clinics, a fire alarm system is not

required when an approved automatic fire-extinguishing system is installed throughout the building.

907.2.2.1 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be provided in boiler and furnace rooms, shops, kitchens, mechanical and electrical rooms, trash-collection rooms, storage rooms and similar areas. In outpatient clinics, initiation of the fire alarm system shall also be by manual means.

907.2.2.2 Notification. Activation of the fire alarm system shall initiate a general evacuation signal.

Exception: In lieu of audible notification appliances, visible notification appliances shall be permitted to be used in patient care areas.

907.2.2.3 Outpatient clinics. Corridors in outpatient clinics and spaces open to the corridors shall be protected by an automatic smoke-detection system.

Subp. 5. **IFC Section 907.2.3.** IFC Section 907.2.3 is amended, and sections added, to read:

907.2.3 Group E, general. A fire alarm system shall be installed in accordance with Sections 907.2.3 through 907.2.3.3 in Group E occupancies having an occupant load of 50 or more.

907.2.3.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be provided in laundry rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, laboratories, kitchens, locker rooms, janitors' closets, trash-collection rooms, storage rooms, lounges and similar areas.

Exceptions:

1. In buildings protected throughout by an approved, supervised fire sprinkler system, manual fire alarm boxes are only required in the main office and in a custodial area.

2. Where all corridors are protected by an approved automatic fire alarm system having smoke detection with alarm verification, manual fire alarm boxes are only required near exits serving shops, chemistry and physics laboratories, boiler rooms, industrial technology and industrial arts rooms, kitchens, custodian's offices and main offices.

907.2.3.2 Travel through adjoining rooms. Where the only means of egress travel from an interior room or rooms having an aggregate occupant load of more than ten occupants is through an adjoining or intervening room, automatic smoke detectors shall be installed throughout the common atmosphere through which the path of egress travel passes.

Exception: In buildings that are protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, smoke detectors are not required in intervening or adjoining rooms.

907.2.3.3 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

Subp. 6. **IFC Section 907.2.4.** IFC Section 907.2.4 is amended, and sections added, to read:

907.2.4 Group F, general. A fire alarm system shall be installed in accordance with Sections 907.2.4 through 907.2.4.2 in Group F occupancies that are two or more stories in

height and have an occupant load of 500 or more above or below the lowest level of exit discharge.

Exception: A fire alarm system is not required when an approved automatic fire-extinguishing system is installed throughout the building.

907.2.4.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be provided in boiler and furnace rooms, trash-collection rooms, kitchens, mechanical and electrical rooms, and similar areas.

907.2.4.2 Notification. Activation of the fire alarm system shall initiate a general evacuation signal.

Subp. 7. **IFC Section 907.2.5.** IFC Section 907.2.5 is amended, and sections added, to read:

907.2.5 Group H, general. A fire alarm system shall be installed in accordance with Sections 907.2.5 through 907.2.5.2 in Group H-5 occupancies, occupancies used for the manufacture of organic coatings and, when required by Chapters 37, 39 and 40, the following locations:

1. Rooms or areas where highly toxic compressed gases are stored or used;

2. Rooms or areas where Class I, II or III organic peroxides are stored; and

3. Liquid and solid oxidizer storage areas.

907.2.5.1 Initiation. Initiation of the fire alarm system in Group H-5 occupancies and in occupancies used for the manufacture of organic coatings shall be by manual means. Initiation of fire alarm systems installed for highly toxic gases, organic peroxides and oxidizers shall be by automatic means, as specified in Chapters 37, 39 and 40.

907.2.5.2 Notification. Activation of the fire alarm system in Group H-5 occupancies and in occupancies used for the manufacture of organic coatings shall initiate a general evacuation signal. Activation of the automatic detection systems installed for highly toxic gases, organic peroxides and oxidizers shall sound a local alarm.

Subp. 8. **IFC Section 907.2.6.** IFC Section 907.2.6 and all subsections are deleted in their entirety and replaced with the following:

907.2.6 Group I, general. A fire alarm system shall be installed in accordance with Sections 907.2.6 through 907.2.6.4.3 in Group I occupancies.

907.2.6.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be installed in laundry and soiled linen rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, laboratories, kitchens, locker rooms, janitors' closets, trash-collection rooms, storage rooms, lounges, gift shops and similar areas. Automatic smoke detectors shall be provided in waiting areas that are open to corridors.

Exception: Manual fire alarm boxes in patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses' stations or other constantly attended staff locations, provided such fire alarm boxes are visible and continuously accessible and that travel distances required by Section 907.4.1 are not exceeded.

907.2.6.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal. In addition, activation of the fire alarm system shall immediately transmit an alarm to

an approved central station or remote station service.

Exceptions:

1. In lieu of audible notification appliances, visible notification appliances shall be allowed to be used in critical care areas.

2. Where occupants are incapable of evacuating themselves because of age, physical/mental disabilities or physical restraint, only the attendants or other personnel required to evacuate occupants from a zone, area, floor or building shall be required to be notified. This notification shall include means to readily identify the zone, area, floor or building in need of evacuation.

907.2.6.3 Group I-2 occupancies. Corridors in hospitals, nursing homes (both intermediate care and skilled nursing facilities), board and care homes and detoxification facilities and spaces open to the corridors shall be protected by an automatic smoke-detection system.

907.2.6.3.1 Patient room smoke detectors. Smoke detectors that receive their primary power from the building wiring shall be installed in patient sleeping rooms of hospitals and nursing homes. Actuation of such detectors shall cause a visual display on the corridor side of the room where the detector is located and shall cause an audible and visual alarm at the nurse's station attending the room.

907.2.6.4 Group I-3 occupancies. Group I-3 occupancies shall be provided with a fire alarm system installed for alerting staff.

907.2.6.4.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be installed in laundry and soiled linen rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, laboratories, kitchens, locker rooms, janitors' closets, trash-collection rooms, storage rooms, lounges, gift shops, commissaries and similar areas. Actuation of an automatic fire-extinguishing system, a manual fire alarm box or a fire detector shall initiate an approved fire alarm signal, which automatically notifies staff. Presignal systems shall not be used.

907.2.6.4.2 Manual fire alarm boxes. Manual fire alarm boxes are not required to be located in accordance with Section 907.4 where the fire alarm boxes are provided at staff-attended locations having direct supervision over areas where manual fire alarm boxes have been omitted.

Manual fire alarm boxes are permitted to be locked in areas occupied by detainees, provided that staff members are present within the subject area and have keys readily available to operate the manual fire alarm boxes.

907.2.6.4.3. Smoke detectors. An approved automatic smoke-detection system shall be installed throughout resident housing areas, including sleeping areas and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

Exceptions:

1. Other approved smoke-detection arrangements providing equivalent protection, such as placing detectors in exhaust ducts from cells or behind protective grills, are allowed when necessary to prevent damage or tampering.

2. Smoke detectors are not required in sleeping rooms with four or fewer occupants in smoke compartments that

are equipped throughout with an approved automatic sprinkler system.

Subp. 9. **IFC Section 907.2.7.** IFC Section 907.2.7 and all subsections are deleted in their entirety.

Subp. 10. **IFC Section 907.2.8.** IFC Section 907.2.8 and all subsections are deleted in their entirety and replaced with the following:

907.2.8 Group R-1, general. A fire alarm system shall be installed in accordance with Sections 907.2.8 through 907.2.8.3 in Group R-1 occupancies.

Exceptions:

1. A fire alarm system is not required in buildings not over two stories in height where all individual guest rooms and contiguous attic and crawl spaces are separated from each other and public or common areas by at least one-hour fire partitions and each guest room has an exit directly to a public way, exit court or yard.

2. Buildings containing five or less guest rooms shall be allowed to be equipped with approved multiple-station smoke detectors installed as required for Group R-3 occupancies. Installation shall be in accordance with Section 907.2.10.

907.2.8.1 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be provided in boiler and furnace rooms, shops, laundry rooms, mechanical and electrical rooms, trash-collection rooms, storage rooms, gift shops, locker rooms and similar areas. Automatic smoke detectors shall be provided in all common areas and interior corridors serving as required means of egress.

Exception: System fire and smoke detectors are not required when an approved automatic fire-extinguishing system is installed throughout the building and manual activation is provided at a constantly attended location.

907.2.8.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

907.2.8.3 Guest room smoke detectors. Guest room smoke detectors required by Section 907.2.10 shall not be connected to a fire alarm system.

Exception: Connection of such detectors for annunciation only.

Subp. 11. **IFC Section 907.2.9.** IFC Section 907.2.9 is amended, and sections added, to read:

907.2.9 Group R-2, general. A fire alarm system shall be installed in accordance with Sections 907.2.9 through 907.2.9.2 in Group R-2 occupancies where:

1. Any guest room or dwelling unit is located two or more stories above the story containing the lowest level of exit discharge;

2. Any guest room or dwelling unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit;

3. The building contains more than 16 dwelling units or guest rooms; or

4. The building is used as a dormitory, convent, monastery, fraternity or sorority and has an occupant load of 20 or more.

Exception: A fire alarm system is not required in buildings not over two stories in height where all dwelling units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least one-hour fire partitions and each dwelling unit has an exit directly to a public way, exit court or yard.

907.2.9.1 Initiation. Initiation of the fire alarm system shall be by automatic means. Automatic fire detectors shall be provided in boiler and furnace rooms, trash-collection rooms, shops, laundry rooms, mechanical and electrical rooms, storage rooms and similar areas. Automatic smoke detectors shall be provided in all common areas and interior corridors serving as a required means of egress.

Exception: System fire and smoke detectors are not required when an approved automatic fire-extinguishing system is installed throughout the building.

907.2.9.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

907.2.9.3 Dwelling unit smoke detectors. Dwelling unit smoke detectors required by Section 907.2.10 shall not be connected to the building fire alarm system.

Exception: Connection of such detectors for annunciation only.

Subp. 12. **IFC Section 907.2.10.1.4.** IFC Section 907.2.10.1 is amended by adding a section to read:

907.2.10.1.4 Fire station and emergency medical quarters. Areas used for sleeping in fire stations and emergency medical and ambulance crew quarters shall be provided with single station smoke detectors in accordance with Section 907.2.10.

Subp. 13. **IFC Section 907.2.10.2.** IFC Section 907.2.10.2 is amended by numbering the existing exception and adding a new exception, so that the exceptions read as follows:

Exceptions:

1. Smoke alarms are not required to be equipped with battery backup in Group R-1 where they are connected to an emergency electrical system.

2. Smoke alarms are not required to be equipped with battery backup in Group R-2 occupancies equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

Subp. 14. **IFC Section 907.2.10.5.** IFC Section 907.2.10 is amended by adding a section to read:

907.2.10.5 Smoke alarms in arc-fault protected circuits. Smoke alarms receiving their primary power supply from electrical circuits that are protected with arc-fault circuit interruption must have a backup power supply.

Subp. 15. **IFC Section 907.2.** IFC Section 907.2 is amended by adding sections to read:

907.2.24 Residential hospices. A fire alarm system shall be installed in accordance with Section 907.2.24 in residential hospices. When automatic sprinkler systems or automatic fire detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

907.2.24.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be provided in boiler and

furnace rooms, kitchens, laboratories, shops, gift shops, commissaries, laundry and soiled linen rooms, mechanical and electrical rooms, locker rooms, storage rooms, janitors' closets, trash-collection rooms, lounges and similar areas. Automatic smoke detectors shall be provided in sleeping rooms, corridors and spaces open to the corridors.

Exception: Manual fire alarm boxes are not required at exits if manual fire alarm boxes are located at all nurses' stations or other constantly attended staff locations, provided such fire alarm boxes are visible and continuously accessible and that travel distances required by Section 907.4.1 are not exceeded.

907.2.24.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal. In addition, the fire alarm system shall be monitored by an approved central station service in accordance with Section 903.4.1.

Exception: In lieu of audible notification appliances, visible notification appliances shall be allowed to be used in sleeping areas.

Subp. 16. **IFC Sections 907.3 through 907.3.1.2.** IFC Sections 907.3 through 907.3.1.2 are amended to read:

907.3 Where required in existing buildings and structures. An approved manual, automatic, or manual and automatic fire alarm system shall be provided in existing buildings and structures in accordance with Sections 907.3.1 through 907.3.6 and NFPA 72. For the purposes of this section, fire barrier walls or fire walls shall not define separate buildings. In buildings containing mixed occupancies that are designed as separated uses (see Section 102.11), fire alarm and detection systems need only be installed in those occupancies where required by this section.

Exception: In areas protected by an approved, supervised automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, automatic fire detectors required by Section 907.3 need not be provided. Where Section 907.3 required smoke detectors, such protection shall be installed.

907.3.1 Group A, general. A fire alarm system shall be installed in accordance with Sections 907.3.1 through 907.3.1.2 in existing Group A occupancies having an occupant load of 300 or more.

Exceptions:

1. Assembly areas used solely for worship purposes.

2. A fire alarm system is not required when an approved automatic fire-extinguishing system is installed throughout the building.

3. Group A occupancy portions of Group E occupancies are allowed to have alarms as required for the Group E occupancy.

4. A-5 occupancies.

907.3.1.1 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be installed in laundry rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, kitchens, trash-collection rooms, storage rooms and similar areas.

907.3.1.2 Notification. The required fire alarm system shall activate an audible and visible notification appliance at a constantly attended location within the building for the purposes of initiating emergency action. A presignal feature and positive alarm sequencing in accordance with NFPA 72 are permitted.

Occupant notification shall be by means of voice announcements, either live or prerecorded, initiated by the person in the constantly attended location.

Exception: Where no constantly attended location exists, an automatic fire alarm system providing a general evacuation signal or an approved emergency voice/alarm communications system is permitted.

Subp. 17. **IFC Sections 907.3.1.3 through 907.3.1.8.** IFC Sections 907.3.1.3 through 907.3.1.8 are deleted.

Subp. 18. **IFC Sections 907.3.2 through 907.3.2.3.** IFC Sections 907.3.2 through 907.3.2.3 are amended to read:

907.3.2 Group E, general. A fire alarm system shall be installed in accordance with Sections 907.3.2 through 907.3.2.3 in existing Group E occupancies having an occupant load of 50 or more.

Exception: A building with a maximum area of 1,000 square feet (93 m^2) that contains a single classroom and is located no closer than 20 feet (15 240 mm) from another building.

907.3.2.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be provided in laundry rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, laboratories, kitchens, locker rooms, janitors' closets, trash-collection rooms, storage rooms, lounges and similar areas.

Exceptions:

1. In buildings equipped throughout by an approved, supervised fire sprinkler system, manual fire alarm boxes are only required in the main office and in a custodial area.

2. Where all corridors are protected by an approved automatic fire alarm system having smoke detection with alarm verification, manual fire alarm boxes are only required near exits serving shops, chemistry and physics laboratories, boiler rooms, industrial technology and industrial arts rooms, kitchens, custodian's offices and main offices.

907.3.2.2 Travel through adjoining rooms. Where the only means of egress travel from an interior room or rooms having an aggregate occupant load of more than ten occupants is through an adjoining or intervening room, automatic smoke detectors shall be installed throughout the common atmosphere through which the path of egress travel passes.

Exception: In buildings that are protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, smoke detectors are not required in intervening or adjoining rooms.

907.3.2.3 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

Subp. 19. **IFC Sections 907.3.3 through 907.3.3.3.3.** IFC Section 907.3 is amended by adding sections to read:

907.3.3 Group I, general. A fire alarm system shall be installed in accordance with Sections 907.3.3 through 907.3.3.3.3 in existing Group I occupancies.

907.3.3.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be provided in laundry and

soiled linen rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, laboratories, kitchens, locker rooms, janitors' closets, trash-collection rooms, storage rooms, lounges, gift shops and similar areas. Automatic smoke detectors shall be provided in waiting areas that are open to corridors.

Exception: Manual fire alarm boxes in patient sleeping areas of Group I-1 and I-2 occupancies are not required at exits if manual fire alarm boxes are located at all nurses' stations or other constantly attended staff locations, provided such fire alarm boxes are visible and continuously accessible and that travel distances required by Section 907.4.1 are not exceeded.

907.3.3.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal. In addition, activation of the fire alarm system shall immediately transmit an alarm to an approved central station or remote station service.

Exceptions:

1. In lieu of audible notification appliances, visible notification appliances shall be allowed to be used in critical care areas.

2. Where occupants are incapable of evacuating themselves because of age, physical/mental disabilities, or physical restraint, only the attendants or other personnel required to evacuate occupants from a zone, area, floor or building shall be required to be notified. This notification shall include means to readily identify the zone, area, floor or building in need of evacuation.

907.3.3.3 Group I-3 occupancies, general. Existing Group I-3 occupancies shall be provided with a fire alarm system installed for alerting staff.

907.3.3.3.1 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be provided in laundry and soiled linen rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, laboratories, kitchens, locker rooms, janitors' closets, trash-collection rooms, storage rooms, lounges, gift shops, commissaries and similar areas. Actuation of an automatic fire-extinguishing system, a manual fire alarm box or a fire detector shall initiate an approved fire alarm signal, which automatically notifies staff. Presignal systems shall not be used.

907.3.3.3.2 Manual fire alarm boxes. Manual fire alarm boxes are not required to be located in accordance with Section 907.4 where the fire alarm boxes are provided at staff-attended locations having direct supervision over areas where manual fire alarm boxes have been omitted.

Manual fire alarm boxes are permitted to be locked in areas occupied by detainees, provided that staff members are present within the subject area and have keys readily available to operate the manual fire alarm boxes.

907.3.3.3.3 Smoke detectors. An approved automatic smoke-detection system shall be installed throughout resident housing areas, including sleeping areas and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

Exceptions:

1. Other approved smoke-detection arrangements providing equivalent protection, such as placing alarms in exhaust ducts from cells or behind protective guards, listed for the purpose,

are allowed when necessary to prevent damage or tampering.

2. Smoke detectors are not required in sleeping rooms with four or fewer occupants in smoke compartments that are equipped throughout with an approved automatic sprinkler system.

Subp. 20. **IFC Sections 907.3.4 through 907.3.6.1.** IFC Section 907.3 is amended by adding sections to read:

907.3.4 Group R-1, general. A fire alarm system shall be installed in accordance with Sections 907.3.4 through 907.3.4.3 in existing Group R-1 occupancies three or more stories in height or with 20 or more guest rooms.

Exception: A fire alarm system is not required in buildings that do not have interior corridors serving guest rooms and where each guest room has an exit door opening directly to an exterior exit access that leads directly to the exits.

907.3.4.1 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be provided in boiler and furnace rooms, shops, laundry rooms, mechanical and electrical rooms, trash-collection rooms, storage rooms, gift shops, locker rooms and similar areas. Automatic smoke detectors shall be provided in all common areas and interior corridors serving as required means of egress.

Exception: System fire and smoke detectors are not required when an approved automatic fire-extinguishing system is installed throughout the building and manual activation is provided at a constantly attended location.

907.3.4.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

907.3.4.3 Guest room detectors. Guest room smoke detectors required by Section 907.2.10 shall not be connected to a fire alarm system.

Exception: Connection of such detectors for annunciation only.

907.3.5 Group R-2, general. A fire alarm system shall be installed in accordance with Sections 907.3.5 through 907.3.5.2 in existing Group R-2 occupancies where:

1. Any guest room or dwelling unit is located two or more stories above the story containing the lowest level of exit discharge;

2. Any guest room or dwelling unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit;

3. The building contains more than 16 dwelling units or guest rooms; or

4. The building is used as a dormitory, convent, monastery, fraternity or sorority and has an occupant load of 20 or more.

Exception: A fire alarm system is not required in buildings that do not have interior corridors serving guest rooms and where each dwelling unit has an exit door opening directly to an exterior exit access that leads directly to the exits.

907.3.5.1 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be provided in boiler and furnace rooms, shops, laundry rooms, mechanical and electrical rooms, trash-collection rooms, storage rooms and similar areas. Automatic smoke detectors shall be provided in all common areas and

interior corridors serving as required means of egress.

> **Exception:** System fire and smoke detectors are not required when an approved automatic fire-extinguishing system is installed throughout the building.

907.3.5.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

907.3.5.3 Dwelling unit smoke detectors. Dwelling unit smoke detectors required by Section 907.3.6 shall not be connected to the building fire alarm system.

> **Exception:** Connection of such detectors for annunciation only.

907.3.6 Single- or multiple-station smoke alarms. Existing Group R occupancies not already provided with single- or multiple-station smoke alarms shall be provided with approved single- or multiple-station smoke alarms installed and maintained in accordance with Section 907.2.10.

> **Exception:** For buildings constructed prior to August 1, 1989, detectors can receive their power from a battery supply. For buildings constructed on or after August 1, 1989, detectors shall be connected to a centralized power source.

907.3.6.1 Fire station and emergency medical quarters. Areas used for sleeping in fire stations and emergency medical and ambulance crew quarters shall be provided with single station smoke detectors in accordance with Section 907.3.6.

Subp. 21. **IFC Section 907.10.2.** IFC Section 907.10.2 is amended to read:

907.10.2 Audible alarms. Audible alarm notification appliances shall be provided and sound a distinctive sound that is not to be used for any purpose other than that of a fire alarm. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every occupied space within the building. The minimum sound pressure levels shall be: 75 dBA in Groups R and I-1 occupancies; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 105 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

> **Exception:** Visible alarm notification appliances shall be allowed in lieu of audible alarm notification appliances in critical care areas of Group I-2 occupancies.

Subp. 22. **IFC Section 907.11.** IFC Section 907.11 is amended, and sections added, to read:

907.11 Fire safety functions. Automatic fire detectors required by Sections 907.2 and 907.3 are to activate notification appliances in accordance with those sections. Where automatic fire detectors are installed for other fire safety functions, they shall perform the intended function upon activation. Where automatic detectors are installed for fire safety functions and the building has a fire alarm system, such detectors shall activate supervisory signals at the fire alarm control panel or at a constantly attended location. Where the building does not have a fire alarm system, such detectors shall activate a visual

and audible supervisory signal at an approved location, which shall indicate the source of the signal.

907.11.1 Air distribution and air-handling systems. Smoke detectors installed to shut down the air distribution or air-handling system shall, upon activation, perform the intended function. Air distribution or air-handling equipment that is part of a smoke-control system shall switch to smoke-control mode upon activation of a detector.

907.11.1.1 Fire alarm system interface. Smoke detectors that are installed in air distribution or air-handling systems for shutdown purposes and that are connected to a fire alarm system shall not sound a general evacuation signal.

907.11.2 Elevator control functions. Smoke detectors that are installed to control or recall elevators or to control doors for elevators, elevator lobbies or elevator shafts and that are connected to a fire alarm system shall not sound a general evacuation signal. Elevator recall and firefighter's emergency operation for elevators shall only be controlled by elevator smoke detectors and shall not initiate upon other building fire detectors or evacuation signals.

907.11.3 Door hold-open functions. Smoke detectors that are installed to hold open fire doors under nonemergency conditions and that are connected to a fire alarm system shall sound a general evacuation signal when the doors being held open are part of the means of egress corridor or stair system. Door hold-open smoke detectors are not required to activate a visual or audible signal.

Subp. 23. **IFC Section 907.12.** IFC Section 907.12 is deleted.

Subp. 24. **IFC Section 907.15.** IFC Section 907.15 is deleted.

Subp. 25. **IFC Section 907.20.2.** IFC Section 907.20.2 is amended to read:

907.20.2 Testing. Fire alarm systems shall be inspected and tested at least annually in accordance with NFPA 72 or more frequently where required by the code official.

> **Exception:** Devices or equipment that are inaccessible for safety considerations shall be tested during scheduled shutdowns where approved by the code official, but not less than every 18 months.

7511.0909 SECTION 909, SMOKE CONTROL SYSTEMS.

Subpart 1. **IFC Section 909.4.7.** IFC Section 909.4 is amended by adding a section to read:

909.4.7 Door opening force. With any of the design methods allowed by Section 909, the door opening force, latch release, and set-in-motion force shall comply with Section 1008.1.2 requirements when the system is in smoke control mode.

Subp. 2. **IFC Section 909.22.** IFC Section 909 is amended by adding a section to read:

909.22 High-rise and covered mall smoke-exhaust systems. High-rise buildings and covered mall buildings exceeding 50,000 square feet (4645 m^2) in floor area, excluding anchor stores, shall be equipped with a post-fire smoke exhaust system installed and maintained in accordance with the Building Code.

7511.0910 SECTION 910, SMOKE AND HEAT VENTS.

Subpart 1. **IFC Section 910.1.** IFC Section 910.1 is amended by adding sections to read:

910.1.1 Required venting method. Required smoke and heat venting shall be accomplished with mechanical smoke exhaust according to Section 910.4.

Exceptions:

1. Calculated engineering design of mechanical smoke exhaust in accordance with Section 910.5 shall be permitted for buildings sprinklered throughout.

2. For nonsprinklered buildings, smoke and heat vents as specified in Section 910.3 shall be permitted.

3. Where approved by the code official, smoke and heat vents as specified in Section 910.3 shall be permitted in sprinklered buildings.

910.1.2 Listing. Smoke and heat vents and mechanical smoke exhaust fans shall be listed for the intended purpose.

910.1.3 Curtain boards. When mechanical smoke exhaust is provided in accordance with Section 910.4 or 910.5, curtain boards are only required at the separation between areas protected with early suppression fast response (ESFR) sprinklers and conventional sprinkler systems.

Subp. 2. **IFC Section 910.4.** IFC Section 910.4 is amended to read:

910.4 Mechanical smoke exhaust. Mechanical smoke exhaust shall be in accordance with Sections 910.4.1 through 910.4.6.

Subp. 3. **IFC Section 910.4.3.** IFC Section 910.4.3 is amended to read:

910.4.3 Operation. Mechanical smoke exhaust fans shall be automatically activated upon sprinkler system water flow. A 5- to 10-minute delay shall be provided between the sprinkler water flow signal and activation of the exhaust fans. In addition, individual manual controls of each fan unit shall also be provided.

Exception: When required by the code official, initiation of mechanical smoke exhaust fans shall be only through manual activation.

Subp. 4. **IFC Section 910.4.5.** IFC Section 910.4.5 is amended to read:

910.4.5 Supply air. Supply air for exhaust fans shall be sized to provide a minimum of 50 percent of the required exhaust. Air velocity at each supply air opening shall not exceed an average of 200 feet per minute when measured 4 feet (1219 mm) in front of the opening. Openings for supply air shall be uniformly distributed around the periphery of the area served and be located or ducted to a position not more than one-half the storage height above the floor. Supply air openings shall open automatically upon operation of the smoke exhaust system and shall not require a manual action at each supply opening for operation. Supply air openings shall be kept clear of storage or obstructions to airflow for at least 4 feet (1219 mm) in front of the opening. Supply air openings shall be separated from exhaust fans and exterior combustibles to prevent introduction of smoke into the building.

Subp. 5. **IFC Section 910.** IFC Section 910 is amended by adding sections to read:

910.5 Calculated engineering design of mechanical smoke exhaust. Calculated engineering design of mechanical smoke exhaust shall be in accordance with Sections 910.5.1 through 910.5.5.

910.5.1 Methodology. Mechanical smoke exhaust systems shall be designed to remove smoke after a fire is extinguished and to assist the fire department during suppression

operations or during marginal sprinkler control situations. They are not considered life safety systems and are not designed for occupant safety.

910.5.2 Calculation method. Volumetric flow rate calculations shall demonstrate that the system will provide at least three air changes per hour for the space required to be provided with smoke exhaust. When only a portion of a space is used for high-piled storage requiring smoke exhaust, the volume to be extracted shall be based on the ceiling height multiplied by the actual gross floor area for storage.

910.5.3 Operation. Mechanical smoke exhaust fans shall be automatically activated upon sprinkler system water flow. A 5- to 10-minute delay shall be provided between the sprinkler water flow signal and activation of the exhaust fans. In addition, individual manual controls of each fan unit shall also be provided.

> **Exception:** When required by the code official, initiation of mechanical smoke exhaust fans shall be only through manual activation.

910.5.4 Supply air. Supply air for exhaust fans shall be sized to provide a minimum of 50 percent of the required exhaust. Air velocity at each supply air opening shall not exceed an average of 200 feet per minute when measured 4 feet (1219 mm) in front of the opening. Openings for supply air shall be uniformly distributed around the periphery of the area served and be located or ducted to a position not more than one-half the storage height above the floor. Supply air openings shall open automatically upon operation of the smoke exhaust system and shall not require a manual action at each supply opening for operation. Supply air openings shall be kept clear of storage or obstructions to airflow for at least 4 feet (1219 mm) in front of the opening. Supply air openings shall be separated from exhaust fans and exterior combustibles to prevent introduction of smoke into the building.

910.5.5 Equipment. Wiring and controls shall be as required in Section 910.4.4. Interlocks shall be as required in Section 910.4.6. Exhaust fans shall be uniformly spaced and each fan shall have a maximum individual capacity of 30,000 cfm (850 m^3/min).

910.6 Testing and maintenance. Mechanical smoke exhaust systems shall be tested and maintained as required in Sections 910.6.1 through 910.6.4.

910.6.1 Acceptance testing. Mechanical smoke exhaust systems shall be acceptance tested as required by Sections 909.18.2 through 909.18.5 and 909.19.

910.6.1.1 Controls. For testing purposes, each smoke exhaust system equipped for automatic activation shall be put into operation by the actuation of the automatic initiating device. Control sequences shall be verified throughout the system, including verification of override from the firefighter's control panel when systems are equipped for automatic activation.

910.6.2 Special inspections. Special inspections for mechanical smoke exhaust shall be conducted according to Section 909.18.8.

910.6.3 Maintenance. Mechanical smoke exhaust systems, including exhaust fans, supply air openings and controls, shall be maintained and unobstructed.

910.6.4 Operational testing. Operational testing of the smoke exhaust system shall include all equipment such as initiating devices, fans, dampers, controls and supply air openings. Mechanical smoke exhaust systems

shall be operated and tested under each control sequence at least annually.

7511.0912 SECTION 912, FIRE DEPARTMENT CONNECTIONS.

IFC Section 912.2 is amended by adding a section to read:

912.2.3 Connection height. Newly installed fire department connections shall be located not less than 18 inches (457 mm) and not more than 4 feet (1.2 m) above the level of the adjacent grade or access level.

7511.1001 SECTION 1001, ADMINISTRATION.

Subpart 1. **IFC Section 1001.1.** IFC Section 1001.1 is amended to read:

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. The provisions of this chapter shall control the design, construction, and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof. Sections 1001 through 1025 and Section 1028 shall apply to new construction. Sections 1001, 1002, 1026, 1027, and 1028 shall apply to existing buildings.

Subp. 2. **IFC Section 1001.3.** IFC Section 1001 is amended by adding a section to read:

1001.3 Special exiting provisions for younger students. Rooms in Group E occupancies used by preschool, kindergarten, first- or second-grade pupils shall be located as required by the Building Code.

7511.1002 SECTION 1002, DEFINITIONS.

The definitions of "aisle" and "corridor" in IFC Section 1002 are amended to read:

AISLE. That portion of an exit access that connects an aisle access way to an exit access doorway, corridor or exit.

CORRIDOR. An interior passageway having a length at least three times its width, having walls, partitions or other obstructions to exit travel over 6 feet (1829 mm) in height on two opposing sides and having openings from rooms or similar spaces.

7511.1007 SECTION 1007, ACCESSIBLE MEANS OF EGRESS.

IFC Section 1007 is deleted.

7511.1008 SECTION 1008, DOORS, GATES AND TURNSTILES.

Subpart 1. **IFC Sections 1008.1.8.1, 1008.1.8.2,**

1008.1.8.3. IFC Sections 1008.1.8.1, 1008.1.8.2, and 1008.1.8.3 are amended to read:

1008.1.8.1 Hardware. Except as permitted by Section 1008.1.8.3, door handles, pulls, latches, locks and other operating devices on doors shall only require a single operation to release the door from the egress side.

1008.1.8.2 Hardware height. Door handles, pulls, latches, locks, and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor.

1008.1.8.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.

2. In buildings in occupancy Group A having an occupant load of 300 or less,

Groups B, F, M, and S and in churches, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side, provided:

2.1 The locking device is readily distinguishable as locked.

2.2 A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.

2.3 The use of the key-operated locking device is revocable by the fire code official for due cause.

3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.

4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of ten or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.

5. Delayed egress locks, installed and maintained in conformance with Section 1008.1.8.6.

6. Special egress-control devices installed and maintained in conformance with Section 1008.1.11 are allowed in Group R-3 and Group R-4 congregate care facilities and in Group I occupancies.

7. Existing door-locking arrangements in Group I occupancies that were installed prior to March 20, 1995, and comply with Appendix I may be allowed to continue.

8. In rooms, other than cells, where occupants are being restrained for safety or security reasons, special locking arrangements that comply with the requirements of Section 1008.1.10 are permitted.

Subp. 2. **IFC Section 1008.1.8.6.** IFC Section 1008.1.8.6 is amended to read:

1008.1.8.6 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A and Group H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke-detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.

2. The doors unlock upon loss of power controlling the lock or lock mechanism.

3. The door locks have the capability of being unlocked by a signal from the fire command center.

4. The initiation of an irreversible process that will release the latch in not more than 15 seconds when a force of not more than 15 pounds (66 N) is applied for one second to the release device. Initiation of the irreversible

process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds shall be permitted.

5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 SECONDS.

6. Emergency lighting shall be provided at the door.

Subp. 3. **IFC Section 1008.1.** IFC Section 1008.1 is amended by adding sections to read:

1008.1.10 Special locking arrangements. Special locking arrangements meeting the requirements of Sections 1008.1.10 through 1008.1.10.5 are permitted for rooms, other than cells, where the occupants are being restrained for safety or security reasons. The use of sections 1008.1.10 through 1008.1.10.5 may be revoked by the fire chief or building official for due cause.

1008.1.10.1 Locking hardware. Locking devices shall release upon any of the following conditions:

1. Activation of the automatic sprinkler system.

2. Activation of any automatic fire detection device.

3. Activation of an automatic fire alarm system.

4. Loss of electrical power to the locking device or the fire alarm system.

5. Activation of the fire alarm trouble signal.

All locking devices shall be designed to fail in the open position. Following the release of the locking devices for any of the conditions specified above in Items 1 through 5, relocking the devices shall be by manual means only at the door.

1008.1.10.2 Fire-extinguishing system. When special locking arrangements are used, the room or area being secured must be protected with quick-response sprinklers.

1008.1.10.3 Fire alarm and detection. When special locking arrangements are used, the room or area and spaces between the room or area and an outside exit door shall be protected with automatic smoke detection connected to the building's fire alarm system. If the walls of the room or area do not extend to the ceiling, automatic smoke detection can be provided in the adjacent room or area, provided that there are no substantial obstructions to delay activation of the smoke detection.

1008.1.10.4 Construction. Rooms or areas containing these special locking arrangements shall be constructed of noncombustible materials having a minimum of one-hour fire-resistive construction. Doors separating the room from other spaces must swing with egress travel from the room and have a fire-protection rating of not less than 20 minutes. Doors need not be self-closing. The interior finish of the wall and ceiling surfaces must not exceed a Class III (or Class C) flame spread rating.

1008.1.10.5 Testing of devices. Special locking arrangements shall be tested monthly to ensure that they will release under the conditions set forth in Section 1008.1.10.1,

Items 1-5. Locking arrangements that are found not to comply with the requirements of Sections 1008.1.10.1 through 1008.1.10.5 shall not be used.

1008.1.11 Special egress control devices. Where the clinical needs of the patients require specialized security measures for their safety, door-locking arrangements are permitted in Group I-1 occupancies (this includes use groups as described in Group I-1 occupancies that are identified as either Group R-3 or Group R-4 occupancies because of occupant load) and Group I-2 occupancies, provided that:

1. Keys or devices that function like keys are carried by staff at all times;

2. In at least one egress path, not more than one such arrangement is located;

3. The building or fire area is protected by an approved automatic sprinkler system in accordance with Section 903.3.1.1 and an approved fire alarm system having smoke detection installed throughout the exit corridor system and areas open to the exit corridor;

4. Locking devices automatically unlock upon activation of any of the following:
a. Automatic sprinkler system;
b. Automatic smoke-detection system;
c. Automatic fire alarm system; or
d. Loss of electrical power;

5. Locking devices can be remotely unlocked from an approved location within the secured area;

6. There is no public assembly space within the secured area;

7. 24-hour patient supervision is provided within the secured area;

8. Relocking of the locking device is by manual means from an approved location within the secured area;

9. Locking devices are designed to fail in the open position.

1008.1.12 Exit stair door locking. Doors are not to be locked on the stairwell side unless meeting one of the following criteria:

1. Delayed egress locks meeting Section 1008.1.8.6.

2. Locking devices meeting the requirements of Section 403.12 of the International Building Code.

3. Non-high-rise buildings that are more than four stories meeting NFPA 101 Section 7.2.1.5.2.

7511.1009 SECTION 1009, STAIRWAYS.

IFC Section 1009.5.2 is amended to read:

1009.5.2 Outdoor conditions. Outdoor ramps and associated landings and approaches shall be designed so that water will not accumulate on walking surfaces.

7511.1014 SECTION 1014, EXIT ACCESS.

IFC Section 1014.4 and all subsections are deleted and replaced with the following:

1014.4 Aisles and aisle accessways. Aisles and aisle accessways serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles and aisle accessways shall be provided from all occupied portions of the exit access. Aisles and aisle accessways serving assembly areas, other than seating at tables, shall comply with Section 1024. Aisles and aisle accessways serving reviewing stands, grandstands and bleachers shall comply with Section 1024.

1014.4.1 Width determination. Where tables or counters are served by fixed seats, the width of the aisle or aisle accessway shall be measured from the back of the seat. Where seating is located at a table or counter and is adjacent to an aisle or aisle accessway, the measurement of required clear width of the aisle or aisle accessway shall be made to a line 19 inches (483 mm) away from and parallel to the edge of the table or counter. The 19-inch (483 mm) distance shall be measured perpendicular to the side of the table or counter. In the case of other side boundaries for aisle or aisle accessways, the clear width shall be measured to walls, tread edges or other obstructions.

The required width of aisles and aisle accessways shall be unobstructed.

> **Exception:** Doors, when fully opened, and handrails shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) from each side.

1014.4.1.1 Minimum aisle accessway width. Aisle accessways shall provide a minimum 12 inches (305 mm) of width plus 0.5 inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3658 mm) of aisle accessway length.

> **Exception:** Portions of an aisle accessway having a length not exceeding 6 feet and used by a total of not more than four persons.

1014.4.1.2 Minimum aisle width. The minimum clear width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches (914 mm).

> **Exception:** Aisles serving less than 50 people need not exceed 28 inches (711 mm) in width.

1014.4.2 Aisle accessway length. The length of travel along the aisle accessway shall not exceed 30 feet (9144 mm) to an aisle or exit access doorway.

7511.1015 SECTION 1015, EXIT AND EXIT ACCESS DOORWAYS.

IFC Section 1015.1 is amended to read:

1015.1 Exit or exit access doorways required. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

1. The occupant load of the space exceeds the values in Table 1015.1.

> **Exception:** In Groups R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 16 if the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

2. The common path of egress travel exceeds the limitations of Section 1014.3.

3. Where required by Sections 1015.3, 1015.4, and 1015.5.

4. When located in buildings used for educational purposes, laboratories and prep rooms that exceed 500 square feet in area and contain hazardous materials.

> **Exception:** Group I-2 occupancies shall comply with Section 1014.2.2.

7511.1019 SECTION 1019, NUMBER OF EXITS AND CONTINUITY.

Subpart 1. **IFC Section 1019.1.** IFC Section 1019.1 is amended to read:

1019.1 Minimum number of exits. Occupants within rooms and spaces shall be provided with and have access to the minimum number of approved independent exits as required by Section 1015.1. Occupants on every story, in every basement, and in every building shall be provided with and have access to the minimum number of approved independent exits as required by Table 1019.1, except as modified in Section 1019.2. For the purposes of this chapter, occupied roofs shall be provided with exits as required for stories. The required number of exits from any story, basement or individual space shall be maintained until arrival at grade or the public way. **Table 1019.1 unchanged.**

Subp. 2. **IFC Section 1019.1.3.** IFC Section 1019.1 is amended by adding a section to read:

1019.1.3 Press box roof access. The means of egress from occupied press box roofs shall comply with the provisions of this chapter. Occupied press box roofs shall be provided with guards in accordance with Section 1013.

> **Exception:** Press box roofs used as camera, video, or security platforms or similar uses having an occupant load of nine or less shall have access to not less than one means of egress. The means of egress is permitted to be by way of a roof hatch or scuttle and ships ladder.

Subp. 3. **IFC Section 1019.2.** IFC Section 1019.2 is amended to read as follows:

1019.2 Buildings or stories with one exit. Only one exit shall be required in buildings or stories as described below:

1. Buildings or stories described in Table 1019.2, provided that the building has not more than one level below the first story above grade plane.

2. Buildings or stories of a Group R-3 occupancy.

3. Single-level buildings with the occupied space at the level of exit discharge provided that the story or space complies with Section 1015.1 as a space with one means of egress.

Subp. 4. **IFC Table 1019.2.** IFC Table 1019.2 is amended to read as follows:

Table 1019.2
Buildings or Stories with One Exit

Occupancy	Maximum Height of Building Above Grade Plane	Maximum Occupants (or Dwelling Units) per Floor (with One Exit) and Travel Distance
A,B[d],E[e],F,M, U	1 story	49 occupants and 75 feet travel distance
H-2,H-3	1 story	3 occupants and 25 feet travel distance
H-4,H-5,I,R	1 story	10 occupants and 75 feet travel distance
S[a]	1 story	29 occupants and 100 feet travel distance
B[b],F,M,S[a]	2 stories	30 occupants and 75 feet travel distance
R-2	2 stories[c]	4 dwelling units and 50 feet travel distance

Footnotes unchanged.

7511.1025 SECTION 1025, ASSEMBLY.

Subpart 1. **IFC Section 1025.6.4.** IFC Section 1025.6 is amended by adding a section to read:

1025.6.4 Width of means of egress for bleacher facilities. Aisles for bleachers shall not be required to be more than 66 inches (167 cm) in width when calculated in accordance with Section 1025.6.1 or 1025.6.3 when the following conditions are satisfied:

1. The seating area served by such aisles is composed entirely of bleachers;

2. The row-to-row dimension is 28 inches (71 cm) or less; and

3. Front egress is not limited.

Subp. 2. **IFC Section 1025.9.5.** IFC Section 1025.9.5 is amended by adding an exception to read:

5. Aisles serving bleachers in compliance with Section 1025.6.4.

Subp. 3. **IFC Section 1025.14.** IFC Section 1025.14 is amended to read:

1025.14 Assembly guards. Assembly guards shall comply with Sections 1025.14.1 through 1025.14.3.

Exception: In accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 16B.616:

1. Guards are not required on bleachers 55 inches and less in height; and

2. Bleachers must have vertical perimeter guards or other approved guards that address climbability and are designed to prevent accidents.

7511.1026 SECTION 1026, EMERGENCY ESCAPE AND RESCUE.

IFC Section 1026.1 is amended to read:

1026.1 Escape windows. In Group R and Group I-1 occupancies, escape windows shall be provided, installed and maintained in sleeping rooms in accordance with this section. Sleeping rooms located in basements and levels below the fourth story shall have at least one exterior emergency escape and rescue opening.

Exceptions:

1. An escape window is not required if the room has a door that leads directly to the exterior of the building.

2. Escape windows installed prior to April 11, 1983, and having a clear opening not less than 20 inches (508 mm) in width, 24 inches (610 mm) in height and 5 square feet (0.46 m^2) in area with a finished sill height not more than 48 inches (1219 mm) above the floor may be allowed to continue.

3. An escape window is not required if the building is protected throughout by an approved, automatic sprinkler system.

4. Escape windows need not be installed from rooms of existing buildings having two separate means of escape, provided that the means of escape are independent of each other and they pass through only one adjacent nonlockable room or area.

5. Existing escape windows at single-story resort buildings installed prior to October 3, 1975, and having a clear opening not less than 20 inches (508 mm) in width, 20 inches (508 mm) in height and 4.5 square feet (0.41 m^2) in area with a finished sill height not more

than 36 inches (914 mm) above the floor may be allowed to continue.

6. Escape windows are not required in Group R hotels or motels constructed prior to April 11, 1983.

7511.1027 SECTION 1027, MEANS OF EGRESS FOR EXISTING BUILDINGS.

IFC Section 1027 is deleted in its entirety and replaced with the following:

SECTION 1027
MEANS OF EGRESS FOR EXISTING BUILDINGS

1027.1 General. Means of egress in existing buildings shall comply with Sections 1027.1 through 1027.23.4.

1027.1.1 Compliance option. Means of egress in existing buildings conforming to NFPA 101 (Life Safety Code) shall be deemed as evidence of compliance with this section.

1027.1.2 Previous codes. Means of egress in existing buildings conforming to the requirements of the Fire Code or Building Code under which they were constructed shall be considered as complying means of egress if, in the opinion of the fire code official, they do not constitute a distinct hazard to life.

1027.1.3 Occupant loads. The number of occupants shall be determined in accordance with Section 1004.

1027.1.4 Egress width. The minimum required egress width shall be determined in accordance with Section 1005.1.

1027.1.5 Ceiling height. The ceiling height in corridors and stairs shall be not less than 78 inches (1981 mm).

1027.2 Elevators, escalators and moving walks. Elevators, escalators and moving walks can only be used as a component of a required means of egress where previously approved.

1027.3 Exit signs - general. Exit signs shall comply with Sections 1027.3.1 through 1027.3.5.

1027.3.1 Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel.

1027.3.2 Number of exits. Exit signs shall be provided where two or more exits are required from a room, area or story.

1027.3.3 Main exits. Exit signs need not be provided for main exterior exit doors that are obviously and clearly identifiable as exits.

1027.3.4 Certain occupancies exempt. Exit signs are not required in housing areas of Group I-3 occupancies; in sleeping rooms or dwelling units in Group R-1, R-2 or R-3 occupancies; and in Group U occupancies.

1027.3.5 Exit sign illumination. Exit signs shall be internally illuminated, externally illuminated or self-luminous. The face of an exit sign illuminated from an external source shall have an intensity of not less than 5 foot-candles (54 lux). Internally illuminated signs shall provide equivalent luminance and be listed for the purpose. Approved self-luminous signs that provide evenly illuminated letters shall have a minimum luminance of 0.06 foot-lamberts (0.21 cd/m^2).

1027.4 Power source. Where emergency illumination is required in Section 1027.5, exit signs shall be visible under emergency illumination conditions. Approved signs that provide continuous illumination independent of external power sources are not required to be connected to an emergency electrical system.

1027.5 Illumination - general. Normal and emergency illumination of the means of egress shall comply with Sections 1027.5.1 through 1027.5.3.

1027.5.1 Illumination required. The means of egress shall be illuminated at all times the building space served by the means of egress is occupied. Natural lighting in the interior rooms or spaces can be used to satisfy this requirement during periods of daylight.

1027.5.1.1 Group U occupancies. Illumination is not required in Group U occupancies.

1027.5.1.2 Aisle accessways. Illumination is not required for aisle accessways.

1027.5.1.3 Dwelling units and sleeping rooms. Illumination is not required for dwelling units and sleeping rooms of Group I, R-1, R-2, and R-3 occupancies.

1027.5.2 Illumination level. Floors and other walking surfaces within the means of egress shall be illuminated as follows:

1027.5.2.1 General. The means of egress illumination level shall not be less than one foot-candle (11 lux) at the floor level.

1027.5.2.2 Assembly performances. In assembly occupancies, the illumination of the floors of exit access shall be at least 0.2 foot-candle (2.2 lux) during periods of performances or projections involving directed light.

1027.5.3 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having more than 50 occupants. Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300 are not required to have emergency illumination.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below the level of exit discharge, or buildings with 1,000 or more total occupants.

3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops, and laboratories.

4. Group F having more than 100 occupants. Buildings used only during daylight hours that are provided with windows for natural light are not required to have emergency illumination.

5. Group I.

6. Group M buildings greater than 3,000 square feet (2879 m^2) in gross sales area or exceeding one story in height.

7. Group R-1. Where each guest room has direct access to the outside of the building at grade, emergency illumination is not required.

8. Group R-2. Where each living unit has direct access to the outside of the building at grade, emergency illumination is not required.

9. Group R-4. Where each sleeping room has direct access to the outside of the building at ground level, emergency illumination is not required.

The emergency power system shall provide power for not less than 30 minutes and consist of storage batteries, unit equipment or an onsite generator. The installation of the emergency power system shall be in accordance with Section 604.

1027.6 Guards. Guards complying with this section shall be provided at the open sides of means of egress that are more than 30 inches (762 mm) above the floor or grade below.

1027.6.1 Height of guards. Guards shall form a protective barrier not less than 42 inches (1067 mm) high except for the following existing guards:

1. Existing guards on the open side of stairs, which are permitted to be not less than 30 inches (760 mm) high.

2. Existing guards within dwelling units, which are permitted to be not less than 36 inches (910 mm) high.

3. Existing guards in assembly areas.

4. Existing guards on stairs and balconies of buildings designated as historic structures, which are permitted to be not less than 24 inches (610 mm) high.

1027.6.2 Opening limitations. Open guards shall have balusters or ornamental patterns such that a 6-inch (152 mm) diameter sphere cannot pass through any opening up to a height of 34 inches (864 mm) except when one of the following conditions exist:

1. At elevated walking surfaces for access to and use of electrical, mechanical or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches (533 mm) cannot pass through any opening.

2. In occupancies in Group I-3, F, H, or S, the clear distance between intermediate rails measured at right angles to the rails shall not exceed 21 inches (533 mm).

3. Approved existing open guards.

1027.7 Doors - general. Except where modified by Section 1008.1.2, doors shall be of the side-hinged swing type. Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons. The minimum width of each door opening shall be sufficient for the occupant load thereof. Locks and latches shall comply with Sections 1008.1.8 and 1008.1.9.

1027.7.1 Size of doors. Except where modified by this section, each required means of egress door shall comply with the minimum dimensions specified herein. Doors shall provide a clear width of not less than 28 inches (711 mm). Where this section requires a minimum clear width of 28 inches (711 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 28 inches (711 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. The height of doors shall not be less than 80 inches (2032 mm).

1027.7.1.1 Closets. Door openings to storage closets less than 10 square feet (0.93 m^2) in area shall not be limited by the minimum width.

1027.7.1.2 Revolving doors. Width of door leafs in revolving doors shall not be limited.

1027.7.1.3 Dwelling units. Door openings within a dwelling unit are permitted to be 78 inches (1981 mm) in height.

1027.7.1.4 Small rooms. Exit access doors serving a room not larger than 70 square

feet (6.5 m^2) are permitted to be 24 inches (610 mm) in door width.

1027.7.1.5 Health care facilities. The minimum clear width for doors in the means of egress from hospitals; nursing homes; limited care facilities; psychiatric hospital sleeping rooms; and diagnostic and treatment areas, such as x-ray, surgery, or physical therapy, shall be not less than 32 inches (810 mm) wide. Existing 34-inch (865 mm) doors shall be permitted. Existing 28-inch (710 mm) corridor doors in facilities where the fire plans do not require evacuation by bed, gurney, or wheelchair shall be permitted.

1027.8 Opening force for doors. The opening force for interior side swinging doors without closers shall not exceed a 5-pound (22 N) force. For other side swinging, sliding and folding doors, the door latch shall release when subjected to a force of not more than 15 pounds (66 N). The door shall be set in motion when subjected to a force not exceeding a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a force of not more than 50 pounds (222 N). Forces shall be applied to the latch side.

1027.9 Revolving doors. Revolving doors shall comply with Sections 1027.9.1 through 1027.9.6.

1027.9.1 Location. A revolving door shall not be located within 10 feet (3048 mm) of the foot or top of stairs or escalators. A dispersal area shall be provided between the stairs or escalators and the revolving doors.

1027.9.2 Speed. The revolutions per minute for a revolving door shall not exceed those shown in Table 1027.9.

1027.9.3 Side-hinged door required. Each revolving door shall have a conforming side-hinged swinging door in the same wall as the revolving door and within 10 feet (3048 mm).

1027.9.4 Elevator lobbies. A revolving door is permitted to be used without an adjacent swinging door for street floor elevator lobbies provided a stairway, escalator or door from other parts of the building does not discharge through the lobby and the lobby does not have any occupancy or use other than as a means of travel between elevators and a street.

1027.9.5 Side-hinged door option. The requirement for aside-hinged swinging door shall not apply where the number of revolving doors does not exceed the number of swinging doors within 20 feet (6096 mm).

1027.9.6 Egress component. A revolving door used as a component of a means of egress shall comply with Section 1027.9 and all of the following conditions:

1. Revolving doors shall not be given credit for more than 50 percent of the required egress capacity.

2. Each revolving door shall be credited with not more than a 50-person capacity.

3. Revolving doors shall be capable of being collapsed when a force of not more than 130 pounds (578 N) is applied within 3 inches (76 mm) of the outer edge of a wing.

TABLE 1027.9
REVOLVING DOOR SPEEDS

Inside Diameter	Power-Driven-Type Speed Control (RPM)	Manual-Type Speed Control (RPM)
6'6"	11	12
7'0"	10	11
7'6"	9	11
8'0"	9	10
8'6"	8	9
9'0"	8	9
9'6"	7	8
10'0"	7	8

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

1027.10 Stair dimensions for existing stairs. Existing stairs in buildings shall be permitted to remain if the rise does not exceed 8.25 inches (210 mm) and the run is not less than nine inches (229 mm). Existing stairs are permitted to have a minimum width of 36 inches (914 mm) but not less than the width required for the number of occupants served as determined by Section 1005.1. Existing stairs can be rebuilt.

1027.10.1 Stair dimensions for replacement stairs. The replacement of an existing stairway in a structure shall not be required to comply with the new stairway requirements of Section 1009 where the existing space and construction will not allow a reduction in pitch or slope.

1027.11 Winders. Existing winders shall be allowed to remain in use if they have a minimum tread depth of 6 inches (152 mm) and a minimum tread depth of 9 inches (229 mm) at a point 12 inches (305 mm) from the narrowest edge.

1027.12 Circular stairways. Existing circular stairs shall be allowed to continue in use provided the minimum depth of tread is 10 inches (254 mm) and the smallest radius shall not be less than twice the width of the stairway.

1027.13 Stairway handrails. Stairways shall have handrails on at least one side. Handrails shall be located so that all portions of the stairway width required for egress capacity are within 44 inches (1118 mm) of a handrail. Aisle stairs provided with a center handrail are not required to have additional handrails.

1027.13.1 Height. Handrail height, measured above stair tread nosings, shall be uniform, not less than 30 inches (762 mm) and not more than 42 inches (1067 mm).

1027.14 Slope of ramps. Ramp runs utilized as part of a means of egress shall have a running slope not steeper than one unit vertical in ten units horizontal (ten percent slope). The slope of other ramps shall not be steeper than one unit vertical in eight units horizontal (12.5 percent slope).

1027.15 Width of ramps. Existing ramps are permitted to have a minimum width of 30 inches (762 mm) but not less than the width required for the number of occupants served as determined by Section 1005.1.

1027.16 Fire escape stairs. Fire escape stairs shall comply with Sections 1027.16.1 through 1027.16.7.

1027.16.1 Existing means of egress. Fire escape stairs shall be permitted in existing buildings but shall not constitute more than 50 percent of the required exit capacity.

1027.16.2 Protection of openings. Openings within 10 feet (3048 mm) of fire escape stairs shall be protected by fire assemblies having a minimum 3/4-hour fire-resistance rating. In buildings equipped throughout with an approved automatic sprinkler system, opening protection is not required.

1027.16.3 Dimensions. Fire escape stairs shall meet the minimum width, capacity, riser height, and tread depth as specified in Table 1027.16.

1027.16.4 Access. Access to a fire escape from a corridor shall not be through an intervening room. Access to a fire escape stair shall be from a door or window meeting the criteria of Table 1005.1. Access to a fire escape stair shall be directly to a balcony, landing, or platform. These shall be no higher than the floor or windowsill level and no lower than 8 inches (203 mm) below the floor level or 18 inches (457 mm) below the windowsill.

1027.16.5 Materials and strength. Components of fire escape stairs shall be constructed of noncombustible materials.

Fire escape stairs and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot (4.78 kN/m^2). Fire escape stairs and balconies shall be provided with a top and intermediate handrail on each side.

The fire code official is authorized to require testing or other satisfactory evidence that an existing fire escape stair meets the requirements of this section.

1027.16.6 Termination. The lowest balcony shall not be more than 18 feet (5486 mm) from the ground. Fire escape stairs shall extend to the ground or be provided with counter-balanced stairs reaching the ground. For fire escape stairs serving ten or fewer occupants, an approved fire escape ladder is allowed to serve as the termination for fire escape stairs.

1027.16.7 Maintenance. Fire escapes shall be kept clear and unobstructed at all times and shall be maintained in good working order.

TABLE 1027.16
DIMENSIONS FOR EXISTING FIRE ESCAPE STAIRS

Features	Serving More than 10 Occupants	Serving 10 or Fewer Occupants
Minimum Width	22 inches	18 inches
Maximum Heights of Risers	9 inches	12 inches
Minimum Tread Depth	9 inches	6 inches

1027.17 Corridors. Corridors and the openings therein shall provide an effective barrier to resist the movement of smoke. Corridors, common path of travel, and travel distance shall comply with Sections 1027.17.1 through 1027.17.6. Corridors complying with Section 1017.1 need not be fire-resistance rated.

1027.17.1 Construction. Corridors shall be fire-resistance rated in accordance with this section and Table 1027.17.1. Existing walls surfaced with wood lath and plaster in good condition or 1/2-inch gypsum wallboard are acceptable for corridor walls and ceilings. Where Table 1027.17.1 allows a sprinkler system in lieu of fire-resistance-rated construction, the building shall be protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 (where allowed).

1027.17.1.1 Existing churches. In Group A occupancies used as churches, existing corridor walls, ceilings and opening protection not in compliance with Section 1027.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all boiler rooms, furnace rooms, mechanical rooms, and storage rooms.

1027.17.1.2 Existing Group B occupancies. In office areas of Group B occupancies not exceeding 10,000 square feet (929 m^2) in size, existing corridor walls, ceilings and opening protection not in compliance with Section 1027.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all boiler rooms, furnace rooms, mechanical rooms and storage rooms.

1027.17.1.3 Existing Group E occupancies. In Group E occupancies, existing corridor walls, ceilings and opening

protection not in compliance with Section 1027.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system that is monitored by a central, proprietary or remote station service. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all rooms and areas other than classrooms and offices.

TABLE 1027.17.1
CORRIDOR FIRE-RESISTANCE RATING

Occupancy	Occupant Load Served by Corridor	Required Fire-Resistance Rating (hours) Without Sprinkler System	With Sprinkler System
A,B,E,F,H, M,S,U	Greater than 30	1	0
I	Greater than 10	1 (see Section 1027.17.2.3)	0
R	Greater than 10	1	0

1027.17.2 Corridor openings. Openings into corridors shall comply with Sections 1027.17.2.1 through 1027.17.2.3.

1027.17.2.1 Doors. Doors opening into corridors required by Table 1027.17.1 to be fire-resistance rated shall be protected by 20-minute fire assemblies or solid wood doors not less than 1-3/4 inches (45 mm) thick. Where the existing frame will not accommodate the 1-3/4 inches (45 mm) thick door, a 1-3/8 inches (35 mm) thick solid bonded wood core door or equivalent insulated steel door shall be permitted. Doors shall be self-closing or automatic-closing by smoke detection.

1027.17.2.2 Other openings. Openings with fixed wired glass set in steel frames are permitted for corridor walls and ceilings. Transoms, louvers and openings other than doors from corridors to rooms shall be automatic-closing by smoke detection or shall be covered with a minimum of three-quarter inch (19 mm) gypsum wallboard or equivalent material on the room side.

1027.17.2.3 Existing Group I-2 and I-3 occupancies. Patient room doors in corridors in Group I-2 occupancies and Group I-3 corridor doors need not be fire-resistance rated or self-closing where smoke barriers are provided in accordance with the Building Code or NFPA 101.

1027.17.3 Corridor width. The minimum corridor width shall be in accordance with Sections 1027.17.3.1 through 1027.17.3.2.

1027.17.3.1 Minimum width. The minimum corridor width shall be as determined by the occupant load calculations in Section 1005.1, but not less than 36 inches.

1027.17.3.2 Minimum width in mechanical areas. The minimum corridor width is allowed to be reduced to 24 inches (610 mm) for spaces providing access to electrical, mechanical or plumbing systems.

1027.17.4 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead ends do not exceed the limits specified in Sections 1027.17.4.1 through 1027.17.4.2 and Table 1027.17.4.

1027.17.4.1 Wide corridors and dead-end provisions. A dead-end passageway or corridor shall not be limited in length where the length of the dead-end passageway or corridor is less and 2.5 times the least width of the dead-end passageway or corridor.

1027.17.4.2 Existing Group E corridors. In Group E occupancies constructed prior to October 3, 1975, dead ends of up to 35 feet (10 668 mm) in length are allowed, provided the building is protected with an approved automatic sprinkler system throughout.

TABLE 1027.17.4
COMMON PATH, DEAD-END, AND TRAVEL DISTANCE LIMITS
(by occupancy)

Occupancy	Common Path Limit		Dead-end Corridor Limit		Travel Distance Limit	
	Unspr (feet)	Spr (feet)	Unspr (feet)	Spr (feet	Unspr (feet)	Spr (feet)
Group A	20/75[a]	20/75[a]	20[b]	20[b]	200	250
Group B	75	100	50	50	200	300
Group E	75	75	20	20	200	250
Groups F-1, S-1[d]	75	100	50	50	200	250
Groups F-2, S-2[d]	75	100	50	50	300	400
Group H-1	25	25	0	0	75	75
Group H-2	50	100	0	0	75	100
Group H-3	50	100	20	20	100	150
Group H-4	75	75	20	20	150	175
Group H-5	75	75	20	50	150	200
Group I-1	75	75	20	20	200	250
Group I-2 (Health Care)	N/R	N/R	N/R	N/R	150	200[c]
Group I-3	100	100	N/R	N/R	150[c]	200[c]
Group I-4 (Day Care)	N/R	N/R	20	20	200	250
Group M (Covered Mall)	75	100	50	50	200	400
Group M (Mercantile)	75	100	50	50	200	250
Group R-1 (Hotels)	75	75	50	50	200	250
Group R-2 (Apartments)	75	75	50	50	200	250
Groups R-3 R-4	N/R	N/R	N/R	N/R	N/R	N/R
Group U	75	75	20	20	200	400

"Unspr" means unsprinklered and "Spr" means sprinklered.
For SI: 1 foot = 304.8 mm.

a. 20 feet for common path serving more than 50 persons; 75 feet for common path serving 50 or fewer persons.
b. See Section 1024.9.5 for dead-end aisles in Group A occupancies.

c. This dimension is for the total travel distance, assuming incremental portions have fully utilized their allowable maximums. For travel distance within the room, and from the room exit access door to the exit, see the appropriate occupancy chapter.

d. See the International Building Code for special requirements on spacing of doors in aircraft hangers.

N/R = No requirements.

1027.18 Exit access travel distance. Exits shall be located so that the maximum length of exit access travel, measured from the most remote point to an approved exterior exit, vertical exit enclosure, horizontal exit, or exit passageway along the natural and unobstructed path of egress travel, does not exceed the distances given in Table 1027.17.4.

1027.19 Common path of egress travel. The common path of egress travel shall not exceed the distances given in Table 1027.17.4.

1027.20 Stairway discharge identification. A stairway in an exit enclosure that continues below the level of exit discharge shall be arranged and marked to make the direction of egress to a public way readily identifiable. Stairs that continue one-half story beyond the level of exit discharge need not be provided with barriers where the exit discharge is obvious.

1027.20.1 Exterior stairway protection. Exterior exit stairs shall be separated from the interior of the building as required in Section 1023.6.

1027.21 Minimum aisle width. The minimum clear width of aisles and aisle accessways shall be in accordance with this section and Table 1027.21.

1027.21.1 Aisle and aisle accessway width. Aisles and aisle accessway widths shall be as determined by the occupant load calculations in Section 1005.1, but not less than the widths shown in Table 1027.21.

1027.21.2 Aisle accessway width for table and chair seating. Aisle accessway width for the table and chair seating (distance between two rows of seats) shall comply with Section 1014.4.1.

TABLE 1027.21
MINIMUM AISLE AND AISLE ACCESSWAY WIDTHS

Condition	Minimum width (in inches)
Aisle accessways serving seating areas having 50 or fewer seats, tables, or desks	24 inches (610 mm)
Aisle accessways serving seating areas having more than 50 seats, tables, or desks	30 inches (760 mm)
Aisle accessways serving employee areas only	24 inches (610mm)
Level or ramped aisles having seating on each side and serving 50 or fewer seats	36 inches (914 mm)
Level or ramped aisles having seating on each side and serving more than 50 seats	42 inches (1067 mm)
Level or ramped aisles having seating on one side and serving 60 or fewer seats	30 inches (760 mm)
Level or ramped aisles having seating on one side and serving more than 60 seats	36 inches (914 mm)
Aisle stairs having seating on each side and serving 50 or fewer seats	36 inches (914 mm)
Aisle stairs having seating on each side and serving more than 50 seats	42 inches (1067 mm)
Aisle stairs having seating on one side and serving 60 or fewer seats	30 inches (760 mm)
Aisle stairs having seating on one side and serving more than 60 seats	36 inches (914 mm)
Aisle stair - distance between	20 inches

Condition	Minimum width (in inches)
seating and aisle handrail or guard when the aisle is subdivided	(508 mm)

1027.22 Stairway floor number signs. Existing stairs shall be marked in accordance with Section 1020.1.7.

1027.23 Number of means of egress or exits. The number of means of egress doors or exits from a room, area, story or building shall be in accordance with Sections 1027.23.1 through 1027.23.4 and Table 1027.23.

1027.23.1 Number based on capacity. Two means of egress doors or exits are required from rooms, areas, stories or buildings when the number of occupants exceeds the values shown in Table 1027.23.

1027.23.2 Three egress doors on exits required. Three means of egress doors or exits are required from rooms, areas, stories or buildings when the number of occupants exceeds 501 persons.

1027.23.3 Four egress doors or exits required. Four means of egress doors or exits are required from rooms, areas, stories or buildings when the number of occupants is 1001 or more persons.

1027.23.4 Group E laboratories. Group E science laboratories containing hazardous materials shall have two exits when exceeding 1,000 square feet (93 m^2) in size.

TABLE 1027.23
TWO EGRESS DOORS OR EXITS REQUIRED

Occupancy	Number of Occupants
A,B,E,F,M,S,U	50 Occupants
H,I,R	10 Occupants

7511.1028 SECTION 1028, MAINTENANCE OF THE MEANS OF EGRESS.

Subpart 1. **IFC Section 1028.2.** IFC Section 1028.2 is amended to read:

1028.2 Reliability. Required exit accesses, exits or exit discharges shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency. Security devices affecting means of egress shall be subject to approval of the fire code official.

Subp. 2. **IFC Section 1028.3.** IFC Section 1028.3 is amended to read:

1028.3 Obstructions. A means of egress shall be free from obstructions that would prevent its use, including the accumulation of snow and ice. Means of egress shall remain free of any material or matter where its presence would obstruct or render the means of egress hazardous. No combustible storage is allowed in corridors or exit stairs.

Subp. 3. **IFC Section 1028.6.** IFC Section 1028.6 is amended to read:

1028.6 Emergency escape openings. Required emergency escape openings shall be maintained in accordance with the following: required emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools. Bars, grilles, grates or similar devices are allowed to be placed over emergency escape and rescue openings provided the minimum net clear opening size complies with the code that was in effect at the time of construction and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.

7511.1408 SECTION 1408, OWNER'S RESPONSIBILITY FOR FIRE PROTECTION.

IFC Section 1408 is amended by adding a section to read:

1408.8 Construction barriers. Where construction, remodeling or demolition is taking place involving the use of cutting and welding, temporary heating with open flames, or flammable-liquid-fueled equipment, such areas shall be separated from occupied areas of a building by materials that will resist the spread of fire and smoke as specified for draft-stopping materials in the Building Code.

7511.2206 SECTION 2206, FLAMMABLE AND COMBUSTIBLE LIQUID MOTOR FUEL-DISPENSING FACILITIES.

Subpart 1. **IFC Section 2206.2.3.** IFC Section 2206.2.3 is amended by adding exceptions to Item 1 to read:

Exceptions:

1. When approved by the fire chief, other aboveground tanks that comply with Chapter 34 are allowed to be used for outside, above-grade storage and dispensing of Class I liquids, provided the tanks are located in accordance with Table 2206.2.3.

2. Existing nonprotected tanks are designed, fabricated and constructed in accordance with Section 3404.2.7 and not exceeding 6,000 gallons individual capacity and 18,000 gallons aggregate capacity are allowed to be located not less than 30 feet from the nearest dispenser and the nearest side of any public way, property line, building or combustible storage located on the same property.

Subp. 2. **IFC Section 2206.2.3.** IFC Section 2206.2.3 is amended by adding an exception to Item 2 to read:

Exception: Existing nonprotected tanks designed, fabricated and constructed in accordance with Section 3404.2.7 and not exceeding 10,000 gallons individual capacity and 30,000 gallons aggregate capacity are allowed to be located not less than 30 feet from the nearest dispenser and the nearest side of any public way, property line, building or combustible storage located on the same property.

Subp. 3. **IFC Section 2206.2.3.** IFC Section 2206.2.3 is amended by adding Items 5 and 6 to read:

5. For operations not open to the public and for resort operations serving registered guests only, which dispense Class I liquids from one tank having a capacity of 560 gallons (2120 L) or less, having the dispenser located on or adjacent to the tank is permitted. Such tanks shall be located in accordance with Table 2206.2.3.

6. For operations not open to the public and for resort operations serving registered guests only, which dispense Class II liquids from two tanks having a capacity of up to 1,000 gallons (3785 L) each, having the dispenser located on or adjacent to the tank is permitted. Such tanks shall be located in accordance with Table 2206.2.3.

Subp. 4. **IFC Table 2206.2.3.** IFC Table 2206.2.3 is amended by modifying footnote "a" to read:

a. When approved by the fire chief, dispensing devices are permitted to be installed on top of or adjacent to

protected aboveground tanks or tanks in vaults.

7511.2210 SECTION 2210, MARINE MOTOR FUEL-DISPENSING FACILITIES.

IFC Section 2210.3.1 is deleted.

7511.2306 SECTION 2306, GENERAL FIRE PROTECTION AND LIFE SAFETY FEATURES.

IFC Section 2306.1 is amended to read:

2306.1 General. Fire-protection and life-safety features for high-piled storage areas shall be in accordance with Section 2306. Nationally recognized standards or guidelines, as applicable, are allowed to be used when approved by the fire chief.

> **Exception:** Limited high-piled storage areas in Group M occupancies not exceeding five percent of the total square footage of the building or not exceeding 2,500 square feet (232 m^2) in size, whichever is less, need not be separated by fire-resistance-rated construction and need not comply with the smoke and heat removal and draft curtain requirements of this article when these buildings are protected throughout by an approved automatic sprinkler system.

7511.2701 SECTION 2701, GENERAL.

IFC Section 2701.1 is amended by adding a section to read:

2701.1.2 Medical gases. The storage, handling, transferring and use of medical gases intended for inhalation or sedation at hospitals, nursing homes and similar facilities shall be in accordance with NFPA 99 and the general provisions of Sections 2701, 2703.2.6 through 2703.2.6.2, and 2703.9 through 2703.9.4. Compressed gases shall also comply with Chapter 30. Cryogenic fluids shall also comply with Chapter 32.

7511.2703 SECTION 2703, GENERAL REQUIREMENTS.

Subpart 1. **IFC Section 2703.8.3.4.** IFC Section 2703.8.3.4 is amended to read:

2703.8.3.4 Separation. The required fire-resistance rating for fire barrier assemblies shall be in accordance with Table 2703.8.3.2.

Subp. 2. **IFC Section 2703.8.3.** IFC Section 2703.8.3 is amended by adding a section to read:

2703.8.3.6 Hazardous materials above the third floor in laboratories in Group B, E or I-2 occupancies. Control areas containing laboratories located above the third floor in Group B, E or I-2 occupancies may be exempted from the provisions of Sections 2703.8.3.1, 2703.8.3.3, and 2703.8.3.4 provided the following conditions are met:

> 1. The buildings containing the laboratories are equipped throughout with automatic sprinkler protection installed in accordance with Section 903.3.1.1.
>
> 2. Control areas containing laboratories located above the third floor are separated from each other and other portions of the building by a fire barrier having a fire-resistance rating of not less than two hours.
>
> 3. The maximum amount of hazardous materials in storage and use in control areas containing laboratories does not exceed 10 percent of the maximum allowable quantities listed in Tables 2703.1.1(1) and 2703.1.1(2) with all increases allowed in the footnotes of those tables.

4. The maximum number of control areas containing laboratories shall not exceed 5 per floor.

7511.3006 SECTION 3006, MEDICAL GAS SYSTEMS.

IFC Section 3006.4 is amended to read:

3006.4 Medical gases. The storage, handling, transferring and use of medical gases in portable cylinders and containers and medical gas systems including, but not limited to, distribution piping, supply manifolds, connections, pressure regulators, and relief devices and valves, shall comply with NFPA 99 and the general provisions of this chapter.

7511.3201 SECTION 3201, GENERAL.

IFC Section 3201.1 is amended by adding a section to read:

3201.1.1 Medical gases. The storage, handling, transferring and use of oxidizing cryogenic fluids used as medical gases shall comply with NFPA 99 and the general provisions of this chapter.

7511.3301 SECTION 3301, GENERAL.

IFC Section 3301.2 and all subsections are deleted.

7511.3308 SECTION 3308, FIREWORKS DISPLAY.

Subpart 1. **IFC Section 3308.1.1.** IFC Section 3308.1 is amended by adding a section to read:

3308.1.1 Displays. Permits are required to conduct a fireworks display. A fireworks display is only permitted when supervised by a pyrotechnic operator certified by the state fire marshal. Unless specifically exempted by the jurisdiction, the sponsor of the proposed fireworks display must submit a written application for permit at least fifteen (15) days in advance of the date of the display. In addition to the information required in Section 3308.2, the permit application shall include the number, type and size of the fireworks to be discharged. For proximate audience displays, the plans required by Section 3308.2 shall also show the fallout radius for each pyrotechnic device used during the display. At the time of permit application, the fire chief shall be consulted regarding requirements for standby fire apparatus and personnel.

Exception: Jurisdictions are authorized to not require permits for displays involving the use of smoke pots, flash pots and theatrical flash powder for ceremonial, theatrical and musical productions. Such displays must be conducted in accordance with this code.

Subp. 2. **IFC Section 3308.11.** IFC Section 3308.11 is deleted.

7511.3401 SECTION 3401, GENERAL.

IFC Section 3401.2 is amended by adding an exception to read:

10. The use of wall-mounted dispensers containing nonaerosol, alcohol-based hand sanitizers classified as Class I or Class II liquids shall be in accordance with Section 3405.5.

7511.3402 SECTION 3402, DEFINITIONS.

IFC Section 3402.1 is amended by adding a definition to read:

INTERMEDIATE BULK CONTAINER. A storage container meeting the requirements of and containing products authorized by the U.S. Department of Transportation Hazardous Materials Regulations, Code of Federal Regulations, title 49, or by Part 6 of the United Nations Recommendations on the Transport of

Dangerous Goods for classes 31H1, 31H2 and 31HZ1.

7511.3404 SECTION 3404, STORAGE.

Subpart 1. **IFC Section 3404.1.1.** IFC Section 3401.1 is amended by adding a section to read:

3404.1.1 Application of sprinkler protection tables. Tables 3404.3.6.3 (4) through 3404.3.6.3 (8) shall only apply to liquids stored in metal containers and tanks. For liquids stored in nonmetallic containers, nonmetallic portable tanks or rigid nonmetallic intermediate bulk containers, sprinkler protection shall be designed and installed in accordance with criteria based on full-scale fire testing conducted at an approved testing laboratory or based on other nationally recognized fire safety standards approved by the code official.

Subp. 2. **IFC Section 3404.2.11.3.** IFC Section 3404.2.11.3 is amended by adding sections to read:

3404.2.11.3.1 Burial depth. The maximum burial depth for underground storage tanks shall be specified by the tank manufacturer, marked on the tank, and in accordance with NFPA 30.

3404.2.11.3.2 Minimum depth of cover. Underground tanks shall be covered with not less than 24 inches (600 mm) of earth, or not less than 12 inches (300 mm) of earth on top of which shall be placed a slab of reinforced concrete not less than 4 inches (100 mm) thick. Where the tanks are subjected to traffic, they shall be protected against damage from vehicles passing over them by at least 36 inches (900 mm) of earth cover, or 18 inches (450 mm) of well-tamped earth plus either 6 inches (150 mm) of reinforced concrete or 8 inches (200 mm) of asphaltic concrete. When asphaltic or reinforced concrete paving is used as part of the protection, it shall extend at least 12 inches (300 mm) horizontally beyond the outline of the tank in all directions.

Subp. 3. **IFC Section 3404.3.1.2.** IFC Section 3404.3.1 is amended by adding a section to read:

3404.3.1.2 Rigid nonmetallic intermediate bulk containers. The design, construction and capacity of rigid nonmetallic intermediate bulk containers for the storage of flammable and combustible liquids shall be in accordance with this section and NFPA 30. When inside buildings, rigid nonmetallic intermediate bulk containers containing flammable or combustible liquids shall be subjected to a standard fire test that demonstrates acceptable inside storage fire performance and shall be listed and labeled in accordance with UL 2368, Standard for Fire Exposure Testing of Intermediate Bulk Containers for Flammable and Combustible Liquids, 2001.

Subp. 4. **IFC Section 3404.3.3.11.** IFC Section 3404.3.3 is amended by adding a section to read:

3404.3.3.11 Fire-extinguishing systems. Automatic sprinkler and foam-water systems provided for the protection of container, intermediate bulk container and portable tank storage shall be of the wet pipe, deluge or preaction type. If preaction systems are used, they shall be designed so that water or foam solution discharges immediately from the sprinkler opened by heat from a fire.

7511.3405 SECTION 3405, DISPENSING, USE, MIXING AND HANDLING.

IFC Section 3405.5 is amended to read:

3405.5 Alcohol-based hand sanitizers. Alcohol-based hand-rub dispensers containing liquids classified as Class I or Class II liquids shall comply with the following:

1. Where dispensers are installed in a corridor, the corridor shall have a minimum width of at least 6 feet (1830 mm).

2. The maximum individual dispenser fluid capacity shall be as follows:

2.1. 0.32 gallons (1.2 L) for dispensers in rooms, corridors and areas open to corridors.
2.2. 0.53 gallons (2.0 L) for dispensers in suites of rooms.

3. The dispensers shall be separated from each other by a horizontal spacing of not less than 48 inches (1220 mm).

4. Not more than an aggregate 10 gallons (37.8 L) of alcohol-based hand sanitizer solution shall be in use outside of a storage cabinet in a single smoke compartment.

5. Storage quantities greater than 5 gallons (18.9 L) in a single smoke compartment shall meet the requirements of this chapter.

6. The dispenser shall not be installed over or within 6 inches to the centerline of the dispenser to an electrical receptacle, switch, appliance, device or other ignition source.

7. Dispensers installed directly over carpeted floors shall be permitted only in sprinklered smoke compartments.

7511.3406 SECTION 3406, SPECIAL OPERATIONS.

Subpart 1. **IFC Section 3406.5.1.18.** IFC Section 3406.5.1.18 is amended by adding an exception to read:

4. Facilities where all control valves are locked in the closed position or the power supply to the pumps is locked in the off position in an approved manner to prevent the dispensing of liquids by unauthorized persons.

Subp. 2. **IFC Section 3406.5.4.** IFC Section 3406.5.4 is amended to read:

3406.5.4 General. Class I liquids shall be transferred from a tank vehicle or tank car only into an approved atmospheric tank or approved portable tank, except as provided in Sections 3406.5.4.1 through 3406.5.4.4. Class II and III-A liquids shall be transferred from a tank vehicle or tank car only into an approved atmospheric tank, approved container or approved portable tank, except as provided in Sections 3406.5.4.1 through 3406.5.4.4.

Subp. 3. **IFC Section 3406.5.4.1.** IFC Section 3406.5.4.1 is amended to read:

3406.5.4.1 Marine craft and special equipment. Liquids intended for use as motor fuels are allowed to be transferred from tank vehicles into the fuel tanks of marine craft and motor vehicles when approved by the fire chief, and when:

1. The tank vehicle's specific function is that of supplying fuel to motor vehicles;

2. The operation is not performed where the public has access or where there is unusual exposure to life or property;

3. The distance between the tank vehicle and vehicle being refueled does not exceed 50 feet in length; and

4. All equipment is approved for use with the fuel being transferred.

7511.3800 CHAPTER 38 - LIQUEFIED PETROLEUM GASES.

Chapter 38 is deleted in its entirety and replaced with the following:

CHAPTER 38
LIQUEFIED PETROLEUM GASES
SECTION 3801
NFPA STANDARD NO. 58 INCORPORATED

3801.1 Incorporation by reference. The storage, handling, transportation, and use of liquefied petroleum gas and the installation of all equipment pertinent to systems for such uses shall be designed, constructed, installed, operated, and maintained in accordance with the provisions of the National Fire Protection Association Standard No. 58, Standard for the Storage and Handling of Liquefied Petroleum Gases (Quincy, Massachusetts, 2004). Standard No. 58, as amended by Section 3802, is incorporated by reference, is not subject to frequent change, and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155.

SECTION 3802
AMENDMENTS TO NFPA STANDARD NO. 58

3802.1 Amendments. NFPA 58 shall apply to the storage, handling, transportation and use of liquefied petroleum gas and the installation of all equipment pertinent to systems for such uses, except as amended by this section.

1. **Section 6.4.5.6.** Section 6.4.5.6 of NFPA Standard No. 58 is amended to read:

6.4.5.6 No horizontal separation shall be required between aboveground LP-Gas containers and underground tanks containing flammable or combustible liquids installed in accordance with Chapter 34 of the International Fire Code.

2. **Section 6.4.5.10.** Section 6.4.5.10 of NFPA Standard No. 58 is amended to read:

6.4.5.10 The minimum separation between LP-Gas containers and liquefied hydrogen containers shall be in accordance with Chapter 32 of the International Fire Code.

3. **Table 6.5.3.** Footnote "b" of Table 6.5.3 of NFPA Standard No. 58 is amended to read:

b. Walls constructed of noncombustible materials having a fire rating of at least one hour as determined by the Building Code.

4. **Section 6.6.7.1.** Section 6.6.7.1 of NFPA Standard No. 58 is amended to read:

6.6.7.1. Installation of containers on roofs of buildings shall be prohibited.

5. **Section 6.6.7.2.** Section 6.6.7.2 of NFPA Standard No. 58 is deleted.

6. **Section 6.17.11.1.** Section 6.17.11.1 of NFPA Standard No. 58 is deleted.

7. **Section 6.20.2.1.** Section 6.20.2.1 of NFPA Standard No. 58 is amended to read:

6.20.2.1 Electrical equipment and wiring shall be of a type specified by and shall be installed in accordance with the Electrical Code for ordinary locations except that fixed electrical equipment in classified areas shall comply with Section 6.20.2.2.

8. **Section 6.20.2.2.** The first sentence of Section 6.20.2.2 of NFPA Standard No. 58 is amended to read:

6.20.2.2 Fixed electrical equipment and wiring installed within the classified areas specified in Table 6.20.2.2 shall comply with Table 6.20.2.2 and shall be installed in accordance with the Electrical Code.

9. **Section 10.2.3.** Section 10.2.3 of NFPA Standard No. 58 is amended to read:

10.2.3 Structure or building heating. Heating shall be by steam or hot water

radiation or other heating transfer medium with the heat source located outside the building or structure (see Section 6.20, Ignition Source Control), or by electrical appliances listed for Class I, Group D, Division 2 locations, in accordance with the Electrical Code.

7511.4500 CHAPTER 45 - REFERENCED STANDARDS.

Chapter 45 of the IFC is amended by changing the effective date of National Fire Protection Association (NFPA) Standards Nos. 1123 and 1126 to 2006. The standard reference number listed for NFPA 1123 is changed to 1123-06, and the standard reference number listed for NFPA 1126 is changed to 1126-06.

7511.4600 CHAPTER 46 - ADULT DAY CARE CENTERS, RESIDENTIAL HOSPICE FACILITIES AND SUPERVISED LIVING FACILITIES.

The IFC is amended by adding Chapter 46 to read:

CHAPTER 46
ADULT DAY CARE CENTERS, RESIDENTIAL HOSPICE FACILITIES AND SUPERVISED LIVING FACILITIES
SECTION 4601
GENERAL

4601.1 Requirements. Adult day care centers, residential hospice facilities and supervised living facilities shall meet the requirements of this chapter.

SECTION 4602
ADULT DAY CARE CENTERS

4602.1 Classification of adult day care centers. Adult day care centers are classified in accordance with the following and must meet the fire safety requirements for the designated occupancy classification.

4602.1.1 Serving only participants capable of self-preservation. Centers serving only participants who are capable of taking appropriate action for self-preservation under emergency conditions shall meet all applicable requirements for Group E occupancies.

4602.1.2 Serving only participants not capable of self-preservation. Centers serving only participants who are not capable of taking appropriate action for self-preservation under emergency conditions shall meet all applicable requirements for Group I-4 occupancies.

4602.1.3 Serving both participants capable and participants not capable of self-preservation. Centers serving a population that includes both participants who are capable and participants who are not capable of taking appropriate action for self-preservation under emergency conditions shall meet the occupancy requirements for Group I-4 or Group E occupancies. In addition to the requirements for Group E occupancies, the center shall meet the requirements set forth in Sections 4602.1.3.1 through 4602.1.3.4.

4602.1.3.1 Population. Not more than 50 percent of the center's licensed capacity shall be made up of participants who are not capable of taking appropriate action for self-preservation under emergency conditions.

4602.1.3.2 Location. The center must be located on a floor level with all exits directly to grade without any intervening stairs.

4602.1.3.3 Fire alarm and detection. The center shall be protected with a complete automatic fire detection system consisting of automatic smoke detection in all corridors and at the top of all stairways and automatic detection in boiler and furnace rooms, kitchens, storage rooms, janitor closets, laundries, and other hazardous areas. In buildings equipped with manual fire alarm systems, the manual fire alarm and automatic

detection systems shall be electrically interconnected.

4602.1.3.4 Evacuation time. The center shall demonstrate the ability to evacuate the entire population of the center within three minutes.

SECTION 4603
RESIDENTIAL HOSPICE FACILITIES

4603.1 Classification of residential hospice facilities. Residential hospice facilities meeting the fire-protection provisions of Chapter 22 of the National Fire Protection Association Standard No. 101 (Quincy, Massachusetts, 1997) for impractical evacuation capabilities shall be classified as Group R-4 occupancies, if serving six to 12 persons, or as Group R-3 occupancies, if serving five or fewer persons. For purposes of this section, Standard No. 101 (1997) Chapter 22 is incorporated by reference, is not subject to frequent change and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.

SECTION 4604
SUPERVISED LIVING FACILITIES

4604.1 Classification of supervised living facilities. Supervised living facilities are classified in accordance with Chapter 2 and must meet the fire safety requirements for the designated occupancy classification.

4604.1.1 Class A-1 supervised living facilities. Class A-1 supervised living facilities must meet Group R-3 occupancy requirements.

4604.1.2 Class A-2 supervised living facilities. Class A-2 supervised living facilities housing not more than 16 persons, excluding staff, must meet Group R-4 occupancy requirements. Class -2 supervised living facilities housing more than 16 persons, excluding staff, must meet Group I-1 occupancy requirements.

4604.1.3 Class B-1 supervised living facilities. Class B-1 supervised living facilities meeting the fire-protection provisions of Chapter 21 of the National Fire Protection Association Standard No. 101 (Quincy, Massachusetts, 1985) for impractical evacuation capabilities shall be classified as Group R-3 occupancies. For the purposes of Sections 4604.1.3 and 4604.1.4, Standard No. 101 (1985) Chapter 21 is incorporated by reference, is not subject to frequent change and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155.

4604.1.4 Class B-2 supervised living facilities. Class B-2 supervised living facilities meeting the fire-protection provisions of Chapter 21 of the National Fire Protection Association Standard No. 101 (Quincy, Massachusetts, 1985) for impractical evacuation capabilities shall be classified as Group R-4 occupancies.

4604.1.5 Class B-3 supervised living facilities. Class B-3 supervised living facilities must meet Group I-2 occupancy requirements.

7511.7900 AMENDMENTS TO APPENDICES OF INTERNATIONAL FIRE CODE.

Subpart 1. **Adoption.** IFC Appendix I, as amended by this part, shall be deemed a part of this code and shall be enforced as such.

Subp. 2. **IFC Appendix H.** The IFC is amended by adding an Appendix H to read:

APPENDIX H
FIRES OR BARBECUES ON BALCONIES OR PATIOS

SECTION 1 - OPEN FLAME AND FUEL STORAGE PROHIBITED

1.1 Open Flame Prohibited. In any structure containing three or more dwelling units, no person shall kindle, maintain, or cause any fire or open flame on any balcony above ground level, or on any ground floor patio within 15 feet (4572 mm) of the structure.

1.2 Fuel Storage Prohibited. No person shall store or use any fuel, barbecue, torch, or other similar heating or lighting chemical or device in the locations designated in Section 1.1.

> **Exception:** Listed electric or gas-fired barbecue grills that are permanently mounted and wired or plumbed to the building's gas supply or electrical system and that maintain a minimum clearance of 18 inches (457 mm) on all sides, unless listed for lesser clearances, may be installed on balconies and patios when approved by the fire chief.

Subp. 3. **IFC Appendix I.** The IFC is amended by adding an Appendix I to read:

APPENDIX I
SPECIAL LOCKING ARRANGEMENTS FOR GROUP I OCCUPANCIES

SECTION 1 - GENERAL

When approved by the fire chief and where there is a demonstrated safety or security concern for the patients or residents, existing door-locking arrangements conforming to this appendix are permitted in Group I-2 occupancies.

1.1 Arrangement. Each egress path shall have not more than one such locking arrangement.

1.2 Public Use of Space. Public assembly space is not permitted within the secured area.

SECTION 2 - SUPERVISION

Patients or residents shall be supervised by staff personnel at all times. Keys or devices that function like keys to unlock the doors shall be carried by staff at all times.

SECTION 3 - FIRE DETECTION

The building must be provided throughout with an approved fire alarm system having automatic smoke detection installed throughout the exit corridor system.

SECTION 4 - RELEASE OF LOCKING DEVICES

All locking devices shall be designed to fail in the open or unlocked position. The locking devices shall immediately release upon any one or more of the following conditions:

1. Activation of the fire alarm system.

2. Activation of any automatic fire detector.

3. Activation of an automatic sprinkler system.

4. Activation of the fire alarm system's trouble signal.

5. Loss of electrical power to the device or the fire alarm system.

6. Activation of an unlocking arrangement from an approved location within the secured area.

SECTION 5 - RELOCKING OF DEVICES

Relocking of the locking devices can only be by manual means from an approved location within the secured area.

SECTION 6 - TESTING OF DEVICES AND SYSTEMS

Special locking arrangements shall be tested at least monthly in conjunction with the fire alarm system to ensure that they will release under the conditions as set forth above.

SECTION 7 - SYSTEMS NOT IN COMPLIANCE

The use of special locking arrangements and related systems that are found to not comply with the requirements of this chapter shall be immediately discontinued until such time that the necessary repairs or modifications can be made.

Subp. 4. **IFC Appendix J.** The IFC is amended by adding an appendix to read as follows:

APPENDIX J
OPTIONAL HOUSING OR PROPERTY MAINTENANCE CODE

SECTION 1 - HOUSING OR PROPERTY MAINTENANCE CODE ADOPTED AS AN OPTION.

The International Property Maintenance Code 2003, as promulgated by the International Code Council, Inc., (Falls Church, Virginia, December 2002) is hereby incorporated as part of the Minnesota State Fire Code for optional adoption by jurisdictions. The International Property Maintenance Code is not subject to frequent change and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155.

7511.8000 PURPOSE AND SCOPE.

Subpart 1. **Purpose.** The purpose of parts 7511.8000 to 7511.8040 is to prescribe the standard abbreviation and symbol required to be displayed on the exterior of any vehicle carrying liquefied petroleum gas fuel or natural gas in a concealed tank.

Subp. 2. **Scope.** The scope of parts 7511.8000 to 7511.8040 is intended to be consistent with Minnesota Statutes, section 169.762.

7511.8010 PRESSURIZED FLAMMABLE GAS.

"Pressurized flammable gas" includes liquefied petroleum gas, compressed natural gas, and liquefied natural gas.

7511.8010 WARNING SYMBOL REQUIRED.

The marking required by Minnesota Statutes, section 169.762, must be displayed on the exterior of a vehicle carrying pressurized flammable gas in a concealed area, whether the gas is the primary fuel or secondary fuel.

7511.8030 SYMBOL DESIGN.

Subpart 1. **Design.** The required warning symbol must be of a design illustrated as follows:

Compressed natural gas	Liquefied petroleum gas	Liquefied natural gas

Subp. 2. **Specifications.** The following specifications apply to each of the warning symbols:

A. The symbol must be diamond-shaped, 2-1/2 inches in height, and four inches in width at its highest and widest points respectively.

B. The letters and border must be silver in color.

C. The background must be black in color.

D. The letters within the symbol must be a minimum of one inch in height.

E. The entire symbol, including letters, background, and border, must be made of reflectorized material and not fade or wash away when exposed to weather or other adverse elements.

7511.8040 SYMBOL PLACEMENT.

A minimum of two warning symbols is required to be displayed. The warning symbols must be displayed in the places specified in item A. If the symbols cannot be clearly displayed or effectively applied to those locations they may be displayed in the places specified in item B. Display at least two symbols as follows:

A. one warning symbol on the extreme left (driver's) side of the rear-facing portion of the rear bumper, and one warning symbol on the extreme right (passenger) side of the front-facing portion of the front bumper; or

B. one warning symbol at least 12 inches but not more than 30 inches above the ground on the rear of the vehicle near the left (driver's) side and one warning symbol at least 12 inches but not more than 30 inches above the ground on the front of the vehicle near the right (passenger) side.

7511.8500 PURPOSE.

The purpose of parts 7511.8500 to 7511.8570 is to establish minimum flammability and labeling standards for seating furniture in public occupancies.

7511.8510 SCOPE.

The standards and requirements in parts 7511.8500 to 7511.8570 are intended to be consistent with Minnesota Statutes, sections 299F.840 to 299F.848, and apply to seating furniture manufactured on or after March 1, 1993, that is sold, used, or intended for use in public occupancies.

7511.8520 DEFINITIONS.

Subpart 1. **Scope.** The terms used in parts 7511.8500 to 7511.8570 have the meanings given them in this part.

Subp. 2. **Child day care center.** "Child day care center" means a child day care facility required to be licensed by the Department of Human Services under parts 9503.0005 to 9503.0175 and classified as a Group E Occupancy under section 202 of the Minnesota State Fire Code, as adopted in part 7511.0090.

Subp. 3. **Filling material.** "Filling material" has the meaning given it in Minnesota Statutes, section 299F.841, subdivision 4.

Subp. 4. **Group I Occupancies.** "Group I Occupancies" means Group I 3 Occupancies as set forth in section 202 of the Minnesota State Fire Code, as adopted in part 7511.0090.

Subp. 5. **Hotel.** "Hotel" means a building containing six or more guest rooms intended or designed to be used, or which is used, rented, or hired out to be occupied, or which is occupied for sleeping purposes by guests, and includes buildings commonly known as motels and lodging houses, but does not include buildings commonly known as dormitories or apartments.

Subp. 6. **Manufacturer.** "Manufacturer" means a person or the person's employee or

agent who makes or reupholsters an article of seating furniture in whole or in part.

Subp. 7. **Public assembly area of a hotel.** "Public assembly area of a hotel" means a lobby, restaurant, lounge, meeting or board room, pool area, or similar public space that is generally accessible to all guests or to the public.

Subp. 8. **Public auditorium.** "Public auditorium" means a building or portion of a building having a capacity of 50 or more persons in fixed seats and used or intended to be used by the general public for such purposes as stage and film presentations, concerts, recitals, lectures, audio-visual presentations, and similar educational, instructional, or entertainment purposes.

Subp. 9. **Public occupancies.** "Public occupancies" means:

A. Group I 3 Occupancies;

B. child day care centers;

C. public auditoriums and stadiums; and

D. public assembly areas of hotels containing more than ten articles of seating furniture.

Subp. 10. **Public stadium.** "Public stadium" means a building, structure, or portion of a building or structure having a capacity of 50 or more persons in fixed seats and used or intended to be used by the general public for watching indoor or outdoor sporting events.

Subp. 11. **Reupholster.** "Reupholster" means to replace filling material or material encasing or covering filling material on an article of seating furniture.

Subp. 12. **Seating furniture.** "Seating furniture" means movable or stationary furniture, including children's furniture, that satisfies the following conditions:

A. It is manufactured on or after March 1, 1993.

B. It is made of or with loose or attached cushions or pillows or is itself filled, or able to be filled, in whole or in part with filling material, hidden by fabric or other covering. Cushions or pillows belonging to or forming part of the furniture also satisfy this condition.

C. The components described in item B, together with the structural units, the filling material, and the container and covering, can be used as a support for a person's body or a person's limbs and feet when sitting or resting in an upright or reclining position.

Seating furniture does not include infant or child car seats and infant carriers.

Subp. 13. **Sell.** "Sell" has the meaning given it in Minnesota Statutes, section 299F.841, subdivision 2.

Subp. 14. **Sufficient cause to believe.** "Sufficient cause to believe" means grounds put forth in good faith that are not arbitrary, irrational, unreasonable, or irrelevant and that make the proposition asserted more likely than not, provided the grounds are based on at least one of the following sources:

A. written information from an identified person;

B. facts or statements supplied by the owner or manufacturer of an article of seating furniture;

C. facts or statements supplied by the owner or operator of a public occupancy;

D. court documents, police records, or fire safety records; and

E. facts of which the fire marshal or the fire marshal's employees have personal knowledge.

7511.8530 PERFORMANCE STANDARDS ADOPTED BY REFERENCE.

Seating furniture manufactured on or after March 1, 1993, that is sold, used, or intended for use in public occupancies must meet the requirements of either item A or B.

A. Seating furniture meeting the requirements of this item must meet the test requirements set forth in Technical Bulletin 133 of the state of California, "Flammability Test Procedure for Seating Furniture for Use in Public Occupancies," published in January 1991 by the California Bureau of Home Furnishings and Thermal Insulation which is incorporated by reference, is not subject to frequent change, and is available at the State Law Library, 25 Constitution Avenue, Minnesota Judicial Center, Saint Paul, Minnesota 55155.

B. Seating furniture meeting the requirements of this item must be constructed using upholstery fabric and filling materials that meet the test requirements set forth in Technical Bulletin 117 of the state of California, "Requirements, Test Procedures and Apparatus for Testing the Flame Retardance of Filling Materials Used in Upholstered Furniture," published in January 1980 by the California Bureau of Home Furnishings and Thermal Insulation which is incorporated by reference, is not subject to frequent change, and is available at the State Law Library, 25 Constitution Avenue, Minnesota Judicial Center, Saint Paul, Minnesota 55155.

7511.8540 EXEMPT ARTICLES.

Subpart 1. **Statutory exemption.** Articles of seating furniture exempted by Minnesota Statutes, section 299F.842, from compliance with Minnesota Statutes, sections 299F.840 to 299F.848, are exempt from compliance with parts 7511.8500 to 7511.8570.

Subp. 2. **Reupholstered furniture.** An article of seating furniture manufactured before March 1, 1993, that is reupholstered after March 1, 1993, may not be used in a public occupancy unless it meets the requirements of part 7511.8530, item A or B, or unless it meets one of the following criteria:

A. all replacement and additional filling material and the fabric used to reupholster the article meet the requirements of part 7511.8530, item B; or

B. all filling material is completely encased in material designed to slow the spread of fire, increase escape time, prevent rapid combustion, insulate internal materials, and restrict generated gases.

Subp. 3. **Health care, beauty, and barber furniture.** The owner or operator of a public occupancy may apply for an exemption from compliance with parts 7511.8500 to 7511.8570 for an article of furniture. The fire marshal shall grant an exemption if the article of furniture is necessary to provide health care, beauty, barber, or other important service to the occupants of the public occupancy, if a complying article of furniture is not commonly available on the market, and if the fire marshal determines that the noncomplying article of furniture will not unreasonably compromise fire safety.

7511.8550 LABELING REQUIREMENTS.

Subpart 1. **TB 133 label.** An article of seating furniture conforming to the requirements of part 7511.8530, item A, shall have a label permanently attached to the

surface of the article, in plain view, stating as a minimum the following:

"NOTICE

THIS ARTICLE IS MANUFACTURED FOR USE IN PUBLIC OCCUPANCIES AND MEETS THE FLAMMABILITY REQUIREMENTS OF CALIFORNIA BUREAU OF HOME FURNISHINGS TECHNICAL BULLETIN 133. CARE SHOULD BE EXERCISED NEAR OPEN FLAME OR WITH BURNING CIGARETTES."

The fire marshal shall permit another label upon request, if the person making the request shows that the label indicates compliance with Technical Bulletin 133 and the label is accepted by another jurisdiction as an indication of meeting the requirements of Technical Bulletin 133.

Subp. 2. **TB 117 label.** An article of seating furniture conforming to the requirements of part 7511.8530, item B, must have a label permanently attached to the surface of the article, in plain view, stating as a minimum the following:

"NOTICE

ONLY THE RESILIENT FILLING MATERIALS CONTAINED IN THIS ARTICLE MEET CALIFORNIA BUREAU OF HOME FURNISHINGS FLAMMABILITY REQUIREMENTS. CARE SHOULD BE EXERCISED NEAR OPEN FLAME OR WITH BURNING CIGARETTES."

The fire marshal shall permit another label upon request, if the person making the request shows that the label indicates compliance with Technical Bulletin 117 and the label is accepted by another jurisdiction as an indication of meeting the requirements of Technical Bulletin 117.

Subp. 3. **Label for reupholstered furniture.** A reupholstered article of seating furniture that meets the requirements of part 7511.8540, subpart 2, and that is exempt from the requirements of part 7511.8530 shall have a label permanently attached to the surface of the article, in plain view, stating as a minimum the following:

"NOTICE

THIS ARTICLE HAS BEEN REUPHOLSTERED FOR USE IN PUBLIC OCCUPANCIES AND MEETS THE FLAMMABILITY REQUIREMENTS OF MINNESOTA RULES, PART 7511.8540, SUBPART 2. THIS ARTICLE IS EXEMPT FROM THE FLAMMABILITY REQUIREMENTS OF CALIFORNIA BUREAU OF HOME FURNISHINGS TECHNICAL BULLETINS 117 and 133. CARE SHOULD BE EXERCISED NEAR OPEN FLAME AND WITH BURNING CIGARETTES."

Subp. 4. **Size of label.** Required labels must be a minimum of two inches by three inches in size. All wording must be in plainly legible capital letters not less than one-eighth inch in height.

7511.8560 TESTING; DOCUMENTATION.

Subpart 1. **Testing not required.** Parts 7511.8500 to 7511.8570 do not require a manufacturer to test every article of seating furniture manufactured. A manufacturer may establish classification systems appropriate to its specific products and may use representative tests of samples of furniture within those classifications to establish

compliance with the fire safety requirements of parts 7511.8500 to 7511.8570.

Subp. 2. **Documentation required.** When a manufacturer labels an article of seating furniture under part 7511.8550, subpart 1, the manufacturer shall maintain a record documenting the basis upon which it determined that the article met the requirements of part 7511.8530. The documentation must include test data showing that at least one article of seating furniture in the same classification as the labeled article was tested in conformance with and met the requirements of Technical Bulletin 133. The documentation must also clearly demonstrate that the labeled article would meet the requirements of Technical Bulletin 133 based on comparisons to the test data.

7511.8570 ENFORCEMENT.

Subpart 1. **Proof of compliance or removal.** When the state or local fire marshal has sufficient cause to believe that an article of seating furniture does not comply with parts 7511.8500 to 7511.8570 and that the article is used or intended for use in a public occupancy, the fire marshal shall order proof of compliance or removal of the article as may be necessary for the enforcement of parts 7511.8500 to 7511.8570 and for the safeguarding of life and property from fire.

Subp. 2. **Inspect, audit, and review.** When the state fire marshal has sufficient cause to believe that the testing of seating furniture does not comply with parts 7511.8500 to 7511.8570 and that the seating furniture is used or intended for use in a public occupancy, the fire marshal shall inspect or audit the testing and shall review records as necessary to ascertain compliance with parts 7511.8500 to 7511.8570. When requested by the state fire marshal, a manufacturer of seating furniture shall permit the state fire marshal to inspect or audit the testing of the manufacturer's seating furniture and to review the manufacturer's documentation that an article complies with parts 7511.8500 to 7511.8570.

Subp. 3. **Injunction.** When the state fire marshal has sufficient cause to believe that an article of seating furniture does not comply with parts 7511.8500 to 7511.8570 and that the article is being sold for use in a public occupancy, the state fire marshal shall institute a civil action to enjoin the seller from selling the article. When the state fire marshal is unable to verify whether an article of seating furniture complies with parts 7511.8500 to 7511.8570 because the manufacturer of the seating furniture did not permit inspection, audit, or review under subpart 2, the state fire marshal shall institute a civil action to enjoin the seller from selling the article.