Department of Labor and Industry

Adopted Permanent Rules Adopting the 2012 International Building Code

1305.0011 ADOPTION OF INTERNATIONAL BUILDING CODE BY REFERENCE AND ADMINISTRATIVE AUTHORITY.

Subpart 1. **General.** For purposes of this chapter, "IBC" means the 2012 edition of the International Building Code as promulgated by the International Code Council, Inc. (ICC), Washington, D.C. The IBC is incorporated by reference and made part of the Minnesota State Building Code except as qualified by the applicable provisions in Minnesota Rules, chapter 1300, and as amended in this chapter. Portions of this chapter reproduce excerpts from the 2012 IBC, International Code Council, Inc., Washington, D.C., copyright 2012, reproduced with permission, all rights reserved. The IBC is not subject to frequent change and a copy of the IBC, with amendments for use in Minnesota, is available in the office of the commissioner of labor and industry.

Subp. 2. **Mandatory chapters.** IBC chapters 2 through 33 and 35 must be administered by any municipality that has adopted the Minnesota State Building Code, except as qualified by the applicable provisions in Minnesota Rules, chapter 1300, and as amended by this chapter. Amendments to IBC chapters 11 and 30 are incorporated by reference in this chapter, but the actual amendments for those chapters are located in Minnesota Rules, chapters 1341, the Minnesota Accessibility Code, and 1307, the Minnesota Elevator Code, respectively. Referenced documents cited in IBC chapters 11 and 30, and Minnesota Rules, chapters 1307 and 1341, apply, unless otherwise stated or deleted. For the complete application and mandatory requirements relating to IBC chapter 11, see Minnesota Rules, chapter 1341. For the complete application and mandatory requirements relating to IBC chapter 30, see Minnesota Rules, chapter 1307.

Subp. 3. **Replacement chapters.** The following IBC chapters are deleted and replaced with the Minnesota Rules chapters listed in items A and B.

A. IBC chapter 1 and any references to State Building Code administration are deleted and replaced with Minnesota Rules, chapter 1300, Minnesota Administration Code.

B. IBC chapter 34 and any references to conservation or rehabilitation of existing buildings are deleted and replaced with Minnesota Rules, chapter 1311, Minnesota Building Conservation Code.

[For text of subp 4, see M.R.]

Subp. 5. **Flood hazard or floodproofing provisions.** Any flood hazard or floodproofing provisions in the IBC, and any reference to those provisions, are deleted in their entirety. Requirements for floodproofing are located in Minnesota Rules, chapter 1335, Floodproofing Regulations.

1305.0021 REFERENCES TO OTHER INTERNATIONAL CODE COUNCIL CODES.

[For text of subps 1 and 2, see M.R.]

Subp. 3. **Residential code.** References to the International Residential Code in this code mean the Minnesota Residential Code, Minnesota Rules, chapter 1309, and adopted pursuant to Minnesota Statutes, section 326B.106, subdivision 1.

Subp. 4. **Electrical code.** References to the International Code Council Electrical Code in this code mean the Minnesota Electrical Code, Minnesota Rules, chapter 1315, and adopted pursuant to Minnesota Statutes, section 326B.35.

Subp. 5. **Fuel gas code.** References to the International Fuel Gas Code in this code mean the Minnesota Mechanical Code, Minnesota Rules, chapter 1346, and adopted pursuant to Minnesota Statutes, section 326B.106, subdivision 1.

Subp. 6. **Mechanical code.** References to the International Mechanical Code in this code mean the Minnesota Mechanical Code, Minnesota Rules, chapter 1346, and adopted pursuant to Minnesota Statutes, section 326B.106, subdivision 1.

Subp. 7. **Plumbing code.** References to the International Plumbing Code in this code mean the Minnesota Plumbing Code, Minnesota Rules, chapter 4715, and adopted pursuant to Minnesota Statutes, section 326B.435.

Subp. 8. **Private sewage disposal code.** References to the International Private Sewage Disposal Code in this code mean the Minnesota Pollution Control Agency's minimum standards and criteria for individual sewage treatment systems, Minnesota Rules, chapters 7080, 7081, 7082, and 7083, and adopted pursuant to Minnesota Statutes, chapters 103F, 103G, 115, and 116.

Subp. 9. **Energy conservation code.** References to the International Energy Conservation Code in this code mean the Minnesota Energy Code, Minnesota Rules, chapters 1322 and 1323, and adopted pursuant to Minnesota Statutes, section 326B.106, subdivision 1.

[For text of subp 10, see M.R.]

Subp. 11. **Fire code.** References to the International Fire Code in this code mean the Minnesota State Fire Code, Minnesota Rules, chapter 7511, and adopted pursuant to Minnesota Statutes, chapter 299F.

Subp. 12. **International Existing Building Code.** References to the International Existing Building Code in this code mean Minnesota Conservation Code for Existing Buildings, Minnesota Rules, chapter 1311, and adopted pursuant to Minnesota Statutes, section 326B.106, subdivision 1.

1305.0030 ADMINISTRATIVE PROCEDURE CRITERIA.

Procedures relating to the administration and enforcement of this code under Minnesota Statutes, section 326B.101, are contained in Minnesota Rules, chapter 1300, Minnesota Administration Code, which governs the application of this code.

1305.0202 SECTION 202, DEFINITIONS.

Subpart 1. **Amended definitions.** IBC section 202 is modified by amending the following definitions to read as follows:

AGRICULTURAL BUILDING. "Agricultural building" means a building that meets the requirements of Minnesota Statutes, section 326B.103, subdivision 3.

AISLE. "Aisle" means that portion of an exit access that connects an aisle accessway to an exit access doorway, corridor, or exit.

ALTERNATING TREAD DEVICE. A device standing between 50 and 70 degrees (0.87 and 1.22 rad) from horizontal, that has a series of steps usually attached to a center support in an alternating manner so that the user does not have both feet on the same level at the same time. A ships ladder in compliance with Minnesota Rules, part 1305.1209, shall be considered equivalent to an alternating tread device.

AMBULATORY CARE FACILITY. "Ambulatory care facility" means buildings or portions of buildings used to provide medical, surgical, psychiatric, nursing, or similar care on a less than 24-hour basis to individuals who are rendered incapable of self-preservation by the services provided. For the purposes of this chapter, federally certified end-stage renal disease facilities (kidney dialysis facilities) located on the level of exit discharge shall not be considered ambulatory care facilities.

APPROVED. "Approved" means approval by the building official, pursuant to the Minnesota State Building Code, by reason of: inspection, investigation, or testing; accepted principles; computer simulations; research reports; or testing performed by either a licensed engineer or by a locally or nationally recognized testing laboratory.

CORRIDOR. "Corridor" means an interior passageway having a length at least 3 times its width, having walls, partitions, or other obstructions to exit travel over 6 feet (1829 mm) in height on 2 opposing sides and having openings from rooms or similar spaces.

LIVE/WORK UNIT. The definition of "Live/Work Unit" in IBC section 202 is deleted in its entirety.

OUTPATIENT CLINIC. "Outpatient clinic" means a building or part of a building used to provide medical care on a less than 24-hour basis to persons who are not rendered incapable of self-preservation by the services provided, including federally certified endstage renal dialysis facilities (kidney dialysis facilities) not classified as an ambulatory care facility.

ROOF COVERING. "Roof covering" means the covering applied to the roof deck for weather resistance, fire classification, or appearance. Roof covering materials consist of two basic types: roofing systems and prepared materials.

Subp. 2. **Added definitions.** The definition of "townhouse" in IBC Section 202 is deleted in its entirety. IBC section 202 is modified by adding the following definitions:

CODE. For purposes of this chapter, "the code" or "this code" means Minnesota Rules, chapter 1305, Adoption of the International Building Code.

GUEST ROOM. "Guest room" means a room or group of rooms used or intended to be used for purposes of lodging by guests.

ROOM. "Room" means a space or area bounded by any obstruction over 6 feet (1829 mm) in height which at any time encloses more than 80 percent of the perimeter of the area. In computing the unobstructed perimeter, openings less than 3 feet (914 mm) in clear width and less than 6 feet 8 inches (2032 mm) in height shall not be considered. Aisles and corridors shall not be construed to form rooms.

SMALL HOSE CONNECTION. "Small hose connection" means a 1 1/2-inch connection supplied inside of a building for firefighting overhaul operations in sprinkler-protected structures.

1305.0302 CARE FACILITY CLASSIFICATIONS.

IBC section 302 is amended by adding Table 302.2 to read as follows:

Table 302.2 Care facilities. Occupancies for care facilities shall be classified in accordance with the following table.

Table 302.2 Care Facilities

Type of Licensed Facility		Number or Type of Residents	IBC Occupancy Classification
Child Care (Day Care)	Family Child Care Home	10 occupants maximum with ≤ 6 below school age	R-3 dwelling unit
	Group Child Care Home < 24 hours per day	11-14 occupants maximum	R-3 dwelling unit
	Child Care Center < 24 hours per day	> 5 but ≤ 100 children < 2.5 years of age and each room at, and with, an exit at the level of exit discharge	E
	Child Care Center < 24 hours per day	More than 5 children > 2.5 years of age	E
	Child Care Center < 24 hours per day	More than 5 children ≤ 2.5 years of age	I-4
Adult Day Care	Family Adult Day Services	≤ 8 impaired adults	R-3 dwelling unit
	Adult Day Care Center < 24 hours per day	6 or more occupants, all may or may not be capable of self-preservation	I-4
	Adult Day Care Center < 24 hours per day	6 or more occupants, but having no more than 50 percent of the occupants who are not capable of self-preservation	E
Supervised Living Facilities	Class A-1	6 or fewer residents; all of whom are capable of self-preservation	R-3 dwelling unit
	Class A-2	7 to 16 residents; all of whom are capable of self-preservation	R-4
	Class A-2	More than 16 residents; all of whom are capable of self-preservation	I-1

	Class B-1	6 or fewer residents; all of whom may not be capable of self-preservation	R-3
	Class B-2	7 to 16 residents; all of whom may not be capable of self-preservation	R-4
	Class B-3	More than 16 residents; all of whom may not be capable of self-preservation	I-2
Hospice	Residential Hospice Facility	1-5 terminally ill persons	R-3
	Residential Hospice Facility	6-12 terminally ill persons	R-4
Adult Foster Care	Adult Foster Care Home	1-5 impaired adults	R-3 dwelling unit
Child Foster Care	Foster Care	1-6 foster children without severe disability or assisted medical technology	R-3 dwelling unit
	Foster Care	1-4 foster children with medical or special care services	R-3 dwelling unit
Housing with Services Facility	Housing with Services Establishment Housing with Services Establishment Providing Assisted Living Services	1-5 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, section 144D.025	R-3 dwelling unit
	Housing with Services Establishment Housing with Services Establishment Providing Assisted Living Services	6-16 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, section 144D.025	R-4
	Housing with Services Establishment Housing with Services Establishment Providing Assisted Living Services	16 adult residents ≥ 80 percent 55 years of age or older unless registered under MN Statutes, section 144D.025	I-1

Boarding Care	Boarding Care Home	< 5 residents	R-3 dwelling unit
	Boarding Care Home	6-16 residents	R-4
	Boarding Care Home	> 16 residents	I-1
Boarding and Lodging	Boarding and Lodging	≤ 16 residents in sleeping rooms or ≤ 2 dwelling units in one building	R-3
	Boarding and Lodging	> 16 residents in sleeping rooms or > 2 dwelling units in one building	R-2
	Boarding and Lodging < 30 days	Bed and Breakfast with 6 or more sleeping units Boarding houses with > 10 occupants	R-1
	Boarding and Lodging < 30 days	Bed and Breakfast with 5 or fewer sleeping units Boarding houses with ≤ 10 occupants	R-3 dwelling unit
Senior Housing	Senior Housing (See IBC 310)	More than 2 dwelling units in one building	R-2
	Senior Housing (See IBC 310)	2 dwelling units in one building	R-3
	Senior Housing (See IBC 310)	1 dwelling unit	R-3 dwelling unit
Congregate Residence	Congregate Residence	≤ 16 residents	R-3
	Congregate Residence	17 or more residents	R-2
Day Services	Day Services Facility	Adult (over 18)	I-4
	Day Services Facility	Ages 13-18	I-4

Chemical Dependency Treatment Programs	Chemical Dependency Treatment Program - Outpatient (< 24 hrs.)	Not regulated	B
	Chemical Dependency Treatment Program - Residential	< 5 residents	R-3 dwelling unit
	Chemical Dependency Treatment Program - Residential	6-16 residents	R-4
	Chemical Dependency Treatment Program - Residential	> 16 residents	I-1

1305.0308 INSTITUTIONAL GROUP I.

Subpart 1. **IBC section 308.3.** IBC section 308.3 is amended to read as follows:

308.3 Institutional Group I-1. This occupancy shall include buildings, structures, or portions thereof for more than 16 persons who reside on a 24-hour basis in a supervised environment and receive custodial care. Examples of this group include the following:

Alcohol and drug centers

Assisted living ~~facilities~~

Boarding care

Congregate care facilities

Convalescent facilities

Group homes

Halfway houses

Housing with services establishment

Residential board and care facilities

Social rehabilitation facilities

Supervised living facilities Class A-2

308.3.1 Five or fewer persons receiving care. A facility such as the above with five or fewer persons receiving such care shall be classified as Group R-3.

308.3.2 Six to 16 persons receiving care. A facility such as above, housing not fewer than six and not more than 16 persons receiving such care, shall be classified as Group R-4.

Subp. 2. **IBC section 308.4.** IBC section 308.4 is amended to read as follows:

308.4 Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are incapable of self-preservation. Examples of this group include the following:

Detoxification facilities

Foster care facilities

Hospitals

Nursing homes

Psychiatric hospitals

Supervised living facilities Class B-3

308.4.1 Five or fewer persons receiving care. A facility such as the above with five or fewer persons receiving such care shall be classified as Group R-3.

Subp. 3. [See repealer.]

Subp. 4. **IBC section 308.6.4.** IBC section 308.6.4 is amended to read as follows:

308.6.4 Five or fewer persons receiving care in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy.

1305.0310 SECTION 310 RESIDENTIAL GROUP R.

IBC section 310 and its subsections are amended to read as follows:

310.1 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. This group shall not include buildings regulated by chapter 1309, the International Residential Building Code (IRC). However, the licensed uses specified in sections 310.5 and 310.6, as amended by this part, are applicable to a building constructed in accordance with the IRC that houses a use that is required to be licensed.

310.2 Definitions. The following terms are defined in chapter 2:

Boarding house

Congregate living facility

Dormitory

Group home

Personal care service

Transient

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

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

Boarding houses (transient) with more than ten occupants

Congregate living facilities (transient) with more than ten occupants

Hotels (transient)

Motels (transient)

310.4 Residential Group R-2. 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 (nontransient) with more than 16 occupants

Congregate living facilities (nontransient) with more than 16 occupants

Convents

Dormitories

Fraternities and sororities

Hotels (nontransient)

Monasteries

Motels (nontransient)

Vacation timeshare properties

310.5 Residential 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:

Assisted living ~~facilities~~

Boarding care homes

Boarding houses (nontransient) with 16 or fewer occupants

Boarding houses (transient) with 10 or fewer occupants

Care facilities that provide accommodations for five or fewer persons receiving care

Congregate living facilities (nontransient) with 16 or fewer occupants

Congregate living facilities (transient) with ten or fewer occupants

Dwelling units in mixed occupancy buildings

Family adult foster homes

Foster care

Housing with services establishment

Residential hospice with five or fewer occupants

In new construction, Group R-3 occupancies shall meet the requirements for building durability of chapter 1309, the International Residential Building Code, parts 1309.0402; 1309.0406, subpart 2; 1309.0702, subpart 2; 1309.0703, subpart 2a; 1309.0703, subpart 9, items A, B, and C; 1309.0903; and 2012 IRC section R703.8.1.

310.5.1 Care facilities within a dwelling. Section 310.5.1 is deleted in its entirety.

310.6 Residential Group R-4. This occupancy shall include buildings, structures, or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive custodial

care. The persons receiving care are capable of self-preservation. This group shall include the following:

Alcohol and drug centers

Assisted living

Boarding care homes

Congregate care facilities

Group homes

Halfway houses

Housing with services establishment (including those that provide assisted living services)

Residential board and care facilities

Residential hospice with 12 or fewer occupants

Social rehabilitation facilities

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

1305.0402 SECTION 402, COVERED MALL AND OPEN MALL BUILDINGS.

Subpart 1. **IBC section 402.4.2.2.2.** IBC section 402.4.2.2 is amended by adding a subsection to read as follows:

402.4.2.2.2 Property lines. Property lines may be platted between an anchor building and a covered mall building separated in accordance with section 402.4.2.2 without requiring the construction of a party wall if there are legal agreements recorded with the deed for each of the separate properties. These recorded agreements shall require that buildings as divided by property lines be in conformance with the applicable provisions of the State Building Code, as if the buildings were a single building on a single piece of property. In addition, the agreement must state that no individual building or property owner may

modify any portion of the building in any way that would not comply with the State Building Code.

Subp. 2. [Repealed, 32 SR 7]

Subp. 3. **IBC section 402.7.2.** IBC section 402.7.2 is amended to read as follows:

402.7.2 Smoke control. Where a covered mall building contains an atrium, a smoke control system shall be provided in accordance with section 404.5.

Exception: Smoke control is not required in covered mall buildings where an atrium connects only two stories.

Covered mall buildings exceeding 50,000 square feet (4645 m^2) in floor area, excluding anchor buildings, not provided with an approved smoke control system, shall be provided with a postfire smoke exhaust system in accordance with Minnesota Rules, part 1305.0916.

1305.0403 SECTION 403, HIGH-RISE BUILDINGS.

Subpart 1. **IBC Section 403.2.1.2.** IBC Section 403.2.1.2 is deleted in its entirety.

Subp. 2. [See repealer.]

Subp. 3. **IBC section 403.4.8.2.** IBC section 403.4.8.2 is amended to read as follows:

403.4.8.2 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the fire command center required by section 403.4.6;
2. Ventilation and automatic fire detection equipment for smokeproof enclosures; and
3. Passenger elevators serving occupied floors more than 75 feet (22860 mm) above the lowest level of fire department vehicle access.

1305.0406 SECTION 406, MOTOR VEHICLE-RELATED OCCUPANCIES.

Subpart 1. **IBC section 406.4.5.** IBC section 406.4.5 is amended by adding a new exception to read as follows:

3. Unoccupied portions of nonpublic parking garages shall not be required to be nonabsorbent.

Subp. 2. **IBC section 406.5.7.** IBC Section 406.5.7 is amended to read as follows:

406.5.7 Means of egress. Where persons other than parking attendants are permitted, open parking garages shall meet the means of egress requirements of Chapter 10. Where no persons other than parking attendants are permitted, there shall not be less than two 36-inch wide (914 mm) exit stairways.

1305.0407 SECTION 407, GROUP I-2.

IBC section 407.2.1 is amended to read as follows:

407.2.1 Spaces open to the corridor. Spaces constructed as required for corridors shall be permitted to be open to a corridor, only when all the following criteria are met:

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

1305.0408 SECTION 408, GROUP I-3.

Subpart 1. [See repealer.]

Subp. 2. **IBC section 408.7.** IBC section 408 is amended to read as follows:

408.7 Security Glazing. In Group I-3 occupancies, windows and doors in 1-hour fire barriers constructed in accordance with section 707; 2-hour fire barriers constructed in accordance with section 707 used for horizontal exits; fire partitions constructed in accordance with section 708; and smoke barriers constructed in accordance with section 709 shall be permitted to have security glazing installed provided that the following conditions are met:

1. Individual panels of glazing in door assemblies shall not exceed 1296 square inches (0.84 m^2).

2. The glazing shall be protected on both sides by an automatic sprinkler system. The sprinkler system shall be designed to, when actuated, wet completely the entire surface of any glazing affected by fire.

Exception: Fire partitions or smoke barriers with 1/4-inch (6.4 mm) wire glass in a security glazing assembly.

3. The glazing shall be in a gasketed frame and installed in such a manner that the framing system will deflect without breaking (loading) the glass before the sprinkler system operates.

4. Obstructions such as curtain rods, drapery traverse rods, curtains, drapes, or similar materials shall not be installed between the automatic sprinklers and the glazing.

5. Security glazing in fire partitions, 1-hour fire barriers enclosing fire command centers, and smoke barriers, shall not be limited to 25 percent of the area of the common wall with any room.

Subp. 3. **IBC section 408.9.** IBC section 408 is amended by adding a new subsection to read as follows:

408.9 Windowless buildings. For the purposes of this section, a windowless building or portion of a windowless building is one with nonopenable or readily breakable windows or with skylights or exterior doors provided in all resident areas of the exit access with an occupant load greater than 50. Windowless buildings shall be provided with an engineered smoke control system to provide a tenable environment for exiting from the smoke compartment in the area of fire origin in accordance with section 909 for each windowless smoke compartment.

1305.0413 SECTION 413, COMBUSTIBLE STORAGE.

IBC section 413 is amended by adding a subsection to read as follows:

413.3 Fire protection of floors. In addition to the requirements of this section, the fire protection of floors in Groups I-1, R-1, R-2, and R-3 occupancies shall comply with the requirements of section 420.6.

1305.0419 SECTION 419, LIVE/WORK UNITS.

IBC section 419, Live/Work Units, is deleted in its entirety.

1305.0420 SECTION 420, GROUP I-1, R-1, R-2, R-3.

Subpart 1. **IBC section 420.1.** IBC section 420.1 is amended to read as follows:

420.1 General. Occupancies in Groups I-1, R-1, R-2, and R-3 shall comply with the provisions of sections 420.1 through 420.6 and other applicable provisions of this code.

(Sections 420.2 to 420.5 remain unchanged.)

Subp. 2. **IBC section 420.6.** IBC section 420 is amended by adding a subsection to read as follows:

420.6 Fire protection of floors. Floor assemblies, not required elsewhere in this code to be fire-resistance rated, shall be provided with 1/2-inch (12.7 mm) gypsum

wallboard membrane, 5/8-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with NFPA 13D, or other approved equivalent sprinkler system.

2. Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances.

3. Portions of the floor assemblies in Group R-3 can be unprotected when complying with the following:

   a. The aggregate area of the unprotected portions shall not exceed 80 square feet per story; and

   b. Fire blocking in accordance with section 717.2 shall be installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.

4. Wood floor assemblies in Group R-3 occupancies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

1305.0425 SECTION 425, GROUP E OCCUPANCIES.

IBC chapter 4 is amended by adding a section and subsections to read as follows:

SECTION 425

GROUP E OCCUPANCIES

425.1 Applicability. This section applies to Group E school buildings containing uses described in this section. School buildings shall comply with this section and all other applicable provisions of this code, as provided by Minnesota Statutes, section 123B.51, subdivision 7.

425.2 Use of school buildings by lower grades. In addition to the occupancy and construction requirements in this code, this section applies to those special uses and occupancies described in this section.

425.2.1 School buildings equipped with approved automatic fire sprinkler and fire alarm systems. Rooms used by preschool, kindergarten, and first and second grade students for classrooms, latchkey, day care, early childhood family education, teen parent, or other programs conducted in the building may be located on any floor level below the fourth story if the following conditions exist:

1. The building is protected throughout with an approved automatic fire sprinkler system; and
2. The building is protected throughout with an approved automatic fire alarm system having automatic smoke detection devices installed throughout the exit system within every room or area used for purposes other than a classroom or office.

425.2.2 School buildings equipped with either an approved automatic fire sprinkler system or a fire alarm system. Rooms shall be located on the story of exit discharge when used for the purposes of classroom, latchkey, day care, early childhood education, teen parent, or other programs conducted in the building by preschool, kindergarten, or first grade students. Rooms shall be located on the story of exit discharge or one story above when used for any purpose by second grade students.

Rooms occupied by preschool, kindergarten, first, or second grade students, when used for the programs described in this section, may be located on floor levels other than those designated above if one of the following conditions is met:

1. An approved automatic fire sprinkler system is provided throughout the building and the use of the affected room or space is limited to one

grade level at a time and exiting is provided from the room or space that is independent from the exiting system used by students above second grade; or

2. An approved automatic fire alarm system is installed throughout the building consisting of automatic smoke detection installed throughout the exit system and within all rooms and areas other than classroom and office areas, and the use of the affected room or space is limited to one grade level at a time, and exiting is provided from the room or space that is independent from the exiting system used by students above second grade.

For the purposes of this subpart, pupils from the second grade down are considered one grade level.

425.2.3 Accessory spaces. Accessory spaces, including spaces used for gymnasiums, cafeterias, media centers, auditoriums, libraries, and band and choir rooms, used on a temporary basis by preschool, kindergarten, first, and second grade students are permitted to be located one level above or one level below the story of exit discharge, if the building is protected throughout by an approved automatic sprinkler system or an approved corridor smoke detection system.

1305.0507 SECTION 507, UNLIMITED AREA BUILDINGS.

[For text of subp 1, see M.R.]

Subp. 2. **IBC section 507.3.** The exceptions listed in IBC section 507.3 are not amended. The first sentence of IBC section 507.3 is amended to read as follows:

507.3 Sprinklered, one-story. The area of a one-story above-grade plane building of Group B, F, M, or S occupancy or a one-story above-grade plane Group A-4 building, of other than Type V construction, shall not be limited when the building is provided with an automatic sprinkler system throughout in accordance with Section

903.3.1.1 and is surrounded and adjoined by public ways or yards not less than 60 feet (18,288 mm) in width.

Subp. 3. **IBC section 507.4.** IBC section 507.4 is amended to read as follows:

507.4 Two story. The area of a two-story above-grade plane building of Group B, F, M, or S occupancy shall not be limited when the building is equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1, and is surrounded and adjoined by public ways or yards not less than 60 feet (18,288 mm) in width.

[For text of subp 4, see M.R.]

1305.0508 MIXED USE AND OCCUPANCY.

IBC section 508.1 is amended by deleting exception 3.

1305.0603 SECTION 603, COMBUSTIBLE MATERIALS IN TYPE I AND TYPE II CONSTRUCTION.

IBC section 603.1 is amended by adding an item to the numerical list as follows:

26. When not exceeding 24 inches above the roof deck, wood is permitted to be used in roof construction for equipment support, building or roof system joints, skylight or mechanical equipment, curbs, cants, blocking and backing, and for parapet or roof edge construction.

1305.0714 SECTION 714, PENETRATIONS.

IBC section 714.4.1.2 is amended by modifying exception 7 as follows:

7. The ceiling membrane of 1- and 2-hour fire-resistance-rated horizontal assemblies is permitted to be interrupted with the double wood top plate of a wall assembly, provided that all penetrating items through the double top plates are protected in accordance with section 714.4.1.1.1 or 714.4.1.1.2.

1305.0717 SECTION 717, DUCTS AND AIR TRANSFER OPENINGS.

Subpart 1. **IBC section 717.5.3.** IBC section 717.5.3 is amended by adding exception 6 as follows:

6. Fire dampers, smoke dampers, and combination fire/smoke dampers are not required in laboratory hood exhaust duct penetrations of shaft enclosures where laboratory ventilation systems are installed in accordance with Chapters 1 to 4, 7, and 8 of NFPA 45.

Subp. 2. **IBC section 717.6.1.** IBC section 717.6.1 is amended to read as follows:

717.6.1 Through penetrations. In occupancies other than Groups I-2 and I-3, a duct constructed of approved materials in accordance with the International Mechanical Code that penetrates a fire-resistance-rated floor or floor/ceiling assembly that connects not more than two stories is permitted without a shaft enclosure protection, provided a listed fire damper is installed at the floor line or the duct is protected in accordance with section 714.4. For air transfer openings, see section 712.1.8.

Exceptions:

1. A duct is permitted to penetrate three floors or less without a fire damper at each floor, provided the duct meets all of the following requirements:

   a. The duct shall be contained and located within the cavity of a wall and shall be constructed of steel having a minimum wall thickness of 0.0187 inches (0.4712 mm) (No. 26 gage) or the duct shall be protected by an approved through-penetration firestop system installed and tested in accordance with ASTM E 814 or UL 1479. The approved through-penetration firestop system shall have an F rating or T rating of not less than the required rating of the horizontal assembly being penetrated.

b. The duct shall open into only one dwelling or sleeping unit and the duct system shall be continuous from the unit to the exterior of the building.

c. The duct shall not exceed 4-inch (102 mm) nominal diameter and the total area of such ducts shall not exceed 100 square inches (0.065 m^2) in any 100 square feet (9.3 m^2) of floor area.

d. The annular space around the duct is protected with materials that prevent the passage of flame and hot gases sufficient to ignite cotton waste where subjected to ASTM E 119 or UL 263 time temperature conditions under a minimum positive pressure differential of 0.01 inch (2.49 Pa) of water at the location of the penetration for the time period equivalent to the fire-resistance rating of the construction penetrated.

e. Grille openings located in a ceiling of a fire-resistance-rated floor/ceiling or roof/ceiling assembly shall be protected with a listed ceiling radiation damper installed in accordance with section 717.6.2.1.

2. In Groups I-2 and I-3 occupancies, a duct constructed of approved materials in accordance with the International Mechanical Code that penetrates a fire-resistance-rated floor or floor/ceiling assembly that connects not more than two stories is permitted without a shaft enclosure protection, provided a listed smoke/fire damper is installed at the floor line.

1305.0901 SECTION 901, GENERAL.

IBC section 901.6.2, Fire alarm systems, is amended by deleting the section in its entirety.

1305.0903 SECTION 903, AUTOMATIC SPRINKLER SYSTEMS.

Subpart 1. [See repealer.]

Subp. 1a. **IBC [F] section 903.2.8.** IBC [F] section 903.2.8 is amended to read as follows:

903.2.8 Group R. An automatic sprinkler system installed in accordance with section 903.3 shall be provided throughout all buildings with a Group R fire area. For purposes of this provision, fire walls, party walls, or attached multiple fire-resistive exterior walls shall only create separate buildings where providing separation from occupancies other than Group R.

Exceptions:

1. A Group R-1 or R-2 fire area or combined fire areas less than ~~or equal to 9,250~~ 4,500 square feet of building area. ~~For the purposes of this provision, fire walls, party walls, or attached multiple fire-resistive exterior walls shall only create separate buildings where providing separation from occupancies other than Group R.~~

2. Group R-3 or R-4 dwelling unit with less than 4,500 square feet of building area, excluding garages.

3. An automatic fire sprinkler system shall not be required if additions or alterations are made to existing Group R-3 or R-4 buildings or a portion thereof that do not have an automatic sprinkler system installed, unless required by a Minnesota license.

4. Group R-1 multiunit resort buildings, as defined in Minnesota Statutes, section 157.15, and licensed by the Department of Health, with less than 9,250 square feet of building area.

903.2.8.1 Group R-3 or R-4 congregate residences. An automatic sprinkler system installed in accordance with section 903.3.1.3 shall be permitted in Group R-3 or R-4 congregate residences with 16 or fewer residents.

903.2.8.2 State licensed facilities. Group R-3 or R-4 occupancies containing facilities licensed by the state of Minnesota shall be provided

with an automatic sprinkler system as required by applicable licensing provisions or this section, whichever is more restrictive.

903.2.8.3 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 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. 1b. **IBC [F] section 903.2.11.4.** IBC [F] section 903.2.11.4 is amended by deleting the section in its entirety and replacing it with the following:

903.2.11.4 Fire protection for exhaust systems. Where required by the International Mechanical Code, automatic sprinklers shall be provided in ducts having a cross-sectional area of 75 square inches (480 cm^2) or more and that convey flammable or combustible components or that have the potential for combustible residue buildup on the inside. When sprinkler protection is installed, and where the application of water constitutes a serious life or fire hazard, a means shall be provided to prevent water accumulation in the duct or the flow of water back to equipment, appliances, machinery, or any apparatus.

Subp. 2. [Repealed, 32 SR 7]

Subp. 2a. **IBC [F] section 903.3.1.** IBC [F] section 903.3.1 is amended as follows:

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with section 903.3.1.1 unless otherwise permitted by sections 903.3.1.2 and 903.3.1.3 and other chapters of this code, as applicable.

Automatic sprinkler systems installed in state-licensed or state-registered facilities shall be installed in accordance with this code and by the appropriate licensing or registration provisions of other Minnesota state agencies.

Subp. 2b. **IBC [F] section 903.3.1.1.1.** IBC [F] section 903.3.1.1.1 is amended by adding a new item 7 to the list of exempt locations to read as follows:

7. Sprinkler protection shall not be installed in elevator shafts, elevator pits, or elevator machine rooms.

Exception to #7: Health care occupancies that are licensed by the Minnesota Department of Health or that participate in Title XVIII (Medicare) or Title XIX (Medicaid) of the Social Security Act.

Subp. 3. [Repealed, 32 SR 7]

Subp. 3a. **IBC [F] section 903.3.1.3.** IBC [F] section 903.3.1.3 is amended to read as follows:

903.3.1.3 NFPA 13D sprinkler systems. Automatic sprinkler systems installed in Group R-3 and R-4 occupancies shall be permitted to be installed throughout in accordance with NFPA 13D.

Subp. 4. **IBC [F] section 903.3.1.4.** IBC [F] section 903.3.1 is amended by adding a section to read as follows:

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.

Subp. 5. **IBC [F] section 903.3.1.5.** IBC [F] section 903.3.1 is amended by adding a subsection to read as follows:

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 rooms or gymnastic rooms.

Subp. 5a. **IBC [F] section 903.3.1.6.** IBC [F] section 903.3.1 is amended by adding a subsection to read as follows:

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.

903.3.1.6.3 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 8.15.8.2 and 8.17.2.5 of NFPA 13 are revised to read:

8.15.8.2 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; and

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

8.17.2.5 Valves.

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

8.17.2.5.1.1 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.

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

903.3.1.6.5 Vestibules. Sprinkler protection is not required in vestibules that meet all of the following conditions:

1. the vestibule is 225 square feet or less in floor area;

2. the vestibule is of noncombustible or limited combustible construction;

3. the vestibule has glazing allowing vision into vestibule;

4. the vestibule's only purpose is ingress and egress; and

5. the vestibule contains no fueled equipment, flammable or combustible liquids, or furniture. Incidental combustible storage in the vestibule is limited to 5 feet^3 of material.

Subp. 6. [Repealed, 32 SR 7]

Subp. 6a. **IBC [F] section 903.3.7.** IBC [F] section 903.3 is amended by adding a subsection to read as follows:

903.3.7 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. 7. **IBC [F] section 903.4.** IBC [F] section 903.4 is amended by adding an exception to read as follows:

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

Subp. 8. **IBC [F] section 903.4.4.** IBC [F] section 903.4 is amended by adding a section to read as follows:

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.

1305.0905 SECTION 905, STANDPIPE SYSTEMS.

Subpart 1. **IBC [F] section 905.2.1.** IBC [F] section 905.2 is amended by adding subsections to read as follows:

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. **IBC [F] section 905.3.2.1.** IBC [F] section 905.3.2 is amended by adding a subsection to read as follows:

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 (1115 m^2).

Subp. 3. **IBC [F] section 905.3.4.** IBC [F] sections 905.3.4 and 905.3.4.1 are amended by deleting the sections in their entirety.

Subp. 4. [Repealed, 32 SR 7]

Subp. 5. [Repealed, 32 SR 7]

Subp. 6. **IBC [F] section 905.3.9.** IBC [F] section 905.3 is amended by adding a subsection to read as follows:

905.3.9 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.

Subp. 6a. **IBC [F] section 905.3.10.** IBC [F] section 905.3 is amended by adding a subsection to read as follows:

905.3.10 Group R-2 occupancies small hose connections. Small hose connections 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. Small hose connections required by this section shall comply with the following:

1. Supply one 1-1/2-inch (38-mm) fire hose valve at each floor level or intermediate stair landing in each required and enclosed stairway.

2. The water for the small hose connections shall be supplied separately from the sprinkler system protecting that area so that the small hose connections are still functional if the water supply to the sprinkler system is shut down following fire extinguishment.

3. The piping shall be a minimum of 1-1/2 inch (38 mm).

4. The water shall be supplied from a wet-pipe sprinkler system only.

5. The piping shall be comprised of metallic piping and hose valve connections.

Permanent signage shall be required which reads "Fire Department Overhaul Hose Connection" at each connection in the building. If a separate standpipe system is provided, a sign shall also be provided at the exterior FD connection.

Subp. 7. **IBC [F] section 905.5.1.** IBC [F] section 905.5.1 is deleted.

1305.0906 SECTION 906, PORTABLE FIRE EXTINGUISHERS.

IBC [F] section 906.1 is amended to read as follows:

906.1 General. Portable fire extinguishers shall be provided in occupancies and locations as required by the Minnesota State Fire Code.

1305.0907 SECTION 907, FIRE ALARM AND DETECTION SYSTEMS.

Subpart 1. [See repealer.]

Subp. 1a. **IBC [F] section 907.2.** IBC [F] section 907.2 is amended to read as follows:

907.2 Where required - new buildings and structures. 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 in accordance with section 508.4,

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. 2. [Repealed, 32 SR 7]

Subp. 2a. **IBC [F] section 907.2.1.** IBC [F] section 907.2.1 is amended to read as follows:

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 in buildings with an occupant load of less than 1,000 when an approved automatic fire-extinguishing system is installed throughout the building.
3. Assembly uses within Group E occupancies shall have alarms as required for the Group E occupancy.
4. Group A-5 occupancies. See also section 907.2.11.

Subp. 3. **IBC [F] section 907.2.1.1.** IBC [F] section 907.2.1.1 is amended to read as follows:

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.

Subp. 4. **IBC [F] section 907.2.1.2.** IBC [F] section 907.2.1.2 is amended to read as follows:

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.

Subp. 5. **IBC [F] section 907.2.1.3.** IBC [F] section 907.2.1 is amended by adding a section to read as follows:

907.2.1.3 System initiation in Group A occupancies with an 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 3 minutes, for the sole purpose of allowing a live voice announcement from an approved constantly attended location.

Subp. 6. **IBC [F] section 907.2.2.** IBC [F] section 907.2.2 is amended to read as follows:

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 where:

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

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

Exception: In other than ambulatory care facilities, a fire alarm system is not required when an approved automatic fire extinguishing system is installed throughout the building.

Subp. 7. **IBC [F] section 907.2.2.1.** IBC [F] section 907.2.2.1 is amended to read as follows:

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 ambulatory care facilities, initiation of the fire alarm system shall also be by manual means.

Subp. 8. **IBC [F] section 907.2.2.2.** IBC [F] section 907.2.2 is amended by adding a section to read as follows:

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.

Subp. 9. **IBC [F] section 907.2.2.3.** IBC [F] section 907.2.2 is amended by adding a section to read as follows:

907.2.2.3 Ambulatory care facilities. Corridors and rooms or spaces open to corridors within an ambulatory care facility shall be protected by an automatic smoke detection system.

Subp. 10. **IBC [F] section 907.2.3.** IBC [F] section 907.2.3 is amended to read as follows:

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.

Subp. 11. **IBC [F] section 907.2.3.1.** IBC [F] section 907.2.3 is amended by adding a section to read as follows:

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 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.

Subp. 12. **IBC [F] section 907.2.3.2.** IBC [F] section 907.2.3 is amended by adding a section to read as follows:

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 10 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.

Subp. 13. **IBC [F] section 907.2.3.3.** IBC [F] section 907.2.3 is amended by adding a section to read as follows:

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

Subp. 14. **IBC [F] section 907.2.4.** IBC [F] section 907.2.4 is amended to read as follows:

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.

Subp. 15. **IBC [F] section 907.2.4.1.** IBC [F] section 907.2.4 is amended by adding a section to read as follows:

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.

Subp. 16. **IBC [F] section 907.2.4.2.** IBC [F] section 907.2.4 is amended by adding a section to read as follows:

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

Subp. 17. **IBC [F] section 907.2.5.** IBC [F] section 907.2.5 is amended to read as follows:

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 60, 62, and 63 of the IFC at 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.

Subp. 18. **IBC [F] section 907.2.5.1.** IBC [F] section 907.2.5 is amended by adding a section to read as follows:

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 60, 62, and 63 of the 2012 IFC.

Subp. 19. **IBC [F] section 907.2.5.2.** IBC [F] section 907.2.5 is amended by adding a section to read as follows:

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. 20. [Repealed, 32 SR 7]

Subp. 21. [Repealed, 32 SR 7]

Subp. 22. **IBC [F] section 907.2.6.** IBC [F] 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 907.2.6.4.2 in Group I occupancies.

907.2.6.1 Group I-1 occupancies-general. A manual and automatic fire alarm system shall be installed in Group I-1 occupancies in accordance with sections 907.2.6.1 through 907.2.6.1.3.

907.2.6.1.1 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 corridors and areas that are open to corridors.

Exception: Manual fire alarm boxes in patient sleeping areas of Group I-1 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 provided that travel distances required by section 907.4.2 are not exceeded.

907.2.6.1.2 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.

907.2.6.1.3 Sleeping room smoke alarms. Smoke alarms shall be installed in resident sleeping rooms in accordance with section 907.2.11.1.

907.2.6.2 Group I-2 occupancies-general. A manual and automatic fire alarm system shall be installed in Group I-2 occupancies in accordance with sections 907.2.6.2 through 907.2.6.2.4.

907.2.6.2.1 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. Hospitals, nursing homes (both intermediate care and skilled nursing facilities), board and care homes, and detoxification facilities shall be provided with smoke detection

throughout the corridor and areas open to the corridors, other than nurses' stations.

Exceptions:

1. Corridor smoke detection shall not be required where the sleeping room smoke detectors required in section 907.2.6.3 are connected to an approved fire alarm system and activate a general evacuation signal.

2. Manual fire alarm boxes shall not be required at exits from patient sleeping areas if located at all nurses' stations or other constantly attended staff locations, provided such fire alarm boxes are visible and continuously accessible and provided that travel distances horizontally on the same floor shall not exceed 200 feet to reach a manual fire alarm box.

907.2.6.2.2 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a signal that is distinctive from audible signals used for other purposes in the same building. Such signal is intended to notify staff and need not meet the minimum sound pressure levels required for general evacuation fire alarm notification. 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.

3. Where total evacuation of occupants is impractical due to building configuration, only the occupants in the affected zones shall be initially notified. Provisions shall be made to selectively notify occupants in other zones to afford orderly evacuation of the entire building.

907.2.6.2.3 Patient room smoke detectors. Smoke detectors shall be installed in patient sleeping rooms of hospitals and nursing homes. Such detectors' primary power shall be other than battery power. Actuation of such detectors shall cause a visual display on the corridor side of the room where the detector is located and shall cause a distinct audible and visual alarm at the nurses' station attending the room. Such detectors may be part of the ~~facility,~~ facility's fire alarm system, nurses' call system, or a standalone system. ~~Integral smoke detectors for automatic door-closing devices on sleeping room doors can meet this requirement if they also cause all the items in section 907.2.6.3.1 to occur.~~

907.2.6.2.3.1 Integral smoke detectors for automatic door-closing devices. Integral smoke detectors for automatic door-closing devices on sleeping room doors can be installed only if they also meet all of the requirements in section 907.2.6.2.3.

907.2.6.2.4 Sleeping room smoke alarms. For Group I-2 facilities other than hospitals and nursing homes, single station smoke alarms shall be installed in resident sleeping rooms.

907.2.6.3 Group I-3 occupancies-general. A manual and automatic fire alarm system shall be installed in Group I-3 occupancies in accordance with sections 907.2.6.3 through 907.2.6.3.4.

907.2.6.3.1 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.

907.2.6.3.2 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.

907.2.6.3.3 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 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.

907.2.6.3.4 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a signal that is distinctive from audible signals used for other purposes in the same building. Such signal is intended to notify staff and need not meet the minimum sound pressure levels required for general evacuation fire alarm notification. In addition, activation of the fire alarm system shall immediately transmit an alarm to an approved central station or remote station service.

907.2.6.4 Group I-4 occupancies-general. A manual and automatic fire alarm system shall be installed in Group I-4 occupancies in accordance with sections 907.2.6.4.1 through 907.2.6.4.2.

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, and similar areas. Automatic smoke detectors shall be provided in corridors and areas that are open to corridors.

907.2.6.4.2 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 signal to an approved central station or remote station service.

Subp. 23. **IBC [F] section 907.2.7.** IBC [F] section 907.2.7 is deleted in its entirety.

Subp. 24. **IBC [F] section 907.2.7.1.** IBC [F] section 907.2.7.1 is deleted in its entirety.

Subp. 25. **IBC [F] section 907.2.8.** IBC [F] section 907.2.8 is amended to read as follows:

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 sleeping 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 sleeping unit has an exit directly to a public way, exit court or yard.

2. Buildings containing five or ~~less~~ fewer sleeping units 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 907.2.11.

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 in accordance with section 903.3.1.1 or 903.3.1.2 and a manual fire alarm box is provided at a constantly attended location. When a constantly attended location is not provided, the manual fire alarm box shall be provided at the main exit.

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 Sleeping unit smoke alarms. Sleeping unit smoke alarms required by section 907.2.11 shall not be connected to a fire alarm system.

Exception: Connection of such alarms for annunciation only.

Subp. 26. **IBC [F] section 907.2.9.** IBC [F] section 907.2.9 is amended, and sections added, to read as follows:

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 sleeping unit or dwelling unit is located three or more stories above the ~~grade plane~~ story containing the lowest level of exit discharge;

2. Any sleeping unit or dwelling unit is located more than one story below the ~~grade plane~~ highest level of exit discharge of exits serving the dwelling unit;

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

4. The building is used as a congregate living facility, dormitory, convent, monastery, fraternity, sorority, group home, or shelter 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 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 alarms. Dwelling unit smoke alarms required by section 907.2.11 shall not be connected to the building fire alarm system.

Exception: Connection of such alarms for annunciation only.

Subp. 26a. [See repealer.]

Subp. 26b. **IBC [F] section 907.2.10.** IBC [F] section 907.2.10 is amended to read as follows:

907.2.10 Group R-4, general. A fire alarm system shall be installed in accordance with sections 907.2.10 through 907.2.10.3 in Group R-4 occupancies.

Exceptions:

1. A fire alarm system is not required in buildings two stories or less in height where all individual sleeping units and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour fire partitions and each sleeping unit room has an exit directly to a public way, exit court, or yard.
2. Buildings containing five or fewer sleeping units shall be allowed to be equipped with approved multiple-station smoke alarms installed as required for Group R-3 occupancies. Installation shall be in accordance with section 907.2.11.

907.2.10.1 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 in accordance with section 903.3.1.1, 903.3.1.2, or 903.3.1.3.

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

907.2.10.3 Smoke alarms. Single and multistation smoke alarms shall be installed in accordance with section 907.2.11.

Subp. 27. **IBC [F] section 907.2.11.4.** IBC [F] section 907.2.11.4 is amended to read as follows:

907.2.10.2 Power source. In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Smoke alarms are not required to be equipped with battery backup in Group R-1 occupancies 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. 27a. [See repealer.]

Subp. 28. **IBC [F] section 907.2.24.** IBC [F] section 907.2 is amended by adding sections to read as follows:

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 continuously 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. 29. [Repealed, 32 SR 7]

Subp. 30. [See repealer.]

Subp. 31. **IBC [F] section 907.3.** IBC [F] section 907.3 is amended, and subsections added, to read as follows:

907.3 Fire safety functions. Automatic fire detectors required by section 907.2 and IFC chapter 11 are to activate notification appliances in accordance with those sections. When automatic fire detectors are installed for other fire safety functions, they shall perform the intended function upon activation. When automatic detectors are installed for fire safety functions and the building has a fire alarm system, the detectors shall activate supervisory signals at the fire alarm control panel or at a constantly attended location. When the building does not have a fire alarm system, the detectors shall activate a visual and audible supervisory signal at an approved location, which shall indicate the source of the signal.

907.3.1 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.

907.3.1.1 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.

907.3.2 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.

907.3.3 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. 31a. **IBC [F] section 907.6.5.** IBC [F] section 907.6.5 and its subsections are deleted in their entirety.

Subp. 32. [See repealer.]

Subp. 33. [See repealer.]

1305.0908 SECTION 908, EMERGENCY ALARM SYSTEMS.

IBC [F] section 908.7 is amended to read as follows:

908.7 Carbon monoxide alarms. Group I or R occupancies located in a building containing a fuel-burning appliance or in a building that has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be:

A. listed as complying with UL 2034;

B. installed and maintained in accordance with NFPA 720 and the manufacturer's instructions; and

C. installed within 10 feet of each sleeping unit or sleeping room.

Exception: Individual sleeping units or dwelling units that do not contain a fuel-burning appliance or have an attached garage, but are located in a multiunit building with a fuel-burning appliance or attached garage, need not be equipped with a single-station carbon monoxide alarm if:

(1) the sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and

(2) the building is equipped with a common area carbon monoxide alarm system.

(Subsection 908.7.1 applies and remains unchanged.)

1305.0909 SECTION 909, SMOKE CONTROL SYSTEMS.

Subpart 1. [See repealer.]

Subp. 1a. **IBC [F] section 909.1.** IBC [F] section 909.1 is amended to read:

909.1 Scope and purpose. This section applies to mechanical or passive smoke control systems for new buildings or portions of new buildings when they are required by other provisions of this code. The purpose of this section is to establish minimum requirements for the design, installation, and acceptance testing for smoke control systems that are intended to provide a tenable environment for the evacuation or relocation of occupants and for fire suppression and overhaul efforts. These provisions are not intended for the preservation of contents or the timely restoration of operations.

Subp. 1b. **IBC [F] section 909.4.6.** IBC [F] section 909.4.6 is amended to read:

909.4.6 Duration of operation. All portions of the active or passive smoke control system shall be capable of continued operation after detection of the fire event for a period of not less than 20 minutes. System design shall be for 20 minutes; however, fans shall continue to operate after 20 minutes and shall continue to operate automatically for smoke removal during fire suppression and overhaul efforts for a minimum of 5 minutes for every 10 feet vertically of protected space.

Subp. 1c. **IBC [F] section 909.4.7.** IBC [F] 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 1008.1.3 requirements when the system is in smoke control mode.

Subp. 2. [See repealer.]

1305.0910 SECTION 910, SMOKE AND HEAT REMOVAL.

IBC [F] section 910 is amended to read as follows:

[F] SECTION 910

SMOKE AND HEAT REMOVAL

Subpart 1. **IBC [F] section 910.1.** IBC [F] section 910.1 is amended by adding sections to read as follows:

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 building 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. **IBC [F] section 910.4.** IBC [F] section 910.4 is amended to read as follows:

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

Subp. 3. **IBC [F] section 910.4.3.** IBC [F] section 910.4.3 is amended to read as follows:

910.4.3 Operation. Mechanical smoke exhaust fans shall be manually activated. In addition, individual manual controls of each fan unit shall also be provided.

Subp. 4. **IBC [F] section 910.4.5.** IBC [F] section 910.4.5 is amended to read as follows:

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. **IBC [F] section 910.5.** IBC [F] section 910 is amended by adding sections to read as follows:

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 manually activated. In addition, individual manual controls of each fan unit shall also be provided.

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 by 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 909.18.1 through 909.18.7 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.

1305.0916 SECTION 916, POST-FIRE EXHAUST SYSTEM.

IBC chapter 9 is amended by adding a section to read as follows:

SECTION 916

POST-FIRE SMOKE EXHAUST SYSTEM

916.1 Scope and purpose. This section applies to post-fire smoke exhaust systems when they are required by other provisions of this code. The purpose of this section is to establish minimum requirements for the design and installation of smoke exhaust systems that are intended for the timely restoration of operations and overhaul activities once a fire is extinguished.

916.2 General design requirements. Post-fire smoke exhaust systems are not intended or designed as life safety systems and are not required to meet the provisions of section 909. These systems are permitted to use dedicated equipment, the normal

building HVAC system or other openings and shall have the capability to exhaust smoke from occupied spaces. Smoke removal may be by either mechanical or natural ventilation, but shall be capable of removing cold smoke. Smoke exhaust shall be permitted through elevator shafts. Smoke removed from a space shall be discharged to a safe location outside the building and may not be recirculated into the building in accordance with the Minnesota Mechanical Code.

916.3 Exhaust capability. The system shall have an air supply and smoke exhaust capability that will provide a minimum of three air changes per hour or remove smoke to less than a 5 percent concentration within one hour of operation. The system does not need to exhaust from all areas at the same time, but is permitted to be zoned based on the largest fire area served. For the purpose of calculating system size, the height of a compartment shall be considered to run from slab to slab and include the volume above suspended ceilings.

916.4 Operation. The smoke exhaust system shall be operated by manual controls that are readily accessible to the fire department at an approved location and shall incorporate an approved control diagram. When a system is zoned into areas of operation less than the entire building, each zone shall have an individual control. Fire department manual controls of post-fire smoke exhaust systems shall have the highest priority of any control point within the building. Smoke exhaust shall not be permitted through any exit enclosure as defined in section 1002.

916.5 Inspection and testing. Post-fire smoke exhaust systems shall be inspected and tested annually.

1305.1008 SECTION 1008, DOORS, GATES, AND TURNSTILES.

Subpart 1. [Repealed, 32 SR 7]

Subp. 2. [Repealed, 32 SR 7]

Subp. 3. [Repealed, 32 SR 7]

Subp. 4. [See repealer.]

Subp. 5. **IBC section 1008.1.5.** IBC section 1008.1.5 is amended by modifying exception 5 to read as follows:

Exceptions:

5. Exterior decks, patios, or balconies that are part of Type B dwelling units, have impervious surfaces, and that are not more than 2 inches (50 mm) below the finished floor level of the adjacent interior space of the dwelling unit.

Subp. 6. **IBC section 1008.1.9.3.** IBC section 1008.1.9.3 is amended to read as follows:

1008.1.9.3 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, in buildings in occupancy Groups B, F, M, and S, and in places of religious worship, 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 revokable by the building 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 10 or less are permitted to be equipped with a night latch, dead bolt, or security chain, provided such devices are openable from the inside without the use of a key or tool.

5. Fire doors, after the minimum elevated temperatures have disabled the unlatching mechanism, in accordance with listed fire door test procedures.

6. Delayed egress locks, installed and maintained in conformance with section 1008.1.9.7.

7. Special locking arrangements installed and maintained in accordance with section 1008.1.9.6.

8. Electromagnetically locked egress doors, installed and maintained in conformance with section 1008.1.9.9.

9. In rooms, other than cells, where occupants are being restrained for safety or security reasons, special detention arrangements that comply with the requirements of section 1008.1.11 are permitted.

Subp. 6a. **IBC section 1008.1.9.6.** IBC section 1008.1.9.6 is amended to read as follows:

1008.1.9.6 Special door locking arrangements in Group I-1, I-2, R-3, or R-4 occupancies. Approved special door locking arrangements shall be permitted in a Group I-1, I-2, R-3, or R-4 occupancy when a person's clinical needs require such locking. Special locking devices shall be permitted on doors in these occupancies when the building is equipped throughout with an approved automatic sprinkler system in accordance with IBC section 903.3.1.1 and an approved automatic smoke or heat detection system is installed in accordance with section 907. The special locking arrangements and devices are permitted if they are installed and comply with

the requirements in items 1 through 10 below. Items 1 through 4 shall not apply to special locking arrangements in areas where persons who, because of clinical needs, require restraint or containment as part of the function of a psychiatric treatment area.

1. The special locking devices shall unlock upon actuation of either the automatic sprinkler system or the automatic fire-detection system.

2. The special locking devices shall unlock upon loss of power controlling the lock or lock mechanism.

3. The special locking devices shall have the capability of being unlocked by a signal from the fire-command center, a nursing station, or other approved location.

4. A building occupant shall not be required to pass through more than one door equipped with a special egress lock before entering an exit.

5. The procedures for the operations of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by IFC chapter 4.

6. All clinical staff shall have the keys, codes, or other means necessary to operate the locking devices.

7. Emergency lighting shall be provided at a door containing a special locking device.

8. 24-hour patient supervision is provided within the secured area.

9. The special locking devices are designed to fail in the open position.

10. Floor levels within the building or portion of the building with special locking arrangements shall be divided into at least two compartments by smoke barriers meeting the requirements of section 709.

Exception to item #10: In existing Group R-3 occupancies where the construction of smoke barrier compartmentation is not practical, an existing sleeping room provided with smoke-tight construction and having an escape window complying with section 1029 is allowed.

Subp. 7. **IBC section 1008.1.9.7.** IBC section 1008.1.9.7 is amended to read as follows:

1008.1.9.7 Delayed egress door locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Assembly Group A occupancies and High Hazard Group H occupancies, and assembly uses within Educational Group E occupancies. Delayed egress locks shall be installed only in buildings that are equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1 ~~and~~ or an approved smoke detection system installed in a means of egress system serving the locked area, provided that the doors unlock in accordance with Items 1 through 4 below. 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 shall have the capability of being unlocked by a signal from the fire command center.
4. The door locks shall include an irreversible process that will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 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 is permitted.

Doors that have been equipped with delayed egress locks shall also comply with items 1 to 3 below.

1. 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 [30] SECONDS.
2. Emergency lighting shall be provided at the door.
3. Delayed egress locks shall be maintained and tested in accordance with the Minnesota State Fire Code.

Subp. 7a. **IBC section 1008.1.9.11.** IBC section 1008.1.9.11 is amended by revising exception 3 to read as follows:

3. In stairways serving not more than four stories, doors are permitted to be locked from the side opposite the egress side. The exit door is permitted to be locked but shall be operable from the egress side.

Subp. 8. **IBC section 1008.1.** IBC section 1008.1 is amended by adding subsections as follows:

1008.1.11 Special detention arrangements. Special detention arrangements meeting the requirements of sections 1008.1.11 through 1008.1.11.4 are permitted for rooms, other than cells, where the occupants are being restrained for safety or security reasons. The use of sections 1008.1.11 through 1008.1.11.5 may be revoked by the fire code official or building official for due cause.

1008.1.11.1 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 any 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.
6. Operation of a manual switch located in an approved location.

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, relocking of the devices shall be by manual means only at the door.

1008.1.11.2 Fire-extinguishing system. When special detention arrangements are used, the room or area being secured shall be protected with quick-response sprinklers.

1008.1.11.3 Fire alarm and detection. When special detention arrangements are used, the room or area and spaces between the room or area and an exterior 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.

1008.1.11.4 Door swing. Doors separating detention rooms from other spaces must swing in the direction of egress travel from the detention room.

1305.1009 SECTION 1009, STAIRWAYS AND HANDRAILS.

Subpart 1. **IBC section 1009.13.** IBC section 1009.13 is amended to read as follows:

1009.13 Alternating tread devices. Alternating tread devices are limited to an element of a means of egress in buildings of Groups F, H, and S from a mezzanine not more than 250 square feet (23 m^2) in area and which serves not more than five occupants; in buildings of Group I-3 from a guard tower, observation station,

or control room not more than 250 square feet (23 m^2) in area and for access to unoccupied roofs. Access to mechanical equipment or appliances on a roof shall be in accordance with section 1209.3.1 and the Minnesota Mechanical Code. (IBC sections 1009.13.1, 1009.13.2, and the exception still apply.)

Subp. 2. **IBC section 1009.14.** IBC section 1009.14 is amended to read as follows:

1009.14 Ships ladders. Ships ladders constructed as required for permanent stairs in accordance with Minnesota Rules, part 1305.1209, shall be permitted to be used as a means of egress component at the following locations:

1. Ships ladders are permitted to be used in Group I-3 occupancies for means of egress at control rooms or elevated facility observation stations not more than 250 square feet (23 m^2) in floor area.

2. Ships ladders are permitted to be used as a component for means of egress at recessed or elevated floors or platforms when the area served has an occupant load of five or less and the space meets all of the following criteria:

(a) access to the area served is limited to building facilities staff, maintenance staff, employees, or other authorized personnel;

(b) required access to the area served is limited and periodic;

(c) the area served is used for building maintenance service functions, or for equipment access or monitoring;

(d) the area served is not required to have a second means of egress by other provisions of this code; and

(e) the area served is not classified as a Group H occupancy.

3. Ships ladders are permitted to be used for access to unoccupied spaces in accordance with Minnesota Rules, part 1305.1209.

1305.1013 SECTION 1013, GUARDS.

Subpart 1. **IBC section 1013.2.** IBC section 1013.2 is amended by adding an exception as follows:

Exception:

8. In accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112, guards are not required on bleachers 55 inches or less in height.

Subp. 2. **IBC section 1013.3.** IBC section 1013.3 is amended by modifying exception 4 to read as follows:

4. The guard height in assembly seating areas shall be in accordance with section 1028.14 and the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112.

Subp. 3. **IBC section 1013.8.** IBC section 1013.8 is amended to read as follows:

1013.8 Window sills. In occupancy groups R-1, R-2, and R-3 where the lowest part of the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or other surface below, the lowest part of the window opening shall be at a height not less than 36 inches (914 mm) above the finished floor surface of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch-diameter (102 mm) sphere where such openings are located within 36 inches (914 mm) of the finished floor.

Exceptions:

1. Operable windows where the lowest part of the opening is located more than 75 feet (22860 mm) above the finished grade or other surface below and that are provided with window fall-prevention devices that comply with ASTM F 2006.

2. Windows whose openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position.

3. Openings that are provided with window fall-prevention devices that comply with ASTM F 2090.

4. Windows that are provided with window opening control devices that comply with section 1013.8.1.

5. Replacement windows for occupancy groups R-1, R-2, and R-3 located on or below the third story above grade plane.

1013.8.1 Window opening control devices. Window opening control devices shall comply with ASTM F 2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by section 1029.2.

1305.1014 [Renumbered 1305.1017]

1305.1015 SECTION 1015, EXIT AND EXIT ACCESS DOORWAYS.

IBC section 1015.1 is amended to read as follows:

1015.1 Exit or exit access doorways required from spaces. 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.

Exceptions:

(a) 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 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1 or 903.3.1.2.

(b) Care suites in Group I-2 occupancies complying with section 407.4.3.

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

3. Where required by sections 1015.3, 1015.4, 1015.5, and 1015.6.

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

Where a building contains mixed occupancies, each individual occupancy shall comply with the applicable requirements for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of section 1004.1.

[Table 1015.1 is unchanged.]

1305.1017 SECTION 1017, AISLES.

IBC section 1017 and all subsections are deleted in their entirety and replaced with the following:

1017.1 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 1028. Aisles and aisle accessways serving reviewing stands, grandstands, and bleachers shall comply with section 1028.

1017.2 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) measured perpendicular to and away from and running parallel to the edge 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 the 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.

1017.2.1 Minimum aisle accessway width. Aisle accessways not required to be accessible by IBC chapter 11 shall provide a minimum of 12 inches (305 mm) of width, plus 0.5 inches (12.7 mm) of width for each additional one 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 six feet and used by a total of not more than four persons.

1017.2.2 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: Nonpublic aisles serving fewer than 50 people, and are not required to be accessible by IBC chapter 11, need not exceed 28 inches (711 mm) in width.

1017.3 Length.

1017.3.1 Aisle accessway. The length of travel along the aisle accessway shall not exceed 30 feet (9144 mm) to an aisle or exit access doorway.

1017.3.2 Aisle. The length of travel along an aisle or combination aisle accessway and aisle to a point where a person has a choice of two or more paths of egress travel to separate exits or exit access doorways shall not exceed that permitted by section 1014.3 for common path of egress travel.

1305.1018 SECTION 1018, CORRIDORS.

Subpart 1. **IBC Table 1018.1.** IBC Table 1018.1 is amended as follows:

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours) Without sprinkler system	With sprinkler system[c]
H-1, H-2, H-3	All	Not permitted	1
H-4, H-5	Greater than 30	Not permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	1	0.5
I-2[a], I-4	All	Not permitted	0
I-1, I-3	All	Not permitted	1[b]

a. For requirements for occupancies in Group I-2, see sections 407.2 and 407.3.

b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see section 408.8.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1 or 903.3.1.2, where allowed.

Subp. 2. **IBC section 1018.6.** IBC section 1018.6 is amended by modifying the exceptions to read as follows:

Exceptions:

1. Foyers, lobbies, or reception rooms constructed as required for corridors shall not be construed as intervening rooms if the aggregate area of these spaces does not exceed 1,000 square feet per floor.

2. Foyers, lobbies, or reception rooms that are more than 1,000 square feet per floor in aggregate area and other rooms or spaces that are constructed as required for corridors shall not be construed as intervening rooms when the rooms or spaces meet the following:

(a) The spaces are not occupied as dwelling units, sleeping units, incidental uses or hazardous uses.

(b) The rooms, spaces, or corridors are protected by an automatic smoke detection system that initiates alarm notification devices in all normally occupied rooms or spaces that use the corridor for a means of egress.

(c) The room or space is arranged so that it does not obstruct access to the required exits.

(d) Group R occupancies shall be provided with an automatic sprinkler system throughout to allow the use of exception #2.

1305.1022 SECTION 1022, INTERIOR EXIT STAIRWAYS AND RAMPS.

IBC section 1022.5 is amended to read as follows:

1022.5 Penetrations. Penetrations into and openings through interior exit stairways and ramps are prohibited except for required exit doors, equipment, and ductwork necessary for independent ventilation or pressurization, sprinkler piping, standpipes, electrical raceway for fire department communications systems and electrical raceway serving the interior exit stairway or ramp and terminating at a steel box not exceeding 16 square inches (0.010 m^2). Such penetrations shall be protected in accordance with section 714. There shall be no penetrations or communicating openings, whether protected or not, between any other interior exit stairways and ramps.

1305.1023 SECTION 1023, EXIT PASSAGEWAYS.

IBC section 1023.6 is amended to read as follows:

1023.6 Penetrations. Penetrations into and openings through an exit passageway are prohibited except for required exit doors, equipment, and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication, and electrical raceway serving the exit passageway and terminating at a steel box not exceeding 16 square inches (0.010 m^2). Such penetrations shall be protected in accordance with section 714. There shall be no

penetrations or communicating openings, whether protected or not, between any other exit passageway.

1305.1026 [Renumbered 1305.1029]

1305.1028 SECTION 1028, ASSEMBLY.

IBC section 1028.1.1 is amended to read as follows:

1028.1.1 Bleachers. Bleachers, grandstands, and folding and telescopic seating, that are not building elements, shall comply with International Code Council (ICC) 300, with the following amendments to ICC 300:

a. ICC 300 section 404.5 is amended by adding an exception as follows:

Exception: Aisles shall not be required to be more than 66 inches (1.676 mm) in width when the following 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.

b. ICC 300 section 405.1 is amended to read as follows:

405.1 Aisles. The minimum width of aisles shall be in accordance with section 404.5, but not less than that required by this section. An aisle is not required in seating facilities where all of the following conditions exist:

1. Seats are without backrest.

2. The rise from row to row does not exceed 6 inches (152 mm) per row.

Exception: Bleachers 55 inches or less in height.

3. The row to row spacing does not exceed 28 inches (711 mm) unless the seat boards and footboards are at the same elevation.

4. The number of rows does not exceed 16 rows in height.

5. The first seat board is not more than 12 inches (305 mm) above the ground floor or a cross aisle.

Exception: Bleachers 55 inches or less in height.

6. Seat boards have a continuous flat surface.

7. Seat boards provide a walking surface with a minimum width of 11 inches (279 mm).

8. Egress from seating is not restricted by rails, guards, or other obstructions.

c. ICC 300 section 405.6 is amended by adding an exception as follows:

3. Aisles serving bleachers in compliance with section 404.5.

d. ICC 300 section 408.1, item 1, is amended by modifying the exceptions to read as follows:

Exceptions:

1. Tiered seating that is located adjacent to a wall and the space between the wall and the tiered seating is less than 4 inches (102 mm) is not required to have a guard.

2. In accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112:

(a) bleachers must have vertical perimeter guards or other approved guards that address climbability and are designed to prevent accidents; and

(b) guards are not required on bleachers 55 inches (1397 mm) and less in height.

e. ICC 300 section 408.3 is amended to read as follows:

408.3 Guard design. Guards and their attachment shall be designed to resist the loads indicated in section 303. Bleachers must have vertical perimeter guards or other approved guards that address climbability and are designed to prevent accidents, in accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112.

f. ICC 300 chapter 5 is deleted and replaced with the following:

All bleachers or bleacher open spaces over 55 inches (1397 mm) above grade or the floor below, and all bleacher guardrails, if any part of the guardrail is over 30 inches (762 mm) above grade or the floor below, must be certified to conform with the safety requirements contained in Minnesota Statutes, section 326B.112.

(IBC Section 1028.1.1.1 still applies.)

1305.1029 SECTION 1029, EMERGENCY ESCAPE AND RESCUE.

Subpart 1. **IBC section 1029.1.** IBC section 1029.1 is amended to read as follows:

1029.1 General. In addition to the means of egress required by this chapter, provisions shall be made for emergency escape and rescue openings in ~~Group R-2 occupancies in accordance with Tables 1021.2(1) and 1021.2(2) and Group R-3~~ Group R occupancies. Basements and sleeping rooms below the fourth story above grade plane shall have at least one exterior emergency escape and rescue opening in accordance with this section. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Such openings shall open directly into a public way, public alley, or to a yard or court that opens to a public way.

Exceptions:

1. In other than Group R-2 occupancies in accordance with Table 1021.2(1), stories with one exit or access to one exit for R-2 occupancies, and Table 1021.2(2), stories with one exit or access to one exit for other occupancies, and Group R-3 occupancies, buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
2. In other than Group R-3 occupancies, sleeping rooms provided with a door to a fire-resistance-rated corridor having access to two remote exits in opposite directions.
3. The emergency escape and rescue opening is permitted to open onto a balcony within an atrium in accordance with the requirements of Section 404, provided

the balcony provides access to an exit and the dwelling unit or sleeping unit has a means of egress that is not open to the atrium.

4. High-rise buildings in accordance with Section 403.

5. Emergency escape and rescue openings are not required from basements or sleeping rooms which have an exit door or exit access door that opens directly into a public way, or to a yard, court, or exterior exit balcony that opens to a public way.

6. Basements without habitable spaces and having no more than 200 square feet (18.6 m^2) in floor area shall not be required to have emergency escape windows.

7. Basements or basement bedrooms in Group R-3 occupancies, when the building is protected by an automatic sprinkler system installed in accordance with section 903.3.

8. Basements in Group R-3 occupancies used only to house mechanical equipment that do not exceed a total floor area of 200 square feet (18.58 m^2).

9. Basements or basement bedrooms in Group R-3 occupancies that comply with all of the following conditions:

A. constructed prior to August 1, 2008;

B. undergoing an alteration or repair; and

C. the entire basement area is protected with an automatic sprinkler system in accordance with section 903.3 and all portions of the means of egress to the level of exit discharge, and all areas on the level of exit discharge that are open to the means of egress, are protected with an automatic sprinkler system in accordance with section 903.3.

Subp. 2. **IBC section 1029.4.** IBC section 1029.4 is amended by adding an exception to read as follows:

Exception: Window opening control devices approved and installed in accordance with ASTM F 2090 that do not require the use of keys or tools to operate.

Subp. 3. **IBC section 1029.6.** IBC section 1029 is amended to read as follows:

1029.6 Replacement windows. Replacement windows installed in buildings regulated by the International Building Code shall be exempt from the minimum size and maximum sill height requirements of sections 1029.2, 1029.2.1, and 1029.3, if the replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

1029.6.1 Licensed facilities. Windows in rooms used for foster care or day care licensed or registered by the state of Minnesota shall comply with the provisions of section 1029.6 or all of the following conditions, whichever is more restrictive:

(a) Minimum of 20 inches in clear opening width;

(b) Minimum of 20 inches in clear opening height;

(c) Minimum of 648 square inches (4.5 square feet) clear opening; and

(d) Maximum of 48 inches from the floor to the sill height.

1305.1203 SECTION 1203, VENTILATION.

IBC section 1203.1 is amended to read as follows:

1203.1 General. Buildings shall be provided with natural ventilation in accordance with section 1203.4 or mechanical ventilation in accordance with Minnesota Rules, chapter 1346. For additional ventilation requirements, see Minnesota Rules, chapters 1322 and 1323, as applicable.

Exceptions:

1. Buildings or portions thereof that are not intended for normal human occupancy, or where the primary purpose is not associated with human comfort.

2. Group U occupancies.

1305.1209 SECTION 1209, ACCESS TO UNOCCUPIED SPACES.

IBC section 1209.3 is amended, and subsections added, to read as follows:

1209.3 Mechanical equipment and appliance access. Access to mechanical equipment and appliances installed in underfloor areas, in attic spaces, and on roofs or elevated structures shall be in accordance with this section and the Minnesota Mechanical Code.

1209.3.1 Mechanical equipment and appliances on roofs or elevated structures. Where mechanical equipment or appliances requiring periodic inspection, service, or maintenance are installed on roofs or elevated structures, a permanent stair shall be provided for access.

Exception: A portable ladder may be used for dwellings, replacement equipment and appliances on existing buildings, and exterior roof access points not exceeding 16 feet (4.9 m) above grade, unless the building official determines that the unique shape of the roof does not allow safe access with a portable ladder.

The permanent stair shall, at a minimum, meet the following:

1. The stair shall be installed at an angle of not more than 60 degrees measured from the horizontal plane;
2. The stair shall have flat treads at least six inches (152 mm) deep and a clear width of at least 18 inches (457 mm) with equally spaced risers at least 10.5 inches (267 mm) high and not exceeding 14 inches (356 mm);
3. The stair shall have intermediate landings not exceeding 18 feet (5.5 m) vertically;
4. The stair shall be installed with continuous handrails on both sides of the stair;
5. interior stairs shall terminate at the underside of the roof at a hatch or scuttle of at least 8 square feet ($0.74 m^2$) with a minimum dimension of 20 inches (508 mm);

6. a roof access hatch or scuttle shall be located within 10 feet (3.0 m) of a roof edge, and a guard shall be installed in accordance with this code; and

7. exterior stairs shall terminate at the roof access point or at a level landing of at least 8 square feet (0.74m^2) with a minimum dimension of 20 inches (508 mm). The landing shall have a guard installed in accordance with IMC section 304.9.

1209.3.1.1 Permanent ladders. Where a change in roof elevation greater than 30 inches (762 mm) but not exceeding 16 feet (4.9 m) exists, a permanent ladder shall be provided. The ladder may be vertical. The ladder shall, at a minimum, meet the following:

1. Width shall be at least 16 inches (406 mm).
2. Rung spacing shall be a maximum of 14 inches (356 mm).
3. Toe space shall be at least 6 inches (152 mm).
4. Side railings shall extend at least 30 inches (762 mm) above the roof or parapet wall.

1305.1210 SECTION 1210, SURROUNDING MATERIALS.

IBC section 1210.2.1 is amended to read as follows:

1210.2.1 Floors and wall bases. In other than dwelling units, toilet, bathing and shower room floor finish material shall have a smooth, hard, nonabsorbent surface, such as portland cement, concrete, ceramic tile, sheet vinyl, or other approved floor covering material. The intersections of such floors with walls shall have a smooth, hard, nonabsorbent vertical base that extends upward onto the walls at least 4 inches (101 mm).

1305.1403 PERFORMANCE REQUIREMENTS.

IBC section 1403.5 is deleted in its entirety.

1305.1405 SECTION 1405, INSTALLATION OF WALL COVERINGS.

Subpart 1. **IBC section 1405.4.2.** IBC section 1405.4.2 is amended to read as follows:

1405.4.2 Masonry. Flashing and weepholes in anchored veneer shall be located above finished ground level above the foundation wall or slab, and other points of support, including structural floors, shelf angles and lintels where anchored veneers are designed in accordance with section 1405.4.6.

Subp. 2. [Repealed, 32 SR 7]

Subp. 3. [See repealer.]

1305.1509 SECTION 1509, ROOFTOP STRUCTURES.

IBC section 1509.2.3 is amended to read as follows:

1509.2.3 Use limitations. Penthouses shall not be used for purposes other than shelter of mechanical or electrical equipment, tanks, or vertical shaft openings in the roof assembly.

Exception: Accessory uses necessary for the maintenance of building systems shall be permitted when the penthouse is sprinkled in accordance with section 903.1.1.

1305.1511 SECTION 1511, SOLAR PHOTOVOLTAIC PANELS/MODULES.

IBC section 1511.1. IBC section 1511.1 is amended to read as follows:

1511.1 Solar photovoltaic panels/modules. Solar photovoltaic panels/modules installed upon a roof or as an integral part of a roof assembly shall comply with the requirements of this code.

(Section 1511.1.1 still applies.)

1305.1607 SECTION 1607, LIVE LOADS.

Subpart 1. [Repealed, 32 SR 7]

Subp. 2. **IBC section 1607.13.2.** IBC section 1607.13.2 is amended to read as follows:

1607.13.2 Vertical impact force. The maximum wheel loads of the crane shall be increased by the percentages shown below to determine the induced vertical impact or vibration force. Impact load shall be applied to one hoist system at a time for multiple hoist or bridge systems.

A. Monorails, underhung bridge cranes and pendant operated top running bridge cranes:

15 percent minimum for hoist lift speeds of less than 30 feet per minute. Percentage equivalent to 0.5 times the hoist lift speed, for lift speeds of 30 to 100 feet per minute.

50 percent maximum for hoist lift speeds greater than 100 feet per minute.

50 percent for magnetic pickup or vacuum lift type systems.

No impact load is required for hand chain (non-powered) hoists.

B. Cab operated or remotely operated top running bridge cranes:

25 percent minimum.

Subp. 3. **IBC section 1607.13.3.** IBC section 1607.13.3 is amended to read as follows:

1607.13.3 Lateral force. Top running powered bridge cranes:

A. The lateral force on top running crane runway beams with powered trolleys shall be calculated as 20 percent of the sum of the rated capacity of the crane and the weight of the hoist and trolley. The lateral force shall be assumed to act horizontally at the traction surface of a runway beam, in either direction perpendicular to the beam, and shall be distributed according to the lateral stiffness of the runway beam and supporting structure. The runway beams shall be designed for the lateral and torsional loads, as well as for the maximum lateral deflection limit of Span/800.

B. Monorails and underhung bridge cranes: The bridge girder, underhung bridge crane runway beam and monorails shall be designed with sufficient strength and rigidity to prevent detrimental lateral deflection. The lateral deflection should not exceed span/800 based on 5 percent of maximum wheel load(s) without vertical impact factor.

1305.1705 SECTION 1705, REQUIRED VERIFICATION AND INSPECTION.

Subpart 1. **IBC Table 1705.3.** IBC Table 1705.3 is amended as follows:

A. Add "X[c]" to the "Periodic" column, row "7. Inspection of concrete and shotcrete placement for proper application techniques."

B. Add footnote "c." to read as follows:

c. Exception: Periodic verification and inspection is permitted, upon approval of the structural engineer of record and the building official.

Subp. 2. **IBC section 1705.4.** IBC section 1705.4 is amended by adding the following sentence to the end of the section: "Periodic verification and inspection of grout placement is permitted, upon approval of the structural engineer of record and the building official."

1305.1805 SECTION 1805, DAMPROOFING AND WATERPROOFING.

Subpart 1. [Repealed, 32 SR 7]

Subp. 2. [Repealed, 32 SR 7]

Subp. 3. [Repealed, 32 SR 7]

Subp. 4. [See repealer.]

Subp. 5. [See repealer.]

Subp. 6. **IBC section 1805.4.3.** IBC section 1805.4.3 is amended to read as follows:

1805.4.3 Drain discharge. The floor base and foundation perimeter drain shall discharge by gravity or mechanical means into a trapped area drain, sump, dry well, or other approved location above the ground.

1305.1809 SECTION 1809, SHALLOW FOUNDATIONS.

IBC section 1809.5 is amended to read as follows:

1809.5 Frost protection. Except where otherwise protected from frost, foundations and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. extending below the frost line specified in Minnesota Rules, part 1303.1600;
2. constructing in accordance with ASCE 32; or
3. erecting on solid rock.

Exception: Freestanding buildings constructed in accordance with Minnesota Rules, chapter 1303, shall not be required to be protected.

Shallow foundations shall not bear on frozen soil.

1305.2510 SECTION 2510, LATHING AND FURRING FOR CEMENT PLASTER (STUCCO).

IBC section 2510.6 is amended to read as follows:

2510.6 Water-resistive barriers. Water-resistive barriers shall be installed as required in section 1404.2 and, where applied over wood-based sheathing, shall include a water-resistive, vapor-permeable barrier with a performance at least equivalent to two layers of Grade D paper.

Exception: Where the water-resistive barrier that is applied over wood-based sheathing has a water resistance equal or greater than that of 60-minute Grade D paper and is separated from the stucco by an intervening, substantially non-water-absorbing layer or drainage space.

1305.2603 SECTION 2603 FOAM PLASTIC INSULATION.

~~IBC section 2603.5.5 is amended by adding exception number 2 and renumbering the exceptions as follows:~~

~~**2603.5.5 Vertical and lateral fire propagation.** The exterior wall assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285.~~

~~**Exceptions:**~~

~~1. one-story buildings complying with section 2603.4.1.4.~~

~~2. In other than high-rise buildings equipped throughout with an automatic sprinkler system installed in accordance with section 903.3.1.1, foam plastic insulation may be installed in compliance with the following conditions:~~

~~(a) The foam plastic insulation shall be applied between a continuous masonry or noncombustible exterior wall sheathing on the building side and a continuous noncombustible substrate or fire resistant treated plywood barrier on the exterior side of the foam plastic insulation.~~

~~(b) Foam insulation shall be limited to a maximum of 3 inches thickness.~~

~~(c) Wall claddings permitted by this code may be applied to the outside of the exterior substrate barrier.~~

~~(d) Continuous fire blocking shall be provided around all opening head, jamb, and sill conditions between continuous masonry or noncombustible exterior wall sheathing on the building side and a continuous substrate barrier on the exterior side of the foam plastic insulation.~~

~~(e) Continuous horizontal metal furring, minimum 16 gauge without perforations, shall be provided at each floor, in line with the slab edge containment fire stopping creating a fire break spanning between the masonry or noncombustible wall sheathing on the building side and a~~

~~noncombustible substrate barrier on the exterior side of the foam plastic insulation.~~

IBC Section 2603.4.1.13 is amended to read as follows:

2603.4.1.13 Type V construction. Foam plastic spray applied to a sill plate and header of Type V construction is subject to all of the following:

1. The maximum thickness of the foam plastic shall be 5-1/2 inches (82.6 mm).

2. The foam plastic shall have a flame spread index of 25 or less and an accompanying smoke-developed index of 450 or less when tested in accordance with ASTM E84.

1305.2902 SECTION 2902, MINIMUM PLUMBING FACILITIES.

[For text of subp 1, see M.R.]

Subp. 1a. **IBC section 2902.1.2.** IBC section 2902.1.2 is amended to read as follows:

2902.1.2 Family or assisted-use toilet and bath fixtures. Fixtures located within family or assisted-use toilet and bathing rooms complying with Minnesota Rules, chapter 1341, are permitted to be included in determining the minimum required number of fixtures for either the male or female occupants.

Subp. 2. **IBC Table 2902.1, Minimum number of required plumbing fixtures.**

A. The body of IBC Table 2902.1 is amended as follows:

1. Add footnote "h" to the A-5 Use Group "Stadiums, amusement parks, bleachers, and grandstands for outdoor sporting events and activities" description of the table.

2. Add footnotes "f," "i," and "j" to the "Drinking Fountains" heading in the table.

3. Add footnote "k" to the "Water Closets" heading in the table.

B. The footnotes to IBC Table 2902.1 are amended to read as follows:

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by this code.

b. Toilet facilities for employees shall be separate from facilities for inmates or care recipients.

c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient rooms shall be permitted where the room is provided with direct access from each patient room and with provisions for privacy.

d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.

e. The minimum number of required drinking fountains shall comply with Table 2902.1 and IBC chapter 11.

f. A drinking fountain shall not be required in buildings or tenant spaces having an occupant load less than 50.

g. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.

h. Permanent facilities located either on site or available in an adjacent building or portable temporary facilities available on site during times when the stadium or grandstand is in use may be used.

i. Where water is served in restaurants, drinking fountains shall not be required.

j. Water or other beverages available through free or fee-based serving or dispensers may be substituted for up to 50 percent of the required number of drinking fountains.

k. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets.

Subp. 3. **IBC section 2902.2.** IBC section 2902.2 is amended to read as follows:

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

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.

2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 20 or less.

3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or less.

Subp. 4. **IBC section 2902.6.** IBC section 2902 is amended by adding a subsection to read as follows:

2902.6 Controlled access to required facilities. Sanitation facilities required by this chapter may have controlled access, but in all cases shall be maintained available for utilization by those employees, customers, or patrons used to calculate the minimum required facilities.

1305.3109 SECTION 3109, SWIMMING POOL ENCLOSURES AND SAFETY DEVICES.

IBC section 3109, Swimming Pool Enclosures and Safety Devices, is deleted in its entirety.

1305.3111 SECTION 3111, SOLAR PHOTOVOLTAIC PANELS/MODULES.

IBC section 3111.1. IBC section 3111.1 is amended to read as follows:

3111.1 General. Solar photovoltaic panels/modules shall comply with the requirements of this code.

1305.3112 SECTION 3112, WINDOW CLEANING ANCHORS.

IBC chapter 31 is amended by adding a new section to the chapter:

3112. Window cleaning anchors. Building anchors for window cleaning safety shall be provided for buildings four or more stories above grade plane. Building anchors for window cleaning safety shall be designed, installed, and located in accordance with the design criteria of ANSI/IWCA I-14.1-2001.

Exceptions:

1. Buildings without windows.

2. Existing buildings undergoing reconstruction, alteration, or repair that does not include the exposure of primary structural roof components.

3. In accordance with Minnesota Statutes, section 326B.106, subdivision 4, paragraph (n), the commissioner of the Minnesota Department of Labor and Industry may waive all or a portion of the requirements for existing buildings if the installation of the dedicated anchorages would not result in significant safety improvements due to limits on the size of the project, or other factors as determined by the commissioner.

1305.3113 SECTION 3113, SOLAR PHOTOVOLTAIC POWER SYSTEMS.

IBC section 3113. IBC chapter 31 is amended to add a section to read as follows:

3113. Solar photovoltaic power systems; general. Solar photovoltaic power systems shall be installed in accordance with this part and Minnesota Rules, chapter 1315.

Exception: Detached, nonhabitable Group U structures including parking shade structures, carports, solar trellises, and similar structures shall not be subject to the requirements of this part. Minnesota Rules, chapter 1315, applies.

3113.1 Access and pathways. Roof access, pathways, and spacing requirements shall be provided in accordance with sections 3113.1 through 3113.3.

Exceptions:

1. Residential structures shall be designed so that each photovoltaic array is no greater than 150 feet (45,720 mm) by 150 feet (45,720 mm) in either axis.

2. Panels/modules shall be permitted to be located up to the roof ridge where an alternative ventilation method approved by the fire department has been provided or where the fire department has determined vertical ventilation techniques will not be employed.

3113.1.1 Roof access points. Roof access points shall be located in areas that do not require the placement of fire department ground ladders over openings

such as windows or doors, and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

3113.1.2 Residential systems for dwelling units. Access to residential systems for dwelling units shall be provided in accordance with sections 3113.1.2.1 through 3113.1.2.4.

3113.1.2.1 Residential buildings with hip roof layouts. Panels or modules installed on residential buildings with hip roof layouts shall be located in a manner that provides a 3-foot-wide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels/modules are located. The access pathway shall be located at a location on the building capable of supporting the live load of firefighters accessing the roof.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

3113.1.2.2 Residential buildings with a single ridge. Panels or modules installed on residential buildings with a single ridge shall be located in a manner that provides two 3-foot-wide (914 mm) clear access pathways from the eave to the ridge on each roof slope where panels/modules are located.

Exception: This requirement shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

3113.1.2.3 Residential buildings with roof hips and valleys. Panels or modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches (457 mm) to a hip or valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

3113.1.2.4 Residential building smoke ventilation. Panels or modules installed on residential buildings shall be located no higher than 3 feet (914 mm) below the ridge in order to allow for fire department smoke ventilation operations.

3113.2 Other than residential buildings. Access to systems for occupancies other than dwelling units shall be provided in accordance with sections 3113.2.1 through 3113.2.1.2.

Exception: Where it is determined by the fire department that the roof configuration is similar to that of dwelling units, the residential access and ventilation requirements in sections 3113.1.2 through 3113.1.2.4 shall be permitted.

3113.2.1 Access. There shall be a minimum 6-foot-wide (1829 mm) clear perimeter around the edges of the roof.

Exception: Where either access of the building is 250 feet (76,200 mm) or less, there shall be a minimum 4-foot-wide (1290 mm) clear perimeter around the edges of the roof.

3113.2.1.2 Pathways. The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

1. The pathway shall be over areas capable of supporting the live load of firefighters accessing the roof.
2. The centerline access pathways shall be provided in both axes of the roof. Centerline access pathways shall run where the roof structure is capable of supporting the live load of firefighters accessing the roof.
3. The pathway shall be a straight line not less than 4 feet (1290 mm) clear to skylights or ventilation hatches.

4. The pathway shall be a straight line not less than 4 feet (1290 mm) clear to roof standpipes.

5. The pathway shall provide not less than 4 feet (1290 mm) clear around roof access hatch with at least one not less than 4 feet (1290 mm) clear pathway to parapet or roof edge.

3113.3 Smoke ventilation. The solar installation shall be designed to meet the following requirements:

1. Arrays shall be no greater than 150 feet (45,720 mm) by 150 feet (45,720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.

2. Smoke ventilation options between array sections shall be one of the following:

2.1 A pathway 8 feet (2438 mm) or greater in width.

2.2 A 4-foot (1290 mm) or greater in width pathway and bordering roof skylights or smoke and heat vents.

2.3 A 4-foot (1290 mm) or greater in width pathway and bordering 4-foot by 8-foot (1290 mm by 2438 mm) "venting cutouts" every 20 feet (6096 mm) on alternating sides of the pathway.

3113.4 Ground-mounted photovoltaic arrays. Ground-mounted photovoltaic arrays shall comply with this part and Minnesota Rules, chapter 1315. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.

1305.3302 SECTION 3302, CONSTRUCTION SAFEGUARDS.

IBC section 3302 is amended by adding a subsection to read as follows:

3302.4 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 draftstopping materials in IBC section 718.3.1.

1305.3500 CHAPTER 35, REFERENCED STANDARDS.

Subpart 1. [See repealer.]

Subp. 2. **Supplemental standards.** The standards listed in this subpart shall supplement the list of referenced documents in chapter 35 of the IBC. The standards referenced in this subpart shall be considered part of the requirements of this part to the extent prescribed in each part or reference.

NFPA 45 - 2011 Standard on Fire Protection for Laboratories Using Chemicals

ANSI/IWCA I-14.1-2001 - Standard for Window Cleaning

REPEALER. Minnesota Rules, parts 1305.0040; 1305.0308, subpart 3; 1305.0403, subpart 2; 1305.0404; 1305.0408, subpart 1; 1305.0421; 1305.0716; 1305.0903, subpart 1; 1305.0907, subparts 1, 26a, 27a, 30, 32, and 33; 1305.0909, subparts 1 and 2; 1305.0913; 1305.1002; 1305.1008, subpart 4; 1305.1019; 1305.1025; 1305.1405, subpart 3; 1305.1502; 1305.1702; 1305.1704; 1305.1805, subparts 4 and 5; 1305.1807; 1305.1907; 1305.2109; and 1305.3500, subpart 1, are repealed.

EFFECTIVE DATE. Minnesota Rules, parts 1305.0011 to 1305.3500, are effective January 24, 2015, or five working days after publication of the amendments' notice of adoption in the State Register, whichever is later.