

1 Department of Labor and Industry
2 Adopted Permanent Rules Relating to International Building Code
3 1305.0011 ADOPTION OF INTERNATIONAL BUILDING CODE BY REFERENCE
4 AND ADMINISTRATIVE AUTHORITY.

5 Subpart 1. **General.** For purposes of this chapter, "IBC"
6 means the 2006 edition of the International Building Code as
7 promulgated by the International Code Council, Falls Church,
8 Virginia. The IBC is incorporated by reference and made part of
9 the Minnesota State Building Code except as qualified by the
10 applicable provisions in chapter 1300, part 1305.0021, and as
11 amended in this chapter. Portions of this chapter reproduce
12 text and tables from the IBC. The IBC is not subject to
13 frequent change and a copy of the IBC, with amendments for use
14 in Minnesota, is available in the office of the commissioner of
15 labor and industry. The IBC is copyright 2006 by the
16 International Code Council, Inc. All rights reserved.

17 Subp. 2. **Mandatory chapters.** IBC Chapters 2 through 33
18 and 35 must be administered by any municipality that has adopted
19 the code, except as qualified by the applicable provisions in
20 chapter 1300, and as amended by this chapter. Amendments to IBC
21 Chapters 11 and 30 are incorporated by reference in this rule
22 chapter, but the actual amendments for those chapters are
23 located in chapters 1341, the Minnesota Accessibility Code, and
24 1307, the Minnesota Elevator Code, respectively. Referenced
25 documents cited in IBC Chapters 11 and 30, and chapters 1307 and
26 1341, apply, unless otherwise stated or deleted. For the
27 complete application and mandatory requirements relating to IBC

1 Chapter 11, see chapter 1341. For the complete application and
2 mandatory requirements relating to IBC Chapter 30, see chapter
3 1307.

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

7 A. IBC Chapter 1 and any references to code
8 administration are deleted and replaced with chapter 1300,
9 Minnesota Administration Code.

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

13 Subp. 4. **Seismic or earthquake provisions.** Any seismic or
14 earthquake provisions of the IBC and any references to them are
15 deleted and are not included in this code.

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

21 1305.0021 REFERENCES TO OTHER INTERNATIONAL CODE COUNCIL CODES.

22 Subpart 1. **General.** References to other codes and
23 standards promulgated by the International Code Council in the
24 IBC are modified in subparts 2 to 12.

25 [For text of subps 2 to 11, see M.R.]

26 Subp. 12. **International Existing Building Code.**

27 References to the International Existing Building Code in this

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1 code mean Minnesota State Building Conservation Code, adopted
2 pursuant to chapter 1311 and Minnesota Statutes, section 16B.61,
3 subdivision 1.

4 1305.0202 SECTION 202, DEFINITIONS.

5 Subpart 1. **Agricultural building.** The definition of
6 "agricultural building" in IBC Section 202 is amended as follows:

7 **AGRICULTURAL BUILDING.** Pursuant to Minnesota Statutes, section
8 16B.60, an agricultural building means a structure on
9 agricultural land as defined in Minnesota Statutes, section
10 273.13, subdivision 23, that is designed, constructed, and used
11 to house farm implements, livestock, or agricultural produce or
12 products used by the owner, lessee, and sublessee of the
13 building and members of their immediate families, their
14 employees, and persons engaged in the pickup or delivery of
15 agricultural products.

16 Subp. 2. **Townhouse.** The definition of "townhouse" in IBC
17 Section 202 is deleted in its entirety.

18 1305.0308 INSTITUTIONAL GROUP I.

19 Subpart 1. **Section 308.2.** IBC Section 308.2 is amended to
20 read as follows:

21 **308.2 Group I-1.** This occupancy shall include buildings,
22 structures, or parts thereof housing more than 16 persons, on a
23 24-hour basis, who because of age, mental disability, or other
24 reasons, live in a supervised residential environment that
25 provides personal care services. The occupants are capable of
26 responding to an emergency situation without physical assistance

1 from staff. This group shall include, but not be limited to,
2 the following:

3 residential board and care facilities

4 assisted living facilities

5 halfway houses

6 group homes

7 congregate care facilities

8 social rehabilitation facilities

9 alcohol and drug centers

10 convalescent facilities

11 A facility such as the above with five or fewer persons
12 shall be classified as Group R-3. A facility such as above
13 housing at least six and not more than 16 persons, shall be
14 classified as Group R-4.

15 Subp. 2. Section 308.3. IBC Section 308.3 is amended to
16 read as follows:

17 308.3 Group I-2. This occupancy shall include buildings and
18 structures used for medical, surgical, psychiatric, nursing, or
19 custodial care on a 24-hour basis for more than five persons who
20 are not capable of self-preservation. This group shall include,
21 but not be limited to, the following:

22 hospitals

23 nursing homes, both intermediate-care facilities and
24 skilled nursing facilities

25 mental hospitals

26 detoxification facilities

27 A facility such as the above with five or fewer persons

1 shall be classified as Group R-3.

2 Subp. 3. Section 308.5. IBC Section 308.5 is amended to
3 read as follows:

4 308.5 Group I-4, day care facilities. This group shall include
5 buildings and structures occupied by persons of any age who
6 receive custodial care for less than 24 hours by individuals
7 other than parents or guardians, relatives by blood, marriage,
8 or adoption, and in a place other than the home of the person
9 cared for. A facility such as the above with five or fewer
10 persons shall be classified as Group R-3. Places of worship
11 during religious functions are not included.

12 1305.0310 SECTION 310 RESIDENTIAL GROUP R.

13 IBC Section 310.1 is amended to read as follows:

14 310.1 Residential Group R. Residential Group R includes, among
15 others, the use of a building or structure, or a portion
16 thereof, for sleeping purposes when not classified as an
17 Institutional Group I ~~er-when-not-regulated-by-the-International~~
18 ~~Residential-Code~~. Residential occupancies shall include the
19 following:

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

22 boarding houses (transient)

23 hotels (transient)

24 motels (transient)

25 bed and breakfast facilities with six or more guest

26 rooms. A facility with less than six guest rooms shall be

27 classified as a Group R-3 occupancy.

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

4 apartment houses
5 boarding houses (not transient)
6 convents
7 dormitories
8 fraternities and sororities
9 hotels (nontransient)
10 monasteries
11 motels (nontransient)
12 vacation timeshare properties

13 Congregate living facilities with 16 or fewer occupants are
14 permitted to comply with construction that complies with the
15 requirements for Group R-3.

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

19 buildings that do not contain more than two dwelling
20 units

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

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

25 congregate living facilities with 16 or fewer persons
26 adult and child care facilities

27 R-4 Residential occupancies shall include buildings

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1 arranged for occupancy as residential care/assisted living
2 facilities including more than five but not more than 16
3 occupants, excluding staff.

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

7 1305.0402 SECTION 402, COVERED MALL BUILDINGS.

8 Subpart 1. Section 402.7. IBC Section 402.7 is amended by
9 adding a subsection to read as follows:

10 **402.7.4 Property lines.** Property lines may be platted between
11 an anchor building and a covered mall building separated in
12 accordance with Section 402.7.3 without requiring the
13 construction of a party wall if there are legal agreements
14 recorded with the deed for each of the separate properties.
15 These recorded agreements shall require that buildings as
16 divided by property lines be in conformance with the applicable
17 provisions of the State Building Code, as if the buildings were
18 a single building on a single piece of property. In addition,
19 the agreement must state that no individual building or property
20 owner may modify any portion of the building in any way that
21 would not comply with the State Building Code.

22 Subp. 2. [See repealer.]

23 1305.0403 SECTION 403, HIGH-RISE BUILDINGS.

24 Subpart 1. IBC Section 403.3.2. IBC Section 403.3.2 is
25 deleted in its entirety.

26 Subp. 2. IBC Section 403. IBC Section 403 is amended by

1 adding a section to read as follows:

2 **403.15 Post-fire smoke exhaust system.** A post-fire smoke
3 exhaust system in compliance with IBC Section 913 shall be
4 provided for high-rise buildings.

5 1305.0404 SECTION 404, ATRIUMS.

6 IBC Section 404.4 is amended to read as follows:

7 **404.4 Smoke control.** A smoke-control system shall be installed
8 in accordance with Section 909.

9 **Exception:** Smoke control is not required for atriums
10 that connect only two stories. Covered mall buildings
11 shall be provided with a post-fire smoke exhaust
12 system in compliance with Section 913.

13 1305.0406 SECTION 406, MOTOR VEHICLE-RELATED OCCUPANCIES.

14 IBC Section 406.3.8 is amended to read as follows:

15 **406.3.8 Means of egress.** Where persons other than parking
16 attendants are permitted, open parking garages shall meet the
17 means of egress requirements of Chapter 10. Where no persons
18 other than parking attendants are permitted, there shall not be
19 less than two 36-inch wide (914 mm) exit stairways.

20 1305.0407 SECTION 407, GROUP I-2.

21 IBC Section 407.2.1 is amended to read as follows:

22 **407.2.1 Spaces of unlimited area.** In an I-2 occupancy, spaces
23 constructed as required for corridors shall be permitted to be
24 open to a corridor, only where all the following criteria are
25 met:

26 1. The spaces are not occupied for patient sleeping rooms,

1 treatment rooms, hazardous or incidental use areas as defined in
2 Section 508.2.

3 2. The open space is protected by an automatic fire
4 detection system installed in accordance with Section 907.

5 3. The corridors onto which the spaces open, in the same
6 smoke compartment, are protected by an automatic fire detection
7 system installed in accordance with Section 907, or the smoke
8 compartment in which the spaces are located is equipped
9 throughout with quick response sprinklers in accordance with
10 Section 903.3.2.

11 4. The space is arranged so as not to obstruct access to
12 the required exits.

13 1305.0408 SECTION 408, GROUP I-3.

14 Subpart 1. Section 408.6. IBC Section 408.6 is amended to
15 read as follows:

16 **408.6 Smoke barrier.** Occupancies in Group I-3 shall have smoke
17 barriers complying with Section 709 to divide every story
18 occupied by residents for sleeping, or any other story having an
19 occupant load of more than five persons, into at least two smoke
20 compartments.

21 **Exception:** Spaces having direct exit to one of the
22 following, provided that the locking arrangement of
23 the doors involved complies with the requirements for
24 doors at the smoke barrier for the use condition
25 involved.

26 1. A public way.

27 2. A building separated from the resident housing

1 area by a 2-hour fire-resistance-rated assembly or 50
2 feet (15,240 mm) of open space.

3 3. A secured yard or court having a holding space 50
4 feet (15,240 mm) from the housing area that provides 6
5 square feet (0.56 m²) or more of refuge area per
6 occupant including residents, staff and visitors.

7 [For text of subp 2, see M.R.]

8 1305.0414 SECTION 414, HAZARDOUS MATERIALS.

9 Subpart 1. Section 414.2.4. IBC Section 414.2.4 is
10 amended to read as follows:

11 414.2.4 Fire-resistance-rating requirements. The required
12 fire-resistance rating for fire barrier assemblies shall be in
13 accordance with Table 414.2.2.

14 Subp. 2. Section 414.2.6. IBC Section 414.2 is amended by
15 adding a subsection to read as follows:

16 414.2.6 Hazardous materials above the third floor in
17 laboratories in Group B, E, and I-2 occupancies. Control areas
18 containing laboratories located above the third floor in Group
19 B, E, or I-2 occupancies may be exempt from the provisions in
20 Sections 414.2.1 through 414.2.4 if all of the following
21 conditions are met:

22 1. Buildings containing the laboratories are equipped
23 throughout with automatic sprinkler protection installed in
24 accordance with Section 903.3.1.1;

25 2. Control areas containing laboratories located above the
26 third floor are separated from each other and other portions of
27 the building by a fire barrier having a fire-resistance rating

1 of not less than two hours;

2 3. The maximum amount of hazardous materials in storage
3 and in use in control areas containing laboratories does not
4 exceed ten percent of the maximum allowable quantities listed in
5 Tables 307.1(1) and 307.1(2) with all increases allowed in the
6 footnotes of those tables; and

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

9 1305.0421 SECTION 421, GROUP E OCCUPANCIES.

10 IBC Chapter 4 is amended by adding a section and
11 subsections to read as follows:

12 SECTION 421

13 GROUP E OCCUPANCIES

14 421.1 Applicability. This section applies to Group E school
15 buildings containing uses described in this section. School
16 buildings shall comply with this section and all other
17 applicable provisions of this code, as intended by Minnesota
18 Statutes, section 123B.51, subdivision 7.

19 421.2 Use of school buildings by lower grades. In addition to
20 the occupancy and construction requirements in this code, this
21 section applies to those special uses and occupancies described
22 in this section.

23 421.2.1 School buildings equipped with complete automatic fire
24 sprinkler and fire alarm systems. Rooms used by preschool,
25 kindergarten, and first and second grade students for
26 classrooms, latchkey, day care, early childhood family
27 education, teen parent, or similar programs may be located on

1 any floor level below the fourth story if the following
2 conditions exist:

3 1. The building is protected throughout with an approved
4 automatic fire sprinkler system; and

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

9 **421.2.2 School buildings equipped with either a complete**
10 **automatic fire sprinkler system or a fire alarm system.** Rooms
11 shall be located on the story of exit discharge when used for
12 the purposes of classroom, latchkey, day care, early childhood
13 education, teen parent, or similar programs by preschool,
14 kindergarten, or first grade students. Rooms shall be located
15 on the story of exit discharge or one story above when used for
16 any purpose by second grade students.

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

21 1. An approved automatic fire sprinkler system is provided
22 throughout the building and the use of the affected room or
23 space is limited to one grade level at a time and exiting is
24 provided from the room or space which is independent from the
25 exiting system used by older students; or

26 2. A complete approved automatic fire alarm system is
27 installed throughout the building consisting of automatic smoke

1 detection installed throughout the exit system and within all
2 rooms and areas other than classroom and office areas, and the
3 use of the affected room or space is limited to one grade level
4 at a time, and exiting is provided from the room or space which
5 is independent from the exiting system used by older students.

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

8 **421.2.3 Accessory spaces.** Accessory spaces, including spaces
9 used for gymnasiums, cafeterias, media centers, auditoriums,
10 libraries, and band and choir rooms, used on an occasional basis
11 by preschool, kindergarten, first, and second grade students are
12 permitted to be located one level above or one level below the
13 story of exit discharge, if the building is protected throughout
14 by an approved automatic sprinkler system or a complete approved
15 corridor smoke detection system.

16 1305.0507 SECTION 507, UNLIMITED AREA BUILDINGS.

17 Subpart 1. IBC Section 507.2. IBC Section 507.2 is
18 amended to read as follows:

19 **507.2 Nonsprinklered, one-story.** The area of a one-story
20 building of Group F-2 or S-2 occupancy shall not be limited when
21 the building is surrounded and adjoined by public ways or yards
22 not less than 60 feet (18,288 mm) in width.

23 Subp. 2. IBC Section 507.3. The exceptions listed in IBC
24 Section 507.3 are not amended. The first sentence of IBC
25 Section 507.3 is amended to read as follows:

26 **507.3 Sprinklered, one-story.** The area of a one-story building
27 of Group B, F, M, or S occupancy or a one-story Group A-4

1 building, of other than Type V construction, shall not be
2 limited when the building is provided with an automatic
3 sprinkler system throughout in accordance with Section 903.3.1.1
4 and is surrounded and adjoined by public ways or yards not less
5 than 60 feet (18,288 mm) in width.

6 Subp. 3. IBC Section 507.4. IBC Section 507.4 is amended
7 to read as follows:

8 **507.4 Two story.** The area of a two-story building of Group B,
9 F, M, or S occupancy shall not be limited when the building is
10 equipped throughout with an automatic sprinkler system in
11 accordance with Section 903.3.1.1, and is surrounded and
12 adjoined by public ways or yards not less than 60 feet (18,288
13 mm) in width.

14 Subp. 4. IBC Section 507.5. IBC Section 507.5 is amended
15 by adding a subsection to read as follows:

16 **507.5.1 Property lines.** Portions of an unlimited area building
17 may be divided by platted property lines without requiring the
18 construction of party walls if the whole building has:

- 19 1. Permanent open space on all sides as required by
20 Section 507.2, 507.3, 507.4, or 507.5; and
- 21 2. Proper legal agreements recorded with the deed for each
22 of the separate properties. These recorded agreements shall
23 require that the buildings as divided by property lines, be in
24 conformance with the applicable provisions of the Minnesota
25 State Building Code, as if the buildings were a single building
26 on a single piece of property. In addition, the agreement must
27 state that no individual building or property owner may modify

1 any portion of the building in any way that would not be in
2 compliance with the Minnesota State Building Code.

3 1305.0508 MIXED USE AND OCCUPANCY.

4 IBC Section 508.3.3.4 is amended by adding an exception as
5 follows:

6 **Exception:** An occupancy separation need not be
7 provided between a child or adult day care use and a
8 Group A-3 church building.

9 1305.0509 SECTION 509, SPECIAL PROVISIONS.

10 IBC Section 509.2, item 4, exception 2, is amended to read
11 as follows:

12 2. Multiple Group A uses, each with an occupant load
13 of less than 300, or Group B, M, or R uses shall be
14 permitted, in addition to those uses incidental to the
15 operation of the building, including storage areas,
16 provided that the entire structure below the
17 horizontal assembly is protected throughout by an
18 approved automatic sprinkler system.

19 1305.0716 SECTION 716, DUCTS AND AIR TRANSFER OPENINGS.

20 IBC Section 716.5.3 is amended by adding exception 5 as
21 follows:

22 5. Fire dampers, smoke dampers, and combination
23 fire/smoke dampers are not required in laboratory hood
24 exhaust duct penetrations of shaft enclosures where
25 laboratory ventilation systems are installed in
26 accordance with NFPA 45.

1 1305.0901 SECTION 901, GENERAL

2 IBC Section 901.6.2 is amended by deleting the section in
3 its entirety.

4 1305.0903 [F] SECTION 903, AUTOMATIC SPRINKLER SYSTEMS.

5 IBC [F] Section 903 is amended as follows:

6 Subpart 1. [See repealer.]

7 Subp. 1a. [F] Section 903.2.7. IBC [F] Section 903.2.7 is
8 amended to read as follows:

9 **903.2.7 Group R.** An automatic sprinkler system installed in
10 accordance with Section 903.3.1 shall be provided throughout all
11 buildings containing a Group R occupancy where one of the
12 following conditions exists:

13 1. The combined area on all floors, including mezzanines,
14 exceeds 9,250 square feet (859.3 m²); or

15 2. The Group R fire area is located more than three
16 stories above grade plane.

17 **Exceptions:**

18 1. Group R-3 single dwelling unit buildings.

19 2. Group R-3 or R-4 occupancies containing a facility
20 licensed by the state of Minnesota shall be provided
21 with a fire suppression system as required by the
22 applicable licensing provision or this section,
23 whichever is more restrictive.

24 3. Attached garages need not be sprinklered
25 throughout if a dry sprinkler is installed within 5
26 feet (1524 mm) of the door opening between the garage

1 and attached residence.

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

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

8 Subp. 1b. [F] Section 903.2.12.1. IBC [F] Section
9 903.2.12.1 is amended to read:

10 **903.2.12.1 Fire protection for exhaust systems.** Any portion of
11 an exhaust system utilizing combustible components or having the
12 potential for combustible residue build-up on the inside or
13 where required by other sections of this code, where the duct
14 cross-sectional area is greater than or equal to 75 square
15 inches (480 cm²), shall be provided with an automatic
16 extinguishing system within the duct and at the duct intake,
17 hood, enclosure, or canopy, or shall be constructed of material
18 listed for use without sprinkler protection. When sprinkler
19 protection is installed, means shall be provided to prevent
20 water accumulation in the duct or the flow of water back to a
21 ~~process subject-that-could-be-damaged-by-water~~ where the
22 application of water constitutes a serious life or fire hazard.

23 Subp. 2. [See repealer.]

24 Subp. 3. [See repealer.]

25 Subp. 3a. [F] Section 903.3.1.2.1. IBC [F] Section
26 903.3.1.2.1 is amended to read as follows:

27 **903.3.1.2.1 Protection of decks and balconies.** Decks and

1 balconies greater than 6 feet (1.8 m) above grade, greater than
2 4 feet (1.2 m) deep, and with an area greater than 40 square
3 feet (3.72 m²) attached to new Group R-1 and R-2 occupancy
4 buildings protected in accordance with Section 903.3.1.2 that
5 are three or more stories in height and with 30 or more units
6 shall be protected with sprinklers under the balcony or deck
7 framing and under attic eaves when both of the following two
8 conditions exist:

- 9 1. The building has an unsprinklered attic; and
- 10 2. The building has combustible siding.

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

12 Subp. 5. [F] Section 903.3.1. IBC [F] Section 903.3.1 is
13 amended by adding a subsection to read as follows:

14 **903.3.1.5 Special sprinkler design criteria.** When fire
15 sprinkler systems are required in areas containing the following
16 uses, they shall be designed and installed to have a sprinkler
17 density of not less than that required for an Ordinary Hazard
18 Group 2 use:

- 19 1. Chemistry labs; or
- 20 2. Wrestling rooms or gymnastic rooms.

21
22
23 Subp. 5a. [F] Section 903.3.1. IBC [F] Section 903.3.1 is
24 amended by adding a subsection to read as follows:

25 **903.3.1.6 Modifications to sprinkler standards.** The sprinkler
26 installation standards as referenced in Sections 903.3.1.1,
27 903.3.1.2, and 903.3.1.3 are modified as follows:

28 **903.3.1.6.1 Hose stream requirements.** When, in the opinion of
29 the fire chief, an adequate alternate water supply for hose

1 stream requirements is provided or available, the water supply
2 requirements for the sprinkler system hose stream demands may be
3 modified.

4 **903.3.1.6.2 Elevator shafts and equipment.** Sprinkler protection
5 shall not be installed in elevator shafts, elevator pits, or
6 elevator machine rooms.

7 **903.3.1.6.3 Swimming pools.** Sprinkler protection need not be
8 provided on the ceiling of rooms containing swimming pools when
9 the pool area is used exclusively for swimming purposes and when
10 sprinklers are provided around the perimeter of the pool area.

11 **903.3.1.6.4 NFPA 13 modifications.** Sections 8.6.4.1.4.2,
12 8.6.4.1.4.3, 8.14.8.2, and 8.16.2.5 of NFPA 13 are revised to
13 read:

14 **8.6.4.1.4.2 Combustible spaces; installation near peak.**

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

22 **8.6.4.1.4.3 Combustible spaces; installation along eave.**

23 Sprinklers under a roof or ceiling in combustible concealed
24 spaces of wood joist or wood truss construction with members 3
25 feet (0.9 m) or less on center and a slope having a pitch of
26 four in 12 or greater shall be installed so that the sprinklers
27 installed along the eave are located not less than 5 feet (1.5

1 m) from the intersection of the truss cords.

2 **8.14.8.2 Linen closets and pantries.** Sprinklers are not
3 required in linen closets and pantries within dwelling units
4 that meet the following conditions:

5 1. The area of the space does not exceed 12 square feet
6 (1.1 m²).

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

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

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

12 **8.16.2.5 Valves.**

13 **8.16.2.5.1 Fire department connection.** A listed check valve
14 shall be installed in each fire department connection.

15 **8.16.2.5.1.1 Maximum pipe length.** There shall be a maximum of
16 25 feet (7.6 m) of pipe between the check valve and the fire
17 department connection inlet.

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

21 **8.16.2.5.1.2 Check valve location.** The check valve shall be
22 located to minimize freezing potential.

23 Subp. 6. [See repealer.]

24 Subp. 6a. [F] Section 903.3.7. IBC [F] Section 903.3 is
25 amended by adding a subsection to read as follows:
26 **903.3.7 Sprinkler system design pressure safety margin.** For new
27 sprinkler systems or additions to existing sprinkler systems,

1 the available water supply shall exceed the sprinkler system
2 demand, including hose stream requirements, by 5 psi (0.34 bars)
3 or more.

4 Subp. 7. [F] Section 903.4. IBC [F] Section 903.4 is
5 amended by adding an exception to read as follows:

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

8 [For text of subp 8, see M.R.]

9 1305.0905 [F] SECTION 905, STANDPIPE SYSTEMS.

10 Subpart 1. [F] Section 905.2. IBC [F] Section 905.2 is
11 amended by adding a subsection to read as follows:

12 905.2.1 Modification to standards. In buildings other than high
13 rise that are protected throughout by an automatic sprinkler
14 system installed in accordance with Sections 903.3.1.1 and
15 903.3.1.2, a Class I or III standpipe system need only meet the
16 pressure requirements for the sprinkler system when such systems
17 comply with Sections 905.2.1.1 through 905.2.1.5:

18 905.2.1.1 Municipal water supply. A municipal water supply
19 capable of supplying the required standpipe flow rate with a
20 residual pressure not less than 20 psi (1.4 bars) through a fire
21 hydrant shall be provided. A fire hydrant shall be located
22 within 300 feet (91 m) of the building's fire department
23 connection.

24 905.2.1.2 System testing and pipe size. The standpipe system
25 shall be able to provide the pressure and flow rate required by
26 NFPA 14 when the standpipe system is supported by local fire
27 department apparatus through the fire department connection as

1 verified with hydraulic calculations. The hydraulic
2 calculations are to be performed between the hydraulically most
3 demanding standpipe hose connection and the fire department
4 connection. Pipe sizes shall not be less than the minimum
5 requirements in NFPA 14.

6 **905.2.1.3 Design pressure.** A maximum design pressure of 150 psi
7 (10.3 bars) is permitted at the fire department connection when
8 the standpipe is supported by local fire department apparatus.

9 **905.2.1.4 Hose connection.** At least one 2-1/2 inch (64 mm) hose
10 connection shall be provided on the exterior of the building at
11 the fire department connection for each 250 gpm (980 L/min) of
12 required standpipe flow.

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

17 Subp. 2. [F] Section 905.3.2. IBC [F] Section 905.3.2 is
18 amended by adding a section to read as follows:

19 **905.3.2.1 Group A exhibition.** Class III automatic standpipes
20 shall be provided in Group A-3 Occupancies where the floor area
21 used for exhibition exceeds 12,000 square feet (1115 m²).

22 Subp. 3. [F] Section 905.3.4. IBC [F] Sections 905.3.4
23 and 905.3.4.1 are amended by deleting the sections in their
24 entirety.

25 Subp. 4. [See repealer.]

26 Subp. 5. [See repealer.]

27 Subp. 6. [F] Section 905.3.8. IBC [F] Section 905.3 is

1 amended by adding a subsection to read as follows:

2 **905.3.8 Detention and correctional facilities.** Regardless of
3 the height of the building or number of stories, every building
4 in a Group I-3 detention and correctional facility, where 50 or
5 more persons are under restraint or security under Occupancy
6 Condition 3, 4 or 5, shall be provided with a Class III
7 automatic wet or semiautomatic dry standpipe system.

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

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

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

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

20 **905.3.9 Group R-2 occupancies.** Class III wet standpipes shall
21 be installed in Group R-2 occupancies three or more stories in
22 height where any portion of the building's interior area is more
23 than 200 feet (60,960 mm) of travel, vertically or horizontally,
24 from the nearest point of fire department vehicle access.
25 Standpipes required by this section shall be installed in
26 enclosed stairways.

27 [For text of subp 7, see M.R.]

1 1305.0907 [F] SECTION 907, FIRE ALARM AND DETECTION SYSTEMS.

2 Subpart 1. [F] Section 907.1.3. IBC [F] Section 907.1 is
3 amended by adding a subsection to read as follows:

4 **907.1.3 Protection of control units.** In areas that are not
5 continuously occupied, automatic fire detection shall be
6 provided at the location of each new fire alarm control unit,
7 fire alarm notification circuit power extender, and supervising
8 station transmitting equipment to provide notification of fire
9 at that location.

10 **Exception:** Additional detection is not required in
11 buildings sprinklered in accordance with Section
12 903.3.1.1 or 903.3.1.2.

13 Subp. 1a. [F] Section 907.2. IBC [F] Section 907.2 is
14 amended to read as follows:

15 **907.2 Where required in new buildings and occupancies.** An
16 approved manual, automatic, or manual and automatic fire alarm
17 system shall be provided in new buildings and occupancies in
18 accordance with Sections 907.2.1 through 907.2.24 and NFPA 72.
19 For the purposes of Sections 907.2.1 through 907.2.24, fire
20 barrier walls or fire walls shall not define separate
21 buildings. In buildings containing mixed occupancies that are
22 designed as separated uses in accordance with Section 508.3.3,
23 fire alarm and detection systems need only be installed in those
24 occupancies where required by this section.

25 **Exception:** In areas protected by an approved,
26 supervised automatic sprinkler system installed in
27 accordance with Section 903.3.1.1 or 903.3.1.2,

1 automatic fire detectors required by Section 907.2
2 need not be provided. Where Section 907.2 requires
3 smoke detectors, such protection shall be installed.

4 Subp. 2. [See repealer.]

5 [For text of subps 3 to 9, see M.R.]

6 Subp. 10. [F] Section 907.2.3. IBC [F] Section 907.2.3 is
7 amended to read as follows:

8 **907.2.3 Group E, general.** A fire alarm system shall be
9 installed in accordance with Sections 907.2.3 through 907.2.3.3
10 in Group E occupancies having an occupant load of 50 or more.

11 [For text of subp 11, see M.R.]

12 Subp. 12. [F] Section 907.2.3. IBC [F] Section 907.2.3 is
13 amended by adding a subsection to read as follows:

14 **907.2.3.2 Travel through adjoining rooms.** Where the only means
15 of egress travel from an interior room or rooms having an
16 aggregate occupant load of more than 10 occupants is through an
17 adjoining or intervening room, automatic smoke detectors shall
18 be installed throughout the common atmosphere through which the
19 path of egress travel passes.

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

24 [For text of subps 13 to 19, see M.R.]

25 Subp. 20. [See repealer.]

26 Subp. 21. [See repealer.]

27 Subp. 22. [F] Section 907.2.6. IBC [F] Section 907.2.6

1 and all subsections are deleted in their entirety and replaced
2 with the following:

3 **907.2.6 Group I, general.** A fire alarm system shall be
4 installed in accordance with Sections 907.2.6 through
5 907.2.6.4.3 in Group I occupancies.

6 **907.2.6.1 Initiation.** Initiation of the fire alarm system shall
7 be by manual and automatic means. Approved automatic fire
8 detectors shall be installed in laundry and soiled linen rooms,
9 boiler and furnace rooms, mechanical and electrical rooms,
10 shops, laboratories, kitchens, locker rooms, janitors' closets,
11 trash-collection rooms, storage rooms, lounges, gift shops, and
12 similar areas. Automatic smoke detectors shall be provided in
13 waiting areas that are open to corridors.

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

21 **907.2.6.2 Notification.** Activation of the fire alarm system or
22 automatic sprinkler system shall initiate a general evacuation
23 signal. In addition, activation of the fire alarm system shall
24 immediately transmit an alarm to an approved central station or
25 remote station service.

26 **Exceptions:**

27 1. In lieu of audible notification appliances,

1 visible notification appliances shall be allowed to be
2 used in critical care areas.

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

11 **907.2.6.3 Group I-2 Occupancies.** Corridors in hospitals,
12 nursing homes (both intermediate care and skilled nursing
13 facilities), board and care homes and detoxification facilities
14 and spaces open to the corridors shall be protected by an
15 automatic smoke-detection system.

16 **907.2.6.3.1 Patient room smoke detectors.** Smoke detectors that
17 receive their primary power from the building wiring shall be
18 installed in patient sleeping rooms of hospitals and nursing
19 homes. Actuation of such detectors shall cause a visual display
20 on the corridor side of the room in which the detector is
21 located and shall cause an audible and visual alarm at the
22 nurse's station attending the room.

23 **907.2.6.4 Group I-3 Occupancies.** Group I-3 occupancies shall be
24 provided with a fire alarm system installed for alerting staff.

25 **907.2.6.4.1 Initiation.** Initiation of the fire alarm system
26 shall be by manual and automatic means. Approved automatic fire
27 detectors shall be installed in laundry and soiled linen rooms,

1 boiler and furnace rooms, mechanical and electrical rooms,
2 shops, laboratories, kitchens, locker rooms, janitors' closets,
3 trash-collection rooms, storage rooms, lounges, gift shops,
4 commissaries and similar areas. Actuation of an automatic
5 fire-extinguishing system, a manual fire alarm box or a fire
6 detector shall initiate an approved fire alarm signal, which
7 automatically notifies staff. Presignal systems shall not be
8 used.

9 **907.2.6.4.2 Manual fire alarm boxes.** Manual fire alarm boxes
10 are not required to be located in accordance with Section 907.4
11 where the fire alarm boxes are provided at staff-attended
12 locations having direct supervision over areas where manual fire
13 alarm boxes have been omitted.

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

18 **907.2.6.4.3 Smoke detectors.** An approved automatic
19 smoke-detection system shall be installed throughout resident
20 housing areas, including sleeping areas and contiguous day
21 rooms, group activity spaces and other common spaces normally
22 accessible to residents.

23 **Exceptions:**

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

1 prevent damage or tampering.

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

6 [For text of subps 23 to 25, see M.R.]

7 Subp. 26. [F] Section 907.2.9. IBC [F] Section 907.2.9 is
8 amended, and subsections added, to read as follows:

9 **907.2.9 Group R-2, general.** A fire alarm system shall be
10 installed in accordance with Sections 907.2.9 through 907.2.9.2
11 in Group R-2 occupancies where:

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

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

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

20 4. The building is used as a dormitory, convent,
21 monastery, fraternity, or sorority and has an occupant load of
22 20 or more.

23 **Exception:** A fire alarm system is not required in
24 buildings not over two stories in height where all
25 dwelling units and contiguous attic and crawl spaces
26 are separated from each other and public or common
27 areas by at least one-hour fire partitions and each

1 dwelling unit has an exit directly to a public way,
2 exit court or yard.

3 **907.2.9.1 Initiation.** Initiation of the fire alarm system shall
4 be by automatic means. Automatic fire detectors shall be
5 provided in boiler and furnace rooms, trash-collection rooms,
6 shops, laundry rooms, mechanical and electrical rooms, storage
7 rooms, and similar areas. Automatic smoke detectors shall be
8 provided in all common areas and interior corridors serving as
9 required means of egress.

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

13 **907.2.9.2 Notification.** Activation of the fire alarm system or
14 automatic sprinkler system shall initiate a general evacuation
15 signal.

16 **907.2.9.3 Dwelling unit smoke detectors.** Dwelling unit smoke
17 detectors required by Section 907.2.10 shall not be connected to
18 the building fire alarm system.

19 **Exception:** Connection of such detectors for
20 annunciation only.

21 **Subp. 26a. [F] Section 907.2.10.1.4. IBC Section**
22 **907.2.10.1** is amended by adding a subsection to read as follows:
23 **907.2.10.1.4 Fire station and emergency medical quarters.** Areas
24 used for sleeping in fire stations and emergency medical and
25 ambulance crew quarters shall be provided with single station
26 smoke detectors in accordance with Section 907.2.10.

27 **Subp. 27. [F] Section 907.2.10.2. IBC [F] Section**

1 907.2.10.2 is amended to read as follows:

2 **907.2.10.2 Power source.** In new construction, required smoke
3 alarms shall receive their primary power from the building
4 wiring where such wiring is served from a commercial source and
5 shall be equipped with a battery backup. Smoke alarms shall
6 emit a signal when the batteries are low. Wiring shall be
7 permanent and without a disconnecting switch other than as
8 required for overcurrent protection.

9 **Exceptions:**

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

13 2. Smoke alarms are not required to be equipped with
14 battery backup in Group R-2 occupancies equipped
15 throughout with an automatic sprinkler system
16 installed in accordance with Section 903.3.1.1 or
17 903.3.1.2.

18 Subp. 27a. [F] Section 907.2.10.5. IBC [F] Section
19 907.2.10 is amended by adding a subsection to read as follows:
20 **907.2.10.5 Smoke alarms in arc-fault protected circuits.** Smoke
21 alarms receiving their primary power supply from electrical
22 circuits that are protected with arc-fault circuit interruption
23 must have a backup power supply.

24 [For text of subp 28, see M.R.]

25 Subp. 29. [See repealer.]

26 Subp. 30. [F] Section 907.9.2. IBC [F] Section 907.9.2 is
27 amended to read as follows:

1 **907.9.2 Audible alarms.** Audible alarm notification appliances
2 shall be provided and shall sound a distinctive sound that is
3 not to be used for any purpose other than that of a fire alarm.
4 The audible alarm notification appliances shall provide a sound
5 pressure level of 15 decibels (dBA) above the average ambient
6 sound level or 5 dBA above the maximum sound level having a
7 duration of at least 60 seconds, whichever is greater, in every
8 occupied space within the building. The minimum sound pressure
9 levels shall be: 75 dBA in Groups R and I-1 occupancies; 90 dBA
10 in mechanical equipment rooms; and 60 dBA in other occupancies.
11 The maximum sound pressure level for audible alarm notification
12 appliances shall be 110 dBA at the minimum hearing distance from
13 the audible appliance. Where the average ambient noise is
14 greater than 105 dBA, visible alarm notification appliances
15 shall be provided in accordance with NFPA 72 and audible alarm
16 notification appliances shall not be required.

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

21 Subp. 31. [F] Section 907.10. IBC [F] Section 907.10 is
22 amended, and subsections added, to read as follows:

23 **907.10 Fire safety functions.** Automatic fire detectors required
24 by Section 907.2 are to activate notification appliances in
25 accordance with those sections. Where automatic fire detectors
26 are installed for other fire safety functions, they shall
27 perform the intended function upon activation. Where automatic

1 detectors are installed for fire safety functions and the
2 building has a fire alarm system, such detectors shall activate
3 supervisory signals at the fire alarm control panel or at a
4 constantly attended location. Where the building does not have
5 a fire alarm system, such detectors shall activate a visual and
6 audible supervisory signal at an approved location, which shall
7 indicate the source of the signal.

8 **907.10.1 Air distribution and air-handling systems.** Smoke
9 detectors installed to shut down the air distribution or
10 air-handling system shall, upon activation, perform the intended
11 function. Air distribution or air-handling equipment that is
12 part of a smoke-control system shall switch to smoke-control
13 mode upon activation of a detector.

14 **907.10.1.1 Fire alarm system interface.** Smoke detectors that
15 are installed in air distribution or air-handling systems for
16 shutdown purposes and that are connected to a fire alarm system
17 shall not sound a general evacuation signal.

18 **907.10.2 Elevator control functions.** Smoke detectors that are
19 installed to control or recall elevators or to control doors for
20 elevators, elevator lobbies, or elevator shafts and that are
21 connected to a fire alarm system shall not sound a general
22 evacuation signal. Elevator recall and firefighter's emergency
23 operation for elevators shall only be controlled by elevator
24 smoke detectors and shall not initiate upon other building fire
25 detectors or evacuation signals.

26 **907.10.3 Door hold-open functions.** Smoke detectors that are
27 installed to hold open fire doors under nonemergency conditions

1 and that are connected to a fire alarm system shall sound a
2 general evacuation signal when the doors being held open are
3 part of the means of egress corridor or stair system. Door
4 hold-open smoke detectors are not required to activate a visual
5 or audible signal.

6 Subp. 32. [F] Section 907.11. IBC [F] Section 907.11 is
7 deleted.

8 Subp. 33. [F] Section 907.14. IBC [F] Section 907.14 is
9 deleted.

10 1305.0909 SECTION 909, SMOKE CONTROL SYSTEMS.

11 Subpart 1. [F] Section 909.4. IBC [F] Section 909.4 is
12 amended by adding a subsection to read as follows:

13 909.4.7 Door opening force. With any of the design methods
14 allowed by Section 909, the door opening force, latch release,
15 and set-in-motion force shall comply with Section 1008.1.2
16 requirements when the system is in smoke control mode.

17 Subp. 2. [F] Section 909.21. IBC [F] Section 909 is
18 amended by adding a subsection to read as follows:

19 909.21 High-rise and covered mall smoke-exhaust systems.
20 High-rise buildings and covered mall buildings exceeding 50,000
21 square feet (4645 m²) in floor area, excluding anchor stores,
22 shall be equipped with a post-fire smoke exhaust system
23 installed and maintained in accordance with Section 913.

24 1305.0910 [F] SECTION 910, SMOKE AND HEAT VENTS.

25 [For text of subps 1 to 4, see M.R.]

26 Subp. 5. [F] Section 910. IBC [F] Section 910 is amended

1 by adding sections to read as follows:

2 **910.5 Calculated engineering design of mechanical smoke**

3 **exhaust.** Calculated engineering design of mechanical smoke

4 exhaust shall be in accordance with Sections 910.5.1 through

5 910.5.5.

6 **910.5.1 Methodology.** Mechanical smoke exhaust systems shall be

7 designed to remove smoke after a fire is extinguished and to

8 assist the fire department during suppression operations or

9 during marginal sprinkler control situations. They are not

10 considered life safety systems and are not designed for occupant

11 safety.

12 **910.5.2 Calculation method.** Volumetric flow rate calculations

13 shall demonstrate that the system will provide at least three

14 air changes per hour for the space required to be provided with

15 smoke exhaust. When only a portion of a space is used for

16 high-piled storage requiring smoke exhaust, the volume to be

17 extracted shall be based on the ceiling height multiplied by the

18 actual gross floor area for storage.

19 **910.5.3 Operation.** Mechanical smoke exhaust fans shall be

20 automatically activated upon sprinkler system water flow. A 5-

21 to 10-minute delay shall be provided between the sprinkler water

22 flow signal and activation of the exhaust fans. In addition,

23 individual manual controls of each fan unit shall also be

24 provided.

25 **Exception:** When required by the code official,

26 initiation of mechanical smoke exhaust fans shall be

27 only through manual activation.

1 **910.5.4 Supply air.** Supply air for exhaust fans shall be sized
2 to provide a minimum of 50 percent of the required exhaust. Air
3 velocity at each supply air opening shall not exceed an average
4 of 200 feet per minute when measured 4 feet (1219 mm) in front
5 of the opening. Openings for supply air shall be uniformly
6 distributed around the periphery of the area served and be
7 located or ducted to a position not more than one-half the
8 storage height above the floor. Supply air openings shall open
9 automatically upon operation of the smoke exhaust system and
10 shall not require a manual action at each supply opening for
11 operation. Supply air openings shall be kept clear of storage
12 or obstructions to airflow for at least 4 feet (1219 mm) in
13 front of the opening. Supply air openings shall be separated
14 from exhaust fans and exterior combustibles to prevent
15 introduction of smoke into the building.

16 **910.5.5 Equipment.** Wiring and controls shall be as required in
17 Section 910.4.4. Interlocks shall be as required in Section
18 910.4.6. Exhaust fans shall be uniformly spaced and each fan
19 shall have a maximum individual capacity of 30,000 cfm (850
20 m³/min).

21 **910.6 Testing and maintenance.** Mechanical smoke exhaust systems
22 shall be tested and maintained as required by Sections 910.6.1
23 through 910.6.4.

24 **910.6.1 Acceptance testing.** Mechanical smoke exhaust systems
25 shall be acceptance tested as required by Sections 909.18.2
26 through 909.18.5 and 909.19.

27 **910.6.1.1 Controls.** For testing purposes, each smoke exhaust

1 system equipped for automatic activation shall be put into
2 operation by the actuation of the automatic initiating device.

3 Control sequences shall be verified throughout the system,
4 including verification of override from the firefighter's
5 control panel when systems are equipped for automatic activation.

6 **910.6.2 Special inspections.** Special inspections for mechanical
7 smoke exhaust shall be conducted according to Section 909.18.8.

8 **910.6.3 Maintenance.** Mechanical smoke exhaust systems,
9 including exhaust fans, supply air openings and controls, shall
10 be maintained and unobstructed.

11 **910.6.4 Operational testing.** Operational testing of the smoke
12 exhaust system shall include all equipment such as initiating
13 devices, fans, dampers, controls, and supply air openings.

14 Mechanical smoke exhaust systems shall be operated and tested
15 under each control sequence at least annually.

16 1305.0912 [F] SECTION 912, FIRE DEPARTMENT CONNECTIONS.

17 IBC [F] Section 912.2 is amended by adding a subsection to
18 read:

19 **912.2.3 Connection height.** Newly installed fire department
20 connections shall be located not less than 18 inches (457 mm)
21 and not more than 4 feet (1.2 m) above the level of the adjacent
22 grade or access level.

23 1305.0913 SECTION 913, POST-FIRE EXHAUST SYSTEM.

24 IBC Chapter 9 is amended by adding a section and
25 subsections to read as follows:

26 SECTION 913

1 POST-FIRE SMOKE EXHAUST SYSTEM

2 **913.1 Scope and purpose.** This section applies to post-fire
3 smoke exhaust systems when they are required by other provisions
4 of this code. The purpose of this section is to establish
5 minimum requirements for the design and installation of smoke
6 exhaust systems that are intended for the timely restoration of
7 operations and overhaul activities once a fire is extinguished.

8 **913.2 General design requirements.** Post-fire smoke exhaust
9 systems are not intended or designed as life safety systems and
10 are not required to meet the provisions of Section 909. These
11 systems are permitted to use dedicated equipment, the normal
12 building HVAC system or other openings and shall have the
13 capability to exhaust smoke from occupied spaces. Smoke removal
14 may be by either mechanical or natural ventilation, but shall be
15 capable of removing cold smoke. Smoke exhaust shall be
16 permitted through elevator shafts. Smoke removed from a space
17 must be discharged to a safe location outside the building and
18 may not be recirculated into the building in accordance with the
19 mechanical code.

20 **913.3 Exhaust capability.** The system shall have an air supply
21 and smoke exhaust capability that will provide a minimum of
22 three air changes per hour or remove smoke to less than a 5
23 percent concentration within one hour of operation. The system
24 need not exhaust from all areas at the same time, but is
25 permitted to be zoned based on the largest fire area served.
26 For the purpose of calculating system size, the height of a
27 compartment shall be considered to run from slab to slab and

1 include the volume above suspended ceilings.

2 **913.4 Operation.** The smoke exhaust system shall be operated by
3 manual controls that are readily accessible to the fire
4 department at an approved location and shall incorporate an
5 approved control diagram. When a system is zoned into areas of
6 operation less than the entire building, each zone shall have an
7 individual control. Fire department manual controls of
8 post-fire smoke exhaust systems shall have the highest priority
9 of any control point within the building. Smoke exhaust shall
10 not be permitted through any exit enclosure as defined in
11 Section 1002.

12 **913.5 Inspection and testing.** Post-fire smoke exhaust systems
13 shall be inspected and tested annually.

14 **1305.1008 SECTION 1008, DOORS, GATES, AND TURNSTILES.**

15 Subpart 1. [See repealer.]

16 Subp. 2. [See repealer.]

17 Subp. 3. [See repealer.]

18 Subp. 4. **IBC Section 1008.1.3.** IBC Section 1008.1.3 is
19 amended by adding a subsection to read as follows:

20 **1008.1.3.6 Special egress control devices.** Where the clinical
21 needs of the patients require specialized security measures for
22 their safety, door locking arrangements are permitted in Group
23 I-1 occupancies (this includes use groups as described in Group
24 I-1 occupancies that are identified as either Group R-3 or Group
25 R-4 occupancies because of occupant load) and Group I-2
26 occupancies provided that:

27 1. keys or devices that function like keys are carried by

1 staff at all times;

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

4 3. the building or fire area is protected by an approved
5 automatic sprinkler system in accordance with Section 903.3.1.1
6 (NFPA 13) and an approved fire alarm system having smoke
7 detection, installed throughout the exit corridor system and
8 areas open to the exit corridor;

9 4. locking devices automatically unlock upon activation of
10 any of the following:

11 a. automatic sprinkler system;

12 b. automatic smoke detection system;

13 c. automatic fire alarm system; or

14 d. loss of electrical power;

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

17 6. there is no public assembly space within the secured
18 area;

19 7. 24-hour patient supervision is provided within the
20 secured area;

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

23 9. locking devices are designed to fail in the open
24 position;

25 10. special egress control devices are not permitted in
26 buildings of type III-B or V-B construction, and shall not
27 exceed one story in height when in type III-A, IV-HT, or type

1 V-A construction;

2 11. floor levels within the building or portion of the
3 building with the special egress control devices shall be
4 divided into at least two compartments by smoke barriers meeting
5 the requirements of Section 709; and

6 12. substitution of the automatic sprinkler system for
7 one-hour fire-resistance-rated construction (pursuant to Table
8 601, footnote d) is permitted.

9 Subp. 5. IBC Section 1008.1.4. IBC Section 1008.1.4 is
10 amended by modifying exception 5 to read as follows:

11 **Exceptions:**

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

17 Subp. 6. IBC Section 1008.1.8.3. IBC Section 1008.1.8.3
18 is amended to read as follows:

19 **1008.1.8.3 Locks and latches.** Locks and latches shall be
20 permitted to prevent operation of doors where any of the
21 following exists:

22 1. Places of detention or restraint.

23 2. In buildings in occupancy Group A having an occupant
24 load of 300 or less, in buildings in occupancy Groups B, F, M,
25 and S, and in churches, the main exterior door or doors are
26 permitted to be equipped with key-operated locking devices from
27 the egress side provided:

1 2.1. The locking device is readily distinguishable as
2 locked.

3 2.2. A readily visible durable sign is posted on the
4 egress side on or adjacent to the door stating: THIS DOOR TO
5 REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in
6 letters 1 inch (25 mm) high on a contrasting background.

7 2.3. The use of the key-operated locking device is
8 revokable by the building official for due cause.

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

13 4. Doors from individual dwelling or sleeping units of
14 Group R occupancies having an occupant load of 10 or less are
15 permitted to be equipped with a night latch, dead bolt, or
16 security chain, provided such devices are openable from the
17 inside without the use of a key or tool.

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

20 6. Special egress-control devices installed and maintained
21 in conformance with Section 1008.1.3.6.

22 7. In rooms, other than cells, where occupants are being
23 restrained for safety or security reasons, special locking
24 arrangements which comply with the requirements of Section
25 1008.1.10 are permitted.

26 Subp. 7. IBC Section 1008.1.8.6. IBC Section 1008.1.8.6
27 is amended to read as follows:

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

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

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

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

17 4. The initiation of an irreversible process which will
18 release the latch in not more than 15 seconds when a force of
19 not more than 15 pounds (67 N) is applied for one second to the
20 release device. Initiation of the irreversible process shall
21 activate an audible signal in the vicinity of the door. Once
22 the door lock has been released by the application of force to
23 the releasing device, relocking shall be by manual means only.

24 **Exception:** Where approved, a delay of not more than
25 30 seconds is permitted.

26 5. A sign shall be provided on the door located above and
27 within 12 inches (305 mm) of the release device reading: PUSH

1 UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

2 6. Emergency lighting shall be provided at the door.

3 Subp. 8. IBC Section 1008.1. IBC Section 1008.1 is

4 amended by adding subsections as follows:

5 **1008.1.10 Special locking arrangements.** Special locking
6 arrangements meeting the requirements of Sections 1008.1.10
7 through 1008.1.10.5 are permitted for rooms, other than cells,
8 where the occupants are being restrained for safety or security
9 reasons. The use of Sections 1008.1.10 through 1008.1.10.5 may
10 be revoked by the fire code official or building official for
11 due cause.

12 **1008.1.10.1 Locking hardware.** Locking devices shall release
13 upon any of the following conditions:

- 14 1. Activation of the automatic sprinkler system.
- 15 2. Activation of any automatic fire detection device.
- 16 3. Activation of any automatic fire alarm system.
- 17 4. Loss of electrical power to the locking device or the
18 fire alarm system.

19 5. Activation of the fire alarm trouble signal.

20 6. Operation of a manual switch located in an approved
21 location.

22 All locking devices shall be designed to fail in the open
23 position following the release of the locking devices for any of
24 the conditions specified above. Relocking of the devices shall
25 be by manual means only at the door.

26 **1008.1.10.2 Fire-extinguishing system.** When special locking
27 arrangements are used, the room or area being secured shall be

1 protected with quick-response sprinklers.

2 **1008.1.10.3 Fire alarm and detection.** When special locking
3 arrangements are used, the room or area and spaces between the
4 room or area and an exterior exit door shall be protected with
5 automatic smoke detection connected to the building's fire alarm
6 system. If the walls of the room or area do not extend to the
7 ceiling, automatic smoke detection can be provided in the
8 adjacent room or area, provided that there are no substantial
9 obstructions to delay activation of the smoke detection.

10 **1008.1.10.4 Construction.** Rooms or areas containing these
11 special locking arrangements shall be constructed of
12 noncombustible materials having a minimum one-hour
13 fire-resistive construction. Doors separating the rooms from
14 other spaces shall swing in the direction of egress travel from
15 the room and have a fire-protection rating of not less than 20
16 minutes. Doors need not be self closing. The interior finish
17 of the wall and ceiling surfaces must not exceed a Class C.

18 **1008.1.10.5 Location.** The room or rooms shall be located on a
19 floor that provides direct grade-level access when located in
20 buildings or portions thereof consisting of nonrated
21 construction.

22 **1305.1009 SECTION 1009, STAIRWAYS AND HANDRAILS.**

23 **IBC Section 1009.9.** IBC Section 1009.9 is amended to read as
24 follows:

25 **1009.9 Alternating tread devices.** Alternating tread devices are
26 limited to an element of a means of egress in buildings of
27 Groups F, H, and S from a mezzanine not more than 250 square

1 feet (23 m²) in area and which serves not more than five
2 occupants; in buildings of Group I-3 from a guard tower,
3 observation station, or control room not more than 250 square
4 feet (23 m²) in area and for access to unoccupied roofs. Access
5 to mechanical equipment or appliances on a roof shall be in
6 accordance with Section 1209.3.1 and the Minnesota Mechanical
7 Code.

8 1305.1013 SECTION 1013, GUARDS.

9 Subpart 1. IBC Section 1013.1. IBC Section 1013.1 is
10 amended by adding an exception as follows:

11 **Exception:**

12 8. In accordance with the Minnesota Bleacher Safety
13 Act, Minnesota Statutes, section 16B.616, guards are
14 not required on bleachers 55 inches or less in height.

15 Subp. 2. IBC Section 1013.2. IBC Section 1013.2 is
16 amended by modifying exception 2 to read as follows:

17 2. The height in assembly seating areas shall be in
18 accordance with Section 1025.14 and the Minnesota
19 Bleacher Safety Act, Minnesota Statutes, section
20 16B.616.

21 1305.1014 SECTION 1014, EXIT ACCESS.

22 IBC Section 1014.4 and all subsections are deleted in their
23 entirety and replaced with the following:

24 **1014.4 Aisles and aisle accessways.** Aisles and aisle accessways
25 serving as a portion of the exit access in the means of egress
26 system shall comply with the requirements of this section.

1 Aisles and aisle accessways shall be provided from all occupied
2 portions of the exit access. Aisles and aisle accessways
3 serving assembly areas, other than seating at tables, shall
4 comply with Section 1025. Aisles and aisle accessways serving
5 reviewing stands, grandstands, and bleachers shall comply with
6 Section 1024.

7 **1014.4.1 Width determination.** Where tables or counters are
8 served by fixed seats, the width of the aisle or aisle accessway
9 shall be measured from the back of the seat. Where seating is
10 located at a table or counter and is adjacent to an aisle or
11 aisle accessway, the measurement of required clear width of the
12 aisle or aisle accessway shall be made to a line 19 inches (483
13 mm) measured perpendicular to and away from and running parallel
14 to the edge of the table or counter. In the case of other side
15 boundaries for aisle or aisle accessways, the clear width shall
16 be measured to walls, tread edges, or other obstructions.

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

19 **Exception:** Doors, when fully opened, and handrails
20 shall not reduce the required width by more than 7
21 inches (178 mm). Doors in any position shall not
22 reduce the required width by more than one-half.

23 Other nonstructural projections such as trim and
24 similar decorative features are permitted to project
25 into the required width 1.5 inches (38 mm) from each
26 side.

27 **1014.4.1.1 Minimum aisle accessway width.** Aisle accessways not

1 required to be accessible by Chapter 11 shall provide a minimum
2 of 12 inches (305 mm) of width, plus 0.5 inches (12.7 mm) of
3 width for each additional one foot (305 mm), or fraction
4 thereof, beyond 12 feet (3658 mm) of aisle accessway length.

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

8 **1014.4.1.2 Minimum aisle width.** The minimum clear width shall
9 be determined by Section 1005.1 for the occupant load served,
10 but shall not be less than 36 inches (914 mm).

11 **Exception:** Nonpublic aisles serving less than 50
12 people, and are not required to be accessible by
13 Chapter 11, need not exceed 28 inches (711 mm) in
14 width.

15 **1014.4.2 Length.**

16 **1014.4.2.1 Aisle accessway.** The length of travel along the
17 aisle accessway shall not exceed 30 feet (9144 mm) to an aisle
18 or exit access doorway.

19 **1014.4.2.2 Aisle.** The length of travel along an aisle or
20 combination aisle accessway and aisle to a point where a person
21 has a choice of two or more paths of egress travel to separate
22 exits or exit access doorways shall not exceed that permitted by
23 Section 1014.3 for common path of egress travel.

24 **1305.1015 SECTION 1015, EXIT AND EXIT ACCESS DOORWAYS.**

25 **IBC Section 1015.1 is amended to read as follows:**

26 **1015.1 Exit or exit access doorways required.** Two exits or exit
27 access doorways from any space shall be provided where one of

1 the following conditions exists:

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

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

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

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

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

15 **Exception:** Group I-2 occupancies shall comply with Section
16 1014.2.2.

17 [Table 1015.1 is unchanged.]

18 1305.1019 NUMBER OF EXITS AND CONTINUITY.

19 Subpart 1. IBC Section 1019.1. IBC Section 1019.1 is
20 amended to read as follows:

21 **1019.1 Minimum number of exits.** Occupants within rooms and
22 spaces shall be provided with and have access to the minimum
23 number of approved independent exits as required by Section
24 1015.1. Occupants on every story, in every basement, and in
25 every building shall be provided with and have access to the
26 minimum number of approved independent exits as required by
27 Table 1019.1, except as modified in Section 1019.2. For the

1 purposes of this chapter, occupied roofs shall be provided with
2 exits as required for stories. The required number of exits
3 from any story, basement, or individual space shall be
4 maintained until arrival at grade or the public way. [Table
5 1019.1 is unchanged.]

6 Subp. 2. IBC Section 1019.1.3. IBC Section 1019.1 is
7 amended by adding a subsection to read as follows:

8 **1019.1.3 Press box roof access.** The means of egress from
9 occupied press box roofs shall comply with the provisions of
10 this chapter. Occupied press box roofs shall be provided with
11 guards in accordance with Section 1013.

12 **Exception:** Press box roofs used as camera, video, or
13 security platforms or similar uses having an occupant
14 load of nine or less shall have access to not less
15 than one means of egress. The means of egress is
16 permitted to be by way of a roof hatch or scuttle and
17 ships ladder as required by Section 1209.3.

18 Subp. 3. IBC Section 1019.2. IBC Section 1019.2 is
19 amended to read as follows:

20 **1019.2 Buildings or stories with one exit.** Only one exit shall
21 be required in buildings or stories as described below:

- 22 1. Buildings or stories described in Table 1019.2,
23 provided that the building has not more than one level
24 below the first story above grade plane.
- 25 2. Buildings or stories of a Group R-3 occupancy.
- 26 3. Single-level buildings with the occupied space at
27 the level of exit discharge provided that the story or

1 space complies with Section 1015.1 as a space with one
2 means of egress.

3 Subp. 4. IBC Table 1019.2. IBC Table 1019.2 is amended to
4 read as follows:

5 Table 1019.2

6 Buildings or Stories with One Exit

7 8 Occupancy	9 10 Maximum Height of 11 Building Above 12 Grade Plane	13 14 Maximum Occupants (or 15 Dwelling Units) per Floor 16 (with One Exit) and 17 Travel Distance
18 19 A, B ^d , E ^e , F, M, U	20 21 1 story	22 23 49 occupants and 75 24 feet travel distance
25 26 H-2, H-3	27 28 1 story	29 30 3 occupants and 25 feet travel distance
31 32 H-4, H-5, I, R	33 34 1 story	35 36 10 occupants and 75 feet travel distance
37 38 S ^a	39 40 1 story	41 42 29 occupants and 100 feet travel distance
43 44 B ^b , F, M, S ^a	45 46 2 stories	47 48 30 occupants and 75 feet travel distance
49 50 R-2	51 52 2 stories ^c	53 54 4 dwelling units and 55 50 feet travel distance
56 [Footnotes unchanged.]		

31 1305.1025 SECTION 1025, ASSEMBLY.

32 IBC Section 1025.1.1. IBC Section 1025.1.1 is amended to
33 read as follows:

34 1025.1.1 Bleachers, grandstands, and folding and telescopic
35 seating shall comply with International Code Council (ICC) 300,
36 with the following amendments to ICC 300:

37 a. ICC 300 Section 404.5 is amended by adding an exception
38 as follows:

1 **Exception:** Aisles shall not be required to be more
2 than 66 inches (1.676 mm) in width when the following
3 are satisfied:

4 1. the seating area served by such aisles is composed
5 entirely of bleachers;

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

8 3. front egress is not limited.

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

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

14 1. Seats are without backrest.

15 2. The rise from row to row does not exceed 6 inches
16 (152 mm) per row.

17 **Exception:** Bleachers 55 inches or less in height.

18 3. The row to row spacing does not exceed 28 inches
19 (711 mm) unless the seat boards and footboards are not
20 the same elevation.

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

23 5. The first seat board is not more than 12 inches
24 (305 mm) above the ground floor or a cross aisle.

25 **Exception:** Bleachers 55 inches or less in height.

26 6. Seat boards have a continuous flat surface.

27 7. Seat boards provide a walking surface with a

1 minimum width of 11 inches (279 mm).

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

4 c. ICC 300 Section 405.6 is amended by adding an exception
5 as follows:

6 3. Aisles serving bleachers in compliance with
7 Section 404.5.

8 d. ICC 300 Section 408.1 is amended by adding an exception
9 as follows:

10 (First exception is numbered as 1.)

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

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

16 (b) guards are not required on bleachers 55 inches
17 (1397 mm) and less in height.

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

19 **408.3 Guard design.** Guards and their attachment shall be
20 designed to resist the loads indicated in Section 303.

21 Bleachers must have vertical perimeter guards or other approved
22 guards that address climbability and are designed to prevent
23 accidents, in accordance with the Minnesota Bleacher Safety Act,
24 Minnesota Statutes, section 16B.616.

25 f. ICC 300 Chapter 5 is deleted and replaced with the
26 following:

27 All bleachers or bleacher open spaces over 55 inches (1397

1 mm) above grade or the floor below, and all bleacher guardrails,
2 if any part of the guardrail is over 30 inches (762 mm) above
3 grade or the floor below, must be certified to conform with the
4 safety requirements contained in Minnesota Statutes, section
5 16B.616.

6 1305.1026 SECTION 1026, EMERGENCY ESCAPE AND RESCUE.

7 IBC Section 1026.1 is amended to read as follows:

8 **1026.1 General.** In addition to the means of egress required by
9 this chapter, provisions shall be made for emergency escape and
10 rescue in Group R as applicable in Section 101.2 and Group I-1
11 occupancies. Basements and sleeping rooms below the fourth
12 story above grade plane shall have at least one exterior
13 emergency escape and rescue opening in accordance with this
14 section. Where basements contain one or more sleeping rooms,
15 emergency egress and rescue openings shall be required in each
16 sleeping room, but shall not be required in adjoining areas of
17 the basement. Such opening shall open directly into a public
18 way, public alley, or to a yard or court that opens to a public
19 way.

20 **Exceptions:**

21 1. In other than Group R-3 occupancies as applicable
22 in Section 101.2, buildings equipped throughout with
23 an approved automatic sprinkler system in accordance
24 with Section 903.3.1.1 or 903.3.1.2.

25 2. In other than Group R-3 occupancies as applicable
26 in Section 101.2, sleeping rooms provided with a door
27 to a fire-resistance-rated corridor having access to

1 two remote exits in opposite directions.

2 3. The emergency escape and rescue opening is
3 permitted to open onto a balcony within an atrium in
4 accordance with the requirements of Section 404,
5 provided the balcony provides access to an exit and
6 the dwelling unit or sleeping unit has a means of
7 egress that is not open to the atrium.

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

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

14 6. Basements without habitable spaces and having no
15 more than 200 square feet (18.6 m²) in floor area
16 shall not be required to have emergency escape windows.

17 1305.1101 SECTION 1101, GENERAL.

18 IBC Section 1101.1 is amended to read as follows:

19 1101.1 General. Buildings or portions of buildings shall be
20 accessible to persons with disabilities as required by Minnesota
21 Rules, chapter 1341. Refer to Minnesota Rules, chapter 1341,
22 the Minnesota Accessibility Code, for the complete application
23 of IBC Chapter 11.

24 1305.1203 SECTION 1203, VENTILATION.

25 IBC Section 1203.1 is amended to read as follows:

26 1203.1 General. Buildings shall be provided with natural

1 ventilation in accordance with Section 1203.4 or mechanical
2 ventilation in accordance with Minnesota Rules, chapter 1346.

3 **Exceptions:**

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

7 2. Group U occupancies.

8 1305.1209 SECTION 1209, ACCESS TO UNOCCUPIED SPACES.

9 IBC Section 1209.3 is amended, and subsections added, to
10 read as follows:

11 **1209.3 Mechanical equipment and appliance access.** Access to
12 mechanical equipment and appliances installed in underfloor
13 areas, in attic spaces, and on roofs or elevated structures
14 shall be in accordance with this section and the Minnesota
15 Mechanical Code.

16 **1209.3.1 Mechanical equipment and appliances on roofs or**
17 **elevated structures.** Where mechanical equipment or appliances
18 requiring periodic inspection, service, or maintenance are
19 installed on roofs or elevated structures, a permanent stair
20 shall be provided for access.

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

1 The permanent stair shall be as required by relevant safety
2 regulations, but shall not be less than the following:

3 1. The stair shall be installed at an angle of not more
4 than 60 degrees measured from the horizontal plane.

5 2. The stair shall have flat treads at least six inches
6 (152 mm) deep and a clear width of at least 18 inches (457 mm)
7 with equally spaced risers at least 10.5 inches (267 mm) high
8 and not exceeding 14 inches (356 mm).

9 3. The stair shall have intermediate landings not
10 exceeding 18 feet (5.5 m) vertically.

11 4. Continuous handrails shall be installed on both sides
12 of the stair.

13 5. Interior stairs shall terminate at the under side of
14 the roof at a hatch or scuttle of at least eight square feet
15 (0.74m^2) with a minimum dimension of 20 inches (508 mm).

16 6. When a roof access hatch or scuttle is located within
17 ten feet (3.0 m) of a roof edge, a guard shall be installed in
18 accordance with this code.

19 7. Exterior stairs shall terminate at the roof access
20 point or at a level landing of at least eight square feet
21 (0.74m^2) with a minimum dimension of 20 inches (508 mm). The
22 landing shall have a guard installed in accordance with IMC
23 Section 304.9.

24 1209.3.1.1 Permanent ladders. Where a change in roof elevation
25 greater than 30 inches (762 mm) but not exceeding 16 feet (4.9
26 m) exists, a permanent ladder shall be provided. The ladder may
27 be vertical and shall be as required by relevant safety

1 regulations, but shall not be less than the following:

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

7 1305.1210 SECTION 1210, SURROUNDING MATERIALS.

8 IBC Section 1210.1 is amended to read as follows:

9 **1210.1 Floors.** In other than dwelling units, toilet, shower,
10 and bathing room floors shall have a smooth, hard, nonabsorbent
11 surface, such as portland cement, concrete, ceramic tile, sheet
12 vinyl, or other approved floor covering material that extends
13 upward onto the walls at least 5 inches (127 mm).

14 1305.1503 SECTION 1503, WEATHER PROTECTION.

15 Subpart 1. IBC Section 1503.4. IBC Section 1503.4 is
16 amended to read as follows:

17 **1503.4 Roof drainage.** Design and installation of roof drainage
18 systems shall comply with Minnesota Rules, chapter 4715,
19 Minnesota Plumbing Code, and the following provisions:

- 20 1. **Where required.** All roofs shall drain into a separate storm
21 sewer system or to an approved place of disposal. For one- and
22 two-family dwellings, and where approved, storm water is
23 permitted to discharge onto flat areas, such as streets or
24 lawns, provided that the storm water flows away from the
25 building.
- 26 2. **Roof design.** Roofs shall be designed for the maximum

1 possible depth of water that will pond thereon as determined by
2 the relative levels of roof deck and overflow weirs, scuppers,
3 edges, or serviceable drains in combination with the deflected
4 structural elements. In determining the maximum possible depth
5 of water, all primary roof drainage means shall be assumed to be
6 blocked.

7 **3. Secondary drainage required.** Secondary (emergency) roof
8 drains or scuppers shall be provided where the roof perimeter
9 construction extends above the roof in such a manner that water
10 will be entrapped if the primary drains allow buildup for any
11 reason.

12 **4. Separate systems required.** Secondary (emergency) roof drain
13 systems shall have piping and point of discharge separate from
14 the primary system. Discharge shall be above grade in a
15 location which would normally be observed by the building
16 occupants or maintenance personnel.

17 **5. Sizing of secondary drains.** Secondary (emergency) roof
18 drain systems shall be sized in accordance with the Minnesota
19 State Plumbing Code. Scuppers shall be sized to prevent the
20 depth of ponding water from exceeding that for which the roof
21 was designed as determined by this code. Scuppers shall not
22 have an opening dimension of less than 4 inches (102 mm). The
23 flow through the primary system shall not be considered when
24 sizing the secondary roof drainage system.

25 Subp. 2. IBC Section 1503.4.1. IBC Section 1503.4.1 is
26 deleted in its entirety.

27 1305.1505 FIRE CLASSIFICATION.

1 IBC Table 1505.1 is amended by deleting footnote "a" from
2 the table.

3 1305.1509 SECTION 1509, ROOFTOP STRUCTURES.

4 IBC Section 1509.2 is amended to read as follows:

5 **1509.2 Penthouses.** A penthouse or other projection above the
6 roof in structures of other than Type I construction shall not
7 exceed 28 feet (8534 mm) above the roof where used as an
8 enclosure for tanks or for elevators that run to the roof and in
9 all other cases shall not extend more than 18 feet (5486 mm)
10 above the roof. The aggregate area of penthouses and other
11 rooftop structures shall not exceed one-third the area of the
12 supporting roof. A penthouse, bulkhead, or any other similar
13 projection above the roof shall not be used for purposes other
14 than shelter of mechanical equipment or shelter of vertical
15 shaft openings in the roof.

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

20 Provisions such as louvers, louver blades, or flashing
21 shall be made to protect the mechanical equipment and the
22 building interior from the elements. Penthouses or bulkheads
23 used for purposes other than permitted by this section shall
24 conform to the requirements of this code for an additional
25 story. The restrictions of this section shall not prohibit the
26 placing of wood flagpoles or similar structures on the roof of
27 any building.

1 1305.1704 SECTION 1704, SPECIAL INSPECTIONS.

2 Subpart 1. [See repealer.]

3 Subp. 2. Table 1704.4. IBC Table 1704.4 is amended as
4 follows:

5 A. Add "X^b" to the "Periodic" column, row "6.

6 Inspection of concrete and shotcrete placement for proper
7 application techniques."

8 B. Add footnote "b." to read as follows:

9 b. Exception: Inspection can be periodic when acceptable to
10 the structural engineer of record and the building official.

11 Subp. 3. [See repealer.]

12 Subp. 4. Table 1704.5.1. IBC Table 1704.5.1, is amended
13 as follows:

14 A. Add "X^b" to the "Periodically during task listed"
15 column, row "4. Grout placement shall be verified to ensure
16 compliance with code and construction document provisions."

17 B. Add footnote "b." to read as follows:

18 b. Exception: Inspection can be periodic when acceptable to
19 the structural engineer of record and the building official.

20 1305.1805 SECTION 1805, FOOTINGS AND FOUNDATIONS.

21 Subpart 1. [See repealer.]

22 Subp. 2. [See repealer.]

23 Subp. 3. [See repealer.]

24 Subp. 4. IBC Section 1805.2. IBC Section 1805.2 is
25 amended to read as follows:

26 1805.2 Depth of footings. The minimum depth of footings below

1 the undisturbed ground surface shall be in accordance with
2 Minnesota Rules, part 1303.1600. Where applicable, the depth of
3 footings shall also conform to Sections 1805.2.1 through
4 1805.2.3.

5 Subp. 5. IBC Section 1805.2.1. IBC Section 1805.2.1 is
6 amended to read as follows:

7 **1805.2.1 Frost protection.** Except where otherwise protected
8 from frost, foundation walls, piers, and other permanent
9 supports of buildings and structures shall be protected from
10 frost by one or more of the following methods:

11 1. The minimum allowable footing depth shall be in
12 accordance with Minnesota Rules, part 1303.1600;

13 2. Constructing in accordance with ASCE-32; or

14 3. Erecting on solid rock.

15 **Exception:** Freestanding buildings meeting all of the
16 following conditions shall not be required to be
17 protected:

18 1. Classified in Occupancy Category I in accordance
19 with Section 1604.5;

20 2. Area of 600 square feet (56 m^2) or less for light
21 frame construction or 400 square feet (37 m^2) or less
22 for other than light frame; and

23 3. Eave height of 10 feet (3,048 mm) or less.

24 Footings shall not bear on frozen soil unless such frozen
25 condition is of a permanent character.

26 1305.1807 SECTION 1807, DAMPPROOFING AND WATERPROOFING.

27 IBC Section 1807.4.3 is amended to read as follows:

1 1807.4.3 Drain discharge. The floor base and foundation
 2 perimeter drain shall discharge by gravity or mechanical means
 3 into a trapped area drain, sump, dry well, or other approved
 4 location above the ground.

5 1305.1907 SECTION 1907, DETAILS OF REINFORCEMENT.

6 IBC Section 1907.7.5 is amended to read as follows:

7 1907.7.5 Corrosive environments. In corrosive environments or
 8 other severe exposure conditions, the amount of concrete
 9 protection shall be suitably increased, and denseness and
 10 nonporosity of protecting concrete shall be considered, or other
 11 protection shall be provided. In corrosive environments of
 12 parking garages and parking ramps, industrial buildings, or
 13 similar environments, a minimum concrete cover of reinforcement
 14 steel must be two inches (50.8 mm) for top surfaces and
 15 three-quarter inch (19.05 mm) for bottom surfaces. All bonded
 16 reinforcement steel located within the depth of the slab must be
 17 epoxy coated in conformance with the applicable standards
 18 referenced in ACI 318 Sections 3.5.3.7 and 3.5.3.8.

19 1305.2308 SECTION 2308, CONVENTIONAL LIGHT-FRAME CONSTRUCTION.

20 Subpart 1. IBC Figure 2308.9.3. The table to IBC Figure
 21 2308.9.3, Basic Components of the Lateral Bracing System, is
 22 amended to read as follows:

23 WIND SPEED	24 MAXIMUM WALL 25 SPACING (FEET)	26 REQUIRED 27 BRACKETING LENGTH ^b
28 90 mph	35'0"	29 Table 2308.9.3(1) and Section 2308.9.3

(IBC Figure 2308.9.3 is changed to reflect amendments in table.)

1 Subp. 2. IBC Table 2308.9.3(1). IBC Table 2308.9.3(1),
 2 Braced Wall Panels, is amended to read as follows:

3 TABLE 2308.9.3(1)

4 BRACED WALL PANELS^a

5 WIND 6 SPEED	CONDITION	CONSTRUCTION METHODS ^{b,c}								BRACED PANEL 7 LOCATION 8 AND LENGTH ^d
		1	2	3	4	5	6	7	8	
9	One story, 10 top of two 11 or three 12 story	X	X	X	X	X	X	X	X	Located in accordance with section 2308.9.3 and not more than 25 feet on center
13 90 mph	14 First story 15 of two story 16 or second 17 story of 18 three story	X	X	X	X	X	X	X	X	
19	20 First story -- 21 of three 22 story	--	X	X	X	X ^e	X	X	X	

23
 24 For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm

25 ^aThis table specifies minimum requirements for braced panels
 26 that form interior or exterior braced wall lines.

27 ^bSee Section 2308.9.3 for full description.

28 ^cSee Sections 2308.9.3.1 and 2308.9.3.2 for alternative braced
 29 panel requirements.

30 ^dBuilding length is the dimension parallel to the braced wall
 31 length.

32 ^eGypsum wallboard applied to framing supports that are spaced at
 33 16 inches on center.

34 1305.2603 SECTION 2603 FOAM PLASTIC INSULATION.

35 IBC Section 2603.4.1.13 is amended to read as follows:

36 2603.4.1.13 Type V construction. Foam plastic spray applied to
 37 a sill plate and header of Type V construction is subject to all
 38 of the following:

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

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

7 1305.2902 SECTION 2902, MINIMUM PLUMBING FACILITIES.

8 Subpart 1. Section 2902.1. IBC Section 2902.1 is amended
9 to read as follows:

10 **2902.1 Minimum number of fixtures.** Plumbing fixtures shall be
11 provided for the type of occupancy and in the minimum number
12 shown in Table 2902.1. Types of occupancies not shown in Table
13 2902.1 shall be considered individually by the building
14 official. The number of occupants shall be determined by this
15 code. Occupancy classification shall be determined in
16 accordance with Chapter 3.

17 **Exception:** When approved by the building official,
18 buildings or structures that are normally unoccupied,
19 such as picnic shelters, amphitheaters, small transit
20 stop stations, cold-storage buildings, utility sheds,
21 warming houses, kiosks, concession stands and similar
22 structures, need not be provided with restroom
23 facilities.

24 Subp. 1a. Section 2902.1.1. IBC Section 2902.1.1 is
25 amended to read as follows:

26 **2902.1.1 Unisex toilet and bath fixtures.** Fixtures located
27 within unisex toilet bathing rooms complying with Minnesota

1 Rules, chapter 1341, are permitted to be included in determining
2 the minimum required number of fixtures.

3 Subp. 2. Table 2902.1.

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

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

8 2. Add footnotes "f," "g," and "h" to the "Drinking
9 Fountains" heading in the table.

10 3. Add footnote "i" to the "Water Closets" heading in the
11 table.

12 B. The footnotes to IBC Table 2902.1 are amended, and
13 footnotes added, to read as follows:

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

18 b. Toilet facilities for employees shall be separate from
19 facilities for inmates or patients.

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

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

27 e. Permanent facilities located either on site or

1 available in an adjacent building or portable temporary
2 facilities available on site during times when the stadium or
3 grandstand is in use may be used.

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

6 g. Where water is served in restaurants, drinking
7 fountains shall not be required.

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

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

14 Subp. 3. Section 2902.2. IBC Section 2902.2 is amended to
15 read as follows:

16 **2902.2 Separate facilities.** Where plumbing fixtures are
17 required, separate facilities shall be provided for each sex.

18 **Exceptions:**

19 1. Separate facilities shall not be required for
20 ~~private-facilities~~ dwelling units and sleeping units.

21 ~~2. Separate-employee-facilities-shall-not-be-required~~
22 ~~in-occupancies-in-which-15-or-less-people-are-employed.~~

23 ~~3.~~ Separate facilities shall not be required in
24 structures or tenant spaces with a total occupant
25 load, including both employees and customers, of 15 or
26 less.

27 3. Separate facilities shall not be required in

1 **3302.3 Construction barriers.** Where construction, remodeling,
2 or demolition is taking place involving the use of cutting and
3 welding, temporary heating with open flames, or flammable liquid
4 fueled equipment, such areas shall be separated from occupied
5 areas of a building by materials that will resist the spread of
6 fire and smoke as specified for draftstopping materials in
7 Section 717.3.1.

8 **1305.3401 CHAPTER 34, EXISTING STRUCTURES.**

9 IBC Chapter 34 is deleted and replaced with the following:

10

CHAPTER 34

11

EXISTING STRUCTURES

12 The standards for a change of occupancy, alteration, and repair
13 of existing buildings and structures with historical
14 significance, shall be in accordance with Minnesota Rules,
15 chapter 1311. Refer to Minnesota Rules, chapter 1311, the
16 Minnesota Building Conservation Code, for the complete
17 application of provisions for existing structures.

18 **1305.3500 CHAPTER 35, REFERENCED STANDARDS.**

19 IBC Chapter 35 is amended by modifying a referenced
20 standard as follows:

21 NFPA 45 - 2004 Standard on Fire Protection for Laboratories
22 Using Chemicals

23 **REPEALER.** Minnesota Rules, parts 1305.0302; 1305.0402, subpart
24 2; 1305.0419; 1305.0704; 1305.0707; 1305.0714; 1305.0903,
25 subparts 1, 2, 3, and 6; 1305.0905, subparts 4 and 5; 1305.0907,
26 subparts 2, 20, 21, and 29; 1305.1003; 1305.1004; 1305.1008,

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1 subparts 1, 2, and 3; 1305.1202; 1305.1204; 1305.1207;
2 1305.1404; 1305.1405, subpart 2; 1305.1507, subparts 1, 2, 3,
3 and 4; 1305.1604; 1305.1607, subpart 1; 1305.1608, subpart 3;
4 1305.1704, subparts 1 and 3; 1305.1805, subparts 1, 2, and 3;
5 1305.1806; and 1305.2304, are repealed.

6 **EFFECTIVE DATE.** These amendments are effective on May 31,
7 2007, or five working days after publication of the notice of
8 adoption, whichever is later.