“Defend In Place”
2012 IFC Overview of Institutional Occupancies

ICC Course No.
ICC CEU’s = 0.50
SCFA Course 8506-15-0

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Institutional Occupancies

• **Course Objectives:**
  
  • Define Institutional Occupancies Groups
  
  • Review IFC and IBC requirements specific to Institutional Occupancies
  
  • Discuss DHEC’s role in Fire and Life Safety of Healthcare Facilities
Institutional Occupancies

• Course Objectives:

  • Discuss Department of Corrections role in Fire and Life Safety of State and local detention facilities.

  • Discuss occurrences of fires in institutional occupancies in SC.

  • Discuss historical and current events and lessons learned.
Institutional Occupancies

• Definitions:

• Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self preservation without physical assistance or in which persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.
Institutional Occupancies

• Definitions:

• INCAPABLE OF SELF-PRESERVATION. Persons because of age, physical limitations, mental limitations, chemical dependency, or medical treatment cannot respond as an individual to an emergency situation.
Institutional Occupancies

• Definitions:

• CUSTODIAL CARE. Assistance with day-to-day living tasks, such as assistance with cooking, taking medication, bathing, using toilet facilities and other tasks of daily living. Custodial care includes persons receiving care who evacuate at a slower rate and/or who have mental and psychiatric complications.
Institutional Occupancies

• Definitions:

  • **FOSTER CARE FACILITIES.** Facilities that provide care to more than five children, \(2^{1/2}\) years of age or less.

  • **MEDICAL CARE.** Care involving medical or surgical procedures, nursing or for psychiatric purposes.
Institutional Occupancies

• Definitions:

• HOSPITALS AND PSYCHIATRIC HOSPITALS. Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of care recipients that are incapable of self-preservation.
Institutional Occupancies

• Definitions:

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

• Definitions:

• **NURSING HOMES.** Facilities that provide care, including both intermediate care facilities and skilled nursing facilities where any of the persons are *incapable of self-preservation.*
Institutional Occupancies

• **Definitions:**

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

- *Institutional Occupancies* pose a unique challenge to fire and life safety because the traditional method of safety through occupant evacuation is more difficult or impractical in *Institutional Occupancies*.

- Instead, the concept of “defend in place” has become a focus of code requirements.
Plans submitted for review and approval in SC are required to be prepared by a licensed designed professional unless:

- A farm building not designed for human occupancy
- Buildings less than 3 stories high
- Buildings less than 5,000 square feet
- Except that all Assembly, Educational, Institutional, and Hazardous occupancies require an Engineer or Architect’s seal.
Group I-1

Institutional Group I-1. This occupancy shall include buildings, structures or parts thereof for more than 16 persons who reside on a 24-hour basis in a supervised environment and receive custodial care. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes
- Half-way houses
- Residential board and custodial care facilities
- Social rehabilitation facilities
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- Congregate care facilities
- Convalescent facilities
- Group homes
- Half-way houses
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- Social rehabilitation facilities
Group I-1

Institutional Group I-1. This occupancy shall include buildings, structures or parts thereof for more than 16 persons who reside on a 24-hour basis in a supervised environment and receive custodial care. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

Five or fewer persons receiving care. A facility such as the above with five or fewer persons receiving such care shall be classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or International Residential Code Section P2904.
Group I-1

Institutional Group I-1. This occupancy shall include buildings, structures or parts thereof for more than 16 persons who reside on a 24-hour basis in a supervised environment and receive custodial care. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

Six to sixteen persons receiving care. A facility such as above, housing at least six and not more than 16 persons receiving such care, shall be classified as Group R-4.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

**Exceptions:**
1. An *automatic sprinkler system* installed in accordance with Section 903.3.1.2 shall be permitted in Group I-1 facilities.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exceptions:
1. An automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be permitted in Group I-1 facilities.

903.3.1.2 NFPA 13R sprinkler systems.
Automatic sprinkler systems in Group R occupancies up to and including four stories in height shall be permitted to be installed throughout in accordance with NFPA 13R.
Group I-1  
Fire Protection

903.2.6 Group I.  
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exceptions:  
2. An automatic sprinkler system installed in accordance with Section 903.3.1.3 shall be allowed in Group I-1 facilities when in compliance with all of the following:
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

**Exceptions:**
2. An *automatic sprinkler system* installed in accordance with Section 903.3.1.3 shall be allowed in Group I-1 facilities when in compliance with all of the following:

903.3.1.3 NFPA 13D sprinkler systems.
*Automatic sprinkler systems* installed in one and two-family *dwellings*, Group R-3 and R-4 congregate living facilities and *townhouses* shall be permitted to be installed throughout in accordance with NFPA 13D.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exceptions:
2. An automatic sprinkler system installed in accordance with Section 903.3.1.3 shall be allowed in Group I-1 facilities when in compliance with all of the following:
   2.1. A hydraulic design information sign is located on the system riser;
   2.2. Exception 1 of Section 903.4 is not applied; and
   2.3. Systems shall be maintained in accordance with the requirements of Section 903.3.1.2.
903.2.6 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4 Sprinkler system supervision and alarms. All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.

Exceptions:
1. Automatic sprinkler systems protecting one- and two-family dwellings.
903.2.6 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

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Exceptions:
1. Automatic sprinkler systems protecting one- and two-family dwellings.
903.2.6 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4 Sprinkler system supervision and alarms.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4.1 Monitoring.
Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

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Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.2 Alarms.
An approved audible device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

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An approved *audible device, located on the exterior* of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.
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907.2.6 Group I.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies.
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A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies.

Exceptions:
1. Manual fire alarm boxes in *sleeping units* of Group I-1 and I-2 occupancies shall not be required at *exits* if located at all care providers’ control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2.1 are not exceeded.
907.2.6 Group I.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies.

Exceptions:

907.4.2.1 Location.
Manual fire alarm boxes shall be located not more than 5 feet (1524 mm) from the entrance to each exit. Additional manual fire alarm boxes shall be located so that travel distance to the nearest box does not exceed 200 feet.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.5 Occupant notification systems.
A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.
2. Automatic sprinkler system workflow devices.
4. Automatic fire-extinguishing systems.
Group I-1  Fire Protection

907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.2.6.1 Group I-1.
An automatic smoke detection system shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens. The system shall be activated in accordance with Section 907.5.

Exceptions:
1. Smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. Smoke detection is not required for exterior balconies.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.2.11.2 Groups R-2, R-3, R-4 and I-1.
Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and I-1 regardless of occupant load at all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.2.11.2 Groups R-2, R-3, R-4 and I-1.
Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and I-1 regardless of occupant load at all of the following locations:

2. In each room used for sleeping purposes.

Exception: Single- or multiple-station smoke alarms in Group I-1 shall not be required where smoke detectors are provided in the sleeping rooms as part of an automatic smoke detection system.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.2.11.2 Groups R-2, R-3, R-4 and I-1.
Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and I-1 regardless of occupant load at all of the following locations:

3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.2.11.2 Groups R-2, R-3, R-4 and I-1.
Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and I-1 regardless of occupant load at all of the following locations:

3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
Group I-1

1103.7.2 Group I-1.
An automatic fire alarm system shall be installed in existing Group I-1 residential care/assisted living facilities in accordance with Section 907.2.6.1.

Exceptions:
1. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits if located at all nurses’ control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2 are not exceeded.
1103.7.2 Group I-1.
An automatic fire alarm system shall be installed in existing Group I-1 residential care/assisted living facilities in accordance with Section 907.2.6.1.

Exceptions:
2. Where each sleeping room has a means of egress door opening directly to an exterior egress balcony that leads directly to the exits in accordance with Section 1019, and the building is not more than three stories in height.
906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

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

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

3. In areas where flammable or combustible liquids are stored, used or dispensed.
906.1 Where required.
Portable fire extinguishers shall be installed in the following locations.

4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1.

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

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.
904.2.1 Commercial hood and duct systems. Each required commercial kitchen exhaust hood and duct system required by Section 609 to have a Type I hood shall be protected with an approved automatic fire-extinguishing system installed in accordance with this code.
609.1 General.
Commercial kitchen exhaust hoods shall comply with the requirements of the *International Mechanical Code*.

609.2 Where required.
A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors.
1004.1 Design occupant load.
In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section.

<table>
<thead>
<tr>
<th>Institutional areas</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient treatment areas</td>
<td>240 gross</td>
</tr>
<tr>
<td>Outpatient areas</td>
<td>100 gross</td>
</tr>
<tr>
<td>Sleeping areas</td>
<td>120 gross</td>
</tr>
</tbody>
</table>
1015.1 Exits or exit access doorways from spaces. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

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

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, E, F, M, U</td>
<td>49</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>3</td>
</tr>
<tr>
<td>H-4, H-5, I-1, I-2, I-3, I-4, R</td>
<td>10</td>
</tr>
<tr>
<td>S</td>
<td>29</td>
</tr>
</tbody>
</table>
Group I-1  

1008.1.2 Door swing.  
Egress doors shall be of the pivoted or side-hinged swinging type.

Doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons or a Group H occupancy.
Group I-1

Egress

1008.1.1 Size of doors.
The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of 32 inches.

1008.1.9 Door operations.
Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.
1008.1.9.1 Hardware.
Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the *International Building Code* shall not require tight grasping, tight pinching or twisting of the wrist to operate.
1008.1.9.4 Bolt locks.
Manually operated flush bolts or surface bolts are not permitted.

1008.1.9.5 Unlatching.
The unlatching of any door or leaf shall not require more than one operation.
1008.1.9.7 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.
Group I-1

Egress

1008.1.9.7 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.
1008.1.9.7 Delayed egress locks.
1. The doors unlock upon actuation of the *automatic sprinkler system* or automatic fire detection system.

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

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

4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.
Group I-1

1008.1.9.7 Delayed egress locks.

Where approved, a delay of not more than 30 seconds is permitted.

5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6. Emergency lighting shall be provided at the door.
Group I-1

1018.2 Width.
The minimum width of *corridors* specified in Table 1018.2 shall be as determined in Section 1005.1.

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WIDTH (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any facilities not listed below</td>
<td>44 inches</td>
</tr>
<tr>
<td>Access to and utilization of mechanical, plumbing or electrical systems or equipment</td>
<td>24 inches</td>
</tr>
<tr>
<td><strong>With a required occupancy capacity less than 50</strong></td>
<td>36 inches</td>
</tr>
<tr>
<td>Within a dwelling unit</td>
<td>36 inches</td>
</tr>
<tr>
<td>In Group E with a corridor having a required capacity of 100 or more</td>
<td>72 inches</td>
</tr>
<tr>
<td>In corridors and areas serving gurney traffic in occupancies where patients receive outpatient medical care, which causes the patient to be incapable of self-preservation</td>
<td>72 inches</td>
</tr>
<tr>
<td>Group I-2 in areas where required for bed movement</td>
<td>96 inches</td>
</tr>
</tbody>
</table>
1018.1 Construction. 
Corridors shall be fire-resistance rated in accordance with Table 1018.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 of the International Building Code for fire partitions.

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>OCCUPANT LOAD SERVED BY CORRIDOR</th>
<th>REQUIRED FIRE-RESISTANCE RATING (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H-1, H-2, H-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>H-4, H-5</td>
<td>Greater than 30</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>A, B, E, F, M, S, U</td>
<td>Greater than 30</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>Greater than 10</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-2, I-4</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-1, I-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
</tbody>
</table>

a. For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3 of the International Building Code.
b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.8 of the International Building Code.
c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.
EXIT Signs
1011.1 Where required. 
Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:
1. Exit signs are not required in rooms or areas that require only one exit or exit access. (2 exits required when more than 10 people)
Group I-1

Egress

1006.1 Illumination required.
The *means of egress*, including the *exit discharge*, shall be illuminated at all times the building space served by the *means of egress* is occupied.

Exceptions:
1006.3 Emergency power for illumination. The power supply for *means of egress* illumination shall normally be provided by the premises’ electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.
Group I-1

1104.4 Power source.
Where emergency illumination is required in Section 1104.5, exit signs shall be visible under emergency illumination conditions.

1104.5 Illumination emergency power.
The power supply for means of egress illumination shall normally be provided by the premises’ electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

5. Group I.

RETROACTIVE REQUIREMENT
IBC 420.2 Separation walls.
Walls separating *dwelling units* in the same building, walls separating *sleeping units* in the same building and walls separating *dwelling* or *sleeping units* from other occupancies contiguous to them in the same building shall be constructed as *fire partitions* in accordance with Section 708.
Group I-1  Construction

**DWELLING UNIT.** A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

**SLEEPING UNIT.** A room or space in which people sleep, which can also include permanent provisions for living, eating, and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a *dwelling unit* are not sleeping units.

**FIRE PARTITION.** A vertical assembly of materials designed to restrict the spread of fire in which openings are protected.
IBC 708.3 Fire-resistance rating.
Fire partitions shall have a fire-resistance rating of not less than 1 hour.

Exceptions:
1. Corridor walls permitted to have a $\frac{1}{2}$ hour fire-resistance rating by Table 1018.1. (Not allowed for I-1)

2. Dwelling unit and sleeping unit separations in buildings of Type IIB, IIIB and VB construction shall have fire-resistance ratings of not less than $\frac{1}{2}$ hour in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
IBC 708.4 Continuity.
Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto.

In combustible construction where the fire partitions are not required to be continuous to the sheathing, deck or slab, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 718.2 and 718.3 at the partition line.

The supporting construction shall be protected to afford the required fire-resistance rating of the wall supported, except for walls separating tenant spaces in covered and open mall buildings, walls separating dwelling units, walls separating sleeping units and corridor walls, in buildings of Type IIB, IIB and VB construction.

SEE EXCEPTIONS
Group I-1  Construction

IBC 708.6 Openings.
Openings in a fire partition shall be protected in accordance with Section 716.

IBC 708.7 Penetrations.
Penetrations of fire partitions shall comply with Section 714.

IBC 708.8 Joints.
Joints made in or between fire partitions shall comply with Section 715.

IBC 708.9 Ducts and air transfer openings.
Penetrations in a fire partition by ducts and air transfer openings shall comply with Section 717.
703.7 Marking and identification.
Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:

1. Be located in accessible concealed floor, floor-ceiling or attic spaces;
2. Be located within 15 feet (4572 mm) of the end of each wall and at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition; and
3. Include lettering not less than 3 inches (76 mm) in height with a minimum $\frac{3}{8}$ inch (9.5 mm) stroke in a contrasting color incorporating the suggested wording. "FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS" or other wording.
703.7 Marking and identification.
Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:
1103.4 Vertical openings. Interior vertical shafts, including but not limited to stairways, elevator hoistways, service and utility shafts, that connect two or more stories of a building, shall be enclosed or protected as specified in Sections 1103.4.1 through 1103.4.7.

1103.4.1 Group I occupancies. In Group I occupancies, interior vertical openings connecting two or more stories shall be protected with 1-hour fire-resistance-rated construction.
1103.9 Carbon monoxide alarms.
Existing Group I or R occupancies located in a building containing a fuel-burning appliance or a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034, and be installed and maintained in accordance with NFPA 720 and the manufacturer’s instructions.

RETROACTIVE REQUIREMENT
1103.9 Carbon monoxide alarms. 
Existing Group I or R occupancies located in a building containing a fuel-burning appliance or a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034, and be installed and maintained in accordance with NFPA 720 and the manufacturer’s instructions.
1103.9 Carbon monoxide alarms.  

Exception: *Sleeping units* or *dwelling units* which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The *sleeping unit* or *dwelling unit* is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage;  
2. The *sleeping unit* or *dwelling unit* is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and  
3. The building is provided with a common area carbon monoxide alarm system.

*RETROACTIVE REQUIREMENT*
404.2 Where required.
An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

6. Group I.

404.3 Contents.
Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2.
Group I-1

404.4 Maintenance.
Fire safety and evacuation plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy or the physical arrangement of the building.

404.5 Availability.
Fire safety and evacuation plans shall be available in the workplace for reference and review by employees, and copies shall be furnished to the fire code official for review upon request.
405 Evacuation Drills

405.2 Frequency.
Required emergency evacuation drills shall be held at the intervals specified in Table 405.2 or more frequently where necessary to familiarize all occupants with the drill procedure.

Group I – Quarterly on all shifts – Employees*

*b. Fire and evacuation drills in residential care assisted living facilities shall include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.
6301.1 Scope.
The storage and use of oxidizing materials shall be in accordance with this chapter and Chapter 50. Oxidizing gases shall also comply with Chapter 53. Oxidizing cryogenic fluids shall also comply with Chapter 55.

Exceptions:
1. Display and storage in Group M and storage in Group S occupancies complying with Section 5003.11.
2. Bulk oxygen systems at industrial and institutional consumer sites shall be in accordance with NFPA 55.
3. Liquid oxygen stored or used in home health care in Group I-1, I-4 and R occupancies in accordance with Section 6306.
Group I-1

in Home Healthcare

IFC Chapter 63 - Oxidizers, Oxidizing Gases and Oxidizing Cryogenic Fluids

6301.1 Scope.
The storage and use of oxidizing materials shall be in accordance with this chapter and Chapter 50. Oxidizing gases shall also comply with Chapter 53. Oxidizing cryogenic fluids shall also comply with Chapter 55.

Exceptions:
1. Display and storage in Group M and storage in Group S occupancies complying with Section 5003.11.
2. Bulk oxygen systems at industrial and institutional consumer sites shall be in accordance with NFPA 55.
3. Liquid oxygen stored or used in home health care in Group I-1, I-4 and R occupancies in accordance with Section 6306.
6306 LIQUID OXYGEN IN HOME HEALTH CARE

6306.1 General.
The storage and use of liquid oxygen (LOX) in home health care in Group I-1, I-4 and R occupancies shall comply with Sections 6306.2 through 6306.6, or shall be stored and used accordance with Chapter 50.
6306.2 Information and instructions to be provided. The seller of liquid oxygen shall provide the user with information in written form that includes, but is not limited to, the following:

1. Manufacturer's instructions and labeling for safe storage and use of the containers.
2. Locating containers away from ignition sources, exits, electrical hazards and high-temperature devices in accordance with Section 6306.3.3.
3. Restraint of containers to prevent falling in accordance with Section 6306.3.4.
4. Requirements for handling containers in accordance with Section 6306.3.5.
5. Safeguards for refilling containers in accordance with Section 6306.3.6.
6. Signage requirements in accordance with Section 6306.6.
Group I-1

Liquid Oxygen in Home Healthcare

6306.3.1 Maximum individual container capacity. Liquid oxygen home care containers shall not exceed an individual capacity of 15.8 gallons (60 L) in Group I-1, I-4 and R occupancies. Liquid oxygen ambulatory containers are allowed in Group I-1, I-4 and R occupancies. Containers of liquid oxygen in home health care shall also be stored, used and filled in accordance with Section 6306 and Sections 5503.1 and 5503.2.
6306.3.2 Manufacturer’s instructions and labeling. Containers shall be stored, used and operated in accordance with the manufacturer’s instructions and labeling.

6306.3.3 Locating containers. Containers shall not be located in areas where:
1. They can be overturned due to operation of a door;
2. They are in the direct path of egress;
3. They are subject to falling objects;
4. They can become part of an electrical circuit; or
5. Open flames and high-temperature devices can cause a hazard.
6306.3.4 Restraining containers.
Liquid oxygen home care containers shall be restrained while in storage or use to prevent falling caused by contact, vibration or seismic activity. Containers shall be restrained by one of the following methods:
1. Restraining containers to a fixed object with one or more restraints.
2. Restraining containers within a framework, stand or assembly designed to secure the container.
3. Restraining containers by locating a container against two points of contact such as the walls of a corner of a room or a wall and a secure furnishing or object such as a desk.
Group I-1  

Liquid Oxygen  
in Home Healthcare

6306.3.6.1 Filling location.  
Liquid oxygen home care containers and ambulatory containers shall be filled outdoors.

**Exception:** Liquid oxygen ambulatory containers are allowed to be filled indoors where the supply container is specifically designed for filling such containers and written instructions are provided by the container manufacturer.
6306.3.6.2 Incompatible surfaces.
A drip pan compatible with liquid oxygen shall be provided under home care container fill and vent connections during the filling process in order to protect against liquid oxygen spillage from coming into contact with combustible surfaces, including asphalt.

6306.3.6.3 Open flames and high-temperature devices.
The use of open flames and high-temperature devices shall be in accordance with Section 5003.7.2.
Group I-1

6306.4 Maximum aggregate quantity.
The maximum aggregate quantity of liquid oxygen allowed in storage and in use in each dwelling unit shall be 31.6 gallons (120 L).

6306.5 Smoking prohibited.
Smoking shall be prohibited in rooms or areas where liquid oxygen is in use.
Group I-1

Liquid Oxygen in Home Healthcare

6306.6.1 No smoking sign.
A sign stating "OXYGEN—NO SMOKING" shall be posted in each room or area where liquid oxygen containers are stored, used or filled.

6306.6.2 Premises signage.
Where required by the fire code official, each dwelling unit or sleeping unit shall have an approved sign indicating that the unit contains liquid oxygen home care containers.

6306.7 Fire department notification.
Where required by the fire code official, the liquid oxygen seller shall notify the fire department of the locations of liquid oxygen home care containers.
SOUTH CAROLINA
STATE FIRE

GROUP I-1
ASSISTED LIVING
Group I-2

Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

- Foster care facilities
- Detoxification facilities
- Hospitals
- Nursing homes
- Psychiatric hospitals
Group I-2

Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

- Foster care facilities
- Detoxification facilities
- Hospitals
- Nursing homes
- Psychiatric hospitals
Group I-2

Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

- Foster care facilities
- Detoxification facilities
- Hospitals
- Nursing homes
- Psychiatric hospitals
Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

Foster care facilities
Detoxification facilities
Hospitals
Nursing homes
Psychiatric hospitals
**Group I-2**

**Institutional Group I-2.** This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

- Foster care facilities
- Detoxification facilities
- Hospitals
- Nursing homes
- Psychiatric hospitals
Group I-2

Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

Five or fewer persons receiving care. A facility such as the above with five or fewer persons receiving such care shall be classified as Group R-3 or shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code.
**Group I-2 Fire Protection**

903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

1103.5.2 Group I-2.
An *automatic sprinkler system* shall be provided throughout existing Group I-2 *fire areas*. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the *level of exit discharge*. 
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

1103.5.2 Group I-2.
An *automatic sprinkler system* shall be provided throughout existing Group I-2 *fire areas*. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the *level of exit discharge*. 
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

1103.5.2 Group I-2.
An automatic sprinkler system shall be provided throughout existing Group I-2 fire areas. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the level of exit discharge.

RETROACTIVE REQUIREMENT
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4 Sprinkler system supervision and alarms.
All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.

Exceptions:
1. Automatic sprinkler systems protecting one- and two-family dwellings.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4 Sprinkler system supervision and alarms.
All valves controlling the water supply for *automatic sprinkler systems*, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a *listed fire alarm control unit*.

Exceptions:
1. *Automatic sprinkler systems* protecting one- and two-family *dwellings*.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area.*

903.4 Sprinkler system supervision and alarms.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4.1 Monitoring.
Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
903.2.6 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4.1 Monitoring. Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.2 Alarms.
An approved audible device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.
903.2.6 Group I.  
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.2 Alarms.  
An approved *audible device, located on the exterior* of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.
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An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4.2 Alarms.
An approved audible device, located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.
907.2.6 Group I.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies.
907.2.6 Group I.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies.

Exceptions:
1. Manual fire alarm boxes in *sleeping units* of Group I-1 and I-2 occupancies shall not be required at *exits* if located at all care providers’ control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2.1 are not exceeded.
907.2.6 Group I.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies.

Exceptions:

907.4.2.1 Location.
Manual fire alarm boxes shall be located not more than 5 feet (1524 mm) from the entrance to each exit. Additional manual fire alarm boxes shall be located so that travel distance to the nearest box does not exceed 200 feet.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.5 Occupant notification systems.
A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.
2. Automatic sprinkler system waterflow devices.
4. Automatic fire-extinguishing systems.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.2.6.2 Group I-2.
An automatic smoke detection system shall be installed in corridors in nursing homes, long-term care facilities, detoxification facilities and spaces permitted to be open to the corridors by Section 407.2 of the International Building Code. The system shall be activated in accordance with Section 907.5. Hospitals shall be equipped with smoke detection as required in Section 407 of the International Building Code.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

Exceptions:

1. Corridor smoke detection is not required in smoke compartments that contain sleeping units where such units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the corridor side of each sleeping unit and shall provide an audible and visual alarm at the care provider station attending each unit.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

Exceptions:

2. Corridor smoke detection is not required in smoke compartments that contain sleeping units where sleeping unit doors are equipped with automatic door-closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

1103.7.3 Group I-2.
An automatic fire alarm system shall be installed in existing Group I-2 occupancies in accordance with Section 907.2.6.2.

RETROACTIVE REQUIREMENT
Group I-2

Fire Protection

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

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

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

3. In areas where flammable or combustible liquids are stored, used or dispensed.
Group I-2 Fire Protection

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

4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1.

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

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.
904.2.1 Commercial hood and duct systems. Each required commercial kitchen exhaust hood and duct system required by Section 609 to have a Type I hood shall be protected with an approved automatic fire-extinguishing system installed in accordance with this code.
609.1 General.
Commercial kitchen exhaust hoods shall comply with the requirements of the *International Mechanical Code*.

609.2 Where required.
A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors.
### 1004.1 Design occupant load.
In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section.

<table>
<thead>
<tr>
<th>Institutional areas</th>
<th></th>
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<tbody>
<tr>
<td>Inpatient treatment areas</td>
<td>240 gross</td>
</tr>
<tr>
<td>Outpatient areas</td>
<td>100 gross</td>
</tr>
<tr>
<td>Sleeping areas</td>
<td>120 gross</td>
</tr>
</tbody>
</table>
**Group I-2**

**Egress**

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

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

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD</th>
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<tbody>
<tr>
<td>A, B, E, F, M, U</td>
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<tr>
<td>H-1, H-2, H-3</td>
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<tr>
<td>H-4, H-5, I-1, I-2, I-3, I-4, R</td>
<td>10</td>
</tr>
<tr>
<td>S</td>
<td>29</td>
</tr>
</tbody>
</table>
1008.1.2 Door swing.
Egress doors shall be of the pivoted or side-hinged swinging type.

**Exceptions:**
3. Critical or intensive care patient rooms within suites of health care facilities.

Doors shall swing in the direction of egress travel where serving a room or area containing an *occupant load* of 50 or more persons or a Group H occupancy.
1008.1.1 Size of doors.
The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of 32 inches. Means of egress doors in a Group I-2 occupancy used for the movement of beds shall provide a clear width not less than $41\frac{1}{2}$ inches (1054 mm). The height of door openings shall not be less than 80 inches (2032 mm).

1008.1.9 Door operations.
Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.
Group I-2

Egress

1008.1.1 Size of doors.
The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of 32 inches. Means of egress doors in a Group I-2 occupancy used for the movement of beds shall provide a clear width not less than 41 1/2 inches (1054 mm). The height of door openings shall not be less than 80 inches (2032 mm).

1008.1.9 Door operations.
Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.
Group I-2

1008.1.9.1 Hardware.
Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the *International Building Code* shall not require tight grasping, tight pinching or twisting of the wrist to operate.
1008.1.9.4 Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:
5. Where a pair of doors serves patient care rooms in Group I-2 occupancies, self-latching edge- or surface-mounted bolts are permitted on the inactive leaf provided that the inactive leaf is not needed to meet egress width requirements and the inactive leaf contains no doorknobs, panic bars or similar operating hardware.

1008.1.9.5 Unlatching.
The unlatching of any door or leaf shall not require more than one operation.
1008.1.9.6 Special locking arrangements in Group I-2. Approved special egress locks shall be permitted in a Group I-2 occupancy where the clinical needs of persons receiving care require such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.
1008.1.9.6 Special locking arrangements in Group I-2. Approved special egress locks shall be permitted in a Group I-2 occupancy where the clinical needs of persons receiving care require such locking. Special egress locks shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.
1008.1.9.6 Special locking arrangements in Group I-2.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a special egress lock before entering an exit.
5. The procedures for the operation(s) of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.
1008.1.9.7 Delayed egress locks. 
Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.
1008.1.9.7 Delayed egress locks.
Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.
Group I-2

1008.1.9.7 Delayed egress locks.
1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.

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

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

4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.
1008.1.9.7 Delayed egress locks.

Where approved, a delay of not more than 30 seconds is permitted.

5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

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

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.

2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.

3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock—-independent of the access control system electronics—and the doors shall remain unlocked for a minimum of 30 seconds.
Group I-2

Egress

1008.1.9.8 Access-controlled egress doors.

4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.

5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
EXIT Signs

1011.1 Where required.

Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:

1. Exit signs are not required in rooms or areas that require only one exit or exit access. (2 exits required when more than 10 people)
Group I-2

Egress

1006.1 Illumination required.
The *means of egress*, including the *exit discharge*, shall be illuminated at all times the building space served by the *means of egress* is occupied.

Exceptions:
1006.3 Emergency power for illumination. The power supply for *means of egress* illumination shall normally be provided by the premises’ electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.
1104.4 Power source.
Where emergency illumination is required in Section 1104.5, exit signs shall be visible under emergency illumination conditions.

1104.5 Illumination emergency power.
The power supply for means of egress illumination shall normally be provided by the premises’ electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

5. Group I.

RETROACTIVE REQUIREMENT
Group I-2

1018.2 Width.
The minimum width of *corridors* specified in Table 1018.2 shall be as determined in Section 1005.1.

[B] TABLE 1018.2 MINIMUM CORRIDOR WIDTH

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WIDTH (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any facilities not listed below</td>
<td>44 inches</td>
</tr>
<tr>
<td>Access to and utilization of mechanical, plumbing or electrical systems or equipment</td>
<td>24 inches</td>
</tr>
<tr>
<td>With a required occupancy capacity less than 50</td>
<td>36 inches</td>
</tr>
<tr>
<td>Within a dwelling unit</td>
<td>36 inches</td>
</tr>
<tr>
<td>In Group E with a corridor having a required capacity of 100 or more</td>
<td>72 inches</td>
</tr>
<tr>
<td>In corridors and areas serving gurney traffic in occupancies where patients receive outpatient medical care, which causes the patient to be incapable of self-preservation</td>
<td>72 inches</td>
</tr>
<tr>
<td>Group I-2 in areas where required for bed movement</td>
<td>96 inches</td>
</tr>
</tbody>
</table>
Group I-2  Egress

1018.1 Construction. *Corridors* shall be fire-resistance rated in accordance with Table 1018.1. The *corridor* walls required to be fire-resistance rated shall comply with Section 708 of the *International Building Code* for *fire partitions*.

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>OCCUPANT LOAD SERVED BY CORRIDOR</th>
<th>REQUIRED FIRE-RESISTANCE RATING (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without sprinkler system</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>H-4, H-5</td>
<td>Greater than 30</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>A, B, E, F, M, S, U</td>
<td>Greater than 30</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>Greater than 10</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-2^a, I-4</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-1, I-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
</tbody>
</table>

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a. For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3 of the *International Building Code*.

b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.8 of the *International Building Code*.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with *Section 903.3.1.1* or *903.3.1.2* where allowed.
Group I-2 Construction

IBC 407.2 Corridors continuity and separation. *Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.4.
IBC 407.2 Corridors continuity and separation. *Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.4.

407.2.1 Waiting and similar areas. Waiting areas and similar spaces constructed as required for *corridors* shall be permitted to be open to a *corridor*, only where all of the following criteria are met:

1. The spaces are not occupied as care recipient’s sleeping rooms, treatment rooms, incidental uses in accordance with Section 509, or hazardous uses.
Group I-2 Construction

IBC 407.2 Corridors continuity and separation. 
*Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 *except spaces conforming to Sections 407.2.1 through 407.2.4.*

407.2.1 Waiting and similar areas. 
Waiting areas and similar spaces constructed as required for *corridors* shall be permitted to be open to a *corridor*, only where all of the following criteria are met:

2. The open space is protected by an automatic fire detection system installed in accordance with Section 907.
IBC 407.2 Corridors continuity and separation. Corridors in occupancies in Group I-2 shall be continuous to the exits and shall be separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.4.

407.2.1 Waiting and similar areas. Waiting areas and similar spaces constructed as required for corridors shall be permitted to be open to a corridor, only where all of the following criteria are met:

3. The corridors onto which the spaces open, in the same smoke compartment, are protected by an automatic fire detection system installed in accordance with Section 907, or the smoke compartment in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
IBC 407.2 Corridors continuity and separation. Corridors in occupancies in Group I-2 shall be continuous to the exits and shall be separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.4.

407.2.1 Waiting and similar areas. Waiting areas and similar spaces constructed as required for corridors shall be permitted to be open to a corridor, only where all of the following criteria are met:

4. The space is arranged so as not to obstruct access to the required exits.
Group I-2  Construction

SMOKE COMPARTMENT. A space within a building enclosed by smoke barriers on all sides, including the top and bottom.

SMOKE BARRIER. A continuous membrane, either vertical or horizontal, such as a wall, floor or ceiling assembly, that is designed and constructed to restrict the movement of smoke.

CARE SUITE. A group of treatment rooms, care recipient sleeping rooms and their associated support rooms or spaces and circulation space within Group I-2 occupancies where staff are in attendance for supervision of all care recipients within the suite, and the suite is in compliance with the requirements of Section 407.4.3.
IBC 407.2 Corridors continuity and separation. *Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 *except spaces* conforming to Sections 407.2.1 through 407.2.4.

407.2.2 Care providers’ stations. Spaces for care providers’, supervisory staff, doctors’ and nurses’ charting, communications and related clerical areas shall be permitted to be open to the *corridor*, where such spaces are constructed as required for *corridors*. 
IBC 407.2 Corridors continuity and separation. *Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 *except spaces conforming to Sections 407.2.1 through 407.2.4.*

407.2.3 Psychiatric treatment areas. Areas wherein psychiatric care recipients who are not capable of self-preservation are housed, or group meeting or multipurpose therapeutic spaces other than incidental uses in accordance with Section 509, under continuous supervision by facility staff, shall be permitted to be open to the *corridor*, where the following criteria are met:
Group I-2  Construction

IBC 407.2 Corridors continuity and separation.  
*Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 *except spaces conforming to Sections 407.2.1 through 407.2.4.*

407.2.3 Psychiatric treatment areas.  
1. Each area does not exceed 1,500 square feet (140 m²).

2. The area is located to permit supervision by the facility staff.

3. The area is arranged so as not to obstruct any access to the required *exits.*
IBC 407.2 Corridors continuity and separation. 
*Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 *except spaces conforming to Sections 407.2.1 through 407.2.4.*

407.2.3 Psychiatric treatment areas.

4. The area is equipped with an automatic fire detection system installed in accordance with Section 907.2.

5. Not more than one such space is permitted in any one *smoke compartment*. 
Group I-2  Construction

IBC 407.2 Corridors continuity and separation. Corridors in occupancies in Group I-2 shall be continuous to the exits and shall be separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.4.

407.2.3 Psychiatric treatment areas.

6. The walls and ceilings of the space are constructed as required for corridors.
**Group I-2 Construction**

**IBC 407.2 Corridors continuity and separation.**
*Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.4.

**IBC 407.2.4 Gift shops.**
Gift shops and associated storage that are less than 500 square feet (455 m²) in area shall be permitted to be open to the *corridor* where such spaces are constructed as required for *corridors*. 
Group I-2 Construction

IBC 407.3 Corridor wall construction. 
*Corridor* walls shall be constructed as smoke partitions in accordance with Section 710.

IBC 407.3.1 Corridor doors. 
*Corridor* doors, other than those in a wall required to be rated by Section 509.4 or for the enclosure of a vertical opening or an *exit*, shall not have a required *fire protection rating* and shall not be required to be equipped with *self-closing* or automatic-closing devices, but shall provide an effective barrier to limit the transfer of smoke and shall be equipped with positive latching. Roller latches are not permitted. Other doors shall conform to Section 716.5.
Group I-2 Construction

IBC 407.3 Corridor wall construction. *Corridor* walls shall be constructed as smoke partitions in accordance with Section 710.

IBC 407.3.1 Corridor doors.
IBC 710.1 General.
Smoke partitions installed as required elsewhere in the code shall comply with this section.

IBC 710.2 Materials.
The walls shall be of materials permitted by the building type of construction.

IBC 710.3 Fire-resistance rating.
Unless required elsewhere in the code, smoke partitions are not required to have a fire-resistance rating.
Group I-2  Construction

IBC 710.4 Continuity.
Smoke partitions shall extend from the top of the foundation or floor below to the underside of the floor or roof sheathing, deck or slab above or to the underside of the ceiling above where the ceiling membrane is constructed to limit the transfer of smoke.
IBC 710.5 Openings.
Openings in smoke partitions shall comply with Sections 710.5.1 and 710.5.2.

IBC 710.5.1 Windows.
Windows in smoke partitions shall be sealed to resist the free passage of smoke or be automatic-closing upon detection of smoke.

IBC 710.5.2.1 Louvers.
Doors in smoke partitions shall not include louvers.
IBC 710.5.2.2 Smoke and draft control doors. Where required elsewhere in the code, doors in smoke partitions shall meet the requirements for a smoke and draft control door assembly tested in accordance with UL 1784. The air leakage rate of the door assembly shall not exceed 3.0 cubic feet per minute per square foot (0.015424 m³/(s • m²)) of door opening at 0.10 inch (24.9 Pa) of water for both the ambient temperature test and the elevated temperature exposure test. Installation of smoke doors shall be in accordance with NFPA 105.
Group I-2  Construction

IBC 710.5.2.3 Self- or automatic-closing doors.
Where required elsewhere in the code, doors in smoke partitions shall be self- or automatic-closing by smoke detection in accordance with Section 716.5.9.3.

IBC 710.6 Penetrations.
The space around penetrating items shall be filled with an approved material to limit the free passage of smoke.

IBC 710.7 Joints.
Joints shall be filled with an approved material to limit the free passage of smoke.
IBC 710.8 Ducts and air transfer openings.
The space around a duct penetrating a smoke partition shall be filled with an *approved* material to limit the free passage of smoke. Air transfer openings in smoke partitions shall be provided with a *smoke damper* complying with Section 717.3.2.2.

**Exception:** Where the installation of a *smoke damper* will interfere with the operation of a required smoke control system in accordance with Section 909, *approved* alternative protection shall be utilized.
1103.4 Vertical openings.
Interior vertical shafts, including but not limited to stairways, elevator hoistways, service and utility shafts, that connect two or more stories of a building, shall be enclosed or protected as specified in Sections 1103.4.1 through 1103.4.7.

1103.4.1 Group I occupancies.
In Group I occupancies, interior vertical openings connecting two or more stories shall be protected with 1-hour fire-resistance-rated construction.

RETROACTIVE REQUIREMENT
IBC 703.7 Marking and identification.

Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:

1. Be located in accessible concealed floor, floor-ceiling or attic spaces;
2. Be located within 15 feet (4572 mm) of the end of each wall and at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition; and
3. Include lettering not less than 3 inches (76 mm) in height with a minimum $\frac{3}{8}$ inch (9.5 mm) stroke in a contrasting color incorporating the suggested wording. "FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS" or other wording.
Group I-2 Construction

IBC 703.7 Marking and identification.
Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:
Group I-2

**Construction**

**IBC 407.4 Means of egress.**
Group I-2 occupancies shall be provided with means of egress complying with Chapter 10 and Sections 407.4.1 through 407.4.3.

**IBC 407.4.1 Direct access to a corridor.**
Habitable rooms in Group I-2 occupancies shall have an exit access door leading directly to a corridor.

**Exceptions:**
1. Rooms with exit doors opening directly to the outside at ground level.
2. Rooms arranged as care suites complying with Section 407.4.3.
Group I-2  Construction

IBC 407.4.1.1 Locking devices.
Locking devices that restrict access to a care recipient’s room from the corridor and that are operable only by staff from the corridor side shall not restrict the means of egress from the care recipient’s room.

Exceptions:
1. This section shall not apply to rooms in psychiatric treatment and similar care areas.
2. Locking arrangements in accordance with Section 1008.1.9.6.
Group I-2  Construction

IBC 407.4.2 Travel distance.
The travel distance between any point in a Group I-2 occupancy sleeping room and an exit access door in that room shall be not greater than 50 feet (15 240 mm).
Group I-2  Construction

IBC 407.4.3 Group I-2 care suites. Care suites in Group I-2 shall comply with Section 407.4.3.1 through 407.4.3.4 and either Section 407.4.3.5 or 407.4.3.6.

IBC 407.4.3.1 Exit access through care suites. Exit access from all other portions of a building not classified as a care suite shall not pass through a care suite. In a care suite required to have more than one exit, one exit access is permitted to pass through an adjacent care suite provided all of the other requirements of Sections 407.4 and 1014.2 are satisfied.
**Group I-2 Construction**

**IBC 407.4.3 Group I-2 care suites.**
*Care suites* in Group I-2 shall comply with Section 407.4.3.1 through 407.4.3.4 and either Section 407.4.3.5 or 407.4.3.6.

**IBC 407.4.3.2 Separation.**
*Care suites* shall be separated from other portions of the building by a smoke partition complying with Section 710.
Group I-2

**Construction**

**IBC 407.4.3** Group I-2 care suites.
Care suites in Group I-2 shall comply with Section 407.4.3.1 through 407.4.3.4 and either Section 407.4.3.5 or 407.4.3.6.

**IBC 407.4.3.3** One intervening room.
For rooms other than sleeping rooms located within a *care suite*, *exit access* travel from the *care suite* shall be permitted through one intervening room where the travel distance to the *exit access* door from the *care suite* is not greater than 100 feet (30 480 mm).
IBC 407.4.3 Group I-2 care suites.
Care suites in Group I-2 shall comply with Section 407.4.3.1 through 407.4.3.4 and either Section 407.4.3.5 or 407.4.3.6.

IBC 407.4.3.4 Two intervening rooms.
For rooms other than sleeping rooms located within a care suite, exit access travel within the care suite shall be permitted through two intervening rooms where the travel distance to the exit access door from the care suite is not greater than 50 feet (15 240 mm).
IBC 407.4.3 Group I-2 care suites.  
*Care suites* in Group I-2 shall comply with Section 407.4.3.1 through 407.4.3.4 and either Section 407.4.3.5 or 407.4.3.6.

IBC 407.4.3.5 Care suites containing sleeping room areas.  
Sleeping rooms shall be permitted to be grouped into *care suites* with one intervening room if one of the following conditions is met:

1. The intervening room within the *care suite* is not used as an *exit access* for more than eight care recipient beds.
2. The arrangement of the *care suite* allows for direct and constant visual supervision by care providers.
Group I-2  Construction

IBC 407.4.3 Group I-2 care suites. Care suites in Group I-2 shall comply with Section 407.4.3.1 through 407.4.3.4 and either Section 407.4.3.5 or 407.4.3.6.

IBC 407.4.3.6 Care suites not containing sleeping rooms. Areas not containing sleeping rooms, but only treatment areas and the associated rooms, spaces or circulation space shall be permitted to be grouped into care suites and shall conform to the limitations in Section 407.4.3.6.1 and 407.4.3.6.2.
Group I-2

Construction

IBC 407.5 Smoke barriers. Smoke barriers shall be provided to subdivide every story used by persons receiving care, treatment or sleeping and to divide other stories with an occupant load of 50 or more persons, into no fewer than two smoke compartments. Such stories shall be divided into smoke compartments with an area of not more than 22,500 square feet (2092 m²) and the travel distance from any point in a smoke compartment to a smoke barrier door shall be not greater than 200 feet (60 960 mm). The smoke barrier shall be in accordance with Section 709.
Group I-2 Construction

IBC 709.2 Materials.
Smoke barriers shall be of materials permitted by the building type of construction.

IBC 709.3 Fire-resistance rating.
A 1-hour fire-resistance rating is required for smoke barriers.
Group I-2 Construction

IBC 709.4 Continuity. Smoke barriers shall form an effective membrane continuous from outside wall to outside wall and from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces, such as those found above suspended ceilings, and interstitial structural and mechanical spaces. The supporting construction shall be protected to afford the required fire-resistance rating of the wall or floor supported in buildings of other than Type IIB, IIIB or VB construction.
Group I-2  Construction

IBC 709.4 Continuity.
Exceptions:

1. Smoke-barrier walls are not required in interstitial spaces where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to that provided by the smoke-barrier walls.

2. *Smoke barriers* used for elevator lobbies in accordance with Section 405.4.3, 3007.4.2 or 3008.11.2 are not required to extend from outside wall to outside wall.

3. *Smoke barriers* used for areas of refuge in accordance with Section 1007.6.2 are not required to extend from outside wall to outside wall.
Group I-2 Construction

IBC 709.5 Openings.
Openings in a smoke barrier shall be protected in accordance with Section 716.

Exceptions:
1. In Group I-2 and ambulatory care facilities, where doors are installed across corridors, a pair of opposite-swinging doors without a center mullion shall be installed having vision panels with fire-protection-rated glazing materials in fire-protection-rated frames, the area of which shall not exceed that tested. The doors shall be close fitting within operational tolerances, and shall not have undercuts in excess of $\frac{3}{4}$-inch, louvers or grilles. The doors shall have head and jamb stops, astragals or rabbets at meeting edges and shall be automatic-closing by smoke detection in accordance with Section 716.5.9.3. Where permitted by the door manufacturer’s listing, positive-latching devices are not required.
IBC 709.5 Openings.
Openings in a smoke barrier shall be protected in accordance with Section 716.

Exceptions:

2. In Group I-2 and ambulatory care facilities, horizontal sliding doors installed in accordance with Section 1008.1.4.3 and protected in accordance with Section 716.
Group I-2

**Construction**

**IBC 709.6 Penetrations.**
Penetrations of *smoke barriers* shall comply with Section 714.

**IBC 709.7 Joints.**
Joints made in or between *smoke barriers* shall comply with Section 715.

**IBC 709.8 Ducts and air transfer openings.**
Penetrations in a *smoke barrier* by ducts and air transfer openings shall comply with Section 717.
IBC 407.5.1 Refuge area.
Refuge areas shall be provided within each *smoke compartment*. The size of the refuge area shall accommodate the occupants and care recipients from the adjoining *smoke compartment*. Where a *smoke compartment* is adjoined by two or more *smoke compartments*, the minimum area of the refuge area shall accommodate the largest *occupant load* of the adjoining compartments.
Group I-2  Construction

IBC 407.5.1 Refuge area.
The size of the refuge area shall provide the following:

1. Not less than 30 net square feet (2.8 m²) for each care recipient confined to bed or litter.

2. Not less than 6 square feet (0.56 m²) for each ambulatory care recipient not confined to bed or litter and for other occupants.

Areas or spaces permitted to be included in the calculation of refuge area are *corridors*, sleeping areas, treatment rooms, lounge or dining areas and other low-hazard...
IBC 407.5.2 Independent egress.  
A means of egress shall be provided from each smoke compartment created by smoke barriers without having to return through the smoke compartment from which means of egress originated.

IBC 407.5.3 Horizontal assemblies.  
Horizontal assemblies supporting smoke barriers required by this section shall be designed to resist the movement of smoke and shall comply with Section 711.9.
IBC 407.9 Secured yards.
Grounds are permitted to be fenced and gates therein are permitted to be equipped with locks, provided that safe dispersal areas having 30 net square feet (2.8 m²) for bed and litter care recipients and 6 net square feet (0.56 m²) for ambulatory care recipients and other occupants are located between the building and the fence. Such provided safe dispersal area shall be located not less than 50 feet (15 240 mm) from the building they serve.
Group I-2

Construction

IBC 407.10 Hyperbaric facilities.
Hyperbaric facilities in Group I-2 occupancies shall meet the requirements contained in Chapter 20 of NFPA 99.

NFPA 99 Standard for Healthcare Facilities
- IBC references only Chapter 20
- IFC references NFPA 99 for its medical gas requirements (IFC 5306.4)
- SC DHEC Regulation 61-16 adopts NFPA 99 in its entirety.
Group I-2  Construction

IBC 407.10 Hyperbaric facilities. Hyperbaric facilities in Group I-2 occupancies shall meet the requirements contained in Chapter 20 of NFPA 99.

NFPA 99 Standard for Healthcare Facilities
  IBC references only Chapter 20
  IFC references NFPA 99 for its medical gas requirements (IFC 5306.4)
  SC DHEC Regulation 61-16 adopts NFPA 99 in its entirety.
1103.9 Carbon monoxide alarms.

Existing Group I or R occupancies located in a building containing a fuel-burning appliance or a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034, and be installed and maintained in accordance with NFPA 720 and the manufacturer’s instructions.
Group I-2 Construction

1103.9 Carbon monoxide alarms.

Exception: Sleeping units or dwelling units which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The sleeping unit or dwelling unit is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage;
2. The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and
3. The building is provided with a common area carbon monoxide alarm system.

RETROACTIVE REQUIREMENT
404.2 Where required.
An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

6. Group I.

404.3 Contents.
Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2.
404.4 Maintenance.
Fire safety and evacuation plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy or the physical arrangement of the building.

404.5 Availability.
Fire safety and evacuation plans shall be available in the workplace for reference and review by employees, and copies shall be furnished to the fire code official for review upon request.
405 Evacuation Drills
405.2 Frequency.
Required emergency evacuation drills shall be held at the intervals specified in Table 405.2 or more frequently where necessary to familiarize all occupants with the drill procedure.

Group I – Quarterly on all shifts – Employees
GROUP I-2
Hospitals
Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

- Ambulatory care facilities
- Clinic-outpatient
Definitions Review

HOSPITALS AND PSYCHIATRIC HOSPITALS. Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of inpatient care recipients that are incapable of self-preservation.

MEDICAL CARE. Care involving medical or surgical procedures, nursing or for psychiatric purposes.

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

HOSPITALS AND PSYCHIATRIC HOSPITALS. Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of inpatient care recipients that are incapable of self-preservation.

MEDICAL CARE. Care involving medical or surgical procedures, nursing or for psychiatric purposes.

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

Institutional Group I-2. This occupancy shall include buildings and structures used for medical care **on a 24-hour basis** for more than five persons who are not capable of self-preservation.

**AMBULATORY CARE FACILITY.** Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a **less-than-24-hour basis** to persons who are rendered incapable of self-preservation by the services provided.
903.2.2 Ambulatory care facilities.
An automatic sprinkler system shall be installed throughout the entire floor containing an ambulatory care facility where either of the following conditions exist at any time:

1. Four or more care recipients are incapable of self-preservation, whether rendered incapable by staff or staff has accepted responsibility for care recipients already incapable.
Fire Sprinklers
No requirement for Group B

Except…

903.2.2 Ambulatory care facilities.
An *automatic sprinkler system* shall be installed throughout the entire floor containing an ambulatory care facility where either of the following conditions exist at any time:

2. One or more care recipients that are incapable of self-preservation are located at other than the level of exit discharge serving such a facility.
903.2.2 Ambulatory care facilities. In buildings where ambulatory care is provided on levels other than the level of exit discharge, an automatic sprinkler system shall be installed throughout the entire floor where such care is provided as well as all floors below, and all floors between the level of ambulatory care and the nearest level of exit discharge, including the level of exit discharge.
Group B  Fire Protection

Fire Sprinklers
  No requirement for Group B
    Except…

903.2.2 Ambulatory care facilities.

This is the challenge… to ensure that an unsprinklered Urgent Care facility will not have more than 4 patients incapable of self-preservation.
GROUP B
Doctor’s Offices
Ambulatory Care
DHEC
Department of Health Facilities Construction
Introduction
Agenda

Introductions

DHFC Sections and What We Do

Regulated Heath Care Facilities Under DHFC
http://www.scdhec.gov/Agency/RegulationsAndUpdates/LawsAndRegulations/Health/

DHFC Contacts
http://www.scdhec.gov/Health/FHPF/HealthFacilityRegulationsLicensing/HealthcareFacilityConstruction/Contact/

DHFC Guidelines Manual
DHFC - Sections

Construction Section

Review plans for DHEC licensed health care facilities

- Compliance with DHEC Health Regulations
- Compliance with SC adopted building codes and standards
- We do not issue building permits; we exist to ensure that licensed facilities meet minimum regulatory standards

Inspect the construction of DHEC licensed facilities to ensure continued compliance of the building product

Introduction – Department of Health Facilities Construction
Fire and Life Safety Section

Provide on-going inspections of DHEC licensed health care facilities after construction to:

- Ensure continued compliance with DHEC Health Regulations
- Ensure continued compliance with state adopted building codes and standards
- Train facility management on life safety issues that affect residents/patients, staff, and visitors to the facility
<table>
<thead>
<tr>
<th>Regulated Facilities</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion Clinics</td>
<td>61-12</td>
</tr>
<tr>
<td>Ambulatory Surgical Facilities</td>
<td>61-91</td>
</tr>
<tr>
<td>Birthing Centers for Deliveries by Midwives</td>
<td>61-102</td>
</tr>
<tr>
<td>Community Residential Care Facilities</td>
<td>61-84</td>
</tr>
<tr>
<td>Day Care Facilities for Adults</td>
<td>61-75</td>
</tr>
<tr>
<td>Facilities that Treat Individuals for Psychoactive Substance Abuse or Dependence</td>
<td>61-93</td>
</tr>
<tr>
<td>Habilitation Centers for Persons with Intellectual Disability or Person with Related Conditions</td>
<td>61-13</td>
</tr>
<tr>
<td>Hospices</td>
<td>61-78</td>
</tr>
<tr>
<td>Hospitals and Institutional General Infirmaries</td>
<td>61-16</td>
</tr>
<tr>
<td>Nursing Homes</td>
<td>61-17</td>
</tr>
<tr>
<td>Renal Dialysis Facilities</td>
<td>61-97</td>
</tr>
<tr>
<td>Residential Treatment Facilities for Children and Adolescents</td>
<td>61-103</td>
</tr>
</tbody>
</table>
DHFC – Facilities that are not Regulated

**DHFC Does Not Regulate:**

- Physician’s Offices
- Outpatient Medical Facilities
- Psychologists’ Offices
DHFC – Contacts

Columbia
- William (Bill) McCallum – Director
- Gwen Haynes – Administration Specialist
- Arnisha Goins – Administration Specialist
- L. Ray Clark – Architect (Construction Section)

Upstate
- Mark Bishop – Architect (Construction Section)
- Michael Locklear – Fire Inspector (F&LS Section)

Midlands
- John Travis – Engineer (Construction Section)
- David Moody – Fire Inspector (F&LS Section)
DHFC – Contacts

Pee Dee
- Graham Cormack – Architect (Construction Section)

Low Country
- Elie Macaron – Architect Construction Section
- Todd McAlhany – Fire Inspector (F&LS Section)
This document provides guidance to persons external to SC DHEC regarding how to interface with the Division of Health Facilities Construction. It is a critical document for all facility owner/developers and design professionals involved in the design and/or modification to any DHEC licensed facility.

It is located at, and can be downloaded from, the following link:

Thank You!
Institutional Group I-3. This occupancy shall include buildings and structures which are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Correctional centers
Detention centers
Jails
Prerelease centers
Prisons
Reformatories
Group I-3

Institutional Group I-3. This occupancy shall include buildings and structures which are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Correctional centers
Detention centers
Jails
Prerlease centers
Prisons
Reformatories
Group I-3

Institutional Group I-3. This occupancy shall include buildings and structures which are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

- Correctional centers
- Detention centers
- Jails
- Prerelease centers
- Prisons
- Reformatories
Institutional Group I-3.
Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated below:

**Condition 1.** This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and other spaces where access or occupancy is permitted to the exterior via means of egress without restraint. A Condition 1 facility is permitted to be constructed as Group R.
Group I-3

Institutional Group I-3.
Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated below:

Condition 2. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked exits.
Institutional Group I-3.
Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated below:

**Condition 3.** This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual sleeping units and group activity spaces, where egress is impeded by remote-controlled release of means of egress from such smoke compartment to another smoke compartment.
Group I-3

Institutional Group I-3. Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated below:

**Condition 4.** This occupancy condition shall include buildings in which **free movement is restricted from an occupied space.** Remote-controlled release is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.
Group I-3

Institutional Group I-3.
Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated below:

**Condition 5.** This occupancy condition shall include buildings in which **free movement is restricted from an occupied space.** Staff-controlled **manual release** is provided to permit movement from sleeping units, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.
903.2.6 Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4 Sprinkler system supervision and alarms. All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.

Exceptions: 1. Automatic sprinkler systems protecting one- and two-family dwellings.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4 Sprinkler system supervision and alarms.
All valves controlling the water supply for *automatic sprinkler systems*, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a *listed fire alarm control unit*.

Exceptions:
1. *Automatic sprinkler systems* protecting one- and two-family *dwellings*. 

903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4 Sprinkler system supervision and alarms.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4.1 Monitoring.
Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
Group I-3  Fire Protection

903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4.1 Monitoring.
Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.2 Alarms.
An approved audible device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

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907.2.6 Group I.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.
907.2.6.3 Group I-3 occupancies. Group I-3 occupancies shall be equipped with a manual fire alarm system and automatic smoke detection system installed for alerting staff.

907.2.6.3.1 System initiation. Actuation of an automatic fire-extinguishing system, automatic sprinkler system, a manual fire alarm box or a fire detector shall initiate an approved fire alarm signal which automatically notifies staff.
907.2.6.3.2 Manual fire alarm boxes.
Manual fire alarm boxes are not required to be located in accordance with Section 907.4.2 where the fire alarm boxes are provided at staff-attended locations having direct supervision over areas where manual fire alarm boxes have been omitted.

907.2.6.3.2.1 Manual fire alarms boxes in detainee areas.
Manual fire alarm boxes are allowed to be locked in areas occupied by detainees, provided that staff members are present within the subject area and have keys readily available to operate the manual fire alarm boxes.
907.2.6.3.3 Automatic smoke detection system.
An automatic smoke detection system shall be installed throughout resident housing areas, including sleeping units and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

Exceptions:
1. Other approved smoke detection arrangements providing equivalent protection, including, but not limited to, placing detectors in exhaust ducts from cells or behind protective guards listed for the purpose, are allowed when necessary to prevent damage or tampering.
907.2.6.3.3 Automatic smoke detection system. An automatic smoke detection system shall be installed throughout resident housing areas, including sleeping units and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

Exceptions:

2. Sleeping units in Use Conditions 2 and 3 as described in Section 308 of the International Building Code.

3. Smoke detectors are not required in sleeping units with four or fewer occupants in smoke compartments that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
An automatic and manual fire alarm system shall be installed in existing Group I-3 occupancies in accordance with Section 907.2.6.3.

**RETROACTIVE REQUIREMENT**
906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

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

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

3. In areas where flammable or combustible liquids are stored, used or dispensed.
906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1.

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

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.
904.2.1 Commercial hood and duct systems. Each required commercial kitchen exhaust hood and duct system required by Section 609 to have a Type I hood shall be protected with an approved automatic fire-extinguishing system installed in accordance with this code.
609.1 General.
Commercial kitchen exhaust hoods shall comply with the requirements of the *International Mechanical Code*.

609.2 Where required.
A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors.
1004.1 Design occupant load.
In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section.

<table>
<thead>
<tr>
<th>Dormitories</th>
<th>50 gross</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional areas</td>
<td></td>
</tr>
<tr>
<td>Inpatient treatment areas</td>
<td>240 gross</td>
</tr>
<tr>
<td>Outpatient areas</td>
<td>100 gross</td>
</tr>
<tr>
<td>Sleeping areas</td>
<td>120 gross</td>
</tr>
</tbody>
</table>
1015.1 Exits or exit access doorways from spaces. Two exits or exit access doorways from any space shall be provided where one of the following conditions exists:

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

### [B] TABLE 1015.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, E, F, M, U</td>
<td>49</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>3</td>
</tr>
<tr>
<td>H-4, H-5, I-1, I-2, I-3, I-4, R</td>
<td>10</td>
</tr>
<tr>
<td>S</td>
<td>29</td>
</tr>
</tbody>
</table>
Group I-3

1008.1.2 Door swing.
Egress doors shall be of the pivoted or side-hinged swinging type.

Doors shall swing in the direction of egress travel where serving a room or area containing an *occupant load* of 50 or more persons or a Group H occupancy.
Group I-3

1008.1.1 Size of doors.
The minimum width of each door opening shall be sufficient for the *occupant load* thereof and shall provide a clear width of 32 inches.

*Exception:*
2. Door openings to resident *sleeping units* in Group I-3 occupancies shall have a clear width of not less than 28 inches (711 mm).
1008.1.9.3 Locks and latches.
Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.

1008.1.9.5 Unlatching.
The unlatching of any door or leaf shall not require more than one operation.

Exceptions:
1. Places of detention or restraint.
Group I-3

Egress

1008.1.9.10 Locking arrangements in correctional facilities.

In occupancies in Groups A-2, A-3, A-4, B, E, F, I-2, I-3, M and S within correctional and detention facilities, doors in means of egress serving rooms or spaces occupied by persons whose movements are controlled for security reasons shall be permitted to be locked when equipped with egress control devices which shall unlock manually and by at least one of the following means:

1. Activation of an automatic sprinkler system installed in accordance with Section 903.3.1.1;

2. Activation of an approved manual alarm box; or

3. A signal from a constantly attended location.
604.2.16 Group I-3 occupancies. Power-operated sliding doors or power-operated locks for swinging doors in Group I-3 occupancies shall be operable by a manual release mechanism at the door, and either emergency power or a remote mechanical operating release shall be provided.

**Exception:** Emergency power is not required in facilities where provisions for remote locking and unlocking of occupied rooms in Occupancy Condition 4 are not required as set forth in the *International Building Code*. 
EXIT Signs
1011.1 Where required.
Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:
1. Exit signs are not required in rooms or areas that require only one exit or exit access.  (2 exits required when more than 10 people)
EXIT Signs
1011.1 Where required.
Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:
4. Exit signs are not required in dayrooms, sleeping rooms or dormitories in occupancies in Group I-3.
Group I-3

1006.1 Illumination required.
The *means of egress*, including the *exit discharge*, shall be illuminated at all times the building space served by the *means of egress* is occupied.

Exceptions:
1006.3 Emergency power for illumination.
The power supply for *means of egress* illumination shall normally be provided by the premises’ electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.
1104.4 Power source.
Where emergency illumination is required in Section 1104.5, exit signs shall be visible under emergency illumination conditions.

1104.5 Illumination emergency power.
The power supply for means of egress illumination shall normally be provided by the premises’ electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

5. Group I.

RETROACTIVE REQUIREMENT
1018.2 Width.
The minimum width of *corridors* specified in Table 1018.2 shall be as determined in Section 1005.1.

[B] TABLE 1018.2 MINIMUM CORRIDOR WIDTH

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WIDTH (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any facilities not listed below</td>
<td>44 inches</td>
</tr>
<tr>
<td>Access to and utilization of mechanical, plumbing or electrical systems or equipment</td>
<td>24 inches</td>
</tr>
<tr>
<td>With a required occupancy capacity less than 50</td>
<td>36 inches</td>
</tr>
<tr>
<td>Within a dwelling unit</td>
<td>36 inches</td>
</tr>
<tr>
<td>In Group E with a corridor having a required capacity of 100 or more</td>
<td>72 inches</td>
</tr>
<tr>
<td>In corridors and areas serving gurney traffic in occupancies where patients receive outpatient medical care, which causes the patient to be incapable of self-preservation</td>
<td>72 inches</td>
</tr>
<tr>
<td>Group I-2 in areas where required for bed movement</td>
<td>96 inches</td>
</tr>
</tbody>
</table>
Group I-3

1018.1 Construction.
Corridors shall be fire-resistance rated in accordance with Table 1018.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 of the International Building Code for fire partitions.

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>OCCUPANT LOAD SERVED BY CORRIDOR</th>
<th>REQUIRED FIRE-RESISTANCE RATING (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without sprinkler system</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>H-4, H-5</td>
<td>Greater than 30</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>A, B, E, F, M, S, U</td>
<td>Greater than 30</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>Greater than 10</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-2&lt;sup&gt;a&lt;/sup&gt;, I-4</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-1, I-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
</tbody>
</table>

<sup>a</sup> For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3 of the International Building Code.
<sup>b</sup> For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.8 of the International Building Code.
<sup>c</sup> Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.
IBC 408.3 Means of egress.
Except as modified or as provided for in this section, the means of egress provisions of Chapter 10 shall apply.

IBC 408.3.1 Door width.
Doors to resident sleeping units shall have a clear width of not less than 28 inches (711 mm).

IBC 408.3.2 Sliding doors.
Where doors in a means of egress are of the horizontal-sliding type, the force to slide the door to its fully open position shall be not greater than 50 pounds (220 N) with a perpendicular force against the door of 50 pounds (220 N).
IBC 408.3.3 Guard tower doors.
A hatch or trap door not less than 16 square feet (610 m²) in area through the floor and having dimensions of not less than 2 feet (610 mm) in any direction shall be permitted to be used as a portion of the *means of egress* from guard towers.

IBC 408.3.4 Spiral stairways.
*Spiral stairways* that conform to the requirements of Section 1009.12 are permitted for access to and between staff locations.

IBC 408.3.5 Ship ladders.
Ship ladders shall be permitted for egress from control rooms or elevated facility observation rooms in accordance with Section 1009.14.
Group I-3  

Construction

IBC 408.3.6 Exit discharge.  
Exits are permitted to discharge into a fenced or walled courtyard. Enclosed yards or courts shall be of a size to accommodate all occupants, be located not less than 50 feet (15 240 mm) from the building and have an area of not less than 15 square feet (1.4 m²) per person.

IBC 408.3.7 Sallyports.  
A sallyport shall be permitted in a means of egress where there are provisions for continuous and unobstructed passage through the sallyport during an emergency egress condition.
Group I-3

Construction

IBC 408.4 Locks.
Egress doors are permitted to be locked in accordance with the applicable use condition. Doors from a refuge area to the outside are permitted to be locked with a key in lieu of locking methods described in Section 408.4.1. The keys to unlock the exterior doors shall be available at all times and the locks shall be operable from both sides of the door.
IBC 408.4.1 Remote release.
Remote release of locks on doors in a means of egress shall be provided with reliable means of operation, remote from the resident living areas, to release locks on all required doors. In Occupancy Conditions 3 or 4, the arrangement, accessibility and security of the release mechanisms required for egress shall be such that with the minimum available staff at any time, the lock mechanisms are capable of being released within 2 minutes.

Exception: Provisions for remote locking and unlocking of occupied rooms in Occupancy Condition 4 are not required provided that not more than 10 locks are necessary to be unlocked in order to move occupants from one smoke compartment to a refuge area within 3 minutes. The opening of necessary locks shall be accomplished with not more than two separate keys.
Group I-3 Construction

IBC 408.4.2 Power-operated doors and locks. Power-operated sliding doors or power-operated locks for swinging doors shall be operable by a manual release mechanism at the door, and either emergency power or a remote mechanical operating release shall be provided.

Exception: Emergency power is not required in facilities with 10 or fewer locks complying with the exception to Section 408.4.1.
IBC 408.5 Protection of vertical openings.
Any vertical opening shall be protected by a shaft enclosure in accordance with Section 713, or shall be in accordance with Section 408.5.1.

IBC 408.5.1 Floor openings.
Openings in floors within a housing unit are permitted without a shaft enclosure, provided all of the following conditions are met:
1. The entire normally occupied areas so interconnected are open and unobstructed so as to enable observation of the areas by supervisory personnel;
2. Means of egress capacity is sufficient for all occupants from all interconnected cell tiers and areas;
**Group I-3 Construction**

**IBC 408.5 Protection of vertical openings.** Any vertical opening shall be protected by a *shaft enclosure* in accordance with Section 713, or shall be in accordance with Section 408.5.1.

**IBC 408.5.1 Floor openings.** Openings in floors within a *housing unit* are permitted without a *shaft enclosure*, provided all of the following conditions are met:

3. The height difference between the floor levels of the highest and lowest *cell tiers* shall not exceed 23 feet (7010 mm); and

4. Egress from any portion of the *cell tier* to an *exit* or *exit access* door shall not require travel on more than one additional floor level within the *housing unit*. 
IBC 408.5 Protection of vertical openings.
Any vertical opening shall be protected by a *shaft enclosure* in accordance with Section 713, or shall be in accordance with Section 408.5.1.

IBC 408.5.2 Shaft openings in communicating floor levels.
Where a floor opening is permitted between communicating floor levels of a *housing unit* in accordance with Section 408.5.1, plumbing chases serving vertically staked individual *cells* contained with the *housing unit* shall be permitted without a *shaft enclosure*. 
Group I-3  Construction

IBC 408.6 Smoke barrier. Occupancies in Group I-3 shall have smoke barriers complying with Sections 408.8 and 709 to divide every story occupied by residents for sleeping, or any other story having an occupant load of 50 or more persons, into no fewer than two smoke compartments.

IBC 408.6.1 Smoke compartments. The number of residents in any smoke compartment shall be not more than 200. The travel distance to a door in a smoke barrier from any room door required as exit access shall be not greater than 150 feet (45 720 mm). The travel distance to a door in a smoke barrier from any point in a room shall be not greater than 200 feet (60 960 mm).
Group I-3

Construction

IBC 408.6.2 Refuge area.
Not less than 6 net square feet (0.56 m²) per occupant shall be provided on each side of each smoke barrier for the total number of occupants in adjoining smoke compartments. This space shall be readily available wherever the occupants are moved across the smoke barrier in a fire emergency.

IBC 408.6.3 Independent egress.
A means of egress shall be provided from each smoke compartment created by smoke barriers without having to return through the smoke compartment from which means of egress originates.
408.9 Windowless buildings.
For the purposes of this section, a windowless building or portion of a building is one with nonopenable windows, windows not readily breakable or without windows.

Windowless buildings shall be provided with an engineered smoke control system to provide a tenable environment for exiting from the smoke compartment in the area of fire origin in accordance with Section 909 for each windowless smoke compartment.
1103.9 Carbon monoxide alarms.
Existing Group I or R occupancies located in a building containing a fuel-burning appliance or a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034, and be installed and maintained in accordance with NFPA 720 and the manufacturer’s instructions.
1103.9 Carbon monoxide alarms.

Exception: Sleeping units or dwelling units which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The sleeping unit or dwelling unit is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage;
2. The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and
3. The building is provided with a common area carbon monoxide alarm system.

RETROACTIVE REQUIREMENT
404.2 Where required.
An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

6. Group I.

404.3 Contents.
Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2.
Group I-3

404.4 Maintenance.
Fire safety and evacuation plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy or the physical arrangement of the building.

404.5 Availability.
Fire safety and evacuation plans shall be available in the workplace for reference and review by employees, and copies shall be furnished to the fire code official for review upon request.
Emergency Planning

Group I-3

405 Evacuation Drills
405.2 Frequency.
Required emergency evacuation drills shall be held at the intervals specified in Table 405.2 or more frequently where necessary to familiarize all occupants with the drill procedure.

Group I – Quarterly on all shifts – Employees
Group I-4

Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive *custodial care* for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care  
Child day care
Group I-4

Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care
Child day care
Group I-4

Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive *custodial care for fewer than 24 hours per day* by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

- Adult day care
- Child day care
Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Classification as Group E. A child day care facility that provides care for more than five but no more than 100 children 2½ years or less of age, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.
Group I-4

Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Within a place of religious worship. Rooms and spaces within places of religious worship providing such care during religious functions shall be classified as part of the primary occupancy.
Group I-4

Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Five or fewer occupants receiving care. A facility having five or fewer persons receiving custodial care shall be classified as part of the primary occupancy.
Group I-4

Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Five or fewer occupants receiving care in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the International Residential Code.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

**Exceptions:**
3. An *automatic sprinkler system* is not required where day care facilities are at the *level of exit discharge* and where every room where care is provided has at least one exterior *exit* door.

4. In buildings where Group I-4 day care is provided on levels other than the *level of exit discharge*, an *automatic sprinkler system* in accordance with Section 903.3.1.1 shall be installed on the entire floor where care is provided and all floors between the level of care and the *level of exit discharge*, all floors below the level of exit discharge, other than areas classified as an open parking garage.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

Exceptions:
3. An *automatic sprinkler system* is not required where day care facilities are at the *level of exit discharge* and where every room where care is provided has at least one exterior *exit* door.

4. In buildings where Group I-4 day care is provided on levels other than the *level of exit discharge*, an *automatic sprinkler system* in accordance with Section 903.3.1.1 shall be installed on the entire floor where care is provided and all floors between the level of care and the *level of exit discharge*, all floors below the level of exit discharge, other than areas classified as an open parking garage.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4 Sprinkler system supervision and alarms.
All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.

Exceptions:
1. Automatic sprinkler systems protecting one- and two-family dwellings.
903.2.6 Group I. An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4 Sprinkler system supervision and alarms. All valves controlling the water supply for *automatic sprinkler systems*, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a *listed fire alarm control unit*.

Exceptions:
1. *Automatic sprinkler systems* protecting one- and two-family *dwellings*. 
903.2.6 Group I. An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4 Sprinkler system supervision and alarms.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.1 Monitoring.
Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved* supervising station or, when *approved* by the *fire code official*, shall sound an audible signal at a constantly attended location.
Group I-4 Fire Protection

903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.1 Monitoring.
Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved supervising station* or, when *approved* by the *fire code official*, shall sound an audible signal at a constantly attended location.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.2 Alarms.
An approved audible device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.
903.2.6 Group I.
An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

903.4.2 Alarms.
An approved audible device, located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.
903.2.6 Group I.
An *automatic sprinkler system* shall be provided throughout buildings with a Group I *fire area*.

903.4.2 Alarms.
An approved audible device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. *Where a fire alarm system is installed*, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.
907.2.6 Group I.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group I occupancies.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.
907.2.6 Group I.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

907.5 Occupant notification systems.
A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:
1. Automatic fire detectors.
2. Automatic sprinkler system workflow devices.
4. Automatic fire-extinguishing systems.
906.1 Where required.
Portable fire extinguishers shall be installed in the following locations.

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

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

3. In areas where flammable or combustible liquids are stored, used or dispensed.
906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1.

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

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.
904.2.1 Commercial hood and duct systems. Each required commercial kitchen exhaust hood and duct system required by Section 609 to have a Type I hood shall be protected with an approved automatic fire-extinguishing system installed in accordance with this code.
609.1 General.
Commercial kitchen exhaust hoods shall comply with the requirements of the *International Mechanical Code*.

609.2 Where required.
A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors.
1004.1 Design occupant load.
In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be determined in accordance with this section.

| Day care | 35 net |
Group I-4

Egress

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

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

[B] TABLE 1015.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, E, F, M, U</td>
<td>49</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>3</td>
</tr>
<tr>
<td>H-4, H-5, I-1, I-2, I-3, I-4, R</td>
<td>10</td>
</tr>
<tr>
<td>S</td>
<td>29</td>
</tr>
</tbody>
</table>
Group I-4

Egress

1008.1.2 Door swing.
Egress doors shall be of the pivoted or side-hinged swinging type.

Doors shall swing in the direction of egress travel where serving a room or area containing an occupant load of 50 or more persons or a Group H occupancy.
1008.1.1 Size of doors.
The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of 32 inches.

1008.1.9 Door operations.
Except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.
Group I-4

1008.1.9.1 Hardware.
Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the *International Building Code* shall not require tight grasping, tight pinching or twisting of the wrist to operate.
Group I-4

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

1008.1.9.5 Unlatching.
The unlatching of any door or leaf shall not require more than one operation.
1008.1.9.7 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.
1008.1.9.7 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.
1008.1.9.7 Delayed egress locks.

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

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

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

4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.
Group I-4

1008.1.9.7 Delayed egress locks.

Where approved, a delay of not more than 30 seconds is permitted.

5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6. Emergency lighting shall be provided at the door.
Group I-4

1018.2 Width.
The minimum width of *corridors* specified in Table 1018.2 shall be as determined in Section 1005.1.

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WIDTH (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any facilities not listed below</td>
<td>44 inches</td>
</tr>
<tr>
<td>Access to and utilization of mechanical, plumbing or electrical systems or equipment</td>
<td>24 inches</td>
</tr>
<tr>
<td>With a required occupancy capacity less than 50</td>
<td>36 inches</td>
</tr>
<tr>
<td>Within a dwelling unit</td>
<td>36 inches</td>
</tr>
<tr>
<td>In Group E with a corridor having a required capacity of 100 or more</td>
<td>72 inches</td>
</tr>
<tr>
<td>In corridors and areas serving gurney traffic in occupancies where patients receive outpatient medical care, which causes the patient to be incapable of self-preservation</td>
<td>72 inches</td>
</tr>
<tr>
<td>Group I-2 in areas where required for bed movement</td>
<td>96 inches</td>
</tr>
</tbody>
</table>
1018.1 Construction. *Corridors* shall be fire-resistance rated in accordance with Table 1018.1. The *corridor* walls required to be fire-resistance rated shall comply with Section 708 of the *International Building Code* for *fire partitions*.

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>OCCUPANT LOAD SERVED BY CORRIDOR</th>
<th>REQUIRED FIRE-RESISTANCE RATING (hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H-1, H-2, H-3</td>
<td>All</td>
<td>Without sprinkler system</td>
<td></td>
</tr>
<tr>
<td>H-4, H-5</td>
<td>Greater than 30</td>
<td>Not Permitted</td>
<td></td>
</tr>
<tr>
<td>A, B, E, F, M, S, U</td>
<td>Greater than 30</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Greater than 10</td>
<td>Not Permitted</td>
<td></td>
</tr>
<tr>
<td>I-2, I-4</td>
<td>All</td>
<td>Not Permitted</td>
<td></td>
</tr>
<tr>
<td>I-1, I-3</td>
<td>All</td>
<td>Not Permitted</td>
<td></td>
</tr>
</tbody>
</table>

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a. For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3 of the *International Building Code*.
b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.8 of the *International Building Code*.
c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.
EXIT Signs
1011.1 Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:
1. Exit signs are not required in rooms or areas that require only one exit or exit access. (2 exits required when more than 10 people)
Group I-4

1006.1 Illumination required.
The *means of egress*, including the *exit discharge*, shall be illuminated at all times the building space served by the *means of egress* is occupied.

Exceptions:
1006.3 Emergency power for illumination.
The power supply for *means of egress* illumination shall normally be provided by the premises’ electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.
Group I-4

1104.4 Power source.
Where emergency illumination is required in Section 1104.5, exit signs shall be visible under emergency illumination conditions.

1104.5 Illumination emergency power.
The power supply for means of egress illumination shall normally be provided by the premises’ electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

5. Group I.

RETROACTIVE REQUIREMENT
Group I-4  

1103.9 Carbon monoxide alarms. 
Existing Group I or R occupancies located in a building containing a fuel-burning appliance or a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034, and be installed and maintained in accordance with NFPA 720 and the manufacturer’s instructions.

RETROACTIVE REQUIREMENT
1103.9 Carbon monoxide alarms.

**Exception:** Sleeping units or dwelling units which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The *sleeping unit* or *dwelling unit* is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage;
2. The *sleeping unit* or *dwelling unit* is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and
3. The building is provided with a common area carbon monoxide alarm system.

**RETROACTIVE REQUIREMENT**
404.2 Where required. An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

6. Group I.

404.3 Contents. Fire safety and evacuation plan contents shall be in accordance with Sections 404.3.1 and 404.3.2.
404.4 Maintenance. Fire safety and evacuation plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy or the physical arrangement of the building.

404.5 Availability. Fire safety and evacuation plans shall be available in the workplace for reference and review by employees, and copies shall be furnished to the fire code official for review upon request.
Group I-4

405 Evacuation Drills
405.2 Frequency.
Required emergency evacuation drills shall be held at the intervals specified in Table 405.2 or more frequently where necessary to familiarize all occupants with the drill procedure.

Group I – Quarterly on all shifts – Employees
STATE OF SOUTH CAROLINA
OFFICE OF STATE FIRE MARSHAL

SOUTH CAROLINA
STATE FIRE

GROUP I-4
Day Cares
Institutional Occupancies

- Review:
  - Defined Institutional Occupancies Groups
  - Reviewed IFC and IBC requirements specific to Institutional Occupancies
  - Discussed DHEC’s role in Fire and Life Safety of Healthcare Facilities
Institutional Occupancies

Course Objectives:

• Discussed Department of Corrections role in Fire and Life Safety of State and local detention facilities.

• Discussed occurrences of fires in institutional occupancies in SC.

• Discussed historical events and lessons learned.
“Defend In Place”
2012 IFC Overview of Institutional Occupancies

ICC Course No.
ICC CEU’s = 0.50
SCFA Course 8506-15-0

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