

# 2021 Virginia Construction Code

## CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

### SECTION 407 GROUP I-2

#### 407.1 General.

Occupancies in Group I-2 shall comply with the provisions of [Sections 407.1](#) through [407.11](#) and other applicable provisions of this code.

#### 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 [407.2.6](#).

##### 407.2.1 Waiting and similar areas.

Waiting areas, public-use areas or group meeting 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.
2. The open space is protected by an *automatic* fire detection system installed in accordance with [Section 907](#).
3. The *corridors* onto which the spaces open, in the same *smoke compartment*, are protected by an *automatic* fire detection system installed in accordance with [Section 907](#), or the *smoke compartment* in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with [Section 903.3.2](#).
4. The space is arranged so as not to obstruct access to the required *exits*.

##### 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*.

##### 407.2.3 Psychiatric treatment areas.

Areas wherein psychiatric care recipients who are *incapable 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:

1. Each area does not exceed 1,500 square feet (140 m<sup>2</sup>).
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*.
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*.
6. The walls and ceilings of the space are constructed as required for *corridors*.

##### 407.2.4 Gift shops.

Gift shops and associated storage that are less than 500 square feet (455 m<sup>2</sup>) in area shall be permitted to be open to the *corridor* where such spaces are constructed as required for *corridors*.

##### 407.2.5 Nursing home housing units.

In Group I-2, Condition 1 occupancies, in areas where *nursing home* residents are housed, shared living spaces, group meeting or multipurpose therapeutic spaces shall be permitted to be open to the *corridor*, where all of the following criteria are met:

1. The walls and ceilings of the space are constructed as required for *corridors*.
2. The spaces are not occupied as resident sleeping rooms, treatment rooms, incidental uses in accordance with [Section 509](#), or hazardous uses.
3. The open space is protected by an *automatic* fire detection system installed in accordance with [Section 907](#).
4. 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](#).
5. The space is arranged so as not to obstruct access to the required *exits*.

##### 407.2.6 Nursing home cooking facilities.

In Group I-2, Condition 1 occupancies, rooms or spaces that contain a cooking facility with domestic cooking appliances shall be permitted to be open to the *corridor* where all of the following criteria are met:

Copyright © 2024 International Code Council, Inc., or its licensors (ALL RIGHTS RESERVED).

Accessed by Venkatesh Shanmugam on 11/13/2024 pursuant to License Agreement with ICC. No further reproduction or distribution authorized. Any Unauthorized reproduction or distribution is a violation of the federal copyright, and subject to civil and criminal penalties thereunder.

1. The number of care recipients housed in the *smoke compartment* shall not be greater than 30.
2. The number of care recipients served by the cooking facility shall not be greater than 30.
3. Not more than one cooking facility area shall be permitted in a *smoke compartment*.
4. The *corridor* shall be a clearly identified space delineated by construction or floor pattern, material or color.
5. The space containing the domestic cooking facility shall be arranged so as not to obstruct access to the required *exit*.
6. The cooking appliance shall comply with [Section 407.2.7](#).

#### **407.2.7 Domestic cooking appliances.**

In Group I-2 occupancies, installation of cooking appliances used in domestic cooking facilities shall comply with all of the following:

1. The types of cooking appliances permitted shall be limited to ovens, cooktops, ranges, warmers and microwaves.
2. Domestic cooking hoods installed and constructed in accordance with [Section 505](#) of the *International Mechanical Code* shall be provided over cooktops and ranges.
3. Cooktops and ranges shall be protected in accordance with [Section 904.14](#).
4. A shut-off for the fuel and electrical power supply to the cooking equipment shall be provided in a location to which only staff has access.
5. A timer shall be provided that automatically deactivates the cooking appliances within a period of not more than 120 minutes.
6. A portable fire extinguisher shall be provided. Installation shall be in accordance with [Section 906](#), and the extinguisher shall be located within a 30-foot (9144 mm) distance of travel from each domestic cooking appliance.

##### **Exceptions:**

1. Cooktops and ranges located within smoke compartments with no patient sleeping or patient care areas are not required to comply with this section.
2. Cooktops and ranges used for care recipient training or nutritional counseling are not required to comply with Item 3 of this section.

#### **407.3 Corridor wall construction.**

Corridor walls shall be constructed as *smoke partitions* in accordance with [Section 710](#).

##### **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](#).

##### **407.3.1.1 Door construction.**

Doors in *corridors* not required to have a *fire protection rating* shall comply with the following:

1. Solid doors shall have close-fitting operational tolerances, head and jamb stops.
2. Dutch-style doors shall have an astragal, rabbet or bevel at the meeting edges of the upper and lower door sections. Both the upper and lower door sections shall have latching hardware. Dutch-style doors shall have hardware that connects the upper and lower sections to function as a single leaf.
3. To provide makeup air for exhaust systems in accordance with [Section 1020.6](#), Exception 1, doors are permitted to have louvers or to have a clearance between the bottom of the door and the floor surface that is  $\frac{2}{3}$  inch (19.1 mm) maximum.

#### **407.4 Means of egress.**

Group I-2 occupancies shall be provided with means of egress complying with [Sections 407.4.1 through 407.4.4](#) and Chapter 10.

##### **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 407.4.4](#).

##### **407.4.1.1 Special locking arrangement.**

Means of egress doors shall be permitted to contain locking devices restricting the means of egress in areas in which the clinical needs of the patients require restraint of movement, where all of the following conditions are met:

Copyright © 2024 International Code Council, Inc., or its licensors (ALL RIGHTS RESERVED).

Accessed by Venkatesh Shanmugam on 11/13/2024 pursuant to License Agreement with ICC. No further reproduction or distribution authorized. Any Unauthorized reproduction or distribution is a violation of the federal copyright, and subject to civil and criminal penalties thereunder.

1. The locks release upon activation of the fire alarm system or the loss of power.
2. The *building* is equipped with an approved automatic sprinkler system in accordance with [Section 903.3.1.1](#).
3. A manual release device is provided at a nursing station responsible for the area.
4. A key-operated switch or other manual device is provided adjacent to each door equipped with the locking device. Such switch or other device, when operated, shall result in direct interruption of power to the lock—*independent of the control system electronics*
5. All staff shall have keys or other means to unlock the switch or other device or each door provided with the locking device.

#### **407.4.2 Distance of travel.**

The distance of travel between any point in a Group I-2 occupancy sleeping room, not located in a *care suite*, and an *exit access door* in that room shall be not greater than 50 feet (15 240 mm).

#### **407.4.3 Projections in nursing home corridors.**

In Group I-2, Condition 1 occupancies, where the *corridor* width is not less than 96 inches (2440 mm), projections shall be permitted for furniture where all of the following criteria are met:

1. The furniture is attached to the floor or to the wall.
2. The furniture does not reduce the clear width of the *corridor* to less than 72 inches (1830 mm) except where other encroachments are permitted in accordance with [Section 1005.7](#).
3. The furniture is positioned on only one side of the *corridor*.
4. Each arrangement of furniture is 50 square feet (4.6 m<sup>2</sup>) maximum in area.
5. Furniture arrangements are separated by 10 feet (3048 mm) minimum.
6. Placement of furniture is considered as part of the fire and safety plans in accordance with [Section 1002.2](#).

#### **407.4.4 Group I-2 care suites.**

*Care suites* in Group I-2 shall comply with [Sections 407.4.4.1](#) through [407.4.4.4](#) and either [Section 407.4.4.5](#) or [407.4.4.6](#).

##### **407.4.4.1 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*.

##### **407.4.4.2 Separation.**

*Care suites* shall be separated from other portions of the building, including other *care suites*, by a *smoke partition* complying with [Section 710](#).

##### **407.4.4.3 Access to corridor.**

Every *care suite* shall have a door leading directly to an *exit access corridor* or *horizontal exit*. Movement from habitable rooms *within a care suite* shall not require more than 100 feet (30 480 mm) of travel *within the care suite* to a door leading to the *exit access corridor* or *horizontal exit*. Where a *care suite* is required to have more than one *exit access door* by [Section 407.4.4.5.2](#) or [407.4.4.6.2](#), the additional door shall lead directly to an *exit access corridor*, *exit* or an adjacent suite.

##### **407.4.4.4 Doors within care suites.**

Doors in *care suites* serving habitable rooms shall be permitted to comply with one of the following:

1. Manually operated horizontal sliding doors permitted in accordance with Exception 9 to [Section 1010.1.2](#).
2. *Power-operated* doors permitted in accordance with [Section 1010.1.2](#), Exception 7.
3. *Means of egress* doors complying with [Section 1010](#).

##### **407.4.4.5 Care suites containing sleeping room areas.**

Sleeping rooms shall be permitted to be grouped into *care suites* where one of the following criteria is met:

1. 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 into the sleeping rooms by care providers.
3. An *automatic* smoke detection system is provided in the sleeping rooms and installed in accordance with [NFPA 72](#).

##### **407.4.4.5.1 Area.**

*Care suites* containing sleeping rooms shall be not greater than 7,500 square feet (696 m<sup>2</sup>) in area.

**Exception:** *Care suites* containing sleeping rooms shall be permitted to be not greater than 10,000 square feet (929 m<sup>2</sup>) in area where an *automatic* smoke detection system is provided throughout the *care suite* and installed in accordance with [NFPA 72](#).

Copyright © 2024 International Code Council, Inc., or its licensors (ALL RIGHTS RESERVED).

Accessed by Venkatesh Shanmugam on 11/13/2024 pursuant to License Agreement with ICC. No further reproduction or distribution authorized. Any Unauthorized reproduction or distribution is a violation of the federal copyright, and subject to civil and criminal penalties thereunder.

#### 407.4.4.5.2 Exit access.

Any sleeping room, or any *care suite* that contains sleeping rooms, of more than 1,000 square feet (93 m<sup>2</sup>) shall have not fewer than two *exit access* doors from the *care suite* located in accordance with [Section 1007](#).

#### 407.4.4.6 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 [Sections 407.4.4.6.1](#) and [407.4.4.6.2](#).

##### 407.4.4.6.1 Area.

*Care suites* of rooms, other than sleeping rooms, shall have an area not greater than 12,500 square feet (1161 m<sup>2</sup>).

**Exception:** *Care suites* not containing sleeping rooms shall be permitted to be not greater than 15,000 square feet (1394 m<sup>2</sup>) in area where an *automatic* smoke detection system is provided throughout the *care suite* in accordance with [Section 907](#).

##### 407.4.4.6.2 Exit access.

*Care suites*, other than sleeping rooms, with an area of more than 2,500 square feet (232 m<sup>2</sup>) shall have not fewer than two *exit access* doors from the *care suite* located in accordance with [Section 1007](#).

#### 407.5 Smoke barriers.

*Smoke barriers* shall be provided to subdivide every *story* used by persons receiving care, treatment or sleeping into not fewer than two *smoke compartments*. *Smoke barriers* shall be provided to subdivide other *stories* with an *occupant load* of 50 or more persons, into not fewer than two *smoke compartments*. The *smoke barrier* shall be in accordance with [Section 709](#).

##### 407.5.1 Smoke compartment size.

Stories shall be divided into *smoke compartments* with an area of not more than 22,500 square feet (2092 m<sup>2</sup>) in Group I-2 occupancies.

##### Exceptions:

1. A *smoke compartment* in Group I-2, Condition 2 is permitted to have an area of not more than 40,000 square feet (3716 m<sup>2</sup>) provided that all patient sleeping rooms within that *smoke compartment* are configured for single patient occupancy and any suite within the *smoke compartment* complies with [Section 407.4.4](#).
2. A *smoke compartment* in Group I-2, Condition 2 without patient sleeping rooms is permitted to have an area of not more than 40,000 square feet (3716 m<sup>2</sup>).

##### 407.5.2 Exit access travel distance.

The distance of travel from any point in a *smoke compartment* to a *smoke barrier* door shall be not greater than 200 feet (60 960 mm).

##### 407.5.3 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. The size of the refuge area shall provide the following:

1. Not less than 30 net square feet (2.8 m<sup>2</sup>) for each care recipient confined to bed or stretcher.
2. Not less than 6 square feet (0.56 m<sup>2</sup>) for each ambulatory care recipient not confined to bed or stretcher 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 areas.

##### 407.5.4 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. *Smoke compartments* that do not contain an *exit* shall be provided with *direct access* to not less than two adjacent *smoke compartments*.

##### 407.5.5 Horizontal assemblies.

*Horizontal assemblies* supporting *smoke barriers* required by this section shall be designed to resist the movement of smoke. Elevator lobbies shall be in accordance with [Section 3006.2](#).

#### 407.6 Automatic-closing doors.

Automatic-closing doors with hold-open devices shall comply with [Sections 709.5](#) and [716.2](#).

##### 407.6.1 Activation of automatic-closing doors.

Copyright © 2024 International Code Council, Inc., or its licensors (ALL RIGHTS RESERVED).

Accessed by Venkatesh Shanmugam on 11/13/2024 pursuant to License Agreement with ICC. No further reproduction or distribution authorized. Any Unauthorized reproduction or distribution is a violation of the federal copyright, and subject to civil and criminal penalties thereunder.

Automatic-closing doors on hold-open devices in accordance with [Section 716.2.6.6](#) shall also close upon activation of a *fire alarm system*, an *automatic sprinkler system*, or both. The *automatic* release of the hold-open device on one door shall release all such doors within the same *smoke compartment*.

**[F] 407.7 Automatic sprinkler system.**

*Smoke compartments* containing sleeping rooms shall be equipped throughout with an *automatic sprinkler system* in accordance with [Sections 903.3.1.1](#) and [903.3.2](#).

**[F] 407.8 Fire alarm system.**

A *fire alarm system* shall be provided in accordance with [Section 907.2.6](#).

**[F] 407.9 Automatic fire detection.**

*Corridors* in Group I-2, Condition 1 occupancies and spaces permitted to be open to the *corridors* by [Section 407.2](#) shall be equipped with an *automatic* fire detection system.

Group I-2, Condition 2 occupancies shall be equipped with smoke detection as required in [Section 407.2](#).

**Exceptions:**

1. Corridor smoke detection is not required where sleeping rooms are provided with *smoke detectors* that comply with [UL 268](#). Such detectors shall provide a visual display on the corridor side of each sleeping room and an audible and visual alarm at the care provider's station attending each unit.
2. *Corridor* smoke detection is not required where sleeping room 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.

**407.10 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 m<sup>2</sup>) for bed and stretcher care recipients and 6 net square feet (0.56 m<sup>2</sup>) for ambulatory care recipients and other occupants are located between the building and the fence. Such provided safe dispersal areas shall be located not less than 50 feet (15 240 mm) from the building they serve.

**[F] 407.11 Electrical systems.**

In Group I-2 occupancies, the essential electrical system for electrical components, equipment and systems shall be designed and constructed in accordance with the provisions of [Chapter 27](#) and [NFPA 99](#).

**407.12 Emergency power systems.**

Emergency power shall be provided for medical life support *equipment*, operating, recovery, intensive care, emergency rooms, fire detection and alarm systems in any Group I-2 occupancy licensed by the Virginia Department of Health as a hospital, nursing home or *hospice facility*.