

2021 Virginia Construction Code

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

SECTION 507 UNLIMITED AREA BUILDINGS

507.1 General.

The area of buildings of the occupancies and configurations specified in [Sections 507.1](#) through [507.13](#) shall not be limited. Basements not more than one *story* below *grade plane* shall be permitted.

507.1.1 Accessory occupancies.

Accessory occupancies shall be permitted in unlimited area buildings in accordance with the provisions of [Section 508.2](#), otherwise the requirements of [Sections 507.3](#) through [507.13](#) shall be applied, where applicable.

507.2 Measurement of open spaces.

Where [Sections 507.3](#) through [507.13](#) require buildings to be surrounded and adjoined by *public ways* and *yards*, those open spaces shall be determined as follows:

1. *Yards* shall be measured from the building perimeter in all directions to the closest interior *lot lines* or to the exterior face of an opposing building located on the same *lot*, as applicable.
2. Where the building fronts on a *public way*, the entire width of the *public way* shall be used.

507.2.1 Reduced open space.

The *public ways* or *yards* of 60 feet (18 288 mm) in width required in [Sections 507.3](#), [507.4](#), [507.5](#), [507.6](#) and [507.12](#) shall be permitted to be reduced to not less than 40 feet (12 192 mm) in width, provided that the following requirements are met:

1. The reduced width shall not be allowed for more than 75 percent of the perimeter of the building.
2. The *exterior walls* facing the reduced width shall have a *fire-resistance rating* of not less than 3 hours.
3. Openings in the *exterior walls* facing the reduced width shall have opening protectives with a *fire protection rating* of not less than 3 hours.

507.3 Nonsprinklered, one-story buildings.

The area of a Group F-2 or S-2 building not more than one *story* in height shall not be limited where the building is surrounded and adjoined by *public ways* or *yards* not less than 60 feet (18 288 mm) in width.

507.4 Sprinklered, one-story buildings.

The area of a Group A-4 building not more than one *story above grade plane* of other than Type V construction, or the area of a Group B, F, M or S building no more than one *story above grade plane* of any construction type, shall not be limited where the building is provided with an *automatic sprinkler system* throughout in accordance with [Section 903.3.1.1](#) and is surrounded and adjoined by *public ways* or *yards* not less than 60 feet (18 288 mm) in width.

Exceptions:

1. Buildings and structures of Type I or II construction for rack storage facilities that do not have access by the public shall not be limited in height, provided that such buildings conform to the requirements of [Sections 507.4](#) and [903.3.1.1](#) and [Chapter 32](#) of the *International Fire Code*.
2. The *automatic sprinkler system* shall not be required in areas occupied for indoor participant sports, such as tennis, skating, swimming and equestrian activities in occupancies in Group A-4, provided that the following criteria are met:
 - 2.1. *Exit* doors directly to the outside are provided for occupants of the participant sports areas.
 - 2.2. The building is equipped with a *fire alarm system* with *manual fire alarm boxes* installed in accordance with [Section 907](#).
 - 2.3. An *automatic sprinkler system* is provided in storage rooms, press boxes, concession booths or other spaces ancillary to the sport activity space.

507.4.1 Mixed occupancy buildings with Groups A-1 and A-2.

Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with [Section 507.4](#), provided that the following criteria are met:

1. Group A-1 and A-2 occupancies are separated from other occupancies as required for separated occupancies in [Section 508.4.4](#) with no reduction allowed in the *fire-resistance rating* of the separation based upon the installation of an *automatic sprinkler system*.
2. Each area of the portions of the building used for Group A-1 or A-2 occupancies shall not exceed the maximum allowable area permitted for such occupancies in [Section 503.1](#).

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3. *Exit* doors from Group A-1 and A-2 occupancies shall discharge directly to the exterior of the building.

507.5 Two-story buildings.

The area of a Group B, F, M or S building not more than two *stories above grade plane* shall not be limited where the building is equipped throughout with an *automatic sprinkler system* in accordance with [Section 903.3.1.1](#) and is surrounded and adjoined by *public ways or yards* not less than 60 feet (18 288 mm) in width.

507.6 Group A-3 buildings of Type II construction.

The area of a Group A-3 building not more than one *story above grade plane*, used as a *place of religious worship*, community hall, dance hall, exhibition hall, gymnasium, lecture hall, indoor *swimming pool* or tennis court of Type II construction, shall not be limited provided that the following criteria are met:

1. The building shall not have a *stage* other than a *platform*.
2. The building shall be equipped throughout with an *automatic sprinkler system* in accordance with [Section 903.3.1.1](#).
3. The building shall be surrounded and adjoined by *public ways or yards* not less than 60 feet (18 288 mm) in width.

507.7 Group A-3 buildings of Type III and IV construction.

The area of a Group A-3 building of Type III or IV construction, with not more than one *story above grade plane* and used as a *place of religious worship*, community hall, dance hall, exhibition hall, gymnasium, lecture hall, indoor *swimming pool* or tennis court, shall not be limited provided that the following criteria are met:

1. The building shall not have a *stage* other than a *platform*.
2. The building shall be equipped throughout with an *automatic sprinkler system* in accordance with [Section 903.3.1.1](#).
3. The assembly floor shall be located at or within 21 inches (533 mm) of street or grade level and all *exits* are provided with *ramps* complying with [Section 1012](#) to the street or grade level.
4. The building shall be surrounded and adjoined by *public ways or yards* not less than 60 feet (18 288 mm) in width.

507.8 Group H-2, H-3 and H-4 occupancies.

Group H-2, H-3 and H-4 occupancies shall be permitted in unlimited area buildings containing Group F or S occupancies in accordance with [Sections 507.4](#) and [507.5](#) and the provisions of [Sections 507.8.1](#) through [507.8.4](#).

507.8.1 Allowable area.

The aggregate floor area of Group H occupancies located in an unlimited area building shall not exceed 10 percent of the area of the building or the area limitations for the Group H occupancies as specified in [Section 506](#) based on the perimeter of each Group H floor area that fronts on a *public way* or open space.

507.8.1.1 Located within the building.

The aggregate floor area of Group H occupancies not located at the perimeter of the building shall not exceed 25 percent of the area limitations for the Group H occupancies as specified in [Section 506](#).

507.8.1.1.1 Rooms for flammable or combustible liquid use, dispensing or mixing in open systems.

Rooms for flammable or combustible liquid use, dispensing or mixing in open systems having a floor area of not more than 500 square feet (46.5 m²) need not be located on the outer perimeter of the building where they are in accordance with the [International Fire Code](#) and [NFPA 30](#).

507.8.1.1.2 Liquid storage rooms and rooms for flammable or combustible liquid use in closed systems.

Liquid storage rooms *and rooms for flammable or combustible liquid use in closed systems* having a floor area of not more than 1,000 square feet (93 m²) need not be located on the outer perimeter where they are in accordance with the [International Fire Code](#) and [NFPA 30](#).

507.8.1.1.3 Spray paint booths.

Spray paint booths that comply with the [International Fire Code](#) need not be located on the outer perimeter.

507.8.2 Located on building perimeter.

Except as provided for in [Section 507.8.1.1](#), Group H occupancies shall be located on the perimeter of the building. In Group H-2 and H-3 occupancies, not less than 25 percent of the perimeter of such occupancies shall be an *exterior wall*.

507.8.3 Occupancy separations.

Group H occupancies shall be separated from the remainder of the unlimited area building and from each other in accordance with [Table 508.4](#).

507.8.4 Height limitations.

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For two-story, unlimited area buildings, Group H occupancies shall not be located more than one story above grade plane unless permitted based on the allowable height and number of stories and feet as specified in [Section 504](#) based on the type of construction of the unlimited area building.

507.9 Unlimited mixed occupancy buildings with Group H-5.

The area of a Group B, F, H-5, M or S building not more than two stories above grade plane shall not be limited where the building is equipped throughout with an automatic sprinkler system in accordance with [Section 903.3.1.1](#), and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width, provided that the following criteria are met:

1. Buildings containing Group H-5 occupancy shall be of Type I or II construction.
2. Each area used for Group H-5 occupancy shall be separated from other occupancies as required in [Sections 415.11](#) and [508.4](#).
3. Each area used for Group H-5 occupancy shall not exceed the maximum allowable area permitted for such occupancies in [Section 503.1](#) including modifications of [Section 506](#).

Exception: Where the Group H-5 occupancy exceeds the maximum allowable area, the Group H-5 shall be subdivided into areas that are separated by 2-hour fire barriers.

507.10 Aircraft paint hangar.

The area of a Group H-2 aircraft paint hangar not more than one story above grade plane shall not be limited where such aircraft paint hangar complies with the provisions of [Section 412.5](#) and is surrounded and adjoined by public ways or yards not less in width than one and one-half times the building height.

507.11 Group E buildings.

The area of a Group E building not more than one story above grade plane, of Type II, IIIA or IV construction, shall not be limited provided that the following criteria are met:

1. Each classroom shall have not less than two means of egress, with one of the means of egress being a direct exit to the outside of the building complying with [Section 1022](#).
2. The building is equipped throughout with an automatic sprinkler system in accordance with [Section 903.3.1.1](#).
3. The building is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

507.12 Motion picture theaters.

In buildings of Type II construction, the area of a motion picture theater located on the first story above grade plane shall not be limited where the building is provided with an automatic sprinkler system throughout in accordance with [Section 903.3.1.1](#) and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

507.13 Covered and open mall buildings and anchor buildings.

The area of covered and open mall buildings and anchor buildings not exceeding three stories in height that comply with [Section 402](#) shall not be limited.