

Section 3103 Temporary Structures

3103.1 General

The provisions of this section shall apply to structures, including *tents* and other membrane structures, erected for a period of less than 180 consecutive calendar days out of any 365 consecutive calendar days on a single premises. *Tents* and other membrane structures erected for a period of less than 180 days shall comply with Section 3103.5. Those erected for a longer period of time shall comply with the applicable sections of this code.

3103.1.1 Conformance

Temporary structures and uses shall conform to the structural [strength](#), fire safety, [means of egress](#), accessibility, light, [ventilation](#), and sanitary requirements of this code as necessary to ensure public health, safety, and general welfare.

3103.1.2 Permit Required

Temporary structures that cover an area greater than 120 square feet (11.16 m²), including connecting areas or spaces with a common [means of egress](#) or entrance that are used or intended to be used for the gathering together of 10 or more persons, shall not be erected, operated or maintained for any purpose without obtaining a [permit](#) from the [building official](#).

3103.2 Construction Documents

A [permit](#) application and [construction documents](#) shall be submitted for each installation of a temporary structure. The [construction documents](#) shall include a [site](#) plan indicating the location of the temporary structure and information delineating the [means of egress](#) and the [occupant load](#).

3103.3 Location

Temporary structures shall be located in accordance with the requirements of [Table 602](#) based on the [fire-resistance rating](#) of the [exterior walls](#) for the proposed type of construction.

3103.4 Means of Egress

Temporary structures shall conform to the [means of egress](#) requirements of [Chapter 10](#) and shall have an [exit access](#) travel distance of 100 feet (30 480 mm) or less.

3103.5 Tents and Other Membrane Structures

All temporary *tents* and membrane structures shall comply with this section.

3103.5.1 Permit Required

Tents and membrane structures having an area in excess of 400 square feet (37 m²) shall not be erected, operated or maintained for any purpose without obtaining a *permit* from the *building official*.

Exceptions:

1. *Tents* used exclusively for recreational camping purposes.
2. *Tents* open on all sides which comply with all of the following:
 1. Individual *tents* having a maximum size of 700 square feet (65 m²)
 2. The aggregate area of multiple *tents* placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m²) total.
 3. A minimum clearance of 12 feet (3658 mm) to all other structures and *tents*.
3. *Tents* 900 square feet and smaller in total area when occupied by fewer than 50 persons, which have no heating appliances, no installed electrical service and are erected for fewer than 72 hours.

3103.5.2 Place of Assembly

For the purposes of this section, a place of assembly shall include a circus, carnival, *tent* show, theater, skating rink, dance hall or other place of assembly in or under which persons gather for any purpose.

3103.5.3 Construction Documents

A detailed *site* and floor plan for *tents* or membrane structures with an

occupant load of 50 or more shall be provided with each application for approval. The *tent* or membrane structure floor plan shall indicate details of the *means of egress* facilities, seating capacity, arrangement of the seating and location and type of heating and electrical equipment.

3103.5.4 Location and Parking

The location and parking for temporary *tents* and membrane structures shall be in accordance with this section.

3103.5.4.1 Location

Tents or membrane structures shall not be located within 20 feet (6096 mm) of *lot lines*, *buildings*, other *tents* or membrane structures, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guy wires shall be considered as part of the temporary membrane structure or *tents*.

Exceptions:

1. Separation distance between membrane structures and tents not used for cooking is not required when the aggregate floor area does not exceed 15,000 square feet (1394 m²).
2. Membrane structures or *tents* need not be separated from *buildings* when all of the following conditions are met:
 1. The aggregate floor area of the membrane structure or tent shall not exceed 10,000 square feet (929 m²).
 2. The aggregate floor area of the *building* and membrane structure or *tent* shall not exceed the allowable floor area including increases as indicated in this code.
 3. Required *means of egress* are provided for both the *building* and membrane structure or *tent* including travel distances.

3103.5.5 Location of Structures in Excess of 15,000 Square Feet in Area

Membrane structures having an area of 15,000 square feet (1394 m²) or more shall be located not less than 50 feet (15 240 mm) from any other *tent* or

structure as measured from the sidewall of the *tent* or membrane structure unless joined together by a *corridor*.

3103.5.6 Connecting Corridors

Tents or membrane structures are allowed to be joined together by means of *corridors*. *Exit* doors shall be provided at each end of such *corridor*. On each side of such *corridor* and approximately opposite each other, there shall be provided openings not less than 12 feet (3658 mm) wide.

3103.5.7 Fire Break

An unobstructed fire break passageway or fire road not less than 12 feet (3658 mm) wide and free from guy ropes or other obstructions shall be maintained on all sides of all *tents* and membrane structures unless otherwise *approved* by the *building official*.

3103.5.8 Membrane Material

The membrane material for all *tents* and membrane structures shall be of: *approved* non-combustible material as set forth in Section 703.5; flame-resistant material as determined in accordance with NFPA 701 and the manufacturer's test protocol; or material treated in an *approved* manner to render the material flame-resistant.

3103.5.8.1 Label

Tents and membrane structures shall have a permanently affixed label which shall identify the size of the structure and the fabric or material type.

3103.5.8.2 Certification

An affidavit or affirmation shall be submitted to the *building official* and a copy retained on the premises on which the *tent* or membrane structure is located. The affidavit or affirmation shall attest to the following information relative to the flame resistance of the fabric:

1. Names and addresses of the *owners* of the *tent*, *canopy* or membrane structure.
2. Date the fabric was last treated with flame-resistant solution.
3. Trade name or kind of chemical used in the treatment.

4. Name of person or firm treating the material.
5. Name of testing agency and test standard by which the fabric was tested.

3103.5.9 Anchorage Required

Tents or membrane structures and their appurtenances shall be adequately roped, braced and anchored to withstand the elements of weather and prevent against collapsing. Documentation of structural stability shall be furnished to the *building official* upon request.

3103.5.9.1 Tents and Membrane Structures Exceeding One Story

Tents and membrane structures exceeding one story shall be designed and constructed to comply with Chapter 16.

3103.5.10 Temporary Air-Supported and Air-Inflated Membrane Structures

In addition to other applicable requirements of Section 3103.5, temporary air-supported and air-inflated membrane structures shall be in accordance with Sections 3103.10.1 to 3103.10.4, inclusive.

3103.5.10.1 Door Operation

In high winds greater than 50 miles per hour (22 m/s) or in snow conditions, the use of doors in air-supported structures shall be controlled to avoid excessive air loss. Doors shall not be left open under any condition.

3103.5.10.2 Fabric Envelope Design and Construction

Air-supported and air-inflated structures shall have the design and construction of the fabric envelope and the method of anchoring in accordance with Architecture Fabric Institute ASI 77.

3103.5.10.2.1 Inflation Pressure

Operating pressure in air-supported and air-inflated structures shall be maintained at the design pressure specified by the manufacturer to assure

stability and to avoid excessive distortion during high wind or snow *loads*.

3103.5.10.3 Blowers

An air-supported structure used as a place of assembly shall be furnished with not less than two blowers, each of which has adequate capacity to maintain full inflation pressure with normal leakage. The design of the blower shall be so as to provide integral limiting pressure at the design pressure specified by the manufacturer.

3103.5.10.4 Auxiliary Power

Places of assembly for more than 200 occupants shall be furnished with either a fully automatic auxiliary engine-generator set capable of powering one blower continuously for 4 hours, or a supplementary blower powered by an internal combustion engine that shall be automatic in operation.

3103.5.11 Seating Arrangements

Seating in *tents* and membrane structures shall be in accordance with Chapter 10.

3103.5.12 Means of Egress

Means of egress for temporary *tents* and membrane structures shall be in accordance with Sections 3103.12.1 to 3103.12.8, inclusive.

3103.5.12.1 Distribution

Exits shall be spaced at approximately equal intervals around the perimeter of the *tent* or membrane structure, and shall be located such that all points are 100 feet (30 480 mm) or less from an *exit*.

3103.5.12.2 Number

Tents, or membrane structures or a usable portion thereof, shall have at least one *exit* and not less than the number of *exits* required by Table 3103.12.2. The total width of *means of egress* in inches (mm) shall not be less than the total *occupant load* served by a *means of egress* multiplied by 0.2 inches (5 mm) per person.

**TABLE 3103.12.2
MINIMUM NUMBER OF MEANS OF EGRESS AND MEANS OF
EGRESS WIDTHS FROM TEMPORARY MEMBRANE STRUCTURES AND
TENTS**

Occupant load	Minimum Width of Each Means of Egress		
	Minimum Number of Means of Egress	Tents	Membrane Structures
10 to 199	2	72	36
200 to 499	3	72	72
500 to 999	4	96	72
1,000 to 1,999	5	120	96
2,000 to 2,999	6	120	96
Over 3,000 ^a	7	120	96

a. When the *occupant load* exceeds 3,000, the total width of *means of egress* (in inches) shall not be less than the total *occupant load* multiplied by 0.2 inches per person.

3103.5.12.3 Exit Openings From Tents

Exit openings from *tents* shall remain open unless covered by a flame-resistant curtain. The curtain shall comply with the following requirements:

1. Curtains shall be free sliding on a metal support. The support shall be a minimum of 80 inches (2032 mm) above the floor level at the *exit*. The curtains shall be arranged so that, when open, no part of the curtain obstructs the *exit*.
2. Curtains shall be of a color, or colors, that contrasts with the color of the *tent*.

3103.5.12.4 Doors

Exit doors shall swing in the direction of *exit* travel. To avoid hazardous air and pressure loss in air-supported membrane structures, such doors shall be automatic closing against operating pressures. Opening force at the door edge shall not exceed 15 pounds (67 N).

3103.5.12.5 Aisle

The width of aisles without *fixed seating* shall be in accordance with the following:

1. In areas serving employees only, the minimum width shall be 24 inches (610 mm) or not less than the width required by the number of employees served.
2. In public areas, smooth-surfaced, unobstructed aisles having a minimum width of not less than 44 inches (1118 mm) shall be provided from seating areas, and aisles shall be progressively increased in width to provide, at all points, not less than 1 foot (305 mm) of aisle width for each 50 persons served by such aisle at that point.

3103.5.12.6 Exit Signs

Exits shall be clearly marked. *Exit* signs shall be installed at required *exit* doorways and where otherwise necessary to indicate clearly the direction of egress when the *exit* serves an *occupant load* of 50 or more.

3103.5.12.6.1 Exit Sign Illumination

Exit signs shall be either *listed* and *labeled* in accordance with UL 924 as the internally illuminated type and used in accordance with the listing or shall be externally illuminated by luminaires supplied in the following manner:

1. Two separate circuits, one of which shall be separated from all other circuits, or *occupant loads* of 300 or less; or
2. Two separate sources of power, one of which shall be an *approved* emergency system, shall be provided when the *occupant load* exceeds 300. Emergency systems shall be supplied from storage batteries or from the on-site generator set, and the system shall be installed in accordance with NFPA 70. The emergency system provided shall have a minimum duration of 90 minutes when operated at full design demand.

3103.5.12.7 Means of Egress Illumination

Means of egress shall be illuminated with light having an intensity of not less than 1 footcandle (11 lux) at floor level while the structure is occupied. Fixtures required for *means of egress* illumination shall be supplied from a separate circuit or source of power.

3103.5.12.8 Maintenance of Means of Egress

The required width of *exits*, aisles and passageways shall be maintained at all times to a *public way*. Guy wires, guy ropes and other support members shall not cross a *means of egress* at a height of not less than 8 feet (2438 mm). The surface of the *means of egress* shall be maintained in an *approved* manner.

3103.5.13 Spot Lighting

Spot or effect lighting shall only be by electricity, and all combustible construction located within 6 feet (1829 mm) of such equipment shall be protected with *approved* noncombustible insulation not less than 9 ¹/₄ inches (235 mm) thick.

3103.5.14 Heating and Cooking Equipment

Heating and cooking equipment shall be in accordance with Section 3104.15 of the 2018 Connecticut State Fire Safety Code.

3103.5.15 LP-gas

The storage, handling and use of LP-gas and LP-gas equipment shall be in accordance with Section 3104.16 of the 2018 Connecticut State Fire Safety Code.

3103.5.16 Flammable and Combustible Liquids

The use of flammable-fuel-fired equipment shall be in accordance with Section 3104.17 of the 2018 Connecticut State Fire Safety Code.

3103.5.17 Separation of Generators

Generators and other internal combustion power sources shall be separated from *tents* or membrane structures by a minimum of 20 feet (6096 mm) and shall be isolated from contact with the public by fencing, enclosure or other *approved* means.