

~~1301:7-7-24~~1301:7-7-31 Tents and other membrane structures.

(A) Section ~~24013101~~ General

(1) ~~2401.13101.1~~ **Scope.** Tents, temporary stage canopies and membrane structures shall comply with this *rule*. The provisions of *paragraph (C)(~~24033103~~) of this rule* are applicable only to temporary tents and membrane structures. The provisions of *paragraph (D)(~~24043104~~) of this rule* are applicable to temporary and permanent tents and membrane structures. Other temporary structures shall comply with the building code as listed in rule 1301:7-7-80 of the Administrative Code.

(B) Section ~~24023102~~ Definitions

(1) ~~2402.13102.1~~ **Definitions.** The following ~~words and terms shall, for the purposes of this rule and as used elsewhere in this code, have the meanings shown herein~~ are defined in *rule 1301:7-7-02 of the Administrative Code*.

~~{B}~~ **“Air-inflated structure.”** ~~A building where the shape of the structure is maintained by air pressurization of cells or tubes to form a barrel vault over the usable area. Occupants of such structure do not occupy the pressurized areas used to support the structure.~~

“Air-supported structure.” ~~A structure wherein the shape of the structure is attained by air pressure, and occupants of the structure are within the elevated pressure area.~~

“Membrane structure.” ~~An air inflated, air supported, cable or frame covered structure as defined by the building code as listed in rule 1301:7-7-47 of the Administrative Code and not otherwise defined as a tent. See Chapter 31 of the building code as listed in rule 1301:7-7-47 of the Administrative Code.~~

“Temporary stage canopy.”

“Tent.” ~~A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.~~

(C) Section ~~24033103~~ Temporary tents and membrane structures

(1) ~~2403.13103.1~~ **General.** ~~All temporary tents and membrane structures shall comply with this paragraph. Tents and membrane structures used for temporary periods shall comply with this paragraph. Other temporary structures erected for a period of 180 days or less shall comply with the building code as listed in rule 1301:7-7-80 of the Administrative Code.~~

(2) ~~2403.23103.2~~ **Approval 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 first obtaining a permit and approval from the fire code official.

Exceptions:

1. Tents used exclusively for recreational camping purposes.

2. Tents open on all sides which comply with all of the following:

2.1 Individual tents having a maximum size of 700 square feet (65 m²).

2.2 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.

2.3 A minimum clearance of 12 feet (3658 mm) to all structures and other tents.

(3) ~~2403.33103.3~~ **Place of assembly.** For the purposes of this *rule*, 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.

(4) ~~2403.43103.4~~ **Permits.** Permits shall be required as set forth in *rule 1301:7-7-01 of the Administrative Code*.

(5) ~~2403.53103.5~~ **Use period.** Temporary tents, air-supported, air-inflated or tensioned membrane structures shall not be erected for a period of more than 180 days within a 12-month period on a single premises.

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(6) ~~2403-63103.6~~ **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.

(7) ~~2403-73103.7~~ **Inspections.** The entire tent, air-supported, air-inflated or tensioned membrane structure system shall be inspected at regular intervals, but not less than two times per permit use period, by the permittee, owner or agent to determine that the installation is maintained in accordance with this *rule*.

Exception: Permit use periods of less than 30 days.

(a) ~~2403-7-13103.7.1~~ **Inspection report.** ~~When~~Where required by the fire code official, an inspection report shall be provided and shall consist of maintenance, anchors and fabric inspections.

(8) ~~2403-83103.8~~ **Access, location and parking.** Access, location and parking for temporary tents and membrane structures shall be in accordance with this *paragraph*.

(a) ~~2403-8-13103.8.1~~ **Access.** Fire apparatus access roads shall be provided in accordance with *paragraph (C)(503) of rule 1301:7-7-05 of the Administrative Code*.

(b) ~~2403-8-23103.8.2~~ **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 tent.

Exceptions:

1. Separation distance between membrane structures and tents not used for cooking is not required ~~when~~where 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:

2.1 The aggregate floor area of the membrane structure or tent shall not exceed 10,000 square feet (929 m²).

2.2 The aggregate floor area of the building and membrane structure or tent shall not exceed the allowable floor area including increases as indicated in the *building code as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code*.

2.3 Required means of egress ~~provisions~~ are provided for both the building and the membrane structure or tent including travel distances.

2.4 Fire apparatus access roads are provided in accordance with *paragraph (C)(503) of rule 1301:7-7-05 of the Administrative Code*.

(c) ~~2403-8-33103.8.3~~ **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.

(d) ~~2403-8-43103.8.4~~ **Membrane structures on buildings.** Membrane structures that are erected on buildings, balconies, decks or other structures shall be regulated as permanent membrane structures in accordance with section 3102 of the *building code as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code*.

(e) ~~2403-8-53103.8.5~~ **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.

(f) ~~2403-8-63103.8.6~~ **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 fire code official *and the building code official in accordance with the applicable requirements of the building code as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code*.

(9) **2403.93103.9 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 fire code official on request.

(a) 3103.9.1 Tents and membrane structures exceeding one story. Tents and membrane structures exceeding one story shall be designed and constructed to comply with chapter 16 of the building code as listed in rule 1301:7-7-80 of the Administrative Code.

(10) **2403.103103.10 Temporary air-supported and air-inflated membrane structures.** Temporary air-supported and air-inflated membrane structures shall be in accordance with *paragraphs* (C)(10)(a)(~~2403.10.13103.10.1~~) to (C)(10)(d)(~~2403.10.43103.10.4~~) of this rule.

(a) **2403.10.13103.10.1 Door operation.** During high winds exceeding 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.

(b) **2403.10.23103.10.2 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 “Architectural Fabric Structures Institute” ASI 77 as listed in rule ~~1301:7-7-471301:7-7-80~~ of the Administrative Code.

(c) **2403.10.33103.10.3 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.

(d) **2403.10.43103.10.4 Auxiliary power.** Places of public assembly for more than 200 persons 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 which shall be automatic in operation.~~ an auxiliary inflation system capable of powering a blower with the capacity to maintain full inflation pressure with normal leakage in accordance with paragraph (C)(10)(c)(3103.10.3) of this rule for a minimum duration of 4 hours. The auxiliary inflation system shall be either a fully automatic auxiliary engine-generator set or a supplementary blower powered by an internal combustion engine that shall be automatic in operation. The system shall be capable of automatically operating the required blowers at full power within 60 seconds of a commercial power failure.

(11) ~~2403.113103.11~~ **Seating arrangements.** Seating in tents or membrane structures shall be in accordance with rule 1301:7-7-10 of the Administrative Code.

(12) ~~2403.123103.12~~ **Means of egress.** Means of egress for temporary tents and membrane structures shall be in accordance with *paragraphs* (C)(12)(a)(~~2403.12.13103.12.1~~) to (C)(12)(h)(~~2403.12.83103.12.8~~) of this rule.

(a) ~~2403.12.13103.12.1~~ **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.

(b) ~~2403.12.23103.12.2~~ **Number.** Tents, or membrane structures or a usable portion thereof shall have ~~at least~~ not less than one exit and not less than the number of exits required by Table ~~2403.12.23103.12.2~~ of this rule. The total width of means of egress in inches (mm) shall ~~be~~ not be less than the total occupant load served by a means of egress multiplied by 0.2 inches (5 mm) per person.

Table 2403.12.23103.12.2

Minimum number of means of egress and means of egress widths from temporary membrane structures and tents

Occupant load	Minimum number of means of egress	Minimum width of each means of egress (inches)	
		Tent	Membrane structure
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

For SI: 1 inch = 25.4 mm.

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

(c) ~~2403.12.33~~103.12.3 **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:

(i) Curtains shall be free sliding on a metal support. The support shall be ~~a minimum of~~not less than 80 inches (2032 mm) above the floor level at the exit. The curtains shall be so arranged that, when open, no part of the curtain obstructs the exit.

(ii) Curtains shall be of a color, or colors, that contrasts with the color of the tent.

(d) ~~2403.12.43~~103.12.4 **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 (66 N).

(e) ~~2403.12.53~~103.12.5 **Aisle.** The width of aisles without fixed seating shall be in accordance with the following:

1. In areas serving employees only, the minimum aisle width shall be 24 inches (610 mm) but 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.

(i) ~~2403.12.5.13~~103.12.5.1 **Arrangement and maintenance.** The arrangement of aisles shall be subject to approval by the fire code official and shall be maintained clear at all times during occupancy.

(f) ~~2403.12.63~~103.12.5.1 **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~~where the exit serves an occupant load of 50 or more.

(i) ~~2403.12.6.13~~103.12.6.1 **Exit sign illumination.** Exit signs shall be either listed and labeled in accordance with UL 924 *as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code* as the internally illuminated type and used in accordance with the listing or shall be externally illuminated by luminaires supplied in either of the following manners:

(a) Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less.

(b) Two separate sources of power, one of which shall be an approved emergency system, shall be provided ~~when~~where 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 *as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code*. The emergency system provided shall have a minimum duration of 90 minutes when operated at full design demand.

(g) ~~2403.12.73~~103.12.7 **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.

(h) ~~2403.12.83~~103.12.8 **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 less than 8 feet (2438 mm). The surface of means of egress shall be maintained in an approved manner.

(D) **Section ~~2404~~3104 Temporary and permanent tents and membrane structures**

(1) ~~2404.13~~104.1 **General.** All tents and membrane structures, both temporary and permanent, shall be in accordance with this *paragraph*. Permanent tents and membrane structures shall also comply with the *building code as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code*.

(2) ~~2404.23~~2404.23104.2 **Flame propagation performance treatment.** Before a permit is granted, the owner or agent shall file with the fire code official a certificate executed by an approved testing laboratory certifying that the tents and membrane structures and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting and combustible decorative materials and effects, including sawdust ~~when~~where used on floors or passageways, are composed of material meeting the flame propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701 as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code or shall be treated with a flame retardant in an approved manner and meet the flame propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701 as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code, and that such flame propagation performance criteria are effective for the period specified by the permit.

(3) ~~2404.33~~2404.33104.3 **Label.** Membrane structures or tents shall have a permanently affixed label bearing the identification of size and fabric or material type.

(4) ~~2403.43~~2403.43104.4 **Certification.** An affidavit or affirmation shall be submitted to the fire code official and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to all of the following information relative to the flame propagation performance criteria of the fabric:

(a) Names and address of the owners of the tent or air-supported structure.

(b) Date the fabric was last treated with flame-retardant solution.

(c) Trade name or kind of chemical used in treatment.

(d) Name of person or firm treating the material.

(e) Name of testing agency and test standard by which the fabric was tested.

(5) ~~2404.53~~2404.53104.5 **Combustible materials.** Hay, straw, shavings or similar combustible materials shall not be located within any tent or membrane structure containing an assembly occupancy, except the materials necessary for the daily feeding and care of animals. Sawdust and shavings utilized for public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under stands or seats at any time.

(6) ~~2404.63~~2404.63104.6 **Smoking.** Smoking shall not be permitted in tents or membrane structures. Approved "No Smoking" signs shall be conspicuously posted in accordance with *paragraph (J)(310) of rule 1301:7-7-03 of the Administrative Code*.

(7) ~~2404.73~~2404.73104.7 **Open or exposed flame.** Open flame or other devices emitting flame, fire or heat or any flammable or combustible liquids, gas, charcoal or other cooking device or any other unapproved devices shall not be permitted inside or located within 20 feet (6096 mm) of the tent or membrane structures while open to the public unless approved by the fire code official.

(8) ~~2404.83~~2404.83104.8 **Fireworks.** Fireworks shall not be used within 100 feet (30 480 mm) of tents or membrane structures.

(9) ~~2404.93~~2404.93104.9 **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 9/16 inches (235 mm) thick.

(10) ~~2404.103~~2404.103104.10 **Safety film.** Motion pictures shall not be displayed in tents or membrane structures unless the motion picture film is safety film.

(11) ~~2404.113~~2404.113104.11 **Clearance.** There shall be a minimum clearance of at least 3 feet (914 mm) between the fabric envelope and all contents located inside membrane structures.

(12) ~~2404.123~~2404.123104.12 **Portable fire extinguishers.** Portable fire extinguishers shall be provided as required by *paragraph (F)(906) of rule 1301:7-7-09 of the Administrative Code*.

(13) ~~2404.133~~2404.133104.13 **Fire protection equipment.** Fire hose lines, water supplies and other auxiliary fire equipment shall be maintained at the site in such numbers and sizes as required by the fire code official.

(14) ~~2404.143~~2404.143104.14 **Occupant load factors.** The occupant load allowed in an assembly structure, or portion thereof, shall be determined in accordance with *rule 1301:7-7-10 of the Administrative Code*.

(15) ~~2404.15.13~~2404.15.15 **Heating and cooking equipment.** Heating and cooking equipment shall be in accordance with *paragraphs* (D)(15)(a)(~~2404.15.13~~2404.15.15.1) to (D)(15)(g)(~~2404.15.73~~2404.15.73104.15.7) of this rule.

(a) ~~2404.15.13~~2404.15.15.1 **Installation.** Heating or cooking equipment, tanks, piping, hoses, fittings, valves, tubing and other related components shall be installed as specified in the *mechanical code* and the International Fuel Gas Code as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code, and shall be approved by the fire code official and the building code official in accordance with the applicable requirements of the building code as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code.

(b) ~~2404.15.23~~2404.15.15.2 **Venting.** Gas, liquid and solid fuel-burning equipment designed to be vented shall be vented to the outside air as specified in the International Fuel Gas Code and the *mechanical code* as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code. Such vents shall be equipped with approved spark arresters ~~when~~where required. Where vents or flues are used, all portions of the tent or membrane structure shall be not less than 12 inches (305 mm) from the flue or vent.

(c) ~~2404.15.33~~2404.15.15.3 **Location.** Cooking and heating equipment shall not be located within 10 feet (3048 mm) of exits or combustible materials.

(d) ~~2404.15.43~~2404.15.15.4 **Operations.** Operations such as warming of foods, cooking demonstrations and similar operations that use solid flammables, butane or other similar devices which do not pose an ignition hazard, shall be approved.

(e) ~~2404.15.53~~2404.15.15.5 **Cooking tents.** Tents with sidewalls or drops where cooking is performed shall be separated from other tents or membrane structures by ~~a minimum of~~not less than 20 feet (6096 mm).

(f) ~~2404.15.63~~2404.15.15.6 **Outdoor cooking.** Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet (6096 mm) ~~from~~of a tent or membrane structure.

(g) ~~2404.15.73~~2404.15.15.7 **Electrical heating and cooking equipment.** Electrical cooking and heating equipment shall comply with NFPA 70 as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code.

(16) ~~2404.16.13~~2404.16.16 **LP-gas.** The storage, handling and use of LP-gas and LP-gas equipment shall be in accordance with *paragraphs* (D)(16)(a)(~~2406.16.13~~2404.16.16.1) to (D)(16)(c)(~~2404.16.33~~2404.16.33104.16.3) of this rule.

(a) ~~2404.16.13~~2404.16.16.1 **General.** LP-gas equipment such as tanks, piping, hoses, fittings, valves, tubing and other related components shall be approved and in accordance with rule ~~1301:7-7-38~~1301:7-7-61 of the Administrative Code and with the International Fuel Gas Code as listed in rule ~~1301:7-7-47~~1301:7-7-80 of the Administrative Code.

(b) ~~2404.16.2~~2404.16.16.2 **Location of containers.** LP-gas containers shall be located outside. Safety release valves shall be pointed away from the tent or membrane structure.

(i) ~~2404.16.2~~2404.16.16.2.1 **Containers 500 gallons or less.** Portable LP-gas containers with a capacity of 500 gallons (1893 L) or less shall have a minimum separation between the container and structure not less than 10 feet (3048 mm).

(ii) ~~2404.16.2~~2404.16.16.2.2 **Containers more than 500 gallons.** Portable LP-gas containers with a capacity of more than 500 gallons (1893 L) shall have a minimum separation between the container and structures not less than 25 feet (7620 mm).

(iii) ~~2404.16.2~~2404.16.16.2.3 **Protection and security.** Portable LP-gas containers, piping, valves and fittings ~~which~~that are located outside and are being used to fuel equipment inside a tent or membrane structure shall be adequately protected to prevent tampering, damage by vehicles or other hazards and shall be located in an approved location. Portable LP-gas containers shall be securely fastened in place to prevent unauthorized movement.

(17) ~~2404.17.13~~2404.17.17 **Flammable and combustible liquids.** The storage of flammable and combustible liquids and the use of flammable-liquid-fueled equipment shall be in accordance with *paragraphs* (D)(17)(a)(~~2404.17.13~~2404.17.17.1) to (D)(17)(c)(~~2404.17.33~~2404.17.33104.17.3) of this rule.

(a) ~~2404.17.13~~2404.17.17.1 **Use.** Flammable-liquid-fueled equipment shall not be used in tents or membrane structures.

- (b) ~~2404.17.23~~2404.17.2 **Flammable and combustible liquid storage.** Flammable and combustible liquids shall be stored outside in an approved manner not less than 50 feet (15 240 mm) from tents or membrane structures. Storage shall be in accordance with ~~rule 1301:7-7-34~~rule 1301:7-7-57 of the Administrative Code.
- (c) ~~2404.17.33~~2404.17.3 **Refueling.** Refueling shall be performed in an approved location not less than 20 feet (6096 mm) from tents or membrane structures.
- (18) ~~2404.18.31~~2404.18.18 **Display of motor vehicles.** Liquid- and gas-fueled vehicles and equipment used for display within tents or membrane structures shall be in accordance with *paragraphs* (D)(18)(a)(~~2404.18.13~~2404.18.1) to (D)(18)(e)(iii)(~~2404.18.5.33~~2404.18.5.3) of this rule.
- (a) ~~2404.18.13~~2404.18.1 **Batteries.** Batteries shall be disconnected in an appropriate manner.
- (b) ~~2404.18.23~~2404.18.2 **Fuel.** Vehicles or equipment shall not be fueled or defueled within the tent or membrane structure.
- (i) ~~2404.18.2.13~~2404.18.2.1 **Quantity limit.** Fuel in the fuel tank shall not exceed one-quarter of the tank capacity or 5 gallons (19 L), whichever is less.
- (ii) ~~2404.18.2.23~~2404.18.2.2 **Inspection.** Fuel systems shall be inspected for leaks.
- (iii) ~~2404.18.2.33~~2404.18.2.3 **Closure.** Fuel tank openings shall be locked and sealed to prevent the escape of vapors.
- (c) ~~2404.18.33~~2404.18.3 **Location.** The location of vehicles or equipment shall not obstruct means of egress.
- (d) ~~2404.18.43~~2404.18.4 **Places of assembly.** When a compressed natural gas (CNG) or liquefied petroleum gas (LP-gas) powered vehicle is parked inside a place of assembly, all the following conditions shall be met:
- (i) The quarter-turn shutoff valve or other shutoff valve on the outlet of the CNG or LP-gas container shall be closed and the engine shall be operated until it stops. Valves shall remain closed while the vehicle is indoors.
- (ii) The hot lead of the battery shall be disconnected.
- (iii) Dual-fuel vehicles equipped to operate on gasoline ~~or~~and CNG or LP-gas shall comply with this *paragraph* and *paragraphs* (D)(18)(a)(~~2404.18.13~~2404.18.1) to (D)(18)(e)(iii)(~~2404.18.5.33~~2404.18.5.3) of this rule for gasoline-powered vehicles.
- (e) ~~2404.18.53~~2404.18.5 **Competitions and demonstrations.** Liquid- and gas-fueled vehicles and equipment used for competition or demonstration within a tent or membrane structure shall comply with *paragraphs* (D)(18)(e)(i)(~~2404.18.5.13~~2404.18.5.1) to (D)(18)(e)(iii)(~~2404.18.5.33~~2404.18.5.3) of this rule.
- (i) ~~2404.18.5.13~~2404.18.5.1 **Fuel storage.** Fuel for vehicles or equipment shall be stored in approved containers in an approved location outside of the structure in accordance with *paragraph* (D)(17)(b)(~~2404.17.23~~2404.17.2) of this rule.
- (ii) ~~2404.18.5.23~~2404.18.5.2 **Fueling.** Refueling shall be performed outside of the structure in accordance with *paragraph* (D)(17)(c)(~~2404.17.33~~2404.17.3) of this rule.
- (iii) ~~2404.18.5.33~~2404.18.5.3 **Spills.** Fuel spills shall be cleaned up immediately.
- (19) ~~2404.193~~2404.19 **Separation of generators.** Generators and other internal combustion power sources shall be separated from tents or membrane structures by ~~a minimum of~~not less than 20 feet (6096 mm) and shall be isolated from contact with the public by fencing, enclosure or other approved means.
- (20) ~~2404.203~~2404.20 **Standby personnel.** ~~When~~Where, in the opinion of the fire code official, it is essential for public safety in a tent or membrane structure used as a place of assembly or any other use where people congregate, because of the number of persons, or the nature of the performance, exhibition, display, contest or activity, the owner, agent or lessee shall employ one or more qualified persons, as required and approved, to remain on duty during the times such places are open to the public, or when such activity is being conducted.

(a) ~~2404.20.13~~104.20.1 **Duties.** Before each performance or the start of such activity, standby personnel shall keep diligent watch for fires during the time such place is open to the public or such activity is being conducted and take prompt measures for extinguishment of fires that occur and assist in the evacuation of the public from the structure.

(b) ~~2404.20.23~~104.20.2 **Crowd managers.** There shall be trained crowd managers or crowd managers/supervisors at a ratio of one crowd manager/supervisor for every 250 occupants, as approved.

(21) ~~2404.21~~3104.21 **Combustible vegetation.** Combustible vegetation that could create a fire hazard shall be removed from the area occupied by a tent or membrane structure, and from areas within 30 feet (9144 mm) of such structures.

(22) ~~2404.22~~3104.22 **Combustible waste material.** The floor surface inside tents or membrane structures and the grounds outside and within a 30-foot (9144 mm) perimeter shall be kept free of combustible waste and other combustible materials that could create a fire hazard. Such waste shall be stored in approved containers and removed from the premises ~~at least~~not less than once a day during the period the structure is occupied by the public.

(E) Section 3105 Temporary stage canopies

(1) 3105.1 General. Temporary stag canopies shall comply with *paragraph (D)(3104), paragraphs (E)(2)(3105.2) to (E)(8)(3105.8) of this rule and ANSI E1.21 as listed in rule 1301:7-7-80 of the Administrative Code.*

(2) 3105.2 Approval. Temporary stage canopies in excess of 400 square feet (37 m²) shall not be erected, operated or maintained for any purpose without first obtaining approval and a permit from the fire code official and the building official.

(3) 3105.3 Permits. Permits shall be required as set forth in *rule 1301:7-7-01 of the Administrative Code.*

(4) 3105.4 Use period. Temporary stage canopies shall not be erected for a period of more than 45 days.

(5) 3105.5 Required documents. The following documents shall be submitted to the fire code official and the building official for review before a permit is approved:

(a) Construction documents: Construction documents shall be prepared in accordance with the *building code as listed in rule 1301:7-7-80 of the Administrative Code* by a registered design professional. Construction documents shall include:

(i) A summary sheet showing the building code used, design criteria, loads and support reactions.

(ii) Detailed construction and installation drawings.

(iii) Design calculations.

(iv) Operating limits of the structure explicitly outlined by the registered design professional including environmental conditions and physical forces.

(v) Effects of additive elements such as video walls, support scenery, audio equipment, vertical and horizontal coverings.

(vi) Means for adequate stability including specific requirements for guying and cross-bracing, ground anchors or ballast for different ground conditions.

(b) Designation of responsible party: The owner of the temporary stage canopy shall designate in writing a person to have responsibility for the temporary stage canopy on the site. The designated person shall have sufficient knowledge of the construction documents, manufacturer's recommendations and operations plan to make judgements regarding the structure's safety and to coordinate with the fire code official.

(c) Operations plan: The operations plan shall reflect manufacturer's operational guidelines, procedures for environmental monitoring and actions to be taken under specified conditions consistent with the construction documents.

(6) 3105.6 Inspections. Inspections shall comply with *paragraph (F)(106) of rule 1301:7-7-01 of the Administrative Code and paragraphs (E)(6)(a)(3105.6.1) and (E)(6)(b)(3105.6.2) of this rule.*

(a) **3105.6.1 Independent inspector.** The owner of a temporary stage canopy shall employ a qualified, independent approved agency or individual to inspect the installation of a temporary stage canopy.

(b) **3105.6.2 Inspection report.** The inspecting agency or individual shall furnish an inspection report to the fire code official. The inspection report shall indicate that the temporary stage canopy was inspected and was or was not installed in accordance with the approved construction documents. Discrepancies shall be brought to the immediate attention of the installer for correction. Where any discrepancy is not corrected, it shall be brought to the attention of the fire code official and the designated responsible party.

(7) **3105.7 Means of egress.** The means of egress for temporary stage canopies shall comply with *rule 1301:7-7-10 of the Administrative Code.*

(8) **3105.8 Location.** Temporary stage canopies shall be located a distance from property lines and buildings to accommodate distances indicated in the construction drawings for guy wires, cross-bracing, ground anchors or ballast. Location shall not interfere with egress from a building or encroach on fire apparatus access roads.