



Orange County Fire Rescue Department Tents & Membrane Structures

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Approved Copy On File

OCFRD TENT STANDARD 6000

1. Authority

This Standard operates under the authority of Orange County, Florida Ordinance and State Statutes.

1.1 Scope

This standard covers all tents and membrane structures having an area in excess of 200 square feet or canopies having an area in excess of 400 square feet. Temporary membrane structures, tents, or canopy structures used exclusively for camping and structures located on the private property of one or two family detached dwellings are exempt from the requirements of this standard.

1.1.1 When the term tent is used, it also applies to membrane structures.

1.2 Appeal

If a party is not satisfied with a decision of the Fire Marshal, an appeal may be made to the Orange County Fire and Life Safety Board of Appeals, as provided by State Law.

2. Plans and Specifications

2.1 A scaled or dimensioned floor plan identifying furnishings, exhibits, pipe and drape, exiting, exit widths, aisles, seating, tables, fire alarm or public address systems, emergency and exit lighting, HVAC units, emergency power sources, and panic hardware shall be provided to the Fire Marshal's Office at the time of permit submittal.

2.2 All applications for tent permits shall include a scaled or dimensioned site plan indicating the location of the tent(s), distances from other buildings, and vehicular access.

2.3 Stages and platforms must not exceed their allowable load limits. The minimum load limit design of stages or platforms shall be a minimum of 100 pounds per square foot (PSF).

2.4 Seating for assembly use accommodating more than 200 persons shall be fastened together in groups of not less than three (3) and not exceeding seven (7).

- 2.5 Documentation shall be provided that all tent fabric meets the requirements of NFPA 701, *Standard Methods of Fire Tests for Flame-Resistant Textiles and Films*.
- 2.6 Covered booths and/or multi-level booths are not permitted without prior review and approval by the Fire Marshal.
- 2.7 A scaled layout shall be provided for all tents used for the sale of pyrotechnics.
- 2.8 Main Aisles in assembly occupancies in large tents, as defined in this section, aisle widths shall at no time be less than outlined in Table 2.9.1 under **Alternate requirements**.

Large Tents

- A single tents or combination of tents with only one multi-purpose room of 12,000 square feet or more;
- Multi-purpose tents used as a mixed occupancy or assembly with occupant loads exceeding 300;
- Tents more than 4,500 square feet used for exhibit or display;
- All other tents that do not meet the definition of Small Tents;

- 2.9 Main aisles in assembly occupancies in small tents, as defined in this section, aisle widths shall at no time be less than aisle dimensions outlined in Table 2.9.1 under **NFPA 101 requirements**.

Small Tents

- A single tent or combination of tents with only one multi-purpose room of less than 12,000 square feet that is not being used for exhibition/display or part of a mixed occupancy;
- Multi-purpose tents used as a mixed occupancy or assembly with occupant loads less than 300;
- Tents less than 4,500 square feet used for exhibit or display.

2.9.1

Aisles	NFPA 101	*Alternate
Classroom	63" (44+19)	85" (66+19)
Banquet	82" (44+19+19)	104" (66+19+19)
General Session	44"	66"
Exhibits	44"	66"

Banquet Seating Aisles - Provide aisles such that the maximum travel distance from any point to the closest aisle or egress door does not exceed 36 feet.

- 2.10 Rows of seating served by aisles or doorways at both ends shall not exceed 100 seats per row. The 12" minimum clear width of aisle access way between such rows shall be increased by 0.3 inches for every seat over a total of 14 as outlined in Table 2.10.3, but shall not be required to exceed 22 inches.

- 2.10.1 Rows of seating served by an aisle or doorway at one end only shall have a path of travel not exceeding 30 ft. in length from any seat to an aisle. The clear width of aisle access way between such rows shall be in accordance with Table 2.10.3.

- 2.10.2 Aisle access ways serving seating for Classroom, Banquet or General Session floor plans shall comply with Table 2.10.3.

2.10.3

Aisle Access ways	NFPA 101
Classroom	36" (average)
Banquet	56" (average)
General session 14 seats per row	12"
General session >14 seats per row	12" + 0.3" each chair (max 22")
General Session Dead-end 7 per row	12"

General Session Dead-end > 7 per row 12"+ 0.6" each chair
(Note: dead-end rows may not exceed 30 feet)

- 2.11 If approval of the set-up of the tent/membrane structure is not received by the Fire Marshal's Office, the structure cannot be occupied.
- 2.11.1 The tent company who permits the tent/membrane structure must contact the Fire Marshal's Office for a fire safety inspection of the structure at least one business day prior to the show or event beginning.
- 2.11.2 Tent/membrane structure permit applications must be submitted to the Orange County Building Division, Zoning Department, and Fire Marshal's Office in a timely manner, with all the pertinent information outlined in this Standard, for the county departments to successfully provide approval prior to the date of the tent set-up. It is strongly recommended that for larger tent/membrane structures that a pre-construction meeting be requested through the OCFRD Office of the Fire Marshal.

3. Location and Spacing

- 3.1 All tents and membrane structures must have a minimum of 20 ft. clearance from exterior obstructions to provide an area to be used as a means of emergency egress by the occupants and access by emergency personnel. Tents may be attached together as long as the perimeter around the structures complies with this section.
- 3.2 Tops of tent stakes shall be blunt. If the stakes are not blunt, they shall be covered so as to prevent injury.
- 3.2.1 All stake lines adjacent to exits shall be visible.

4. Exits

- 4.1 There shall be a minimum of two (2) separate exits from any point in the structure where the occupant load is less than 500 persons. Where occupant loads are between 500 and 999 persons there shall be a minimum of three (3) separate exit doors from any point in the structure. Where occupant loads are 1,000 persons or greater there shall be a minimum of four (4) separate exit doors from any point in the structure.
- 4.2 The number of required exits and their exit widths for assembly occupancies in large tents, as defined in section 2.8 of this standard, **will be based on the alternate method of protection and must be increased based on 1.5 times the calculated occupant load.** Egress widths and number of exits is based on calculated occupant load for the size of the tent or the documented maximum occupant load identified by the property management.
- 4.3 The number of required exits and their exit widths for assembly occupancies in small tents, as defined in section 2.9 of this standard, **will not be based on the alternate method of protection and will be as specified in NFPA 101 on the calculated occupant load.**

- 4.4 There shall not be changes of elevations in excess of one-half (1/2) inch at exits. Any changes of elevations at exits must be in compliance with NFPA 101 and provided with the appropriate stairs or ramps.
- 4.5 Panic hardware or an approved equivalent must be provided on all exit doors that are lockable.
- 4.6 Exit doors are required to be placed at a distance from one another not less than one-half (1/2) the length of the maximum overall diagonal dimension of the structure or area served, measured in a straight line between the nearest edge of the exit doors.
- 4.6.1 Exits shall remain accessible and unobstructed while the tent is occupied.
- 4.6.2 If exits are covered while the tent is occupied; tent flaps or canvas curtains shall be arranged so that when opened they can readily be moved to the sides so that they create an unobstructed opening in the tent wall of the minimum width and height required for door openings.
- 4.6.3 Exits shall be designed and arranged to be clearly recognizable and distinctly marked as a means of egress.
- 4.7 If fencing, barricade, or similar material is installed around the perimeter of a tent, that portion that would cover the exits when the tent is not occupied shall be a separate piece and removed when the tent is occupied as defined in NFPA 101, 7.2.1.1.3.
- 4.8 For assembly occupancies in large tents as defined in section 2.8 of this standard, exits shall be so arranged that no point within the tent is more than 100' from an exit.
Exception: No point within a tent used for the sale of pyrotechnics shall be more than 50' from an exit.
- 4.8.1 For assembly occupancies in small tents as defined in section 2.9 of this standard; exits shall be so arranged that no point within the tent is more than 150' from an exit. Exception: No point within a tent used for the sale of pyrotechnics shall be more than 50' from an exit.
- 4.9 Exits shall be clearly marked with externally illuminated exit signs. Private party tents not exceeding 1,200 square feet shall not be required to have illumination in accordance with this section.
- 4.9.1 Directional exit signs if required shall be provided in accordance with NFPA 101, 7.10.
- 4.9.2 Exits, exit access, and exit discharge shall be illuminated at all times. Emergency lighting shall be provided as required by NFPA 101. Private party tents not exceeding 1,200 square feet shall not be required to have illumination in accordance with this section.
- 5. Occupant Load**
- 5.1.1 The occupant load shall be posted in all tents used for assembly purposes, regardless of occupant load.

- 5.1.2 Occupant loads shall be calculated by the square footage of the structure multiplied by 7 sq. ft per person for concentrated use (general session, classroom, reception) or 15 sq. ft. per person for less concentrated use (exhibits or banquet). Maximum occupant loads may be proposed to the Fire Marshal based on written documentation.

6. Cooking and Heating Equipment

- 6.1 Cooking is not permitted without prior review and approval by the Fire Marshal. Temporary and limited heating of food products by sterno is acceptable when contained in a noncombustible container and constantly attended and supervised.
- 6.2 HVAC equipment if installed, shall comply with the Florida Mechanical Code and the appropriate NFPA Standard.

7. Fire Hazards

- 7.1 No storage or handling of flammable or combustible liquids or gases shall be permitted at any location where it could jeopardize egress from the tent.
- 7.2 Refueling of equipment shall not be permitted inside a tent.
- 7.3 The ground enclosed by any tent and a minimum of 10'-0" outside of such tent shall be cleared of all flammable or combustible material or vegetation and the premises shall be kept free of such during the use of the tent. Live landscaping is exempt from the requirements of this section.
- 7.4 Decorative or acoustical materials as outlined in NFPA 1, 13.7.4.3.6 such as hay, paper, straw, wood chips, shavings, foams, and plastics are strictly prohibited unless flame retardant and approved by the Fire Marshal's Office.
- 7.5 Open flames are not permitted without prior review and approval by the Fire Marshal.
- 7.6 Pyrotechnics are not permitted without prior review and approval by the Fire Marshal.
- 7.7 Vehicle parking or display in the structures is not permitted without prior review and approval by the Fire Marshal.
- 7.8 Smoking is prohibited unless previously approved by the Fire Marshal's Office.
- 7.8.1 "No Smoking" signs shall be posted throughout the tent and outside of each entrance/exit.

8. Fire Extinguishers

- 8.1.1 A minimum 2A10BC dry chemical fire extinguisher shall be provided within 75'-0" of any point in the structure.
Exception: Where a functioning garden hose that can reach all portions of the private tent, that does not exceed 1,200 square feet, is provided

9. Fire Alarm and Emergency Communications

9.1 Tents used for assembly use with an occupant load of 300 or more people shall provide a fire alarm system, public address system with constantly attended location, or an alternate method of protection approved by the Orange County Fire Marshal's Office. An acceptable method of emergency forces notification shall be provided satisfactory to the Fire Marshal. Tents without sides that are open, accessible, and unobstructed on all sides at all times shall be exempt from the requirements of section 9.1 unless specifically mandated by the Fire Marshal.

10. Electrical Installations

10.1 Electrical installations shall comply with NFPA 70, *National Electrical Code*.

11. Crowd Managers and Orange County Fire Department Fire Watch

11.1.1 Trained Crowd Managers, with a means of emergency forces notification, shall be provided for all events at a ratio of 1 to 250 people. When occupant loads exceed 250 individuals, additional trained crowd managers or crowd manager supervisors shall be provided at a ratio of 1 for every 250 occupants.

11.1.2 The Fire Marshal shall have the authority to require Orange County Fire Department Standby Fire Personnel, emergency response equipment, or an approved fire watch when potentially hazardous conditions or a reduction in a life safety feature exist due to the type of performance, display, exhibit, occupancy, contest or activity, an impairment to a fire protection feature, or the number of persons present.

11.1.3 One (1) Orange County Fire Department Fire Watch Personnel with a means of emergency forces notification shall be provided when actual occupant loads exceed 1,000 individuals in addition to the crowd manager requirements of 11.1.1.

12. Special Requirements

12.1 An OCFRD Special Event Permit is required for all events inside of tents that are being used for exhibition or display purposes. The tent company shall provide general floor plans and the OCFRD tent checklists. The hotels or event coordinator shall submit specific floor plans.

12.2 An OCFRD Special Event Permit is not required for events inside of tents such as banquet, reception, classroom or general session settings. The tent company shall provide general floor plans and the OCFRD tent checklist.