

## **FIRE MARSHAL'S OFFICE**

### ***Temporary Tents and Membrane Structures***

Fires occurring in tents and air-supported structures have historically caused significant loss of life. Perhaps the most notable of these tragedies occurred on July 6, 1944, in Hartford, Connecticut, where a circus tent caught fire during a matinee performance, killing 167 people and injuring 487. Fire can present a danger to the occupants by exposing them to heat, smoke and toxic combustion products. Even flame-resistant fabrics may ignite or fail under extreme conditions posed by a fire, and may compromise the structural supports if not the integrity of the membrane in the case of an air-supported structure. Full or partial collapse of the membrane covering of a tent or air-supported structure may occur and egress may become difficult, if not nearly impossible. This SafetyNet shall not apply to membrane structures or tents erected for periods longer than 180 days.

#### **Definitions**

**AIR-INFLATED STRUCTURE** - A structure that uses air-pressurized membrane beams, arches or other elements to enclose space. Occupants of such a structure do not occupy the pressurized areas used to support the structure.



**Air-Inflated**

**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. Air supported structures are of two basic types:

- Double skin - Similar to a single skin, but with an attached liner that is separated from the outer skin and provides an airspace which serves for insulation, acoustic, aesthetic or similar purposes.
- Single skin - Where there is only the single outer skin and the air pressure is directly against that skin.



**Air-Supported**

**MEMBRANE STRUCTURE** - An air-inflated, air-supported, cable or frame-covered structure as defined by the California Building Code and not otherwise defined as a tent. See Chapter 31 of the California Building Code.

**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.

California Code of Regulations, Title 19, Division 1, §310.(a) through (c) Definitions.

- (a) Tent - A shelter, structure or enclosure made of fabric or similar pliable material.
- (b) Large tent - A tent designed for use by 10 or more people.
- (c) Small tent - A tent designed for use by less than 10 people.



**Tent**

**TEMPORARY** - For the purpose of this SafetyNet, "Temporary" means 180 days or less.

## General Requirements

- ✓ All temporary membrane structures and tents over 120 square feet shall obtain an operational permit from the UCDH Fire Marshal's Office. Permit applications may be obtained at the Fire Marshal's website or in person.
- ✓ Construction documents shall be submitted with each permit application showing a site plan, size and location of membrane structure or tent. The documents should also have seating arrangements, stage locations, number of proposed occupants, exit locations, manufacture data, and any support buildings, devices or machines, etc.
- ✓ Tents and membrane structures shall be equipped with Fire Extinguishers.
- ✓ Tents and membrane structures shall be securely anchored to anticipate the elements and adverse weather. Documentation of structural stability should be submitted to Facilities Development and Construction (FD&C) for review.
- ✓ Provide exit signs at all exits.
- ✓ All interior decorative fabrics or materials shall be flame resistant. Provide certifications for each item approved for fire resistivity.
- ✓ Provide "No Smoking" signs.
- ✓ Combustible materials shall not be stored in tents. Grills, BBQs and fryers shall be at least 20 feet away.
- ✓ No open flames will be allowed in membrane structures or tents.
- ✓ Generators shall be located at least 20 feet from membrane structures and tents.
- ✓ Tents and membrane structures shall not be located within 10 feet of any building.

*For further information or questions on membrane structures or tents, please contact the Fire Marshal's Office (916) 734-3036*