



Fire Marshal's Office
San Mateo County Fire
CAL FIRE

320 Paul Scannell Drive, San Mateo, California 94402 (650) 573-3846

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Number: CFS-0013

Title: *Tents & Awnings*

Approved: *Clayton Jolley*

SCOPE: Tents, canopies, and membrane structures shall conform to the provisions of this standard and all applicable code sections of the 2007 California Fire (CFC). This standard is intended to provide direction for plan submittal and to serve as guide for field inspection. (CFC Chapter 24)

PERMIT APPLICATION: A Temporary Tent Permit must be obtained for tents and membrane structures having an area in excess of 200 square feet and canopies in excess of 400 square feet from the Planning/Building Division of San Mateo County. The permit shall be reviewed by the San Mateo County Fire Marshal's Office. No tent, canopy or membrane structure shall be erected without the Fire Marshal's approval. The application should be submitted at least 30 days prior to the projected use date. The following information must be included in the application.

1. Period of Use: State dates of intended use.
Site Plan "to scale":
 - a. The area of tent(s) installation including guy wires, support ropes and fire department access roads.
 - b. Nearest existing fire hydrant(s).
 - c. Dimensions to property lines, buildings, other tents.
 - d. Automobile parking including islands (if applicable).
 - e. Location of heating units.
 - f. Location LP-gas cylinders.
 - g. Wiring routing on floors and how secured, protected, and/or ramped.
 - h. Location of generators.
 - i. Location of other equipment relating to this event (e.g. trailers, living quarters, vehicles, etc.).
 - j. Certification of structural requirements of tent, per the requirements of CBC Chapter 31E, by a structural, civil or other qualified registered engineer.

2. Floor Plan "to scale" Include the location(s) of following if applicable:
 - a. Tables, chairs, bleachers, grandstands, aisles, stages, switchboards, buffets.
 - b. Fire extinguishers.
 - c. Exits, exit signs and exit lighting.
 - d. Occupant load sign.
 - e. Electrical power cord routes.
 - f. Audio/visual cord routes.
 - g. "No Smoking" signs.
 - h. Location and type of decorations, including potted plants, fake plants,

- Christmas Trees, etc., showing 3 ft. clearance from all contents to fabric envelope.
- i. Heaters. Provide information and manufactures cut sheets. No open flame allowed.
 - j. LP-gas cylinders.
 - k. Generators.
 - l. Cooking equipment and other associated equipment.
4. A copy of fire retardant certificates completely legible (front and back). The tent(s) and all decorative materials used in the tent(s) shall be fire retardant material or treated and display the California State Fire Marshal label. Proof of flame retardant treatment is required for all tenting, floor coverings, curtains, tablecloths, banners, etc. (CFC 2404)

INSPECTIONS:

Pre-event Inspection. - A site inspection is required after the structure has been erected and prior to the event. Contact the San Mateo County Fire/CAL FIRE Fire Marshal's Office at 650-573-3846 to schedule an inspection. The pre-event inspection must be scheduled at least 2 days prior to the event. If code compliance problems are found time must be available for correction.

Event Inspection. A Fire Department inspection may occur anytime the event is open to the public.

Reinspection Fee: A reinspection fee may be charged for missed appointments, failure to comply or not being ready.

USE PERIOD:

Tents and canopies shall be used for a period of not more than 180 days within a 12-month period for a single premises (CFC 2403.5).

FIRE APPARATUS ACCESS:

Fire apparatus access shall be capable of supporting the fire apparatus load of 50,000 LBS, have an all-weather driving surface, have a minimum 20-foot width, a minimum 13-½ foot vertical clearance and a minimum center lane 35 foot turning radius. Fire apparatus access shall be provided in accordance with Section 503 of the California Fire Code.(CFC 2403.8)

LOCATION OF TENTS:

Tents shall not be located within 20 feet of property lines, buildings, temporary membrane structures, other tents and canopies, 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, tent or canopy. (>15,000 Square Feet)(CFC 2403.8.2)

1. Any tent or combination of tents having a floor area in excess of 1,500 square feet but less than 15,000 square feet shall be located not less than 30 feet (9144 mm) from any real property line or building.
2. Any tent or combination of tents having a floor area in excess of 15,000 square feet shall be located not less than 50 feet from any real property line or building.
3. Tents shall be arranged to exit independently of each other. Such tents may, however, be joined together by means of corridors, and such corridors shall be open to the sky. On each side of such corridor and directly opposite each other, there shall be provided openings equivalent to the width of the corridor. These openings shall be equipped with sliding curtains or left entirely open and clear of any obstruction.
4. An unobstructed passageway not less than 12 feet in width and free from guy ropes or other obstructions shall be maintained on all sides of all tents. (CFC 2403.8)

STRUCTURAL STABILITY:

Temporary membrane structures, tents and canopies and their appurtenances shall be adequately braced and anchored to prevent weather related collapse. Water barrels shall not be used in lieu of stakes. Certification of structural stability may be required from a structural, civil or other qualified registered engineer. (CFC 2403.9)

FLAME RETARDANT TREATMENTS:

The sidewalls, drops and tops of temporary membrane structures, tents and canopies shall be composed of flame-resistant material or shall be treated with a flame retardant in an approved manner. Floor coverings, bunting, combustible decorative materials and effects (curtains, tablecloths, banners, etc), including sawdust when used on floors or passageways, shall be composed of flame-resistant material or shall be treated with a flame retardant in an approved manner.

Temporary membrane structures, tents or canopies shall have a permanently affixed label bearing the following information:

1. Identification of temporary membrane structure, tent or canopy, size and fabric or material type.
2. For flame-resistant materials, the necessary information to determine compliance with this article or Section 1103 as applicable.
3. For flame-retardant-treated materials, the date that the temporary membrane structure, tent or canopy and other combustible materials were last treated with an approved flame retardant.
4. The trade name and type of flame retardant utilized in the flame-retardant treatment.
5. The name of the person and firm that applied the flame retardant.

(CFC 2404)

MAXIMUM OCCUPANT LOAD:

Each room having an occupant load of 50 or more, shall have the capacity of the room posted in a conspicuous place on an approved sign near the main exit from the room. (CFC 1004.3)

SEATING ARRANGEMENTS:

Seating arrangements shall be per Chapter 10 of the California Fire Code and applicable sections of the California Building Code.

EXITING:

Exits shall be in accordance with Chapter 10 of the CBC and CFC.

Distribution. Exits shall be spaced at approximately equal intervals around the perimeter of the temporary membrane structure, tent or canopy and shall be located such that all points are 100 feet or less from an exit. (CFC 2403.12.1)

Every tent and temporary membrane structure or usable portion thereof shall have at least one exit and not less than the number of exits required by the following table. (CFC 2403.12.2)

MINIMUM NUMBER OF EXITS AND WIDTHS FROM TEMPORARY MEMBRANE STRUCTURES, TENTS AND CANOPIES

OCCUPANT LOAD	MINIMUM # OF EXITS	MINIMUM WIDTH OF EACH MEANS OF EGRESS	
		x 25.4 for mm	
		Tent or Canopy	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	7	120	96

The total width of EXITS in inches shall not be less than the total occupant load served by a means of egress multiplied by 0.2 (5.08). Such widths of means of egress shall be divided approximately equally among the separate means of egress.

Exit Openings. Exit openings from tents shall remain open during hours of occupation unless the exit opening is provided with a flame-resistant curtain, and:

1. Curtain is free sliding on a metal support. The support shall be a minimum of 8 feet above the floor level at the exit. The curtains shall be so arranged that, when open, no part of the curtains obstructs the exit, and
2. Curtain is of a color, which contrasts with the color of the tent.

(CFC 2403.12.3)

Aisle. Aisles shall have a minimum width of 44 inches to all exits. Aisle widths shall be increased, based on the occupant load of the tent, to not less than 1 foot of aisle width for each 50 persons served by such aisle at that point (CFC 2403.12.5).

Ramp Slope. The slope of ramped aisles shall not be more than 1 unit vertical in 8 units horizontal (12.5 % slope) or less (CFC 1010.2).

Handrails shall comply with the height size and shape dimensions set forth the Building Code. (CFC 1012)

MAINTENANCE OF EXITS:

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. The surface of means of egress shall be maintained in an approved manner. Exits, aisles and passageways shall not be blocked or have their minimum clear width obstructed in any manner including by persons for whom seating is not available. (CFC 2403.12.8)

EXIT ILLUMINATION:

Means of egress shall be illuminated with light having an intensity of not less than 1 foot-candle 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. (CFC 2403.12.7)

EXIT SIGNS:

Exit signs shall be installed at required exit doorways and where otherwise necessary to clearly indicate the direction of egress when the exit serves an occupant load of 50 or more. Exit signs shall have minimum 6-inch high letters with 3/4-inch stroke above each exit. (CFC 2403.12.6)

Illumination:

Exit signs in temporary membrane structures, tents and canopies with occupant loads of 50 or more persons shall be of an approved self-luminous type or shall be internally or externally illuminated by fixtures supplied in the following manner:

1. Two separate circuits, one of which shall be separate from all other circuits, for 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 on site generator set, and the system shall be installed in accordance with the Electrical Code. (CFC 2403.12.6)

SOURCES OF IGNITION:

Smoking. Smoking shall not be permitted in temporary membrane structures, tents and canopies or in adjacent areas where hay, straw, sawdust or other combustible materials are stored or used. NO SMOKING signs shall be conspicuously posted. (CFC 2404.6) Fireworks, Open Flames and Hot Objects capable of igniting combustible materials shall not be used in or adjacent to a temporary membrane structure, tent or canopy, unless otherwise approved. (CFC 2404)

HEATING AND COOKING:

General. Cooking and heating shall be in accordance with CFC Section 2404.15 and CBC 3107E. Cooking and heating equipment, tanks, piping, hoses, fittings, valves, tubing and other related components shall be approved and in accordance with the California Mechanical Code and be approved by the Fire Marshal.

EXCEPTION: Operations such as warming of foods, cooking demonstrations and similar operations which do not present an ignition hazard.

Ventilation. Cooking and heating equipment shall be vented to the outside air as specified in the California Mechanical Code. Where vents or flues are used, all portions of the temporary membrane structure, tent, or canopy shall be no less than 12 inches from the flue or vent. Solid-fuel-burning equipment shall be equipped with spark arresters having openings not exceeding 1/4-inch wire mesh. (CFC 2404.15)

Location.

Comfort heating equipment shall not be located within 10 feet of exits, aisles or passageways. Comfort heating equipment shall be rigidly supported to prevent overturning and guards shall be provided to protect against ignition of clothing and other combustible material.

All other gas; solid- or liquid-fuel-fired appliances, including, but not limited to, forges, kitchen ranges and stoves, and water heaters, shall be located not less than 50 feet from any tent used as a place of public assemblage.

Cooking and heating equipment shall not be located within 10 feet of exits or combustible materials.

Tents where cooking is performed shall be separated from temporary membrane structures, other tents and canopies by a minimum of 20 feet.

Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet from a temporary membrane structure, tent or canopy.

LP GAS:

General. Equipment such as tanks, valves, tubing and other related components shall be approved and in accordance with CFC Chapter 38 and the California Mechanical Code.

Location of containers. LP-gas containers shall be located outside and in accordance with Table 3804.3 of the CFC. Safety release valves shall be pointed away from the temporary membrane structure, tent or canopy. (CFC 2404.16.2)

Protection and security. Portable LP-gas containers, piping, valves and fittings which are located outside and are being used to fuel equipment inside a temporary membrane structure, tent or canopy shall be adequately protected to prevent tampering, damage by vehicles or other hazards and shall be located in an approved location. (CFC 2404.16.3)

Electrical Heating and Cooking Equipment. Electrical cooking and heating equipment shall be in accordance with the California Electrical Code and CFC 605. (CFC 2404.15.7)

FLAMMABLE AND COMBUSTIBLE LIQUIDS:

General. Flammable-liquid-fueled equipment shall not be used in temporary membrane structures, tents or canopies. (CFC 2404.17)

Storage. Flammable and Combustible Liquids shall be stored outside in an approved manner not less than 50 feet from temporary membrane structures, tents and canopies. Storage shall be in accordance with Chapter 34.

Refueling. Refueling shall be performed in an approved location not less than 20 feet from temporary membrane structures, tents and canopies.

GENERATORS:

Generators and other internal combustion power sources shall be separated from temporary membrane structures, tents and canopies by a minimum of 20 feet and be

isolated from contact with the public by fencing, enclosure or other approved means. (CFC2404.19)

Combustible materials shall be at least ten feet away from generators. (i.e., ground cover, straw, hay).

Generator fuel shall be stored in an approved safety can away from any source of ignition or combustible materials.

Refueling of generators shall only be done with the machine off and cooled down.

ELECTRICAL INSTALLATIONS:

Electrical extension cords shall not cross aisles or exit passageways at any time.

Temporary wiring shall be attached to the structure in an approved manner and not extend across aisles, exists or passageways. (CFC 605.9)

Temporary wiring/extension cords shall be supported and protected against physical and accidental damage. (CEC 240.5, 590.4)

HOUSEKEEPING:

Vegetation Removal. Combustible vegetation shall be removed from the area occupied by a temporary membrane structure, tent or canopy and from areas within 30 feet of such structures. (CFC 2404.21)

Waste Material. The floor surface inside a temporary membrane structure, tent or canopy and the grounds outside and within a 30-foot perimeter shall be kept clear of combustible waste. Such waste shall be stored in approved containers until removed from the premises. (CFC 2404.22)

PORTABLE FIRE EXTINGUISHERS:

Portable fire extinguishers shall be provided in accordance with Sections 906 of the CFC (CFC 2404.12).

Size and Type. Extinguishers shall have a minimum 2A10BC rating with the State Fire Marshal tags denoting service within the date of service. All fire extinguishers shall be mounted with approved brackets or as deemed acceptable by the inspecting officer. A responsible person capable of operating a fire extinguisher shall be present at all times during the event. Additional fire extinguishers may be required by the Fire Marshal.

FIRE WATCH - STANDBY PERSONNEL:

When, in the opinion of the Fire Chief, it is essential for public safety in a place of assembly or any other place where people congregate, due to 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 be on duty at such place. Such individuals shall be subject to the Chief's orders at all times when so employed and shall be in uniform and remain on duty during the times such places are open to the public, or when such activity is being conducted. Before each performance or the start of such activity, such individuals shall inspect the required fire appliances provided to see that they are in proper place and in good working order, and 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

may occur. Such individuals shall not be required or permitted, while on duty, to perform any other duties than those herein specified. (CFC 2404.20)

PUBLIC SAFETY PLAN

The Fire Chief may require an Emergency Plan to augment required Standby Personnel or Fire Watch. (CFC 403.2)