



COLLEGE *of* CHARLESTON

FIRE AND EMS

Purpose:

The attached document & guidelines are intended to protect students, staff, faculty, and guests on the Campuses of the College of Charleston. The guidelines and information establishes general precautions for the safe use, as per the College of Charleston Fire & EMS, Office of Environmental Health & Safety, International Fire Code (IFC), and the National Fire Protection Association (NFPA), for individuals and/or organizations that plan to use tent(s), canopies, and/or any membrane structure on the College of Charleston campuses.

Definitions

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

Canopy: A structure or architectural projection, which may be constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects.

Membrane Structure: An air-inflated, air-supported, cable or frame-covered structure as defined in the International Building Code and otherwise *not* defined as a tent.

Flame-resistant: The property of a material whereby combustion is prevented, terminated, or inhibited following the application of a flaming or non-flaming source of ignition, with or without subsequent removal of the ignition source (NFPA 701).

Inspection

College of Charleston Fire Marshal shall inspect all tents, canopies, and membrane structures 400 square feet or larger. Any violations of the International Fire Code, Building Code or NFPA shall be corrected prior to the tent approval or immediately if discovered during the event. A diagram showing:

- The campus location of the proposed tent(s).
- Layout, showing distances between tents (and tent stakes of adjoining tents).
- Setup (tables, chairs, bandstand, etc.).
- Location of exits and egress routes.

This diagram must be submitted to College of Charleston Fire and EMS and (Director of Environmental Health & Safety) at least 5 working days prior to the event. College of Charleston Fire Marshals will coordinate the inspection of all tents with the College of Charleston Director of EH&S.

Permits

A permit/approval issued by the College of Charleston Fire and EMS is required for any tent larger than 20 X 20 (400 square feet). It is the responsibility of the tent provider, supplier or organization providing the tent, to obtain this permit. Permit information may be obtained from College of Charleston Fire and EMS Office at (843) 953-5499 / (843) 953-6369. Permit applications must be made at least 5 working days prior to the event.

Liability Insurance

Outside (Non-College of Charleston) groups are required to provide a "Certificate of Insurance" that names the College of Charleston as co-insured for the event, to the Events Office. For details, contact the Events Office.

Tent Layout/Location

Tents, canopies or other membrane structures shall not be located within 20 feet of lot lines, buildings, parked vehicles or internal combustion engines (e.g., generators). For measurement purposes, use tent stakes as the perimeter of the tent structure. Tent structures larger than 15,000 square feet must maintain a 50 foot separation from any building, parked vehicle or internal combustion engine.

Adjacent tents must allow a means of egress from one tent to the other without interruption. If two or more tents are connected by a corridor, exits must be provided at either end of the corridor.

Tents must be placed to provide access to fire hydrants for Fire Department vehicles and provide unobstructed ways of travel at all times to permit prompt escape from any point of danger in case of fire.

Certificates of Flame Resistance

All tents are required to meet the provisions of NFPA 701. A certificate or other proof of approval by a certified testing laboratory is required as evidence of the tent material fire resistance. This certificate shall list the name of the testing organization and testing methodology, and must be permanently affixed to the tent in a prominent location.

Certificates of Flame Resistance are generally provided with the tent from the manufacturer, but if the certificate is missing, a duplicate is available from the tent supplier. It is the responsibility of the tent provider, or organization providing the tent, to ensure this certificate is available.

Combustible Material

No hay, straw, shavings, or similar combustible materials are permitted within any tent.

Combustible trash shall be removed at least once a day during the period the tent is occupied.

The area enclosed by any tent, and not less than 20 feet around the outside of the tent must be cleared of all flammable, combustible material or vegetation prior to erecting the tent and the duration of its use.

Smoking

Smoking is prohibited in all tents. "***No Smoking***" signs shall be conspicuously posted.

Open or Exposed Flame

Open flame or other devices emitting flame, fire, heat, or any flammable or combustible liquids, gas, charcoal or other cooking devices shall not be permitted inside or located within 20 feet of the tent, unless expressly approved by the College of Charleston Fire and EMS.

Lighting and Electrical

Electrical installations shall conform to the requirements of NFPA 70, National Electrical Code®, and shall be maintained and operated in a safe and professional manner. The electrical system and equipment shall be isolated from the public by proper elevation or guarding. All electrical fuses and switches shall be enclosed in approved enclosures. Cables on the ground in areas traversed by the public shall be placed in trenches or protected by approved covers.

Occupant Limits (Load)

The maximum number of occupants, called the occupant load, is based on the floor area of the tent. The occupant load is decreased when tables and chairs or other obstructions are used.

The following calculations will be used to determine the occupant load. Please note that these calculations are for planning purposes only and do not represent a legal capacity. The College of Charleston Fire Marshal's Office will provide legal capacities based on submitted set-up plans in accordance with the code.

With obstructions (e.g., tables and chairs)	Net square footage of tent floor area (Minus stage areas) $\div 15$ = Occupant load
Without obstructions	Net square footage of tent floor area (Minus stage areas) $\div 7$ = occupant load

Example: The number of occupants allowed, with tables and chairs, in a 50 x 50' tent with a 10' x 20' stage.

2,500 square feet (floor area) – 200 square feet (stage area) $\div 15$ = 153 persons

Required Number of Exits for Enclosed Tents

Tents that have sides attached and rolled up or are capable of being enclosed must meet these requirements even if it is intended for the tent to remain unenclosed during the event. The number of separate exits required for enclosed tents is based on the floor area of the tent.

Occupant Load	Number of Exits (Minimum)	Minimum Exit Width (inches)
10 to 199	2	72
200 to 499	3	72
500 to 999	4	96
1,000 to 1,999	5	120
2,000 to 2,999	6	120

Exit Signs and Emergency Lighting

Each exit must be provided with an illuminated emergency exit sign. The word "EXIT" must be plainly legible in letters at least 6 inches high and with strokes not less than inches wide. If the tent is to be occupied after sunset, the exit sign shall be self-illuminated, or lit by emergency lighting. Emergency lighting must be provided if the tent is to be occupied after sunset.

Emergency lights and exit signs must be powered as follows:

Occupant Load	
300 or less	Two circuits, one of which shall be separate from all other circuits
Over 300	Two separate sources of power, one of which shall be an approved emergency system, supplied either by generator or battery

It is the responsibility of the company or organization providing the tent, to provide "illuminated" exit signs and emergency lighting. Exit signs shall be installed at required exit doorways and where otherwise necessary as determined by the Fire Marshal, to indicate clearly the direction of egress.

Fire Protection

- Portable fire extinguishers (dry chemical, ABC type) will be furnished by the tent vendor/supplier at each exit of an enclosed tent, or when required by the College of Charleston Fire Marshal (Depending upon functions within the tent).
- Cooking is not permitted in occupied tents. Tents where cooking is performed shall be separated from other tents by a minimum of 20 feet.
- Commercial cooking equipment such as grills and broilers, when used within a tent, must meet the same requirements for indoor commercial kitchens (i.e. proper ventilation, fire suppression systems) and must be a minimum of 20' from any occupied tent.
- LP gas containers having a capacity of 500 gallons or less shall be properly secured at least 10 feet away from the tent or any structure with the safety release valves pointed away from the tent.
- Flammable liquids shall not be used in the tent. Refueling is not permitted within the tent.
- Cooking: Prior approval must be obtained by the College of Charleston Fire and EMS Office. The area must have a minimum 20 BC rated fire extinguisher, and if using a deep fryer, a “K” rated extinguisher. Fire extinguishers shall show proof of inspection within the last twelve months and contain sodium bicarbonate or potassium bicarbonate.
- Appliances: Must be isolated from the public by at least four feet or a suitable barrier placed between the cooking device and the public. Cooking appliances shall be installed per the manufacturer’s instructions. U.L listed appliances shall have clearances of not less than 36 inches at the backsides, and 48 inches at the front.

Exit Requirements

- There shall be a minimum clearance of at least 3 feet between the fabric envelop and the inside contents.
- Exits shall be spaced at approximately equal intervals around the perimeter of the tent.
- Exits shall be located such that all points are 100 feet or less to an exit.
- The minimum width of an exit must not be less than 72 inches.

- Guy wires or guy ropes must not cross an exit at a height of less than 7 feet.
- Where tents are placed near fences or other obstructions, a clear exit path must be maintained to an area sufficiently away from the tent.
- Adjacent tents shall be sufficiently distant from each other to provide an area to be used as a means of emergency egress, with a minimum of 12 ft. between stake lines.
- Tent stakes must be railed off, capped or covered.
- Unobstructed aisles must be a minimum of 44 inches and shall increase 1 foot for each 50 persons served by such aisle at that point.
- Cooking or heating equipment shall not be located within 10 feet of an exit or combustible materials.

Fireworks/Pyrotechnics

Fireworks, open flames, and devices capable of igniting combustible materials shall not be used inside a tent, canopy, or temporary membrane structure. Portable heaters shall not have their flame source inside the tent, canopy, or temporary membrane structure.

Electrical

- The electrical system and equipment must be isolated from the public by proper elevation or guarding. All electrical fuses and switches must be enclosed in approved enclosures. Cables on the ground, in areas traveled by the public must be placed in trenches or protected by approved covers (mats, yellow jackets etc.).
- All electrical systems must be properly grounded.

Generators must be located so that exhaust fumes do not enter tents. Generators must be a minimum of 20 feet from the tent.

Additional Information/Requirements

Additional requirements may be imposed on applicant due to the specific use and types of membrane structure as per Chapter 31 of the International Fire Code.