



3560 Nevada St. Pleasanton, CA 94566

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Temporary Tent Anchorage for Tents Not Exceeding 1,600 Square Feet

This document addresses tents which will be erected for no more than six months in a 12-month period. Tents erected for a longer period shall comply with California Building Code requirements, including permitting requirements. The Fire Code specifies anchorage requirements for temporary tents.

The following temporary tents must meet Building Code requirements for wind resistance:

- Tents exceeding 7,500 square feet
- Tents with an occupant load exceeding 1,000 people
- Tents exceeding one-story
- Tents erected on roofs, balconies, decks, platforms or other structures

In these cases, a site-specific anchorage plan signed-off on by a professional engineer is required. In addition, the engineer shall certify the tent was properly installed.

Other temporary tents must be designed and installed to “resist the elements of weather and prevent collapsing”. For these tents, minimum anchorage requirements are discussed below.

When or more tents are installed next to each other, each tent must be anchored independently, unless an alternative anchorage plan is proposed and approved.

Tents of Up to 1,600 Square Feet

Tents may be anchored with stakes. The staking must be consistent with the tent staking guidelines of the Industrial Fabrics Association International. Contact the Fire Department for this guideline. Ballast can also be used to anchor tents.

The following anchorage protocol using ballast is acceptable for tents not exceeding 1,600 square feet. Examples of requirements for common configurations are provided in the following table:

- Tents using the protocol shall not be used and/or shall be evacuated if wind speeds (sustained and/or gusts) exceed 35 miles per hour. The tent user is responsible for monitoring weather conditions.
- Ballast is to be provided at 7.6 pounds per square foot of tent area using concrete blocks. (Based upon tent industry rule of thumb of providing 10 pounds per square foot of tent area for winds up to 45 miles per hour).
- The weight required when using plastic barrels is greater than when using concrete blocks due to the barrels' high center of gravity and ease of sliding. Note: 55 gallons of water weighs 458 pounds; 55 gallons of sand weighs 770 pounds.
- Number of barrels required: When the number is not a whole number and 55-gallon barrels are used, the number of barrels shall be rounded up, unless the fraction over the whole number is less than one-tenth. Alternately, smaller barrels may be used as long as the required weight is provided.
- Other types of ballast will be evaluated on a case-by-case basis
- The weight shall be doubled at the corners, with the guys at the corner forming a 90-angle to each other.
 - Exception: for 10 x 10 tents



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- The weight per upright is determined by dividing the required weight by the number of uprights + 4.
 - Exception: for 10 x 10 tents the number remains 4.
- No upright shall have less than the required minimum amount of weight; averaging amount of weight across uprights is not permitted.

The anchorage system for tents that are tied off to railings, building, or other structures must be reviewed and stamped by a structural engineer when the tent exceeds 10X10.

Minimum Requirement for Tents Not Exceeding 1,600 Square Feet for Common Configurations					
Size	Number of Uprights	LBS Concrete per Upright – Double at Corners **	Lbs in Plastic Barrels – Double at the Corners **	Number of 55-gallon barrels filled with WATER	Number of 55-gallon barrels filled with SAND
10x10	4	190	380	1	1
10x20	6	152	304	1	1
10x30	8	190	380	1	1
10x40	10	217	434	1	1
15x12	8	137	274	1	1
15x15	8	171	342	1	1
15x25	8	285	570	2	1
20x20	8	253	507	1	1
20x30	10	326	760	2	1
20x40	12	380	651	2	1
30x30	10	489	760	2	2
30x40	14	507	977	2	2
40x40	16	608	1013	3	2

** Doubling at the corners does not apply to 10 x 10 tents.

Notes on concrete:

- Normal concrete weighs about 145 pounds per cubic foot
- A cubic foot contains 7.48 gallons
- A gallon of concrete weighs about 19.4 pounds
- A five-gallon bucket filled with concrete weighs about 97 pounds