

**Permit Requirements
Professional Fireworks Display**

Kern County Fire Department



Office of the Fire Marshal ~ Fire Prevention
2820 M St. ~ Bakersfield, CA 93301
Telephone (661) 391-3310 ~ Fax (661) 636-0466/67
Website: kerncountyfire.org
Email: fireprevention@kerncountyfire.org



Please include with submittal:

**Application for Permit for Professional Fireworks Display (KCFD 226), &
Application for Standby (KCFD 201)**

Fee Amount: \$145.00

Fee Code: 2.7

Minimum standby fees will be collected at time of permit submittal

Standby Fee, \$150.00 an hour for one Fire Safety Officer

Minimum six hours

1. Permits for Fireworks Display shall be applied for at 2820 M St., Bakersfield, CA 93301.
2. Fee shall be submitted at time of application submittal. Make check payable to Kern County Fire Department. **Visa and MasterCard accepted.**

Fireworks Display Permit Requirements

3. Copy of California Pyrotechnic Operator license.
4. Certificate of General Liability Insurance and Workers Compensation for all employees.
5. Minimum of \$1,000,000 public liability, \$1,000,000 property damage insurance policy and products liability insurance in the amount of \$1,000,000. Attach riders to the policies designating the County of Kern as an additional insured there under. The deductible shall not exceed \$15,000.
6. Submit site plan to include the dimensions of the display site and location of discharge site, spectator viewing area, parking areas, fallout area, and the associated separation distances. See the table on page two for minimum separation distances.
7. Electronic firing only, **no hand firing allowed**.
8. Public displays in the vicinity of an airport should be approved by the FAA.
9. Mortar tubes in racks shall only be made of HDPE.
10. Racks showing significant wear of the lumber or tubes shall not be used.
11. Technicians shall be a minimum of 100 feet away when firing, everyone else shall be as far away as possible.
12. Stress relieving of the e-match shall be used.
13. Wire connector rails, Box Rails, shall be secured with wire ties, tape, wire, etc.

Rack construction on page 589 of the CFC has an example of the design of racks and what is called a unit, two racks joined together at the end. The code says 10 mortar tubes is the max for a "Unit".

Several times a different configuration for the racks has been discussed to resolve issues with connecting to box rails. The example of a typical rack in the CFC has proven not to be safe connecting racks side to side. Rack construction shall be different if the configuration of the racks is side to side & more than 10 mortar tubes.

A quality plywood shall be used, either marine or hardwood plywood. This type of plywood is stronger and will withstand a mortar rupture better than plywood made with lower grade products. The attached pictures show 3/4" grade A marine plywood is used on the sides. 3/4" grade A marine plywood doubled up is used for the ends of the rack. This configuration did not rupture when tested with a shell exploding in the bottom of the mortar.

14. Mortar racks shall be limited to a maximum of 10 tubes per unit. The base and ends of the rack shall be nominal 2-inch thick lumber. The inside width shall be equal to the outside diameter of the mortar tube. Each mortar tube shall be separated by horizontal or vertical blocks nominally 2 inches thick and 4 inches wide. No metallic parts are allowed in the construction of mortar rack, except nails, screws, or construction grade staples. A minimum 5-foot separation shall be required between other racks, cakes, and devices. A minimum 3-inch separation shall be provided between all mortars in adjacent racks within the cluster. This is to provide for the same effect as spacer blocks within each single-rack and reduce the increased exposure of adjacent mortars.

**NFPA - Table 5.1.3.1
Distances for Outdoor Aerial Shell Display Sites:**

Minimum Separation Distances from Mortars to Spectators for Land or Water Displays

Mortar Diameter (inches)	Min. Separation From Spectator Viewing Areas, Vehicles & Buildings (feet)
Less than 3	200
3	210
4	280
5	350
6	420
7	490
8	560
10	700
12	840
Greater than 12	Approved by the chief

15. The AHJ can revoke or restrict any approval to conduct an outdoor display whenever conditions such as site location, weather, traffic, communication, security procedures, available public protection, or other safety precautions make such action necessary to safeguard the health, safety, or welfare of the public.

16. All mortar tubes must be cleared of debris before the FSO arrives to inspect for damage.

17. All loaded finale mortars shall be covered with foil.

All permit requirements can be found in **NFPA 1123 and Title 27, Part 55, Code of Federal Regulations, Commerce in Explosives and California Fire Code Chapter 56 section 5608 of the 2019 CFC.**

**Fallout Zone Requirements for Vertical Mortars
Up to a 2-inch shell requires 70 feet per inch of shell.
Greater than a 2-inch shell requires 100 feet per inch of shell.**

Mortars to Special Hazards double the distances. See NFPA 1123 5.1.4 (special hazards consist of health care or detention facilities, bulk storage of flammable material. Dwellings, buildings, and structures if occupied during the display. Structures must provide protection for occupants through noncombustible or fire-resistant construction)

Mailing Address:

Kern County Fire Department
2820 M St.
Bakersfield, CA 93301
Attn: Fire Prevention

CFC – California Fire Code 2019