



INSPECTION CHECKLIST

OUTDOOR AERIAL FIREWORKS DISPLAY

PAPERWORK

- Fire Department Permit
- Approved Site Plan

PERSONNEL

- Verify and record pyrotechnic operator identity
- Verify pyrotechnic operator possesses valid license of proper type
- Verify and record information on the identity and ages of all assistants, helpers, etc. **(Must be 18 years old.)**

SECURITY

- Verify site security of storage area, discharge area, display area and fallout area as indicated on approved plan.
- Verify arrangements for traffic and crowd control before, during, and after display.

TRANSPORTATION AND STORAGE ARRANGEMENTS

- Transportation shipping documents match product in vehicle
- Vehicle placards are provided as required
- Fireworks storage is in an approved manner and location
- Storage container(s) is locked and secured

FIRE PROTECTION AND SAFETY EQUIPMENT

- Fire extinguishers available and accessible (minimum of two (1)-water filled; and (1)-2A 40BC)
- Shovel and container available for retrieving duds (bucket of water)
- Appropriate protective gear (i.e., hard hat, long sleeved shirt, etc.) available for persons manually discharging fireworks

MORTAR INSPECTION

- Compare list of mortar racks, etc. with actual equipment
- Mortars are approved for use with type of shells to be fired
- Mortars are inspected prior to use for defects, debris, etc.
- Base plugs are securely attached to bottom of mortars
- Mortars are proper length for size of shells to be fired

RACK INSPECTION

- Racks have no more than 10 tubes per unit
- Base and ends of racks are nominal 2" thick lumber
- Racks have blocks (nominally 2" x 4") separating individual mortars
- Racks for mortars 3 inches or larger have side braces of 1" x 6" nominal lumber or 1/2" x 4" plywood
- All racks with more than 5 tubes have diagonal side braces
- Racks are secured to prevent falling over

TROUGH INSPECTION

- No trough is more than 8 feet in length
- Bottom surface of trough is provided with 3/4-inch plywood if not sufficiently stable to support firing of mortar
- Troughs are constructed of minimum 3/4-inch plywood and secured with 3/8-inch through-bolts, rods, or angle iron. "U" brackets at each end & center
- Sand or soft dirt, free of rocks or debris, is on-hand to fill trough
- Minimum separation distance between mortars is provided
- Trough is of adequate height to securely bury mortars 2/3 of their minimum legal length

DRUM INSPECTION

- Drums are in good condition
- Sand or soft dirt, free of rocks or debris, is on-hand to fill drum
- Drums are adequate size to provide minimum separation distances between mortars
- Drums are of adequate height to securely bury mortars 2/3 of their minimum legal length

TRENCHES, ETC. TO BURY MORTARS IN GROUND

- Planking below mortars is provided for unstable or unlevelled surfaces
- Trenches are of sufficient depth to securely bury mortars 2/3 of their minimum legal length
- Minimum separation distance between mortars is provided
- Sand or soft dirt, free of rocks or debris, is on-hand to fill trench

AERIAL SHELL INSPECTION

- Number of shells matches quantity listed on permit
- Shells properly labeled for use in California
- Operator examines shells for damage
- Operator sizes shell for proper fit in mortars

GROUND DEVICE INSPECTION

- Ground devices match items listed on permit
- Location and spacing of devices is per approved permit
- Equipment available to secure & brace ground devices

DISCHARGE FALL/OUT AREA INSPECTION

- Location is as per approved permit
- Minimum required fall out area is provided
- Arrangements provided to secure fall out area when shell loading begins

ELECTRICALLY FIRED DISPLAY INSPECTION

- Power source is restricted to batteries or individually isolated generators
- Firing system is protected against accidental firing
- Method for circuit testing is available
- Firing panel is located a minimum of 100' from devices
- Devices are located within continuously unobstructed full view of operator
- Electric firing is required for all mortars greater than eight inches (8") in diameter

MANUALLY FIRED DISPLAY INSPECTION

- Safety caps protecting fuses remain in place until immediately before firing

RELOADED MORTARS DISPLAY INSPECTION

- No HDPE mortars will be reloaded
- Ready box(es) are located more than 25 feet upwind of the closest mortar
- Ready box(es) are divided into separate compartments for each shell size
- Ready box(es) are covered with a flame-resistive canvas cover

OPERATION OF DISPLAY

- Discharge, display, and fall out areas are cleared of all unauthorized personnel prior to loading shells
- No one under the age of 18 is in discharge, display, and fall out areas once loading of shells begins
- Mortars are aimed over fallout area and away from spectators
- On electrically fired shows, discharge area is cleared of all persons prior to electrical circuit testing
- All devices are ONLY fired upon order or signal of the licensed operator
- During discharging of shells, operator observes activities to ensure wind and trajectory are adequate and makes adjustments if necessary
- If a misfire occurs, mortar shall be identified, marked and left undisturbed

POST DISPLAY ACTIVITIES

- NO ONE permitted to enter display, discharge, or fall-out areas until pyrotechnic operator has determined the area to be safe and secure
- Entire firing area is inspected by pyrotechnic operator and crew to locate any unexploded shells. Shells located are properly disposed of
- Unfired shells removed and returned directly to supplier or stored in manner approved on permit

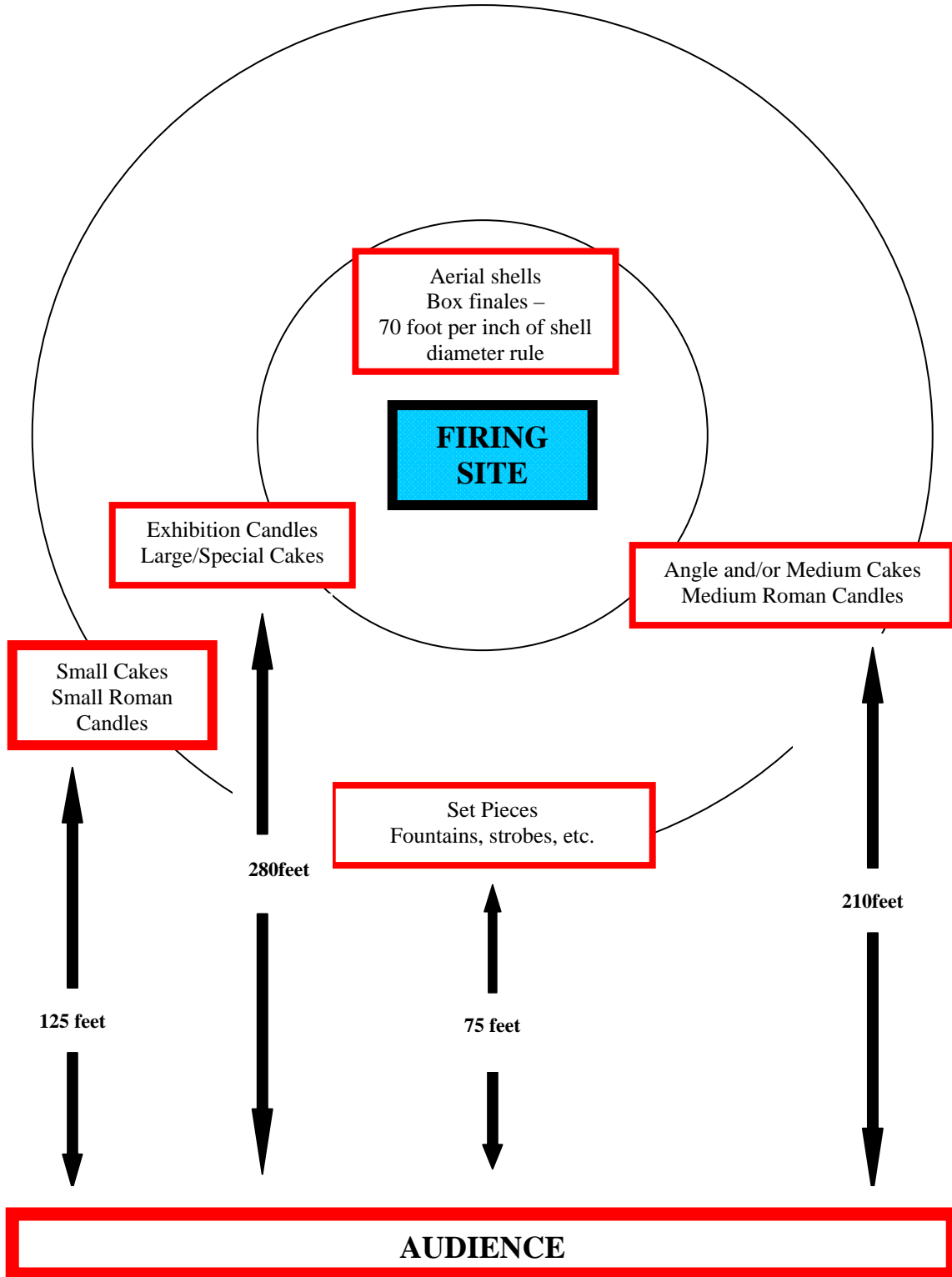
NOTIFICATION

- PYROTECHNIC OPERATOR provides verbal reports to State Fire Marshal for any incident involving injury or death to public or crew, or for any fire requiring emergency action or response resulting from the firing of the show.
- AUTHORITY HAVING JURISDICTION files charges of violations that would be cause for revocation or denial of a license to the State Fire Marshal within three years of the alleged act or omission.
- AUTHORITY HAVING JURISDICTION reports fireworks seized pursuant to 12522 Health & Safety Code to State Fire Marshal within 3 days.

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Recommended minimum safe distances from the audience where pyrotechnic devices should be placed for outdoor aerial displays. The performance criteria of the device as well as site characteristics will determine actual placement.



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MORTAR SIZES

NOTE: Numbers in parenthesis indicate 2/3 minimum depth for burying.

SHELL SIZE	INSIDE LENGTH STEEL MORTARS	INSIDE LENGTH PAPER MORTARS	INSIDE LENGTH HDPE MORTARS
1.99" or less	8 inches (5.3)	8 inches	10 inches (6.7)
2 inches	13 inches (8.7)	13 inches	13 inches (8.7)
2-1/2 inches	13 inches (8.7)	13 inches	13 inches (8.7)
3 inches	15 inches (10)	15 inches	15 inches (10)
4 inches	20 inches (13.3)	20 inches	20 inches (13.3)
5 inches	25 inches (16.7)	25 inches	25 inches (16.7)
6 inches	30 inches (20)	30 inches	30 inches (20)
7 inches	32 inches (21.3)	32 inches	32 inches (21.3)
8 inches	32 inches (21.3)	32 inches	32 inches (21.3)
10 inches	40 inches (26.7)		
12 inches	40 inches (26.7)		
16 inches	64 inches (42.7)		
24 inches	96 inches (64)		

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MINIMUM RADIUS OF DISPLAY SITES
FOR OUTDOOR FIREWORKS DISPLAYS
BASED UPON NFPA 1123 GUIDELINES

SHELL SIZE	INSIDE LENGTH STEEL MORTARS
< 3 Inches	140 Feet
3 Inches	210 Feet
4 Inches	280 Feet
5 Inches	350 Feet
6 Inches	420 Feet
7 Inches	490 Feet
8 Inches	560 Feet
10 Inches	700 Feet
12 Inches	840 Feet
> 12 Inches	Approval of AHJ