



## CLARK COUNTY FIRE DEPARTMENT - FIRE PREVENTION BUREAU

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### Permit Submittal Guideline

## **OUTDOOR FIREWORKS DISPLAY**

This guide is to assist in the submittal for a permit to conduct an outdoor fireworks display using devices governed by the *Code for Fireworks Display*, NFPA 1123. A permit is required per 105.5.16 of the Clark County Amendments to the 2024 IFC. Indoor pyrotechnics, rooftop fireworks, and explosive material storage are covered by separate permit guides.

Specific precautions and procedures for inspections required for outdoor display fireworks are not contained in the Clark County Fire Code or nationally recognized standards. This document is directed at specific procedures for the constancy of enforcement.

Available industry standards for display fireworks have subjective requirements with heavy reliance on enforcement by the Authority Having Jurisdiction. This permit guide therefore provides some requirements due to the absence of specific code requirements.

**PLEASE NOTE:** The fire inspector has the authority to halt, delay or cancel fireworks displays if unsafe conditions are witnessed. These include high wind, weather events, compromised fall-out zone, low breaking shells, excessive fallout, uncontrolled firings, or hazardous conditions.

### **APPLICABLE CODES:**

The following codes and standard apply to this permit.

- *International Fire Code*, 2024 edition (IFC)
- *Clark County Fire Code Amendments*, 2024 edition (CCFC)
- *Code for Fireworks Display*, NFPA 1123, 2022 edition

### **SUBMITTAL REQUIREMENTS:**

**The requirements in this guide are not intended to be all inclusive, nor do they entail a limit to the extent of the information, etc., which may be necessary to properly evaluate the submitted plans and documents. Reference NFPA 1123 chapter 5 and provide all applicable information that pertains to your permit:**

#### **1. LICENSING AND QUALIFICATIONS:**

- A copy of a valid Nevada State Fire Marshal pyrotechnic company license for the type of effects to be fired is to be provided with the submittal. (Outdoor Pyrotechnic Aerial)
- A copy of state and federal licenses held by operators or assistants (DOT, ATF, and homeland security)
- BATFA License 20 – Manufacture of High Explosives if applicable
- BATFA License 23 – Importer of High Explosives
- An operator with the appropriate certification will be required for the technician over seeing or firing the display.

- Close proximity product may be fired by a company holding a theatrical (indoor) license as defined by the Nevada Office of the State Fire Marshal (OSFM).
  - A State of Nevada, OSFM certified operator may oversee another operator without a Nevada certification provided that there is direct and continuous supervision.
2. **INSURANCE:** Provide a copy of a valid bond or Certificate of Insurance for the specified event.
- “Clark County, its agents, employees and volunteers” shall be named as additional insured and certificate holder.
  - General liability limits, including contractual liability, in the minimum amount of \$5,000,000 per each occurrence and shall be provided to conduct an indoor pyrotechnics display.
  - Greater liability insurance amounts may be required in certain cases as required by the Fire Code Official.
  - Reference CCFC 105.1.7
3. **MONITORS AND SPOTTERS:** Monitors and Spotters to be provided for each fireworks event;
- **Include list of personnel designated as monitor;**
    - The sole duty of the monitor is to enforce crowd control around the display area and fall out zone
    - Ensure radios are provided to communicate with the firing technician. All monitors must report status of assigned areas to the lead technician.
    - Unauthorized persons will not be allowed to enter the fall out zone or display area until the site has been inspected and deemed safe by the technician.
    - Clark County Fire Department reserves the right to determine the minimum number of monitors required for each display.
  - **Include list of personnel designated as spotter;**
    - The sole duty of the spotter is to observe the firing and bursting of aerial shells and other display fireworks for the purpose of detecting the occurrence of duds and observing other potential hazardous situations.
    - Ensure radios are provided to communicate with the firing technician. All spotters must report status of assigned areas to the lead technician.
    - Clark County Fire Department reserves the right to determine the minimum number of spotters required for each display.

**During the firing of the display ensure all personnel located in discharge site wear proper PPE (Personal Protective equipment) which includes head protection, eye protection, hearing protection, foot protection, and proper clothing (cotton, wool or similarly flame resistant, long-sleeved, long-legged clothing).**

4. **PRODUCTION SCHEDULE:** Provide a detailed description to include the following, but not limited to:
- The name of the contact person for the property/facility, their telephone number, fax number and email address.
  - Contact information, qualifications, ages, and experience for the fireworks operator and assistants
  - Firing schedule; include the date(s) and timing of the following;
    - The target time and dates the fireworks effects are to be unloaded and stored on site.
    - The time and date of initial set-up, site inspection and demonstration shots.

- The time and date of the fireworks display along with any rehearsal times and dates. If multiple display(s) and/or rehearsal(s) are needed, all date(s) and time(s) will also need to be provided.
- Ensure the schedule includes shot time, device address, module location, quantity, product number, related family, minimum distance, height of device, construction and location of every device used in the outdoor firework display.

**4. PRODUCT INFORMATION:**

- A brief description of each effect including the size/load, number, maximum height of fireworks, and firing locations. (Multi-shot pre-manufactured devices are counted as one device.)
- Include “shot sheet” with the name(s) and quantity of each type of device, maximum distance of travel, locations, construction and maximum height of trajectory.
- Provide information on device mounting, angles, device stability and material surface where the displays will be located.
- Material safety data sheets (MSDS) of the firework material to be used. Ensure manufacturer’s statement indicating whether firework device is intended for outdoor or indoor use.
- Flame certificates may be required for any potential combustible items located in the fallout area.

**5. STORAGE AND SECURITY:** Clarify manner and placement of on-site storage;

- **Stored within an approved magazine**
  - Have contracted dedicated security/fire watch staff during storage time
  - A 24-hour security detail shall be provided while the fireworks are on-site.
- **The security personnel shall be able to perform the following;**
  - Be physically capable of walking the perimeter, discharge site and any locations that are part of the fireworks display during the duration of the shift, except for breaks.
  - Replacement security personnel must be provided to continue walking the perimeter, discharge site and any locations that are part of the display, during the breaks.
  - Be advised of the duties to not allow any persons other than firework personnel in the discharge site or fireworks display area.
  - Be trained in the use of a portable fire extinguisher and capable of extinguishing a small incipient fire utilizing a portable fire extinguisher.
  - Upon discovery of a fire, security personnel shall contact the Clark County Fire Department immediately (Dial 9-1-1), then advise all other security personnel of the emergency. The security personnel will be provided a remote radio to a 24-hour monitoring station or a cellular phone.
  - A fence or other means of restraint shall be provided around the perimeter of the fireworks display site to prevent unauthorized access.

**6. PLANS: Provide detailed plans for the event, designed to an indicated scale and saved to a .PDF file. Plans shall include the following information;**

- Detailed **SITE PLAN** showing the location where the effect will be fired.
  - Include the location of buildings, streets, parking areas, vegetation and any other non-combustible structures that are located within the fallout zone and the distances from the discharge site.
  - Indicate the location(s) of detention/correctional facilities, health care facilities including, but not limited to hospitals, quick care centers, medical treatment/rehab

centers, and hospices and provide dimensions to fireworks display. Please note: These facilities are required to have at least twice the distance specified in the fall out zone.

- The location of any tents or temporary membranes that are adjacent to the outdoor fireworks display fall out zone. Dimensions shall be provided.

- Detailed **FIREWORKS PLAN:**

- Location of each firework device(s), including mortar racks, but not limited to mortar trough, shooter, and spotters.
- Type of ignition used to ignite fireworks, such as manual ignition or electrical ignition.
- Location of the firing unit and type of firing unit to be used to ignite electrical matches, if using electrical ignition.
- Location of storage and number of fuses/port fires to be used to ignite fireworks display.
- Description of chain-fused devices, if used during the fireworks display.
- Location/dimensioned designated fall-out areas
- Location of the spectators viewing area and the distance/dimension from the discharge site. Minimum separation distances for ground pieces shall be 150 feet from all spectators.
- The location(s) of the rooftop 2.5" fire hose valves or a minimum of 5/8" charged water hose(s) and nozzle(s) capable of reaching all areas required by Clark County Fire Department (CCFD). CCFD reserves the right to determine the minimum number of charged hoses and size required for each display.
- Location outside fallout zone for Emergency response personnel during the fireworks display.
- Method of storage and type of equipment used, such as magazines and ready boxes shall be indicated.
- Fire extinguisher locations. Additional fire extinguishers shall be provided in addition to those required by NFPA 10;
  - They shall be located as close to the discharge site as practical for operations and shall be compatible to the pyrotechnic product being used. They shall be placed so that at least (1) extinguisher is located on each opposing side of the pyrotechnic display
  - (2) pressurized water extinguishers, each with a minimum rating of 2-A
  - (2) extinguishers, each with a minimum rating of 10-B:C, or (2) extinguishers appropriate to fuel source.
  - (1) Class D extinguisher

- The following are considered aerial devices by Clark County Fire Department, including but not limited to comets, mines, shells, cakes, roman candles, aerial shells or aerial devices fired from a mortar. These devices shall follow the following distance criteria:

- **AERIAL SHELLS MULTI-ACTION/BURSTING/ BREAKING DEVICES:** such as comets, mines, shells, cakes, roman candles

- shall provide a minimum of 70 feet per inch diameter of mortar distance from spectators, viewing areas and buildings.
- All devices will be fired at 90-degree angle to the horizontal plane.
- Only pre-manufactured cakes shall be allowed to be angled with an internal diameter less than 2".
- All displays will be limited to a maximum internal mortar diameter of 3".

- **NON-SPLITTING/NON-BURSTING DEVICES:** such as comets, mines, gerbs and other single action effects
  - shall provide a minimum of 35 feet per inch diameter of mortar distance from spectators, viewing areas, dry vegetation, flammable/combustible materials and buildings.
  - All devices will be fired at a 90-degree angle to the horizontal plane. Only pre-manufactured cakes shall be allowed to be angled with an internal diameter less than 2”.
  - All displays will be limited to a maximum internal mortar diameter of 3”.

**PLEASE NOTE: Separation distances may be increased based on the hazard characteristics determined during the demonstration, site inspection or review of submittal.**

**7. NOTIFICATION/ STAFFING/INSPECTIONS:**

- **NOTIFICATION:** The following agencies must be notified by the pyrotechnic company of the show a minimum of 48-hours prior to the outdoor fireworks show. The pyrotechnic company will provide confirmation that notification has been made either by providing the time and date of contact and person that contact was made with, or by providing a copy of the letter sent to the agencies.
  - McCarran International Airport Control Tower – (702) 388-6559
  - Nellis Air Force Military Base – (702) 652-1110
  - Metro Police Department – (702) 229-3111
  - Fire Department Dispatch – (702) 229-0291

Governing agencies that manage the adjacent properties will be contacted in writing. Confirmation of the approval for the pyrotechnics display concerning any noise abatement, debris and any other pertinent requirements that may need to be met shall be provided with the submittal package to Clark County Fire Department.

- **STAFFING:**
  - A minimum of (1) Fire inspector from the Clark County Fire Prevention Bureau shall be required at every outdoor fireworks display. If multiple firing sites are requested, additional inspectors may be requested at the discretion of the AHJ (Authority Having Jurisdiction).
  - At the discretion of the inspector overseeing the fireworks show, a minimum of one (1) stand-by engine from Clark County Fire Department will be required for any fireworks display on any outdoor fireworks display. If multiple firing sites are requested additional stand-by engines may be requested at the discretion of the AHJ.
- **INSPECTIONS:**
  - The display site will be inspected for conformance with the approved site plan.
  - The fallout zones are to be cleared of all spectators. Ref. CCFC 5608.4
  - The quantity, mounting locations, materials used to secure the devices will be verified for position placement, orientation, fit, stability, and strength.
  - Vegetation within the fallout zone(s) shall be wet-down/watered within 30 minutes of the scheduled display
  - Wind speeds taken approximately 12 minutes prior to show time and near the mortar racks are not to exceed 15 mph for ground displays and 10 mph for rooftops and measured with an anemometer. Ref CCFC 5608.3.2.

- If high winds, precipitation, or other adverse weather conditions prevail or hazards exist in the opinion of the operator or the AHJ, the fireworks display shall be postponed or discontinued until weather conditions improve.
- A single test shot of the largest mortar shall be fired approximately 30 minutes prior to the scheduled show time to allow for any adjustments. Material drifting or projected outside of a fallout zone is a failure and the show shall be delayed.
- Please Note: Any misrepresentation of permit such as unlicensed operation, incorrect products, uncooperative operators may result in cancellation or revocation of permit.

**8. EMERGENCY PROCEDURES:** Provide a copy of company's emergency procedures, including the following information:

- Description of alerting the staff of emergencies
- Identification of the signal and means to notify the display operator, technician or both to terminate the loading or firing of fireworks in the event a hazard arises during the outdoor display.
- Identification of the means of notifying public emergency personnel.
- Emergency reporting instructions describing the information that should be provided to emergency operators.

**9. SHOW STOP/DELAY AND PACK OUT PROCEDURES;**

- The inspector shall establish communications with the fireworks operator (shooter) responsible for each display. A direct method signaling an order for the operator to immediately stop firing shall be established and agreed. Examples are hand signals and contact such as placing a hand on the shoulder of the shooter.
- The individual(s) stationed in the fire control room must be knowledgeable in all aspects of all fire protection, smoke control systems and fire alarm panels. The individuals disabling any fire alarm devices must possess a valid Nevada State Fire Marshal's license for fire alarms and must be approved by Clark County Fire Department. These items are subject to change as required by the on-site inspector(s).
- A show may be delayed based on excessive wind speeds. The delay duration(s) will be 15-minute intervals up to 60 minutes (one-hour).
- When there are unfired fireworks due to a cancellation or failed operation, the unfired product is to be packed-out under the direction of the pyrotechnician. The inspector shall witness an agreed positive method for disabling the firing mechanism. A common way of achieving this is to have electric matches removed. The product shall be placed in its original packaging and removed following the same route to be transported to an appropriate storage location.
- The type and quantity of all unfired effects must be included and recorded in inspection report.