

COLORADO SPRINGS FIRE DEPARTMENT

Firework, Pyrotechnic and Flame Effect Productions

Requirements for Firework, Pyrotechnic and Flame Effect Productions.



TECHNICAL SERVICES
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PURPOSE

To provide permitting and plan submittal requirements for the use of fireworks, pyrotechnics, flame effects and other similar effect productions.

SCOPE

This document pertains to the approved use and required permitting of fireworks, proximate audience displays, flame effects and pyrotechnic special effects in motion picture, television, theatrical, and group entertainment productions as required by the City Code of Colorado Springs and the Colorado Springs Fire Prevention Codes and Standards.

DEFINITIONS

Fireworks Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration or detonation that meets the definition of 1.4G fireworks or 1.3G fireworks as set forth herein.

Fireworks, 1.4G (Formerly known as Class C, Common Fireworks.) Small fireworks devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion.

Fireworks, 1.3G (Formerly Class B, Special Fireworks.) Large fireworks devices, which are explosive materials, intended for use in fireworks displays and designed to produce audible or visible effects by combustion, deflagration or detonation. Such 1.3G fireworks include, but are not limited to, firecrackers containing more than 130 milligrams (2 grains) of explosive composition, aerial shells containing more than 40 grams of pyrotechnic composition, and other display pieces which exceed the limits for classification as 1.4G fireworks. Such 1.3G fireworks, are also described as Fire-works, UN0335 by the DOTn.

Fireworks Display A presentation of fireworks for a public or private gathering. (See also definitions in NFPA 1123 - Code for Fireworks Display)

Flame Effect The combustion of flammable solids, liquids or gases to produce thermal, physical, visual or audible phenomena before an audience. (See also definitions in NFPA 160, Standard on the Use of Flame Effects Before and Audience.)

Pyrotechnic Special Effect A visible or audible effect for entertainment created through the use of pyrotechnic materials and devices. (See also definitions in NFPA 1126 - Standard for the Use of Pyrotechnics Before a Proximate Audience.)

GUIDELINES

USE OF FIREWORKS

It is unlawful for any person to possess, store, offer for sale, expose for sale, sell at retail or use or explode any fireworks except as allowed in City Code of Colorado Springs, Chapter 9, Article 7, Part 3.

Exceptions:

1. Storage and handling of fireworks as permitted in Section 5604 of the Colorado Springs Fire Prevention Codes and Standards.
2. Manufacture, assembly and testing of fireworks as permitted in Section 5605 of the Colorado Springs Fire Prevention Codes and Standards.
3. The use of fireworks for display as permitted in Section 5608 of the Colorado Springs Fire Prevention Codes and Standards.
4. The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable local or state laws, ordinances and regulations provided such fireworks comply with CPSC 16 CFR, Parts 1500 and 1507, and DOTn 49 CFR, Parts 100-178, for consumer fire-works.

PERMITTING AND FEES

A provisional permit from the Division of the Fire Marshal is required prior to the use of any approved firework or pyrotechnic production per the Colorado Springs Fire Prevention Codes and Standards.

Once a permit application has been submitted and approved, set up of the display may begin. The permit will be issued at the time of inspection and must remain on site of the display at all times until after the dismantling of the production.

Fees are required for permits and subsequent inspections. The fee amount is based on the current approved Division of the Fire Marshal Fee Schedule.

City special event applications. The Division of the Fire Marshal charges a fee for applicable city special event applications in addition to firework/pyrotechnic/flame effect applications. Due to liability issues with firework, pyrotechnic, and flame effect productions, the applications for these productions must be submitted separately from any City Special Event application. This means that a City Special Event application incorporating the use of fireworks will be issued a permit and charged a fee for the City Special Event application as well as the firework/pyrotechnic/flame effect application.

PLAN SUBMITTAL REQUIREMENTS

Plans may be submitted through our ePlan electronic plan submittal portal located at <https://web1.coloradosprings.gov/ePlan>. First time users must create an account. Once an account is created,

documents may be uploaded and submitted.

The submittal package for a firework, pyrotechnic and/or flame effect production must consist of the following documents. This submittal package must be received by the Division of the Fire Marshal no later than fourteen (14) business days prior to the production. Incomplete submittals will be disapproved or not accepted.

All plans must be in accordance with the following applicable national codes and standards, current editions:

1. NFPA 160 - *Standard on the Use of Flame Effects Before and Audience*
2. NFPA 1123 - *Code for Fireworks Display*
3. NFPA 1126 - *Standard for the Use of Pyrotechnics Before a Proximate Audience*

I. Fireworks Plan Submittal

Submittal requirements for a fireworks plan include, but are not limited to:

1. Permit application, found on the Colorado Springs Fire Department website
 - a. Fill out Sections 1, 2, 3, 4, and 8 on the front page
 - b. Check “105.6.38-Pyrotechnic Special Effects” under Prescribed (Revocable) Permits on the second page
2. A copy of the following licenses/certifications:
 - a. Operator’s Colorado State fireworks display operator certification
 - b. Pyrotechnics operator certification
 - c. All other applicable State and Federal explosive/fireworks permits and licensure
3. A copy of a certificate of insurance as specified in Section III of this document
4. A diagram detailing dimensions of the display grounds or indoor event area.
5. A shot plan in sequence, to include:
 - a. Number and size/type of product
 - b. Duration of the display
 - c. Start and end time
6. Method of storage
(Continued on Next Page)
7. Use and handling of products on site
8. Fire retardant materials
9. Proposed rain delay dates
10. Number of assistants
11. Method of crowd control or audience restraint lines,
12. Other plan documentation as required by the Division of the Fire Marshal or listed in NFPA 1123, NFPA 1126 or NFPA 160.

a. Mortar racks

Mortar racks shall be reinforced using sandbags or other *approved* materials per the fire code. The fireworks display

shall not commence unless the reinforcement has been installed and satisfactorily demonstrated to the inspector prior to the display.

b. Fire danger and burn bans

The Fire Marshal shall have the authority to cancel any display based on fire danger and other criteria. Displays are prohibited during “extreme fire danger” conditions except when expressly approved by the Fire Code Official. During issued Burn Bans, firework displays are prohibited and any scheduled shows may be cancelled.

c. Standby personnel and equipment

Standby fire department personnel and equipment may be required by the fire department prior to and during the event. Personnel and equipment may be required during “high fire danger” or greater, or if the Fire Code Official determines that the specific site and conditions pose an increased risk of fire. The fire department shall be reimbursed by the event coordinator or responsible party for all costs associated with providing this service.

II. Flame Effects/ Flame Performers Submittal

Submittal requirements for a flame effects or flame performance submittal include, but are not limited to:

1. Permit application, found on the CSFD website
 - a. Fill out Sections 1, 2, 3, 4, and 8 on the front page
 - b. Check “105.6.38-Pyrotechnic Special Effects” under Prescribed (Revocable) Permits on the second page
2. The flame effect classification.
3. A site plan showing the following:
 - a. A narrative description of the flame effect.
 - b. The location of flame effect devices to be fired and their controls and control sequence.
 - c. The area affected by the flame effect device.
 - d. The location of the audience.
 - e. The fuels used and their estimated consumption.
 - f. Air for combustion and ventilation for indoor effects.
 - g. Flammable materials piping.
 - h. Storage and holding areas and their capacities.
4. Supplemental fire protection features.
5. Emergency response procedures.
6. Means of egress.
7. A current material safety data sheet (MSDS) for the materials (fuels) consumed in the flame effect.
8. Documentation that the combustible materials used for construction of the flame effects have been rendered flame retardant.

III. INSURANCE

With the exception of government entities, the permit holder shall furnish a bond or certificate of insurance in an amount deemed adequate by the fire code official for the payment of all potential damages to a person or persons or to property by reason of the permitted display, and arising from any acts of the permit holder, the agent, employees or subcontractors.

This bond or certificate shall include:

- \$2,000,000 general aggregate
- \$1,000,000 products and completed operative aggregate
- \$1,000,000 each occurrence
- Comprehensive automobile liability with minimum limits of \$1,000,000 per occurrence
- Workers compensation and employers liability as required by statute. Employers' liability coverage is to be carried for a minimum of \$100,000

The insurance shall cover all operations involving fireworks and any vehicles used for the transportation or storage of fireworks, bodily injury liability and property damage liability for the purpose of payment of any damages to persons or property which arise from, or are caused by, the conduct of an act authorized by the permit upon which a judicial judgment results.

The insurance shall also provide protection for underground property damage and property damage resulting from fireworks or explosion. The certificate of insurance shall guarantee 30 days written notice to the chief of the fire department in the event of policy cancellation or reduction in coverage for any reason. The chief is authorized to specify a greater or lesser amount when, in the chief's opinion, conditions at the location of use indicate the need for modification.

INSPECTIONS

A Fire Inspector from the Division of the Fire Marshal is required to conduct an inspection for the approval of the firework, pyrotechnic and/or flame effect production installation and permit application prior to the production occurring.

Fire inspections are scheduled by calling the Division of the Fire Marshal and making an appointment after the submittal package has been approved. Inspection scheduling is subject to personnel availability. A minimum of three (3) business days is needed between the inspection scheduling and inspection date, although it is strongly recommended that inspections be scheduled as far in advance as possible to ensure any desired inspection date.

The firework/pyrotechnic installer and/or operator shall be present on site for the duration of the fire inspection and remain on-site through the production. For fireworks productions, the installer/operator shall remain on-site after

the display as required per NFPA 1123.

Prior to the Fire Inspector's arrival for the inspection, the production shall be installed completely and compliant with all applicable fire codes and standards as well as plan review comments. A copy of the permit submittal package shall be available to the inspector.

Fire Inspectors may require the pyrotechnic operator to demonstrate any or all of the items used within a production to verify what the effect will be or look like (span/extents of effects, amount of sparks produced, height of flames, etc.) as well as adequate clearances from adjacent hazards. Any deficiencies found by the Fire Inspector must be corrected prior to issuance of the permit.

Once the installation has been approved by the inspector, the inspector will issue the permit which then allows the production to commence.

The Division of the Fire Marshal is authorized to delay, cease or modify the production based on fire and life safety concerns noted during the plan review and/or during final site inspection. Additionally, the Division of the Fire Marshal is authorized to delay or cease outdoor aerial displays due to changing weather conditions or other factors. The display may resume at the discretion of the Fire Inspector as conditions improve and/or hazards are mitigated.