



HOUSTON FIRE DEPARTMENT LIFE SAFETY BUREAU (LSB)



LIFE SAFETY BUREAU (LSB) STANDARD 12, REV 03 FIREWORKS DISPLAY

Supersedes: LSB Standard 12, rev. 02 (5/23/03)

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Approved: _____
Richard W. Galvan, Assistant Fire Marshal

Approved: _____
Tyrone G. Freeman, Fire Marshal

LIFE SAFETY BUREAU (LSB) STANDARDS ARE ESTABLISHED IN ACCORDANCE WITH PROVISIONS OF THE CITY OF HOUSTON FIRE CODE. THEY ARE SUBJECT TO THE ADMINISTRATIVE SECTIONS COVERING – ALTERNATIVE MATERIALS AND METHODS, MODIFICATIONS, AND BOARD OF APPEALS.

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**LSB STANDARD 12 rev. 03
FIREWORKS DISPLAY**

SECTION 12.1 --- GENERAL

12.1.1 Scope.

Fireworks displays within the City of Houston shall be in accordance with the *Fire Code* and this standard.

12.1.2 Purpose.

This standard shall provide guidelines for Pyrotechnic Operators and Inspectors in the use and setting up of indoor and outdoor Fireworks Displays. Displays may be either aerial or non-aerial displays.

SECTION 12.2 --- DEFINITIONS

12.2.1 Fireworks.

Fireworks are a combustible or explosive composition, or any substance, combination of substances, or device prepared for the purpose of producing a visible or audible effect by combustion, explosion, deflagration or detonation. Fireworks include but are not limited to: blank cartridges, toy pistols, toy cannons, toy canes, or toy guns, in which explosives are used; firecrackers, torpedoes, sky-rockets, Roman candles, sparklers, or other devices of like construction; any devices containing an explosive or flammable compound; or any tablet or other device containing an explosive substance. Fireworks do not include auto flares; paper caps containing an average of 0.25 grains of explosive content per cap or less; and toy pistols, toy canes, toy guns, or other devices for use of such caps.

12.2.2 Fireworks, Class C, Common.

Fireworks, Class C, Common, (Explosives, Division 1.4) as defined by the United States Department of Transportation (DOTn), are small firework devices designed primarily to produce visible or audible effects by combustion and which comply with the construction, chemical composition and DOTn labeling requirements for Class C common fireworks.

12.2.3 Fireworks, Special.

Special Fireworks are large fireworks designed primarily to produce visible or audible effects by combustion, deflagration or detonation. Special Fireworks include, but are not limited to, firecrackers containing more than 2 grains of explosive composition, aerial shells containing more than 40 grains of pyrotechnic composition, and other display pieces, which exceed the limits for classification as common fireworks. Special Fireworks as defined by the DOTn, are classified as Class B Explosives (Explosives, Division 1.3 and some Division 1.2)

12.2.4 Low Explosive.

Low Explosive is explosive material, which will burn or deflagrate when ignited. It is characterized by a reaction rate that is less than the speed of sound. Examples of low explosives are black powder, safety fuse, igniters, igniter cord, fuse lighters, Class B special fireworks, Class B composite solid propellants (Class B Explosives Division 1.2

or 1.3), and common fireworks defined as Class C Explosives, Division 1.4 as defined by the DOTn.

12.2.5 Pyrotechnic Operator.

Pyrotechnic Operator is an individual approved by the Fire Marshal to be responsible for pyrotechnics, pyrotechnic special effects material or both and holds an appropriate current State of Texas Pyrotechnic License.

12.2.6 Pyrotechnic special effects material.

Pyrotechnic special effects material is a low explosive material other than detonating cord, commonly used in motion picture, television, theatrical, or group entertainment production for which a permit from the Fire Marshal is required for use or storage.

12.2.7 Standby Personnel.

Standby personnel shall be fire inspectors, who are current members of the Life Safety Bureau of the Houston Fire Department, who may be required by the Fire Marshal for the duties of a standby firewatch at all fireworks events as provided for in this standard.

SECTION 12.3 --- GENERAL INFORMATION

12.3.1 Hours of operation.

No aerial display authorized by this standard shall be commenced prior to the hour of 1:00 p.m. or later than 10:00 p.m. (**Exception:** An authorized aerial display may commence at 1:00 p.m. through 12:00 a.m. on December 31st and from 12:00 a.m. through 1:00 a.m. on January 1st of any year.) Any display authorized by this standard shall be completed within one hour after the time of display is commenced and no permit shall authorize more than two displays in each twenty-fours.

12.3.2 Permit extension.

When a permit for fireworks display is issued it shall be for a period of time designated on the permit, but shall not exceed 14 days. The Code Official may authorize the permit to exceed 14 days, but not more than 180 days. The permit shall not be transferable.

12.3.3 Materials used for fireworks.

The material to be used for a fireworks display shall not be stored within the City of Houston, but shall be brought in on the day of the display and then shall be taken immediately to the place of display for further handling and storage.

12.3.4 Persons handling the display.

The person handling the display of fireworks shall meet all the requirements of the Texas Commission on Fire Protection, Texas Insurance Code Article 5.43-4, and any other requirements as specified by the Code Official.

12.3.5 Theatrical Pyrotechnic Displays.

Theatrical Pyrotechnic Displays will require a permit and may require the presence of Standby Personnel. A copy of the plans indicating the exact placement of the pyrotechnic displays, and the distances from audience, stage props, scenery, curtains, performers and other items incidental to the theatrical performance, shall accompany each permit application. Exact type of pyrotechnic devices to be used shall be noted.

The determination of the necessity of Standby Personnel will be made by the Code Official's Office. See Section 12.4.3.

12.3.6 Type of Fireworks to be used.

Only Class C (Explosives, Division 1.4), Common and Special fireworks (Explosives, Division 1.2 or 1.3) are allowed to be used.

SECTION 12.4 --- REQUIREMENTS

12.4.1 Prohibition.

Possession, assembly, sale, purchase, transportation, storage, use, discharge, detonation and handling of fireworks, except for public display by a pyrotechnic operator, licensed in the state of Texas, and operating under an approved permit are prohibited within the City of Houston.

12.4.2 Permits.

An application for a permit shall be submitted along with the permit fee of \$180.00 (*Special Handling Fee* - add \$75.00 if not submitted 4 days prior to event). Submit *Deed Restriction and Law Compliance Affidavit* with permit application. Permits shall be granted only to an approved pyrotechnic operator. Permit applications shall be made at the, City of Houston Permit Office, 3300 Main Street; Telephone: (713)535-7897.

12.4.3 Standby Personnel.

General requirements for Standby Personnel are as follows:

- 1) There shall be a minimum of two Standby Personnel for all aerial displays.
- 2) There shall be a minimum of one Standby Person for non-aerial (theatrical) displays, additional standby personnel may be required by the Code Official.
- 3) A minimum 4-hour fee shall accompany each Standby Firewatch application for a standby inspector.

An additional per hour fee per Standby Firewatch Inspector will be assessed for fire watches over the minimum of 4 hours.

For current fee schedules contact the City of Houston Permit Office, 3300 Main Street, 77002; Telephone: 713-865-7897.

12.4.4 Site Plan.

A copy of the site plan showing the exact placement of launching site, distance to spectators, buildings, tents, fuel pumps, parking and other objects in the vicinity, shall accompany each permit application. Exact type of fireworks to be used shall be noted. The minimum distance required is *70 feet per inch* of size of shells.

12.4.5 Bond.

The permit requester shall furnish a bond or certificate of insurance in an amount deemed adequate by the Code Official for the payment of damages which could be caused either to a person or persons or to property by reason of the permitted display and arising from acts of the permit requester, agents, employees, or subcontractors.

12.4.6 State Permit.

Proof of State Permit application shall be provided. (Requirement for Aerial Display only)

NOTE: Chapter 2154 of the *Texas Occupations Code* establishes additional requirements in regards to certain flame effects or pyrotechnics, including requirements for an operator's license and insurance. Applicable provisions of state laws and regulations must be complied with in addition to provisions of the *Fire Code* and this standard.

12.4.7 Pyrotechnic Operator-Licensed.

Proof of Pyrotechnic License or a Pyrotechnic Special Effects License through the *State of Texas* shall be provided.

12.4.8 Demonstration and Approval.

A demonstration of pyrotechnic special effects to be used shall be provided for the Code Official prior to approval of the fire department permit.

12.4.9 Storage Magazines.

Approved methods of storage for fireworks shall be provided as indicated:

12.4.9.1 within Buildings.

Explosives stored within a building shall not exceed 50 pounds. Low explosives stored within a building shall be stored in a Type 2 or Type 4 magazine. High explosives shall be stored in a Type 2 magazine.

12.4.9.2 Outside of buildings.

Pyrotechnic special effects material, which is to be stored outdoors shall be stored in a Type 2 or Type 4 magazine. Pyrotechnic special effects material which is classified as a high explosive, including detonating cord and detonators that will mass detonate, such as fuse caps, shall be stored in a Type 2 magazine. When a Type 4 magazine is used for outdoor storage, such storage shall be in a constantly attended location or, if unattended, shall have wheels removed or the magazine immobilized by kingpin locking devices or by other approved security measures. When a quantity in excess of 50 pounds of explosive materials is stored outside of a building, such storage shall be located in accordance with nationally recognized standards.

12.4.10 Security and barriers.

The Code Official is authorized to require security personnel and/or rope barriers, fences, signs, or other devices to be installed around the display area to aid in crowd control.

12.4.11 Display discontinued.

If the Code Official or the pyrotechnic operator determines that there is a lack of crowd control or that the crowd is in danger, the display shall be immediately discontinued. If any time high winds, weather conditions or the immediate surrounding environment creates a danger, the display shall be stopped, postponed or cancelled until conditions are acceptable to the Code Official.

REFERENCES

1. City of Houston *Fire Code*, International Fire Code, 2000 edition, as amended.
2. *Texas Commission on Fire Protection*, Texas Insurance Code, Article 5.43-4.
3. National Fire Protection Association (NFPA) Standard No. 1123, "Fireworks – Display".
4. Section 1, Title 13, Chapter 2154, *Texas Occupations Code*,

Conversion factors: 1 inch = 25mm; 1 foot = 305 mm