



**HOUSTON FIRE DEPARTMENT
LIFE SAFETY BUREAU (LSB)**



**LSB STANDARD 12, REV 05
FIREWORKS DISPLAY**

Supersedes: LSB Standard 12, rev. 04 (12/31/10)

Note: Vertical lines in the left-hand margin delineates revisions to the previous version.

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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 the Board of Appeals.

TABLE OF CONTENTS

SECTION 12.1 --- GENERAL	1
12.1.1 Scope.....	1
12.1.2 Purpose.....	1
SECTION 12.2 --- DEFINITIONS	1
12.2.1 Fireworks.....	1
12.2.2 Fireworks, 1.3G.....	1
12.2.3 Fireworks, 1.4G.....	1
12.2.4 Low Explosive.....	2
12.2.5 Pyrotechnic Operator; Pyrotechnics Special Effects Operator; Flame Effects Operator.....	2
12.2.6 Pyrotechnic special effects material.....	2
12.2.7 Standby Personnel.....	2
SECTION 12.3 --- GENERAL INFORMATION	2
12.3.1 Hours of operation.....	2
12.3.2 Permit extension.....	2
12.3.3 Materials used for fireworks.....	2
12.3.4 Persons handling the display.....	3
12.3.5 Theatrical Pyrotechnic Displays.....	3
12.3.6 Type of Fireworks to be used.....	3
SECTION 12.4 --- REQUIREMENTS	3
12.4.1 Prohibition.....	3
12.4.2 Permits.....	3
12.4.3 Standby Personnel.....	4
12.4.4 Site Plan.....	4
12.4.5 Bond.....	4
12.4.6 State Permit.....	4
12.4.7 Licenses Required.....	4
12.4.8 Demonstration and Approval.....	4
12.4.9 Storage Magazines.....	4
12.4.10 Security and barriers.....	5
12.4.11 Display discontinued.....	5
REFERENCES.....	6

**LSB STANDARD 12 rev. 05
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, 1.3G.

"Fireworks 1.3G" means a large fireworks device:

- (A) Primarily designed to produce visible or audible effects by combustion, deflagration, or detonation; and
- (B) Classified as a 1.3G explosive by the department in 49 C.F.R. Part 173 (1996).

12.2.3 Fireworks, 1.4G.

"Fireworks 1.4G" means a small fireworks device:

- (A) Primarily designed to produce visible or audible effects by combustion, deflagration, or detonation;
- (B) That complies with the construction, labeling, and chemical composition requirements of the United States Consumer

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; 1.3G fireworks; 1.3G composite solid propellants and fireworks defined as 1.4G Explosives, as defined by the DOTn.

12.2.5 Pyrotechnic Operator; Pyrotechnics Special Effects Operator; Flame Effects Operator.

A Pyrotechnic Operator, Pyrotechnics Special Effects Operator or a Flame Effects Operator, respectively, are individual(s) approved by the Fire Marshal to be responsible for pyrotechnics, pyrotechnic special effects material, flame effects or any combination thereof, and holds an appropriate and current State of Texas License, issued by the Texas Department of Insurance, in that respective discipline(s).

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, as certified by the Texas Commission on Fire Protection, who are current members of the Life Safety Bureau of the Houston Fire Department, and required by the Fire Marshal to perform standby duties 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-four hour period.

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 Department of Insurance, “*Texas Occupations Code*”, Chapter 2154; the “*Texas Administrative Code*”, Title 28 and any other requirements as specified by the Fire Marshal.

12.3.5 Theatrical Pyrotechnic Displays.

Theatrical Pyrotechnic Displays shall require a permit and 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. This diagram shall indicate the points at which the pyrotechnic devices are located to be discharged, the fallout radius for each pyrotechnic device used in the performance and the lines behind which the audience shall be restrained. The determination of the necessity of Standby Personnel will be made by the Fire Marshal’s Office. See Section 12.4.3.

12.3.6 Type of Fireworks to be used.

Only “1.4G” and 1.3G” 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 Plans and Permits.

Before the performance of any production, the permit applicant shall submit a plan and a list of proposed materials, for the use of pyrotechnics, to the Fire Marshal’s Office. An application for a permit shall be submitted, along with the applicable permit fees, not less than 4 business days prior to event. A “*Deed Restriction and Law Compliance Affidavit*” shall be completed and submitted with the permit application. Permits shall be granted only to an approved pyrotechnic operator according to Section 12.2.5, of this Standard.

Permit Office contact information for Pyrotechnic Permits and Standby Personnel is as follows:

The Houston Permitting Center

1002 Washington Avenue

Houston, Texas 77007

Hours of operation: 8:00 a.m. to 3:30 p.m. Central Time

Monday through Friday

Office phone (832)394-8811

To Email Customer Service Questions: bfd.permitoffice@houstontx.gov

Link to City Wide Fee Schedule: www.houstoncityfees.org

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 application for a standby inspector.

An additional per hour fee per Standby Inspector will be assessed for fire watches over the minimum of 4 hours. See Section 12.4.2, for Permit Office contact information concerning Standby Personnel.

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 Licenses Required.

Proof of Pyrotechnic Operator License, a Pyrotechnic Special Effects License, or Flames Effects Operators License, shall comply with Section 12.2.5 of this Standard.

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, 2006 edition, as amended.
2. *Texas Occupations Code*, Chapter 2154
3. *Texas Administrative Code*, Title 28
4. National Fire Protection Association (NFPA) Standard Nos. 160, 1123 and 1126.
5. Section 1, Title 13, Chapter 2154, *Texas Occupations Code*,