§ 405.10 Permits for indoor pyrotechnics.

1. Definitions. For the purposes of this section, the following terms have the following meanings:

a. Airburst. A pyrotechnic device that is suspended in the air to simulate outdoor aerial fireworks shells without producing hazardous debris.

b. Areas of public assembly. All buildings or portions of buildings used for gathering together fifty or more persons for amusement, athletic, civic, dining, educational, entertainment, patriotic, political, recreational, religious, social, or similar purposes, the entire fire area of which they are a part, and the means of egress therefrom.

c. Assistant. A person who works under the supervision of the pyrotechnic operator.

d. Audience. Spectators whose primary purpose is to view a performance.

e. Building. A combination of any materials, whether portable or fixed, having a roof, to form a structure affording shelter for persons, animals, or property. The word "building" shall be construed for the purposes of this section as though followed by the words "or part or parts thereof", unless the context clearly requires a different meaning.

f. Concussion mortar. A device specifically designed and constructed to produce a loud noise and a violent jarring shock for dramatic effect without producing any damage.

g. Fallout area. The area in which any hazardous debris falls after a pyrotechnic device is fired. The fallout area is defined as a circle that, in turn, is defined by the fallout radius.

h. Fallout radius. A line that defines the fallout area of a

pyrotechnic device. The line is defined by two points. The first point is at the center of a pyrotechnic device. The second point is the point most distant from the center of the pyrotechnic device at which any hazardous debris from the device can fall.

i. Fire area. The floor area of a story of a building within exterior walls, party walls, fire walls, or any combination thereof.

j. Hazardous debris. Any debris, produced or expelled by the functioning of a pyrotechnic device, that is capable of causing personal injury or unpredicted property damage. This includes, but is not limited to, hot sparks, heavy casing fragments, and unignited components. Materials such as confetti, lightweight foam pieces, feathers, or novelties are not to be construed as hazardous debris.

k. Owner. Any person, agent, firm, association, limited liability company, partnership, or corporation having a legal or equitable interest in the property.

l. Performance. The enactment of a musical, dramatic, operatic, or other entertainment production. The enactment may begin and progress to its end according to a script, plan, or other preconceived list of events, or deviate therefrom. A performance includes any encores.

m. Performer. Any person active in a performance during which pyrotechnics are used and who is not part of the audience or support personnel. Among others, performers include, but are not limited to, actors, singers, musicians, and acrobats.

n. Permit authority. The agency authorized to grant and issue the permits provided for in this section on or within state property shall be the office of fire prevention and control, in the territory within a county park shall be the county park commission, or such other agency having jurisdiction, control, and/or operation of the parks or parkways within which any pyrotechnics are to be used, in a city shall be the duly constituted licensing agency thereof and, in the absence of such agency, shall be an officer designated for the purpose by the

legislative body thereof, in a village shall be an officer designated for the purpose by the board of trustees thereof, and, in the territory of a town outside of villages, shall be an officer designated for the purpose by the town board thereof.

o. Permittee. (1) The person or persons who are responsible, as provided in subparagraph two of this paragraph, for obtaining the necessary permit or permits for the use of indoor pyrotechnics in areas of public assembly or for a production, or who are responsible for obtaining such permit or permits under an applicable local law or ordinance authorized pursuant to subdivision five of this section.

(2) The owner of a place of public assembly or building in which pyrotechnics are to be used shall be responsible for obtaining such permit or permits; provided, however, that such owner, in writing, by agreement or lease, may require or otherwise authorize a lessee, licensee, pyrotechnic operator, or other party to be responsible for obtaining such permit or permits, in which case such other party or parties shall be deemed responsible for obtaining such permit or permits and shall be the permittee for purposes of this article; provided further that the structure is otherwise appropriate for such use under the New York state fire prevention and building code or other such applicable code.

p. Producer. An individual who has overall responsibility for the operation and management of the performance where the pyrotechnics are to be used. Generally, the producer is an employee of the promotion company, entertainment company, festival, theme park, or other entertainment group.

q. Production. All the performances of a musical, dramatic, operatic, or other show or series of shows.

r. Pyrotechnic device. Any device containing pyrotechnic materials and capable of producing a special effect as defined in this subdivision.

s. Pyrotechnic material (Pyrotechnic special effects material). A chemical mixture used in the entertainment industry to produce visible

or audible effects by combustion, deflagration, or detonation. Such a chemical mixture consists predominantly of solids capable of producing a controlled, self-sustaining, and self-contained exothermic chemical reaction that results in heat, gas, sound, light, or a combination of these effects. The chemical reaction functions without external oxygen.

t. Pyrotechnic operator (Special effects operator). An individual who has responsibility for pyrotechnic safety and who controls, initiates, or otherwise creates special effects.

u. Pyrotechnic special effect. A special effect created through the use of pyrotechnic materials and devices.

v. Pyrotechnics. Controlled exothermic chemical reactions that are timed to create the effects of heat, gas, sound, dispersion of aerosols, emission of visible electromagnetic radiation, or a combination of these effects to provide the maximum effect from the least volume.

w. Rocket. A pyrotechnic device that moves by the ejection of matter produced by the internal combustion of propellants.

x. Special effect. A visual or audible effect used for entertainment purposes, often produced to create an illusion. For example, smoke might be produced to create the impression of fog being present, or a puff of smoke, a flash of light, and a loud sound might be produced to create the impression that a cannon has been fired.

y. Support personnel. Any individual who is not a performer or member of the audience. Among others, support personnel include the road crew of any production, stage hands, property masters, security guards, fire watch officers, janitors, or any other employee.

z. Venue manager. An individual who has overall responsibility for the operation and management of the facility where pyrotechnics are to be used in a performance.

2. Permit requirements. a. All uses of all pyrotechnics in areas of

public assembly shall be approved by the permit authority. The permit authority shall determine that appropriate measures are established to provided acceptable crowd management, security, fire protection, (including sprinklers), and other emergency services. All planning and use of pyrotechnics shall be coordinated with the venue manager and producer.

b. Before the performance of any production, the permittee shall submit a plan for the use of pyrotechnics to the permit authority. After a permit has been granted, the permittee shall keep the plan available at the site for safety inspectors or other designated agents of the permit authority. Any addition of pyrotechnics to a performance or any significant change in the presentation of pyrotechnics shall require approval by the permit authority, except that reducing the number or size of pyrotechnics to be used in a performance shall not be considered to be a significant change in the presentation.

c. (1) The plan for the use of pyrotechnics shall be made in writing or such other form as is required or approved by the permit authority.

(2) The plan shall provide the following:

(a) Name of the person, group, organization, or other entity sponsoring the production.

(b) Date and time of day of the production.

(c) Exact location of the production.

(d) Name of the person actually in charge of firing the pyrotechnics (i.e., the pyrotechnic operator).

(e) Number, names, and ages of all assistants who are to be present.

(f) Qualifications of the pyrotechnic operator.

(g) Pyrotechnic experience of the operator.

(h) Confirmation of any applicable local, state, and federal licenses held by the operator or assistant.

(i) Evidence of the permittee's insurance carrier or financial responsibility.

(j) Number and types of pyrotechnic devices and materials to be used, the operator's experience with those devices and effects, and a definition of the general responsibilities of assistants.

(k) Diagram of the grounds or facilities where the production is to be

held. This diagram shall show the point at which the pyrotechnic devices are to be fired, the fallout radius for each pyrotechnic device used in the performance, the lines behind which the audience shall be restrained, and the placement of sprinkler systems.

(l) Point of on-site assembly of pyrotechnic devices.

(m) Manner and place of storage of the pyrotechnic materials and devices.

(n) Material safety data sheet (MSDS) for the pyrotechnic materials to be used.

(o) Certification that the set, scenery, and rigging materials are inherently flame-retardant or have been treated to achieve flame retardancy.

(p) Certification that all materials worn by performers in the fallout area during use of pyrotechnic effects shall be inherently flame-retardant or have been treated to achieve flame retardancy.

(3) All plans shall be submitted as soon as is possible so that the permit authority has time to be present and to notify other interested parties. In no event shall such advance notice be less than five business days.

d. A walk-through and a representative demonstration of the pyrotechnics shall be approved by the permit authority before a permit is approved. The permit authority may waive this requirement based on past history, prior knowledge, and other factors; provided that the authority is confident that the discharge of pyrotechnics can be conducted safely. The demonstration shall be scheduled with sufficient time allowed to reset/reload the pyrotechnics before the arrival of the audience.

e. All pyrotechnic operators shall be at least twenty-one years old and licensed or approved by the permit authority in accordance with all applicable laws, if any. All assistants shall be at least eighteen years old.

3. Conduct of pyrotechnic performances. a. Two or more fire extinguishers of the proper classification and size as approved by the permit authority shall be readily accessible while the pyrotechnics are

being loaded, prepared for firing, or fired. In all cases, at least two pressurized water or pump extinguishers shall be available. Additional fire extinguishing equipment shall be provided as required by the permit authority. Personnel who have a working knowledge of the use of the applicable fire extinguishers shall be present while the pyrotechnics are being handled, used, or removed. No personnel shall use or handle pyrotechnic materials or devices while under the influence of intoxicating beverages, narcotics, controlled substances, and prescription or nonprescription drugs that can impair judgment. Fire detection and life safety systems shall not be interrupted during the operation of pyrotechnic effects.

b. (1) All pyrotechnic devices shall be mounted in a secure manner to maintain their proper positions and orientations so that, when they are fired, the pyrotechnic effects described in the plan submitted by the permittee are produced. Pyrotechnic devices shall be mounted so that no fallout from the device endangers human lives, results in personal injury, or damages property. Pyrotechnic materials shall be fired only from equipment specifically constructed for the purpose of firing pyrotechnic materials. The pyrotechnic operator shall be responsible for selecting equipment and materials that are compatible.

(2) Where rockets are launched before an audience, performers, or support personnel, the rockets shall be attached securely to a guide wire or cable with both ends securely attached and placed on an impact-resistant surface located at the terminal end of the guide. This guide wire or cable shall be of sufficient strength and flame resistance to withstand the exhaust from the rocket. An effective arrangement to stop the rocket shall be provided.

(3) Pyrotechnics shall be: (a) placed so that any hazardous debris falls into a safe, flame-resistant area; (b) fired so that the trajectory of their pyrotechnic material is not carried over the audience; and (c) placed for firing so that no flammable materials are within their fallout area.

(4) Pyrotechnic devices and materials used indoors shall be specifically manufactured and marked for indoor use by the manufacturer.

(5) Airbursts shall be permitted to be fired above the assembled audience, subject to the following conditions:

(a) The airburst shall be suspended by a minimum 30-gauge metal wire that is attached securely to a secure support acceptable to the authority having jurisdiction.

(b) The airburst shall occur at a minimum height of three times the diameter of the effect.

(c) Where the effect is demonstrated, there shall be no burning or glowing particles below the fifteen-foot level above the floor.

c. Each pyrotechnic device fired during a performance shall be separated from the audience by at least fifteen feet but not by less than twice the fallout radius of the device. Concussion mortars shall be separated from the audience by a minimum of twenty-five feet. There shall be no glowing or flaming particles within ten feet of the audience.

d. (1) The facility where pyrotechnic materials and devices are handled and used shall be maintained in a neat and orderly condition and shall be kept free of any conditions that can create a fire hazard.

(2) Smoking shall not be permitted within twenty-five feet of the area where pyrotechnics are being handled or fired; provided that smoking by performers as part of the performance shall be permitted as blocked in rehearsals and if expressly approved by the pyrotechnic operator and the permit authority.

e. (1) The pyrotechnic effect operator shall advise all performers and support personnel that they are exposed to a potentially hazardous situation when performing or otherwise carrying out their responsibilities in the vicinity of a pyrotechnic effect. Performers and support personnel familiar and experienced with the pyrotechnic effects being used shall be permitted to be in the area of a pyrotechnic effect, but only voluntarily and in the performance of their duties.

(2) No part, projectile, or debris from the pyrotechnic material or device shall be propelled so that it damages overhead properties, overhead equipment, or the ceiling and walls of the facility.

(3) Immediately before any performance, the pyrotechnic operator shall make a final check of wiring, positions, hook-ups, and pyrotechnic devices to ensure that they are in proper working order. The pyrotechnic

operator also shall verify safety distances.

(4) The placement and wiring of all pyrotechnic devices shall be designed to minimize the possibility of performers and support personnel disturbing the devices during a performance.

(5) The pyrotechnic operator shall exercise extreme care throughout the performance to ensure that the pyrotechnic devices function correctly and that the performers, support personnel, and audience are clear of the devices.

(6) When pyrotechnics are fired, the quantity of smoke developed shall be controlled so as not to obscure the visibility of exit signs or paths of egress.

4. Bonds. Before granting and issuing a permit for a use of pyrotechnics as provided in this section, the permit authority shall require an adequate bond from the applicant therefor, unless such applicant is a state entity, county park, city, village, or town, or from the person to whom a contract for such use shall be awarded, in a sum to be fixed by the permit authority, which, however, shall not be less than five hundred thousand dollars, conditioned for the payment of all damages which may be caused to a person or persons or to property by reason of the use so permitted and arising from any acts of the permittee, his or her agents, employees, contractors, or subcontractors. Such bond shall run to the owner of the facility for which the permit is granted and issued and shall be for the use and benefit of any person or persons or any owner or owners of any property so injured or damaged, and such person or persons or such owner or owners are hereby authorized to maintain an action thereon, which right of action also shall accrue to the heirs, executors, administrators, successors, or assigns of such person or persons or such owner or owners. The permit authority may accept, in lieu of such bond, an indemnity insurance policy with liability coverage and indemnity protection equivalent to the terms and conditions upon which such bond is predicated and for the purposes herein provided.

5. Local laws or ordinances superseded. All local laws or ordinances regulating the use of pyrotechnics within the contemplation of this section are hereby superseded by the provisions of this section, with

the exception of:

a. all laws or ordinances enacted by a city of one million or more; and

b. other local laws or ordinances that prohibit the use of indoor pyrotechnics.