

**NFPA 140**  
Standard on  
Motion Picture and Television Production Studio  
Soundstages and Approved Production Facilities  
2004 Edition

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This edition of NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages and Approved Production Facilities*, was prepared by the Technical Committee on Motion Picture and Television Industry and acted on by NFPA at its November Association Technical Meeting held November 15–19, 2003, in Reno, NV. It was issued by the Standards Council on January 16, 2004, with an effective date of February 5, 2004, and supersedes all previous editions.

This edition of NFPA 140 was approved as an American National Standard on January 16, 2004.

**Origin and Development of NFPA 140**

The 1999 edition of NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages and Approved Production Facilities*, was the first standard developed by the Technical Committee on Motion Picture and Television Industry. It closely paralleled a standard in effect in the state of California.

The 2004 edition incorporates minor reformatting mandated by the NFPA *Manual of Style*.

**Technical Committee on Motion Picture and Television Industry**

**Davis R. Parsons**, *Chair*  
Lakewood, CA [SE]

**Hamid R. Bahadori**, Hughes Associates, Inc., FL [SE]

**Manny Chavez**, Aon/Albert G. Ruben, CA [I]

**Randall W. A. Davidson**, Risk International & Associates, CA [SE]

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**Craig D. Garlock**, Marsh USA Inc., CA [I]

**Raymond A. Grill**, The RJA Group, Inc., VA [SE]

**John E. Kersten**, Universal City Studios, CA [U]

**Dennis King**, Alliance of Motion Picture & Television Producers, CA [L]  
Rep. Alliance of Motion Picture and Television Producers

**Richard G. Momii**, Culver City Fire Department, CA [E]

**Patrick Moynihan**, American Broadcasting Company, NY [U]

**John F. Mueller**, State of New York, NY [E]

**Chris R. Reimer**, Facilities Protection Systems, Inc., CA [IM]

**Richard B. Schiehl**, R. B. Schiehl & Associates, CA [SE]

**Richard D. Thompson**, Thompson Associates, CA [SE]

**Paul Walker**, Paramount Pictures, CA [U]

#### **Alternates**

**David R. Geary**, Universal Studios, Inc., CA [U]  
(Alt. to J. E. Kersten)

**Daniel F. Gemeny**, The RJA Group, Inc., CA [SE]  
(Alt. to R. A. Grill)

**William Hood**, Los Angeles County Fire Department, CA [E]  
(Voting Alt. to LACFD Rep.)

**Johnson K. Lee**, Aon Risk Services, Inc., CA [I]  
(Alt. to M. Chavez)

**Kenneth R. Quick, Jr.**, City of Culver City Fire Department, CA [E]  
(Alt. to R. G. Momii)

**Laura Tankenson**, National Broadcasting Company, Inc., CA [U]  
(Voting Alt. to NBC Rep.)

**Ron Coté**, NFPA Staff Liaison

*This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to*

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*classifications is found at the back of the document.*

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

**Committee Scope:** This Committee shall have primary responsibility for documents on the hazards associated with practices, processes, materials, and facilities associated with motion picture and television production.

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**Production Facilities**  
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NOTICE: An asterisk (\*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet (•) between the paragraphs that remain.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, Annex B lists the complete title and edition of the source documents for both mandatory and nonmandatory extracts. Editorial changes to extracted material consist of revising references to an appropriate division in this document or the inclusion of the document number with the division number when the reference is to the original document. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex B.

## **Chapter 1 Administration**

### **1.1 Scope.**

**1.1.1\*** This standard shall address fire protection, property protection, and life safety in motion picture and television industry soundstages and approved production facilities.

**1.1.2** Practices, processes, materials, and facilities that are addressed by other NFPA standards shall be governed by those standards unless modified herein.

### **1.2 Purpose.**

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The purpose of this standard shall be to provide minimum requirements for the design, construction, operation, and maintenance of soundstages and approved production facilities used in motion picture and television industry productions.

### **1.3 Application.**

**1.3.1** This standard shall apply to the following:

- (1) New buildings, or portions thereof, used as soundstages or approved production facilities in motion picture and television industry production
- (2) Existing buildings, or portions thereof, used as soundstages or approved production facilities in motion picture and television industry production to the extent specifically required by other portions of this document
- (3) Additions to buildings used as soundstages or approved production facilities in motion picture and television industry production
- (4) Alterations, modernizations, or renovations of existing buildings used as soundstages or approved production facilities in motion picture and television industry productions
- (5) Existing buildings, or portions thereof, upon change of occupancy for use as soundstages or approved production facilities in motion picture and television industry production

**1.3.2** That portion of the standard dealing with operating features shall apply to new and existing soundstages and approved production facilities.

**1.3.3** Existing soundstages and approved production facilities that are in conformance with requirements of the authority having jurisdiction at the time of the adoption of this standard shall be permitted to remain in use under the following conditions:

- (1) The occupancy classification and use remain the same.
- (2) No serious hazards to life safety exist that would constitute an imminent threat.

**1.3.4** This standard shall not apply to production locations and to facilities used exclusively for radio broadcasts, theaters and auditoriums, and post-production facilities.

### **1.4 Equivalency.**

Nothing in this standard shall be intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety as alternatives to those prescribed by this standard, provided that technical documentation is submitted to the authority having jurisdiction to demonstrate equivalency, and the system, method, or device is approved for the intended purpose.

## **Chapter 2 Referenced Publications**

## **2.1\* General.**

The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document. Existing buildings or installations that do not comply with the provisions of the publications referenced in Section 2.2 shall be permitted to be continued in service, provided the lack of conformity to the referenced standards does not present a serious hazard.

## **2.2 NFPA Publications.**

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2002 edition.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2002 edition.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2002 edition.

NFPA 30, *Flammable and Combustible Liquids Code*, 2003 edition.

NFPA 51, *Standard for the Design and Installation of Oxygen–Fuel Gas Systems for Welding, Cutting, and Allied Processes*, 2002 edition.

NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*, 2003 edition.

NFPA 58, *Liquefied Petroleum Gas Code*, 2004 edition.

NFPA 70, *National Electrical Code*®, 2002 edition.

NFPA 101®, *Life Safety Code*®, 2003 edition.

NFPA 221, *Standard for Fire Walls and Fire Barrier Walls*, 2000 edition.

NFPA 1126, *Standard for the Use of Pyrotechnics before a Proximate Audience*, 2001 edition.

## **2.3 Other Publication.**

### **2.3.1 UL Publication.**

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062–2096.

UL 1975, *Standard for Fire Tests for Foamed Plastics Used for Decorative Purposes*, 1996.

## **Chapter 3 Definitions**

### **3.1 General.**

The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not included, common usage of the terms shall apply.

## 3.2 NFPA Official Definitions.

**3.2.1\* Approved.** Acceptable to the authority having jurisdiction.

**3.2.2\* Authority Having Jurisdiction (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

**3.2.3\* Listed.** Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

**3.2.4 Shall.** Indicates a mandatory requirement.

**3.2.5 Should.** Indicates a recommendation or that which is advised but not required.

**3.2.6 Standard.** A document, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

## 3.3 General Definitions.

**3.3.1 Approved Production Facility.** An existing building, portion of a building, or group of buildings altered for use by the entertainment industry and approved by the authority having jurisdiction for the purposes of motion picture, television, or commercial production.

**3.3.2 Motion Picture Production Studio.** See 3.3.5, Production Studio.

**3.3.3 Platform.** The raised area within a building used for the presentation of music, plays, or other entertainment. [101:3.3]

**3.3.4 Production Location.** Any area or facility outside a production studio, soundstage, or approved production facility used by the entertainment industry for purposes of motion picture, television, or commercial production.

**3.3.5 Production Studio.** A building, a portion of a building, or a group of buildings designed and constructed for use by the entertainment industry for the purpose of motion picture, television, or commercial productions, or broadcasting television programs utilizing a soundstage.

**3.3.6 Set.** A structure built or assembled for the purpose of motion picture, television, or commercial productions.

**3.3.7 Soundstage.** A building or a portion of a building, usually insulated from outside noise and natural light, used by the entertainment industry for the purpose of motion picture, television, or commercial productions.

**3.3.8 TV Production Studio.** See 3.3.5, Production Studio.

## Chapter 4 General Requirements

### 4.1 General.

**4.1.1** This chapter shall apply to new and existing motion picture and television soundstages and approved production facilities.

**4.1.2** Means of egress shall be kept clear of obstructions and tripping hazards.

#### 4.1.3 Smoking.

**4.1.3.1** Smoking shall be prohibited on soundstages and in approved production facilities unless otherwise provided in 4.1.3.2.

**4.1.3.2** Smoking shall be permitted only when it is a necessary part of a performance, and only when the smoker is a member of the cast.

**4.1.4** Fire extinguishers shall be installed and maintained in accordance with NFPA 10, *Standard for Portable Fire Extinguishers*.

**4.1.5** The use of pyrotechnic special effects and open flames shall be subject to the approval of the authority having jurisdiction.

**4.1.6** The use of motor vehicles on soundstages shall be subject to the approval of the authority having jurisdiction.

**4.1.7** Air-conditioning, heating, and ventilating ductwork and related equipment shall be in good working order and in compliance with the requirements of the authority having jurisdiction.

### 4.2 Common Hazards.

**4.2.1** Electrical equipment shall be in accordance with NFPA 70, *National Electrical Code*.

**4.2.2** The location of portable, mobile, or stationary power-generating equipment shall be subject to the approval of the authority having jurisdiction.

#### 4.2.3 Decorative Materials.

**4.2.3.1** Combustible drapes, drops, and any other similar combustible hanging or vertically placed material shall be maintained in a flame-retardant condition.

**4.2.3.2** Cut greens shall be treated with an approved or listed fire retardant and the process shall be repeated as often as necessary to maintain its effectiveness.

**4.2.3.3** Foamed plastic materials used for decorative purposes, scenery, sets, or props shall have a maximum heat release rate of 100 kW where tested in accordance with UL 1975, *Standard for Fire Tests for Foamed Plastics Used for Decorative Purposes*.

### 4.3 Means of Egress.

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Means of egress shall be in accordance with NFPA 101, *Life Safety Code*, unless otherwise modified by Chapter 5 of this standard.

#### **4.4 Structural Loads.**

**4.4.1** Approved production facilities and soundstages shall be designed, constructed, and altered to sustain all dead loads and other loads specified in the local building code.

**4.4.2** Where the anticipated loads exceed those specified in the local building code for the purpose of suspending sets, and ceilings, backings, and other heavy production set pieces, the building shall be designed and constructed for the additional loads.

#### **4.5 Electrical Requirements.**

See also 4.2.1.

**4.5.1\*** Soundstages and approved production facilities shall be provided with a minimum of 377 W/m<sup>2</sup> (35 W/ft<sup>2</sup>) dedicated for production lighting and power.

**4.5.2** The electrical distribution equipment used shall be designed for soundstage use.

**4.5.3** The wiring method to electrical distribution equipment shall comply with the provisions of Article 530 of NFPA 70, *National Electrical Code*.

**4.5.4** Auxiliary power cables supplied from mobile generators or adjacent buildings shall not be routed through fire-rated windows and doors.

**4.5.5** Cables shall be permitted to pass through fire-rated assemblies in accordance with NFPA 221, *Standard for Fire Walls and Fire Barrier Walls*.

**4.5.6** Where the penetration utilizes a conduit, metal-threaded caps shall be attached to the pipe by means of chain or cable and shall effectively cap the conduit when not in use.

**4.5.7** Exterior penetrations shall be located near the predesignated location for portable and mobile power-generating equipment.

## **Chapter 5 Soundstages and Approved Production Facilities**

### **5.1 Means of Egress.**

**5.1.1** The maximum travel distance to an exit within the soundstage shall be 45 m (150 ft).

**5.1.2** Soundstages and approved production facilities shall have an aisle along the perimeter of the soundstage or facility as approved by the authority having jurisdiction unless otherwise provided in 5.1.2.2.

**5.1.2.1** A clear unobstructed aisle height of 2.1 m (7 ft) shall be maintained.

**5.1.2.2** A soundstage or approved production facility with a gross area not exceeding 139 m<sup>2</sup> (1500 ft<sup>2</sup>) shall be exempt from the perimeter aisle requirement of 5.1.2 provided there is a minimum of two means of egress.



**5.1.3** Emergency lighting shall be provided for the means of egress in accordance with NFPA 101, *Life Safety Code*.

**5.1.4** Any door in a required means of egress from an area having an occupant load of 100 or more persons shall be permitted to be provided with a latch or lock only if it is panic hardware or fire exit hardware.

## **5.2 Extinguishment Requirements.**

**5.2.1** Existing soundstages and existing approved production facilities equipped with automatic sprinkler systems shall maintain those systems in accordance with NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

**5.2.2** A new soundstage or new approved production facility shall be equipped with an approved, supervised automatic sprinkler system.

**5.2.3** The automatic sprinkler system required by 5.2.2 shall be installed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*, unless otherwise provided in 5.2.3.1 or 5.2.3.2.

**5.2.3.1\*** The requirements of NFPA 13 prohibiting obstructions to sprinkler discharge shall not be applicable if approved mitigation techniques are employed.

**5.2.3.2\*** The requirements of NFPA 13 prohibiting obstructions to sprinkler discharge shall not be applicable if the building sprinkler system meets the design criteria for Extra Hazard, Group 2.

**5.2.4** The automatic sprinkler system required by 5.2.2 shall be maintained in accordance with NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

## **5.3 Fire Alarm System.**

Fire alarm system notification appliances within soundstages and approved production facilities shall be permitted to be deactivated during videotaping, filming, or broadcasting of programs provided the following conditions exist:

- (1) In the event of alarm system activation, notification appliances shall activate within a location that is constantly attended during the videotaping, filming, or broadcasting of programs.
- (2) The attendants of the location identified in (1) are provided with a means of communicating with the fire command center for the building, where one is provided, and with the occupants of the soundstage to initiate emergency action.
- (3) Deactivation of notification appliances shall cause activation of a visual signal at an approved location, which shall remain illuminated while notification appliances on the soundstage are deactivated.
- (4) The visual signal shall be identified by a sign that shall read "When Illuminated,

## Chapter 6 Operating Features

### 6.1 Waste or Refuse.

Waste or refuse shall not be allowed to accumulate in any area or in any manner that creates a fire hazard.

### 6.2 Flammable or Combustible Liquids.

**6.2.1** Use of flammable or combustible liquids shall be in accordance with one of the following, unless otherwise permitted by 6.2.2:

- (1) NFPA 30, *Flammable and Combustible Liquids Code*
- (2) NFPA 58, *Liquefied Petroleum Gas Code*

**6.2.2** Approved flammable or combustible liquids and liquefied petroleum gases used for special effects shall be permitted.

### 6.3 Welding.

Welding shall be in accordance with NFPA 51, *Standard for the Design and Installation of Oxygen–Fuel Gas Systems for Welding, Cutting, and Allied Processes*, and NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*.

### 6.4 Pyrotechnics.

When an audience is present, NFPA 1126, *Standard for the Use of Pyrotechnics before a Proximate Audience*, shall be used to regulate any pyrotechnic use.

### 6.5\* Audience Life Safety.

When an audience is present during productions, provisions for life safety and means of egress shall be subject to the approval of the authority having jurisdiction.

### 6.6 Emergency Notification.

The production company shall provide a procedure acceptable to the authority having jurisdiction for notifying the public emergency services of emergency incidents.

## Annex A Explanatory Material

*Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.*

**A.1.1.1** The entertainment industry occasionally depicts actions, situations, equipment installations, or construction that are violations of recommended standards and codes but do  
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not reflect actual entertainment industry safety practices.

**A.2.1** The Motion Picture and Television Industry Committee recognizes that it is sometimes not practical to continually upgrade existing buildings or installations to comply with all the requirements of the referenced publications.

**A.3.2.1 Approved.** The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

**A.3.2.2 Authority Having Jurisdiction (AHJ).** The phrase “authority having jurisdiction,” or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

**A.3.2.3 Listed.** The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

**A.4.5.1** This does not prohibit the use of mobile generators for auxiliary power.

**A.5.2.3.1** Paragraphs 5.2.3.1 and 5.2.3.2 recognize motion picture and television industry practices that require sets to change constantly and that sets are “temporary” construction not subject to building codes or standards. Solid ceilings that obstruct the stage sprinklers are “flown” (moved) in or out to permit special shooting angles or lighting requirements, often on a scene-by-scene basis. With temporary walls and ceilings, it would be impractical to install a sprinkler system in a constantly changing structure. Therefore, one or more of the following mitigation techniques should be used to compensate for the areas shielded from sprinkler spray by solid or hard ceilings or platforms:

- (1) Approved and listed heat detectors or smoke detectors can be installed beneath such solid or hard ceilings in excess of 55.7 m<sup>2</sup> (600 ft<sup>2</sup>) in area and platforms in excess of 55.7 m<sup>2</sup> (600 ft<sup>2</sup>) in area and 0.9 m (3 ft) in height. Detectors should be connected to an approved and listed central, proprietary, or remote station service, or a local alarm that will provide an audible signal (that is, bell, horn) at a constantly attended

location. The detector system, including the alarm panel, is defined as a portable system as it is intended to be reinstalled when platforms or sets are changed. The detectors that are secured to standard outlet boxes and the listed fire alarm panels can be temporarily supported by sets, platforms, or pedestals. Spacing of detectors should be per manufacturers' requirements.

- (2) The ceiling can be positioned to allow for the operation of the building's automatic fire sprinkler system after videotaping, filming, or broadcasting of programs has been completed for the day.
- (3) A fire watch should be provided when the set is not in use.
- (4) No combustible materials should be stored under any platforms. Consideration should be given to secure such covered areas with screen wire or other materials that will permit visual inspection and emergency access.
- (5) Approved/listed fire retardants can be applied beneath combustible platforms and on combustible, hard-ceiling sets.

**A.5.2.3.2** See A.5.2.3.1.

**A.6.5** Special attention should be focused on any possible obstructions to the means of egress. The means of egress and the marking of it might be confusing to the audience due to the numerous bright lights, scenery, TV and movie cameras, and other equipment in and around the soundstage.

## **Annex B Informational References**

### **B.1 Referenced Publications. (Reserved)**

### **B.2 Informational References. (Reserved)**

### **B.3 References for Extracts.**

The following documents are listed here to provide reference information, including title and edition, for extracts given throughout this standard as indicated by a reference in brackets [ ] following a section or paragraph. These documents are not a part of the requirements of this document unless also listed in Chapter 2 for other reasons.

NFPA 101®, *Life Safety Code*®, 2003 edition.

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