Fire Safety Director On Site Examination for Hotels

Study Guide

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** IMPORTANT NOTICE **

New Topic Areas for the Fire Safety Director On Site Examination

The Fire Safety Director On Site Examination for Hotels has been revised to reflect the new changes to the Fire Code.

The FSD On Site Examination may include questions on the following topic areas:

1. The Duties and Responsibilities of the Fire Safety Director
2. **The Duties and Responsibilities of the Impairment Coordinator**
3. Knowledge of the Building's Fire Safety Plan
4. Operation of the Building's Fire Command Center
5. **Phase 1 and Phase 2 Elevator Operation (Firefighter Service)**
6. Effective Training for Brigade Members
7. **Company Certificates**
8. **Commercial Cooking Systems**
9. **Hot Work Operations**
10. **Flame-Resistant Decorations**
11. **Types of Fire Extinguishers**
12. **Smoke Detectors**
13. **Fire Department Permits**
14. **Requirements for the Installation, Inspection, and Maintenance of Fire Protection Equipment**

If the Fire Safety Director course that you completed did not cover these topic areas, it is strongly recommended that you take a Fire Safety Director continuing education course on Building Operation, Maintenance, and Recordkeeping. For an updated list of schools offering the course, you may go to http://www.nyc.gov/html/fdny/pdf/cof_study_material/fsd_cof_renew.pdf on the internet.

If you fail the examination, the examination fee will not be refunded. If you do not pass the examination after your second attempt, you will be required to repeat the 20-hour Fire Safety Director course and retake the written Certificate of Fitness examination.

This study guide is intended to introduce you to the topic areas that will be covered on the Fire Safety Director Certificate of Fitness On Site Examination (Hotels Only). It is just a general overview of the topic areas and is not intended to be a comprehensive guide. You must conduct additional research and obtain additional study materials to prepare for the exam.

This study guide includes information taken from the New York City Fire Code. The study guide does not contain all the information you need to know in order to work efficiently and safely when acting as a Fire Safety Director. It is your responsibility to become familiar with all applicable laws, rules and regulations of the federal, state and city agencies having jurisdiction, even though such requirements are not included in this study guide. You need to be familiar with the National Fire Protection Association (NFPA) rule book and applicable sections of the New York City Fire Code in order to adequately prepare for the exam. You must also be able to understand and apply the rules and procedures contained in this study guide to help increase your chances of receiving a passing score.

The Fire Safety Director On Site Examination contains the following parts:

1. Response to a Fire Emergency
2. Response to a Building Impairment
3. Building Knowledge
4. Practical Demonstration of the Fire Command Center
5. Practical Demonstration of Phase 1 and Phase 2 Elevator Operation
6. Candidate Training Knowledge
7. Fire Scenario
8. Building Impairment Scenario

The Duties and Responsibilities of the Fire Safety Director

The Fire Safety Director (FSD) must supervise the fire safety and evacuation plan. The owner shall designate competent persons to act as FSP staff, train the FSP staff and conduct fire drills. Such persons shall possess such qualifications and/or hold such certificate of fitness. The owner shall ensure that adequate FSP staff is present on the premises during regular business hours, and at other times when the building is occupied, to perform the duties and responsibilities set forth in the fire safety and evacuation plan.

Fire Safety Director (F-58) -The fire safety director and deputy fire safety directors designated in the fire safety and evacuation plan shall hold a fire safety director certificate of fitness, and shall have the following duties and responsibilities and such other duties and responsibilities as prescribed by rule:

1. Be familiar with the written Fire Safety Plan providing for fire drill and evacuation procedure in accordance with Fire Prevention Code.

2. Select qualified building service employees for a Fire Brigade and organize, train and supervise such Fire Brigade.

3. Be responsible for the availability and state of readiness of the Fire Brigade.

4. Conduct fire and evacuation drills.

5. Notify the owner or other persons having charge of the building when any designated individual is neglecting his responsibilities contained in the Fire Safety Plan. The owner or other person in charge of the building shall bring the matter to the attention of the firm employing the individual. If the firm fails to correct the condition, the owner or person in charge of the building shall notify the Fire Department.

6. Building occupants should be trained to take precautions to prevent fires and make prompt notification to the building's FSD should they become aware of a fire or smoke condition.

7. In the event of a fire, shall report to the Fire Command Center to supervise, provide for and coordinate:

(a) Insure that the Fire Department has been notified of any fire or fire alarms.
(b) Manning of the fire Command Station.
(c) Direction of evacuating procedures in the Fire Safety Plan.

Once a fire alarm activates, the FSD must acknowledge the alarm(s) that are received by the Fire Command Center, check the fire panel to see if other devices have activated, and send the Fire Brigade to investigate the cause of the alarm in a timely manner. The FSD must inform the building's occupants on the fire (alarm) floor, floor above and floor below of the alarm.

The FSD must be in constant communication with the Fire Brigade and direct the evacuation or relocation of the people on the fire floor and floor above (and floor below if appropriate) to at least two floors below the affected floor(s).

To prevent additional danger to building occupant, the FSD must ensure that the elevators have been recalled to the lobby and that the heating, ventilating, and air conditioning (HVAC) systems have been shut off.

The FSD must prepare for the arrival of the Fire Department, by ensuring that the lobby and/or building entrance is kept clear**.** Guests and visitors should be directed to leave the building or relocated to wait in another area of the building. The FSD should also arrange for a Fire Brigade member to meet the Fire Department upon their arrival and escort them to the Fire Command Center. A building engineer should also be contacted and be available to assist the Fire Department.

Upon the Fire Department's arrival, the FSD reports the conditions on the fire floor and other affected floors and advises the Fire Department Chief in charge in the operation of the Fire Command Center. The FSD will be instructed by the Fire Department firefighting personnel to silence the alarm. The FSD should provide the Fire Department with a copy of the building's fire safety plan, building floor plans, master keys, and elevator keys. A Fire Brigade member should also be available to escort the Fire Department to the location of the fire or as close to the location as possible if dangerous conditions exist. A record of the incident must be maintained for the Fire Department. The fire alarm system should be reset before the Fire Department leaves, but only upon their instruction.

Arson - Intentionally damaging the property of another without consent of the owner by intentionally starting a fire or causing an explosion. When a Fire Safety Director is notified that arson has occurred or is about to occur, he or she must immediately call the police (911).

The Duties and Responsibilities of the Impairment Coordinator

The building owner shall assign an Impairment Coordinator (IC) to comply with the requirements of the Fire Code. In the absence of a specific designee, the owner shall be considered the Impairment Coordinator.

Impairment Coordinator - The person responsible for ensuring that proper safety precautions are taken when a fire protection system is out of service

Fire protection systems include, but are not limited to, the Fire Command Center and it's components, standpipe systems and sprinkler systems.

The FSD Certificate of Fitness holder and the Impairment Coordinator shall be made aware of and authorize the placing of systems out of service. Note that in many buildings the FSD on duty will be assigned to be the Impairment Coordinator. When assigned as the Impairment Coordinator, the FSD will carry out the all of the prescribed functions of the Impairment Coordinator.

Before a major building fire protection system is to be taken out of service for maintenance, repairs, etc…, the Impairment Coordinator must ensure that a service tag is placed near the Fire Command Center. The Impairment Coordinator must also determine the extent and duration of the out of service condition, inspect the building and determine the increased risk of fire or danger to the building's occupants, and record all information in the logbook. Prior to taking the system out of service, the IC must notify the central station company, Fire Department Borough Dispatcher, the insurance carrier and the occupants in the affect area(s). Appropriate recommendations must also be made to the building's management or owner.

The Fire Department Borough Dispatcher must be given a brief description and the extent of the out of service condition and be told that you are calling from a hotel. You must also tell them the area of the hotel that is affected by the out of service condition and the estimated time that the system is expected to be out of service. They should also be given your contact information in case they need additional information from you regarding the out of service condition.

Precautions must be taken to protect the occupants of the building when a major building fire protection system is out of service. These precautions include ensuring that a fire watch is conducted by a qualified people holding a Certificate of Fitness for Fire Guard. In the event that there are no qualified people to conduct a fire watch, the building must be evacuated for the duration of the out of service condition.

Once an out of service condition has been corrected and the system is being restored to normal operation, the Impairment Coordinator must conduct the necessary inspections and tests to verify that the system is operational, remove the service tags and record that the system is operational in the logbook. Notifications must also be made to the central station company, Fire Department Borough Dispatcher, the insurance carrier, the occupants in the affect area(s), and to the building's management or owner.

Knowledge of the Building's Fire Safety Plan

To be an effective Fire Safety Director, you must have a thorough working knowledge of building's Fire Safety Plan.

Fire Safety and Evacuation Plan - A written plan which sets forth the circumstances and procedures for the in-building relocation, partial evacuation or evacuation of building occupants, required or as appropriate for such occupancy or building type, in response to a fire.

The purpose of a Fire Safety Plan is to establish a method of systematic, safe, and orderly evacuation of an area or building by and of its occupants in case of fire or other emergency, in the least possible time, to a safe area or by the nearest safe means of egress; also the use of such available fire appliances (including sounding of alarms) as may have been provided for the controlling or extinguishing of fire and the safeguarding of human life.

FSP Staff - The individuals identified in a fire safety and evacuation plan as responsible for the implementation of such plan.

Fire Drill - A training exercise by which building occupants are familiarized with and/or practice the procedures for the safe, orderly and expeditious in-building relocation, partial evacuation or evacuation, as applicable to the occupancy or building type, in accordance with the fire safety and evacuation plan, and to evaluate the efficiency and effectiveness of the implementation of such plan.

Building Information Card - The commissioner may require by rule the preparation of a building information card depicting and/or setting forth the relevant fire safety information for a building or occupancy for which a fire safety and evacuation plan is required to be submitted to the department pursuant. A building information card, when required to be prepared, shall be maintained on the premises and made available upon request to any department representative.

A fire safety and evacuation plan shall include the following information and such other information and documentation as the commissioner may prescribe:

1. The procedures for notifying building occupants of a fire and reporting a fire to the department, including the preferred and any alternative means of notifying and reporting.

2. Whether the response to a fire emergency will require the occupants of the building to be completely evacuated, partially evacuated or relocated within the building, and the procedures for each such response.

3. Site plans indicating the following:
    - 3.1. Surrounding buildings and streets, including cross streets, and fire apparatus access roads.
    - 3.2. The location of building occupant assembly areas, if applicable.

4. Floor plans, with corresponding legend, identifying the locations of the following, as applicable:
    - 4.1. Exits.
    - 4.2. Evacuation routes.
    - 4.3. Fire barriers.
    - 4.4. Areas of refuge.
    - 4.5. Stairs with letter designation.
    - 4.6. Access and convenience stairways.
    - 4.7. Elevator bank letter and car number designations.
    - 4.8. Fire command station.
    - 4.9. Warden phones.
    - 4.10. Manual fire alarm boxes.
    - 4.11. Standpipe hose outlets.
    - 4.12. Sprinkler and standpipe system riser diagrams and Fire Department connections.
    - 4.13. Sprinkler and standpipe system control valves.
    - 4.14. Any part of the building not protected by a sprinkler system.
    - 4.15. Emergency power generator and fuel supply.

5. Permitted hazardous material and combustible material storage, handling or use at the premises.

6. Identification of fire safety director or other building employees responsible for implementing the fire safety and evacuation plan, training FSP staff, or other duties related to the fire safety and evacuation plan.

7. Identification and assignment of personnel responsible for operation of building fire protection, fire extinguishing and life safety systems, or other critical equipment.

8. Procedures for employees who must operate critical equipment.

9. Procedures for accounting for building employees and building occupants after such employees or occupants have been relocated or evacuated to a safe area.

10. Identification and assignment of personnel responsible for implementing the plan.

11. Identification of personnel available, if any, to provide emergency medical care.

12. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, when approved.

13. Procedures for identifying in advance building occupants who require assistance to participate in the plan because of an infirmity or disability or other special need, and approved procedures for providing for such assistance.

A copy of the fire safety and evacuation plan and the emergency action plan shall be readily available on the premises during regular business hours. For buildings provided with a Fire Command Center, the plans shall be maintained at such Center, if practicable.

Operation of the Building's Fire Command Center

As a Fire Safety Director, you must be fully capable of operating the controls of and interpreting the signals of the Fire Command Center. Since each Fire Command Center is different, you should obtain an instruction manual on its operation and/or training form the manufacturer, installation company, or other qualified persons.

Fire Command Center - The principal attended or unattended location where the status of the detection, alarm communications and control systems is displayed, and from which the system(s) can be manually controlled.

Acceptance of professional certification - The commissioner shall not accept professional certification of compliance with the requirements of this code and the rules in lieu of required department inspections, witnessing of tests, or approval of design and installation documents,

except as otherwise provided in this section. Professional certification may only be accepted with respect to fire alarm system devices or equipment that are not part of the building's core fire alarm system. The commissioner shall adopt a written policy setting forth procedures by which professionally certified fire alarm system devices or equipment will be audited by the department to ensure the accuracy of such professional certifications. For purposes of this section, “professional certification" or "professionally certified" means the submission to the department of a signed, personal verification by a registered design professional that accompanies an application and/or design and installation documents filed with the department that attests that such application or design and installation documents do not contain any false information and that such application or design and installation documents are in compliance with all applicable laws, rules and regulations.

Sufficient clearance shall be provided between kiosks, displays, booths, or concession stands and fire alarm and carbon monoxide systems equipment and devices including detectors and strobes, so as not to interfere with their operation. The location and accessibility of the fire command center shall be approved by the department. The fire command center shall be installed according to the construction codes, including the Building Code. A layout of the fire command center and all operational features shall be submitted for approval prior to installation.

Phase 1 and Phase 2 Elevator Operation (Firefighter Service)

As a Fire Safety Director, you must be fully capable of recalling the elevator(s) utilizing phase 1 elevator operation and operating the elevator utilizing phase 2 elevator operation.

Citywide Standard Key - A key of special or controlled design approved by the commissioner which serves to operate elevator emergency recall and emergency in-service operation service.

Phase I Emergency Recall and Phase II Emergency In-Service Operation - Elevators intended to serve the needs of emergency personnel for firefighting or rescue purposes shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with the Building Code.

Elevator Keys - Keys for the elevator car doors and firefighter service keys shall be kept in an approved location for immediate use by the department. Firefighter service key switches shall be operable by citywide-standard key.

Elevators In Readiness. Elevators in every building 75 feet (22 860 mm) or more in height shall be kept ready for immediate use by the department during all hours of the night and day including holidays and weekends. There shall be a competent building attendant available to operate such elevators, except that no attendant shall be required for buildings between 75 and 150 feet (22 860 and 45 720 mm) in height having elevators with Phase I emergency recall and Phase II emergency in-service operation.

Emergency Elevator Operation and Maintenance - All elevators equipped with Phase I emergency recall and Phase II emergency in-service operation shall be maintained in proper working order such that the emergency elevator operations are operable at all times. All elevators with Phase I emergency recall shall be subjected, at least monthly, to a Phase I recall test. All elevators with Phase II emergency in-service operation shall be subjected, at least monthly, to a minimum of a one-floor operation II test. A written record of the operational status of the elevator shall be made and kept on the premises and made available for inspection by any representatives of the department.

Effective Training for Fire Brigade Members

The fire safety director and deputy fire safety directors designated shall be fully familiar with the provisions of the fire safety and evacuation plan, and when a fire brigade is required by shall conduct fire brigade training drills.

Each Fire Brigade Member shall be familiar with the Fire Safety Plan, and be trained to carry out specific duties and responsibilities during a fire drill or emergency. They must know the location and number of exits on each floor and the location of any available fire alarm system. In the event of a fire, or fire alarm, the Fire Brigade Members shall ascertain location of the fire, and direct the evacuation of the floor in accordance with directions received and the following guidelines:

(a) Report to the floor below the fire to assist in evacuation and provide information to the Fire Command Center.

(b) After evacuation of fire floor, try to control spread of fire by closing doors, etc.

(c) Attempt to control the fire (by using a fire extinguisher) until arrival of the Fire Department, if the fire is small and conditions do not pose a personal threat.

(d) Leave one member on the floor below the fire to direct the Fire Department to the fire location and to inform them of conditions.

(e) Upon arrival of the Fire Department, the Fire Brigade shall report to the Fire Command Center for additional instructions.

(f) Have a member designated as Alarm Box Runner (if applicable), who shall know the location of the nearest street Fire Alarm Box, and be instructed in its use. Such member shall immediately, upon receipt of information that there is a fire or evidence of fire, go to the street alarm box, transmit an alarm and await the arrival of the fire department and direct such department to the fire.

Fire Brigade Members must know the building’s evacuation procedures and the evacuation location. The most critical areas for immediate evacuation are the fire floor and floors immediately above (and floor below if appropriate). Before entering the fire floor, Brigade Members must

verify it is safe to do so. Evacuation from the other floors shall be instituted when instructions from the Fire Command Center or conditions indicates such action. Evacuation should be via uncontaminated stairs. Fire Brigade Members shall try to avoid stairs being used by the Fire Department. If this is not possible, they shall try to attract the attention of the Fire Department personnel before such personnel open the door to the fire floor.

Evacuation to two or more levels below the fire floor is generally adequate. Fire Brigade Members shall keep the Fire Command Center informed regarding their location. They must know the location of the warden phones in order to communicate with the Fire Command Center. Fire Brigade Members shall check the environment in the stair prior to entry for evacuation. If it is affected by smoke, an alternate stairway shall be selected, and the Fire Command Center must be notified. The Fire Brigade Members shall keep the Fire Command Center informed of the means being employed for evacuation by the occupants of the floor. Fire Brigade Members shall see that all occupants are notified of the fire, and that they proceed immediately to execute the Fire Safety Plan. The Fire Brigade Members on the fire floor shall, as soon as practicable, notify the Fire Command Center of the situation. Fire Brigade Members on the floor above the fire shall, after executing the Fire Safety Plan, notify the Fire Command Center of the means being used for evacuation (means of egress) and any other particulars.

Company Certificates

The Fire Department issues the following Company Certificates:

Company Certificates	**Fire Code Section**
Central Station Certificate of Operation	901.6.3.5
Commercial Cooking Exhaust System Servicing Company Certificate	901.6.3.3
Fumigation and Thermal Insecticidal Fogging Operation Company Certificate	1701.4.1
Portable Fire Extinguisher Servicing Company Certificate	901.6.3.1
Smoke Detector Maintenance Company Certificate	901.6.3.1

Central Station Certificate of Operation

Central Station - A facility that receives alarm signals from a protected premises and retransmits or otherwise reports such alarm signals to the department.

It shall be unlawful for any person to operate a central station that monitors fire alarm systems and maintain transmitters in protected premises without a certificate of operation.

Commercial Cooking Exhaust System Servicing Company Certificate

Commercial cooking exhaust systems - It shall be unlawful for any person engaged in the business of inspecting and cleaning commercial cooking exhaust systems as required by the provisions of this code to perform such service without a commercial cooking exhaust system servicing company certificate. The inspection and cleaning of commercial cooking exhaust systems shall be performed by a person holding a certificate of fitness. Nothing in this section shall preclude commercial cooking exhaust systems from being inspected and cleaned by the owner or occupant of the premises, or an employee of such owner or occupant, who possesses a certificate of fitness for inspecting and cleaning commercial cooking exhaust systems and the tools, materials, and equipment necessary to perform such services in accordance with this section.

Fumigation and Thermal Insecticidal Fogging Company Certificate

Fumigation and thermal insecticidal fogging operation company certificate - A certificate issued by the commissioner to a person engaged in the business of fumigation and thermal insecticidal fogging operations, which authorizes an owner or principal of such business to conduct such fumigation and thermal insecticidal fogging operations, for which such certificate is required by this code or the rules.

Fumigation and insecticidal fogging operations may require that fire alarm systems be taken out of service during such operation to avoid unwarranted alarms. The date and time the alarm system was taken off-line, the reason for such action, the name and operator number of the person notified at the central station (or other evidence of notification satisfactory to the Department), and the date and time the system was restored to service, shall be entered in the alarm log book in each such circumstance.

The FDNY's Field Public Communication Unit must be notified in writing at least 48 hours before fogging or fumigation commences by faxing 718-999-7108 or writing to the FDNY 9 Metrotech Center Field/Public Communications Brooklyn, N.Y. 11201. Notification shall give the location of the enclosed space to be fumigated or thermal fogged, the occupancy, the fumigants or insecticides to be utilized, the person or persons responsible for the operation, and the date and time at which the operation will begin. Cold ULV fogging does not require any notification. Written notice of any fumigation operation shall be given to all affected occupants of the building, structure or portion thereof in which such operations are to be conducted, with sufficient advance notice to allow all such spaces to be vacated in an orderly manner. Such notice shall inform the occupants as to the purposes and anticipated duration of the fumigation operations.

Warning signs - Approved warning signs indicating the danger, type of chemical involved and necessary precautions shall be posted on all doors and entrances to the premises. Such notices shall be printed in red ink on a white background. Letters in the headlines shall be at least 2 inches (51mm) in height and shall state the date and time of the operation, the name and address of the person conducting the fumigation or thermal insecticidal fogging, the name of the operator in charge, and a warning stating that the occupied premises shall be vacated at least 1 hour before the operation begins and shall not be reentered until the danger signs have been removed by the

proper authorities. Advance notice shall be given to all occupants of the building or structure where fumigation and thermal insecticidal fogging operations are to be conducted to warn of the hazards of such operation.

Portable Fire Extinguisher Sales and Servicing Company Certificates

Portable Fire Extinguisher Sales Company Certificate - A certificate issued by the commissioner to a person engaged in the business of selling portable fire extinguishers door to door to owners of buildings or business for use on their premises, which authorizes such person to engage in such business and supervise such sales.

It shall be unlawful for any person to engage in the business of selling portable fire extinguishers door to door to owners of buildings or businesses for use on their premises without a portable fire extinguisher sales company certificate.

Portable Fire Extinguisher Servicing Company Certificate - A certificate issued by the commissioner to a person engaged in the business of servicing portable fire extinguishers, which authorizes such person to engage in such business and supervise the provision of such servicing by certificate of fitness holders.

It shall be unlawful for any person engaged in the business of servicing portable fire extinguishers to service portable fire extinguishers without a portable fire extinguisher servicing company certificate. Any person that services portable fire extinguishers shall hold a certificate of fitness, except that a person training for such certificate of fitness may service portable fire extinguishers under the personal supervision of a certificate of fitness holder. Nothing in this section shall preclude portable fire extinguishers that are maintained on a premises for use at such premises from being serviced by the owner or occupant of the premises, or an employee of such owner or occupant, who possesses a certificate of fitness for portable fire extinguisher servicing and the tools, materials, equipment and facility necessary to perform such services.

Smoke Detector Maintenance Company Certificate

Smoke Detector - A listed device that senses visible or invisible particles of combustion.

Smoke detector cleaning and testing - The cleaning and testing for smoke entry and sensitivity of smoke detectors installed in a defined fire alarm system shall be performed by a person holding a certificate of fitness for smoke detector maintenance. Such work shall be performed under the supervision and by employees of a person holding a smoke detector maintenance company certificate, except that such smoke detector cleaning and testing may be performed by an owner or occupant of the premises, or an employee of such owner or occupant, who possesses a certificate of fitness for smoke detector maintenance, and possesses the tools, instruments or other equipment necessary to perform such services in accordance this code and the rules. All other smoke detector

maintenance shall be performed by a person possessing the requisite qualifications and experience, and any applicable license or certificate.

Commercial Cooking Systems

Commercial Cooking System - A system consisting of commercial cooking equipment, exhaust hood, filters, exhaust duct system, fire extinguishing system and other related devices designed to capture grease-laden cooking vapors and exhaust them safely to the outdoors. Commercial cooking equipment shall be attended at all times while in operation.

Commercial cooking systems shall be designed and installed in accordance with the construction codes, including the Building Code. The fire extinguishing system for commercial cooking systems shall be of an approved type recognized for protection of commercial cooking equipment and exhaust systems of the type and arrangement protected. Pre-engineered wet chemical fire extinguishing systems shall be tested in accordance with UL 300 and listed and labeled for the intended application. Dry chemical fire extinguishing systems shall not be installed to protect commercial cooking equipment and exhaust systems. Other types of fire extinguishing systems shall be listed and labeled for specific use as protection for commercial cooking operations. The system shall be installed in accordance with this code, its listing and the manufacturer's installation instructions. Fire extinguishing systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:

1. Carbon dioxide fire extinguishing systems, NFPA 12.
2. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
3. Wet chemical fire extinguishing systems, NFPA 17A.

Manual System Operation. A manual activation device shall be located at or near a means of egress from the cooking area, a minimum of 10 feet (3048 mm) and a maximum of 20 feet (6096 mm) from the kitchen exhaust system. The manual activation device shall be located a minimum of 42 inches (1067 mm) and a maximum of 48 inches (1219 mm) above the floor at its center. The manual activation shall require a maximum force of 40 pounds (178 N) and a maximum movement of 14 inches (356 mm) to activate the fire extinguishing system.

The activation of the fire extinguishing system shall automatically shut down the fuel and electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.

Upon completion of the installation of a commercial cooking system, such system shall be tested at the owner's risk, by his or her representative, to confirm proper installation and operation of the system in compliance with the requirements of the construction codes, including the Mechanical Code, and the Fire Code. The owner's representative shall furnish the necessary equipment required to conduct the test. No permit shall be issued for the operation of a commercial cooking system until satisfactory performance of the fire extinguishing system is demonstrated, including compliance with the following requirements:

1. A performance test of the exhaust system conducted before a representative of the department. The test shall verify that the exhaust airflow rate and makeup airflow meet the standards set forth in the construction codes, including the Mechanical Code, and verify proper operation as specified in this chapter.

2. A performance test of the fire extinguishing system conducted before a representative of the department, in accordance with the applicable installation standard set forth in this chapter and its listing.

3. Chimneys serving masonry ovens shall be proved tight by a smoke test. A report of such test shall be prepared by the installer and made available for inspection by a representative of the department at the time the performance tests of the exhaust system and fire extinguishing system are witnessed by such department representative.

It shall be unlawful to operate commercial cooking equipment that generates smoke or grease-laden vapors or fumes under any of the following conditions:

1. Without a permit for the operation of a commercial cooking system.
2. Without a lawfully installed fire extinguishing system.
3. Without a lawfully installed exhaust system.
4. While its fire extinguishing system or exhaust system is out of service.

Portable fire extinguishers shall be provided within a 30-foot (9144 mm) travel distance of commercial cooking equipment. Cooking equipment involving vegetable or animal oils and fats shall be protected by a Class K rated portable fire extinguisher.

The owner or operator of commercial cooking equipment shall train all staff in the proper procedures for the use of all components of the grease removal system, cleaning of filters, and the manual operation of the fire extinguishing system. At least once every 6 months the owner or operator of the premises shall review the instructions for manual operation of the fire extinguishing system with all staff.

The ventilation system in connection with hoods shall be operated at the required rate of air movement, and approved grease filters shall be in place when equipment under a kitchen grease hood is used. Exhaust systems shall be operated at all times while cooking equipment is being used. Fixed air supply openings installed to provide make-up air for air exhausted through the exhaust system shall not be restricted by covers, dampers, or any other means that would reduce the operating efficiency of the exhaust system. Commercial cooking hoods shall not be painted.

The entire exhaust system, including but not limited to hoods, filters, grease removal devices, ducts, fans, pollution control devices, and other appurtenances, shall be inspected and cleaned at least once every three months under the personal supervision of a person holding a certificate of fitness. Surfaces shall be cleaned to bare metal and no powder or other foreign substance shall remain in the exhaust system after cleaning. Flammable cleaning fluids shall not be used. Cleaning fluids shall not be applied on fusible links or other detection devices of the fire extinguishing

system. Electrical switches that may be accidentally activated during the cleaning process shall be electrically locked out during such process.

Exception: Vertical portions of interior and exterior vertical ducts in excess of three stories in height shall be cleaned at least every six months by a person holding a certificate of fitness.

Maintenance. At least once a month, an inspection shall be conducted by a trained and knowledgeable person to assess that the system is in good working order. A licensed master fire suppression piping contractor properly trained and having knowledge of the installation, operation and maintenance of the specific fire extinguishing system shall inspect, test, service and otherwise maintain such system in accordance with this section and the manufacturer's specifications and servicing manuals at least on a semiannual basis.

At a minimum, the semiannual inspection, testing and servicing shall include:

1. Verification that the hazard has not changed.
2. Verification that the fire extinguishing system has not been altered.
3. Examination of all detectors, agent and gas containers, releasing devices, piping, hose assemblies, nozzles, and all auxiliary equipment.
4. Verification that the agent distribution piping is not obstructed.
5. Verification that the extinguishing agent container and/or auxiliary pressure containers have been, as applicable, inspected, re-tested and marked.
6. A test of the system's automatic and manual releasing devices, including any associated equipment.
7. A test of the gas and electric power source shutoff devices.
8. Preparation and submission to the owner of a written report of any system defects.
9. Upon satisfactory completion of the semiannual inspection and correction of all defects, providing the owner with an inspection, testing and service compliance tag. Such tag shall indicate the date issued, the name and license number of the licensed master fire suppression piping contractor issuing the tag, and that the system was found to be in compliance with the requirements of this section.

Records shall be maintained as follows:

1. A record of the inspection and cleaning of the exhaust system shall be maintained at the premises and made available for inspection by any representative of the department upon request. Such record shall indicate the date that such inspection and cleaning was conducted, and the name and certificate of fitness number of the individual supervising such inspection and cleaning.

2. A record indicating the name of the person or firm doing the servicing and the dates when filters were cleaned or replaced shall be maintained at the premises and made available for inspection by any representative of the department upon request.

3. Upon satisfactory completion of the semiannual inspection and the correction of all system defects, the licensed master fire suppression piping contractor shall issue an inspection, testing and service compliance tag. Such tag shall be posted in a conspicuous location on the premises. A new compliance tag shall be posted for each required semiannual inspection.

Hot Work Operations

Hot Work - Cutting, welding, thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, cadwelding, installation of torch-applied roof systems or any other similar operation or activity.

Hot Work Area - The area exposed to sparks, hot slag, radiant heat, or convective heat as a result of hot work.

Hot Work Equipment - Electric or gas welding or cutting equipment used for hot work.

Hot Work Program Authorizations - Authorizations issued by the responsible person under a hot work program allowing welding or other hot work to be performed at the premises.

Hot Work Program - A program, implemented by a responsible person designated by the owner of a building or structure in or on which hot work is being performed, to oversee and issue authorizations for such hot work for the purpose of preventing fire and fire spread.

Responsible Person - A person trained in the fire safety hazards associated with hot work and in the necessary and appropriate measures to minimize those hazards, who is designated by the owner of a premises to authorize the performance of hot work at the premises. Note: In most buildings the Fire Safety Director will be required to assume the role of the responsible person.

Fire Guard - A person holding a certificate of fitness for such purpose, who is trained in and responsible for maintaining a fire watch and performing such fire safety duties as may be prescribed by the commissioner.

A Hot Work permit is required to conduct hot work using oxygen and a flammable gas. Hot work shall be conducted only in the areas set forth in this section or approved by the commissioner.

Hot work may be conducted in the following areas:

1. Areas designed for hot work operations.
2. Areas authorized for that purpose by the responsible person at the premises when precautions have been taken in compliance with the Fire Code.

Hot work shall not be conducted in the following areas unless approval has been obtained from the commissioner:

1. Areas where the sprinkler system is impaired.
2. Areas where there exists the potential of an explosive atmosphere, such as locations where flammable gases, liquids or vapors are present.
3. Areas with readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials.
4. On board marine vessels or watercraft at dock under construction or repair.

The responsible person shall ensure that a permit has been obtained from the department when one is required, and ensure that the hot work is performed in compliance with the terms and conditions of the permit. The responsible person shall inspect the hot work site prior to issuing a hot work program authorization and periodically monitor the work as it is being performed to ensure there are no fire safety hazards. Hot work operations shall be conducted under the general supervision of the responsible person.

A hot work program authorization bearing the signature of the responsible person shall be obtained for any project conducted on a premises involving hot work operations by the person in charge of such hot work operations. Hot work authorizations, issued by the responsible person, shall be available for inspection by any representative of the department during the performance of the work and for 48 hours after the work is complete.

An authorization for hot work operations shall not be issued unless the individuals in charge of performing such operations are capable of performing such operations safely. Demonstration of a working knowledge of the provisions of this chapter shall constitute acceptable evidence of compliance with this requirement.

Torch operations using oxygen and a flammable gas, and any torch operation for torch-applied roof systems, shall be performed by a person holding a Certificate of Fitness for Torch Operation.

The responsible person for the hot work area shall maintain “prework check” reports. These reports shall be maintained on the premises for a minimum of 48 hours after work is complete. Where the hot work area is accessible to persons other than the operator of the hot work equipment, signs shall be posted in a conspicuous location to warn others before they enter the hot work area.

Sprinkler system protection shall not be shut off or impaired while hot work is performed unless approved by the commissioner. Where hot work is performed close to sprinklers, noncombustible barriers or damp cloth guards shall shield the individual sprinkler heads and shall be removed when the work is completed. If the work extends over several days, the shields shall be removed at the end of each workday.

Approved special precautions shall be taken to avoid accidental operation of automatic fire detection systems and a fire watch shall be maintained and fire guards provided. A fire watch shall be maintained during hot work operations. The fire watch shall continue for a

minimum of 30 minutes after the conclusion of the work. The commissioner, or the responsible person implementing a hot work program, may extend the duration of the fire watch based on the hazards or work being performed. The fire watch shall observe the entire hot work area. Hot work conducted in areas with vertical or horizontal fire exposures that are not observable by a single individual shall have additional personnel assigned to ensure that exposed areas are monitored.

Individuals assigned to fire watch duty shall have fire extinguishing equipment readily available and shall be trained in the use of such equipment. Individuals assigned to fire watch duty shall be responsible for identifying and extinguishing spot fires and reporting such fires to the department.

The individuals responsible for performing the hot work, and for the fire watch, shall be trained in the use of portable fire extinguishers.

Pre-Hot Work Check - A pre-hot work check shall be conducted by the responsible person prior to work to ensure that all equipment is safe and hazards are recognized and protected. A report of the check shall be kept at the work site during the work and made available for inspection by any representative of the department.

The pre-hot work check shall be conducted at least once per day and shall verify the following:

1. The hot work equipment is in good working order.
2. The hot work area is clear of combustibles and flammable solids or that such materials present in the area are protected.
3. Exposed construction is of noncombustible materials or, if combustible, is protected.
4. Openings are protected.
5. Hot work area floors are clear of combustible waste accumulation.
6. Fire watch personnel, where required, are assigned.
7. Approved actions have been taken to prevent accidental activation of extinguishing and detection equipment.
8. Portable fire extinguishers and fire hoses (where provided) are operable and available.
9. All persons performing hot work possess certificates of fitness, where such certificates are required.
10. All persons performing hot work requiring a permit possess a site-specific permit or citywide permit, authorizing such work.

Flame-Resistant Decorations

Flame-retardant treatments - An approved chemical that, when applied to a material in an approved manner, imparts flame resistance to a material.

When a material or item is treated with a flame-retardant chemical to meet the requirements of this chapter for a flame-resistant material, such chemical and its method of application shall be approved. Flame-retardant treatments shall be maintained so as to retain the effectiveness of the treatment under conditions encountered in actual use.

When a material or item is treated with a flame retardant chemical, the application of the chemical shall be conducted by or under the personal supervision of a certificate of fitness holder. Any flame-retardant chemical used to render a material flame-resistant to meet the requirements of this chapter shall be of a type for which a certificate of approval has been issued.

Fire-retardant coating - An approved coating that, when applied to the surface of scenery in an approved manner, imparts flame resistance and reduces flame spread.

When a material or item is coated with a fire-retardant coating to meet the requirements of this chapter for a flame-resistant material, such coating and its method of application shall be approved. Flame-retardant coatings shall be maintained so as to retain the effectiveness of the coating under conditions encountered in actual use.

Flame-Resistant Material - Material that meets the criteria for flame-resistance as set forth in NFPA 701, either because it is inherently flame-resistant or because it has been subjected to a flame-retardant treatment.

The required width of any portion of a means of egress shall not be obstructed by any furnishing, decorative vegetation, decoration or scenery nor shall such furnishing, decorative vegetation, decoration or scenery obstruct any exit or the visibility thereof.

Types of Fire Extinguishers

Portable fire extinguishers are required by the Fire Code and rules, in certain occupancies and for certain activities to give the occupants the means to suppress a fire in its incipient stage. The capability for manual suppression can contribute to the protection of the occupants. To be effective, personnel must be properly trained in the use of portable fire extinguishers.

Portable fire extinguishers are required to be provided in the following locations:

- In all Group A, B, E, F, H, I, M, R-1, R-2 adult homes and enriched housing, and S occupancies.
- Within 30 feet of commercial cooking equipment.
- In areas where flammable or combustible liquids are manufactured, stored, handled and used in quantities requiring a permit.
- On each floor of structures under construction, alteration or demolition except detached Group R-3 occupancies.

NFPA Standard 10 requires that portable fire extinguishers be selected for the class(es) of fire hazards to be protected. The classification of portable fire extinguisher type corresponds with the classification of fires. NFPA Standard 10 classifies fires as follows:

- Class A fires are fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics.
- Class B fires are fires in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases.
- Class C fires are fires that involve energized electrical equipment.
- Class D fires are fires in combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium.
- Class K fires are fires in cooking appliances that involve combustible cooking media (vegetable or animal oils and fats).

FSP staff shall be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment

Fire protection systems shall be designed and installed in accordance with the construction codes, including the Building Code, and, as applicable, this code and the rules, and the applicable referenced standards listed in this code. Required systems shall be extended or altered as necessary to maintain and continue protection whenever the building or structure is altered. Alterations to fire protection systems shall be performed in compliance with the requirements of this code, the rules, and the construction codes, as applicable. Buildings and structures shall be provided with such fire hose, portable fire extinguishers and other means of preventing and extinguishing fires as the commissioner may direct.

An inspection to verify that the portable fire extinguishers are readily available and in good working order shall be conducted at least once a month. The person conducting such inspections shall keep records of all portable fire extinguishers inspected, including the date the inspection was performed, the person performing the inspection, and those portable fire extinguishers found to require corrective action. Such recordkeeping shall be either kept on a tag or label securely attached to the portable fire extinguisher, on an inspection checklist maintained on file or by an approved electronic method that provides a permanent record.

Annual servicing and recharging shall be performed by a person or company. Records of servicing and recharging of portable fire extinguishers shall be provided and maintained. The required tag or label for servicing shall also include the following information:

1. The name and certificate of fitness number of the person who serviced the portable fire extinguisher.
2. The month and year the portable fire extinguisher was serviced.
3. The name, street address and telephone number of the portable fire extinguisher servicing company, if any, servicing the portable fire extinguisher.

Smoke Detectors

Smoke Detector - A device that senses visible or invisible particles of combustion

Companies engaged in the business of cleaning and testing of smoke detectors must obtain a smoke detector maintenance company certificate, except that such smoke detector cleaning and testing may be performed by an owner or occupant of the premises, or an employee of such owner or occupant, who possesses a certificate of fitness for smoke detector maintenance, and possesses the tools, instruments or other equipment necessary to perform such services.

The owner shall be responsible for ensuring that the fire and life safety systems are maintained in good working order at all times. Service personnel shall possess the necessary qualifications for inspecting, testing, servicing and otherwise maintaining such systems. A smoke detector maintenance log book shall be maintained and made available to the commissioner upon request.

The owner of any premises, or part thereof, monitored by a fire alarm system or sub-system which automatically transmit signals to the department or to a central station, shall be responsible for preventing unnecessary and unwarranted alarms. Cleaning and testing of smoke detectors shall be performed and records maintained of smoke detectors installed in a defined fire alarm system.

Unwarranted Alarm - An alarm signal transmitted by a fire alarm system which failed to function as designed as a result of improper installation, improper maintenance, malfunction, or other factor. Examples of unwarranted alarms are alarms resulting from improper smoke detector placement, improper detector setting for installed location, lack of system maintenance, and control panel malfunction.

Fire Department Permits

The Fire Department issues the following permits to building owners:

- Commercial cooking systems
- Compressed gases
- Flammable and combustible liquids
- Hot work operations
- Liquefied Petroleum Gases (LPG)
- Open flames (Places of assembly)
- Places of assembly
- Refrigerating systems – permits are required to maintain or operate a refrigerating system that uses a Group A1, A2, A3, B1, B2 or B3 refrigerant or that is mounted on or suspended from a roof or ceiling. No permit is required for a refrigerating system of less than five horsepower that uses a Group A1 refrigerant and that is not mounted on or suspended from a roof or ceiling. No permit is required for a refrigerating system installed in the residence portion of any building or employing water or air as a refrigerant.

Requirements for the Installation, Inspection, and Maintenance of Fire Protection Equipment

A fire protection system is any system designed to detect, control, extinguish and alert building occupants to fire or fire related smoke. The primary fire protection systems are sprinkler systems, standpipe systems and fire alarm systems.

Sprinkler System - A fire extinguishing system, other than a water mist system, that utilizes water as the extinguishing agent.

Standpipe System - Piping installed in a building or structure that serves to transfer water from a water supply to hose connections at one or more locations in a building or structure used for firefighting purposes.

The installation, alteration, testing and repair of the fire extinguishing system, including any maintenance or modification of the system, shall be performed by a person possessing a master fire suppression piping contractor license issued by the New York City Department of Buildings and trained and knowledgeable in the installation, operation and maintenance of the specific fire extinguishing system.

Sprinkler systems shall be inspected at least once a month by a person employed by the owner, holding a certificate of fitness issued by the department, a fire suppression contractor license issued by the Department of Buildings, or, for a sprinkler system with not more than 30 sprinkler heads, holding a master plumber license issued by the Department of Buildings, to ensure that all parts of the system are in perfect working order, and that the department connections, if any, are ready for immediate use by the department. Such inspection shall include a check of all control valves on the system, including the main supply control valve, making certain the valves are fully open and sealed in such open position; a check of the static pressure in the sprinkler system from a pressure gauge, if installed, located at or near the inspector's test connection, making certain the system design pressure is being maintained; a check that all sprinkler heads are in place; and such other requirements as the commissioner may prescribe. A detailed record of each inspection shall be kept for examination by any representative of the department.

To prevent water from flowing during repairs or to stop the flow of water from the sprinkler system, the sprinkler shut-off valve that serves the affected floor(s) should be closed and the water flow point for that floor should be bypassed or disabled.

Standpipe Hydrostatic Pressure and Flow Tests - Once every 5 years, the standpipe system shall be subjected to a hydrostatic pressure test and a flow test to demonstrate its suitability for department use. These tests shall be conducted in compliance with the requirements of the rules and shall be conducted at the owner's risk, by a Licensed Master Fire Suppression Piping Contractor of the owners choosing and before a representative of the department. A building engineer, superintendent, or Fire Safety Director must also be present during the test.

References:

NYC Fire Code
ICC Building Operation, Maintenance and Recordkeeping Workbook
New York State Penal Law (Section § 150.01 - Arson)