

# **Fire Safety Director On Site Examination for Hotels and Office Buildings F-58 Study Guide**



**It is recommended that this guide be kept at all times at the Fire Command Center.**

This publication is provided free to the public by the New York City Fire Department.

© 9/14/2011 New York City Fire Department - All rights reserved.

**Release 9.0 – This guide will be updated periodically. Please check the FDNY website to see if there is a newer version before your exam date.**

**\*\* IMPORTANT NOTICE \*\***

**This study guide is to be used for all current Hotel/Office On Site Exams.**

The Fire Safety Director On Site Examination for Hotels and Office Buildings has been revised to reflect the new changes to the 2008 Fire Code.

The Fire Safety Director On Site Examination may include questions on the following topic areas:

<b>A. The Duties and Responsibilities of the Fire Safety Director</b> .....	8
<b>B. The Duties and Responsibilities of the Impairment Coordinator</b> .....	10
<b>C. Knowledge of the Building’s Fire Safety Plan</b> .....	12
<b>D. Operation of the Building’s Fire Command Center</b> .....	14
<b>E. Phase 1 and Phase 2 Elevator Operation (Firefighter Service)</b> .....	16
<b>F. General Training Requirements</b> .....	18
<b>G. Effective Training for Floor Wardens</b> .....	18
<b>H. Effective Training for Fire Brigade Members</b> .....	19
<b>I. Company Certificates</b> .....	20
I-(1). <i>Central Station Certificate of Operation</i> .....	21
I-(2). <i>Commercial Cooking Exhaust System Servicing Company Certificate</i> .....	21
I-(3). <i>Fumigation and Thermal Insecticidal Fogging Company Certificate</i> .....	21
I-(4). <i>Portable Fire Extinguisher Sales and Servicing Company Certificates</i> .....	22
I-(5). <i>Smoke Detector Maintenance Company Certificate</i> .....	22
<b>J. Commercial Cooking Systems</b> .....	23
<b>K. Hot Work Operations</b> .....	26
<b>L. Flame-Resistant Decorations</b> .....	28
<b>M. Types of Fire Extinguishers</b> .....	29
<b>N. Fire Department Permits</b> .....	30
<b>O. Requirements for the Installation, Inspection, and Maintenance of Fire Protection Equipment</b> .....	31

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](http://www.nyc.gov/html/fdny/pdf/cof_study_material/fsd_cof_renew.pdf) on the internet.

## STUDY MATERIAL AND EXAM DESCRIPTION

### About the Study Material

This study guide is intended to introduce the Fire Safety Director applicant to the topic areas that will be covered on the Fire Safety Director Certificate of Fitness On Site Examination. It is just a general overview of the topic areas and is not intended to be a comprehensive guide. The applicant 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 the applicant need to know in order to work efficiently and safely when acting as a Fire Safety Director. It is the applicant's 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 the chances of receiving a passing score.

**This study guide or any other study materials or personal notes are NOT allowed during the Fire Safety Director On Site Exam.**

### About the On Site Exam

#### *(1) Schedule the On Site exam*

A candidate's supervisor must make the request to schedule an On Site Fire Safety Director Exam. Candidates cannot schedule their own exams. To qualify for the Fire Safety Director On Site Exam, the candidate must receive a **Certificate of Completion** issued from FDNY. The Certificate of Completion indicates the candidate meets all the following requirements:

- Have a minimum of 3 years of fire related experience
- Pass a 20-hour certified fire safety director course
- Pass the Fire Safety Director certificate of fitness written exam

The Certificate of Completion is **valid for one (1) year** from the date of issuance. **An appointment must be requested no more than one (1) year from the issuance date on the Certificate of Completion** in order to receive a Fire Safety Director Certificate of Fitness. The first appointment for the On Site exam is strongly advised to be requested within the first six (6) months of the one-year valid period of the Certificate of Completion in order to be entitled to two (2) attempts at the On Site examination.

The supervisor or the building manager should schedule the On Site Exam appointment through the following link providing that the building has a current FDNY approved Fire Safety Plan on file:

<http://www1.nyc.gov/nyc-resources/service/1708/fire-safety-director-on-site-test>

No telephone, email or fax appointments will be accepted.

In the case of hardship, the supervisor can request an emergency overtime test Monday to Friday after 5:00 PM or on Saturday. The candidate must agree to cover additional overtime expenses.

Applicants are allowed to be certified at 2 locations at one time without special restrictions. Applicants with 3 or more locations must apply for a modification/variance. A \$200 non-refundable fee is required with each application (Email Maryana Chouchereba, for further info about multiple certifications at [chouchm@fdny.nyc.gov](mailto:chouchm@fdny.nyc.gov)). This modification/variance will be subject to frequent On Site Exams at renewal time:

It requires the applicants to retake On Site Exams at all locations (to be scheduled at the Department's discretion). It also requires the applicants to retake On Site Exams upon their renewal.

*(2) Cancel the On Site Exam*

All requests for cancellations shall be submitted via email **only** to [High-Rise@fdny.nyc.gov](mailto:High-Rise@fdny.nyc.gov). Please note "Request for Cancellation" in the subject of the email and provide all the pertinent information regarding the candidate in the email so that the cancellation can be expedited. The building will be charged the On-Site test fee **if cancelled less than 72 hours prior to the On-Site Exam. Any candidate canceling three (3) On-Site exams will not be allowed to schedule an On-Site exam until after 6 months following the third cancellation.**

If the supervisor or the building manager needs to reschedule the candidate, the cancellation must be submitted. After the cancellation is confirmed by the High Rise Unit, the supervisor or the building manager could schedule the On-Site Exam again. Requests to reschedule the On-Site exam must be 7 to 10 business days after cancellation.

*(3) On Site Exam environment*

In order to maximum the candidate's testing performance, the candidate or the supervisor must arrange a suitable environment for the FDNY inspector to administer the On Site Exam.

A suitable testing environment includes but is not limited to:

- adequate room lighting
- adequate ventilation
- comfortable seating and clean work surfaces for the candidate to take notes and answer the questions.
- minimum noise and no distractions during testing
- alarms and announcements will be sounded at various points during this Exam, refer to "(4) During the Fire Safety Director On Site Exam".

The average testing time of the On Site Exam is approximately 3 to 3.5 hours. The testing environment should be expected to be occupied for at least 3.5 hours.

FDNY inspectors have the right to move the candidate to a proper testing environment.

*(4) During the Fire Safety Director On Site Exam*

Before the On Site Exam, the most recent plan must be available to the FDNY, including **Building Information Card (BIC), Fire Safety and Evacuation Plan, and Comprehensive Fire Safety**

**and Emergency Action Plan.** Failure to produce the required documents before the On Site Exam can result in termination of the exam. The On-Site exam fee will be charged.

The On Site Exam is to be conducted between the inspector and the candidate ONLY. The Fire Safety Director On Site examination is an oral and practical test. For the oral test, the candidate will be required to answer various questions referenced to in this study material.

The candidate will also be presented with various scenarios and directed to state the actions that the candidate would take should those scenarios occur. The inspector will read each part of the scenario and then wait for the candidate's responses before proceeding to the subsequent parts of the scenario. The candidate is allowed to take notes while the inspector is reading the scenario. Inspectors will provide paper for the candidate to take notes. The candidate will be directed by the inspector which sections are allowed for note taking. No study materials or personal/outside notes are allowed at any time during the On Site Exam. The candidate may also write his/her responses on the note that the inspector provides, but the candidate **must verbally state his/her answers in order to receive credit.** The inspector will repeat the scenario at the candidate's request.

When stating answers, the candidate should state all the actions that are required to take. Be as specific as possible and do not assume that actions were taken by others. Candidates should explain their actions from the beginning to the very end. The inspector may ask the candidate to restate and/or explain the answers. The candidate must inform the inspector when he/she is satisfied with the answers have provided and are finished stating the answers. **The candidate must return the notes to the inspector when the scenario is completed.**

The candidate will also be directed to practically demonstrate how the Fire Command Center operates and how to operate an elevator in Firefighter service mode.

During the Fire Safety Director On Site examination, the candidate will be required to activate the building's fire alarm system (visual signals and audible tones). **If the building's management prohibits the candidate from activating the building's fire alarm system, the exam will be terminated.** The failure will be designated to be a building failure and will not count as a failing score pertaining to the candidate, but the On-Site exam fee will be charged. The candidate will also be required to demonstrate Phase 1 and Phase 2 Elevator Operation (Firefighter Service). **If the building's management prohibits the candidate from demonstrating Phase 1 and Phase 2 Elevator Operation (Firefighter Service), the exam will be terminated.** The failure will be designated to be a building failure and will not count as a failing score pertaining to the candidate, but the On-Site exam fee will be charged. The candidate is required to secure the appropriate approvals from the building's management before the inspector arrives to administer the exam.

The candidate must instruct building employees who are posted at or near the Fire Command Center to remain silent while he/she is answering questions or demonstrating how to operate the building's fire alarm panel. If any other person answers questions that he/she required to answer, instructs him/her to on how to operate the fire alarm panel or interferes with the exam in any manner, the candidate will NOT receive credit for those questions.

The Fire Safety Director is responsible for the training of the fire safety staff. The staff includes floor wardens, deputies & searchers, brigade members and building evacuation supervisors where required. The candidate is required to demonstrate their ability to train a staff member as part of the on site test. The training knowledge demonstration requires the candidate to verbalize all the building specific information, which the staff member needs to know, in order to perform their role. During this test segment, the candidate must assume that the inspector is a new employee. This new employee does not have any knowledge of the building. The candidate can only show his/her training knowledge verbally during the On Site Test, the candidate must describe any required information specifically and clearly.

Below are two examples; the first is an example of a poorly executed training segment. The second is a properly executed training segment.

For this example we will assume that the staff member being trained must be taught information about the elevator(s) location and floors served.

▪ Bad example: NO CREDIT

*“I will show you where the elevator lobby is located and which floors each elevator serves”* the candidate said.

▪ Good example: CREDIT

*“You need to know the location of the elevator lobby. It is located on the right hand side of the front entrance reception desk. The first two elevators serve from the ground floor to the roof and the last elevator serves from basement to the 7<sup>th</sup> floor.”* the candidate said.

In general, 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 Scenario

(5) On Site Exam Grading

Different weightings are assigned for different questions. For example, there are Mandatory and Important questions throughout the On Site Exam. **All candidates must receive a score of 70% and pass all mandatory life safety questions.** If the candidate **does not state a Mandatory response or two important responses, the candidate will NOT receive a passing score.**

The Mandatory questions are building specific questions. Important questions are generic questions. Generic Important questions are the tasks or actions that must be explained as part of the answer to a question or scenario. A building specific Mandatory question is where a practical demonstration will be required.

**The inspectors only record the candidate's VERBAL answers but do not grade the exams.**

The onsite exam will be graded by a third party unit at the FDNY. If you feel the examiner(s) did not provide a fair environment or opportunity, you may file a complaint by email. We assure that all complaints will be kept confidential.

Your complaints and/or concerns regarding the on site exam must be:

- received by email **within 24 hours of your on site Exam**
- address your complaints to **pubcert@fdny.nyc.gov**
- subject line of **FSD Onsite Complaint**
- In the body of the email please include
  1. Your full name
  2. Your Social Security number
  3. The date the on site Exam occurred
  4. Describe the specific issue in details

The grading processing may take from **four (4) to six (6) weeks**. **The exam results will be mailed to the candidate's home address stated on the A-20 application filled out during the onsite exam. If the candidate fails, the failure notices will also be mailed to Building Managers.**

*(6) The Consequence of Failing the On Site Exam*

If the candidate fails the examination, the examination fee will not be refunded. Applicants will be permitted to take two (2) On Site Exams, however, applications for a second On Site Exam must be filed within the one (1) year valid period of the Certification of Completion. Candidates failing their first On Site examination will no longer be permitted to perform as Acting FSD. There is a thirty (30) day waiting period between the first and the second On Site exams. The FSD On Site Exam appointments made by the applications whose Certificate of Completion is going to expired may be expedited.

If the candidate does not pass the examination after the second attempt (even the candidate that holds a valid F-58/F-25 Certificate of Fitness for another building), the candidate will be required to begin the application process from the beginning by retaking the 20-hour Fire Safety Director course and retaking the Z-50 Certificate of Fitness computer based examination.

If the candidate is seeking to be certified in an additional building and fail the On Site Exam because he/she missed two or more important responses during the exam, the candidate will be required to take and pass a written Remedial Fire Safety Director Exam (R-58) before being permitted to schedule another On Site Exam. Failure to pass the R-58 exam or ignoring the R-58 notice will result in a suspension of the Fire Safety Director and/or Emergency Action Plan Director. See the examination notice of F-58 for further information.

However, if the candidate is not holding any valid Fire Safety Director Certificate of Fitness, missing two or more important responses would **ONLY** cause him/her failing the Fire Safety Director ON Site Exam. He/she is **NOT** required to take the R-58 Exam.

**TOPICS COVERED IN THE FIRE SAFETY DIRECTOR ON SITE EXAM**

**A. 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. Select qualified building employees to serve as Floor Wardens and organize, train and supervise such Floor Wardens.
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 Fire Safety Director 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) Immediately notify the Fire Department or ensure that the Fire Department has been notified of any fire or fire alarms.
  - (b) Manning of the Fire Command Center.
  - (c) Direction of evacuating procedures in the Fire Safety Plan.

Once a fire alarm activates, the Fire Safety Director 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 contact the Floor Fire Warden(s) to investigate the cause of the alarm in a timely manner (Note: only office buildings are required to have floor fire wardens). The Fire Safety Director must also send the Fire Brigade to assist with the investigation and evacuation. The Fire Safety Director must inform all the building's occupants of the alarm (by making an "all call announcement") and notify the affected floors; the fire (alarm) floor, floor above and floor below of the alarm (if applicable).

The Fire Safety Director must be in constant communication with the Fire Brigade and Floor Warden(s) and direct the evacuation or relocation of the people on the fire floor and floor above (and floor below if appropriate) to at least three floors below the effected floor(s). If the fire alarm has activated on the fourth floor or a floor below the fourth floor, the occupants of those floors must be relocated to a designated assembly area outside of the building.

To prevent additional danger to building occupant, the Fire Safety Director 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 Fire Safety Director must prepare for the arrival of the Fire Department, by ensuring that the lobby and/or building entrance is kept clear. Employees and visitors should be directed to leave the building or relocated to wait in another area of the building. The Fire Safety Director should also arrange for a fire brigade member to remain on the floor below of the fire (if safe) to provide information to the responding firefighters. A building engineer should also be contacted and be available to assist the Fire Department.

Upon the Fire Department's arrival, the Fire Safety Director 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 Fire Safety Director must report the location of the fire smoke condition, or alarm activation to the FDNY and tell them the number and the type of device(s) that activated and the nature of the alarm (if known). The FDNY will also look for any other relevant notifications/ information in regards to the fire/smoke. Fire Safety Director must record the source/ the location of all fire related information provided and inform the FDNY the information such as: Did anyone call to report the fire? Did anyone see the fire/smoke?

The FDNY also be informed of the status of the stairways, the evacuation status, elevator status, HVAC system status, and the status of any fire protection impairments that are in the building. The Fire Safety Director must also inform them of any situations in the building that might need their attention or affect their ability to respond to the situation. Theses situation include but are not limited to trapped occupants, a large number of additional people in the building, disabled person, injured occupants, etc...

When informing the FDNY of the status of the stairways, the Fire Safety Director is telling them which stairways, if any, are being used for an evacuation and the Fire Safety Director is also telling them which stairway(s) contain the standpipe. When informing them of the evacuation status, the Fire Safety Director is telling them the evacuation route and where the occupants have

been relocated to. When informing them of the elevator status, the Fire Safety Director is telling them if the elevators have recalled properly. When informing them of the HVAC status, the Fire Safety Director is telling them if the heating, air conditioning, and ventilation systems have been shut off. If there is any impairment to the building's fire protection systems, the Fire Safety Director must alert the FDNY to them. Such impairments include but are not limited to situations where the sprinkler, standpipe or fire alarm systems are out of service.

The Fire Safety Director will be instructed by the Fire Department firefighting personnel to silence the alarm. The Fire Safety Director should provide the Fire Department with a copy of the building's fire safety plan, building floor plans, master keys, elevator keys, and BIC card. 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. The Fire Safety Director must ensure that a record of the incident has been properly logged in the fire alarm logbook or that there is a printed log of the incident from the Fire Command Center.

**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 actions below represent what needs to be done when an alarm is activated or notification of a fire/smoke condition/alarm condition. Failure to state these types of actions outlined below may cause a **failure. The bullets below are purposely not the exact wording for the correct** response, but are "IMPORTANT" indications for the categories that have been deemed critical. The correct response terminology/language which will be expected during the exam can be found in the text of the study guide.

- Know the location that you will conduct your business from
- Check the alarm activation and other devices
- Communication with fire safety staff
- Ensure that the first responders have been alerted
- Confirm the elevator status
- Conduct movement of occupants on necessary floors
- Ensure communication with appropriate floors
- Ensure communication with all building occupants
- Know how to reset the fire alarm system

## **B. 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. In the event of a major building impairment, you must know the procedures available for safeguarding the building occupants. This is an important concept that could result in failure if not stated.

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

The Fire Safety Director 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 Fire Safety Director on duty will be assigned to be the Impairment Coordinator. When assigned as the Impairment Coordinator, the Fire Safety Director will carry out 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 effected 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 an office building or hotel. You must also tell them the area of the building that is effected 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 qualified people holding a Certificates of Fitness for Fire Guard (F-01). 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.

**Exception:**

For the initial 4 hours of an out of service condition when the effected area does not exceed 50,000 square feet, the impairment coordinator or a trained and knowledgeable person who is capable of performing fire watch duties and is designated by the building owner shall immediately perform the duties of the fire watch. After 4 hours of an out of service condition, such patrols shall only be conducted by fire guards holding the Certificate of Fitness.

The number of fire guards generally depends on the location and the size of the area affected by the out of service fire protection system. A fire guard should be available to patrol all areas in which the fire protection system is out of service at least once every hour. No individual fire

guard should patrol more than **50,000 square feet** of building floor area. To meet this standard, it may be necessary that more than one fire guard be designated.

The recommended coverage for performing fire watch in affected area(s) is summarized in the table below.

Area	The initial <b>4 hours</b>	Planned or Unplanned > 4 hours
≤ 50,000 ft <sup>2</sup>	A F-01*Certificate of Fitness holder or an Impairment coordinator or a trained and knowledgeable person	One F-01 Certificate of Fitness holder
> 50,000 ft <sup>2</sup>	One F-01 Certificate of Fitness holder per 50,000 square feet	

- Note: F-32 (Fire Guard for Shopping Center) or F-36 (Fire Guard Generic) or F-91 (Hotels/Motels/Office Buildings) certificate of fitness holders are also allowed to perform fire watch as F-01. However, F-32, F-36 and F-91 are premises related Certificate of Fitness, the holders are only allowed to perform their duties on the addressed shown on their Certificate of Fitness cards.

The fire guard should be maintained continuously, 24 hours a day, until such systems are restored to good working order. In some cases, Fire Department personnel may be on scene and provide additional direction on the number of required fire guards or other fire protection measures that may be required until such time as the fire protection system is restored to good working order.

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 effected area(s), and to the building’s management or owner.

**C. 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. In new office occupancies, fire drills must be conducted every 3 months for the first 2 years after the Certificate of Occupancy is issued. In existing office occupancies, fire drills are required to be conducted every six months. In all hotels (new and existing), fire drills must be conducted at least once every three months on each shift.

**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.
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 center.
  - 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 (i.e. by armband, vest, or other attire).
  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.

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.

#### **D. 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.

The following actions are building related Mandatory and must be performed correctly during the examination. Inability to perform any of these actions will result in a failure:

- Placing the fire alarm system on and off line.
- Making a P.A. announcement throughout the building, in the stairway(s), on individual floors, and acknowledging the signal at the fire alarm panel.
- Communicating with Fire Wardens or the Fire Brigade via floor phones or other two-way voice communication.
- Manually activate the fire alarm tone on the floor(s) (if applicable)
- Silencing the fire tones throughout the building.
- Resetting the Fire Command Center.

**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.

According to NFPA 72, the visual inspection of an unmonitored (e.g. not monitored by a central station) Fire Command Center must be conducted by a Fire Safety Director at a minimum of a **weekly basis**. The visual inspection of a monitored (e.g. monitored by a central station) Fire Command Center may be conducted by a Fire Safety Director **annually**. Although **daily visual inspection of the fire command center has been the industrial practice and highly recommended by the Fire Department**.

The fire alarm control panel and fire alarm devices (such as fuses, interfaced equipment, lamps and LEDs, and Primary (main) power supply, etc) should be visually inspected for indicated abnormal conditions by the C of F holder. The purpose of the visual inspection is to detect defective components or abnormalities. The visual inspection shall be made to ensure that there are no changes that affect equipment performance.

Testing of the Fire Command Center shall be conducted by a S-97/S-98 Certificate of Fitness holder, and it should be performed in accordance with the schedules in NFPA 72 or more frequently where required by the Fire Department.

**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. Every Fire Command Center must have a central station connection that transmits an alarm to the central station. This connection is used to test the system with the central station to make sure that they are receiving alarms from the building. When the central station connection is manually activated during a fire or emergency, the alarm will be transmitted to the central station company. The central station

connection must be tested monthly to verify that it is operational. If your system is in service and online, the central station company should also be automatically alerted to alarms in your building as soon as the fire command center activates.

## **E. Phase 1 and Phase 2 Elevator Operation (Firefighter Service)**

### **Keys, Key Access and Elevators In Readiness**

*Citywide Standard Key* is a key of special or controlled design, also known as a “2642” key, approved by the commissioner which serves to operate elevator emergency recall and emergency in-service operation service switches and other devices or locks as required by the construction codes, including the Building Code, this code or the rules.

It shall be unlawful to possess a citywide standard key except for persons authorized to possess such key in connection with the following purposes:

1. Owners of buildings equipped with firefighter service elevators, or their authorized representatives, including FLS directors and FEP coordinators.
2. Elevator contractors.
3. Elevator inspectors of the Department of Buildings.
4. Persons authorized to conduct testing and other maintenance or servicing of fire alarm systems.
5. Authorized department personnel.
6. New York City police officers and other approved law enforcement personnel.
7. Building owners required to have key boxes, locked boxes or locked gates or barriers pursuant to this code, or their authorized representatives.
8. Building owners with locked gates and barriers that block required fire department and fire apparatus access.
9. Locksmiths or other authorized key suppliers when in connection with their lawful business operations.

Citywide-standard keys shall be able to operate the firefighter service elevator key switches and shall be allowed to provide access to

- (1) key boxes,
- (2) gates and barriers, and
- (3) other locked areas, boxes or cabinets

to which the department requires access for firefighting operations.

#### (1) Key boxes

A key box is a secure device with a lock operable only by a citywide standard key or other approved key. Where access to or within a building, structure or premises is restricted because of locked doors or other building openings, or where immediate access would be needed for lifesaving or firefighting purposes in the event of a fire or other emergency, the department may require that keys be kept in a key box installed in an approved location. The owner shall ensure that the key kept in the lock box is replaced whenever a lock securing the area, box or cabinet is changed or rekeyed.

(2) Gate and barriers

Wherever a gate or similar barrier obstructs fire department access or fire apparatus access to a premises, and a lock is installed on such gate or barrier, the lock shall be of an approved type and operable by a citywide standard key.

(3) First responder box

The department may require that a locked box operable by a citywide standard key be provided in a designated area in a building, structure or premises to store plans, building information cards or other materials that will assist firefighting personnel responding to a fire or other emergency at the premises.

***Fire department standard key*** is a key of special or controlled design, also known as a “1620” key, for the use of department personnel and others specifically authorized by the commissioner, which serves to operate all switches, locks and other devices required to be operable by a citywide standard key. **It shall be unlawful to possess a fire department standard key, except for authorized department personnel and other approved persons.**

**Elevators in readiness.** Elevators in every building 75 feet 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 in height having elevators with Phase I emergency recall operation and Phase II emergency in-car operation.

**Phase I Emergency Recall & Phase II Emergency In-Car 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. All elevators equipped with Phase I emergency recall operation and Phase II emergency in-car 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 operation shall be subjected, at least monthly, to a Phase I recall test. All elevators with Phase II emergency in-car operation shall be subjected, at least monthly, to a minimum of a one-floor operation II test.

As a Fire Safety Director, you must be fully capable of

- (1) utilizing phase I emergency elevator recall,
- (2) utilizing phase II emergency in-car operation including the following:
  - a. closing the elevator door,
  - b. canceling the floor selection, and
  - c. opening the door utilizing the built-in safety feature.
- (3) Communication from the Fire Command Center
  - a. acknowledging the call from the occupants in the elevator
  - b. initiating communication with occupants inside the elevator.

**F. General Training Requirements**

FSP staff shall be trained in the performance of their duties in accordance with the fire safety and evacuation plan.

FSP staff shall receive initial training in the contents of the fire safety and evacuation plan upon commencement of their authority and duties in the building. Such staff shall participate in training sessions designed to familiarize them with their duties pursuant to the plan in accordance with the frequency set forth in table below. A written record of such staff training shall be maintained in a bound log book with consecutive numbered pages, or other form of approved recordkeeping, and maintained on the premises for a period of 3 years and made available for inspection by department representatives. An entry shall be made in such log book for each training session conducted.

**FSP STAFF TRAINING DRILLS**

<b>OCCUPANCY OR BUILDING TYPE</b>	<b>REFRESHER TRAINING DURATION AND FREQUENCY</b>
Group A	1 hour quarterly
Group I-1	30 minutes every 2 months
Group I-2	Monthly in accordance with Section 406.2.1
Group R-1	1 hour quarterly on each shift
Buildings with a fire alarm system with communication as set forth in FC Section 404.2.1(9)	1 hour quarterly
All other occupancies or building types	1 hour annually

**G. Effective Training for Floor Wardens**

The fire safety director is responsible for training floor wardens. Each floor must have at least one floor warden, a deputy floor warden and at least two searchers.

Floor Wardens must undergo initial training on their duties and responsibilities and refresher training once a year. They must be told where the manual pull stations are located and be instructed in how to activate them should the need arise. Floor wardens must be trained to report to the floor warden phone when an alarm activates on their floor, the floor above and the floor below (where appropriate). They must call the Fire Safety Director who should be at the Fire Command Center and inform him/her of the conditions on the floor and if there is smoke and/or fire.

The floor wardens must know the building’s means of egress and the evacuation procedures. They must direct the evacuation of the occupants of their floor during a fire. They must know how many exits are on the floor and how to determine if it is safe to enter the stairway. Instruct all building occupants of floors that are in alarm to evacuate or relocate to another safe area at least three (3) floors below their present location. Identify the stairwell(s) or other routes of egress for their use and direct them to use only those stairwell(s) or routes of egress. Instruct building occupants to

close office doors and stairwell doors. The Floor warden must re-contact the Fire Safety Director and inform him/her of their location.

## **H. 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, the Fire Safety Director 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. If the door is hot or smoke is visible, the Fire Brigade Members should not attempt to enter that area/space.
- (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) Fire Brigade Members must also know where the building's manual pull stations are located.

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 or relocation to another safe area at least three (3) floors below their present location 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 effected 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.

**I. Company Certificates**

A certificate issued by the commissioner to a person engaged in the businesses listed below, for which such certificate is required by the Fire Code or the Fire Rules or the Construction Codes.

The Fire Department issues the following Company Certificates:

<b>Company Certificates</b>	<b>Fire Code Section</b>	<b>Corresponding Individual's Certificate of Fitness</b>
Central Station Certificate of Operation	FC 901.6.3.5	Certificate of Fitness for Operator of Central Station Signaling Systems (F-40)
Commercial Cooking Exhaust System Servicing Company Certificate	FC 901.6.3.3	Certificate of Fitness for Commercial Kitchen Exhaust System Cleaning Technician (F-64/W-64)
Fumigation and Thermal Insecticidal Fogging Operation Company Certificate	FC 1701.4.1	Certificate of Fitness for Fumigation and Insecticidal Fogging (W-97)
Portable Fire Extinguisher Servicing Company Certificate	FC 901.6.3.1	Certificate of Fitness for Full Service Shop (W-96) and Sales (S-96) of Portable Fire Extinguishers
Smoke Detector Maintenance Company Certificate	FC 901.6.3.1	Certificate of Fitness for Inspection, Cleaning & Testing of Smoke Detectors (S-78 / F-78) Certificate of Fitness for Fire Alarm Systems Inspection, Testing & Service Technician (S-97/S-98)

Individuals who has the required Certificate of Fitness may not be qualified to perform such work if he/she is not employed by an approved FDNY company. When the approved company certificate expires, and if the company does not renew its certification, the person working for the company will no longer be able to perform the work.

The approved company lists are updated at the beginning of every month on the following FDNY website:

[http://www.nyc.gov/html/fdny/html/units/fire\\_prevention/certified\\_companies.shtml](http://www.nyc.gov/html/fdny/html/units/fire_prevention/certified_companies.shtml)

In order to verify whether the company is one of the current FDNY approved companies, the Fire Safety Director or the responsible person could check the list mentioned above or request a copy of the FDNY's company approval letter and verify that the approval expiration date and insurance expiration date are post the current date.

*I-(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.

*I-(2). 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 (F-64/W-64). 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.

*I-(3). 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 shall be conducted by or under the personal supervision of a person holding a Certificate of Fitness (W-97). 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 effected 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.

*I-(4). 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(W-96/S-96).

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 (W-96/S-96), 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.

*I-(5). 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 (S-78/F-78) or a certificate of fitness for fire alarm systems inspection, testing and service technician (S-98/S-97). 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. Smoke detectors must be cleaned every 6 months and maintained annually.

## **J. 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 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 (F-64/W-64). 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.

## **K. 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 (G-60).

The responsible person for the hot work area shall maintain "pre-hot work check" reports. These pre-hot work check 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 for torch operation (F-60) 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 guard(s) for torch operation (F-60 Certificate of Fitness holder(s)) 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.

## **L. 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.

## **M. 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.

## **N. 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.

#### **O. 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.

**Fire Alarm System:** Any system, including any interconnected fire alarm sub-system, of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal-initiating devices.

Any installation, alteration, testing and repair of the primary fire protection system shall be ONLY conducted by the authorized technicians mentioned as follows.

##### **(A) Standpipe System**

The installation, alteration, testing and repair of the standpipe system, including any maintenance or modification of the system, shall be performed by a person possessing two licenses: (1) a Master Fire Suppression Piping Contractor license issued by the New York City Department of Buildings ; (2) Certificate of Fitness for City Wide Standpipe System (S-13) issued by FDNY and trained and knowledgeable in the installation, operation and maintenance of the specific system.

The technician who is Master Plumber and also holds the FDNY S-13 Certificate of Fitness are allowed to inspect, test, maintain and repair/replace the standpipe systems that are NOT combined with sprinkler systems only.

**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 holding a S-13 Certificate of Fitness 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.

### **(B) Sprinkler System**

The installation, alteration, testing and repair of the sprinkler system, including any maintenance or modification of the system, shall be performed by a person possessing two licenses: (1) a Master Fire Suppression Piping Contractor license issued by the New York City Department of Buildings ; (2) Certificate of Fitness for Citywide Sprinkler System (S-12) issued by FDNY and trained and knowledgeable in the installation, operation and maintenance of the specific system.

The technician who is Master Plumber and also holds the FDNY S-12 Certificate of Fitness are allowed to inspect, test, maintain and repair/replace the sprinkler systems for the residential occupancies with 30 sprinkler heads or less without booster pump.

**Hydrostatic Pressure and Flow Tests** - Once every 5 years, the sprinkler 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 holding a S-12 Certificate of Fitness 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.

### **(C) Fire Alarm System**

The programming, inspecting, testing and servicing of fire alarm systems shall only be performed by S-97/S-98 Certification of Fitness holders. F-58 (FSD) Certificate of Fitness holders are **ONLY** allowed to perform the visual inspections, the monthly manual fire alarm activation test and maintain the log book.

An S-97/S-98 Certificate of Fitness holder must be present at any FDNY Fire Alarm System test and inspection. The holder must make an entry in the premises log book, including the holder's name, Certificate of Fitness number, employer, as well as record the purpose of the visit and its official outcome.

The FDNY certifies individuals in different aspects of fire alarm maintenance. There are 3 Certificate of Fitness categories S-78 / F-78 (Smoke Detector Maintenance), F-58 (FSD) and S-97/S-98 (Fire Alarm Systems Inspection, Testing and Service Technician). The scope for each of the Certificates is different, and it is critical to know the limitations of each. Holders of the S-97/S-

98 may perform the responsibilities of holders of the S-78/F-78 Certificate of Fitness; however, S-78/F-78 holders cannot perform all of the functions of an S-97/S-98 holder (see the chart below).

<b>Duties can be performed by C of F Holders</b>		<b>May be performed by</b>		
		<b>S-78/F-78</b>	<b>F-58</b>	<b>S-97/S-98*</b>
<b>1.</b>	Smoke detectors must be visually inspected	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>2.</b>	Smoke detectors must be inspected, tested and cleaned or maintained at least every six month	<b>Yes</b>	<b>NO</b>	<b>Yes</b>
<b>3.</b>	Program, service, clean, test, repair and/or replace low voltage fire alarm system components	<b>NO</b>	<b>NO</b>	<b>Yes</b>

\*Note: Unexpired and valid T-97 Certificate of Fitness can also perform the same duties of S-97/S-98 Certificate of Fitness

### **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.

**References:**

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