



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



**LSB STANDARD 07, Rev 03
HIGH-RISE FIRE SAFETY PLANS**

SUPERSEDES: LSB Standard 07, approved by the Fire Chief on 5.23.03

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LIFE SAFETY BUREAU (LSB) STANDARDS ARE ESTABLISHED IN ACCORDANCE WITH PROVISIONS OF THE CITY OF HOUSTON FIRE CODE. THEY ARE SUBJECT TO THE ADMINISTRATIVE SECTIONS COVERING – ALTERNATIVE MATERIALS AND METHODS, MODIFICATIONS, AND BOARD OF APPEALS.

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**LSB STANDARD 07, rev. 03
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SECTION 7.1 --- GENERAL

7.1.1 Scope.

This standard shall apply to all high-rise buildings as defined by the *Building Code* and located within the City of Houston.

7.1.2 Purpose.

This standard shall provide guidance for all owners, managers and occupants of high-rise office/mercantile buildings, high-rise condominiums/apartments/dormitories, and high-rise hotels in the event of a fire emergency by applying all applicable provisions of the City of Houston *Fire Code* and *Building Code*, and this standard.

SECTION 7.2 --- DEFINITIONS

7.2.1 High-rise Building.

High-rise buildings are buildings having floors used for human occupancy located more than 75 feet above grade.

7.2.2 Fire Safety Team.

A Fire Safety Team is hereby defined as the Fire Safety Director, Assistant Directors, the Building Emergency Response Personnel (BERP), and such other persons specified in the approved plan. The members of the Fire Safety Team shall possess a certificate signed by the Fire Marshal (Fire Marshal). The training required for a certificate shall include organizing and training to conduct fire drills, fire safety and related activities. Such training shall be approved by the Fire Marshal and may include a written test and demonstrations of individual proficiency. Certification training shall be done by persons, institutions, or companies approved by the Fire Marshal. Certificates shall be valid for a period of five (5) years from the date of successful completion of training.

7.2.3 Fire Safety Director.

The Fire Safety Director is a representative of the owner of a high-rise building who is mandated by the Fire Marshal to implement the Fire Safety Plan by providing information and proper training to staff, tenants, residents and guests, as defined herein. The Director is responsible for directing the Fire Safety Plan during and after a fire emergency.

7.2.4 Fire Warden.

The Fire Warden is a dependable and responsible representative of a tenant in a high-rise office building who will direct the fire safety of occupants on their floor.

7.2.5 Building Emergency Response Personnel (BERP).

Building Emergency Response Personnel are representatives of the building owner or management who are responsible for fire prevention, and who will assist the occupants and fire department in the event of a fire.

7.2.6 Occupants.

Occupants include management, staff, tenants, residents, guest, or visitors.

7.2.7 Tenants.

Tenants are lessees or occupants in a high-rise office / mercantile building.

7.2.8 Resident.

A resident is an occupant of a high-rise condominium / apartment / dormitory building.

7.2.9 Guest.

A guest is an occupant of a high-rise hotel room.

SECTION 7.3 --- SUBMITTING AND IMPLEMENTING A PLAN

7.3.1 Process of receiving plan.

The process to receive an approved Fire Safety Plan consists of the three following essential training elements conducted by persons, institutions or companies approved by the Code Official according to regulations established by the Code Official:

Consultation with building management, and Building Emergency Response Personnel (BERP),

Certification training for Fire Wardens; and

A fire drill supervised by persons, institutions or companies approved by the Code Official

7.3.2 Possession of Fire Safety Plan.

The owner, management or designated representative of a high-rise building (office, mercantile, condominium, apartment, dormitories or hotel) shall possess and maintain a Fire Safety Plan approved by the Code Official according to regulations established by the Code Official.

7.3.3 Plan contents.

The emergency plan should include the following:

1. Identify the person or persons responsible for maintenance of facilities and personnel required by the plan.
2. Identify the responsible person designated as the "Fire Safety Director" and their duties.
3. List of sufficient alternates shall be provided for each Fire Safety Director and Assistant Directors.
4. Provide approved procedures for reporting fires and / or fire alarms.

5. Instructions on the Fire Alarm system operations.
6. Procedures for fire safety.
7. Identify the building's fire safety features.
8. Maps with means of egress. A means of egress comprises the vertical and horizontal ways of travel to a public way.
9. The maps shall also indicate those stairwell doors through which under emergency conditions re-entry may be made into the corridor.
10. The locations of any of the following components will be required on the maps:
 - a. Fire Alarm Pull Stations
 - b. Fire Extinguishers and Fire Hose Cabinets
 - c. Elevator Lobbies
 - d. Fire Depository Box
 - e. Emergency Generator
 - f. Fire Alarm Annunciator Panel
 - g. Fire Extinguishing Systems
 - h. Smoke Removal Controls
 - i. Public Address System Panels
 - j. Two-way Communications means
 - k. Fire Command or Central Control Room
 - l. Elevator Fire Service Recall Location
 - m. Stairwell Identification
 - n. Air handlers, Mechanical and Electrical service rooms
 - o. Other Emergency Control or Indicating Systems

SECTION 7.4 --- DUTIES AND RESPONSIBILITIES

7.4.1 Fire Safety Director.

7.4.1.1 Maintain records.

Maintain current Fire Safety Team training records. Records shall be made available to the Code Official upon request.

7.4.1.2 Notify Acting Safety Director.

Notify an on-site management representative, who shall be the Acting Fire Safety Director and shall be capable of directing fire safety, as provided for in the Fire Safety Plan, when the Fire Safety Director is not on duty in the building. The training and

related activities of the Acting Fire Safety Director shall be under the direction of the Fire Safety Director. Such activities shall be subject to fire department control.

7.4.1.3 Distribute plans (Office / Mercantile Buildings).

Distribute the applicable parts of the approved Fire Safety Plan to all tenants, fire wardens and building management or contract employees.

7.4.1.4 Distribute plans (Condominiums / Apartments / Dormitories).

Distribute the applicable parts of the approved Fire Safety Plan to all building management or contracted employees and residents.

7.4.1.5 Distribute plans (Hotels).

Distribute the applicable parts of the approved Fire Safety Plan to all building management or contracted employees.

7.4.1.6 Conduct Fire Drills.

Be familiar with the approved Fire Safety Plan and conduct a fire drill at least every six (6) months. The Code Official, upon survey of conditions, may require additional drills. A written record of such drills shall be kept on the premises and shall be readily available for fire department inspection.

7.4.1.7 Select Building Emergency Response Personnel (BERP).

Select, organize, train and supervise qualified BERP, and be responsible for their availability and state of readiness.

7.4.1.8 Implement training program (Office / Mercantile Buildings).

Implement an approved training program to provide fire prevention and emergency procedures for, but not limited to, the following person(s): building maintenance personnel, security personnel, custodial personnel, and such other specialized personnel the Code Official deems applicable to each building. Ensure that each employee is familiar with the Fire Safety Plan, the location of exits, and the location and activation of fire alarm pull stations.

7.4.1.9 Implement training program (Condominiums / Apartments / Dormitories).

Implement an approved training program to provide fire prevention and emergency procedures for, but not limited to, the following person(s): the concierge, housekeeping, kitchen personnel, laundry personnel, doorman, building maintenance personnel, security personnel, custodial personnel, and such other specialized personnel the Code Official deems applicable to each building. Ensure that each employee be familiar with the Fire Safety Plan, the location of exits and the location and operation of fire alarm pull stations and any applicable manually operated fire extinguishing systems.

7.4.1.10 Implement training program (Hotels).

Implement an approved training program to provide fire prevention and emergency procedures for, but not limited to, the following person(s): the MOD, PBX operators, housekeeping, kitchen personnel, laundry personnel, doorman, building maintenance personnel, security personnel, custodial personnel, and such other specialized personnel the Code Official deems applicable to each building. Ensure that each

employee be familiar with the Fire Safety Plan, the location of exits and the location and operation of fire alarm pull stations and any applicable manually operated fire extinguishing systems.

7.4.1.11 Fire Depository Box (FDB).

Be responsible for installation and maintenance of the FDB and its contents. See LSB Standard 06, "Fire Depository Boxes".

7.4.1.12 Fire safety Assistance List (Hotels).

Maintain a current guest Fire safety Assistance List at the front desk and **update it daily**.

7.4.1.13 Assist the Code Official.

Provide facilities and assistance as needed by the Code Official to obtain approval for the Fire Safety Plan.

7.4.1.14 Ensure method of reporting fires (Office / Mercantile Buildings)

The building manager or owner of a high-rise office or mercantile building, who has employed or contracted with an answering service, shall provide instructions to the answering service to call "9-1-1" when a fire, the smell of smoke, or a fire alarm is reported to them. Answering services outside of the local City of Houston / Harris County "9-1-1" service area shall call the Houston Fire Department Office of Emergency Communications emergency telephone number (713-884-3143). Answering services shall instruct the caller to dial "9-1-1" to report the conditions as well.

7.4.1.15 Ensure method of reporting fires (Condominiums/Apartments/Dormitories).

Ensure that all employees and the off-site alarm monitoring companies, if applicable, are properly trained in methods of reporting fires and / or fire alarms to the Fire Department whenever there is a fire of any size and / or fire alarm of any nature.

7.4.1.16 Ensure method of reporting fires (Hotels).

Ensure that all employees, the PBX operators and the off-site alarm monitoring companies, if applicable, are properly trained in methods of reporting fires and / or fire alarms to the Fire Department whenever there is a fire of any size and / or fire alarm of any nature.

7.4.1.17 Individuals neglecting responsibilities (Office / Mercantile Buildings).

Notify the tenant when any employee of the tenant or individual is neglecting their responsibilities contained in the Fire Safety Plan. If the tenant fails to correct the condition, the owner or person in charge of the building shall notify the Code Official.

7.4.1.18 Individuals neglecting responsibilities (Condominiums/Apartments/Dormitories).

Be responsible for employees performing their responsibilities and duties contained in the Fire Safety Plan.

7.4.1.19 Individuals neglecting responsibilities (Hotels).

Notify the general manager when any employee or individual is neglecting their responsibilities contained in the Fire Safety Plan. If the general manager fails to correct the condition, the Fire Safety Director shall notify the Code Official.

7.4.1.20 Fire and Life-Safety systems.

Understand the purpose and operation of all fire and life-safety systems located in the building under the control of the building owner or manager.

7.4.1.21 Duties in the event of a fire or fire alarm.

In event of a fire or fire alarm the Fire Safety Director shall:

1. Ensure that the fire department has been notified immediately whenever there is a fire of any size and / or fire alarm of any nature.

a) Have someone knowledgeable of the building meet the fire department upon their arrival.

b) Advise the fire department in the operation of the fire command station.

c) Report any known conditions on the fire floor or alarm floor to the fire department upon their arrival.

2. Ensure that all elevators serving the floor of incident are removed from service from the general public and made available to the BERP (if so trained and authorized) and the Fire Department. Specific instructions will depend on the individual building. The specific instructions for each building shall be incorporated in the building's Fire Safety Plan.

3. Direct fire safety procedures utilizing the public address system, if available.

a) Be familiar with the location of all exits / stairwells and select the safest exit/stairwell to use for fire safety on the basis of the location of the fire and any information available. If affected by smoke, an alternate exit/stairwell shall be selected.

b) The priority floors for immediate fire safety are the fire floor, one floor above and one floor below the fire.

c) Fire safety from other floors shall be instituted when conditions indicate such action or when instructed by the fire department or the Fire Safety Director. Fire safety should be via uncontaminated stairwells.

d) Relocation to three (3) or more levels below the fire floor is generally adequate.

e) Mobility-Impaired occupants may require special assistance in the event of an fire safety. Occupants not requiring assistance should

evacuate first. This avoids the possibility of persons in need of assistance being bumped and / or falling down, thus slowing fire safety and / or causing injury. If there is evidence of fire, the person(s) having mobility impairments should be positioned near the fire exit / stairwell that is located farthest away from the fire. If fire conditions pose a personal threat, the fire warden or person assisting should enter into the fire exit stairwell with the person(s) needing special assistance and wait for the Fire Department. If fire conditions pose a personal threat in the stairwell, the mobility-impaired person(s) should be evacuated to a safe location. Fire Wardens shall have someone notify the fire department the location of all mobility-impaired occupants that have required special assistance in evacuating the affected areas of their location.

7.4.2 Fire Wardens (High-rise Office Buildings only)

7.4.2.1 Each floor of a building.

Each floor of a building shall be under the direction of the Fire Wardens for the fire safety of occupants in the event of a fire or fire alarm.

7.4.2.2 Familiar with Fire Safety Plan and systems.

Each Fire Warden shall be familiar with the Fire Safety Plan, the location of exits and the location and how to activate the fire alarm.

7.4.2.3 Duties in the event of a fire or fire alarm.

In the event of a fire or fire alarm the Fire Warden, **when it can be done safely**, shall:

1. Notify the fire department as specified in the approved Fire Safety Plan.
2. Shall see that all occupants are notified of the fire or fire alarm, and shall instruct occupants as per the Fire Safety Plan.
3. Direct the fire safety of the floor in accordance with directions received and the following guidelines:
 - a) The Fire Warden shall select the nearest fire exit stairwell to use for fire safety on the basis of the location of the fire and any information received. If it is affected by smoke, an alternate fire exit stairwell shall be selected.
 - b) The priority floors for immediate fire safety are the fire floor, one floor above and one floor below the fire. In the event of a fire alarm, minimum fire safety response is to prepare to evacuate by relocating occupants to the nearest fire exit stairwell door. Fire safety from other floors shall be instituted when conditions indicate such action or when instructed by the fire department or the Fire Safety Director. Fire safety should be via uncontaminated stairwells.
 - c) Relocation to three (3) or more levels below the fire floor is generally adequate.

d) Fire Wardens on the fire floor shall, as soon as practical, notify the Fire Safety Director of the conditions.

e) Fire Wardens shall notify the Fire Safety Director of all mobility-impaired occupants that may require special assistance in the event of a fire safety. Occupants not requiring assistance will evacuate first. This avoids the possibility of the person(s) in need of assistance being bumped and / or falling down, thus slowing fire safety and / or causing injury. If there is evidence of fire, the person(s) having mobility impairment should be positioned near the fire exit stairwell that is located farthest away from the fire. If fire conditions pose a personal threat, the Fire Warden or person assisting should enter into the fire exit stairwell with the person(s) needing special assistance and wait for the Fire Department. If fire conditions pose a personal threat in the stairwell, the mobility-impaired person(s) should be evacuated to a safe location.

Fire Wardens shall have someone notify the fire department of the location of all mobility-impaired occupants that have required special assistance in evacuating the affected areas of their location.

7.4.3 Building Emergency Response Personnel (BERP).

7.4.3.1 Training.

Shall be trained in accordance with regulations established by the Code Official.

7.4.3.2 Duties.

Duties and responsibilities shall be in accordance with regulations established by the Code Official.

7.4.3.3 Fire and life-safety.

Shall be familiar with the Fire Safety Plan, the location of exits and the location and operation of all available fire alarm systems.

7.4.4 Tenants (High-rise Office Buildings only).

7.4.4.1 Complying with approved Fire Safety Plan.

Each tenant shall be required to comply with the approved Fire Safety Plan.

7.4.4.2 Availability of Fire Wardens.

All tenants, upon request of the owner, management or designated representative, shall make responsible and dependable employees available for Fire Warden certification training towards approval and implementation of the Fire Safety Plan.

1. A Fire Warden shall be provided for each tenancy per floor. When the floor area of a tenancy exceeds 7,500 square feet of occupiable space, a Warden shall be assigned for each such 7,500 square feet or part thereof.

2. Each floor of a building shall have a minimum of two (2) Fire Wardens.

7.4.4.3 Distribution of Fire Safety Plan.

The applicable parts of the approved Fire Safety Plan shall be distributed by the tenants to all their employees.

7.4.4.4 Occupants needing special assistance.

Advise the Fire Safety Director of any occupants that may need special assistance in fire safety so that the Mobility Impaired List can be updated in the Fire Depository Box (FDB).

7.4.4.5 Drill Participation.

When fire drills are conducted, all persons who are subject to the fire drill shall participate in the drill.

SECTION 7.5 --- FIRE DRILLS

7.5.1 Frequency.

A fire drill shall be conducted at least every six (6) months.

7.5.2 Notification.

All occupants shall be notified prior to the fire drill.

7.5.3 Participants.

When fire drills are conducted, all persons who are subject to the fire drill shall participate in the drill.

7.5.4 Additional fire drills.

The Code Official, upon survey of conditions, may require additional drills.

7.5.5 Fire Drill records.

A written record of such drills shall be kept on the premises and shall be readily available for Code Official's inspection.

REFERENCES

1. City of Houston *Fire Code*, International Fire Code, 2000 edition, as amended.
2. City of Houston *Building Code*, all editions.
3. Life Safety Bureau (LSB) Standard 08, "Fire Drills"
4. Life Safety-Bureau (LSB) Standard 18, "High-Rise Fire Safety Plan Approval"
5. "Building Emergency Response Personnel – Elevators and the Use of Elevators to Investigate Fire Alarms" Procedures, LSB Rev. Mar 2003
6. Houston Fire Department LSB, HIGH-RISE APARTMENT / CONDOMINIUM FIRE SAFETY PLAN, Rev. 3/03
7. Houston Fire Department LSB, HIGH-RISE HOTEL FIRE SAFETY PLAN, Rev. 3/03
8. Houston Fire Department LSB, HIGH-RISE OFFICE BUILDING FIRE SAFETY PLAN, Rev. 3/03