FIRE SAFETY PLAN

_____

(Building/Business Name)

_____

(Building Address)

Prepared By:_____

Date: _____

FSCO Name : _____

Signature: _____

Date: _____

Submission Procedures

One copy of the fire safety plan must be submitted to the Fire Prevention Branch for review.

Fire Prevention Branch:

10425 106 Avenue NW
Edmonton AB T5H 0P5
Phone: 780.496.3628 Email:
fireprevention@edmonton.ca

Table of Contents

INTRODUCTION

The purpose of these guidelines is to assist building owners and managers to prepare effective and properly documented Fire Safety Plans. Fire Safety Plans contain measures to:

i) Control fire hazards in a building
ii) Ensure a safe and orderly evacuation of a building in case of fire
iii) Assure effective utilization of fire protection systems and equipment in a building

The Fire Safety Plan shall be kept in the building for review by all supervisory staff and Fire and Protective Services personnel.

During a formal fire inspection, a Fire Safety Plan is subject to review by the Fire Department to ensure that all required provisions of the National Fire Code (AE) have been met.

The fire safety plan shall be reviewed at intervals not greater than 12 months to ensure that it takes account of changes in the use and other characteristics of the building.

This official document is always to be kept readily available for use by the fire department, supervisory staff and other personnel. The fire safety plan shall be located at the main entrance if the building or facility has dangerous goods, flammable liquid stored or handled, hazardous processing or operation, or if the building is classified as a high rise.

GENERAL INFORMATION

1) A copy of the fire emergency procedures and other duties for supervisory staff, as laid down in the Fire Safety Plan, shall be distributed to all supervisory staff.

2) The Fire Safety Plan should only deal with matters which pertain specifically to the particular building.

3) The National Fire Code - Alberta Edition (referred to as Fire Code) requires that a Fire Safety Plan be provided for:

a) every building containing an assembly or a care or detention occupancy,
b) every building required by the National Building Code - AE to have a fire alarm system,
c) demolition and construction sites regulated under the Fire Code,
d) indoor and outdoor storage areas regulated under the Fire Code,
e) areas where flammable liquids or combustible liquids are stored or handled, including refineries and process plants,
f) areas where hazardous processes or operations occur.

4) The fire safety plan shall include:

a) the emergency procedures to be used in case of fire including
    i) sounding the fire alarm,
    ii) notifying the Emergency response services,
    iii) instructing occupants on procedures to be followed when the fire alarm sounds,
    iv) evacuating occupants, including special provisions for persons requiring assistance
    v) confining, controlling and extinguishing the fire,
b) the appointment and organization of designated supervisory staff to carry out fire safety duties,
c) the training of supervisory staff and other occupants in their responsibilities for fire safety,
d) documents, including diagrams, showing the type, location and operation of the building fire emergency systems,
e) the holding of fire drills,
f) the control of fire hazards in the building,
g) the inspection and maintenance of building facilities provided for the safety of occupants, and
h) additional requirements for High-Rise Buildings as indicated under Step 9.

Part 3
Audit of Building Resources Checklist

Occupancy Type _____

Occupant Load
Occupant Load: (if applicable) _____

Access

Designated Fire Route: ☐No ☐Yes

Nearest Municipal Hydrant Location: _____

Private Hydrants: ☐No ☐Yes (Location(s)): _____

FD Lockbox: ☐No ☐Yes (Location(s)): _____

Heating ☐Natural Gas ☐Electric ☐ Other _____

Main Gas Shut-off: ☐No ☐ Yes (Location(s)): _____

Main Electrical Shut-off Location: Main Domestic _____

Water Shut-off Location: _____

Single/Two Stage Fire Alarm System:
Make: _____
Model: _____
Main Panel Location: Annunciator: _____
Panel Location: Fire Alarm Description: _____
Monitoring Company: _____

Sprinkler System: ☐No ☐Yes Type: ☐ Wet ☐ Dry ☐ Other _____

Connected to the Fire Alarm System: ☐No ☐Yes

Location of Sprinkler Room/Shut Off Valves: _____

Standpipe System : ☐ No ☐ Yes

Location of Shutoff/Isolation Valves: _____

Fire Department Connection: ☐ No ☐ Yes (Location(s)): _____

_____

Fire Pump: ☐ No ☐ Yes (Location(s): _____

Fire Pump Description: _____

_____

Fixed Extinguishing System for Commercial Cooking Equipment

☐ No ☐ Yes Type: _____

(i.e. Wet Chemical, Dry Chemical, CO^2)

Connected to F/A System: ☐ No ☐ Yes

Ecology Unit: ☐ No ☐ Yes Protected by Fixed System: ☐ No ☐ Yes

Fuel Source: ☐ Natural Gas ☐ Electric ☐ Other _____

Fuel Shut Off for Appliances: Location: _____

40BC Extinguisher: Location: _____

K Type (wet) Extinguisher (if applicable): Location: _____

Other Extinguishing Systems:

Type(i.e. pre-action, sprinkler, halon, inergen, dry chemical): Area/Location Protecting

_____ _____

_____ _____

_____ _____

_____ _____

Portable Fire Extinguishers: (Refer to schematic drawings)

Emergency Lighting

☐ No ☐ Yes Location(s): _____

_____

Emergency Power

☐ No ☐ Yes ☐ Battery ☐ Generator

Generator

☐ Diesel ☐ Natural Gas

Fuel Supply Location: _____

Transfer Switch Location: _____

Equipment Powered By Generator: _____

_____

_____

_____

☐ No ☐ Yes (manual release switch location) _____

Proper Signage (Example – no parking signs, fire lane signage, no storage, emergency procedures, 911 signage at manual pull stations)

☐ No ☐ Yes

Location(s) throughout building: _____

_____

_____

_____

Extra Hazardous Area:

Is there hazardous materials on site? ☐ No ☐ Yes

If YES, please list the material and quantity:

_____

_____

_____

_____

Exits: Refer to schematics for location of exits.

Elevators:

Automatic Recall ☐ No ☐ Yes

Manual Recall ☐ No ☐ Yes

Manual Recall Switch(s) ☐ No ☐ Yes Location: _____

Total Number of Elevators: _____

Total Number of FF Elevators: _____

FF Elevator Location: _____

Floors Served by FF Elevator: _____

Location of recall/operating keys: _____

Operating Instructions: _____

_____

_____

_____

Part 2(a)
Additional Information

For any additional information not already covered:

FLOOR PLANS AND EVACUATION DIAGRAMS

The following list provides an example of the types of plans typically required as part of your plan submission. Please make note that two separate types of plans are required.

EVACUATION DIAGRAMS

What are they?
Evacuation Diagrams are typical diagrams that provide instructions to occupants & visitors to your building highlighting exit facilities and other fire safety provisions for their use. They should include an orientation tool "You Are Here" as well as directional arrows leading to all exits. "Approved" diagrams are then permanently affixed to the wall near elevators and exits. A copy also needs to be provided to the residents and or occupants as part of their fire safety instructions.

What part of the building must be shown?
Site plans, basements, parking garages, and floor plans of all levels including typical floors, penthouses, mezzanines and partial floor levels, roof plans, building sections may also be necessary. Unit layouts are required for business and commercial buildings but optional for apartment suites.

What symbols must be shown?
Typical symbols used include: pull stations, designated exits, portable fire extinguishers and fire hose cabinets, and other symbols as practical.

FIRE SAFETY PRE-INCIDENT PLAN DIAGRAMS

What are they?
Fire Safety Pre-Incident Plan Diagrams provide greater detail to your building managers and firefighters to aid them in the locations and identity of fire safety features, provisions and hazards for firefighting, etc. The "reviewed" Fire Safety Plan and Fire Safety Pre-Incident Plan diagrams are then added into the fire safety plan template below.

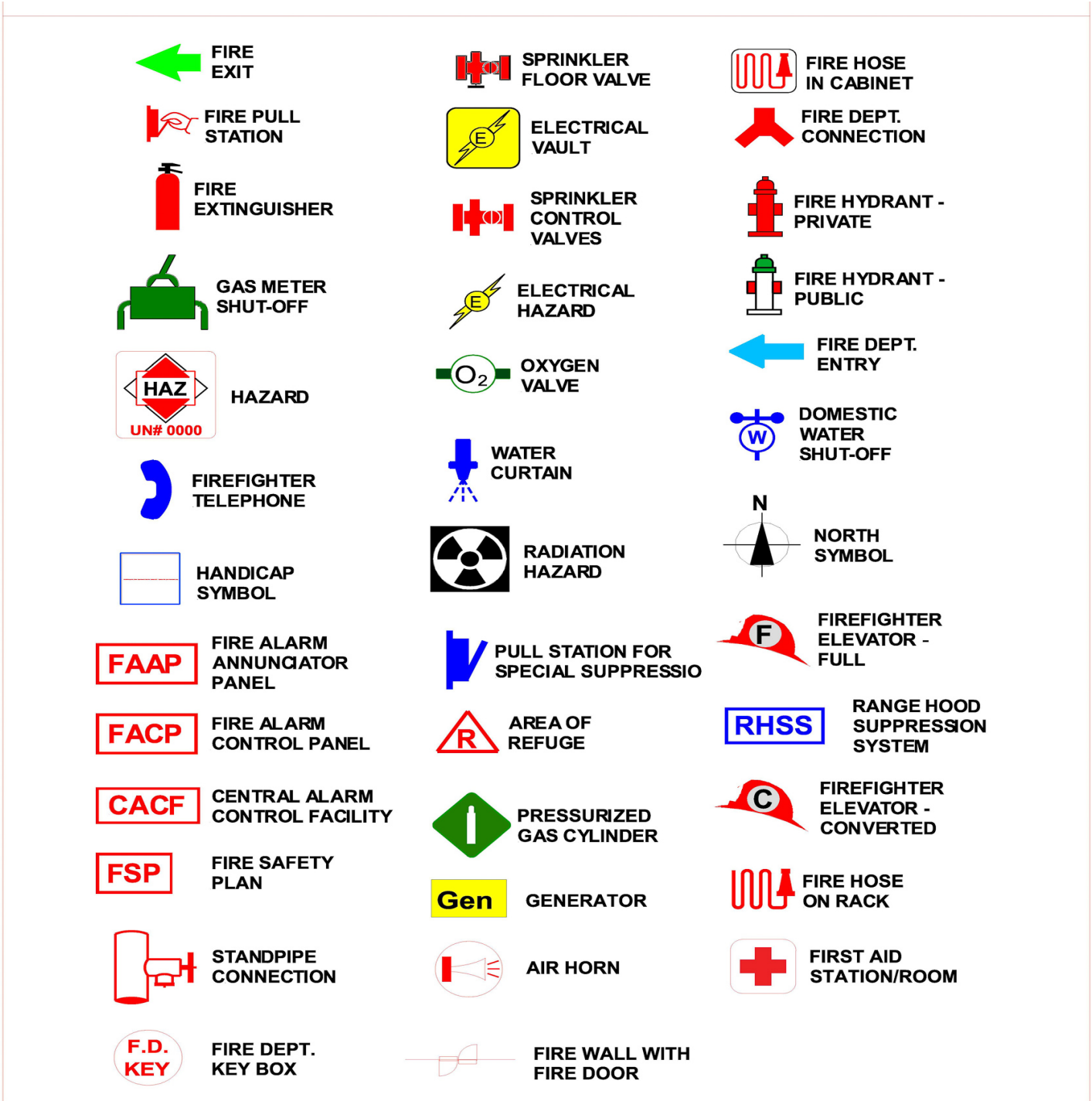
What part of the building must be shown?
Site plans, basements, parking garages, and floor plans of all levels including typical floors, penthouses, mezzanines and partial floor levels, roof plans, building sections may also be necessary.

Additional Plans?
Fire alarm zone diagrams, fire protection zone and valve diagrams are necessary.

Consultation with Fire Prevention prior to the creation of plans is recommended.

Part 11 Building Schematics

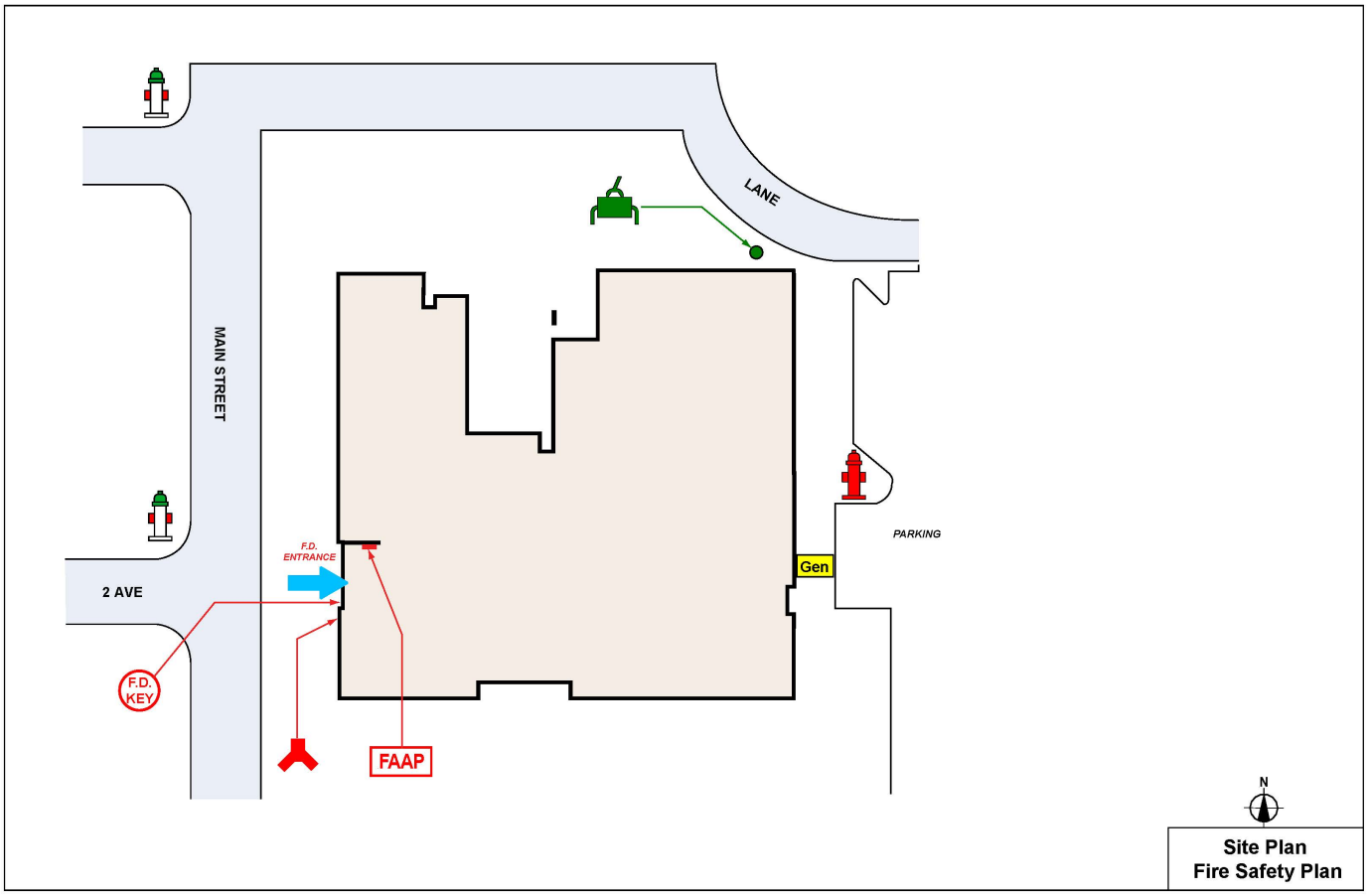
Fire department symbols for fire safety plan



Site Plan

☐ **Please attach Site Plan to email or send via postal mail. (Include legend)**

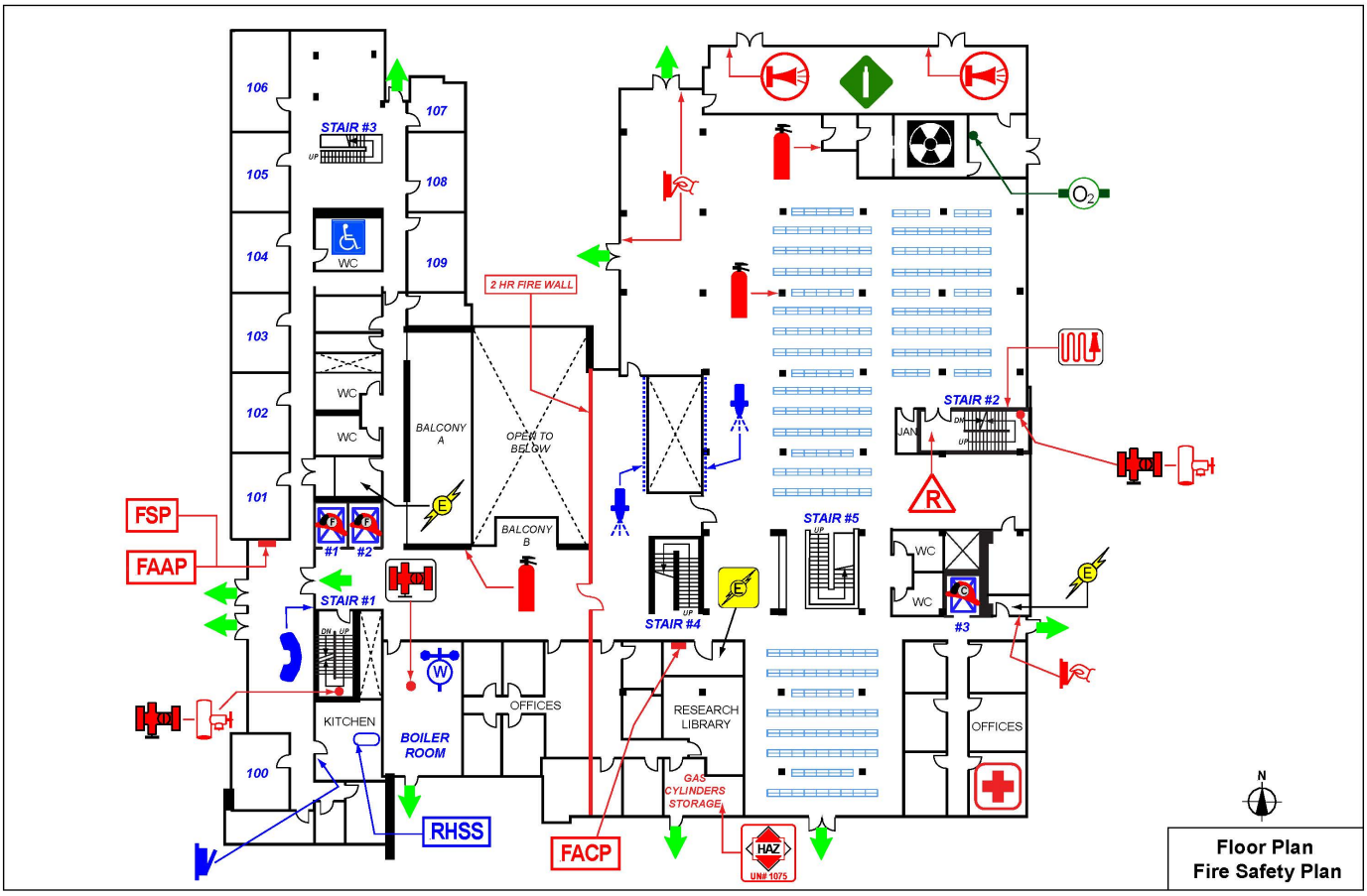
(Example only. Provide full plans in this section)



Floor Plan
Please attach Floor Plan to email or send via postal mail.

Use Fire Departments "Emergency Planning Diagrams" requirements

(Example only. Provide full plans in this section)



Part 5
Audit of Human Resources

Business/Building Name: _____

Address: _____ Unit No. _____

Postal Code: _____ Business Phone No. _____ Business Owner: _____

Address: _____

Postal Code: _____

Phone Number(s): _____

After Hour Contacts (24 hour telephone numbers): _____

Manager/Supervisor: _____ Phone No. _____

Employee/Title: _____ Phone No. _____

Employee/Title: _____ Phone No. _____

Other: _____ Phone No. _____

Building Owner: _____

Address: _____

Postal Code: _____ Phone No. _____

Fire Alarm Monitoring Company: _____ Phone No.: _____

Sprinkler Monitoring Company: _____ Phone No.: _____

Part 6 IDENTIFYING RESPONSIBILITIES

Responsibilities of Owner

1) To ensure the building and facilities comply with the provisions of the National Fire Code -Alberta Edition.

2) To prepare a Fire Safety Plan in accordance with requirements of the National Fire Code -Alberta Edition.

3) To provide alternative measures for the safety of occupants during a shutdown of the fire protection equipment.

4) To post and maintain a copy of the fire emergency evacuation procedures on each floor area

Responsibilities of supervisory staff

The size of an organization and the number of personnel required to carry out the requirements of the Fire Safety Plan will depend on the size of the building, specific hazards, and the fire safety equipment provided. This may require designation of supervisory staff who must be instructed in the fire emergency procedures before they are given any responsibility for fire safety. Any keys or special devices needed to operate the fire alarm system or provide access to any fire protection systems or life safety equipment shall be readily available to on-duty supervisory staff. The Fire Safety Plan must also specify the names and phone numbers of the key holders in case access to the building is required after business hours.

Supervisory Staff Shall:

1) **be trained in the fire emergency procedures described in the Fire Safety Plan before they are given any responsibility for fire safety.**

2) **be in charge of the approved Fire Safety Plan and the specific responsibilities of the personnel. (Your plan should specify the responsibilities given to individuals**

3) **designate and train sufficient assistants to act in positions whenever and wherever an absence may occur,**

4) **educate and train all building personnel and occupants in the use of the existing fire safety equipment, and in the actions to be taken according to the approved fire safety plan,**

5) **ensure that the provisions of the approved Fire Safety Plan are adhered to, updated and maintained at minimum, annually. Any fire safety procedures which apply to them shall be distributed to the occupants.**

6) **ensure that procedures are put in place in the event that a fire protection system is temporarily shutdown, i.e. "Fire Watch" person, notify fire dispatch ,etc. In the event of any shutdown of fire protection equipment or part thereof, the EFRS and the building occupants must be notified and instructions must be posted as to alternate provisions or actions to be taken in case of an emergency.**

7) These provisions and actions must be acceptable to the Edmonton Fire Rescue Service. An attempt tominimize the impact of the malfunctioning equipment must be indicated (e.g. whole portions of a sprinkler, fire alarm or standpipe system is placed out of service, service to remaining portions must be maintained) and where necessary, the use of watchmen, bull horns, walkie- talkies, etc. Should be employed to notify concerned parties of emergency procedures. Directions for specific situations may be sought from the Edmonton Fire Rescue Service, Fire Prevention Branch. In all cases when a fire alarm system is out of service, fire watch patrols must be implimented immediatly. Fire watch patrols may also be required in the event of a shutdown of other fire protection systems. Notify the Fire Prevention Branch when a fire protection system goes"out of service" as well as when a fire protection system has been repaired and restored "back in service".

Responsibilities of Building Occupants

1) **To be familiar with:**

* the evacuation procedures as outlined in the Fire Safety Plan or as posted in the building,
* the location of fire alarm system manual pull stations and exits,
* the location of fire hose, portable fire extinguishers and other fire protection equipment,
* the correct municipal address of the building.

2) **To avoid hazards in the building by:**

* not permitting the accumulation of combustible materials in and around buildings,
* being aware of dangerous ignition sources, i.e.: combustibles left on stove elements, worn extension cords, oily rags, overheating equipment, careless smoking, careless cooking etc.
* reporting burnt out light bulbs in exit signs,
* reporting fire or exit doors which are inoperable or wedged open,
* ensuring that exit routes, stairwells, etc. are not used for storage or otherwise obstructed
* reporting to management, any fire hose and portable extinguishers or any other fire protection or life safety equipment which are not in good repair and ready for use,
* ensuring that fire lanes are kept clear and accessible for Edmonton Fire Rescue service and Alberta health Service

Part 7 - Designating Responsibility

This section may be copied in full but then you MUST specifically describe the responsibilities for each designated person in your building.

Designate appropriate staff to:

1) Notify Edmonton Fire Rescue Service of the emergency condition i.e.: ensure the fire alarm system has been activated and call 9-1-1 even if the fire alarm system is monitored. When a building's fire alarm system is monitored and an alarm has been activated, an outside contracting agency, typically called a central station, receives the alarm and initiates an emergency response by calling Edmonton Fire Rescue Service and representatives of the building.

2) Sound the fire alarm. These procedures should also include training of authorized personnel for silencing fire alarm and alert signals under specified conditions. If special keys or devices are required to operate the alarm system, they should be readily available to supervisory staff on duty. Such persons should have a working knowledge of the fire alarm system and how it is reset. The procedure laid down for the occupants to follow at the sound of an alarm will vary slightly, depending on the type of fire alarm system with which the building is equipped, i.e.: single stage or two stage system,

3) Instruct occupants on the procedures to be followed when the fire alarm system's audible/visual signalling devices sound/flash and supervise the evacuation of the building occupants. This may be accomplished by training and designating Fire Wardens or other key personnel to perform duties in fire prevention and emergency evacuation. In such a case, your Fire Safety Plan would include a list of the individuals who have been designated as Fire Wardens (or their alternates) along with their respective responsibilities. You may have to designate Fire Wardens and other fire safety responsibilities to different individuals who work during different times of the day.

4) Check areas of the building which may be of concern during an evacuation procedure. This would include areas such as washrooms, storerooms, laundry rooms and so forth.

5) Assist or provide special provisions for the evacuation of disabled persons. Your Fire Safety Plan should specifically state the provisions and procedures to follow. Some occupants of a building may require special assistance during evacuation because cognitive or physical limitations make them unable to proceed independently to a place of safety. Fire safety for these persons will depend to a large extent on preplanning and on their awareness of the fire protection measures incorporated into the building. In some buildings, it may be appropriate to advise such occupants of these provisions by posted notices, handouts or other suitable means. In certain residential occupancies, such as hotels or motels, staff should be aware of rooms occupied by persons requiring special assistance during evacuation and should inform the responding Edmonton Fire Rescue Service of these locations.

6) **Meet Edmonton Fire Rescue Service** to provide access and information to fire fighters.

7) Ensure that the fire alarm system is not silenced until the cause of the alarm is verified and not reset until the Edmonton Fire Rescue Service has responded and the cause of the alarm has been investigated and determined.

8) **Confine, control and extinguish the fire**. For example, in the event that a small fire cannot be extinguished with the use of a portable fire extinguisher or the smoke presents a hazard to the operator, then the door to the area should be closed to confine and contain the fire. Leave the fire area, activate the fire alarm system by pulling the nearest manual pull station, ensure the Edmonton Fire Rescue Service has been notified and wait outside for the firefighters to arrive on the scene.

9) **Conduct fire drills**. The purpose of fire drills is to ensure that the occupants and staff are totally familiar with emergency evacuation procedures, resulting in orderly evacuation with efficient use of exit facilities. Ideally, fire drills should begin with practices on each floor or area. The Voice Communication System should be used where available. Following each drill, all persons of delegated responsibility should attend a debriefing to report on their actions and the reactions of the occupants. Fire drills shall be held at intervals not greater than 12 months for the supervisory staff except as indicated otherwise in this document. A fire safety plan is of little value if it is not reviewed periodically so that all supervisory staff are familiar with their responsibilities. A fire drill, then, is at least a review of the Fire Safety Plan by supervisory staff. The extent to which non-supervisory staff participate in a fire drill should be worked out in cooperation with Edmonton Fire Rescue Service. The decision as to whether all occupants should leave the building during a fire drill will depend on the nature of the occupancy. It may be necessary to hold additional fire drills outside normal working hours for the benefit of employees on afternoon or night shifts who should be as familiar with fire drill procedures as those who work during the day. If full scale fire drills are not possible during non-regular working hours, arrangements should be made so that night-shift supervisory staff can participate in fire drills conducted during the daytime.

10) **Oversee and arrange for the inspection**, testing and maintenance procedures of fire protection equipment and other building systems. Provide records (where required) of all testing procedures for examination by Edmonton Fire Rescue Service.

Responsibility: Notify Edmonton Fire Rescue Service

Manager/Supervisor:_____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Sound the fire alarm

Manager/Supervisor:_____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Instruct occupants

Manager/Supervisor:_____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Check areas

Manager/Supervisor:_____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Assist or provide special provisions

Manager/Supervisor: _____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Meet Edmonton Fire Rescue Manager/

Supervisor: _____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Ensure fire alarm is not silenced until the cause of the alarm is verified and not reset until Edmonton Fire rescue has responded and the cause of the alarm has been investigated and determined

Manager/Supervisor:_____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Confirm, control and extinguish fire.

Manager/Supervisor:_____

Employee/Title: _____

Other: _____

(If applicable use text box to describe building specific instructions)

Responsibility: Conduct fire drills

Manager/Supervisor:_____

Employee/Title: _____

Other: _____

Responsibility: Oversee and arrange for inspection

Manager/Supervisor: _____

Employee/Title: _____

Other: _____

Additional Information

For any information not already covered:

Part 8 - INSTRUCTIONS TO OCCUPANTS ON FIRE PROCEDURES

- Instructions to occupants on fire procedures will vary according to the nature of the occupancy, the hazards involved, the occupant load, the type of fire protection equipment, and so forth.
- Instructions to occupants on fire procedures **must be specific to your building.** This may be determined in co-operation with Edmonton Fire Rescue Service.

In the Event of Discovering a Fire Occupants Will:

- Leave the fire area and take a key.
- Close and latch all doors behind you.
- Activate the fire alarm using a pull station to notify all building occupants.
- Telephone Edmonton Fire Rescue Service, dial **9-1-1** (never assume this has been done!) Know and give the correct address and location of the fire.
- Use exit stairwells to leave the building immediately.
- Do **NOT** use elevators. They may fail to operate if power to the building is lost.
- Do not return until it is declared safe to do so by Edmonton Fire Rescue Service.
- **If you are in a suite and a fire alarm is heard:**
- Before opening the door, feel the door knob for heat. If it's not hot, brace yourself against the door and open it slightly. If you feel air pressure or a hot draft, close the door quickly. If you find no fire or smoke in the corridor, take the room key, close the door behind you and leave by the nearest exit stairwell.
- If you encounter smoke in the corridor or stairwell, consider taking the corridor to the other side of the building where another stairwell may be clear, or return to your suite.
- **If you cannot leave your suite or have returned to it because of fire or heavy smoke, remain in your suite and:**
- Close the door.
- Unlock the door for possible entry by fire fighters.
- Dial **9-1-1** and tell Edmonton Fire Rescue Service where you are; If possible, signal to fire fighters by waving a sheet or towel out a window to attract their attention.
- Seal all cracks where smoke can get in by using wet towels or sheets. Seal mail slots, transoms and central air conditioning outlets if necessary. (A roll of wide, strong masking tape or duct tape is useful.)
- Crouch low to the floor if smoke enters the room. More Oxygen is available near the floor and it is cooler.
- If possible, move to a balcony or most protected room and partially open the window for air (close the window if smoke comes in.)
- Wait to be rescued. Remain calm. Do not panic or jump.
- Listen for instructions or information which may be given by authorized personnel over loudspeakers.

At least one copy of the "Fire Emergency Procedures" shall be ***prominently posted*** on each floor area**.** ***You may choose a sample which follows and post in your building.***

Single Stage Fire Alarm System and No Elevators

IN CASE OF FIRE

UPON DISCOVERY OF FIRE

- Leave the Fire area immediately
- Close and latch all doors behind you
- Activate the fire alarm pull station to notify building occupants
- Leave the building immediately via the nearest exit
- Telephone Edmonton Fire Rescue Service - DIAL 9-1-1

UPON HEARING FIRE ALARM

- LEAVE the BUILDING immediately via nearest exit
- Take your keys
- CLOSE and latch DOORS behind you – do not lock

IF YOU ENCOUNTER HEAVY SMOKE

- STAY in your suite IF you are UNABLE TO EXIT
- DIAL 9-1-1 and await further instructions

REMAIN CALM

WARNING

Tampering with any fire protection systems and equipment is a criminal offence subject to a heavy fine, imprisonment or both.

Single Stage Fire Alarm System *with* Elevators

IN CASE OF FIRE

UPON DISCOVERY OF FIRE

- Leave the Fire area immediately
- Close and latch all doors behind you
- Activate the fire alarm pull station to notify building occupants
- Leave the building immediately via the nearest exit or stairwell exit
- Telephone Edmonton Fire rescue Service – DIAL 9-1-1

DO NOT USE ELEVATORS

UPON HEARING FIRE ALARM

- LEAVE the BUILDING immediately via nearest exit or stairwell exit
- Take your keys
- CLOSE and latch DOORS behind you – do not lock

IF YOU ENCOUNTER HEAVY SMOKE

- Return to or stay in your suite or office if you are unable to leave by an alternate exit.
- DIAL 9-1-1 and await further instructions

REMAIN CALM

WARNING

Tampering with any fire protection systems and equipment is a criminal offence subject to a heavy fine, imprisonment or both.

Two-Stage Fire Alarm System

IN CASE OF FIRE

UPON DISCOVERY OF FIRE

- Leave the Fire area immediately
- Close and latch all doors behind you
- Activate the fire alarm pull station to notify building occupants
- Leave the building immediately via the nearest exit or stairwell exit
- Telephone Edmonton Fire Rescue Service – DIAL 9-1-1

DO NOT USE ELEVATORS

UPON HEARING FIRE ALARM

INTERMITTENT SIGNAL-

- Stand by and prepare to leave the building

IF CONTINUOUS SIGNAL-

- LEAVE the BUILDING immediately via nearest exit or stairwell exit
- Take your keys
- CLOSE and latch DOORS behind you – do not lock

IF YOU ENCOUNTER HEAVY SMOKE

- Return to or stay in your suite or office if you are unable to leave by an alternate exit.
- DIAL 9-1-1 and await further instructions

REMAIN CALM

WARNING

Tampering with any fire protection systems and equipment is a criminal offence subject to a heavy fine, imprisonment or both.

Red lettering on a white background is an effective colour combination for these signs.

Part 9 - ADDITIONAL REQUIREMENTS FOR HIGH RISE BUILDINGS

(Within the scope of the Alberta Building Code)

This applies to a building:

A) of Group A, D, E or F major occupancy classification that is more than
   (i) 36m high, measured between grade and the floor level of the top storey**,** or
   (ii) 18 m high, measured between grade and the floor level of the top storey**,** and in which the cumulative or total occupant load on or above any storey above grade, other than the first storey, divided by 1.8 times the width in metres of all exit stairs at that storey**,** exceeds 300,

B) containing a Group B major occupancy in which the floor level of the highest storey of that major occupancy is more than 18 m above grade**,**

C) containing a floor area or part of a floor area located above the third storey designed or intended as a Group B, Division 2 occupancy, and

D) containing a Group C major occupancy whose floor level is more than 18 m above grade.

Modern high rise buildings contain specialized equipment which is provided by the Alberta Building Code to ensure safety to both occupants and fire fighters in the event of an emergency situation. In addition to fire equipment and life safety systems outlined in previous sections of this document, high rise buildings may contain fire fighter's elevators, smoke control systems or smoke removal systems.

Part 7 of the Alberta Fire Code outlines testing and maintenance requirements when such equipment is installed. It is necessary to establish what equipment is installed and consequently what testing and maintenance procedures are required to ensure code compliance.

In addition to maintenance procedures, the fire safety plan must include specific fire fighting procedures for high rise buildings. These procedures must be prepared jointly by the Edmonton Fire rescue Service and building owner/manager.

The following information is provided to ensure basic code compliance. This information will also assist the owner in understanding how specialized equipment was designed to operate and consequently proper maintenance and testing can be established.

Prior to developing procedures for your building, an audit of specialized equipment must be done.

THE FIRE SAFETY PLAN FOR HIGH BUILDINGS SHALL INCLUDE:

1) **Keys** - Keys for elevators, fire alarm and voice communications systems, locked stair doors, hose cabinets, ventilation systems, etc., must be provided for responding fire fighters. These keys must be located in a readily accessible location, acceptable to the Edmonton Fire Rescue Service. It is recommended that building owners/managers contact the Edmonton Fire Rescue Service regarding placement of required keys.
2) Training of supervisory staff in the use of the voice communication system,
3) Procedures for the use of elevators.

4) **Actions** to be taken by supervisory staff in initiating any smoke control or other fire emergency systems installed in a building in the event of fire until the Edmonton Fire Rescue Service arrives,
5) **Instructions** to the supervisory staff and the Edmonton Fire Rescue Service for the operation of the systems referred to in Sentence 4, and
6) **Procedures** established to facilitate Edmonton Fire Rescue Service access to the building and fire location within the building**.**
7) **A copy** of the Fire Safety Plan shall be kept at the central alarm and control facility.
8) **Fire drills** shall be held at intervals not greater than 2 months.

High Rise Building Information

High Rise Building Information

Part 10 - ADDITIONAL REQUIREMENTS FOR INDUSTRIAL BUILDINGS

Dangerous Goods

- Where dangerous goods are stored or handled, the fire safety plan must include the names, addresses and telephone numbers of persons to be contacted in case of fire during non-operating hours.
- Specify methods to control a fire emergency and to safely and efficiently recover radioactive materials.
- Provide names, addresses and telephone numbers of primary and alternate sources of expert radiation safety advice and assistance as well as the locations of sources of radiation survey instruments.
- Individual storage areas used for the indoor storage of dangerous goods must be clearly identified by posting placards conforming to the *Transportation of Dangerous Goods Regulations.*

Indoor Storage (General Requirements)

- Identify product classifications for each part of a building where different product classifications are stored.
- Identify the method of storage including:
  - Aisle widths for rack storage
  - Maximum permitted storage heights (must be posted with signs).
  - Maximum permitted size of *individual storage areas* (must be posted with signs).
- In buildings with sprinkler systems, identify the sprinkler system design criteria, inside and outside hose allowances, and results of benchmark sprinkler system main drain and water flow tests.
- When stored products include Group A plastics, rubber products, Level 2 or 3 aerosols, or dangerous goods, a record of their location shall be available in a location that is readily accessible to emergency responders.

Outdoor Storage (General Requirements)

- Identify the location and classification of products stored, namely:
  - Class III & IV commodities, group A, B, and C plastics,
  - Rubber tires,
  - Forest products, including lumber, timber and wood pallets,
  - Forest by-products,
  - Manufactured buildings,
  - Wrecked vehicles in salvage yards, and
  - Dangerous goods in packages or containers.
- Identify the method of storage, including the clear spaces required and the maximum permitted size of individual storage areas.
- Identify the location of fire alarm systems and fire fighting equipment.
- Identify the manner in which fire hazards are controlled in and around the outdoor storage area.
- Fire emergency procedures must be prominently posted at the outdoor storage site.

Rooms for Storage Tanks

- Placards identifying stored flammable/combustible liquids and the capacities of the storage tanks must be posted in a conspicuous location outside the room. That information must be included in the Fire Safety Plan.

Hot Works

- Hot Works are activities that involve open flames or the production of heat or sparks, including, without being limited to, cutting, welding, soldering, brazing, grinding, adhesive bonding, thermal spraying and thawing pipes. A Fire Safety Plan must include "hot works" safety measures for the prevention of fires as described in the Fire Code.

Laboratories

- Laboratories must conform to the Fire Safety Plan requirements for Dangerous goods and Indoor Storage as identified above.
- Fire drills must be held at intervals not greater than 3 months.
- Personnel must be trained in the safe handling and use of dangerous goods and at least one person must be:
    - In responsible charge during operating hours,
    - Available to respond to a day-time or night-time emergency,
    - Trained in the correct procedures for the handling, storing and offering for transport, dangerous goods in accordance with all applicable regulations.
- A laboratory must be clearly designated as an area containing dangerous goods.
- Measures must be taken to prevent access by unauthorized persons.

Industrial Building Information

Industrial Building Information

STEP 12 - IDENTIFYING INSPECTION, TESTING AND MAINTENANCE REQUIREMENTS FOR FIRE PROTECTION SYSTEMS AND EQUIPMENT

To assist you in fulfilling your obligations, included is a list of the portions of the Alberta Fire Code which requires checks, inspections and/or tests be made of equipment and facilities from time to time. It is suggested that you read over this list and perform or have performed the necessary checks, inspections and/or tests for the items which may apply to your property.

It is the building owner's responsibility to ensure that fire protection equipment and life safety systems are inspected, tested and maintained in accordance with the requirements of the Alberta Fire Code. The attached schedules have been provided for the building owner's convenience ONLY. For accurate reference, the Alberta Fire Code should be consulted.

Definitions for key words are as follows:

CHECK	-	**Means visual observation to ensure the device or system is in place and is not obviously damaged or obstructed.**
INSPECT	-	**Means physical examination to determine that the device or system will apparently perform in accordance with its intended function.**
TEST	-	**Means operation of device or system to determine that it will perform in accordance with its intended operation or function.**

It is stated in the Alberta Fire Code that records of all tests and corrective measures are required to be retained for a period of two years after they are made.

Select the general requirements and the checklists that apply to the fire protection equipment in your building.

GENERAL REQUIREMENTS

Fire Department Access:

- Ensure streets, yards and private roadways that are provided for Fire Department access, are kept clear at all times.
- Ensure signs prohibiting parking in Fire Department access routes (Fire Lanes) are in place and are legible.
- Ensure access to Fire Department connections for sprinklers and standpipe systems are free from obstructions at all times.
- A lock box containing keys for entrance, the fire alarm panel, and other service rooms is not mandatory but very useful (and encouraged) if there is no supervisory person on-site to meet the Fire Department.

Water Supply Systems:

- Inspect all valves controlling water supplies to fire protection systems to ensure they the valve is wide open and sealed or locked in the open position, or are equipped with supervisory switches.

Laundry Equipment:

- Clean lint traps in laundry equipment after each use.

Carbon Monoxide Detection:

- Carbon Monoxide alarms shall be inspected, tested and maintained as per Manufacturer's instructions.

FIRE PROTECTION SYSTEMS & EQUIPMENT

FIRE ALARM SYSTEM

Daily

Check status of fire alarm a/c power indicator light and trouble indicator light.

Monthly

Test fire alarm system-including supervised and non-supervised systems (a non-supervised system is a fire alarm system without trouble monitoring capability). Testing is to be done on rotational basis if zoned. Test voice communication system to and from floor areas and central alarm and control facility. Inspect standby batteries. Confirm signals to Central Reporting Agency (if provided.) This test is to be conducted in conjunction with the fire alarm test and in direct communication with the appropriate agency.

Annually

Inspect and service all components of the fire alarm system.

Inspect and service all components of the voice communication systems. Inspect and service Central Reporting Agency's transmitting devices. Inspect and test all auxiliary devices connected to a fire alarm system. This may include fans, dampers, door holders, fire shutters, etc. Annual inspections shall be properly documented. Documentation, as per ULC-S536 shall be retained on site for Edmonton Fire Rescue Service examination if requested.

EMERGENCY LIGHTING (UNIT EQUIPMENT)

Monthly

Inspect unit equipment including pilot lights, terminal connections, clamps and batteries.

Test unit equipment.

Annually

Test unit equipment to ensure emergency lighting for duration required to design criteria under simulated power failure conditions.

After completion of annual test, check the charging conditions for voltage and current. The charging recovery period shall be tested to ensure proper function.

PORTABLE FIRE EXTINGUISHERS

Required
Recharge extinguishers after use, as indicated by inspection or when performing maintenance.
Each extinguisher shall have a tag showing maintenance, date, etc.
Monthly
Inspect all portable fire extinguishers.
Annually
Service and tag all portable fire extinguishers.
5 Years
Hydrostatically test carbon dioxide and water type extinguishers.
6 Years
Empty and service stored pressure type extinguishers.
12 Years
Hydrostatically test dry chemical and vaporizing liquid type extinguishers.

EMERGENCY GENERATOR

Monthly
Completely test emergency generator. Test shall simulate failure of normal hydro-electric power supply. Operate generator under at least 30% of rated load capacity for 60 minutes.
Operate transfer switches under load. Inspect for proper operation, including ventilation systems, pumps, coolers and shutters. Monthly test to be logged and data recorded.
Annually
Operate the generator under full load for 2 hours (full load equals nameplate kilo watt rating of generator). Test to be conducted by qualified technician and report to be retained on site. Annual test to be logged and data recorded.

EXITS

As Required
Maintain means of egress, including corridors and stairways free of obstructions and in good repair. Maintain lighting for exits and exit signs when building is occupied.
Monthly
Operate and inspect all doors in fire separations to ensure proper operation. Inspection to include fusible links, hardware and hold open and releasing devices when provided.
Inspect all doors in fire separations to ensure they are closed.

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SPECIAL EXTINGUISHING SYSTEMS

6 Months

Inspection, testing and maintenance procedures shall be conducted for the following systems:

a) Commercial Cooking Equipment (NFPA 96.).
b) Halon 1301 Fire Extinguishing Systems (NFPA 12A.)
c) Water Spray Fixed Systems for Fire Protection (NFPA 15.)
d) Deluge Foam-Water Sprinkler Systems and Foam-Water Spray Systems (NFPA 16.)
e) Dry Chemical Extinguishing Systems (NFPA 17.)
f) Wet Chemical Extinguishing Systems (NFPA 17A.)
g) Wetting Agents (NFPA 18.)

Annually

Inspection, testing and maintenance procedures shall be conducted for the following systems:

a) Low Expansion Foam and Combined Agent Systems (NFPA 11.)
b) Medium and High Expansion Foam Systems (NFPA 11A.)
c) Carbon Dioxide Extinguishing Systems (NFPA 12.)
d) Halon 1211 Fire Extinguishing Systems (NFPA 12B.).

SMOKE ALARMS

Annually

Inspect, test and maintain smoke alarms in conformance with the manufacturer's instructions.
Recommend battery replacement.

10 Years

Recommend replacement of smoke alarms after 10 years or as per manufacturer's instructions.

As Required

Replace "back-up" batteries in hard-wired smoke alarms.

HEATING, VENTILATION, AIR CONDITIONING, DUCTING AND CHIMNEYS:

As Required

Inspect hoods, filters and ducts subject to accumulations of combustible deposits and clean or replace as necessary.

Annually

Inspect fuel fired heating systems including appliances, chimneys and flue pipes.
Operate disconnect switches for mechanical air conditioning and ventilation systems.
Clean and inspect incinerator spark arresters.
Except in one or two-family dwellings, every fuel fired heating system shall be inspected annually by a person acceptable to the Edmonton Fire Rescue Service.

PRIVATE FIRE HYDRANTS

Annually

Flush all private hydrants with main valve and all outlet valves open fully until water runs clear.

SPRINKLER SYSTEMS

ITEM	ACTIVITY	FREQUENCY
Gauges (dry/pre-action/deluge)	Inspection	Weekly/Monthly
Control valves	Inspection	Weekly/Monthly
Alarm devices	Inspection	Quarterly
Gauges (wet systems)	Inspection	Monthly
Hydraulic name plate	Inspection	Quarterly
Buildings	Inspection	Annually (prior to freezing weather)
Hanger/seismic bracing	Inspection	Annually
Pipe and fittings	Inspection	Annually
Sprinklers	Inspection	Annually
Spare sprinklers	Inspection	Annually
Fire department connections	Inspection	Quarterly
Valves (all types)	Inspection	
Alarm devices	Test	Quarterly/Semi-annually
Main drain	Test	Annually
Antifreeze solution	Test	Annually
Gauges	Test	5 years
Sprinklers – extra high temp.	Test	5 years
Sprinklers – fast response	Test	At 20 years and every 10 years thereafter
Sprinklers	Test	At 50 years and every 10 years thereafter
Valves (all types)	Maintenance	Annually or as needed
Obstruction investigation	Maintenance	5 years or as needed
Low point drains (dry system)	Maintenance	Annually prior to freezing and as needed

FIRE PUMPS

ITEM	ACTIVITY	FREQUENCY
Pump house, heating ventilating louvers	Inspection	Weekly
Fire pump system	Inspection	Weekly
Pump operation	---	---
No-flow condition	Test	Weekly
Flow condition	Test	Annually
Hydraulic	Maintenance	Annually
Mechanical transmission	Maintenance	Annually
Electrical system	Maintenance	Varies
Controller, various components	Maintenance	Varies
Motor	Maintenance	Annually
Diesel engine system, various components	**Maintenance**	**Varies**

STANDPIPE AND HOSE SYSTEMS

ITEM	ACTIVITY	FREQUENCY
Control valves	Inspection	Weekly/monthly
Pressure regulating devices	Inspection	Quarterly
Piping	Inspection	Quarterly
Hose connections	Inspection	Quarterly
Cabinet	Inspection	Annually
Hose	Inspection	Annually
Hose storage device	Inspection	Annually
Alarm device	Test	Quarterly
Hose nozzle	Test	Annually
Hose storage device	Test	Annually
Hose	Test	5 years/3years
Pressure control valve	Test	5 years
Pressure reducing valve	Test	5 years
Hydrostatic test	Test	5 years
Flow test	Test	5 years
Main drain test	Test	Annually
Hose connections	Maintenance	Annually
Valves (all types)	Maintenance	Annually/as needed

WATER STORAGE TANKS

ITEM	ACTIVITY	FREQUENCY
Condition of water in tank	Inspection	Monthly/quarterly*
Water temperature	Inspection	Daily/weekly*
Heating system	Inspection	Daily/weekly*
Control valves	Inspection	Weekly/monthly
Water – level	Inspection	Monthly/quarterly
Air pressure	Inspection	Monthly/quarterly
Tank – exterior	Inspection	Quarterly
Support structure	Inspection	Quarterly
Catwalks and ladders	Inspection	Quarterly
Surrounding area	Inspection	Quarterly
Hoops and grillage	Inspection	Annually
Painted/coated surfaces	Inspection	Annually
Expansion joints	Inspection	Annually
Interior	Inspection	5 years/3 years
Check valves	Inspection	5 years
Temperature alarms	Test	Monthly*
High temperature limit switches	Test	Monthly*
Water level alarms	Test	Semiannually
Level indicators	Test	5 years
Pressure gauges	Test	5 years
Water level	Maintenance	--
Drain silt	Maintenance	Semiannually
Control valves	Maintenance	Annually
Embankment – supported coated fabric (ESCF)	Maintenance	--
Check valves	Maintenance	--

*Cold weather

FIRE DAMPERS

Annually

Inspect fire dampers and fire stops to ensure that they are in place and are not obviously damaged or obstructed.

Every 4 Years

Test, inspect, & maintain fire dampers and fire stops one years after installation and every 4 years after, except for hospitals where the frequency shall be every 6 years.

HIGH BUILDINGS

As Required

Check for availability of keys for fire fighters' elevators, fire alarm system and other keys required in fire alarm control facility and box at elevator lobby. Check position of emergency recall key switch (auto position) for emergency recall on elevators. Check for correct position of emergency power key switch on elevators.

3 Months

High Rise Buildings (Central Alarm and Control Facility)

a) Test operation of switches for control of air moving fans.
b) Test operation of all hold open devices (release on fire alarm signal.)
c) Test operation of all electric door releases (release of locking device on fire alarm signal.)
d) Test operation of all pressurization fans (elevators, stairways, vestibules, etc., start on fire alarm signal.)
e) Test operation of all smoke removal fans, dampers, etc. (start/stop, open/close on fire alarm signal.)

High Rise Buildings (Elevators)

a) Test operation of recall key switch outside elevator shaft.
b) Test operation of in-car fire fighters' elevator key switch.
c) All tests shall be in conformance with the Alberta Fire Code.

High Rise Buildings (Venting to Aid Fire Fighting)

a) Test operation of closures into smoke shafts from each floor area.
b) Test operation of closures opening to outdoors at top of smoke shaft.
c) Test operation of controls for air handling systems used for venting floor areas.

Annually

Inspect fire dampers and smoke dampers to ensure they are in place and not obviously damaged, rusted or blocked.

Verify operation of each fire damper and smoke damper and check and lubricate any parts as required.

2 Years

High Rise Buildings (Smoke Control Systems)

Test pressurized vestibules by pressure sensor to ensure movement of air is from vestibules to floor areas.

Test exit door pressures to ensure that force required to open doors does not exceed 133N (30 lb).

Test pressurized elevator shafts, by pressure sensor, to ensure movement of air is from elevator shaft to floor areas.

Test pressurized stair shafts, by pressure sensor, to ensure movement is from stair shaft to floor areas.

Inspect and test smoke control measures in accordance with Section 7.3 of the Alberta Fire Code.

APPENDIX A

Fire Dampers And Fire Stops Inspection & Maintenance Of Information

Fire Dampers are used to prevent transmission of flame where air ducts penetrate fire barriers. They can also be in air transfer openings in walls and partitions. There are two types of fire dampers, static and dynamic. Older HVAC (Heating, ventilation and air conditioning) systems were traditionally designed to automatically shut down in the event of a fire, allowing the fire dampers to close under "static" conditions. Newer "dynamic" smoke control systems require HVAC fans to remain in operation in order to pressurize areas adjacent to a smoke filled area to stop smoke migration above or below a fire floor, in a stairwell for escape, a safe refuge area, or to purge smoke to the outside of a building.

Smoke Dampers are installed in ducts and air transfer openings that are designed to resist the passage of air and smoke. They are installed to operate automatically and controlled by a smoke detection system. They are installed where ducts penetrate through smoke barriers, or at other locations within an engineered smoke control system. They can be used in HVAC systems where the fans are shut down in the event of a fire, and can also be used in smoke control systems designed to operate during a fire incident. They operate against air velocity and fan pressure.

Combination Fire/Smoke Dampers *are used at location that are designated as both fire barriers and smoke barriers to prevent the passage of both flame and smoke.*

The National Building Code (Alberta Edition) requires a tight fitting access door for each fire damper to enable inspection of the damper and resetting of the release device.

The Inspection and servicing of fire dampers are to include:

An inspection at intervals not greater than 12 months as per Fire Code
Access to be provided to allow inspection of each damper
Inspect to ensure there is no obvious damage, no rusting or blockage, verify the operation and check and lubricate any parts as required.





APPENDIX B

Alternative Measures for Occupant Fire Safety

Please review this section (1 page)

If a fire alarm and detection system, or part thereof, is inoperative for more than 2 hours for any reason, the owner shall notify the fire department, and when directed, provide acceptable surveillance within the building continuously until the fire alarm and detection system is restored to operating condition

All attempts to minimize the impact of malfunctioning equipment will be initiated. Where portions of a sprinkler or fire alarm system are placed out of service, service to remaining portions must be maintained, and where necessary, the use of watchmen, bull-horns, portable radios, employed to notify concerned parties of emergencies. Assistance and direction for specific situations will be sought from Fire Department.

Procedures to be followed in the event of shutdown of any part of a fire protection system are as follows:

1) Notify Fire Department, dial (780)496-3628 (DO NOT USE 911). Give your name, address and a description of the problem and when you expect it to be corrected. Fire Department is to be notified in writing of shutdowns longer than 24 hours.
2) Post notices at all exits and the main entrance, stating the problem and when it is expected to be corrected.
3) Maintain fire watch in affected area(s) as per Basic Watchman Service Conditions.
4) Notify Fire Department and the building occupants when repairs have been completed and systems are operational.

Note: All shutdowns will be confined to a limited area **and** duration as possible.

Cooking operations shall be suspended until the commercial cooking fixed extinguishing system is restored.

Work on fire protection systems can only be carried out by qualified persons acceptable to Fire Department. For more information call the Fire Prevention Branch (780) 496-3628

APPENDIX C

Smoke alarm test records

Address								
Suite # (where applicable)								
Date	Location / Suite #	Type of Power Source[1]	Tested (Y / N)	Installation Date	Visual Inspection / Observations	Maintenance Required (Y / N)	Remarks (e.g., Note #)	Tenant Signature
NOTES:								

APPENDIX D

Sample – Emergency Exit Floor Plan