

# CLEARWATER REGIONAL FIRE RESCUE SERVICES



Clearwater Regional Fire Rescue Services

## Building Owner's Responsibilities for Fire Safety Equipment



# Alberta Fire Code Safety Equipment Maintenance Requirements

Clearwater Regional Fire Rescue Services has prepared this pamphlet listing the fire safety equipment maintenance requirements that are found in Division B of the Alberta Fire Code (AFC) (2006) for all existing buildings. For a complete explanation of the maintenance

requirements, the Alberta Fire Code should be consulted. Please contact Clearwater Regional Fire Rescue Services at 403-845-4444 with any questions or concerns.

**Owners failing to comply with maintenance requirements as identified in the Alberta Fire Code may be subject to fines of not more than \$100k and/or imprisonment for a term not exceeding 6 months, as per the Alberta Safety Codes Act Section 68(1).**

## Your responsibilities as identified in the Alberta Fire Code (2006)

**Division C Article 2.2.1.1.** Unless otherwise specified, the owner or the owner's authorized agent shall be responsible for carrying out the provisions of this Code.

**Article 6.1.1.3.** Before tests, repairs or alterations are made to fire protection installations, including sprinkler, standpipe, fire alarm and detection systems, a procedure of notification shall be established and the procedure shall include notifying the fire department and the building occupants where necessary for safety in the event of a fire emergency.

**Division C Article 2.2.1.2.** A written record shall be kept of all tests, inspections, maintenance or operational procedures for a period of two years after they are made, and the record shall be made available upon request to the Authority Having Jurisdiction.

## Definitions

**CHECK** means a 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.

## Definitions (cont'd)

**TEST** means operation of device or system to ensure that it will perform in accordance with its intended function.

**OWNER** means a lessee, a person in charge, a person who has care and control and a person who holds out that the person has the powers and authority of ownership or who, for the time being, exercises the powers and authority of ownership.

**AUTHORITY HAVING JURISDICTION (AHJ)** means a safety codes officer in the fire discipline exercising authority pursuant to designation of power and terms of employment in accordance with the Safety Codes Act.

**SUPERVISORY STAFF** means those occupants of a building who have some delegated responsibility for the fire safety of other occupants under the fire safety plan.

## WATER-BASED FIRE PROTECTION SYSTEMS

Includes sprinkler systems, standpipes, private hydrants, hose systems, water spray fixed systems, foam-water sprinkler systems, foam-water spray systems, and fire pumps.

Daily	AFC Ref #
1. Fire Alarm System – CHECK AC power lamp.	6.3.1.2.
2. Central Alarm and Control Facility – CHECK to ensure that no trouble is indicated.	6.3.1.2.
3. Fire Pump Rooms – CHECK temperature during cold weather.	6.4.1.1.
4. Fire Protection Water Tanks – CHECK tank heating equipment, enclosure and water temperature during heating season in systems without low temperature alarms.	6.4.1.1.
5. Exit Signs – CHECK to ensure they are in clean and legible condition.	2.7.3.1
6. Fire Doors – CHECK doors in fire separation to ensure they remain closed.	2.2.2.4.(1)
7. Exit Lights – CHECK to ensure they are illuminated and in good repair.	2.7.3.1.(2)
8. Torches, Regulators and Welding Equipment – CHECK for leakage or defects.	5.2.2.2.
Weekly	AFC Ref #
1. Fire Pump – CHECK fuel and oil level.	6.4.1.1.
2. Fire Pump – CHECK water level in reservoirs.	6.4.1.1.
3. Fire Pump – INSPECT and operate.	6.4.1.1.
4. Sprinkler System – CHECK that the control valves are open.	6.4.1.1.
5. Dry Pipe Sprinkler System – CHECK pressure gauge to ensure that air pressure is being maintained.	6.4.1.1.
6. Fire Protection Water Tanks – CHECK tank heating equipment, enclosure and water temperature during heating season in systems with low temperature alarms.	6.4.1.1.
7. Emergency Generator System – INSPECT, TEST and MAINTAIN as per Table 2 of CAN/CSA-C282-05 Emergency Electrical Power Supply For Buildings.	6.5.1.1.*
8. Hoods, Filters and Ducts in Ventilation Systems – CHECK for accumulation of combustible deposits and clean as required.	2.6.1.3.

Monthly	AFC Ref #
* These articles require written records. (Division C 2.2.1.2.)	
1. Fire Alarm System – TEST system and check all components on emergency power supply including standby power batteries.	6.3.1.2.*
2. Voice Communication System – TEST the system.	6.3.1.2.*
3. Water Based Fire Protection Systems – INSPECT all control valve tamper switches.	6.4.1.1.
4. Fire Protection Water Tanks – INSPECT the water level in tanks not equipped with supervised water level alarms connected to a constantly attended location.	6.4.1.1.
5. Emergency Generator System - INSPECT, TEST and MAINTAIN as per Table 3 of CAN/CSA-C282-05.	6.5.1.1.*
6. Portable Fire Extinguishers – INSPECT and sign tag.	6.2.1.1.*
7. Exit Doors – TEST all doors forming part of a means of egress to ensure they are operable.	2.7.2.1.
8. Emergency Lighting Systems – INSPECT and TEST batteries, units and lamps.	6.5.1.6.
9. Fire Doors – OPEARATE all doors in fire separations.	2.2.2.4.(3)
10. Fire Alarm Drills – CONDUCT drills for supervisory staff in day care and health care facilities.	2.8.3.2.
Every Three Months	AFC Ref #
* These articles require written records. (Division C 2.2.1.2.)	
1. All Fire Emergency Systems in High Buildings as defined by Subsection 3.2.6. of the Building Code – TEST.	7.2.1.1.*
2. Sprinkler Alarm Devices – INSPECT to verify that they are free of physical damage.	6.4.1.1.
3. Water Based Fire Protection Systems – TEST all system water flow alarm devices.	6.4.1.1.*
4. Water Based Fire Protection Systems – TEST all preaction/deluge valves.	6.4.1.1.*
5. Water Based Fire Protection Systems – TEST all dry pipe valves/quick-opening devices	6.4.1.1.*
6. Fire Department Connections – INSPECT.	6.4.1.1.

# Fire Safety Maintenance Requirements

## Every Three Months (cont'd) AFC Ref #

- 7. Main Drain – TEST the main drain of at least one system downstream of a device that has the sole water supply through a backflow preventer and/or pressure reducing valves 6.4.1.1.\*
- 8. Fire Protection Tanks – INSPECT the water level in tanks equipped with supervised water level alarms that are connected to a constantly attended location. 6.4.1.1.
- 9. CLEAN – hoods, grease removal devices, fans and ducts on commercial equipment used in deep fat cooking, charbroiling or similar cooking operations. 2.6.1.9.\*

## Every Six Months AFC Ref #

- \* These articles require written records. (Division C 2.2.1.2.)
- 1. Fire Protection Systems – TEST supervisory control valves. 6.4.1.1.\*
- 2. Special Fire Suppression Systems – TEST, INSPECT and MAINTAIN systems as per the appropriate NFPA code. 6.6.1.1.
- 3. Commercial Cooking Equipment Suppression System – INSPECT and MAINTAIN. 2.6.1.13.\*
- 4. CLEAN hoods, grease removal devices, fans and ducts on commercial cooking equipment.
- 5. Emergency Generator System – INSPECT, TEST and MAINTAIN as per Table 4 of CAN/CSA-282-05. 6.5.1.1.\*
- 6. Fire Alarm Drills – CONDUCT in schools attended by children, three times in both spring and fall terms. 2.8.3.2.\*
- 7. Fire Alarm Drill – CONDUCT for supervisory staff in all high-rise buildings. 2.8.3.2.\*

## Annually AFC Ref #

- \* These articles require written records. (Division C 2.2.1.2.)
- 1. Fire Alarm System – CONDUCT a test of the system by qualified personnel acceptable to the AHJ. 6.3.1.2.
- 2. Voice Communication System – CONDUCT a test of the system by qualified personnel acceptable to the AHJ. 6.3.1.4.
- 3. Water-Based Fire Protection System – INSPECT, TEST, OPERATE and MAINTAIN components of each system as required by the appropriate NFPA or CAN/ULC document referenced in the AFC. 6.4.1.1.

## Annually (cont'd) AFC Ref #

- 4. Fire Pump – CONDUCT a flow test. 6.4.1.1.
- 5. Water-Based Fire Protection System Riser – TEST the main drain of each riser to determine whether there has been a change in the condition of the water supply piping and control valves. 6.4.1.1.
- 6. Hydrants – INSPECT and flow test all private hydrants. 6.4.1.1.
- 7. Standpipe Hose – INSPECT and re-rack. 6.4.1.1.
- 8. Fire Extinguishers – CONDUCT maintenance procedures by qualified personnel acceptable to the AHJ. 6.2.1.1.
- 9. Electromagnetic Door Locks – TEST to ensure they work properly. 2.7.2.1.\*
- 10. Sliding Doors – TEST sliding doors that are required to swing on their vertical axis in the direction of egress when pressure is applied. 2.7.2.1.\*
- 11. Revolving Doors – TEST safety features. 2.7.2.1.\*
- 12. Mechanical Air Conditioning and Ventilation Systems – OPERATE disconnect switches. 2.6.1.6.
- 13. Fire Dampers and Fire Stop Flaps – INSPECT 2.2.2.4.
- 14. Sprinkler Heads – INSPECT supply of spare sprinkler heads and replace as required. 6.4.1.1.
- 15. Emergency Generator System – INSPECT, TEST and MAINTAIN as per Table 5 of CAN/CSA-282-05. 6.5.1.1.\*
- 16. Chimneys, Flues and Flue Pipes – INSPECT. 2.6.1.4.
- 17. Chimney Spark Arrestors – INSPECT and CLEAN. 2.6.2.3.
- 18. Fire Alarm Drills – CONDUCT for supervisory staff in buildings with fire alarm systems. 2.8.3.2.\*
- 19. Exhaust and make up air system – TEST and MAINTAIN system initiating devices (i.e. carbon monoxide detector) in enclosed parkades. 2.6.1.6\*

# Fire Safety Maintenance Requirements

## Every Two Years AFC Ref #

- 1. Fire Protection Water Tanks – CHECK steel tanks for corrosion. 6.4.1.1.
- 2. Fire Protection Water Tanks – INSPECT all tanks, connected to a non-potable water supply for sediment. 6.4.1.1.
- 3. Pressurization Systems – TEST systems in high buildings as defined by Subsection 3.2.6. of the Building Code. 7.3.2.2.

## Every Three Years AFC Ref #

- 1. Dry Pipe Sprinkler Systems – TEST the dry pipe valve with the control valve fully open and the quick-opening device, if provided, in service. 6.4.1.1.

## Every Five Years AFC Ref #

- \* These articles require written records. (Division C 2.2.1.2.)
- 1. Sprinkler System – TEST extra-high temperature sprinkler heads as per NFPA document. 6.4.1.1.\*
- 2. Standpipe System – Flow TEST systems. 6.4.1.1.\*
- 3. Standpipe System – Hydrostatically TEST system. 6.4.1.1.\*
- 4. Standpipe system – TEST pressure control and pressure reducing valves. 6.4.1.1.\*
- 5. Standpipe System – TEST standpipe hose. 6.4.1.1.\*
- 6. Water Based Fire Protection Systems - TEST all gauges. 6.4.1.1.\*
- 7. Private Hydrant – Flow TEST exposed and underground piping. 6.4.1.1.\*
- 8. Fire Extinguishers – Hydrostatically TEST- carbon dioxide and water type extinguishers 6.2.1.1.\*
- 9. Water Based Fire Protection System – INSPECT fire protection water tank for corrosion. 6.4.1.1.
- 10. Emergency Generator System – INSPECT, TEST, and MAINTAIN as per Table 6 of CAN/CSA-282-05. 6.5.1.1.\*

**NOTE: Whenever a defect or deficiency is discovered in any fire safety equipment as a result of these maintenance requirements, CORRECTIVE ACTION must be taken IMMEDIATELY by the owner or the owner's authorized agent!**

## Every Six Years AFC Ref #

- 1. Fire Extinguishers – REPLACE the extinguishing agent in dry chemical fire extinguishers. 6.2.1.1.

## Every Twelve Years AFC Ref #

- 1. Fire Extinguishers – Hydrostatically TEST dry chemical and vaporizing liquid fire extinguishers. 6.2.1.1.\*

## Every Twenty Years AFC Ref #

- 1. Sprinkler System – TEST fast response sprinkler heads. 6.4.1.1.

## As Required AFC Ref #

- \* These articles require written records. (Division C 2.2.1.2.)
- 1. Fire Department Access – ENSURE streets, yards and private roadways that are provided for fire department access are kept clear. 2.5.1.3.
- 2. Dry Pipe Sprinkler Systems – TEST the dry pipe valve with the control valve fully open and the quick-opening device, if provided, in service. 6.4.1.1.
- 3. Spray Booths – CLEAN residue in walls, ceilings, floors, etc. from spray booths. 5.4.5.2.
- 4. Means of Egress – CHECK exterior passageways and exterior exit stairs and ensure they are maintained free of snow, ice and obstructions. 2.7.1.7.
- 5. Smoke Control Equipment – MAINTAIN equipment in a manner that ensures satisfactory operation. 7.3.1.1.
- 6. Sprinkler System – INSPECT auxiliary drains. 6.4.1.1.
- 7. Fire Doors – CHECK doors in fire separations to ensure they are closed. 2.2.2.4.
- 8. Dust Producing Operations – CLEAN any combustible dust-producing operations. 5.3.1.2.
- 9. Dry-powder Finishing Operations – VACUUM, CLEAN and DUST any dry-powder finishing operations. 5.4.5.2.
- 10. Industrial Ovens – INSPECT clean and maintain all industrial ovens and associated ductwork. 5.4.1.2.
- 11. CHECK lint traps in laundry equipment. 2.4.1.4.

# Emergency Planning

The building owner is responsible for preparing a fire safety plan, acceptable to the Fire Prevention Bureau, and appointing supervisory staff to carry out the same in all public assembly buildings, care or detention buildings, all buildings equipped with a fire alarm, demolition and construction sites, storage areas, areas where flammable liquids or combustible liquids are stored or handled and areas where hazardous processes or operations occur.

Section 2.8 of the Alberta Fire Code must be referred to in order to get the exact regulations as it applies to your building.

## SECTION 2.8

### Subsection 2.8.1. General

**2.8.1.1.** The requirements of this Section apply to every building containing a group A or Group B occupancy, and to every building required by the Building Code to have a fire alarm system.

**2.8.1.2.(1)** Supervisory staff shall be trained in the fire emergency procedures as described in the fire safety plan before they are given any responsibility for fire safety.

**A.2.8.1.2.(1)** ...Except in hospitals and nursing homes, it is not necessary that the supervisory staff be in the building on a continuous basis, but they shall be available to fulfill their obligations as described in the fire safety plan on notification of a fire emergency...

### Subsection 2.8.2. Fire Safety Plan

**2.8.2.1.(1)** A fire safety plan acceptable to the Fire Marshal which includes the following measures shall be prepared in buildings regulated by Article 2.8.1.1.:

- a) the emergency procedures to be used in case of fire including:
  - i) sounding the fire alarm,
  - ii) notifying the fire department,
  - iii) instructing occupants on procedures to be followed when the fire alarm sounds,
  - iv) evacuating occupants, including special provision 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 operations of the building fire emergency systems,
- e) the holding of fire drills,
- f) the control of fire hazards in the building, and
- (g) the inspection and maintenance of building facilities provided for the safety of occupants.

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

**2.8.2.2.(1)** A sufficient number of supervisory staff shall be on duty in care or detention occupancies to perform the tasks outlined in the fire safety plan.

**2.8.2.3.(1)** In Group 1, Division 1 assembly occupancies containing more than 60 occupants, there shall be at least one supervisory staff member on duty in the building to perform the tasks outlined in the fire safety plan whenever the building is open.

**2.8.2.4.(1)** In buildings within the scope of Subsection 3.2.6. of Division B of the Alberta Building Code, the fire safety plan shall, in addition to the requirements of Sentence 2.8.2.1.(1), include:

- a) the training of supervisory staff in the use of the voice communication system,
- b) the procedures for use of elevators,
- c) the action 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 fire department arrives,
- d) the instructions to the supervisory staff and fire department for the operation of the systems referred to in Clause (c), and
- e) the procedures established to facilitate fire department access to the building and fire location within the building.

**2.8.2.5.(1)** The fire safety plan shall be kept in the building for reference by the fire department, supervisory staff and other personnel.

**2.8.2.5.(2)** The fire safety plan for a building within the scope of Subsection 3.2.6. of Division B of the Alberta Building Code 2006 shall be kept at the central alarm and control facility.

**2.8.2.6.(1)** A copy of the fire emergency procedures and other duties for supervisory staff as laid down in the fire safety plan, shall be given to all supervisory staff.

**2.8.2.7.(1)** At least one copy of the fire emergency procedures shall be prominently posted on each floor area.

**Owners failing to comply with maintenance requirements as identified in the Alberta Fire Code may be subject to fines of not more than \$15,000 and/or imprisonment for a term not exceeding 6 months, as per the Alberta Safety Codes Act Section 68(1).**