

Fire Safety Information for You and Your Property

The information provided is intended to outline some of the common building elements which are required to be reviewed when a fire safety inspection is done on a non-residential building.

This listing is not complete and is subject to revision as the codes and standards are revised. In all cases the Manitoba Fire Code will take precedence.

Depending on occupancy use and life safety systems in your building, the following provisions may be applicable to your building.

Definitions:

Combustible Material - a material that, in the form in which it is used and under the conditions anticipated, will ignite, burn, support combustion, or release flammable vapors when subjected to fire or heat. Wood, paper, rubber, and plastics are examples of combustible materials.

Service Room: a room provided in a building to contain the equipment associated with building services. Examples: boiler room, furnace room, incinerator rooms, garbage handling rooms, rooms to accommodate AC or heating appliances, pumps, compressors, and electrical equipment.

Service Space: space provided in a building to facilitat4e or conceal the installation of building service facilities such as cutes, ducts, pipes, shafts, or wires.

Fire Separation: a construction assembly that acts as a barrier against the spread of fire.

Means of Egress: a continuous path of travel provided for the escape of persons from any point in the building or contained open space to a separate building, an open public thoroughfare, or an exterior open space protected from fire exposure from the building and having access to an open public thoroughfare. Includes exits and access to exits.

Smoke Detector: a fire detector designed to operate when the concentration of airborne combustion particles exceeds a predetermined level.

Smoke Alarm: a combined smoke detector with an audible alarm device designed to sound an alarm within the room or suite in which it is located upon the detection of smoke within that room or suite.

Heat Detector: a fire detector designed to operate at a predetermined temperature or rate of temperature rise.

Fire Detector: a device that detects a fire condition and automatically initiates an electrical signal to actuate an alter signal or alarm signal and includes heat detectors and smoke detectors.

Carbon Monoxide Detector: a device that detects the presence of the carbon monoxide (CO) gas to prevent carbon monoxide poisoning.

Fire Alarm System: a system of devices made up of automatic and/or manual device designed to alert the occupants within a building to the presence of fire. The alarm system may also alert a monitoring company (if monitored) or actuate devices connected to the alarm system, such as smoke control devices, strobe lights, magnetic devices, fire dampers or other life safety devices.

A fire alarm system is comprised of three main stages:

- Detection manual (at the sighting of flame or smoke and burning smell) or automatic (heat or smoke detectors). There are chances of false alarms with automatic detection.
- Signal initiation manual (pull or push bell electric or manual), semi-automatic (through a system panel that requires manual confirmation) or automatic (there are chances of false alarms)
- Occupant notification manual, semi-automatic (auto detection, manual confirmation, and notification) or automatic (there are chances of false alarms)



Service Spaces:

"Service rooms" shall not be for storage, and combustible materials shall not be allowed to accumulate in any part of the service room.

Combustible materials, other than those for which the location, room or space is designed, shall not be permitted to accumulate in any part of an elevator shaft, ventilation shaft, means of egress, **service room** or **service space**.

"Storage use prohibition", that **service spaces** provided to contain service facilities shall not be designed to facilitate subsequent use as storage space.

Therefore, the storage of materials in service rooms or spaces is not permitted. It is the responsibility of the occupant or building owner to keep these areas free of combustible materials.

Fire Separations:

Where a building contains more than one major occupancy, such occupancies <u>shall be</u> separated with a fire separation conforming to the requirements of the Manitoba Building Code.

Some examples of where fire separations may also be required are:

- to separate suites between other occupancies,
- public corridors,
- janitors rooms,
- common laundry rooms,
- storage rooms,
- service (mechanical) rooms etc.

Where fire separations are damaged or penetrated, they shall be repaired so that the integrity of the fire separation is maintained. Openings in fire separations shall be protected with closures conforming to the Manitoba Building Code.

Means of Egress & Doors in Fire Separations Requiring Closures:

Doors used to separate one part of the building from another, and located in walls deemed to be fire separations <u>shall</u> <u>have self-closing hardware installed</u> on the door.

These doors shall **NOT** be blocked or wedged open at any time. The only possible way these doors can be held open is with an electromagnetic device that will release the door and allow it to close upon initiation of the fire alarm system. Wooded wedges, phone books, paper weights etc. shall **NOT** be used to hold these doors open.

Means of egress shall be provided for in buildings conformance with the Manitoba Building Code and shall be maintained in good repair and free of obstructions.

Exit Lights:

In accordance with the Manitoba Fire Code, installation, and maintenance of exit lighting, exit signs and emergency lighting shall be provided in buildings in conformance with the Manitoba Building Code (2010).

Exit lighting and exit signs shall be illuminated during times the building is occupied, and emergency lighting shall be maintained in operating.

Every exit sign shall:

- (a) be visible from the exit approach.
- (b) have the word Exit or Sortie displayed in plain legible letters, (for buildings which pre-date application of the 2010 MBC) New buildings or newly renovated buildings are required to have signage with a green pictogram and a white graphic symbol, and
- (c) be illuminated continuously while the building is occupied.

Exit signs (signs which pre-date the application of the 2010 MBC) shall consist of:

- (a) red letters on a contrasting background or contrasting letters on a red background, with the letters not less than 114 mm high and having a 19mm stroke, when the sign is internally illuminated, and
- **(b)** white letters on a red background or red letters on a contrasting background, that is white or a light tint, with letters not less than 150 mm high and having a 19 mm stroke, when the sign is externally illuminated.

If illumination of an exit sign is provided from an electrical circuit, that circuit shall:

- (a) serve no equipment other than emergency equipment, and
- **(b)** be connected to an emergency power supply.

Emergency Lighting:

Self-contained emergency lighting units shall be inspected at intervals not greater than one month to ensure that:

- (a) pilot lights are functioning and not obviously damaged or obstructed.
- **(b)** ensure that the emergency lights will function upon failure of the primary power supply.
- (c) the terminal connections are clean and free of corrosion and lubricated, when necessary,
- (d) the terminal connections are clean and tight as per manufacture's specifications, and
- (e) the battery surface is kept clean and dry.

Self-contained emergency lighting unit equipment shall be tested at intervals not greater than 12 months to ensure that:

- (a) the unit will provide emergency lighting for a duration equal to the design criterion under simulated power failure conditions.
- **(b)** the charging conditions for voltage and current and the recovery period shall be tested to ensure that the charging system is functioning in accordance with the manufacture's specifications.

It is required that records of these inspections and testing be kept. These records should indicate what was done, when it was done, and by whom. These records should be kept and made available to the "Local Authority Having Jurisdiction" or a representative of the Office of the Fire Commissioner.

Emergency Power Systems:

Self-contained emergency lighting unit equipment shall be tested at intervals not greater than one month to ensure the emergency lights will function upon failure of the primary power source, and at intervals not greater than 12 months to ensure the unit will provide emergency lighting for a duration equal to the design criteria under simulated power failure conditions.

Emergency power systems shall be inspected, tested, and maintained. Emergency electrical power supply systems for emergency equipment for health care facilities shall be inspected, tested, and maintained in conformance with Standards.

Written records shall be maintained and available for review at the time of inspection, when requested.



Liquid fuel in storage tanks shall be drained and re-filled with fresh fuel at intervals not greater than 12 months.

Fuel Fired Heating Systems:

Except in a one- or two-family dwelling, every fuel fired heating system must be inspected annually by a person acceptable to the authority having jurisdiction to ensure the appliance is operating and maintained so as not to create a hazardous condition.

An acceptable person to conduct these inspections would be a trained licensed installer.

Fire Extinguishers:

All fire extinguishers shall be maintained, checked, and repaired as to the requirements of the Manitoba Fire Code and the NFPA 10 Standard.

Only a **qualified and licensed** fire extinguisher repair agency shall be used to conduct this maintenance. The certification is to be in conformance with standards. Regular maintenance is required yearly.

It should be noted that for dry chemical extinguishers with mild steel shells, internal examination of the extinguisher shall be every six (6) years from the date of manufacture and every twelve (12) years from date of manufacture will be maintained and hydrostatically tested.

Pressurized water extinguishers will be checked and maintained annually.

Extinguishers protecting the canopy over commercial cooking equipment shall be inspected by a qualified service technician at six (6) and twelve (12) month intervals.

All fire extinguishers shall be visually inspected once per month. The monthly visual inspections can be conducted by <u>inhouse maintenance</u> staff trained to make the necessary observations of these extinguishers.

This includes but not limited to checking the pressure gauge, seal, and hose for powder residue. It is suggested at this time of the inspection that a record be kept of the regular inspection, maintenance, and hydrostatic testing dates for each fire extinguisher.

These records shall be kept and be made available to the "Local Authority having Jurisdiction" or a representative of the Office of the Fire Commissioner.

Smoke Alarms and Carbon Monoxide Detectors:

Smoke alarms shall be inspected, tested, and maintained in conformance with standards. A record shall be kept of all testing. Carbon Monoxide detectors shall be inspected, tested, and maintained in conformance with manufacturer's instructions (monthly).

A monthly check is to include the following:

- securely fastened
- not obstructed
- tested by pushing the test button



Yearly maintenance is to include the following:

- exterior of the smoke alarm shall be vacuumed externally.
- Tested using simulated smoke intended to test smoke alarms
- Battery smoke alarms- check and clean terminals, change batteries.

Smoke alarms should be replaced if;

- Does not sound when tested
- Damaged
- Covered with smoke stains or has a heavy grease/dire accumulation
- Gives false alarms
- Corrosion of battery terminals
- Exterior case has been painted
- Expiry date has been reached

Carbon Monoxide detectors and warning equipment shall be installed in a building or part of a building if a risk of carbon monoxide exposure exists in the building or part of the building.

If you have any fuel burning appliances, attached storage garages, or any other potential source of carbon monoxide, a carbon monoxide detector is required to be installed in your building.

Fire Alarm Systems:

Fire alarm systems, voice communication systems and system components must be always maintained in operating condition. Inspections of the Fire Alarm System shall be done as follows:

DAILY:

- to check the status of the primary and remote trouble signal indicators and
- Status of the "power on" indicator.

MONTHLY:

- Fire alarms should be checked Monthly to ensure operation. Checks of the systems should be recorded at the time of each incident or alarm occurrence.
- One initiating field device or manual pull station shall be operated on a rotational basis and have the system inspected to ensure the alert signal or alarm signal is operating and the test device annunciated accurately.
- Ensure operation of common audible and visual trouble signals
- Batteries inspected, terminals clean, terminal clamps secured
- If emergency phones used, to be tested to determine they are functioning
- If Voice paging systems are used, they are to be tested to determine if they are functioning.

YEARLY:

• A certified fire alarm service company <u>shall inspect the existing fire alarm system annually</u>. The <u>verification certificate issued by the fire alarm company should be displayed in a conspicuous location</u>.

If changes to the existing system are completed by a qualified journeyman electrician at any time, these changes shall be verified by a certified fire alarm company, other than the firm to which the electrician was employed.



Commercial Cooking Equipment:

The use, inspection, and maintenance of commercial cooking equipment, exhaust and fire protection systems shall be in accordance with standards.

Hoods, grease removal devices, fans, ducts, and other appurtenances shall be cleaned at regular intervals.

Instructions for manually operating the fire protection systems shall be posted conspicuously in the kitchen and as part of the fire safety plan.

An inspection and servicing of the fire extinguishing system and listed exhaust hood containing a constant or fire actuated water system shall be made at lease every six (6) months by properly trained and qualified persons.

Hoods, grease removal devices, fans, ducts, and other appurtenances shall be cleaned to bare metal at frequent intervals prior to surfaces becoming heavily contaminated with grease or oily sludge. The exhaust system is to be inspected at intervals. (Typically, quarterly)

Fire Safety Plan:

Fire emergency procedures shall be provided for every building containing an assembly (community hall, schools), care (hospitals, day-care facilities, elderly persons housing, personal care home, residential care facility), treatment or detention occupancies. The emergency plan shall be available for review.

At least one copy of the fire emergency procedures shall be prominently posted on each floor area.

Where a fire alarm system has been installed with no provisions to transmit a signal to the fire department, a sign shall be posted at each manually actuated signaling box requesting that the fire department (E-911) be notified.

Fire Drills:

The procedure for conducting fire drills shall be determined by the person in reasonable charge of the building.

Daycare centres and Group B major occupancies and residential care facilities shall hold fire drills at least once a month.

In Schools attended by children, total evacuation fire drills shall be held at <u>least 10 times a year</u> and where practical in the opinion of the Principal at least once a month.

Records Management:

It is required that records of inspections be kept concerning the existing Fire Alarm System, Emergency Lighting units, Fire Extinguishers, and when required, Smoke Alarms and Carbon Monoxide detectors.

All these items should be inspected at least once a month to ensure operational status. The records kept can be very simply recorded in a notebook or file and should be kept available for review by the "Local Authority Having Jurisdiction" or a representative of the Office of the Fire Commissioner.

Other records of checks made can include Exit lights, Standpipe Systems, Sprinkler Systems, and Auxiliary Power Generators if applicable.

Maintenance Logs template are available from the Mid-West planning District office.

WHEN IS A GOOD TIME FOR THE ANNUAL and MONTHLY CHECKS???

This question is best answered by yourself because only you know your own schedules and agendas.

Some other Fire Prevention tips for your building...

- Keep the accesses clear for the Fire Department year round
- Do not allow combustible materials to accumulate inside or outside your building
- Be sure that all EXIT doors open and operate freely
- Be sure that doors to service rooms are kept closed at all times
- Be sure that service rooms are not used for storage
- Be sure that exhaust vents are kept free of grease and / or lint (Lint traps are to be cleaned after each use)
- Be sure that smoking/ no smoking signs are displayed in appropriate places
- Be sure that smoking materials are properly disposed of and not thrown into general garbage
- Be sure that hazardous goods are properly stored in identified and approved containers
- Be sure that Fire Extinguishers are always accessible and ready to go
- Be sure that if your building has a standpipe system in it, the fire hose is inspected regularly
- Be sure that doors located in fire separations ARE NOT blocked or wedged open
- Be sure the fire drills are held regularly if required for your building
- Be sure that electrical problems are repaired by QUALIFIED electricians only, all electrical installations shall be used and maintained as to not constitute an undue fire hazard
- Ensure every chimney, flue, and flue pipe is inspected yearly to identify any dangerous condition
- Be sure that general housekeeping efforts are maintained
- Be sure that hazards are identified and corrected as they are noticed
- Invite your local fire department in for a routine visit to your building
- Fire Emergency Plans as required shall be located on premise and reviewed as annually

Thank You for helping make Manitoba Fire Safe!