



## Fire Protection & Life Safety Maintenance

By Howard McKew, P.E., C.P.E.

This month we are going to discuss the importance of fire protection and life safety point of view. Within this discussion we will create a combination fire protection and life safety checklist for use during the year.

It is important to note that this checklist could become more formalized into a preventive maintenance (PM) work order to drive the process of making sure this PM work order (a.k.a. fire protection and life safety checklist), is used and the findings are documented each time.

### UNDERSTANDING PREVENTION vs PROTECTION

To begin, the National Fire Protection Association (NFPA) is an international nonprofit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. It publishes more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks. For more on this organization please refer to this month's *Focus on Facilities – Facility Management* column, "[Fire Protection and Life Safety Certification](#)".

When it comes to prevention, versus protection, "prevention" is aimed at minimizing fire hazards and increasing personal safety. With fire prevention, a building should have fire protection and life safety rules posted for everyone to see. "Protection" is aimed at reducing damage and helping to safely evacuate a building. Protection devices include fire and smoke detectors located per code throughout the building to alarm occupants of an active hazardous situation. The fire



protection and safety rules should include "means of egress" signs posted strategically throughout the facility. These exit signs, as well as illuminated LED exit signs are especially important if the facility is a multi-story building.

The simplest "prevention" can be to use fire extinguishers easy to access, located with brief instructions to extinguish a small fire such as in a waste basket. For any large fires, occupants should evacuate the facility and leave the fire-fighting up to the professionals, the local fire department. Life safety, as well as preservation of a building, is critical and so preventive maintenance is essential to occupant safety.

### BEGINNING THAT PM CHECKLIST

To get started with a **fire protection and life safety**

**PM checklist** it is always good to spend time reading up on fire prevention, personal safety within a building, and means to protect and save lives in that facility. An internet search is a great way to get started and here are a few questions to consider:

- Is there a life safety code?
- Where do I find a fire protection code?
- What makes up a passive fire protection system?
- What makes up an active fire protection system?

Other words or phrases, such as, “What’s included in fire protection”, “What is included in life safety”, etc.

Empowered with this wealth of information, one can complete a “walk around” with a pad of paper and a pencil to inventory what currently exists for protection, prevention, and life safety. After collecting the data, sort this information into categories that will be assigned a timeframe to routinely be checked, e.g., daily, weekly, monthly, quarterly, semi-annually, and/or annually.

Daily, and quite often weekly checking may be simply making observation and taking note or notifying the building manager of the potential for a fire hazard, such as excessive trash accumulation, overuse of an electrical outlet with multiple devices plugged into the wall outlet, or an egress door obstruction preventing the ability to exit the building quickly. Monthly and semi-annual tour of the building, using the PM checklist to document existing conditions, recording these conditions, and taking action to eliminate or remove the hazard should be considered a “time well spent.”

From this survey one can create their own PM work order as follows:

Date: \_\_\_\_\_ and By: \_\_\_\_\_  
Floor: \_\_\_\_ and Room Name and/or Number: \_\_\_\_\_

Exit Signs Posted and/or Lit: Y/N

Safety Rules/Instructions Posted: Y/N

Emergency Contact List & Numbers Posted: Y/N

- \* Fire Department
- \* Police
- \* Fire Alarm Contractor

Fire Extinguisher(s) with Gage Pressure:  
[ ] OK [ ] Recharge

Fire Extinguisher Cabinet Labelled: Y/N

Smoke Detector Tested: Y/N

Elevator Use In Emergency Instructions Posted:  
[ ] Yes [ ] No Remark: \_\_\_\_\_

Automatic Door Closures Operate: [ ] Yes [ ] No  
Remark: \_\_\_\_\_

Water Flow Test (Sprinkler System) Current:  
[ ] Yes [ ] No Remark: \_\_\_\_\_

Fire Pump Test Current: [ ] Yes [ ] No Remark:

Emergency Test Current: [ ] Yes [ ] No Remark:

Audible/Visual Notification Tested: [ ] Yes [ ] No

Fire Wall & Smoke Zone Floor Plans: [ ] Yes [ ] No

Sprinkler Pipe Distribution Plans: [ ] Yes [ ] No

Fire Alarm System Distribution Plans: [ ] Yes [ ] No

**WORK ORDER SPECIAL INSTRUCTIONS:**

- Required equipment and tools should be specified on the PM work order, e.g., 8-foot ladder
- A maintenance note pad to document additional comments from a visual inspection should also be included for the maintenance

person to document unscheduled work requirements e.g., Safety Rules not current and the inclusion of photograph(s) from cell phone (a picture is always worth a 1,000 words).

- Equipment manufacturer's maintenance instructions should be copied and placed adjacent to the equipment e.g., fire hose cabinet, fire pump, etc.
- Refer to *Focus on Facilities – Asset Management* August 2019 column, "[Soliciting Service Contract Bids](#)" for additional information on PM work order and service contractors e.g., when soliciting a fire alarm contractor.

### SUMMARY:

When maintaining a building, the building manager and/or maintenance person should remember that although the facility was built or renovated to the latest fire, smoke, and life safety codes at the time of construction, time can modify the original design intent. One should stay current with fire prevention and life safety technology by reading, research, and by inviting a local safety consultant or service contractor to provide a discussion on what the building future planning could include.

[Business Fire Safety Checklist, Ohio Department of Commerce Division of State Fire Marshall](#)

*Howard McKew is a registered engineer and president of Building Smart Software. Howie has a ton of experience to draw from the various industry jobs he's held and often writes about that experience in his columns in Engineered Systems Magazine. He is the author of 3-books, contributor to other author's books, lectures, and is an active member and Fellow in ASHRAE.*

[www.buildingsmartsoftware.com](http://www.buildingsmartsoftware.com)

[hmckew@bss-consultant.com](mailto:hmckew@bss-consultant.com)

*The links to third-party websites included in this article are meant for convenience only. The Diocese of Cleveland Facilities Services Corporation does not review or control these third-party websites and is not responsible for any third-party websites or any content of those sites. Inclusion of any linked website does not imply our approval or endorsement of the products, services, or opinions of the third-party website. Linking to any other site is at your own sole risk and the Diocese of Cleveland Facilities Services Corporation will not be responsible or liable for any damages associated with linking to the third-party websites or any subsequent links.*

For more information:  
[facilities@dioceseofcleveland.org](mailto:facilities@dioceseofcleveland.org)

