

FIRE, LIFE SAFETY SYSTEM IMPAIRMENT PROGRAM
UMD Facilities Management Department

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1.0 POLICY STATEMENT

To establish procedures to be followed when a fire protection system (sprinkler system standpipe, fire alarm systems, special extinguishing system, fire pump, fire protection water supply, or the communication lines to BSAC or Simplex), or other life safety equipment such as emergency generators or smoke control system is taken out of service for construction, alteration, or due to an emergency condition. Procedures set forth in the policy do not apply to routine scheduled maintenance or testing.

2.0 SCOPE

This policy applies to any employee, including University employees, trade workers, or outside construction crews who will be working on a University fire protection or alarm systems.

3.0 STANDARDS

- NFPA 25, Maintenance of Water Based Fire Protection Systems
- NFPA 72, Fire Alarm Code
- NFPA 101, Life Safety Code
- State of Minnesota Fire Code
- UMD Hot Work/Open Flame Program

4.0 PROGRAM COMPONENTS

- 4.1 Responsibilities
- 4.2 Definitions
- 4.3 Impairment Coordination Procedures

Attachments

- UMD Impairment Form
- Fire Watch Log Sheet

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4.1 RESPONSIBILITIES

A. UMD FM Management Team

- ◆ Assure an effective Fire, Life Safety System Impairment Program is established and implemented for UMD Facilities Management personnel and any contracted vendors.
- ◆ Provide the necessary support to manage and restore impaired protection systems and provide temporary protection for extended outages or emergency circumstances.

B. UMD FM Supervisors/Project Managers

Assure that fire system impairment policies and procedures are followed and complied with in their respective areas.

C. Impairment Coordinator

- ◆ Determine impairment level.
- ◆ Determine any temporary fire protection requirements.
- ◆ Manage hazardous operations during the impairment.
- ◆ Notify BSAC, Simplex, Fire Departments, Insurance Company, Building Code Office and University Services' Risk Management prior to and after the impairment based upon the hazard level (see UMD Impairment Form).
- ◆ Assist and/or coordinate with the supervisors when their respective line staff is performing work that will require impairments to a fire protection system.
- ◆ Schedule line staff to work on the fire protection system only after job has been reviewed and all necessary parts are on hand.
- ◆ Ensure a Fire Watch is assigned to the affected area for emergency or extended impairments.
- ◆ Facilitate impairments for their respective construction projects with customers.
- ◆ Review Fire and Life Safety Impairment Program with outside contractors. Include a copy of the impairment program in the specifications.
- ◆ Verify system has been returned to service.

D. Building System Automation Center (BSAC) Operators/Outside System Monitors (i.e. Simplex)

- ◆ Receive calls and take necessary point information. Disable points to prevent false fire alarms.
- ◆ Return monitoring service to normal once coordinator gives authorization.

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E. Line Staff (includes, but is not limited to, plumbers, electricians, BSAC technicians)

- ◆ Post the building describing the impaired system, location, emergency procedures, and dates of the impairment.
- ◆ Prior to beginning any work which impairs a fire and life safety system, make sure all necessary parts to complete the job are at the job site.
- ◆ Inform supervisor or project manager when job is complete so system may be reactivated promptly.
- ◆ Perform the necessary tests to verify the fire protection system is returned to service.

F. Contractor Work

- ◆ Contractors are NOT considered authorized impairment coordinators. Contractors will be required to follow the UMD Fire, Life Safety Impairment Program.

4.2 **DEFINITIONS**

- ◆ Impairment Coordinator: The person who manages the impairment while system work is being performed.
- ◆ Level 1 Impairment: A single component (i.e. smoke detector or heat detector) is found to be defective during routine maintenance, and requires replacement or is covered during a hot work task or a system shut down of unoccupied/vacated facility. A Fire Watch is not required for Level 1 Impairments. Notification of the fire department, BSAC, Risk Management, the Insurance Company, or Building Code Office is not necessary.
- ◆ Level 2 Impairment: A shutdown of a system, or portion thereof, for more detailed maintenance (i.e., replacement or rerouting of electrical systems or mechanical systems such as pipes or pump maintenance) of an occupied facility. A Fire Watch is required during non-working hours of the shutdown. All sprinkler system shutdowns are at least a Level 2 Impairment. Notification of the fire department, Insurance Company, and the Building Code Office is required. Notify FM Risk Management if the impairment will extend over night.
- ◆ Level 3 Impairment: This pertains only to sprinkler and alarm systems. This is a condition where the entire, or major portions, of the water supply to the sprinkler or fire alarm system for a building is out of service, or the connection to BSAC is not available. A Fire Watch is mandatory during the entire duration of impairment. Notify fire department, FM Risk Management, the Building Code Office and the Insurance Company.
- ◆ Fire Watch: A person designated to physically review the area where the fire protection system is impaired. Where utilized, fire watches shall be provided with at least one

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approved means for notifications of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires (2000 International Fire Code: Ref. 901.7). A Fire Watch Log Sheet is to be completed indicating where the watch was performed and at what time. A sample form is attached to this policy. A Fire Watch is mandatory during a Level 2 Impairment only during off hours and during all times for Level 3 Impairments.

- ◆ Hot Work/Open Flame: Any process that will introduce intense heat, sparks, or open flame to a work area. Hot work activity includes, but is not limited to; welding, cutting, burning, brazing, pipe thawing, soldering, or grinding. Any type of hot work activity not conducted in an approved Facilities Management shop area requires a permit.
- ◆ Fire Watch Observer: A worker, whose sole purpose during a hot works/open flame task is to stand by with a fire extinguisher, be alert to any fire or smoldering as a result of the hot works, and to know the location of the nearest building fire alarm pull station. The Fire Watch Observer will sign the "Hot Work Permit" verifying that there is no object still hot to the touch at the job site.
- ◆ Fire Safety Coordinator: A worker who is in charge of ensuring that the requirements for safely conducting hot work/open flame tasks outside of designated shop areas are followed, and who is responsible for filling out and signing the "Hot Work Permit".

4.3 Impairment Coordination Procedures

- ◆ Schedule a meeting with all affected personnel. This includes, but is not limited to, line staff, BSAC technicians, contractors, supervisors, and University Project Manager. It is possible that Building Code Office, or user group representative(s) will also be included. At this time it should be noted what supplies and materials are needed for the necessary work. The impairment will not be scheduled, nor work started, until all needed materials are on hand.
- ◆ Determine any temporary fire protection requirements.
- ◆ Post the building describing the impaired system, located, emergency procedures, and dates of the impairment.
- ◆ The Impairment Coordinator or designate will notify BSAC, Simplex, fire department, Insurance company, Building Code Office, and University Services' Risk Management once the impairment is initiated.
- ◆ Inform personnel on the next shift if the impairment will exceed 8 hours, or carry over to the next shift. The next shift may need to be scheduled to perform fire watch duty.
- ◆ Continuous fire watch is required until the impairment is complete.
- ◆ Extra hot work precaution shall be exercised in the location of a sprinkler impairment.
- ◆ Stop any hazardous operation, i.e., paint spraying, when required fire protection is to be

performed.

- No impairment is considered complete until all repairs have been made and any necessary systems testing are performed. Systems must be returned to service. Fire detection devices, notification appliances, and circuits must be tested for proper operation. A full flow main drain test must be completed after a control valve is reopened.
- The fire watch log should be attached and retained with the impairment.
- Notify departments that were contacted prior to the impairment that the systems are returned to service.

Note: In some cases, it may not be possible to order all needed material prior to initiating the impairment; but the coordinator is expected to use best judgment in implementing the impairment procedure. In the case of impairment emergencies occurring during off shift hours, the coordinator will provide the information to the next shift for complete resolution.

Approved by:

Director of Facilities Management

Director of Facilities Manage



Date:

