

# Code Review for the Performance Bypass of the Fire Protection Systems

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## I. INTRODUCTION

This document was prepared to list the requirements for the performance bypass of the fire detection systems. These requirements are based of the 2009 edition of the *International Fire Code (IFC)*, the 2007 edition of the *National Fire Alarm Code (NFPA-72)*, the 2009 edition of the *UCB Standards* section 16720 and the *UCB Building Proctor Manual*.

## II. EXECUTIVE SUMMARY

During a scheduled outage of the fire detection system the code requirements listed below should be followed in order for the outage to happen as safely as possible. The responsible person is to contact the campus Fire Systems Group to coordinate the outage and to let them know when and for how long the outage will be. If detection is disabled the campus fire marshal will require that a fire watch be put in place during the outage for added protection. The stage manager will be in contact with the fire watcher during the outage and activate the building general alarm (using a manual pull station) if an emergency occurs. Please read through the code sections below for specific performance bypass policies and procedures.

## III. GENERAL CODE REQUIREMENTS

1. Based on the requirements of section 901.7 of the IFC, the campus does not allow the planned impairment of fire protection (sprinkler and standpipe) systems during a performance bypass.
2. Section 4.6.1 of NFPA-72 states that the system owner or their designated representative are to be notified when a fire alarm system or part thereof is impaired. Impairments to systems are to include out-of-service events.
3. Section 4.6.2 of NFPA-72 states that a record is to be maintained by the system owner or designated representative for a period of 1 year from the date the impairment is corrected.
4. Section 4.6.3 of NFPA-72 states that where required, mitigating measures acceptable to the authority having jurisdiction are to be implemented for the period that the system is impaired.

5. Section 4.6.4 of NFPA-72 states that the system owner or owner's designated representative is to be notified when an impairment period is completed or discontinued.
6. Section A4.6 of NFPA-72 states that the term *impairments* encompasses a broad range of circumstances wherein a fire alarm system or portion thereof is taken out of service for a variety of reasons. Fire alarm systems are routinely impaired in order to perform hot work (e.g., open flame operations) in areas with automatic detection, construction, painting, etc., as well as to conduct normal fire alarm maintenance and testing. Impairments can be limited to specific initiating devices and/or functions (e.g., disconnecting the supervising station connection during system testing), or they can involve taking entire systems or portions of systems out of service. This section is intended to help building owners control impairments of the fire alarm system(s) in their building(s) and to ensure that systems are restored to full operation and/or returned to service afterward.
7. Section (H)1.03 of the 2009 edition of the UCB Standards 16720 states that a "Stage Manager's Console" is to adhere to the following guidelines:
  - (1) "Stage Manager's Console" is to be installed in those areas open to the public for performances or special events where special effects could be used. Areas where special effects are used are to provide a means to disable detection during performances. All switches are to be identified and activate a system trouble upon activation of any switch.
  - (2) Any initiating devices that are disabled from the stage manager's console are to cause a trouble at the FACP and activate a trouble lamp at the stage manager's console.
  - (3) A pull station is to be located near the stage manager's console for general alarm activation by the stage manager during emergencies, i.e. in the area with the bypassed devices.
8. Section (A)3.08 of the 2009 edition of the UCB Standards 16720 states that a fire alarm shut down must adhere to the following guidelines:
  - (1) Except for replacement of control equipment, at no time during construction should the entire fire alarm system be disabled where the notification devices are not functioning.
  - (2) If the fire alarm system is out of service, fire watches are to be posted in accordance with UCB procedures. See requirements at <http://www.colorado.edu/facilitiesmanagement/pdc/safety/documents/firewatch.pdf>
9. According to the *UCB Building Proctor Manual* the following items must be followed for the "Performance Bypass for Fire Alarms":
  - (1) The stage manager from the building (such as the Events Center, Macky, Old Main or Theatre) is to contact the Service Center before

an event and request the fire alarm be taken "off-line" or be put into "performance bypass."

- (2) The stage manager is to call back after the performance to return the fire alarm system to normal, i.e., reset the performance bypass. The Service Center will then verify that the building has returned to normal. Authority for using performance bypass mode must be pre-arranged through Fire Systems Group.
- (3) If the Service Center receives a fire alarm during the performance, they will contact Boulder Fire Department and UCPD and report a fire alarm.