

What Testing Do I Need To Do? - Part 2

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Last issue, we began to answer the following question:

“My supervisor has recently placed me in charge of the fire alarm system maintenance for seven locations of our nursing home chain in the northwest part of the state. I really don’t know where to begin. Exactly what testing do I need to do on these systems?”

As I suggested in the last issue, your employer has handed you both an enormous challenge and an enormous opportunity. The challenge comes from making an effort to bring yourself up to speed on the requirements for properly testing and maintaining the fire alarm systems under your care. The opportunity arises from the very significant role you can play in assuring the long term reliability of these systems that provide such a vital service in protecting the lives of the clients using your facilities.

NFPA 72-1999, *National Fire Alarm Code*, offers quite a bit of guidance on this subject in Chapter 7, Inspection, Testing and Maintenance. As we continue to consider the requirements in this *Code*, we need to next look at Section 7.1.3. This section contains the following requirements:

7-1.3* Notification.

A-7-1.3 Prior to any scheduled inspection or testing, the service company should consult with the building owner or the owner’s designated representative. Issues of advance notification in certain occupancies, including advance notification time, building posting, systems interruption and restoration, evacuation procedures,

accommodation for evacuees, and other related issues, should be agreed upon by all parties prior to any inspection or testing.

7-1.3.1 Before proceeding with any testing, all persons and facilities receiving alarm, supervisory, or trouble signals, and all building occupants, shall be notified of the testing to prevent unnecessary response. At the conclusion of testing, those previously notified (and others, as necessary) shall be notified that testing has been concluded.

7-1.3.2 The owner or the owner's designated representative and service personnel shall coordinate system testing to prevent interruption of critical building systems or equipment.

As the Appendix Section A-1-7.3 explains, the subject of "notification" gives everyone associated with the testing an opportunity to make certain they do not overlook critical issues. Since you will serve as the owner's representative at each of these seven nursing homes, you need to work with the administrator of each nursing home, and with his or her staff, to make certain that they understand the scope of your inspection and testing activities. With regard to notification, you will have three specific populations of individuals that you will have to consider: the staff, the residents, and any visitors.

You will have to develop a well-thought-through procedure for notifying the staff that you will be conducting inspection and tests of the fire alarm system. It will serve you well to carefully explain to the staff exactly why you must conduct the inspection and tests. Tell them that in order to make certain the fire alarm system will work properly when called upon to do so, you must inspect it and perform certain functional tests. Make certain you explain that while some portions of these tests may seem a bit annoying, testing serves as the primary way that you can assure the ongoing quality and operational readiness of the fire alarm system.

Tell the staff exactly when you expect to begin testing and when you expect the testing to end. Then, make absolutely certain that you rigorously adhere to that schedule. This will require

that you plan your inspection and testing thoroughly. But, we'll discuss more about the planning process in a future issue.

Do not neglect to explain to the staff exactly how they should report the occurrence of a fire, while you have the fire alarm system out of service. You may need to designate a special internal telephone number for them to call. Or, you may direct them to dial the fire department directly. Whatever procedure you develop for handling a real fire emergency that might occur during your inspection and testing, make certain that you clearly write that procedure down and give a copy of it to every staff member.

As far as how you will notify the residents, you will need to carefully coordinate this with the administrator of each of the seven nursing homes. The administrator will know of the special needs of his or her individual residents. Because many elderly people become quite confused by any activity that strays outside the boundaries of their normal routine, you will need to make certain that you notify the residents in a way that will create as little confusion as possible.

Once again, stating a very specific starting time and ending time for your testing, and then very specifically holding to those times, will give the residents less difficulty in processing this change to their routine.

Some residents will still likely become confused. To help them, remind the staff that they will have to remain alert for any residents who may not react properly to the testing.

This confusion may also persist once you have completed your testing. Should a real alarm occur sometime soon after you have finished your testing, the staff will need to remain alert for residents who may think that testing has continued. Such residents may fail to react properly to the alarm signal.

You should coordinate with the administrator of each nursing home how you will notify any visitors. You may choose to post large signs at the entrance to the building. You may post a small reminder immediately adjacent to the sign-in log book. You may ask the receptionist to remind each visitor as he or she signs in that inspection and testing of the fire alarm system will occur between the specific times you have selected for your work. And, you may also prepare a simple printed note card that explains why you will be conducting the inspection and testing of the fire alarm system, and that lists the specific times you will be doing so.

Once you have developed a careful procedure to notify all of the occupants at each of the nursing homes, make certain you also develop a procedure to notify any persons outside the building that may have an interest in your test. For example, you will need to have a procedure to notify the supervising station to which each system transmits signals. You will also need to notify the public fire service communication center serving each nursing home. In dealing with the fire dispatchers, you will also want to explain to them how the nursing home will notify them should a real fire emergency occur during your testing. This will prevent them from having any confusion should they receive a telephone call from the nursing home while you conduct your tests. You may want to develop a special code word that staff can give the fire dispatcher during this time to help verify that the telephone call is genuine.

Next, you will want to consider the impact your inspection and testing may have on any of the critical building systems or equipment. You will want to particularly consider any of the fire safety functions that the fire alarm system initiates. These typical building fire safety functions, may include the recall of elevators and elevator shutdown upon sprinkler actuation in the elevator machine room or shaft. They may include the unlocking of doors to permit fire fighter access to the building. They may also include the release of hold-open devices on fire and smoke doors, the shut

down of certain air handling systems, and the operation of other air handling systems into a smoke control mode.

You may not wish to operate each of the building fire safety functions every time you initiate an alarm signal during testing. You can circumvent this by developing a very careful written procedure that substitutes some other load in place of the specific function. Depending on the complexity of each particular fire alarm system, this substitute load may be a simple lamp or LED, or you may choose to use some type of event logger that records the date and time of each actuated function. Of course, your procedure will need to include how to properly reconnect each impaired building fire safety function, and include a final test to make certain that each function has truly been fully restored to service, once you have completed your testing.

The notification requirements of Section 1-7.3 give you very specific guidance as to the kinds of items that you will need to consider as you prepare to inspect and test the fire alarm systems that serve the nursing homes. The *Code* intends to encourage you to think through all of the issues very carefully to make certain that you have included every one in a very methodical way. By soliciting the help of the administrator of each nursing home, and the help of his or her staff, you will make certain that you do not overlook some critical piece of information. After all, you want to make certain that you get the most value out of this process as possible.

In the next issue, I will continue our discussion of how you should prepare to take on this new responsibility. Your role in caring for the fire alarm systems at these seven nursing homes is a critical one. Please take this responsibility seriously. And, remember that NFPA 72-1999, *National Fire Alarm Code*, will serve as your very best ally in discharging your responsibility in a professional manner.

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