

CHALLENGE

NFPA 101 (2015) 7-9.3 – Periodic Testing of Emergency Lighting Equipment contains a multitude of requirements related to both building features and specific occupancies, the focus of which are to minimize danger to life from the effects of fire – including the products of fire, such as smoke, heat and gas – as well as non-fire related emergencies. Among the building feature requirements outlined in the code are egress requirements, contained in Chapter Seven which includes the specifics regarding emergency lighting equipment necessary along the means of egress within a building.

BEST PRACTICE IMPLEMENTED

Most emergency lighting systems are powered with a battery system that operates the lights when the building loses powers. The lights are also directly wired to a power source, which maintains the charge in the backup batteries. They are strategically located throughout the store along the egress to properly illuminate the paths to the exits in case of an emergency.

There are several types of emergency lights such as:

- **Inverter**, which is a backup battery system for the emergency lights that is contained in a cabinet near the electrical panel. Replacing the batteries when needed can be expensive and the storage cabinets take up valuable space in the back of house. It has a computer screen that alerts the store when the batteries are low.
- **“Bug-eyes”** are separate from ambient and spot lighting. Most have a visible and/or audible alarm that activates when the batteries are low. Some consider these lights to be an eyesore.
- **Batteries** connected to approximately 20 percent of the existing light fixtures are one of the more common emergency lighting systems. They are not visible to the consumer but the batteries do not have an audible or visual alert when they are low.

The Life Safety Code requires emergency lighting systems to be tested at least once per year by a lighting or fire/life safety service provider. The test may need to be executed either before or after store hours because it does require all lights to be turned off. In some cases, the emergency lights will be connected to a dedicated circuit, and in these situations normal lighting can be maintained while the emergency light circuit is being tested. The emergency lights are then required to remain operational for 1.5 hrs.

The Life Safety Code requires monthly testing of the emergency lighting systems but in a less rigorous fashion. The monthly requirement involves testing the lights for 30 seconds to ensure that the bulbs are functioning properly. Most emergency lights are equipped with test buttons for this express purpose.

RESULTS OF THE BEST PRACTICE

Testing emergency lights will help assure that employees and customers can safely exit the building when required. Panic spreads quickly when a building loses power and the successful operation of the emergency lights can prevent serious injury or incidents.

Retailers can also avoid fines and violations from the local fire department. If the test fails, the retailer will first be issued a Notice of Violation (NOV) which gives 30 days to repair the emergency lights and submit the proper paperwork for a re-test. Most fire departments are diligent in testing a store's emergency lights every year – with little or no notice.

Maintain records of the testing of the emergency light systems, whether the service is performed with store staff or through a supplier. These records help to assure the local fire department that the work has been completed at the frequency required.

VERIFICATION OF EFFICIENCY AND/OR SAVINGS CAPTURED

The primary focus for testing emergency lights is safety. Retailers can save money by preventing fines or installing a low maintenance system; however, the true test of a successful emergency lighting system is when it operates in a power outage and everyone safely exits the building. A dollar amount cannot be put on safety.

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