



Physical Environment Portal: Module 7, LS.02.01.35 Leadership

Features of Fire Safety

This module is titled: Providing and maintaining systems for extinguishing fires.

1. Leadership Orientation: Suppression Systems (LS.02.01.35)

Healthcare buildings have proven to be much safer since the requirement to add sprinkler protection when renovating, remodeling or new construction. However, the suppression system must be installed, inspected and maintained to properly protect the patients, staff and visitors.

Leadership must have a basic understanding of the ***Suppression System***, generally referred to as the **Sprinkler System**. This system is a series of pipes running overhead in the interstitial space between the underside of the floor / room above and the lay-in ceiling tiles. Descending from these pipes through the ceiling tiles are sprinklers (also referred to as sprinkler heads or pendants). These sprinklers are activated by heat directly applied to the sprinkler, which causes the sprinkler to activate and allow the ***suppressing agent (referred to as “water” going forward)*** to descend and quench the fire. To help in spreading water are deflectors at the bottom of the typical sprinkler, creating an arcing pattern of coverage. Anything closer than 18 inches to the deflector will interrupt the calculated spread of the water and possibly interrupt putting out a fire.

Water is delivered to the sprinkler system from either city / municipal water; well water; water tank; or other source of water. For buildings greater than 3 stories a fire pump is used to aid in pulling water from the source and lifting it to the higher floors to put out a fire. These fire pumps are tested based on EC.02.03.05 (Module 4 of the JCPEP) and NFPA codes.

When the sprinkler piping is installed established installation practices are followed that accommodate the weight of the piping and connectors, the suppression agent (i.e. water) and an additional safety factor. Any additional loading of the piping system may cause the supporting system to fail, resulting in flooding and not placing the water where intended to fight the fire. Also, when the sprinkler system is activated in a fire condition the sudden release of pressure through the sprinklers causes the entire system to move, and, if additional weight were added, the system could collapse.

Leadership Role in Maintaining the Integrity of the Sprinkler System

Survey Scoring:

Survey findings at LS.02.01.35 EP 4, 5, and 14 are associated with Conditions of Participation (COP) §482.41(b)(1), A-0710; and §485.623(d)(1), C-0231 for EP 25. Non-compliance may lead to a condition level deficiency, depending on “manner and degree” (CMS phrase). Manner and degree consider how often non-compliance is occurring (i.e. trending) and the criticality of the non-compliance. Often findings in the Life Safety Chapter have corresponding findings in the Environment of Care chapter or Infection Control chapters, which aggregate to the Condition Level Deficiency (CLD). The CLD requires a Medicare Deficiency Follow-up Survey within 45 calendar days of the last day of survey. This follow up survey will focus on these survey issues, but may also address any other non-compliant conditions identified at this time.

Survey Finding:

1. Evaluation of Compliance with LS.02.01.35 EP 4

Surveyors look above the ceiling tiles in the interstitial spaces to evaluate the integrity of barriers and sprinkler piping, as well as other conditions. When sprinkler piping is supporting anything other than the sprinkler system, an observation is written, requiring a Requirement for Improvement (RFI). The RFI must be corrected within 60 days from the end of survey.

Leadership can begin compliance assessment by asking the following:

- a. Asking facilities if they have evaluated the integrity of the sprinkler system in regards to supporting wires or other materials.
 - a. An acceptable response would be that the organization has an inventory of areas with high-traffic wire runs and those areas are targeted for mitigation first. The inventory should also identify second or third phased of mitigation.
 - b. Corrective actions should begin and be on-going.
 - c. Ensure all future projects have a zero tolerance of sprinkler piping being free of all other materials being supported.

2. Evaluation of Compliance with LS.02.01.35 EP 5

Maintaining a reliable sprinkler system is important as we defend in place and do not evacuate patients, staff or visitors. This includes the physical conditions of the sprinklers, being free from dust, corrosion or paint. Also, missing trim rings (escutcheon rings) or ceiling tiles not in their track may compromise the smoke detection system, delaying occupant notification.

All of these are easily identified by visual inspection.

3. Evaluation of Compliance with LS.02.01.35 EP 14

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