

AUTOMATIC SPRINKLER SYSTEMS

New Jersey Public Housing Authorities' buildings that have automatic sprinkler protection enhance the safety of both the residents and the property. Whether installed in every living unit, or just in common areas, some basic steps will assure sprinklers provide maximum protection.

All sprinkler systems should have an annual inspection by a qualified sprinkler contractor. This should include a "Two Inch Drain" test, which assures that water is flowing properly and there are no system obstructions. The contractor should sign and date an inspection tag, which should be affixed to the main valve of the sprinkler system.

There should be a metal box near the main sprinkler controls containing a supply of replacement sprinkler heads and a wrench. These are to provide a quick means of replacing a head that has been damaged or has discharged.

Sprinkler systems are designed to deliver cooling water to a fire and to pre-wet the surrounding materials to limit fire spread. Obstructions prevent cooling water from reaching the fire or from pre-wetting the surrounding fuels.

Changes in the building's storage arrangements, structural supports, pipes, ducts, or other fixtures should be closely examined to prevent creating an obstruction to the sprinkler system. When an obstruction, such as a light fixture, is placed in the discharge pattern, the system's effectiveness will be diminished. Changes to a building's layout, storage arrangements, or HVAC system should not create obstructions. When evaluating storage arrangements or building layout changes, a qualified sprinkler system installer should be consulted.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, published by the National Fire Protection Association, Inc. (NFPA), provides general clearance requirements for preventing sprinkler obstructions. In general, these include:

- Do not place anything closer than 18 in. from the bottom of a sprinkler. Where living units have sprinklers inside, residents should be counseled to keep storage away from closet sprinkler heads. It may be helpful to add a painted line to the closet wall, defining where storage should end.
- Do not install light fixtures, exit signs, or other similar items any closer than 4 ft. from a sidewall sprinkler head.

A number of other common impediments to sprinkler head discharge that do not fall into the category of "obstructions" but which can hamper sprinkler head effectiveness, include:

- Painting sprinkler heads. This will cause the sprinkler head to react slowly or not at all during a fire
- Hanging decorations, plants, clothing, or any other materials from sprinkler heads. This also can break the glass vial that serves as the fuse for the sprinkler, and accidentally activate the head

- Attaching cable trays, ducts, or wiring to sprinkler pipes or sprinkler bracing

Maintenance staff should be aware of these issues as they prepare a unit for a new tenant, and when performing services inside an occupied living unit. Residents should be educated on their role in assuring that protection in their living units is not compromised.

For further assistance on this matter or other safety and risk control issues, contact your risk management consultant or Jim Rhoads, NJPHA-JIF safety consultant (610-397-5061).

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