

211000 Water-Based Fire Suppression Systems

Sections Included In This Standard:

- 1.1 General Requirements
- 1.2 Fire Protection Piping
- 1.3 Dry Pipe Sprinkler Systems
- 1.4 Pre-Action Systems
- 1.5 Connections (*relocated from 213000*)
- 1.6 Pressure Testing

1.1 GENERAL REQUIREMENTS

1. Concealed sprinklers are not permitted without specific approval from the UF Division of Environmental Health & Safety (EH&S).
2. EH&S discourages the use of non-water-based fire suppression/extinguishing systems. See section 212000.
3. All residential occupancies shall be provided with automatic fire sprinkler protection regardless of currently adopted code requirements.
4. See section 212000 regarding non-water-based fire suppression/extinguishing systems.
5. See Section 331000 for requirements relating to fire hydrants.

1.2 FIRE PROTECTION PIPING

A. SPRINKLER PIPING

1. Wet screwed sprinkler piping shall be schedule 40 black pipe or as approved by NFPA and code. Schedule 10 shall be minimum allowable thickness for 2½" or larger black steel pipe with roll grooves.
2. Dry pipe sprinkler piping 2" and larger shall be seamless schedule 40 galvanized with galvanized fittings.
3. ~~Color: Paint all exposed sprinkler piping except galvanized, fire engine red.~~
4. Stipulate dielectric unions where dissimilar metals meet.

1.3 DRY PIPE SPRINKLER SYSTEMS

- A. Dry pipe sprinkler systems shall have a drainage valve (or valves) piped to waste a safe discharge location. Location of the drainage valve(s) shall be clearly marked on the as-built drawings.
- B. Install drains at low points of system; with valves and piping to exterior.

1.4 PRE-ACTION SYSTEMS

- A. Pre-action sprinkler systems shall only be used where required or warranted for specific spaces or facilities and stipulated in the Facilities Program, Owner's Project Requirements, or similar planning document.
- B. If used, provide UL-listed, packaged systems consisting of deluge valve, pressure-operated release valve, release control panel, and all required specialties and trim.
- C. Detection: Consult with user; smoke detection is normally preferred. Smoke detectors must be UL-listed for use with the pre-action control panel and are not a part of the fire alarm system. These detectors must be shown on the Fire Protection drawings.
- D. System Type: Unless otherwise indicated, provide double-interlocked, supervised, electric-operated pre-action systems.
- E. FACP Integration: Report TROUBLE to FACP on low air pressure. Report ALARM to FACP on deluge valve trip (water flowing).

1.5 **CONNECTIONS**

- A. Siamese (Fire Department) Connections: Siamese connections shall be installed in an easily accessible position away from the building and landscaping.
- B. Standpipe Connections: Standpipe connections shall have restricted orifices be 2½" hose valves for use by the Fire Department only. Existing user type connections may remain.
- C. Fire Pump Test Hydrants: See 213000.
- D. Connection Signage: All fire department connections shall be marked with a reflective sign mounted 4' to 6' high on buildings above the fire department connection. The sign shall be the same as the standard sign used by the City of Gainesville (see Drawing 15300-A).
- E. Fire Department Connections shall be protected with locking "Knox" caps. Caps will be provided and installed by UF Environmental Health & Safety (EH&S) Fire Equipment Services, with the cost billed to the project.

1.6 **PRESSURE TESTING**

All fire water systems shall be tested for two hours at 200 psi according to NFPA 24. Pressure test shall be inspected and approved by UF EH&S and PPD. All testing shall be performed to ASTM Standards.

END OF SECTION