PORTSMOUTH FIRE DEPARTMENT

FIRE PREVENTION BUREAU

General Information for Fire Sprinkler Designers / Installation Contractors / Technicians

IMPORTANT NOTE: A Fire Protection Engineer (FPE) of record is required for ALL new installations and some alterations, please check with us if you are not sure. The registered design professional's license must designate them as qualified in the field of fire protection. All documents shall be reviewed and stamped by the FPE to be considered a complete permit application. Any deviations from the approved plan shall be submitted to the FPE of record for review, stamped and submitted to the Bureau before a final inspection.

Permits and inspections shall be required for:

- New installations of any fixed fire suppression system including sprinkler, standpipes, & clean agent systems
- Alterations of existing systems (relocating a head, nozzle etc. is an alteration)
- Repairs of existing systems
  - Exemptions- testing, inspecting, replacement of damaged/faulty items and maintenance items such as gaskets, valve rebuilds, FDC covers etc. Emergency repairs require a permit to be applied for within 48 hours of starting work. Notify the bureau *immediately* of *any* system impairment longer than 4 hours at 603.427.1515 AND fireprevention@cityofportsmouth.com Failure to notify in a timely manner is working without a permit and you are subject to fines.

Electronic plans shall include *all* applicable items listed in 2019 NFPA 13 Chapter 27.

Commonly omitted items and issues that cause plans to be returned-

1. **A signed copy of the owners certificate** (2019 NFPA 27.1.1.1.(4))
2. Water supply capacity information from a waterflow test conducted no more than 12 months prior
3. Floor plans with piping, heads, riser locations etc. This shall *not* be on a reflected ceiling drawing
4. Hydraulic calculations, including a graph sheet, node analysis and detailed worksheet
5. Specification sheets shall only be for materials specified in the system proposed. Documents that do not pertain to the alarm shall not be included with the submittal and shall lead to the plans being returned.
6. Failure to adhere to the additional requirements listed below.

Additional Installation, Inspection, and Acceptance Requirements:

- NFPA 13 and 13R systems hydraulic calculations shall demonstrate a safety margin of 10% of system demand pressure or 10 psi, whichever is greater **(A 10 PSI minimum will be strictly enforced)**
- The **hydraulic data nameplate** and **general information sign** and a **list** of all control, drain, venting and test connections **SHALL** be provided on a weatherproof metal or rigid plastic material permanently secured to the riser. If this is not in place, the inspection shall end and be rescheduled at a later date. A re-inspection fee shall be paid prior the rescheduled inspection.
- A rough inspection of all system components ***shall*** be scheduled and completed prior to being covered or enclosed
- Failure to have a properly operating system will cause the system to be rejected at the final inspection. A re-inspection

fee shall be charged for all additional inspections for failed and/or incomplete inspections. This includes any fire alarm system components connected to the sprinkler system

- All NFPA 13 and 13R fire protection sprinkler and standpipe system valves shall be supervised. All waterflow devices shall be supervised and automatically report as a fire alarm via a UL listed central station. See fire alarm info sheet
- Provisions for a full forward flow of the backflow preventer at the minimum flow rate of the system demand shall be demonstrated on shop/drawings/plans.
- Exterior key boxes are required from www.knoxbox.com for any structure with a sprinkler system. Be sure to select Portsmouth, NH Fire Department to ensure proper keying. Consult with Bureau on the type, number of boxes, master key quantity/requirements and installation location(s) prior to ordering
- Backflow preventer installation and permitting, see below

The installer shall schedule a final system test and inspection with the Fire Prevention Bureau. The contractor shall submit a Contractor's Material and Test Certificate for Aboveground Piping to certify the system has been 100% tested and functions in compliance with the approved system design, prior to the requesting a final inspection. Figure 25.1 in 2019 NFPA 13 shall be the only acceptable format. A copy is available on the department web site. ***Final inspection shall not be scheduled*** *by the Bureau without this form. Partial or incomplete forms shall not be accepted.*

Fire Department Connections

Fire Department Connections-Check with the Bureau for required connection type, please do not assume.

Standpipes

All standpipe systems shall be installed in compliance with 2021 NFPA 14. Standpipes shall be equipped with 2 ½" to 1 ½" reducers. The 2 ½" component shall be provided with National Standard threads and the 1 ½" component shall be equipped with iron pipe thread. Contact the bureau for specific riser and connection points location requirements prior to commencement of work.

Fire Pumps

All fire pumps shall be installed in compliance with 2022 NFPA 20. They shall be directly accessible from the exterior. Fire pumps shall be supervised for pump running (shall report by point, as a fire alarm) and supervisory alarms for power failure, phase loss/reversal and all other off normal conditions. A permanent sign with engraved letters 1"+ high, in a contrasting color, shall be located adjacent to the fire alarm control panel and remote annunciators indicating the fire pump location. Contact the bureau for approval.

Sprinkler Backflow Preventers

These require a licensed plumber to obtain a plumbing permit to install new. You must have the appropriate certificate to test, repair or replace one per NH RSA 485:11. Any questions about back flow's, please contact the inspections department at 603.610.7342