

Fire & Life Safety Department

FIRE SPRINKLER UNDERGROUND REQUIREMENTS

MINIMUM INSPECTION REQUIREMENTS

1. Visual Inspection
2. Piping Flush
3. Hydrostatic Pressure Test
4. Final Inspection

VISUAL INSPECTION

1. Visual inspection of the installation shall be performed prior to cover. If the piping and joints are covered prior to inspection, you will be required to uncover the piping for inspection, regardless of cover. NO EXCEPTIONS.
2. All underground piping and joints must be uncovered and exposed, with labeling of the pipe legible from grade.
3. All thrust blocks will be visually inspected and must be uncovered and exposed to grade.
4. Pipe depth of bury (48" min.) shall be measured and verified.
5. All ductile iron, retaining rods, and other non-plastic components shall be externally coated for corrosion and poly-rapped.
6. Embedment material shall be inspected and comply with the approved plans.

HYDROSTATIC PRESSURE TEST

1. All new fire service mains shall be tested hydrostatically at not less than 200 psi for a minimum of two hours, or at 50 psi pressure in excess of the maximum static pressure when the maximum required static pressure exceeds 150 psi.
2. Hydrostatic test of the fire sprinkler underground lines shall be performed as per 2019 NFPA 24 (Sec. 10.10.2.2).
3. All piping must be exposed, with all joints and thrust blocks exposed, labeling of the pipe must be visible and turned upward.
4. Hydrostatic test shall be made by the installing contractor.
5. The piping will be allowed to be center loaded to prevent pipe movement.
6. Any pressure loss or leaks will result in a failed inspection.
7. Any pressure gains will result in a failed inspection.
8. Any failed hydrostatic test will require all previously approved buried piping to be uncovered for re-inspection.
9. RME-U or RME-G shall be present for this testing.

PIPING FLUSH

1. All underground piping shall be thoroughly flushed prior to connecting to the system risers or other aboveground piping system(s). If the underground piping is connected to the system riser, "stacked", both the overhead and underground piping will be required to be flushed in accordance with the requirements of 2019 NFPA 13 and NFPA 24.
2. Flushing shall be completed prior to any overhead fire sprinkler inspections.

3. Minimum flow rate shall not be less than the water demand of the rate of the system, or not less than that necessary to provide a velocity of 10 ft/s, whichever is greater. Flushing shall continue until flow is clear of debris.
4. Flush shall be made by the installing contractor in the presence of a representative of the Fire & Life Safety Department.
5. Proper methods and equipment to perform the flush must be used. All piping used to flush must be properly secured or restrained. Field Fire Inspector must approve of flushing method and equipment.

FINAL INSPECTION

1. As-Built plans, if necessary, shall be submitted and approved prior to final inspection.
2. All inspections shall be 100% completed and passed, if additional inspections are required.

GENERAL SUBMITTAL REQUIREMENTS

1. Plans approved by the Fire & Life Safety Department give authorization for installation. Final approvals are subject to field verification. Any approval issued by the Fire & Life Safety Department does not release the contractor or property owner from the responsibility of full compliance with all applicable codes and ordinances.
2. All installations shall comply with the approved plans. Any deviation from the approved plans requires a re-submittal to the Fire & Life Safety Department.
3. All underground piping shall be a minimum of (C900) Class 200 / DR 14 or better. Embedment shall be No. 4 crushed stone. Depth of Bury - minimum is 48 inches from grade to the top of the pipe. All underground lines begin at the point of connection to the circulating public/private water main and terminate at the top of the spigot piece 1 ft. above the finished floor and no more than 5 ft. inside the building.

All modifications to an automatic sprinkler system, required by the Fire & Life Safety Department, shall conform to the 2021 International Fire Code and/or 2021 NFPA 101 & NFPA 1.