

**MCKINNEY FIRE DEPARTMENT
FIRE MARSHAL'S OFFICE**

FIRE SPRINKLER UNDERGROUND INSPECTION REQUIREMENTS

MINIMUM REQUIRED REQUIREMENTS

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

VISUAL INSPECTION

5. Visual inspection of the installation shall be performed **PRIOR TO** cover. If the piping and joints are covered prior to installation, you will be required to uncover the piping for inspection, regardless of cover. **NO EXCEPTIONS.**
6. All underground piping and joints must be uncovered and exposed, with labeling of the pipe legible from grade.
7. All thrust blocks will be visually inspected and must be uncovered and exposed to grade.
8. Depth of bury of the pipe shall be measured and verified.
9. All ductile iron, retaining rods, and other non-plastic components shall be externally coated for corrosion and poly-wrapped.
10. Embedment material shall be inspected and comply with the approved plans.

HYDROSTATIC PRESSURE TEST

11. All new fire service mains shall be tested hydrostatically at not less than 200 psi pressure for a minimum or two hours, or at 50 psi pressure in excess of the maximum static pressure when the maximum required static pressure exceeds 150 psi.
12. Any pressure loss or leaks will result in a failed inspection.
13. Any pressure gains will result in a failed inspection.
14. All piping must be exposed, with all joints and thrust blocks exposed, and labeling of the pipe must be visible and turned upward.
15. Hydrostatic test shall be made by the installing contractor.
16. Hydrostatic test of the fire sprinkler underground lines shall be required at the same time the visual inspection is performed. **NO EXCEPTIONS.**
 - a. The piping will be allowed to be center loaded to prevent pipe movement.
17. Hydrostatic test shall be conducted prior to the cover of the underground pipe. If a hydrostatic test is completed after the piping system is covered and fails, the piping will be required to be uncovered, regardless of cover.

PIPING FLUSH

18. 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 NFPA 13 and NFPA 24.
19. Flushing shall be completed prior to any overhead fire sprinkler inspections.
20. Minimum flow rate shall not be less than the water demand of the rate of the system, or not less than that

FIRE SPRINKLER/SERVICE UNDERGROUND INSPECTION REQUIREMENTS

necessary to provide a velocity of 10 ft/s, whichever is greater.

21. Flush shall be made by the installing contractor in the presence of a representative of the McKinney Fire Marshal's Office.
22. Proper methods and equipment to perform the flush must be used. All piping used to flush must be properly secured or restrained. Hoses may not be used. Field Fire Inspector must approve of flushing method and equipment.

TABLE 14.1
**Flow Required to Produce a Velocity of
10 ft/s in Pipes**

Nominal Pipe Size (in.)	Flow Rate (gpm)
4	390
6	880
8	1560
10	2440
12	3520

FINAL INSPECTION

23. As-Builts, if necessary, shall be submitted and approved.
24. All inspections shall be 100% completed and passed.

GENERAL SUBMITTAL REQUIREMENTS

25. Each submittal shall have a completed McKinney Fire Department Plan Review Permit Application.
26. Plans approved by the Fire Marshal's Office give authorization for installation. Final approvals are subject to field verification. Any approval issued by the Fire Marshal's Office does not release the contractor or property owner from the responsibility of full compliance with all applicable codes and ordinances.
27. All fire department inspection forms and permits shall be kept on the job site until final inspection.
28. All installations shall comply with the approved plans. Any deviation from the approved plans requires a re-submittal to the Fire Marshal's Office.

All modifications to an automatic sprinkler system for the purposes of this guideline and any other guidelines or requirements of the Fire Department shall conform to the 2015 International Fire Code, as adopted and amended by City of McKinney.

This guide does not replace, nor supersede any codes and/or ordinances adopted by the City of McKinney, or determinations and positions of the Fire Chief or Fire Marshal.