



# MOBILE FIRE - RESCUE DEPARTMENT FIRE CODE ADMINISTRATION

## Sprinkler System NFPA 13 Acceptance Inspection

**Facility Name:** \_\_\_\_\_

**Facility Address:** \_\_\_\_\_

**Building Code Permit Number (if applicable) BLD- 201\_\_ - \_\_\_\_\_**

Reference numbers following checklist statements represent an NFPA code section unless otherwise specified.

1. \_\_\_\_ Approved drawing and piping certification documents are on-site.
2. \_\_\_\_ Underground supply testing and flushing is witnessed and underground piping certification is provided. Flushing requirements shall be 880 gpm for 6 in., 1,560 gpm for 8 in., 2,440 gpm for 10 in., 3,520 for 12 in.
3. \_\_\_\_ Hydrostatic test: wet system, 200 psi for 2 hours and it should include the Fire Department Connection (FDC) piping.
4. \_\_\_\_ Hydrostatic test: dry and double interlock system: 200 psi for 2 hours and a 40 psi air leak test for 24 hours with less than 1.5 psi loss, 24.2.2.
5. \_\_\_\_ Double back flow prevention device is installed and forward flow tested, 24.2.5.
6. \_\_\_\_ Systems subject to pressures greater than 150 psi shall be hydrostatically tested at 50 psi above system working pressure, 24.2.1.2.
7. \_\_\_\_ Operational test of the dry-pipe valve is performed and the quick opening device (500+ gallon systems) is tested, 750+ gallon system must trip within the time provided in Table 7.2.3.6.1, 24.2.3.2.

8. \_\_\_\_ PRVs are tested at maximum and normal inlet pressures or as specified by the manufacturer, the supply pressure is recorded on the certificate, a relief valve is on the discharge side and gauges on each side of the valve, 24.2.4.

### **Riser Room**

9. \_\_\_\_ The main drain is routed to the exterior with a turned down elbow or an inside drain capable of handling the water flow. A flow test is performed. The main drain pipe is  $\frac{3}{4}$  in. or greater for a riser up to 2 in.,  $1\frac{1}{4}$  in. or greater for a riser  $2\frac{1}{2}$  in. to  $3\frac{1}{2}$  in., 2 in. for a riser 4 in. or greater, 8.16.2.4.2, 24.2.3.4.
10. \_\_\_\_ Water control valves and flow switches are monitored and tested for all occupancies with 20 or more sprinklers, 903.4, 24.2.3.1.
11. \_\_\_\_ Paddle-type water flow is not allowed for dry, pre-action or deluge systems.
12. \_\_\_\_ 24-hour monitoring service agency received signals.
13. \_\_\_\_ **Water flow alarm is tested with power off to ensure battery back up,** And initiates an alarm within 5 minutes, located above the FDC, and it is properly signed, 24.2.3.1.
14. \_\_\_\_ Water supply valves are indicating type and supervised by one of 4 means, 8.16.1.1.2.1.
15. \_\_\_\_ High-rise: each floor system shall have a separate water flow device with a test connection and be connected to the fire alarm system, 8.16.1.1.2.2 and 8.17.1.6
16. \_\_\_\_ Permanent system identification signs for each control valve and what portion of the building each valve serves are provided, 6.7.4.
17. \_\_\_\_ Permanent label with hydraulic calculations is attached to the riser, 24.5.1.
18. \_\_\_\_ Riser is supported by hanger or attachment, for multistory at the lowest level, each alternate level, above and below offsets, and at the top, 9.2.5.4.
19. \_\_\_\_ Gauges are above and below riser check valve, 7.1.1.2.

### **Fire Department Connection (FDC)**

20. \_\_\_\_ FDC lock-capped and permanently signed with system type, PSI required, and area or building served, 8.17.2.4.7.

21. \_\_\_\_ FDC has check valve and drip valve, 8.17.2.5.
22. \_\_\_\_ FDC for wet single riser system connects to the system side, 8.17.2.4.1.
23. \_\_\_\_ FDC for wet multi-riser system connects after the main system shutoff valve, 8.17.2.4.
24. \_\_\_\_ FDC for dry system connects between the indicating and dry-pipe valves, 8.17.2.4.2. Ensure that the minimum clearance to the sides, front. And, height are provided in accordance with IFC 912.3.2.
25. \_\_\_\_ FDC is a minimum 4 in. pipe unless hydraulically calculated but not less than the riser dimension; 18 in. to 48 in. above grade, and properly supported, 8.17.2, A.8.17.2.

### **Sprinklers**

26. \_\_\_\_ Extra sprinklers: there are no less than 6, some of each type: 6 per 300, 12 per 300 to 1000, and 24 per 1000+ and a wrench are provided, 6.2.9.
27. \_\_\_\_ Sprinkler head and wrench location are the same as the plans.
28. \_\_\_\_ Sprinklers shall be a minimum of 4 in. from the wall and be properly spaced, 8.6.3.3.
29. \_\_\_\_ Sprinkler heads have a guard if subject to damage.
30. \_\_\_\_ Sprinkler heads are not painted or covered.
31. \_\_\_\_ ESFR deflectors are placed in accordance with 8.12.4.
32. \_\_\_\_ EFSR sprinklers are at least 1 ft. horizontally from the bottom edge of bar joist or open truss and at least 36 in. above the top of the storage level, 8.12.6.
33. \_\_\_\_ Proper type and temperature sprinklers are used and match plans.
34. \_\_\_\_ Escutcheon plates are installed.

### **Pipe: Hangers, Seismic, and Penetrations**

35. \_\_\_\_ Piping layout and size are the same as the plans.
36. \_\_\_\_ Flexible sprinkler hose fitting bends are within manufacturer specifications, 9.2.1.3.3.

37. \_\_\_\_\_ Flexible couplings may be used for pipe 2½ in. or larger at structural separations, within 24 in. of expansion joints, within 24 in. of the top and bottom of all risers, within 12 in. above and below a floor penetration in multistory buildings, and on both sides of and within 1 ft. of concrete or masonry wall penetrations unless pipe clearance is provided, 9.3.2.
38. \_\_\_\_\_ Minimum clearance around pipes: holes are 2 in. larger than pipe 1 in. to 3½ in., 4 in. for pipe 4 in. and larger. Clearance is not required through sheetrock which is not required to be fire rated nor when flexible couplings are used on each side and within 1ft. of penetration. A listed fire stop system shall be used for penetration holes, the system listing sheet is available, 9.3.4.
39. \_\_\_\_\_ A 6 ell seismic separation assembly or listed flexible pipe assembly is provided at building seismic joints, 9.3.3.
40. \_\_\_\_\_ Lateral sway bracing are spaced in accordance with the plans and calculations for all mains, cross mains, and branch lines 2½ in. and larger. Bracing is provided for the last length of pipe but within 6 ft. of the end of a feed or cross main. Bracing is required unless all the pipe is supported by rods less than 6 in. or by 30° wrap-around u-hooks for any size pipe, 9.3.5.3.
41. \_\_\_\_\_ Longitudinal sway bracing is a maximum of 80 ft. for mains and cross-mains, check spacing on the plans, 9.3.5.4.
42. \_\_\_\_\_ A 4-way sway brace is provided at least every 25 ft. and at the top of each riser, 9.3.5.5.
43. \_\_\_\_\_ Longitudinal and lateral bracing is provided for each run of pipe between the change of pipe direction unless the pipe run is less than 12 ft., 9.3.5.11.3.
44. \_\_\_\_\_ Sprigs greater than 4 ft. are restrained from lateral movement, 9.3.6.6.
45. \_\_\_\_\_ Splayed seismic bracing wire, wrap-around u-hooks, or lateral sway bracing shall not exceed 30 ft. spacing and are used to restrict sprinkler movement that could impact the building, equipment or finishing materials, 9.3.6.
46. \_\_\_\_\_ Restraining straps are on all C-clamps and the strap is bolted through if there is not a lip on the beam, 9.3.7.1.
47. \_\_\_\_\_ Branch lines have one hanger per section of pipe, see exceptions, 9.2.3.2.

48. \_\_\_\_ Mains and cross-mains have one hanger between each branch line and at the end of the main, 9.2.4.
49. \_\_\_\_ The maximum distance between the end sprinkler and hanger is 36 in. for 1 in. pipe, 48 in. for 1¼ in., and 60 in. for 1½ in. pipe and greater, 9.2.3.4.1.
50. \_\_\_\_ Risers in multi-story buildings have supports at the lowest level, at each alternate level, below offsets, and at the top, 9.2.5.4.
51. \_\_\_\_ Hangers are not within 3 in. of upright sprinklers, 9.2.3.3.

### **Dry and Pre-action Systems**

52. \_\_\_\_ Dry system compressor with a minimum ½ in. fill line, pressure gauges, and relief valve that function automatically and fill the system within 30 minutes, 7.2.6.2.2.
53. \_\_\_\_ Pre-action and deluge systems are tripped by activation of the detection system.
54. \_\_\_\_ Riser room is heated, 7.2.5.2.
55. \_\_\_\_ Air pressure is set at least 20 psi above the trip pressure, 16.2.2.
56. \_\_\_\_ Dry and pre-action systems are supervised and water reaches furthest point within the time period provided on the plans or water delivery calculations in accordance with Table 7.2.3.6.1.
57. \_\_\_\_ Pre-action systems exceeding 20 sprinklers automatically supervise (constant monitoring) pipe pressure (maintain at least 7 psi) and detection devices, 7.3.2.4.

**Acceptance Inspection**    \_\_\_\_ / \_\_\_\_ / 20\_\_\_\_    \_\_\_\_\_

**Fire Code Administration Staff Captain**