

IDAHO STATE FIRE MARSHAL'S OFFICE

NFPA 13 Sprinkler System Acceptance Inspection

2018 IFC and 2019 NFPA 13

Date of Inspection: _____ Permit Number: _____

Business/Building Name: _____ Address of Project: _____

Contractor: _____ Contractor's Phone: _____

Pass | Fail | N/A

1. _____ | _____ | _____ Approved drawing and above-ground 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., have them pitot and calculate that flow and confirm the velocity is at least 10 ft/sec.
3. _____ | _____ | _____ Hydrostatic test: wet system, 200 psi for 2 hours and it should include the 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, 28.2.2.1.
5. _____ | _____ | _____ Double back flow prevention device is installed and forward flow tested, 28.2.5.1.
6. _____ | _____ | _____ Systems subject to pressures greater than 150 psi shall be hydrostatically tested at 50 psi above system working pressure, 28.2.1.3.
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, 28.2.4.3.

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., $\frac{1}{4}$ 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, 16.10.4.2.
10. _____ | _____ | _____ Water control valves and flow switches are monitored and tested for all occupancies with 20 or more sprinklers, 903.4, 28.2.3.1.1, 16.11.2.1.
11. _____ | _____ | _____ Paddle-type water flow is not allowed for dry, preaction or deluge systems.
12. _____ | _____ | _____ 24-hour monitoring service agency received signals.
13. _____ | _____ | _____ Water flow alarm is tested 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.

FDC

- 20. _____ | _____ | _____ FDC 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 multiriser 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 300 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 crossmains, 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 crossmains 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 1in. 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 Preaction 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. _____ | _____ | _____ Preaction 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 preaction 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. _____ | _____ | _____ Preaction systems exceeding 20 sprinklers automatically supervise (constant monitoring) pipe pressure (maintain at least 7 psi) and detection devices, 7.3.2.4.

