

SANTA ROSA FIRE DEPARTMENT

FIRE PREVENTION BUREAU

INSPECTION CHECKLIST

July 1, 2010



RESIDENTIAL FIRE SPRINKLERS NFPA 13D

Address:		Permit #:
Inspector:	Date Inspected:	Status:
Inspector:	Date Inspected:	Status:
A-Approved, R-Re-inspection Required		

This Checklist outlines general requirements. Information contained herein applies to typical instances and may not address all circumstances.

FILE REVIEW

1. **REVIEW FILE** – Is there an alternate method application approved and are the conditions incorporated?
2. **REVIEW PLANS, PLAN NOTES AND FD APPROVAL LETTER**

REQUIRED INSPECTIONS

3. **UNDERGROUND** – NFPA 13D, An examination of the underground to determine that the calculated pipe diameter and water meter size are provided.
4. **OVERHEAD HYDROSTATIC** – NFPA 13D, System shall be pressurized at 200 psi for two hours. Gauge shall be marked upon pressurization.
5. **FIRE SPRINKLER FINAL** - NFPA 13D, A main drain, inspector test and final walkthrough of sprinkler coverage shall be performed.

GENERAL

6. Approved plans are on site

VERIFY INSPECTION REQUIREMENTS

Inspections in addition to the two (2) inspections allowed by permit will to be charged for the additional inspections.

7. Verify that the water supply configuration, including the underground line and meter, match the approved plans. The underground supply, including lateral size, meter size and pipe run to the base of the riser shall be the same as the plans submitted for a sprinkler permit.
8. Meter Size – City Water Standard 863 & 865. For one and two family dwellings, ensure the meter size and the lateral (corporation stop to meter box) is of sufficient size to supply a residential fire sprinkler system. Generally, 1-1/2 inch is sufficient for one and two family dwellings.

- | | Y | N | |
|-----|--------------------------|--------------------------|---|
| 9. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.1.1 (*) - Each system shall have an indicating ball style brass control valve at the base of the riser that controls both the sprinkler system and domestic water. The valve shall be installed a minimum 6" above grade and easily accessible. A separate shut-off valve for the domestic water may be installed on the system side of the control valve. Other than the water meter shut-off valve no other system control valves are permitted including valves on a backflow device. All valves shall be signed. |
| 10. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.1.1.1 (*) - Sprinkler system has a single soft seated check valve installed on the system side of the control valve. Unless approved by the fire department, no additional check valves or pressure reducing valves shall be installed on the sprinkler system. If backflow devices are required by the water purveyor, the device shall be installed before the domestic connection and be reflected in the hydraulic calculations. |
| 11. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.3.2 - A pressure gauge shall be installed on the riser. |
| 12. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.2.1. - A drain and test connection are provided. |
| 13. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.2.4. - A water flow test connection is provided. The test connection shall be in a hydraulically remote location unless a combination drain/test valve is provided at the riser. |
| 14. | <input type="checkbox"/> | <input type="checkbox"/> | Verify that the hydrostatic test pressure is at 200 psi, the pump disconnected and the gauge has been marked. |

PIPING

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|-----|--------------------------|--------------------------|---|
| 15. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.4.1 - Listed pipe is supported in accordance with any listing limitations. |
| 16. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.4.2 Pipe that is not listed, and listed pipe with listing limitations that do not include piping support requirements, shall be supported from structural members using support methods comparable to those required by applicable local plumbing codes. |
| 17. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.4.3 Piping laid on open joists or rafters shall be supported in a manner that prevents lateral movement. |
| 18. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.4.4 Sprinkler piping shall be supported in a manner that prevents the movement of piping upon sprinkler operation. |
| 19. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.7 - Pipes in attics are adequately insulated. |
| 20. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.3.3 - Antifreeze system is installed in accordance with the approved set of plans. |
| 21. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 5.2.2 - CPVC fire sprinkler pipe may be used. All materials shall be installed per their listing requirements. CPVC piping is acceptable for use in a garage when it is installed in the following manner: <ul style="list-style-type: none">○ The piping is installed above a smooth flat horizontal ceiling.○ The entire ceiling and all the walls are covered with a minimum of 1/2 inch plywood or 3/8 inch gypsum board. |

SPRINKLERS

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|-----|--------------------------|--------------------------|---|
| 22. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 4.2.3 - Sprinkler heads are not painted or covered or blocked. |
| 23. | <input type="checkbox"/> | <input type="checkbox"/> | Proper type and temperature sprinklers are used. |

- | | Y | N | |
|-----|--------------------------|--------------------------|---|
| 24. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.5.7 - Escutcheon plates are installed and pendent/upright deflectors are within 1in. to 4 in. from the ceiling, sidewalls are within 4 in. to 6 in. from the ceiling or all are per their listing. |
| 25. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.2.1.3 - Pendent and upright deflectors in closets can be installed within 12 in. of the ceiling. |
| 26. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.6.8 (*) - Sprinkler protection for covered porches and balconies, adjacent to kitchens and other covered areas that could accommodate the use of portable cooking equipment. |
| 27. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.6 - Sprinklers are in all areas as shown on the approved set of plans. |
| 28. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.1.3 - Spacing between sprinklers does not exceed 12 ft., sprinklers are not greater than 6 ft. from a wall, and sprinklers are not within 8 ft. of each other unless listing allows it. |
| 29. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.1.3 (*) Sprinklers in the garage are spaced at a maximum of 130 square feet per each sprinkler head. |
| 30. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.6.1 - Sprinklers in all areas of the structure including: |
| 31. | <input type="checkbox"/> | <input type="checkbox"/> | Attached garage (*) |
| 32. | <input type="checkbox"/> | <input type="checkbox"/> | Attic Spaces (as described below*) |
| 33. | <input type="checkbox"/> | <input type="checkbox"/> | Crawl Spaces (as described below*) |
| 34. | <input type="checkbox"/> | <input type="checkbox"/> | Closets (as described below*) |
| 35. | <input type="checkbox"/> | <input type="checkbox"/> | Under combustible balconies (*) |
| 36. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.6.4(*): Full sprinkler coverage provided in attached garages. Attached carports shall be protected by coverage along the separation wall between the dwelling unit and carport. |
| 37. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.6.5 (*) - Sprinklers may be omitted from attics which are not intended for living purposes or storage provided that coverage is installed above the attic access and above any furnace or air handling units. Any attic areas or under-floor areas used or intended to be used for storage shall be provided with full coverage using sprinklers installed in accordance with their listing. The number of sprinklers to be calculated in these areas shall be the two most remote sprinklers. |
| 38. | <input type="checkbox"/> | <input type="checkbox"/> | A pilot sprinkler shall be provided above any attic access openings. |
| 39. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 8.6.4 and 8.6.5 (*) - Garages and small enclosures containing heat producing devices (i.e. furnaces, hot water heater, etc.) may be standard type with intermediate temperature rating within the vicinity of the hazard. |

SIGNAGE

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| 40 | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 6.3 (*) - Signs provided for the system: <ul style="list-style-type: none">○ A permanent plate labeled “INSPECTOR’S TEST/MAIN DRAIN” securely affixed at the inspector’s test/main drain.○ At the system control valve, a permanent plate which reads “WARNING: THE WATER SYSTEM FOR THIS HOME SUPPLIES A SPRINKLER SYSTEM THAT DEPENDS ON CERTAIN FLOWS AND PRESSURES TO FIGHT A FIRE. DEVICES THAT RESTRICT THE FLOW OR PRESSURE SUCH AS PRESSURE REDUCERS AND WATER SOFTENERS SHALL NOT BE ADDED TO THE SYSTEM WITHOUT A REVIEW OF THE SYSTEM BY A |
|----|--------------------------|--------------------------|---|

FIRE PROTECTION SPECIALIST. LEAVE VALVE IN THE FULLY OPEN POSITION AT ALL TIMES.”

- Hydraulic calculation plate provided and permanently attached to the riser, which indicates the system demand and pressure.

ALARMS

- | | Y | N | |
|-----|--------------------------|--------------------------|--|
| 41. | <input type="checkbox"/> | <input type="checkbox"/> | Title 24 CFC 510.1 - Alarms installed adjacent to the system riser and include a sign that reads “ FIRE ALARM – CALL 911 ” or equivalent language. |
| 42. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.2.4 and 7.6. – An exterior notification appliance shall be placed in a location to permit notification in sleeping areas. |
| 43. | <input type="checkbox"/> | <input type="checkbox"/> | An inspector’s test connection is provided. The outlet shall be in a remote location unless a combination “drain/test” valve is installed at the riser. If a hose bib is utilized, the hose threads shall be disabled. The outlet shall be supplied with an inspector’s test sign. |

TESTING

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|-----|--------------------------|--------------------------|--|
| 44. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 4.3.1 and 4.3.2 - All piping and attached appurtenances subjected to system working pressure hydrostatically tested. Piping hydrostatically tested at 200 psi. The piping shall be exposed for the test and the system maintained at pressure without loss for two hours. |
| 45. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.1.1 - System control valve for both the sprinkler and domestic systems is on, operable and secured. |
| 46. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 7.2.1- Operate the drain valve on the system side of the control valve and record the static and residual pressure. |
| 47. | <input type="checkbox"/> | <input type="checkbox"/> | Contractor to open the inspectors test valve – record the number of seconds until alarm activation, must be >90 seconds. |
| 48. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 13D 4.3.1 - External alarm operational. |

An (*) indicates a standard adopted by Sonoma County Fire Authorities for enforcement within those jurisdictions.