

# SANTA ROSA FIRE DEPARTMENT

## FIRE PREVENTION BUREAU PLAN REVIEW CHECKLIST

July 1, 2010



### STANDPIPE SYSTEMS

<b>Address:</b>		<b>Permit #:</b>
<b>Inspector:</b>	<b>Date Inspected:</b>	<b>Status:</b>
<b>Inspector:</b>	<b>Date Inspected:</b>	<b>Status:</b>
<b>A-Approved; AC-Approved w/comments; I-Incomplete; D-Denied</b>		

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

#### CODE REFERENCES

2007 California Fire Code (CFC), Chapter 9 Section 905  
National Fire Protection Association (NFPA) 14

#### REQUIRED INSPECTIONS

1. Rough and Hydrostatic Inspection(s)
2. Sprinkler Final Inspection (including flow test)

#### FILE REVIEW

- |    | <b>Y</b>                 | <b>N</b>                 |  |
|----|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Is there an alternate method application approved                          |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Are there any special requirements or AM&M proposals?                      |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Permit fees entered in Permits Plus.                                       |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Contractor shall provide, or have on file, a current Contractor's License. |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | Name and address of project  |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | Contractor's name, address, and telephone number.                          |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | Three (3) sets of scaled plans and specifications                          |

#### MINIMUM INFORMATION

8.   NFPA 14 - Class of standpipe system and the type of standpipe in accordance with 5.2 and 5.3.
9.   NFPA 14 – 8.1 – Scale: a common scale is used and the plan information shall be clear and legible, 8.1.
10.   NFPA 14 - Plot plan showing supply piping and pipe size from the water source to the building.

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- | <b>Y</b>                     | <b>N</b>                 |   |
|------------------------------|--------------------------|---|
| 11. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 - Equipment symbol legend and compass point.  |
| 12. <input type="checkbox"/> | <input type="checkbox"/> | CFC – 905 –The correct standpipe class is provided for the occupancy and is in accordance with IFC 905. |
| 13. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 - Building dimensions, height, and the location of the fire department connection.              |

**PIPE**

- |                              |                          |  |
|------------------------------|--------------------------|--|
| 14. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.2.3 –The material standard and pipe wall thickness (schedule) for steel pipe assembled using welded or rolled groove method shall comply with the requirements in Section 4.2.3. |
| 15. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.2.4 –Steel pipe assembled using threading shall comply with the material standard and pipe wall thickness requirements in Section 4.2.4.   |
| 16. <input type="checkbox"/> | <input type="checkbox"/> | Piping shall be supported and anchored in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, 6.4.  |

**VALVES**

- |                              |                          |   |
|------------------------------|--------------------------|---|
| 17. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.5.1 –Valve locations are detailed and data sheets are provided.   |
| 18. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.5.1 –The type of indicating or nonindicating shall comply with the design and operational requirements in section 4.5.1.                                    |
| 19. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 6.2.1 –Connection to the water supply is equipped with the appropriate valve(s) as specified in 6.2.1.  |
| 20. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 6.2.2 –Gate valves are provided to permit the isolation of standpipes without interrupting the supply to other standpipes from the same water source.         |
| 21. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 6.2.5.1 –Combined systems: connection from standpipe to sprinkler system has an individual control valve and check valve detailed.                            |
| 22. <input type="checkbox"/> | <input type="checkbox"/> | CFC 905.9 – Electric supervision of the valves for water supply, isolation control, and valves in feed mains is provided in accordance with IFC 905.9.                  |
| 23. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 6.2.8 –All valves are marked or otherwise identified in accordance with the requirements of Section 6.2.8 to indicate the portion of the system they control. |

**HOSE AND CABINETS**

- |                              |                          |   |
|------------------------------|--------------------------|---|
| 24. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.6 – Specification sheets for hose cabinets, racks and hose are provided.  |
| 25. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.6.2 – Hose for Class II and III systems is listed and complies with the diameter and length requirements of Section 4.6.2.      |
| 26. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.6.4 – Nozzles for Class II service are listed.  |
| 27. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.7 – Hose valves and connections comply with the requirements in Section.  |
| 28. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.6.1.1.2 – Hose cabinets are provided with signage and operating instructions.   |
| 29. <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 4.6.1.2 – Cabinets with glass shall have a glass breaking device secured to the cabinet, which is detailed or noted on the plans. |

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30.  **Y**     **N**    NFPA 14 – 4.6.1.3 – When a hose cabinet penetrates a fire-resistive assembly, the assembly shall be protected in accordance with CBC 712.3.2 requirements for membrane penetrations.

**HOSE CONNECTIONS**

31.         NFPA 14 – 7.2.1 – Approved pressure regulating device is provided when the residual pressure exceeds the pressure specified in 7.2.1, detail and specification sheets are provided.
32.         NFPA 14 – 7.3.1 – Hose connections and hose stations are unobstructed and shall be located above the floor in compliance with.
33.         CFC 905.4 – The Class I standpipe is detailed showing outlets locations in compliance with 7.3.2 and CFC 905.4.
34.         CFC 905.4 – Each Class I standpipe has a roof outlet or an outlet at the highest landing of stairway that has roof access for a roof with less than a 4/12 slope.
35.         NFPA 14 – 7.3.3 – The Class II standpipe is detailed showing outlets locations in compliance with 7.3.3.
36.         CFC 905.6 – Class III standpipe outlets are located the same as Class I and II outlets, including the roof outlets, 7.3.4.
37.         CFC 905 – When required, Class II and III standpipe systems are auto- or semiautomatic-wet systems as specified in 5.4.3 and IFC 905.
38.         CFC 904.5 – An extra outlet is detailed and provided for the most hydraulically remote standpipe for testing purposes when the roof has less than a 4/12 slope.
39.         NFPA 14 – 4.8.2 – Each FDC has swivel fittings that comply with 4.8.2.
40.         NFPA 14 – 6.3.5.2 – Each fire department hose connection is provided signage in accordance with 6.3.5.2.
41.         NFPA 14 – 6.3.5.2.2 – If the FDC also supplies the sprinkler system then a sign indicating the system pressure and demand are detailed.
42.         NFPA 14 – 6.3.5.3 – When a portion of a building is served by an FDC, a sign is detailed to specify which part of the building is being served.
43.         NFPA 14 – 6.3.2 – Each FDC is provided with a listed check valve.
44.         NFPA 14 – 6.3.3 – FDC connections to a specific type of system are located and detailed relative to the control valves in accordance with the criteria listed in 6.3.3.
45.         NFPA 14 – 6.3.4 – For freezing environments, an automatic drip valve is detailed between the check valve and the FDC.
46.         NFPA 14 – 6.3.5.1 – FDC location is detailed on the street or response side of the building and signage detail complies with 6.3.5.1.
47.         NFPA 14 – 6.3.6 – The FDC height above finish grade is detailed and complies with 6.3.6.
48.         NFPA 14 – 7.13.1 – The number of FDCs required for Class I or III standpipe system shall comply with 7.13.1.

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- | Y   | N                        |   |
|-----|--------------------------|---|
| 49. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.13.2 – Each high-rise building zone is provided the number of remotely located FDCs in accordance with 7.13.2. |

**PROTECTION**

- |     |                          |   |
|-----|--------------------------|---|
| 50. | <input type="checkbox"/> | <input type="checkbox"/> CFC 905.4.1 – Class I and III standpipes and lateral piping supplied from the standpipes are located in stairways or are protected in accordance with 6.1.2.2, CFC 905.4.1, and 905.6. |
| 51. | <input type="checkbox"/> | <input type="checkbox"/> CFC 905.4.1– Class I and III lateral piping to hose connections need not be protected in sprinklered buildings, 6.1.2.2.1, CFC 905.4.1 and 905.6.                                      |
| 52. | <input type="checkbox"/> | <input type="checkbox"/> CFC 905.5.2 – Class II standpipes and risers need not be protected.  |
| 53. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 6.1.2.4 – Piping exposed to corrosive conditions is corrosion-resistant pipe or provided a protective coating, coating information is provided.                              |
| 54. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 6.1.1 – Dry standpipes are not concealed unless monitored in accordance with 6.1.1.  |
| 55. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 6.1.2.6.1 – If pipe must be installed under the building, details are provided to show method of protecting the pipe in accordance with 6.1.2.6.1.                           |
| 56. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 13 – 6.1.2.5 – Earthquake bracing is provided and detailed in accordance with NFPA13, 6.1.2.5.  |

**INTERCONNECTION**

- |     |                          |  |
|-----|--------------------------|--|
| 57. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.5.1 – Interconnection between two or more standpipes in the same building is detailed.  |
| 58. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.5.2 – Interconnection at the top of the building is detailed when water supply tanks are at the top of the building and check valves are located and detailed in accordance with 7.5.2. |

**DESIGN CRITERIA**

- |     |                          |   |
|-----|--------------------------|---|
| 59. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.7.1 – Each FDC for Class I and II standpipes are designed to provide the system demand, calculations are provided.   |
| 60. | <input type="checkbox"/> | <input type="checkbox"/> CFC 905 – When automatic or semiautomatic water supply is required by 5.4 and CFC 905 the standpipe system demand shall comply with 7.7.2 and calculations are provided. |
| 61. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.10.1.3 – Combination automatic sprinkler and standpipe systems shall be calculated in accordance with the requirements in Section 7.10.1.3.                  |

**HYDRAULIC DEMAND**

- |     |                          |  |
|-----|--------------------------|--|
| 62. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.10.1.2 – Class I and III standpipes: Calculations based on the criteria in Section 7.10.1.2 shall be hydraulically calculated to verify the minimum flow rates specified in Sections 7.10.1.1.1, 7.10.1.1.2, 7.10.1.1.3, or 7.10.1.1.4.1 are satisfied. |
| 63. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.10.2.2 – Class II standpipes: Calculations demonstrate the hydraulically most remote hose connection is supplied with the minimum water flow and pressure specified in 7.10.2.2.  |
| 64. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.10.3 – Maximum flow rate for each hose connection is in accordance with 7.10.3.   |
| 65. | <input type="checkbox"/> | <input type="checkbox"/> NFPA 14 – 7.8.2 – Pipe schedule standpipe system complies with Table 7.8.2.1. Pipe schedule designs are limited to buildings not classified as a high-rise and equipped with wet standpipe systems, 7.8.2.  |

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- |     | <b>Y</b>                 | <b>N</b>                 |  |
|-----|--------------------------|--------------------------|--|
| 66. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 7.12.1 – A drain risers are detailed is provided in accordance with 7.12.1 for a standpipe equipped with pressure-regulating devices 7.12.1. |
| 67. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 7.12.1.1 – The drain riser detail illustrates a tee as required in section 7.12.1.1.   |
| 68. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 7.12.2.1 – A drain valve and piping are detailed in accordance with 7.12.2.1.  |
| 69. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 9.3 – At least a 30 minute water supply is available for any class system.   |
| 70. | <input type="checkbox"/> | <input type="checkbox"/> | NFPA 14 – 7.9 –Standpipe zoning is designed, detailed, and comply with 7.9.  |