Mobile Fire-Rescue Department Bureau of Fire Prevention
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Standpipe System Plan Review

March 2010

Date of Review: ____/____/____ Permit Number: _____
Business/Building Name: _____Address of Project: _____
Designer Name: _____Designer's Phone: _____
Contractor: _____Contractor's Phone: _____
Occupancy Classification: Class: I ___II___ III___ Type: Dry___ Wet___ Combination___
IFC and 2003 NFPA 14

Worksheet Legend: OK = acceptable **N** = need to provide **NA** = not applicable
Numbers following worksheet comments represent a **NFPA code section** unless otherwise specified.

1. ____ 2 sets of drawings are provided.
2. ____ Equipment is listed for intended use, compatible with the system, and equipment data sheets are provided.

Minimum Information:

3. ____ Class of standpipe system and the type of standpipe in accordance with 5.2 and 5.3.
4. ____ Scale: a common scale is used and the plan information shall be clear and legible, 8.1.
5. ____ Plot plan showing supply piping and pipe size from the water source to the building.
6. ____ Equipment symbol legend and compass point.
7. ____ Correct, standpipe class is provided for the occupancy and is in accordance with IFC 905.
8. ____ Building dimensions, height, and the location of the fire department connection.

Pipe:

9. ____ 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. Steel pipe assembled using threading shall comply with the material standard and pipe wall thickness requirements in Section 4.2.4.
10. ____ Piping shall be supported and anchored in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, 6.4.

Valves:

11. ____ Valve locations are detailed and data sheets are provided, 4.5.1.
12. ____ Type of indicating or non-indicating shall comply with the design and operational requirements in Section 4.5.1.
13. ____ Connection to the water supply is equipped with the appropriate valve(s) as specified in 6.2.1.
14. ____ Gate valves are provided to permit the isolation of standpipes without interrupting the supply to other standpipes from the same water source, 6.2.2.
15. ____ Combined systems: connection from standpipe to sprinkler system has an individual control valve and check valve detailed, 6.2.5.1.

16. ____ Electric supervision of the valves for water supply, isolation control, and valves in feed mains is provided in accordance with IFC 905.9.
17. ____ 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:
18. ____ Specification sheets for hose cabinets, racks and hose are provided, 4.6.
19. ____ Hose for Class II and III systems is listed and complies with the diameter and length requirements of Section 4.6.2.
20. ____ Nozzles for Class II service are listed, 4.6.4.
21. ____ Hose valves and connections comply with the requirements in Section 4.7.
22._____ Hose cabinets are provided with signage and operating instructions, 4.6.1.1.2.
23. ____ Cabinets with glass shall have a glass breaking device secured to the cabinet, which is detailed or noted on the plans, 4.6.1.2.
24._____ When, a hose cabinet penetrates a fire-resistive assembly, the assembly shall be protected in accordance with IBC 712.3.2 requirements for membrane penetrations, 4.6.1.3.

Hose Connections:
25._____ Approved pressure regulating device is provided when the residual pressure exceeds the pressure specified in 7.2.1, detail and specification sheets are provided.
26._____ Hose connections and hose stations are unobstructed and shall be located above the floor in compliance with 7.3.1.
27._____ The Class I standpipe is detailed showing outlets locations in compliance with 7.3.2 and IFC 905.4.
28._____ 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, IFC 905.4.(5).
29._____ The Class II standpipe is detailed showing outlets locations in compliance with 7.3.3.
30._____ Class III standpipe outlets are located the same as Class I and II outlets, including the roof outlets, 7.3.4, IFC 905.6.
31._____ When, required Class II and III standpipe systems are auto- or semiautomatic-wet systems as specified in 5.4.3 and IFC 905.
32._____ 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, IFC 905.4.(5).

Fire Department Connection (FDC):
33._____ Each FDC has swivel fittings that comply with 4.8.2.
34._____ Each fire department hose connection is provided signage in accordance with 6.3.5.2.
35._____ If, the FDC also supplies the sprinkler system then a sign indicating the system pressure and demand are detailed, 6.3.5.2.2.
36._____ 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, 6.3.5.3.
37._____ Each FDC is provided with a listed check valve, 6.3.2.

38._____ 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.
39._____ For freezing environments, an automatic drip valve is detailed between the check valve and the FDC, 6.3.4.
40._____ FDC location is detailed on the street or response side of the building and signage detail complies with 6.3.5.1.
41._____ FDC height above finish grade is detailed and complies with 6.3.6.
42._____ Number of FDCs required for Class I or III standpipe system shall comply with 7.13.1.
43._____ Each, high-rise building zone is provided the number of remotely located FDCs in accordance with 7.13.2.

Protection:
44._____ 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, IFC 905.4.1, and 905.6.
45._____ Class I and III lateral piping to hose connections need not be protected in sprinklered buildings, 6.1.2.2.1, IFC 905.4.1 and 905.6.
46._____ Class II standpipes and risers need not be protected, IFC 905.5.2.
47._____ Piping exposed to corrosive conditions is corrosion-resistant pipe or provided a protective coating, coating information is provided, 6.1.2.4.
48._____ Dry standpipes are not concealed unless monitored in accordance with 6.1.1.
49._____ If piping is subject to freezing, it is detailed how water filled piping will be protected to maintain the water temperature in accordance with 6.1.2.3.
50._____ 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.
51._____ Earthquake bracing is provided and detailed in accordance with NFPA13, 6.1.2.5.

Interconnection:
52._____ Interconnection between two or more standpipes in the same building is detailed, 7.5.1.
53._____ 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:
54._____ Each FDC for Class I and II standpipes are designed to provide the system demand, calculations are provided, 7.7.1.
55. ____ When automatic or semiautomatic water supply is required by 5.4 and IFC 905 the standpipe system demand shall comply with 7.7.2 and calculations are provided.
56. ____ Combination automatic sprinkler and standpipe systems shall be calculated in accordance with the requirements in Section 7.10.1.3.

Hydraulic Demand:
57. ____ 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.

58. ____ 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.
59. ____ Maximum flow rate for each hose connection is in accordance with 7.10.3.
60. ____ 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.
61. ____ A drain risers are detailed is provided in accordance with 7.12.1 for a standpipe equipped with pressure regulating devices 7.12.1.
62. ____ Drain riser detail illustrates a tee as required in Section 7.12.1.1.
63. ____ Drain valve and piping are detailed in accordance with 7.12.2.1.
64. ____ At least a 30 minute water supply is available for any class system, 9.2 and 9.3.
65. ____ Standpipe zoning is designed, detailed, and complies with 7.9.

Additional Comments:

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Review Date: ____/____/____ Approved or Disapproved FD Reviewer:_____