

SANTA ROSA FIRE DEPARTMENT

FIRE PREVENTION BUREAU

INSPECTION CHECKLIST

July 1, 2010



HIGH RISE STRUCTURES EXCEEDING 75 FEET IN HEIGHT FIRE AND LIFE SAFETY SYSTEMS

Address:		Permit #:
Inspector:	Date:	Status:
Inspector:	Date:	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.

CODE REFERENCES

2007 California Fire Code (CFC), Chapter 3; Santa Rosa City Code 18-44

REQUIRED INSPECTIONS

Fire Sprinkler System Installation

- Rough and Hydrostatic Inspection(s)
- Sprinkler Final

Fire Alarm System

- Rough In Inspection
- Fire Alarm Final (including all components tied into the Fire Alarm)

Standpipe System(s) Installation

- Rough and Hydrostatic Inspection(s)
- Sprinkler Final Inspection (including flow test)

Fire Pump Installation

- Fire Sprinkler Final (Including flow test)

Fire Department Final

* Additional inspections may be required based on project design.

FILE REVIEW

- | | Y | N | |
|----|--------------------------|--------------------------|---|
| 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? |

Inspection Checklist
High Rise Greater than 75 Feet

4. **Y** **N** Verify all systems have been finalized prior to building final.

FIRE DEPARTMENT ACCESS

5. CFC 503.3 - Verify Building's address shall be plainly visible and legible from the street.
6. CFC 503.1 – Verify approved Fire Lanes needed are in place and maintained.
7. CFC 18-44 .502.1 - Verify access roads meet approved plans, are located minimum 10 feet and maximum 30 feet away from building and are at least 28 feet wide and have vertical clearance of 13 feet 6 inches.
8. CFC 506.1 - Verify KNOX or Supra box in place with appropriate labeled keys (Fire Alarm, Fire Control Room, Electrical/Mechanical Rooms, Roof Equipment Rooms, Main Access, etc...)

FIRE SPRINKLER AND STANDPIPE SYSTEM

9. CFC 903.2.10.3 - Verify sprinkler and standpipe system is under separate permit and accordance with approved plans (see Commercial Sprinkler System Checklist).
10. CFC 18-44.1414.3 – Verify operating sprinkler system on each floor prior to construction continuing to next floor. Is the fire pump in place (temporary or permanent) for construction past the third floor.
11. NFPA 13 – 403.5 – Verify each floor has own shutoff valve and is labeled and monitored.
12. CFC 903.3.5.2 – Verify if separate water storage tank is required. Tank is corrosion resistant, and transmits a trouble alarm to Fire Alarm control panel when water level reaches minimum required level.
13. CFC 905.4.2 – Verify two standpipes are interconnected
14. Verify diesel fire pump installation, acceptance testing with approved plans. A separate Fire Pump Installation permit has been approved. See (Fire Pump Checklist).
15. CFC 903.3.7 – Verify located not less than fifteen (15) feet or more than fifty (50) feet from a fire hydrant and not more than thirty (30) feet from a paved roadway.
16. NFPA 20 - 5.12.1.1.1 - Verify Fire Pump separated by a minimum 2-hour rated assembly.
17. NFPA 20 – 11.3.1 - Verify if Fire Pump is installed below ground or basement, a sump pump is provided to prevent flooding. A water level indicator shall transmit a trouble signal to FACP if water is detected.
18. Verify Fuel supply for Diesel Fire Pump. Has an AST or UST permit been pulled?
19. NFPA 20 – 11.4.5.1 - Verify re-fueling lines extend to exterior of building.
20. Verify fuel capacity meets approved plans and is sufficient to run fire pump for a minimum of 4 hours.
21. CFC 901.6 - Standpipe hose valve thread protective caps in place and tight
22. NFPA 14 – 7.2.1 - Verify pressure reducing valves / devices provided on stairway standpipe outlets if required.

Inspection Checklist
High Rise Greater than 75 Feet

- | | Y | N | |
|-----|--------------------------|--------------------------|---|
| 23. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 901.6 – Verify all Fire Department Connections maintained, properly identified and unobstructed |
| 24. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 901.6 / CFC 907.20.2 - Verify Fire hoses and fire extinguishers provided, identified, unobstructed and service tagged; Service tags current |

FIRE ALARM

Verify Fire Alarm permit and installation is in accordance with approved plans (See Fire Alarm Checklist)

- | | | | |
|-----|--------------------------|--------------------------|--|
| 25. | <input type="checkbox"/> | <input type="checkbox"/> | Verify installations of auxillary supervised panels with approved plans and are of approved size and clearly display all required equipment it monitors. |
| 26. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 510.1 - Verify fire alarm annunciator panel is a graphic illustration of the building elevation, and is of sufficient size to accommodate any control switches, visual displays, lettering and is clearly legible. |
| 27. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.2.12.2 - Verify Fire Alarm activates on alarm floor as well and floor above and below the floor of alarm. |
| 28. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.2.12.2.3 - Verify approved tones of alarm and locations. |
| 29. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.2.12.2.1 - Verify a manual override for emergency voice communication shall be provided for all paging zones. |
| 30. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 510.1 - Verify the fire alarm annunciator panel shall visually display alarm, trouble and supervisory signals immediately adjacent to the floor, area or zone the devices are serving. |
| 31. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 510.1 - Verify additional graphics with an illustration of the ground floor. The panel shall be of sufficient size to accommodate any control switches, visual displays, lettering and be clearly legible. |
| 32. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.9.3 - Verify an auxiliary supervised annunciation system shall be installed in the fire control room. A "trouble condition" in these systems shall be indicated by an audible signal and a visual display. |
| 33. | <input type="checkbox"/> | <input type="checkbox"/> | CFC - 907.9.4 - Verify in group R Division 1 occupancies individual rooms detectors monitored with an approved annunciator panel. This panel shall be located in an area that is supervised twenty-four (24) hours per day but shall not cause initiate the building's evacuation signals. |

FIRE DEPARTMENT COMMUNICATION SYSTEM

- | | | | |
|-----|--------------------------|--------------------------|---|
| 34. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.2.12.3 - Verify installation and function of the two-way, fire department communication system including operator's telephone headset, with one earpiece connected to the console in Fire Control Room. |
| 35. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.2.12.3 – Verify working communication to all connection points of phone system. |
| 36. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.2.12.3 – Verify travel distance to phone jack never exceeds 200 feet. |

SMOKE CONTROL

- | | | | |
|-----|--------------------------|--------------------------|---|
| 37. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 909.2 & 909.4 - Verify a smoke removal system has been designed by a licensed mechanical engineer registered in the State of California. The design shall be reviewed and approved by SRFD. |
|-----|--------------------------|--------------------------|---|

Inspection Checklist
High Rise Greater than 75 Feet

- | Y | N | |
|-----|--------------------------|--|
| 38. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.12 - Verify a graphic illustrated control panel for the smoke removal system shall be installed with the following controls and indicate the location of the following items: |
| 39. | <input type="checkbox"/> | <input type="checkbox"/> Fan control switches and indicator lights; |
| 40. | <input type="checkbox"/> | <input type="checkbox"/> Damper control switches and indicator lights; |
| 41. | <input type="checkbox"/> | <input type="checkbox"/> Stair pressurization fan controls and indicator lights. |
| 42. | <input type="checkbox"/> | <input type="checkbox"/> All smoke removal fans, duct work and area(s) served; |
| 43. | <input type="checkbox"/> | <input type="checkbox"/> Stair pressurization fan(s) locations. |
| 44. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.1 - Verify method of smoke removal through windows above first floor or through air circulation system exhausting directly to the outside. |
| 45. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.18 - Verify test method used in acceptance testing of the smoke control system. View report and determine if results meet the design of the system. Further FD acceptance testing may be required based on system design. |
| 46. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.10 - Verify heat dampers temperature rating is equal to or greater than maximum temperature that could be reached during smoke removal operations. |
| 47. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.1 - Verify smoke removal openings do not re-circulate back into building openings. |
| 48. | <input type="checkbox"/> | <input type="checkbox"/> CBC 909.20 - Verify activation of stairwell pressurization upon activation of fire alarm and by manual means in Fire Control Room. |
| 49. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.16 - Verify a control panel is provided for the control of all fans and dampers associated with the life safety system and be located in the fire control room. |
| 50. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.16.2 - Verify each supply and return fan associated with the smoke removal system shall be provided with its own illuminated control switch. |
| 51. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.16.1 - Verify each supply and exhaust damper shall be provided with a re-openable fire/smoke damper operator control switch. |
| 52. | <input type="checkbox"/> | <input type="checkbox"/> CBC 403.2 - Verify all fans, dampers and their controls, associated with the smoke removal system, shall be on the emergency standby power systems. |
| 53. | <input type="checkbox"/> | <input type="checkbox"/> CFC 909.16 - Verify a graphic illustration of the smoke removal system for the building shall be provided and posted adjacent to the control panel. |

CENTRAL CONTROL STATION (Fire Control Room)

- | | | |
|-----|--------------------------|--|
| 54. | <input type="checkbox"/> | <input type="checkbox"/> CFC 509 - Verify a Central Control Station has been provided on the ground floor adjacent to a Fire Department Access and is separated from the building by a minimum 2-hour fire-resistive rating. |
| 55. | <input type="checkbox"/> | <input type="checkbox"/> CFC 509 - Verify the room is a minimum of 100 sq/ft with no dimension less than 8 feet including ceiling. |
| 56. | <input type="checkbox"/> | <input type="checkbox"/> CFC 509 - Verify the Central Control Room contains the following: |
| | <input type="checkbox"/> | <input type="checkbox"/> The voice alarm and public address system panels. |
| | <input type="checkbox"/> | <input type="checkbox"/> The fire department communications panel. |

Inspection Checklist
 High Rise Greater than 75 Feet

- | Y | N | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Fire-detection and fire alarm system annunciator panels. |
| <input type="checkbox"/> | <input type="checkbox"/> | Annunciator visually indicating the location of the elevators and whether they are operational. |
| <input type="checkbox"/> | <input type="checkbox"/> | Status indicators and controls for air-handling systems. |
| <input type="checkbox"/> | <input type="checkbox"/> | Controls for unlocking all stairway doors simultaneously. |
| <input type="checkbox"/> | <input type="checkbox"/> | Sprinkler valve and water-flow detector display panels. |
| <input type="checkbox"/> | <input type="checkbox"/> | Emergency and standby power status indicators. |
| <input type="checkbox"/> | <input type="checkbox"/> | A telephone for fire department use with controlled access to the public telephone system. |
| <input type="checkbox"/> | <input type="checkbox"/> | Fire pump status indicators. |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire-protection systems, firefighting equipment and fire department access. |
| <input type="checkbox"/> | <input type="checkbox"/> | Work table. |
| <input type="checkbox"/> | <input type="checkbox"/> | Elevator control switches for switching of emergency power. |
| <input type="checkbox"/> | <input type="checkbox"/> | Other fire-protection equipment and systems controls as required by the enforcing agency having jurisdiction. |
| <input type="checkbox"/> | <input type="checkbox"/> | Air-handling system control switches and status indicator lights that clearly show that the system is operational. Status indicators shall be connected to devices that positively sense the movement of the required air flow; |
| <input type="checkbox"/> | <input type="checkbox"/> | Standby and emergency power system indicators. |
| <input type="checkbox"/> | <input type="checkbox"/> | Controls necessary to automatically notify the fire alarm monitoring company in the event of a fire alarm or trouble condition. The interconnections required shall also comply with the raceway requirements; |
| <input type="checkbox"/> | <input type="checkbox"/> | A labeled cabinet containing spare fire sprinkler heads (of all types used in the building) and the proper tool(s) needed for their removal and installation. The number of spare fire sprinkler heads shall be determined by N.F.P.A. 13; |
| <input type="checkbox"/> | <input type="checkbox"/> | Clear instructions for the operation of all equipment located in the fire control room; |

- | Y | N | |
|------------------------------|--------------------------|--|
| 57. <input type="checkbox"/> | <input type="checkbox"/> | CFC 510 - Verify the door leading to the Central Control Station is labeled as FIRE CONTROL ROOM in red letters and a contrasting background. Letters shall be at least two inches high with a minimum of one-quarter inch stroke. |
| 58. <input type="checkbox"/> | <input type="checkbox"/> | CFC 509 - Verify the room is lit and all systems are powered by the emergency generator excluding any outlets and receptacles. Room is well lit and has adequate temperature control. |
| 59. <input type="checkbox"/> | <input type="checkbox"/> | CFC 509 - Verify the room is not being used for any other shared purpose including mechanical or electrical equipment. |

ELEVATORS

- | | Y | N | |
|-----|--------------------------|--------------------------|---|
| 60. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 907.2.18.1 - Verify smoke detectors in elevator lobbies operate automatic closing doors to the elevator lobbies and any other automatic closing doors serving the floors affected by the alarm. |
| 61. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 607 - Verify when a smoke detector is activated in an elevator lobby, all cars in all banks shall transfer to elevator recall status and shall return to the ground or pre-determined alternate floor and park. |
| 62. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 607 - Verify automatic passenger elevators shall have call and car operation buttons within forty-eight (48) inches of the floor and the building address and car number shall be clearly posted in each car. |
| 63. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 607 - Verify Firefighter Recall and phone jacks are functional or State Certification stating such tests were done. |

EMERGENCY POWER

- | | | | |
|-----|--------------------------|--------------------------|--|
| 64. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.2.15.1 - Verify installation of an emergency standby generator. Installation of generator and associated fuel supply (AST or UST) shall have its own plan submittal and permit. |
| 65. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.2.15.1.2 - Verify generator is sized to supply power to only those functions needed for fire and life safety, or at a minimum: exit signs and means of egress illumination, elevator car lighting, fire alarm system, fire-detection system, and sprinkler alarm system. |
| 66. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.15.3 - Verify power switches to emergency generator within 10 seconds of main power loss. |
| 67. | <input type="checkbox"/> | <input type="checkbox"/> | CBC 403.10.1 - Verify generators located indoors shall be separated by the rest of the building by no less than a 2-hour fire separation. |
| 68. | <input type="checkbox"/> | <input type="checkbox"/> | CBC 2702.1 - Verify generators located outdoors shall be located a minimum of 10 feet from walls and openings or within 50 feet from Fire Control Room. Distance can be reduced to 5 feet if no openings. |
| 69. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.1 - Fuel supply should be of capacity to provide 6 hours of generator run-time and 8 hours if also fueling a Diesel Fire Pump. |
| 70. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.1 - Verify set supervisions with manual start and transfer override features are provided at the central control station. |
| 71. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.1 - Verify sump pump for generator or any electrical life safety power is located underground or where groundwater may be a threat. Sump pump shall transmit a trouble signal to FACP in the event of water present. |
| 72. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.1 - Verify emergency receptacles powered by the generator are located in Exit corridors per approved plans and are red in color. |
| 73. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 604.1 - Verify remote manual starting controls for generator are located in the Fire Control Room. |

EXITING

Inspection Checklist

High Rise Greater than 75 Feet

74. CFC 509 - Verify all stairway doors have the capability of being unlocked simultaneously without unlatching upon a signal from the central control station.
- Y** **N**
75. CBC 403.12 - Verify upon failure of electrical power, the locking mechanisms retract to the unlocked position.
76. CBC 403.12 - Verify stairway doors automatically unlock when the fire alarm system is in the alarm mode or whenever there is a loss of power.
77. U.B.C. Standard 33.203 - Verify in secured stairways that a emergency phone is placed every 5th floor.
78. CBC 403.11.1 - Verify Emergency Lighting provided
79. CFC 1028.3 - Verify exit stairways and passageways are free of storage & obstructions
80. CBC 1011.3 - Verify required stair identification and reentry signs provided on occupancy side of stairway doors.
81. CFC 1008.1.8.3 - Approved exit door devices on exit level discharge doors
82. CBC 1024 - Approved area of discharge; provided with emergency lighting provided throughout
83. CFC 1008.1.8.3 - Approved exit door locking devices provided
84. CFC 1008.1.3.4 - Electronic egress control devices permitted and approved
85. CBC 1020.1.6 - Adequate exit way directional signs provided and properly positioned
86. CFC 1020.1.5 - Verify stairway barriers in place between exit discharge level and basement
87. CFC 404.2 – Verify emergency evacuation routes are posted and in place in the lobby and at the exit stairwell door at each level

ELECTRICAL

88. CFC 605.1 - Verify all Electrical and Mechanical rooms properly identified
89. CFC 315.2.3 – Verify electrical & mechanical rooms free of combustible storage
90. CFC 608 - Verify approved Lead Acid Battery system(s) in use. Separate plan review and permit required.

FIREFIGHTER BREATHING AIR REPLENISHMENT SYSTEM

91. SRFD Standard - Verify approved Breathing Air Replenishment System in place. Requires separate plan referral and permit. Specifics to the system shall be determined by the Chief.
92. SRFD Standard - Verify breathing air replenishment access stations are located no more than one hundred fifty feet apart, and on at least every third floor in multi-story buildings and structures.

PUBLIC SAFETY RADIO SYSTEM COVERAGE

93. CBC 18.44.5.11 - Verify study and requirement (if any) for the installation of an in-building public safety radio system. If one is required the system shall be under separate plans and permits. (See checklists and standards for In Building Public Safety Radio Systems).

COOKING AND DINING FACILITIES

- | | Y | N | |
|-----|--------------------------|--------------------------|--|
| 94. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 1004.3 - Verify occupant Load posted – Assembly permit needed |
| 95. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 609.2 – Verify kitchen is provided with approved vent hood system (wherever grease laden vapors are produced) Kitchen vent hood provided with approved fire suppression system. Requires separate plans and permits (See Fixed Extinguishing System standards and checklists). |

HAZARDOUS MATERIALS

- | | | | |
|-----|--------------------------|--------------------------|---|
| 96. | <input type="checkbox"/> | <input type="checkbox"/> | CFC 2701 and 105 – Verify all hazardous chemical identified and properly stored; Permit required & current. |
|-----|--------------------------|--------------------------|---|

HELISTOP

- | | | | |
|-----|--------------------------|--------------------------|--|
| 97. | <input type="checkbox"/> | <input type="checkbox"/> | Verify Helistop is designed as required by the Department of Transportation, Federal Aviation Administration, Helicopter Design Advisory Circular 150/5390-2, and Title 21, Division of Aeronautics. |
| 98. | <input type="checkbox"/> | <input type="checkbox"/> | Verify Helistop being used for non-emergency use has a fuel containment system capable of holding two hundred (200) gallons and shall be designed so that no fuel shall enter the building drain system. |

Exceptions to Helistop:

- | | | | |
|------|--------------------------|--------------------------|---|
| 99. | <input type="checkbox"/> | <input type="checkbox"/> | Helistops may be omitted when an approved permanent enclosed stairway is provided for fire department use. |
| 100. | <input type="checkbox"/> | <input type="checkbox"/> | Helistop may be omitted when the building is equipped with an approved freight elevator that serves all floors and is separated from all other elevators and protected by a minimum of 2-hour construction. |