



FIRE SYSTEMS PLAN REVIEW INFORMATION

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Fire Protection System plans must be submitted to the Building Department. Plans are forwarded to an outside fire engineering firm for review and approval. All fees for the review must be paid at the Building Department, before the review results will be released to the applicant. After the review is approved, the applicant will be furnished with one (1) set of drawings with the permit, which will be required to be on-site and available for the Fire Marshal/Inspector.

Codes:

N.F.P.A. #1, (2000 Edition)

N.F.P.A. #101, Life Safety Code (2000 Edition)

The plan submittal shall include:

A minimum of five (5) sets of plans for each fire protection system.

Fire protection system calculations

Manufacturer's specification sheets on all devices.

The fire department connection (FDC) is to be on a side of the building that is within 100 feet from a positive water source (fire hydrant).

Fire protection systems must be designed, installed and function in accordance with all application N.F.P.A. Codes, Building Codes and locally adopted ordinances

Inspection Information:

Fire Protection systems must be inspected at certain intervals during and after construction according to the following schedule. All inspections to be scheduled through the Building Department (48 hour notice required to coordinate with Fire Marshal)

Fire Sprinkler/Standpipe Systems:

Rough inspection of piping: The flushing of the underground water main shall have the Fire District witnessing it. The flush shall last at least 10 minutes without interruption and a Pitot reading is to be taken to ensure the amount of GPM needed for the fire sprinkler system. The opening for the main shall be reduced to half the size of the main so a back pressure will be applied

Hydrostatic Test: The hydrostatic test on the fire sprinkler system is to be witnessed by the Fire District once it has been pre-tested by the contractor to ensure that there are no leaks in the new piping.

Final acceptance/performance test: At the time of the final acceptance test, the fire alarm contractor shall provide a schematic showing the location of all devices. This shall be placed by the F.A.C.P. for Fire District use.

Annual Test/Inspection

Fire Alarm Systems:

Rough inspection of wiring

Final acceptance/performance test: For the fire alarm system connected to the fire sprinkler system, a test is to be run on the sprinkler system enabling the fire alarm system to activate and this too is to be witnessed by the Fire District. A Knox box shall be installed on the building. Forms can be obtained through the Fire District.

Annual Test/Inspection

Hood Suppression Systems:

Rough inspection of Duct & Hood

Puff test (includes verification of fire panel zoning)

Final acceptance/performance test: An air test on the completed system will be needed with the Fire District witnessing it. The activation of the gas shutoff and fire alarm system shall be witnessed by the Fire District.

Annual Test/Inspection

Underground Water Main Submittals:

***See NFPA 24 for a complete submittal list**

- Plans must show the job name and complete address.
- Plans shall have the contractors name, address & phone number.
- Plans must be to scale and clearly show work to be done including a **detailed scope of work**.
- Provide a scaled site plan clearly showing the building fire department connection location and fire hydrant locations
- Plans must show all new and existing underground piping, sizes, control valves, hydrants and flow test information.
- The specific size, type and quantity of all valves shall be provided on every page.
- Fire Hydrant flow test information shall be dated and less than 1 year old.
- Hydraulic calculations shall be submitted and include a graphed demand curve sheet. IFC Appendix "B"
- Indicating control valves shall be located at each Municipal water supply connection, each side of any check valves and for the building fire service main to the building.
- Provide catalog cut sheets for all hydrants, valves and other underground water main components.
- All underground piping, joints and fittings shall comply with AWWA standards.
- All hydrants shall be on a 6" water main minimum.
- Provide hydrant and valve details on drawings.
- Plans shall indicate the building square footage and construction classification.

Life Safety Code Submittals:

***See NFPA 101 for a complete submittal list**

- Five (5) sets of complete plans showing the job name and complete address; and shall include the design professional in charge, name, address and phone number.
- Plans must be signed and sealed by the design professional in charge of the project and include all architectural, electrical, plumbing, mechanical, accessibility, etc, drawings and material specifications.
- Plans must be to scale, fully dimensioned to determine building area and height; and clearly show work to be done including a **detailed scope of work**.
- Provide a scaled site plan clearly showing any existing structures, all new construction, distance from lot lines, street grades, proposed finish grades, location of underground mains, fire hydrant locations, building fire department connection location and any fire department access lanes.
- Description of building use or occupancy for all areas of the building.
- Description of design approach for mixed use buildings.
- Proposed type of construction, including testing/listing agency details for all fire rated construction.

- Hazard of content classification and any proposed special storage arrangements.
- Complete exist details to fully evaluate the means of egress including; occupant loads, means of egress arrangement, corridors, doors, stairs, exit signage, emergency lighting, emergency power supply, etc.
- Special occupancy information including; assembly, high rise, mezzanine, atrium, covered mall, underground building, etc.
- Details for all fire protection systems proposed including fire sprinkler, fire alarm, standpipes, fire pumps, and other extinguishing systems.

Kitchen Hood Wet Chemical System Submittals:

***See NFPA 17A for a complete submittal list**

- Plans must include exact hood, duct, pipe and appliance dimensions
- Plans must show job name and complete address
- Catalog cut sheets must be provided for all nozzles and equipment to be used.
- The tank size and flow point count must be noted on the plans.
- All plans must have the contractors name, address and phone number.
- A plan review of the kitchen must show the hood, tank, and pull station locations.
- The plans must clearly show the type of nozzles to be used and show the mounting height.

Kitchen Hood Mechanical Systems Submittals:

***See NFPA 96/mechanical code for a complete submittal list**

- Plans must include complete hood, duct and mounting dimensions.
- Plan must show job name and address.
- Plans must include a roof detail showing the exhaust fans and all equipment within 15'
- Specific information and manufacturers UL listing must be provided for all hoods calculated for other than code requirements.
- Complete calculations must be shown for both the CFM and FPM used in sizing the exhaust duct and fan.
- Notes or details shall be provided showing shut down of fuel, electric and fans.

Clean Agent System Submittals:

***See NFPA 2001 for a complete submittal list**

- Plans must be to scale and clearly show all work to be done.
- Plans must show the job name and complete address.
- A key plan shall be provided showing the area of work in the building.
- Complete catalog cut sheets shall be provided for all equipment to be used.
- The scope of work shall include a description of hazard being protected and type/manufacturer of agent being used.
- Calculations for required agent quantity and discharge time shall be provided.
- All alarm portions of the system shall comply with the submittal requirements of a fire alarm system.