



Mobile Fire-Rescue Department Bureau of Fire Prevention
 2851 Old Shell Road Mobile, Al 36607 (251)208-7484 Fax: (251)208-7162



Kitchen Hood Suppression 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: _____
 System Manufacturer: _____ Model: _____

IFC, IMC, NFPA 13 and NFPA 17A

Worksheet Legend: OK = acceptable N = need to provide NA = not applicable

1. ____ 2 sets of drawings submitted.
2. ____ Fire extinguishing system is listed in accordance with UL 300.

Floor Plan Showing:

3. ____ Scale: a common scale shall be used and plan information is legible.
4. ____ Equipment symbol legend is provided.
5. ____ Cross sectional view of the room and equipment are provided.

Pre-engineered Wet Chemical and Water Spray Systems:

6. ____ Total number of nozzles and aggregate flow rate is provided.
7. ____ System model is provided and the plan indicates the permissible number of flow points.
8. ____ Description and measurements of the appliances to be protected is provided, 5.1.4.
9. ____ Measurements of hood, plenum, and duct are provided, 5.1.4.
10. ____ Pipe size and length for supply, branches, etc. are provided.
11. ____ Pipe volumes are provided with calculations when required as part of the listing, 6.3.3.
12. ____ Pipe configuration complies with the listed manufacturer's design manual, 6.3.3.
13. ____ Piping and nozzles are adequately braced, 6.3.2.
14. ____ Type of fuel or power shutoff device is described and detailed.
15. ____ Fuel or power shutdown device shall be arranged that it requires manual resetting, IFC 904.11.2.
16. ____ All equipment under the hood shall shutdown when the fire-extinguishing system activates, IFC 904.11.2.
17. ____ Nozzle types are identified for the appliance hazard, type of use, and coverage area, 6.3.3.
18. ____ Nozzle placement complies with the manufacturer's data sheet, distances from each nozzle to the protected hazard surface are detailed and distance from appliances to filters and duct opening are detailed.
19. ____ Plenum and duct areas are protected in accordance with the manufacturer's design manual.
20. ____ If provided, the fire-extinguishing system is connected to the building fire alarm system, 5.2.1.9.



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21. ____ At least one accessible manual pull station is provided in path of egress, 10 ft. to 20 ft. (IMC 509.3) from the hood and 42 in. to 48 in. above the floor level, IFC 904.11.1.
22. ____ Control head model number is identified and the wet chemical container installation location is detailed and complies with Section 5.4.1.
23. ____ Heat detectors or fusible links are located in accordance with the manufacturer's design manual and the detector part number is provided, 6.3.4 (1).
24. ____ Fusible link temperature is in accordance with fire extinguishing systems' listing requirements, 5.6.1.6.
25. ____ Simultaneous activation of systems occurs when protecting common hoods, plenums, and ducts, 5.1.4.

NFPA 13:7.9 Sprinkler Protection:

26. ____ Duct, hood, and appliance configuration(s) are detailed and measurements provided.
27. ____ Sprinkler protection is provided for cooking equipment, plenum area, and the duct(s).
28. ____ Location of duct sprinklers complies with Section 7.9.3.1.
29. ____ Sprinkler spacing in ducts and sprinkler temperature ratings comply with Section 7.9.3.3.
30. ____ Sprinklers are installed above duct collars and the temperature ratings comply with Section 7.9.4.1.
31. ____ Location of sprinklers required in the plenum chamber complies with Section 7.9.5.
32. ____ Sprinklers used to protect deep fat fryers will be listed for that use, IFC 904.11.4.1.
33. ____ Operation of a sprinkler automatically shuts off all sources of fuel and heat to all equipment under the hood.
34. ____ Listed indicating control valve for the water supply is provided, 7.9.9.
35. ____ Listed strainer for the water supply is provided when required by Section 7.9.10.
36. ____ Adequate water pressure and flow is available to operate the system and meet the listing requirements of the sprinkler, pressure and flow information are provided, 7.9.1.
37. ____ Supervised water supply valve is provided, 7.9.1.
38. ____ Sprinklers in ducts are accessible for maintenance, 7.9.7.
39. ____ Sprinklers are a minimum 6 ft. apart unless baffled in accordance with NFPA 13.
40. ____ Sprinklers exposed to temperatures of 300 degrees f or will be 325-375 degrees but if the temperature exceeds 300 degrees then a higher temperature sprinkler will be used, 7.9.6.
41. ____ K-factor for sprinklers installed in ducts, above the duct collar, and in plenum areas are in accordance with Section 5.6.
42. ____ Test connection to verify equipment shutdown is detailed, 7.9.11.

Fire Extinguishers:

43. ____ Solid fuel appliance with firebox volume of 5 cu. Ft. or less shall be equipped with at least one 2.5 gallon or two 1.5 gallon K extinguishers. The extinguishers shall be located within 30 ft., IFC 904.11.5.1.
44. ____ Class K extinguisher is within 30 ft. of the appliance. Provide one 1.5 gallon extinguisher for up to four deep fat fryers with a maximum cooking medium capacity of 80 pounds and one additional extinguisher for every additional group of four fryers. For fryers



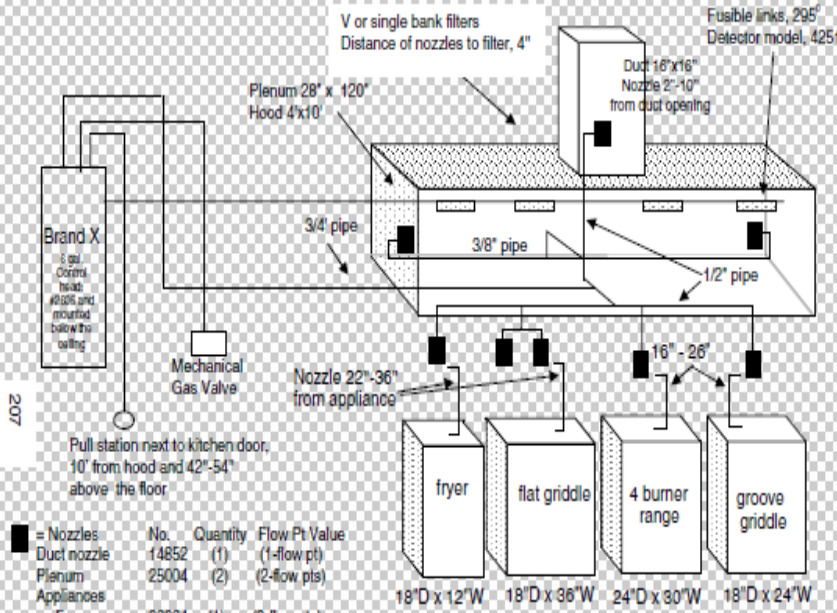
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exceeding 6 sq. ft. provide an extinguisher in accordance with the manufacturer recommendations, IFC 904.11.5.

Fire Plan Review and Inspection Guidelines

This example illustrates the minimum information required for plan submittal for a Type I hood fire suppression system.



| | No. | Quantity | Flow Pt Value |
|--------------|-------|----------|---------------|
| Nozzles | | | |
| Duct nozzle | 14852 | (1) | (1-flow pt) |
| Plenum | 25004 | (2) | (2-flow pts) |
| Appliances | | | |
| Fryer | 23334 | (1) | (2-flow pts) |
| Flat griddle | 23326 | (2) | (1-flow pt) |
| Range | 23388 | (1) | (1-flow pt) |
| Groove grid | 23388 | (1) | (2-flow pts) |

Distribution pipe = 3/4" pipe, 22' plus 6' equivalent length
 Appliance pipe = 1/2" pipe, 14.5 plus 3.2 equiv. length
 Plenum pipe = 3/8" pipe, 12 plus .5 equiv. length

Include the following information on the plans:

Address:
 Permit #:
 Business name:
 Manufacturer/model:
 Nozzle type/number:
 Type fuel shutoff:
 Pipe type:
 Pipe sizes & lengths:
 Fusible link temp:
 Detector model:
 Pipe volume:
 Flow point info:
 Control head model:
 Attach current cut sheets of pipe limits and nozzle coverage limits:
 Month/year of design manual used:
 Pull station mounting location distance to cooking area and height from the floor:
 Cylinder location:

Addition Comments:

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