

EFFECTIVE IMMEDIATELY

**ALL SUBMISSIONS FOR FIRE PROTECTION SYSTEMS
MUST MEET THE FOLLOWING REQUIREMENTS**

- **Fire Protection, including alarm, hood systems, and sprinkler shall require 3 sets of original drawings.**
- **All drawings must be prepared by a minimum NICET Level III Designer or signed and sealed by a fire protection engineer.**
- **All work shall be performed by NICET certified or properly factory trained personnel. Proof of training and/or certification must be provided. All persons working of fire protection must have certification cards and photo identification available for inspection upon request by the Fire Marshal.**

Information required for plan review for Commercial Hood and Duct System: General

- ◆ Provide a complete floor plan showing the location of all equipment (cooking heat producing, vapor producing), size of the hood and size and type of the cooking equipment.
- ◆ Indicate the type of equipment being used. Indicate the production of steam, heat or grease laden fumes.
- ◆ Indicate the type of cooking extra heavy to light duty.

Type I Systems

- ◆ Provide a catalog cut for a factory built commercial kitchen hood. It shall comply with UL 710
- ◆ Indicate the gage of the exhaust hood a minimum of 18 gage for steel and 20 gage for stainless steel.
- ◆ Provide an enclosure around the hood equal to a shaft in the building code where the hood penetrates the ceiling.
- ◆ Indicate the method of supporting the hood. The supports shall be noncombustible material and designed to carry the gravity and seismic loads.
- ◆ The hood joints and seams shall be made with a continuous liquid tight weld or braze on the external side of the hood.
- ◆ The minimum distance from the hood to combustible material shall be 18 inches and no clearance is required when gypsum board is attached to non combustible materials.
- ◆ Indicate the distance from the filter to the cooking surface, type of filter, size of filter and mounting position.
- ◆ Provide details showing the size of the cooking surface, size of hood and distance to the cooking surface. This will be used to determine the style of the hood.
- ◆ Provide a calculation showing the capacity of the exhaust system including type of hood and linear feet of the hood.
- ◆ The exhaust system shall automatically activate whenever cooking occurs.
- ◆ Provide a calculation for the non-canopy hood showing not less than 300 cfm per linear foot of cooking surface.
- ◆ Indicate a performance test for the kitchen hood.
- ◆ Indicate the gage of the exhaust duct, a minimum of 16 gage for steel and 18 gage for

stainless steel is required.

- ◆ The duct joints and seams shall be made with a continuous liquid tight weld or braze on the external side of the duct system.
- ◆ Indicate the method of supporting the duct. The supports construction shall be noncombustible material. The supports and supporting construction and designed to carry the gravity and seismic loads.
- ◆ Indicate the local official will be notified before the grease duct test.
- ◆ The velocity in the duct shall be a minimum of 500 feet per minute. Velocity = cfm divided square foot of duct.
- ◆ Indicate duct clearance. A minimum of 18 inches (combustible) to 3 inches (gypsum board on non-combustible).
- ◆ The ductwork shall be installed so that grease can not collect in any portion.
- ◆ Indicate the slope of the horizontal ductwork / 1/4 in 12, ducts over 75 feet / 1 in 12.
- ◆ Provide a cleanout with maximum dimensions of 12 x 12 on the side of all horizontal ducts with a maximum spacing of 20 feet.
- ◆ Provide an enclosure where the duct penetrates a ceiling, wall, and floor. The enclosure shall comply with the building code with a clearance of 18 inches (combustible) to 3 inches (gypsum board on non-combustible)..
- ◆ The exhaust duct shall terminate not less than 40 inches above the roof, not less than 10 feet to air intakes or less than 10 feet above grade.
- ◆ Provide a catalog cut for the exhaust fan being used for the type I hood. It shall show the fan outside the air stream.
- ◆ Provide details for the grease diverter when a centrifugal fan with horizontal discharge including size of vertical outlet, length of duct and a low point drain outlet.
- ◆ The exhaust fan shall terminate 40 inches above the roof.
- ◆ Wall exhaust termination shall be a minimum of 3 feet from other exterior wall openings
- ◆ Exhaust fans shall be 10 feet from adjacent buildings or property lines or air intake openings and 10 feet above grade.
- ◆ The exhaust fan housing shall be the same as the exhaust duct work and extend 18 inches above the roof.

- ◆ Indicate the source of the make up air and the other source of the air for other equipment in the room.
- ◆ The make up air shall be tempered where it enters the conditioned space.

Information required for plan review for commercial Hood and Duct extinguishing system:

- ◆ Provide working plans for the required fire suppression system.
- ◆ Provide a complete design, installation and maintenance manual for the extinguishing system
- ◆ Indicate a manual means of activation between 10-feet and 20-feet from the exhaust system in the path to the exit with the activation device between 42 and 48 inches above the floor. The manual means of activation shall have operating instructions.
- ◆ Provide an automatic shut down for the energy source(s) for the cooking equipment.
- ◆ Indicate the fuel and electric power supply reset shall be manual.
- ◆ Indicate the extinguishing system shall have an acceptance test in accordance with NFPA-17A and the manufacturer's instructions.
- ◆ Indicate the system activation shall be connected to the building fire alarm system on a separate zone on the fire alarm.
- ◆ Provide a calculation showing the total number of flow points for the extinguishing system.
- ◆ Indicate the type of pipe being used in the system. Galvanized pipe shall not be used.
- ◆ Provide a piping layout showing the length of all pipes.
- ◆ Indicate the type of detection system including the location of the detectors.
- ◆ Indicate the type of caps used on the nozzles.
- ◆ Indicate the type of nozzles used in each location.
- ◆ Indicate the pipe penetrations of the hood and ducts are liquid tight.
- ◆ The fire extinguisher in the kitchen shall be compatible with the agent in the fixed system.
- ◆ Indicate alarm supervision shall indicate trouble in the automatic detection system, electrical actuation circuit and the electric power supply.
- ◆ Indicate a fusible link above each cooking appliance or within 12-inches of the entrance to the exhaust duct.

- ◆ **The plan shall state they comply with the codes adopted by the municipality including edition of codes and standards.**
- ◆ **The plan shall include a statement the system including all equipment and appliances is installed in accordance with the manufacturer's installation instructions.**
- ◆ **The plan shall indicate person(s) trained by the manufacturer and witnessed by the local authority will test the system.**
- ◆ **The owner shall be provided with a copy of the manufacturer's installation and maintenance manual.**