



HVAC Commercial Hood Suppression Systems

Where the MN Mechanical Code or MN Fire Code require Type I hoods in commercial kitchens, automatic fire extinguishing systems are required. Examples of equipment requiring Type I hoods are deep fat fryers, griddles, upright broilers, char broilers, range tops and grills, open face pizza ovens and other similar equipment.

Commercial cooking hood fire suppression systems are regulated by the Minnesota State Building and Fire Codes and permits are required for installation, repair or replacement. Commercial cooking operations shall conform to NFPA 17, NFPA 17A and Minnesota Building and Fire Codes. Plan review, approval and permitting are required prior to installation of hood fire suppression systems.

Permitting Process

Apply for a Fire Suppression System permit and submit plans and specifications in the Construction Services & Inspections Division, Room 100, Duluth City Hall.

The application shall include:

- The scope of work.
- The name and contact information for the system installer.
- Installer's credentials for the type of system proposed.
- Valuation for the work, including labor and materials.

Plans and documentation required:

- Submit two (2) sets of all required plans and documents.
- System plans generated by the installing company specific to the installation. Plans shall contain sufficient detail to enable the plan reviewer to accomplish a complete review. The following information shall be included in the plans:
 - Drawing scale or dimensions
 - Hood dimensions consistent with approved mechanical plans
 - Duct perimeter consistent with mechanical plans
 - All kitchen equipment
 - Piping schematic
 - Nozzle type, direction and number
 - Location and temperature of fusible links
 - Interconnection to the building fire alarm system
 - Interconnection with hood exhaust and make-up air
 - Interconnection to the to the fuel supply shut-off and indicate type of fuel supply
 - Drawings shall show plan view and other pertinent information

- Floor plan indicating the location of the kitchen hood, electrical panel, manual pull stations, K Class fire extinguisher and suppression system cabinet
- One drawing shall be provided in 3D/isometric view of the hood, ductwork and protected appliances
- Equipment list
- Manufacturer's data sheets
- One set of specifications
- Name and contact information for the system installer
- Installers credentials for the type of system proposed
- Valuation for the work, including labor and materials

Post-permit Requirements

- The permit authorizes the installation
- Inspections are required
- Installation shall comply with approved plans and all applicable codes and ordinances
- Deviation from approved plans requires submittal of revised plans and other information
- Approved plans must be kept on the job site until final inspection
- Installers credentials for the type of system proposed
- Valuation for the work, including labor and materials
- Plans will be reviewed and work inspected by Duluth Fire Marshal. Call 218-730-4380 to schedule inspections or with questions about installation requirements.

Installation and Performance Requirements

- Pre-engineered fire suppression systems shall be installed by individuals certified by the manufacturer.
- All systems shall conform with UL 300.
- Both a manual and automatic means of activation shall be provided.
- A minimum of one manual activation pull station shall be provided in the path of egress and shall be located between 42" and 48" above the floor. The manual actuation device shall be located a minimum of 10 feet and a maximum of 20 feet from the kitchen exhaust system.
- Pull stations shall be clearly identified as to the hood being protected.
- Distinctive audible and/or visible alarms shall be provided to indicate system operation and activation. An audible/visual notification device shall be provided to indicate system operation which requires personnel attention and system recharge.
- The hood suppression system shall be interconnected to the fire alarm system. Activation of the kitchen hood fire suppression system shall cause the fire alarm to activate throughout the building in accordance with NFPA 72.
- The actuation of the fire suppression system shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.
- A sodium bicarbonate or potassium bicarbonate dry-chemical type portable fire extinguisher having a minimum rating of 40-B shall be installed at an approved location and within 30 feet of commercial food heat processing equipment as measured along an unobstructed path of travel. A K Class fire extinguisher shall be provided.