



ORANGE COUNTY FIRE AUTHORITY

NOTES: FIRE EXTINGUISHING FOR COMMERCIAL COOKING

PLACE THE FOLLOWING NOTES VERBATIM ON THE PLAN:

1. This system is designed in accordance with ANSI/UL 300—05(R2010), 2017 NFPA 17A; 2017 NFPA 96, 2019 CFC, 2019 CMC, and the most recent manufacturer's manual.
2. OCFA final inspection required. Please schedule all field inspections *at least* 48 hours in advance. Call OCFA Inspection Scheduling at 714-573-6150. Phasing of inspections may require additional fees. Inspections canceled after *1 p.m. on the day before the scheduled date will be subject to a re-inspection fee.*
3. All gas fueled, electrically powered, and heat-producing equipment located under the hood shall shut down upon activation of the extinguishing system. *CFC 904.11.2*
4. Discharge nozzles shall be located and installed as shown in the manufacturer's listed installation manual and the OCFA approved plans. All discharge nozzles shall be provided with caps, covers, or other suitable protective devices. *NFPA 17A 4.3.1.5*
5. Piping shall be rigidly supported to prevent movement (shall not be able to sway for cleaning). Swivel nozzles shall be rotated to a predetermined aiming point and then tightened to hold that angle. Careful attention shall be given at the time of designing the system as nozzles cannot be moved "out of the way" once approved in the field. Any moving of the pipe or nozzles shall require an approved contractor to evaluate the pipe/nozzle layout.
6. Movable cooking equipment shall be provided with a means to ensure that it is correctly positioned in relation to the appliance discharge nozzle during cooking operations. *NFPA 17A 5.6.4*
7. Fryers shall be separated from surface flame appliances by 16 inches or an 8 inch steel or tempered glass baffle plate shall be provided between fryers and surface flames. *CMC 515.0*
8. Manual pull stations shall be located no higher than 4 feet above finished floor and shall be readily accessible for use at or near a means of egress from the cooking area a minimum of 10 feet and maximum of 20 feet from the kitchen exhaust system. The distance is measured from the edge of the hood. *CFC 904.11.1*
9. Where more than one manual actuator (pull) is installed, they shall be identified with a permanent sign indicating which extinguishing system will activate.
10. A Class K-rated extinguisher shall be provided within a maximum of 30 feet of cooking equipment. Placement is at the discretion of the inspector. Additional extinguishers may be required based on travel distance for solid fueled equipment or multiple fryers with 6 square foot surface area or greater. Portable fire extinguishers shall be conspicuously located along normal paths of travel where they are readily accessible. Portable fire extinguishers shall be maintained in accordance with NFPA and CFC requirements. *CFC 906.1 & 906.2*
11. A placard shall be conspicuously placed near each extinguisher that states:
"Fire Protection System Shall Be Activated Prior To Using The Fire Extinguisher." *NFPA 17A*
12. Exhaust Fan Operation: A hood exhaust fan(s) shall continue to operate after the extinguishing system has been activated unless fan shutdown is required by a listed component of the ventilation system or by the design of the extinguishing system.
13. The hood exhaust fan shall not be required to start upon activation of the extinguishing system if the exhaust fan and all cooking equipment served by the fan have been shut down. *NFPA 96 8.2.3.2*
14. The exhaust fan shall be provided with a means so that the fan is activated when any appliance under the hood is turned on. *CMC 515.2.3 and NFPA 96 8.2.3.3*
15. The inside edge of the hood shall overhang a horizontal distance of not less than 6 inches beyond the edge of the cooking surface on all open sides, and the vertical distance between the lip of the hood and the cooking surface shall not exceed 4 feet unless the manufacturer's specifications states otherwise. *CMC 508.4.1*

SYSTEM MONITORING

Where a building fire alarm or monitoring system is installed, the automatic fire-extinguishing system(s) shall be monitored in accordance with NFPA 72, CFC 904.3.5. Monitoring of commercial cooking hood and duct systems will be field verified only and installation must be performed by a contractor with a valid C-10 License. A separate fire alarm plan is not required

SYSTEM AND EQUIPMENT MAINTENANCE

1. 904.12.5: Operations and maintenance: Automatic fire extinguishing systems protecting commercial cooking systems shall be maintained in accordance with California Code of Regulations, Title 19, Division 1, Chapter 5 and Sections 904.12.5.1 through 904.12.5.3. Sections 904.12.5.1 through 904.12.5.3.
2. The approved set of plans shall be delivered by the contractor to the owner/manager to be kept on-site for reference and inspection records along with the completed "Wet Chemical Acceptance Test Report."
3. The owner shall be provided with a copy of the manufacturer's listed installation and maintenance manual or listed owner's manual.
4. Wet chemical systems shall be provided with an audible or visual indicator to show that the system is in a ready condition or is in need of recharging. *NFPA 17A 4.8*
5. The extinguishing system shall be maintained in accordance with the current CFC, CMC, NFPA 16, NFPA 17A, NFPA 17 and manufacturer's requirements as applicable.
6. For existing hood extinguishing systems, where changes in the cooking media, positioning of cooking equipment or replacement of cooking equipment occur, plans shall be submitted to the OCFA for the automatic fire-extinguishing system and shall comply with the applicable provisions. *CFC Sections 904.11.6.1* Approval from the Orange County Health Care Agency and the Building Department shall be required for all new equipment. A higher air exchange may be required based on the type of equipment being proposed. *CMC 507.1 and NFPA 96:4.1.4.*
7. Extinguishing systems shall be serviced at least every 6 months, or after activation of the system, by a qualified trained technician. Maintenance shall be conducted by a Certified Technician in accordance with the manufacturer's listed installation and maintenance manual. *CFC 901.6.2 NFPA 17A Section a7.3*
8. Fusible links shall be replaced annually. *CFC 904.12.5.3*
9. The hood ventilation system shall be operated at the required rate of air movement, and approved grease filters shall be in place when cooking equipment under a kitchen grease hood is operated.
10. Hydrostatic testing of the wet chemical extinguishing system shall be completed in intervals not exceeding 12 years. *NFPA 17A 7.5*
11. All interior surfaces of the exhaust systems shall be made accessible for cleaning and inspection purposes. If during the inspection it is found that the hood, grease removal devices, fans, ducts or other appurtenances have an accumulation of grease, such components shall be cleaned. Flammable solvents or other flammable cleaning aids shall not be used. *CMC 507.1.Item 6; CFC 609.3.3.2*

TESTING AND INSPECTION

The system shall be pre-tested prior to OCFA inspection to determine that the system is properly installed and functions in accordance with the approved plans and the manufacturer's installation and maintenance manual. **The complete technical manual shall be made available to the inspector.** Please note, if a full manual is not available, the inspection may be discontinued, and a rescheduling fee will apply. Testing during the OCFA inspection shall include a manual and automatic activation via fusible link. A shut down of all electrical and gas cooking equipment shall also be demonstrated. Nozzle type, height, and orientation relative to placement of cooking appliances will also be verified during the inspection.

Table 609.3.3.1 COMMERCIAL COOKING SYSTEM INSEPTION FREQUENCY

Type of Cooking Operations as determined by Fire Code Official	Minimum Frequency of Inspections
High-Volume cooking operations such as 24-hour cooking, charbroiling or wok cooking	3 months
Low-Volume cooking operations such as places of religious worship, seasonal businesses and senior centers	12 months
Cooking operations utilizing solid fuel burning cooking appliances	1 month
All other cooking operations	6 months

The entire duct system shall be inspected at a minimum per Table 609.3.3.1. If during the inspection it is found that the hood, grease removal devices, fans, ducts or other appurtenances have an accumulation of grease, such components shall be cleaned. *CFC 609.3.3.*

**Additional OCFA Notes for Systems Burning Solid Fuel
Procedures for Inspection, Cleaning and Maintenance for Solid Fuel Cooking**

PLACE THE FOLLOWING NOTES VERBATIM ON THE PLAN:

Solid cooking appliances shall be inspected, cleaned, and maintained in accordance with the following per 2019 NFPA 96:

1. The combustion chamber shall be scraped clean to its original surface once each week and shall be inspected for deterioration or defects.
2. Any significant deterioration or defect that might weaken the chamber or reduce its insulation capability shall be immediately repaired.
3. The flue or chimney shall be inspected weekly for the following conditions:
 - a. Residue that might begin to restrict the vent or create an additional fuel source
 - b. Corrosion or physical damage that might reduce the flue's capability to contain the effluent
4. The flue or chimney shall be cleaned before these conditions exist.
5. The flue or chimney shall be repaired or replaced if any unsafe condition is evident.
6. Spark arrester screens located at the entrance of the flue or in the hood assembly shall be cleaned prior to their becoming heavily contaminated and restricted.
7. Filters and filtration devices installed in a hood shall be cleaned.

STORAGE OF SOLID FUEL

1. Where storage is in the same room as the solid fuel appliance or in the same room as the fuel-loading or clean-out doors, fuel storage shall not exceed a 1-day supply.
2. Fuel shall not be stored above any heat-producing appliance or vent or closer than 3 ft. to any portion of a solid fuel appliance constructed of metal or to any other cooking appliance that could ignite the fuel.
3. Fuel shall be permitted to be stored closer than the requirements of (Item 2 above) where a solid fuel appliance or other cooking appliance is listed or approved for less clearance to combustibles.
4. Fuel shall not be stored in the path of the ash removal.
5. Where stored in the same building as the solid fuel appliance, fuel shall be stored only in an area with walls, floor, and ceiling of noncombustible construction extending at least 3 feet past the outside dimensions of the storage pile.
6. Fuel shall be permitted to be stored in an area with walls, floor, and ceiling of combustible or limited-combustible construction.
7. Fuel shall be separated from all flammable liquids, all ignition sources, all chemicals, and all food supplies and packaging goods.
8. Where acceptable to the authority having jurisdiction, fuel storage areas shall be permitted to be protected with a fixed water pipe system with a hose capable of reaching all parts of the area.
9. In lieu of the sprinkler system outlined in 14.9.2.8, a listed 2-A rated water spray fire extinguisher or a 1.6 gallon wet chemical fire extinguisher listed for Class K fires with a maximum travel distance of 20 feet to the solid fuel piles shall be permitted to be used for a solid fuel pile, provided that the fuel pile does not exceed 5 cubic feet volume.

SOLID FUEL HANDLING AND ASH REMOVAL

1. Solid fuel shall be ignited with a match, an approved built-in gas flame, or other approved ignition source.
2. Combustible or flammable liquids shall not be used to assist ignition.
3. Matches and other portable ignition sources shall not be stored in the vicinity of the solid fuel appliance.
4. Solid fuel shall be added to the fire as required in a safe manner and in quantities and ways not creating a higher flame than is required.
5. Long-handled tongs, hooks, and other required devices shall be provided and used to safely add fuel, adjust the fuel position, and control the fire without the user having to reach into the firebox.

ASH PROTECTION

1. Ash, cinders, and other fire debris shall be removed from the firebox at regular intervals to prevent interference with the draft to the fire and to minimize the length of time the access door is open.
2. All ash shall be removed from the chamber a minimum of once a day.
3. The ash shall be sprayed with water before removal to extinguish any hot ash or cinders and to control the dust when the ash is moved.

ASH REMOVAL PROCESS

1. Tools shall be provided so that ash removal can be accomplished without having to reach into the chamber.

2. The ash shall be spread out gently in small lots on the chamber floor or on a shovel, to be sprayed before it is removed to the metal container or cart. If the floor of the chamber is of a metal that is subject to rapid corrosion from water, then a noncombustible, corrosion-resistant pan shall be placed just outside the cleanout door for this purpose.
3. The ash shall be carried to a separate heavy metal container (or dumpster) used exclusively for the purpose.

OTHER SAFETY REQUIREMENTS

1. Metal-fabricated solid fuel cooking appliances shall be listed for the application where produced in practical quantities or shall be approved by the authority having jurisdiction.
2. Where listed, metal-fabricated solid fuel cooking appliances shall be installed in accordance with the terms of their listings and with the applicable requirements of this standard.
3. No solid fuel cooking device of any type shall be permitted for deep fat frying involving more than 1 quart of liquid shortening, nor shall any solid fuel cooking device be permitted within 3 feet of any deep fat frying unit.
4. Site-built solid fuel cooking appliances shall be submitted for approval to the authority having jurisdiction before being considered for installation.
5. All units submitted to the authority having jurisdiction shall be installed, operated, and maintained in accordance with the approved terms of the manufacturer's instructions and any additional requirements set forth by the authority having jurisdiction.