

Removable Grease Doors for Cleaning and Maintenance in Compliance with Section 508.3

Vent Release for Heated Air Around Duct (UMC 508.4)

Do Not Rake Roofing Over Top of Curb, (Must be 5/8 Type "X" Gypsum Board)

Non-Combustible Duct Support per Manufacturer's Specifications

Duct Construction (UMC 508.1.1):

- 16 Ga. Galvanized Steel
- 18 Ga. Stainless Steel
- All Joints Welded No Screws or Rivets
- For Grease Duct Requiring Offsets Comply with UMC Section 508.2

For Exposed Grease Duct Provide 18" Min. Between Duct and Unprotected Combustibles or 3" Min. from Protected Combustibles. (UMC 508.8)

Provide 18" Min. between hood and unprotected combustibles or 3" Min. from Protected Combustibles. (UMC 509.4)

Approved Grease Filters (UMC 509.5)

Grease Gutter (UMC 509.3)

Removable Grease Cup

See Table 5-2 for Minimum Distance to Cooking Surface to Grease Filter (UMC 509.5)

Bottom Horizontal Discharge Centrifugal Bladed Exhaust Fan Discharge Min. 10'-0" From any Property Line or Air Intake (May be reduced to 5'-0" when directed away from such locations) (UMC 508.9)

Support per Manufactures Recommendations Seal any Penetrations

Removable Drip Pan or Grease Cup

Roof Curb

Roof Structure

Roof Line

Min. One Hour Ventilated Duct Enclosure as Required for Type I Hood (UMC 508.4):

- Provide 3" Minimum and 12" Maximum Air Space Around Entire Enclosure Construction: 2x4 Wood or 1-5/8" Mt. Studs @ 16" o.c. with 5/8" Type X Gyp. Brd. on Both Sides.
- Openings in Enclosure for Duct Cleanouts Shall Comply With UMC Section 508.5

Air Velocity 1500 to 2500 ft./sec. (UMC 508.6)

Ceiling Line

Make Up Air Per Section 509.9 UMC.

See Page 2 For Flashing and Ceiling Protection Requirements. Flashing Shall be 22 Ga. Minimum.

UL Listed Light Fixture (NEC 410-4c)

Hood Material (UMC 509.2)

Type I Hood:

- Galv. Steel No 22 Ga.
- Stainless Steel 22 Ga.
- Copper 24 oz. per sq. ft.

Type II Hood:

- Galv. Steel No 24 Ga.
- Stainless Steel 22 Ga.
- Copper 24 oz. per sq. ft.

45° Min.

6" Min. (UMC 509.6)

4' Maximum (UMC 509.6)

SECTION AT HOOD AND SHAFT

OTHER NOTES:

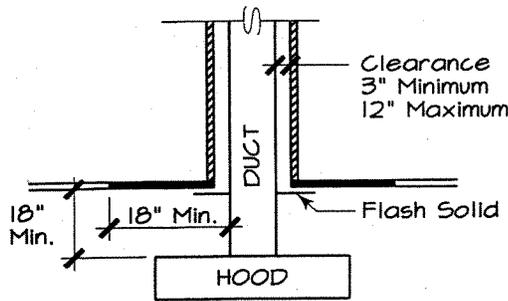
1. Joints and Seams shall be substantially tight. (UMC 509.2)
2. Makeup Air shall be provided to replenish the air exhausted by the ventilation system. (UMC 509.9)
3. Hoods shall be secured in place by non-combustible supports. (UMC 508.1.1)
4. Fire-extinguishing equipment for protection of kitchen grease hoods and ducts shall be installed per UMC 510.2.



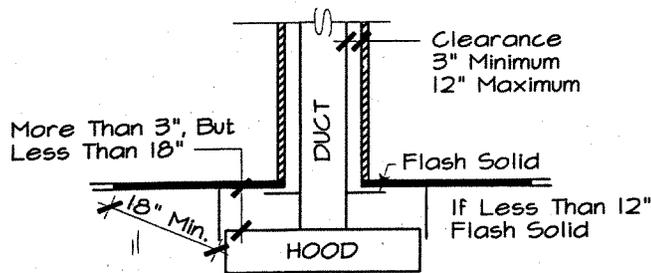
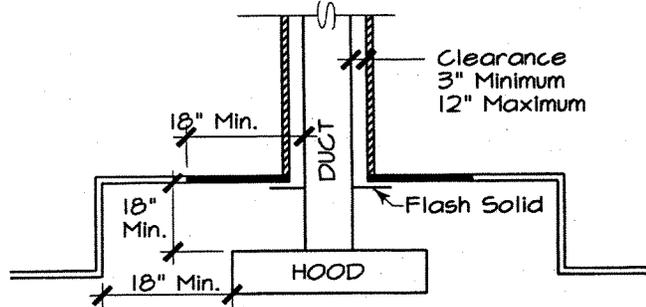
TYPE I COMMERCIAL GREASE HOOD DETAILS
HELP FOR THE SMALL BUSINESS
CITY OF SANTA PAULA, BUILDING AND SAFETY

Approved By: *[Signature]* Date: 4/6/04
 Date: 10/17/03 Sheet 1 of 4 D-3

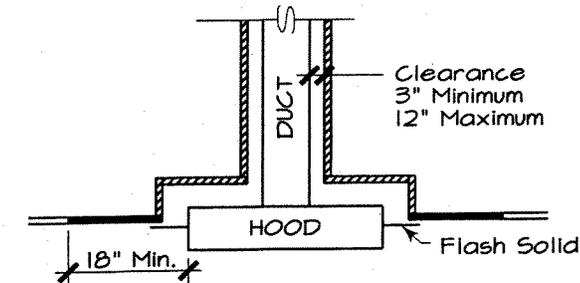
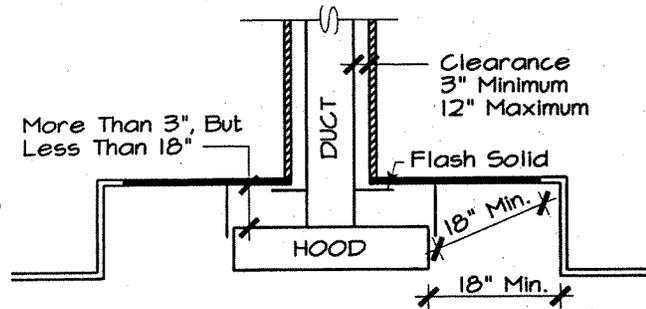
CLEARANCES FOR DUCT AND TYPE I GREASE HOOD SECTION 508.8 & 509.4 UMC



TOP OF HOOD MORE THAN 18" BELOW CEILING



TOP OF HOOD BETWEEN 3" AND 16" BELOW CEILING



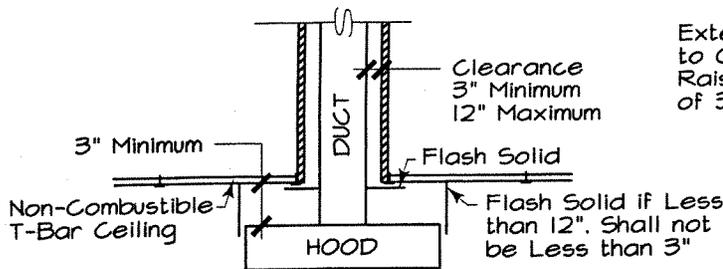
TOP OF HOOD LESS THAN 3" BELOW CEILING

WALL/CEILING CONSTRUCTION LEGEND

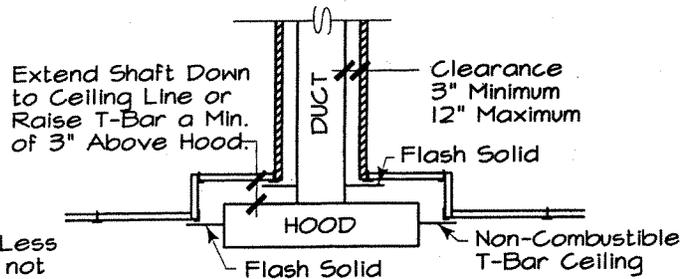
- The shaft enclosure shall be constructed, as required by the Building Code, as a fire rated shaft. (Minimum 1-Hour Assembly) (See Table 7-B UBC for Assemblies.)
- 1 Hour fire resistive construction on hood side of the ceiling only (not required if ceiling is of non-combustible material).
- Non-rated ceiling construction.

OTHER NOTES:

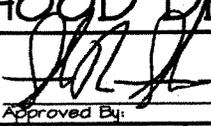
Does not show support or construction of the shaft or clearances above the roof.
All flashing shall be a minimum of 22 Ga.



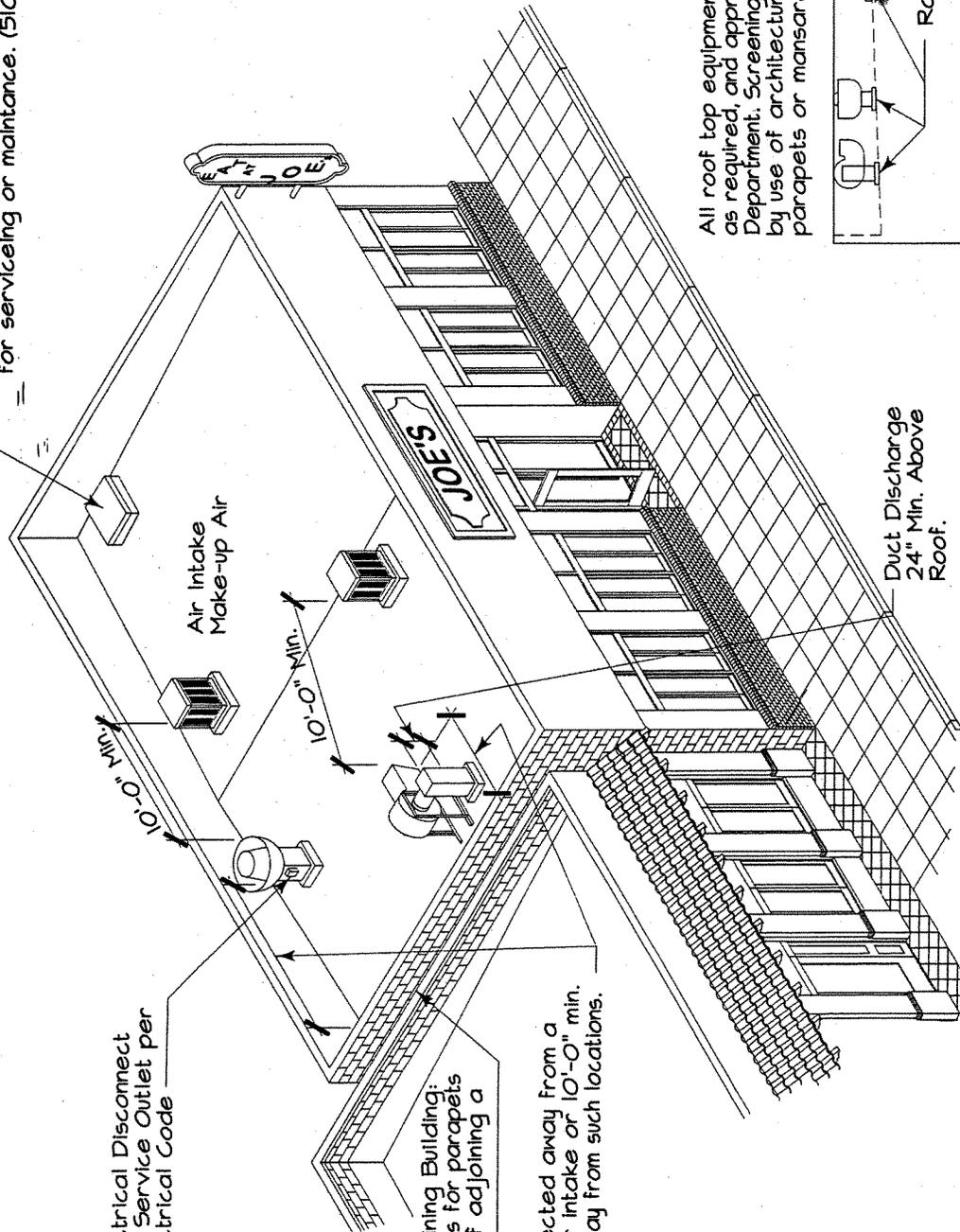
REQUIREMENTS APPLIED TO T-BAR CEILINGS



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Roof Hatch / Mechanical Equipment Access
Motors and fans shall be accessible
for servicing or maintenance. (510.1 UMC)

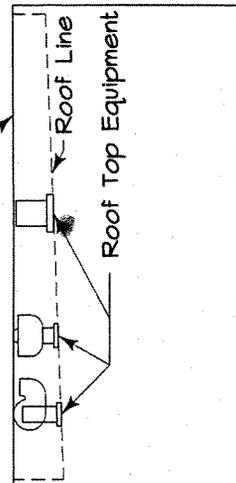


Electrical Disconnect
and Service Outlet per
Electrical Code

Property Line/Adjoining Building:
Also see requirements for parapets
for openings in roof adjoining a
property line.

5'-0" Min. when directed away from a
property line or air intake or 10'-0" min.
when not directed away from such locations.
(508.9 UMC)

All roof top equipment shall be screened
as required, and approved by the Planning
Department. Screening may be accomplished
by use of architectural elements such as
parapets or mansards.



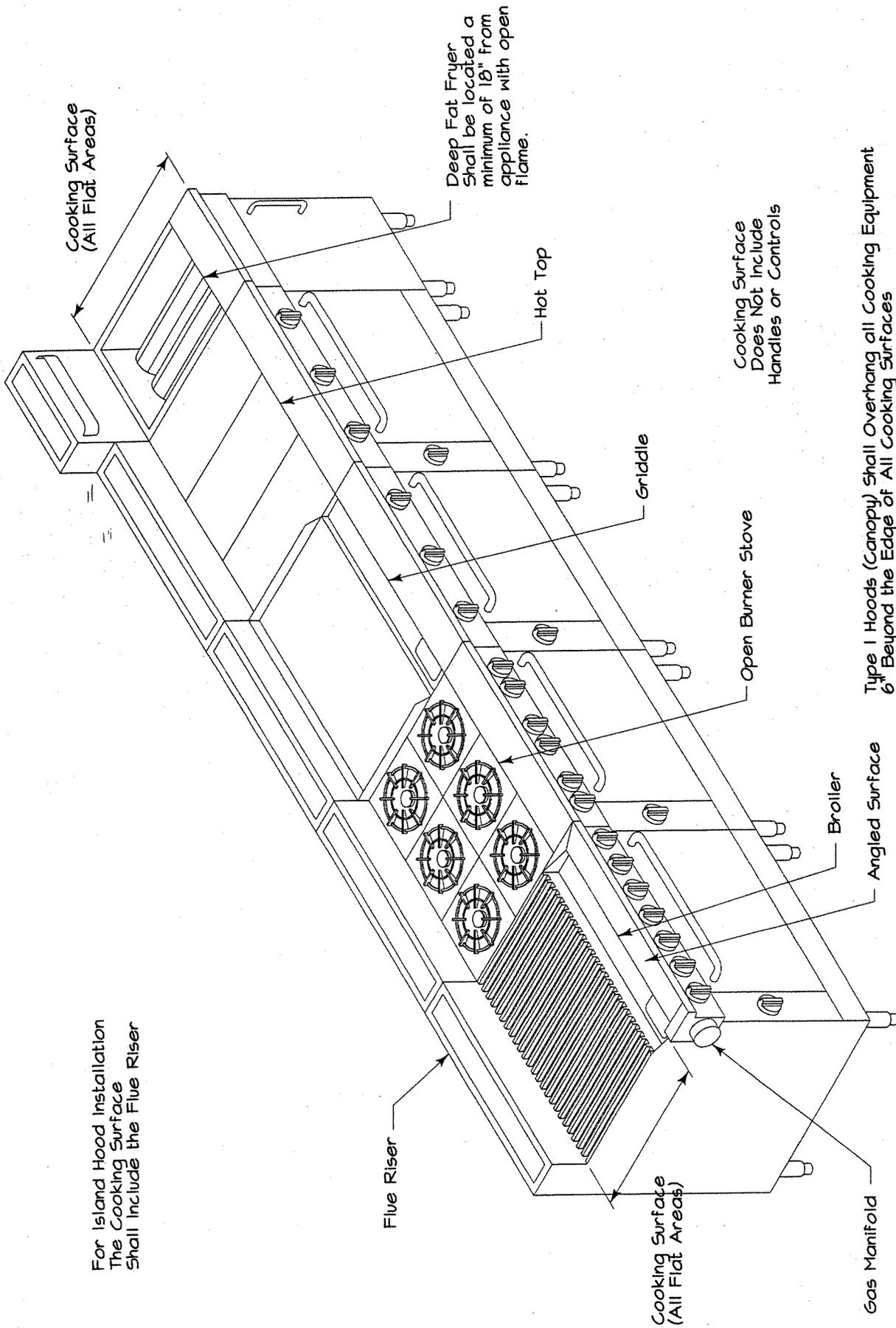
BUILDING ELEVATION



TYPE I COMMERCIAL GREASE HOOD DETAILS
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Sheet 2 of 2

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TYPE I COMMERCIAL GREASE HOOD DETAILS

HELP FOR THE SMALL BUSINESS

CITY OF SANTA PAULA, BUILDING AND SAFETY

Approved By: *[Signature]* Date: 4/6/04

Date: 10/17/03 Sheet: 4 of 4 ID-3

REVISED: 10/17/03

PURPOSE:

To establish a list of food processing equipment and the required exhaust hoods that is consistent with both Uniform Mechanical Code (UMC) requirements and the recommendations of the Food Committee of the California Conference of Directors of Environmental Health (CCDEH)

POLICY:

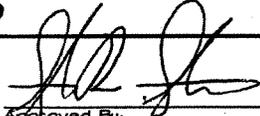
This recommendation for the type of hood to be used with various kinds of heat processing equipment shall be followed when reviewing plans for installations for compliance with Section 509, UMC. Exhaust airflow requirements for canopy type hoods are specified by the formulas given in Section 509.7. The appropriate exhaust airflow formula is also given in the list below. Exhaust airflow for non canopy hoods shall be per Section 509.8. Listed grease extractors shall have an exhaust air flow that is consistent with their listing data per Underwriters Laboratories, Inc., Standard 710, latest edition.

EQUIPMENT		CANOPY HOOD	
		TYPE	SECTION
1.	Bain Marie/Steam Table	None	-
2.	Broiler (side , overfired, or Salamander) (Gyros)	I	509.7.3
3.	Charbroiler-underfired (charcoal, solid fuel burning or other than solid fuel burning)	I	509.7.1
4.	Cheese Melter	II	509.7.4
5.	Chinese Range (wok)	I	509.7.2
6.	Coffee Urn	None	-
7.	Corn Warmer	None	-
8.	Crepe Maker		
	a. Portable	None	-
	b. Non-protable	II	509.7.4
9.	Deep Fat Fryer	I	509.7.2
10.	Dish washing Machine		
	a. Chemical sanitizing or under counter	II	509.7.4
	b. Non-protable	None	-
11.	Hot Dog Warmer	None	-
12.	Hot plate		
	a. Small 1.5 KW or 5,000 BTU or less	None	-
	b. Large (greater than above)	I	509.7.3
13.	Griddle/Grill (medium temperature)	I	509.7.3
14.	Kettle, Steam/Coffee	II	509.7.4
15.	Kettle, Candy	II	509.7.4
16.	Oven		
	a. Maximum temperature 250 F thermostatically controlled	None	-
	b. Greater than 250 F without grease vapor generation (example: enclosed-baking, roasting rotisserie)	II	509.7.4
	c. Greater than 250 F with grease vapor generation (example: open-conveyor, roasting, rotisserie)	I	509.7.3
	d. Microwave (only)	None	-
	Exhausting ventilation determination for ovens should be based on the primary factors of heat (above or 250 F) and whether or not more than minimal amounts of greased vapors will be produced.		
17.	Popcorn Popper		
	a. Two gallons or less hopper capacity, no grease vapor generation (enclosed)	None	-
	b. Greater than two gallon hopper capacity, with grease vapor generation (open)	I	509.7.3
18.	Pressure Fryer	I	509.7.2
19.	Pizza Oven		
	a. Solid Fuel	I	509.7.1
	b. All others (or per Product Listing)	II	509.7.4
20.	Range	I	509.7.2 & 509.7.3
21.	Roll Warmer	None	-
22.	Rotisserie (open)		
	a. High Temperature	I	509.7.3
	b. Low temperature	None	-
23.	Skillet (tilting or brasing)	I	509.7.3
24.	Steam Cooker	II	509.7.4
25.	Steam Table	None	-
26.	Toasters		
	a. Large production	II	509.7.4
	b. Small	None	-
27.	Waffle Cone Maker/Waffle Iron		
	a. Large production	None	-
	b. Small	II	509.7.4



COOKING HOOD REQUIREMENTS

HELP FOR THE SMALL BUSINESS
 CITY OF SANTA PAULA, BUILDING AND SAFETY

Approved By:  4/6/04
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BACKGROUND:

Section 508.1 of the UMC requires exhaust hoods to be installed at or above most types of smoke, grease, steam, or heat producing equipment usually found in food processing, other than in a dwelling. This UMC section is not specific as to which equipment requires only a general Type II hood for removal of steam, odor, vapors, etc. as contrasted with a Type I for collection and removal of grease and smoke. The food committee of the CCDEH has recommend which type off exhaust hood should be installed with various kinds of heat processing equipment.

PURPOSE:

1. Type I hoods for use over solid-fuel cooking equipment shall be provided with separate exhaust systems. The formula in Section 509.7.1 is required for solid-fuel cooking equipment.
2. This guideline does not preclude the use of non canopy hoods. (See applicable sections of the Uniform Mechanical Code.)
3. Pant leg or slot hoods for dish machines may be approved for conveyor type dish machines (i.e., where where emissions are localized and can reasonably be captured by such configuration). Use $Q=200\text{cfm}$ per lineal foot of hood. Similar configurations for non-dish machine applications may be approved using $Q=300\text{cfm}$.
4. In general, cooking equipment that exceeds 250 F temperature shall be equipped with at least a Type II exhaust ventilation system. Adherence to this standard may be adjusted (more or less restrictive in consideration of the following factors:
 - a. The existence of other un-vented heat processing units.
 - b. The presence of a heating/ventilating (HVAC) system.
 - c. The size of the room or space where equipment is installed.
 - d. The nature of emissions, use of the equipment, and the impact on the facility's enviroment.
 - e. The relative size of the cooking unit.
5. Portable. The recognized standard of portability is the NSF standard equaling 88 pounds or less.
6. Filters in Type I hoods should be properly mounted to minimize the possibility of being lifted off the upper mounting flange during hood operation. A channel or full length bracket along the inside edge of the upper mounting flange will generally be adequate.

	Number of Exposed Sides		
	Four Sides (Island or Central Hood)	Three Sides or Less	Alternate Formula
509.7.1 - Type I Hood Solid-Fuel Cooking Equipment, Grease-Burning Char Broilers, and Undefined Equipment	$Q = 300A$	$Q = 200A$	$Q = 100PD$
509.7.2 - Type I Hood High-Temperature Appliances i.e. Deep Fat Fryers	$Q = 150A$	$Q = 100A$	$Q = 100PD$
509.7.3 - Type I Hood Medium-Temperature Appliances i.e. Rotisseries, Grilles, and Ranges	$Q = 100A$	$Q = 75A$	$Q = 50PD$
509.7.4 - Type I & Type II Hoods Low-Temperature Appliances i.e. Medium to Low Temperature Ranges, Roasters, Roasting Ovens, Pastry Ovens, and Equipment Approved for use under a Type II hood such as Pizza Ovens.	$Q = 75A$	$Q = 50A$	$Q = 50PD$

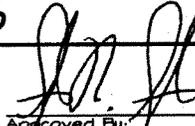
NOTES:

1. Where:
 - A = the horizontal surface area of the hood, in square feet.
 - P = that part of the perimeter of the hood is open, in feet.
 - D = distance in feet between the lower lip of the hood and the cooking surface.
 - Q = quantity of air, in cubic feet per minute.
2. When cooking equipment is installed back to back and is covered by a common island type hood, the airflow required may be calculated using the formula for three sides exposed.
3. Hoods for use over solid-fuel cooking equipment shall be provided with separate exhaust systems.



COOKING HOOD REQUIREMENTS

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Approved By:  Date: 4/4/04
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CERTIFIED BALANCE REPORT AND KITCHEN HOOD TEST DATA - SECTION 509.11

Must be performed by an independent contractor (not involved with the installation) who is licensed and certified to perform such tests.

Date: _____

Contractor Name & License No: _____

Permit No: _____

Job Name & Address: _____

Hood Location: _____

Plan Sheet No: _____ Plan Sheet No: _____

1. Type of Hood: Type I Type II
2. List All Equipment Under Hood: _____

3. Actual Hood Size:

$$\frac{\text{_____ Ft.}}{\text{(Hood Width)}} \times \frac{\text{_____ Ft.}}{\text{(Hood Length)}} = \frac{\text{_____ Sq. Ft.}}{\text{(Hood Area)}}$$

4. Required Quantity of Air

$$\frac{\text{_____ Ft.}}{\text{(Hood Width)}} \times \frac{\text{_____ Ft.}}{\text{(Hood Length)}} \times \frac{\text{_____}}{\text{(Formula)}} = \frac{\text{_____ CFM}}{\text{(Hood Exhaust)}}$$

5. Actual Quantity of Air As Measured: = _____ CFM
(Actual Volume)

6. Actual Total Filter Area = _____ Sq. Ft.
(Filter Area)

7. Actual Filter Air Flow Rate Per Sq.Ft. of Filter Area:

$$\frac{\text{_____ CFM}}{\text{(CFM from No. 5)}} / \frac{\text{_____ Sq.Ft.}}{\text{(Filter Area)}} = \frac{\text{_____ FPM}}{\text{(Hood Area)}}$$

8. Listed Filter Air Flow Rate: = _____ FPM Per Filter
(As Shown on Filter)

9. Actual Duct Size:
Rectangular Duct

$$\frac{\text{_____ Ft.}}{\text{(Front Width)}} \times \frac{\text{_____ Ft.}}{\text{(Side Width)}} = \frac{\text{_____ Sq.Ft.}}{\text{(Hood Area)}}$$

OR Round Duct

$$0.79 \times \frac{\text{_____ Ft.}}{\text{(Duct Diameter)}} = \frac{\text{_____ Sq.Ft.}}{\text{(Hood Area)}}$$

10. Actual Quantity of Make Up Air As Measured: = _____ CFM
(Actual Volume)

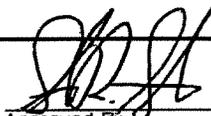
The exhaust and make up air system (does / does not) meet the minimum design requirements as shown on the approved plans.

Signature of Licenced Certifier: _____



HOOD CERTIFICATION FORM

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 Approved By: _____ Date: 4/6/04
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