Form # P 04 DISPLAY THIS CA	ARD ON PRINCIPAL FRONTAGE OF WORK
	TY OF PORTLAND
Please Read Application And Notes If Any	DUIL DING _ INSPECTION
Attached	PERIVIN
This is to certify that10 DANA STREET LLC	C/H yPond Construction
has permission toKitchen Hood System co	JUN - 8 2006
AT 10 DANA ST	032 V001001
provided that the person or perso	ons rm or standing this period this period of all option with all
of the provisions of the Statutes	of aine and or the chances of the City of Portland regulating
the construction, maintenance a	nd se of buildings and suctures, and of the application on file in
this department.	
Apply to Public Works for street line and grade if nature of work requires such information.	ificatio of inspanner musice on and vien permission process pre this ailding or pirt there is ned or porvise losed-in 4 UR NO construction are QUIRED.
OTHER REQUIRED APPROVALS	
Fire Dept.	
Health Dept	
Appeal Board	
Other Department Name	
PI	

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Location of Construction:	Owner Name:		Owner	Address:	JUN -	8 2005	Pione:	·····
10 DANA ST	10 DANA ST	TREET LLC	10 D	ANA ST. SI	'E 300			
Business Name:	Contractor Nam	ie:	Contra	actor Address:			Phone	
	HardyPond C	Construction	1039	Riverside S	Super 1	Virilande/	<b>10</b> 0779 <b>1</b> 60	066
Lessee/Buyer's Name	Phone:		Permit	t Type:				Zone:
			Hoo	od Systems, C	ommerical			<u> </u>
Past Use:	Use: Proposed Use:		Permit Fee: Cost of Work: CEO District:					
Commercial	Commercial/	Kitchen Hood System	FIDE	\$273.00	\$28,0	00.00	I	
	connected w/	permit#000315	FIRE DEPT: Approved INSPECTION:					
			r		Denied		Hg-/	
			10	NFPF	4 96		1. 1\$10	76
Proposed Project Description:			1				0/0/0	$\Gamma$ .
Kitchen Hood System com	nected w/ permit#060315		Signat	ure: Grea	Gues	Signatur	e/ []][]	luy
			PEDE	STRIAN ACTI	VITIES DIS	TRICT (P.	A.D.) (	
			Action	n 🗌 Approv	ed Ap	proved w/C	Conditions	Denied
			Signat	hure			Date	
Permit Taken By:	Date Applied For:		Signa	Zoning	Annrov	al	2 410	
ldobson	05/11/2006			Zonng	Approv	a1		
		Special Zone or Revie	ews	Zonir	g Appeal		Historic Pres	servation
		Shoreland		Variance	9	Ę	Not in Distri	ct or Landmar
		Wetland		Miscella	neous	Γ	Does Not Re	quire Review
		Flood Zone		Conditio	nal Use	[	Requires Rev	view
		Subdivision		Interpret	ation	۲ -	Approved	
		Site Plan		Approve	d	[	Approved w/	Conditions
		Maj 🔄 Minor 🚞 MM		Denied		[	Denied	
		1.4.		1-4		D	DA.	Ja. 1

## CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE <b>OF</b> APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

City of Portland, Maine - Bui	lding or Use Permit		Permit No:	Date Applied For:	CBL:
389 Congress Street, 04101 Tel: (	(207) 874-8703, <b>Fax:</b> (207	) 874-871 <u>6</u>	06-0700	05/11/2006	032 V001001
Location of Construction:	Owner Name:	(	Owner Address:		Phone:
10 DANA ST	10 DANA STREET LLC		10 DANA ST. STI	E 300	
Business Name:	Contractor Name:	(	Contractor Address:		Phone
	HardyPond Construction 10391		1039 Riverside St	1039 Riverside St Suite 11 Portland (207) 797-6	
Lessee/Buyer's Name	Phone: Permit T		Permit Type:		•
	Hood Systems, Commerical				
Proposed Use:	ŢŢ	Propose	d Project Description:		
Commercial/Kitchen Hood System c	connected w/ permit#0603 15	Kitche	n Hood System cor	nnected w/ permit#06	03 15
<b>Dept:</b> Historical <b>Status:</b> A	Approved	Reviewer:	Deborah Andrew	s Approval Da	nte: 06/05/2006
Note:					Ok to Issue:
1					
<b>Dept:</b> Building <b>Status:</b> A	Approved	<b>Reviewer:</b>	Mike Nugent	Approval Da	nte: 06/08/2006
Note:					Ok to Issue: 🗹
		D			A
Dept: Fire Status: A	Approved with Conditions	keviewer:	Cptn Greg Cass	Approval Da	ite: 05/11/2006
Note:					Ok to Issue: 🗹
I) The 2 hour rated stairwell shall n	ot be impacted by the installa	tion of the h	ood system.		

# **Comments:**

5/15/2006-mjn: Plans stamped by Mass. Engineer, only received page one of the check list. Notified applicant. Sent to historic.

PERMIT ISSUED JUN - 8 2005 CITY OF PORTLAND

Signature of applicant:



# General Building Permit Application

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If you or the property owner owes real estate of personal property taxes or user chargee on any property within the City, payment arrangements must be made before permits of any kind are accepted.

	ture Square Footage of Lot	
x Assessor's Chart, Block & Lot art# Block# Lot# 2 V /	Owner: Vignola L.L.C.	Telephone:
see/Buyar's Name (If Applicable) Dan Kary	Applicent name, address & telephone: 10 Dana Street Portland Maine 04/01	Cost Of Work: \$ <u>2</u> 4,000 Fee: \$
		C of O Fee: \$
posed Specific use:		
tractor's name, address & relephone:	Jack SEIOMON / SEIOMON / BROS 25 Sinth St. Chelsen A Phone: G17-884-8110	na 02150

This is not a permit; you may not commence ANY work until the permit is issued

Date:

51510

300r



Lee Urban-Director of Planning and Development Michael J. Nugens-Inspections Division Director

# Kitchen Exhaust System Checklist and Code Provisions

Dear Applicant,

The following is a checklist to assist you in filing for a permit for a Kitchen Exhaust system. The applicable Mechanical Code provisions have also been attached. Please complete this and submit job specific construction documents that demonstrate compliance with the attached information.

Type of System: Түре 🏽 \_\_\_\_\_ Type I \_

(Type I systems are systems that vent fryers, grills, broilers, ovens or woks. Type II systems are systems that vent steamers and other non grease producing appliances)

# Type of Materials:

Is the hood Stainless steel or other type of steeh 18 GA S If Other, what Type?
Is the duct work Stainless steel or other type of steel?
Thickness of the steel for the hood 18 an S/S
Thickness of the duct for the hood 16ga Galy
Type of Hood and Duct supports Wall Mount Comopy Type I S/s Hood Supported by 3/8 Steel Rocks
Type of seams and joints Welded Standing Seams on Ductwork,
Welded Sharp Edgeson Hood

### SECTION 506 COMMERCIAL KITCHEN HOOD VENTILATION SYSTEM DUCTS AND EXHAUST EQUIPMENT

**506.1 General.** Commercial kitchen hood ventilation ducts and exhaust equipment shall comply with the requirements of this section. Commercial kitchen grease ducts shall be designed for the type of cooking appliance and hood served.

**506.2 Corrosion protection.** Ducts exposed to the outside atmosphere or subject to a corrosive environment shall be protected against corrosion in an approved manner.

**506.3 Ductsserving Type I hoods.** Type I exhaust ducts shall be independent of all other exhaust systems except as provided in Section 506.3.5. Commercialkitchen duct systems serving Type I hoods shall be designed, constructed and installed in accordance with Sections 506.3.1 through 506.3.12.3.

**506.3.1 Duct materials.** Ducts serving Type I hoods shall be constructed of materials in accordance with Sections 506.3.1.1 and 506.3.1.2.

**506.3.1.1 Grease duct materials.** Grease ducts serving Type I hoods shall be constructed of steel not less than 0.055 inch (1.4 mm) (No. 16Gage) in thickness or stainless steel not less than 0.044 inch (1.1 mm) (No. 18Gage) in thickness.

**Exception:**Listed and labeled factory-built commercial kitchen grease ducts shall be installed in accordance with Section 304.1.

**506.3.1.2Makeup air ducts.** Make up air ducts connecting to or within 18 inches (457 mm) of a Type I hood shall be constructed and installed in accordance with Sections 603.1, 603.3, 603.4, 603.9, 603.10 and 603.12. Duct insulation installed within 18 inches (457 mm) of a Type I hood shall be noncombustible or shall be listed for the application.

**506.3.2 Joints, seams and penetrations of grease ducts.** Joints, seams and penetrations of grease ducts shall be made with a continuous liquid-tight weld or braze made on the external surface of the duct system.

#### **Exceptions**:

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- Penetrations shall not be required to be welded or, brazed where sealed by devices that are listed for the application.
- 2. Internal welding or brazing shall not be prohibited provided that the joint is formed or ground smooth and is provided with ready access for inspection.
- 3. Listed and labeled factory-built commercial kitchen grease ducts installed in accordance with Section 304.1.

**506.3.2.1 Duct joint types,** Duct joints shall be butt joints or overlapping duct joints of either the telescoping or bell type. Overlapping joints shall be installed to prevent ledges and obstructions from collecting grease or interfering with gravity drainage to the intended collection point. The difference between the inside cross-sectional dimensions of overlapping sections of duct shall not exceed 0.25 inch (6 mm). The length of overlap for overlapping duct joints shall not exceed 2 inches (51 mm).

**506.3.2.2 Duct-to-hood joints.** Duct-to-hood joints shall be made with continuous internal or external liquid-tight welded or brazed joints. Such joints shall be smooth, accessible for inspection, and without grease traps.

#### Exceptions: This section shall not apply to:

- 1. A vertical duct-to-hoodcollar connection made in the top plane of the hood in accordance with all of the following:
  - 1.1. The hood duct opening shall have a 1-inch-deep (25 mm), full perimeter, welded flange turned down into the hood interior at an angle of 90 degrees from the plane of the opening.
  - 1.2. The duct shall have a 1-inch-deep (25 mm) flange made by a 1-inchby **1**-inch (25 mm by 25 mm) angle iron welded to the full perimeter of the duct not less than 1 inch (25 mm) above the bottom end of the duct.
  - 1.3. A gasket rated for use at not less than 1,500°F (815°C) is installed between the duct flange and the top of the hood.
  - 1.4. The duct-to-hoodjoint shall be secured by **stud** bolts not less than **0.25** inch (6.4 mm) in diameter welded to the hood with a spacing not greater than 4 inches (102 mm) on center for the full perimeter of the opening. All bolts and nuts are to be secured with lockwashers.
- **2.** Listed and labeled duct-to-hood collar connections installed in accordance with Section 304.1.

**506.3.2.3 Duct-to-exhaust fan connections.** Duct-to-exhaust fan connections shall be flanged and gasketed at the base of the fan for vertical discharge fans; shall be flanged, gasketed and bolted to the inlet of the fan for side-inlet utility fans; and shall be flanged, gasketed and bolted to the inlet of the fan for side-inlet utility fans; and shall be flanged, gasketed and bolted to the inlet and outlet of the fan for in-line fans.

**506.3.2.4 Vibration isolation. A** vibration isolation connector for connecting a duct to a fan shall consist of noncombustible packing in a metal sleeve joint of approved design or shall be a coated-fabricflexible duct connector listed and labeled for the application. Vibration isolation connectors shall be installed only at the connection of a duct to a fan inlet or outlet.

**506.3.3 Grease duct supports.** Grease duct bracing and supports shall be of noncombustible material securely attached to the structure and designed to carry gravity and seismic loads within the stress limitations of the *International Building Code*. Bolts, screws, rivets and other mechanical fasteners shall not penetrate duct walls.

**506.3.4** Air velocity. Grease duct systems serving a Type I hood shall be designed and installed to provide an air velocity within the duct system of not less than 1,500 feet per minute (7.6 m/s).

**Exception:** The velocity limitations shall not apply within duct transitions utilized to connect ducts to differently

**506.3.11** Grease duct fire-resistive access opening. Where cleanout openings are located in ducts within a fire-resistance-rated enclosure, access openings shall be provided in the enclosure at each cleanout point. Access openings shall be equipped-with tight-fitting sliding or hinged doors that are equal in fire-resistive protection to that of the shaft or enclosure. An approved sign shall be placed on access opening panels with wording as follows: "ACCESS PANEL.DO NOT OBSTRUCT"

**506.3.12 Exhaust outlets serving Type I hoods.** Exhaust outlets for grease ducts serving Type I hoods shall conform to the requirements of Sections 506.3.12.1 through 506.3.12.3.

**506.3.12.1 Termination above the roof.** Exhaust outlets that terminate above the roof shall have the discharge opening located not less than 40 inches (1016 mm) above the roof surface.

**506.3.12.2 Termination through an exterior wall.** Exhaust outlets shall be permitted to terminate through exterior walls where the smoke, grease, gases, vapors, and odors in the discharge from such terminations do not create a public nuisance or a fire hazard. Such terminations shall not be located where protected openings are required by the International Building Code. Other exterior openings shall not be located within 3 feet (914 mm) of such terminations.

**506.3.12.3 Termination location.** Exhaust outlets shall be located not less than 10 feet (3048 mm) horizontally from parts of the same or contiguous buildings, adjacent property lines and **air** intake openings into any building and shall be located not less than 10 feet (3048 mm) above the adjoining grade level.

**Exception:** Exhaust outlets shall terminate not less than **5** feet (1524 mm) from **an** adjacent building, adjacent property line and air intake openings into a building where air from the exhaust outlet discharges away from such locations.

**506.4 Ducts serving Type II hoods.** Single or combined Type II exhaust systems for food-processing operations shall be independent of all other exhaust systems. Commercial kitchen exhaust systems serving Type II hoods shall comply with Sections 506.4.1 and 506.4.2.

**506.4.1 Type II exhaust outlets.** Exhaust outlets for ducts serving Type II hoods shall comply with Sections 401.5 and 401.5.2. Such outlets shall be protected against local weather conditions and shall meet the provisions for exterior wall opening protectives in accordance with the International Building Code.

**506.4.2 Ducts.** Ducts and plenums serving Type II hoods shall be constructed of rigid metallic materials. Duct construction, installation, bracing and supports shall comply with Chapter 6. Ducts subject to positive pressure and ducts conveying moisture-laden or waste-heat-laden air shall be constructed, joined and sealed in an approved manner.

**506.5 Exhaust equipment.** Exhaust equipment, including fans and grease reservoirs, shall comply with Section 506.5.1

through 506.5.5 and shall be of an approved design or shall be listed for the application.

**506.5.1 Exhaust fans.** Exhaust fan housings serving a Type I hood shall be constructed **as** required for grease ducts in accordance with Section 506.3.1.1.

**Exception:** Fans listed and labeled in accordance with UL 762.

**506.5.1.1 Fan motor.** Exhaust fan motors shall be located outside of the exhaust airstream.

**506.5.2Exhaust fan discharge.** Exhaust fans shall be positioned so that the discharge will not impinge on the roof, other equipment or appliances or parts of the structure. A vertical discharge fan shall be manufactured with **an** approved drain outlet at the lowest point of the housing to permit drainage of grease to an approved grease reservoir.

**506.5.3 Exhaust fan mounting.** An upblast fan shall be hinged and supplied with a flexible weatherproof electrical cable to permit inspection and cleaning. The ductwork shall extend a minimum of 18 inches **(457** mm) above the roof surface.

**506.5.4 Clearances.** Exhaust equipment serving a Type I hood shall have a clearance to combustible construction of not less than 18 inches (457 mm).

**Exception:** Factory-built exhaust equipment installed in accordance with Section 304.1 and listed for a lesser clearance.

**506.5.5 Termination location.** The outlet of exhaust equipment serving Type I hoods, shall be in accordance with Section 506.3.12.3

**Exception:** The minimum horizontal distance between vertical discharge fans **and** parapet-type building structures shall be 2 feet (610 mm) provided that such structures are not higher than the top of the fan discharge opening.

## SECTION 507 COMMERCIAL KITCHEN HOODS

**507.1 General.** Commercial kitchen exhaust hoods shall comply with the requirements of this section. Hoods shall be 'Type I or Type II and shall be designed to capture and confine cooking vapors and residues.

#### Exceptions:

- 1. Factory-built commercial exhaust hoods which are tested in accordance with UL 710, listed, labeled and installed in accordance with Section 304.1 shall not be required to comply with Sections 507.4, 507.7, 507.11, 507.12, 507.13, 507.14 and 507.15.
- 2. Factory-builtcommercial cooking recirculating systems which are tested in accordance with UL 197, listed, labeled and installed in accordance with Section 304.1 shall not be required to comply with Sections 507.4, 507.5, 507.7, 507.12, 507.13, 507.14 and 507.15.
- 3. Net exhaust volumes for hoods shall be permitted to be reduced during no-load cooking conditions, where

installed in frames or holders so as to be readily removable without the use of separate tools, unless designed and installed to be cleaned in place and the system is equipped for such cleaning in place. Removable filter units shall be of a size that will allow them to be cleaned in a dishwashing machine or pot sink. Filter units shall be arranged in place or provided with drip-interceptingdevices to prevent grease or other condensate from dripping into food or on food preparation surfaces.

**507.11.2Mounting position.** Filters shall be installed at **an** angle of not less than **45** degrees (0.79 rad) from the horizontal and shall be equipped with a drip tray beneath the lower edge of the filters.

**507.12 Canopy size and location.** The inside lower edge of canopy-type commercial cooking hoods shall overhang or extend a horizontal distance of not less than 6 inches (152 mm) beyond the edge of the cooking surface, on all open sides. The vertical distance between the front lower lip of the hood and the cooking surface shall not exceed **4** feet (1219 mm).

**Exception:** The hood shall be permitted to be flush with the outer edge of the cooking surface where the hood is closed to the appliance side by a noncombustible wall or panel.

**507.13 Capacity of hoods.** Commercial food service hoods shall exhaust a minimum net quantity of air determined in accordance with this section and Sections 507.13.1 through 507.13.4. The net quantity of exhaust air shall be calculated by subtracting any airflow supplied directly to a hood cavity from the total exhaust flow rate of a hood. Where any combination of extra-heavy-duty, heavy-duty, medium-duty, and light-duty cooking appliances are utilized under **a** single hood, the highest exhaust rate required by this section shall be used for the entire hood.

**507.13.1 Extra-heavy-dutycooking appliances.** The minimum net airflow for Type I hoods used for extra-heavy-duty cooking appliances shall be determined as follows:

Type of Hood	CFM per linear foot of hood		
Wall-mounted canopy	550		
Single island canopy	700		
Double island canopy (per side)	550		
Backshelf/pass-over	Not allowed		
Eyebrow	Not allowed		

For SI: 1 cfm per linear foot = 1.55 L/s per linear meter.

**507.13.2 Heavy-duty cooking appliances.** The minimum net airflow for Type I hoods used for heavy-duty cooking appliances shall be determined as follows:

Type of Hood	CFM per linear foot of hood
Wall-mounted canopy	400
Single island canopy	600
Double island canopy (per side)	400
Backshelf/pass-over	400
Eyebrow	Not allowed

For SI: 1 cfm per linear foot = 1.55 L/s per linear meter.

**507.13.3 Medium-duty cooking appliances.** The minimum net airflow for Type I hoods used for medium-duty cooking appliances shall be determined as follows:

Type of Hood	CFM per linear foot of hood
Wall-mounted canopy	300
Single island canopy	500
Double island canopy (per side)	300
Backshelf/pass-over	300
Eyebrow	250

For SI: 1 cfm per linear foot = 1.55 Us per linear meter.

**507.13.4 Light-duty cooking appliances.** The minimum net airflow for Type I hoods used for light duty cooking appliances and food service preparation and cooking operations approved for use under a Type II hood shall be determined **as** follows:

Type of Hood	CFM per linear foot of hood
Wall-mounted canopy	200
Single island canopy	400
Double island canopy (per side)	250
Backshelf/pass-over	250
Eyebrow	250

For SI: 1 cfm per linear foot = 1.55 Us per linear meter.

**507.14** Noncanopy size and location. Noncanopy-type hoods shall be located a maximum of 3 feet (914mm) above the cooking surface. The edge of the hood shall be set back amaximum of 1 foot (305 mm) from the edge of the cooking surface.

**507.15 Exhaust outlets.** Exhaust outlets located within the hood shall be located so as to optimize the capture of particulate matter. Each outlet shall serve not more than a 12-foot (3658 mm) section of hood.

**507.16 Performance test.** A performance test shall be conducted upon completion and before final approval of the installation of a ventilation system serving commercial cooking appliances. The test shall verify the rate of exhaust airflow required by Section 507.13, makeup airflow required by Section 508, and proper operation as specified in this chapter. The permit holder shall furnish the necessary test equipment and devices required to perform the tests.

**507.16.1 Capture and containment test.** The permit holder shall verify capture and containment performance of the exhaust system. This field test shall be conducted with all appliances under the hood at operating temperatures. Capture and containment shall be verified visually by observing smoke or steam produced by actual or simulated cooking, such as with smoke candles, smoke puffers, etc.

#### SECTION 508 COMMERCIAL KITCHEN MAKEUP AIR

**508.1 Makeup air.** Makeup air shall be supplied during the operation of commercial kitchen exhaust systems that are provided for commercial cooking appliances. The amount of



22 Oakmont Drive Old Orchard Beach, ME 040644 12I Phone: (207) 934-8038 Fax: (207)934-8039

# **MEMORANDUM**

Date:May 9,2006Project:10 Dana Street, Suite 100To:Jeff Frey, Hardypond ConstructionFrom:David TetreaultSubject:Support of Mechanical Equipment

Jeff,

I have performed structural calculations to determine whether the existing floor and roof framing have sufficient capacity to support new equipment as shown plans prepared by Seidman Bros. The equipment and weights are as follows:

Equipment	Weight	Location
Stainless Steel Hood	450 lbs	Hung from 2 <sup>nd</sup> floorjoists
18"x18" Duct	17 plf	Hung from 2 <sup>nd</sup> floorjoists
Exhaust Fan	250 lbs	Rooftop mount
Makeup air fan	250 lbs	Rooftop mount

Roof and floor framing consist of  $3\frac{1}{2}$  x 12" joists spaced at 16", spanning 17'-3". All framing was found to be adequate to support the new equipment and the live and snow loads required by IBC/2003.

Please call me if there is any question or if I can be of further assistance.

