



MECHANICAL PERMIT APPLICATION

City of Portland, Oregon - Bureau of Development Services

1900 SW 4th Avenue, Portland, Oregon 97201 • 503-823-7363 • TTY 503-823-6868 • www.portlandoregon.gov/bds

19-188547-MT

Type of work

New construction Addition/alteration/replacement
 Demolition Other:

Category of construction

1 & 2 family dwelling Commercial/industrial Accessory building
 Multifamily Master builder Other:

Job site information and location

Job no.: 51032 Job address: 220 SE 143rd Ave
City/State/ZIP: Portland, OR 97233
Suite/bldg./apt. no.: Project name: Wild Ginger Apts - BUILDING 300
Cross street/directions to job site:
Subdivision: Lot no. Tax map/parcel no.

Description of work (example: upstairs bath fan/dryer exhaust)
CO # 18-257779 vent exhaust ducts for fans and range hoods
(provided & installed by others) to sidewall terminations via soffits
provided (3rd floor vent to roof)

Provide RS permit no.

Property owner **Tenant**

Name: Relay Resources E-mail:
Address:
City/State/ZIP:
Phone: FAX:
Owner installation: This installation is being made on property that I own, which is not intended for sale, lease, rent, or exchange.
Owner signature: Date:

Contractor **Subcontractor**

Business name: Jacobs HVAC E-mail: andreab@jacobsheating.com
Address: 4474 SE Milwaukie Ave
City/State/ZIP: Portland, OR 97202
Phone: 503-234-7331 FAX: 503-296-5351
Lic. no. CCB lic. no. 1441
Authorized signature: *Andrea Bowlds*
Print name: ANDREA BOWLDS Date: 7/3/2019

Applicant **Contact Person**

Business name: Jacobs Heating & Air Conditioning
Contact name: Andrea Bowlds
Address: 4474 SE Milwaukie Ave
City/State/ZIP: 97202
Phone: 503-234-7331 FAX: 503-296-5351
E-mail: Andreab@jacobsheating.com

This permit application expires if a permit is not obtained within 180 days after it has been accepted as complete.

Commercial Fee Schedule - Use Checklist			
Mechanical permit fees* are based on the value of the work performed. Indicate the value (rounded to the nearest dollar of all mechanical materials, equipment, labor, overhead and profit.)			
Value: \$ 60,466.00			
Residential Equipment / Systems Fees			
For special information use checklist			
Description	Qty.	Fee	Total
Heating / cooling			
Air conditioner (site plan required)		\$26	
Furnace / burner including duct work / vent / liner		\$55	
Heat pump (site plan required)		\$51	
Air handling unit		\$26	
Hydronic hot water system		\$32	
Residential boiler (radiator or hydronic) includes piping		\$32	
Unit heaters (fuel type, not electric) in-wall, in-duct, suspended, etc.		\$26	
Vent for appliance other than furnace		\$22	
Alteration of existing HVAC system		\$32	
Other fuel appliances			
Decorative gas fireplace		\$26	
Flue vent for water heater or gas fireplace		\$22	
Wood / pellet stove		\$57	
Gas or wood fireplace / insert		\$57	
Chimney / liner / flue / vent		\$22	
Other:		\$32	
Environmental exhaust and ventilation			
Range hood / other kitchen equipment		\$14	
Clothes dryer exhaust		\$14	
Single-duct exhaust (bathrooms, toilet compartments, utility rooms)		\$14	
Exhaust system apart from Heating or AC		\$22	
Other:		\$32	
Gas fuel piping			
\$15 for the first four, \$2.70 for each additional. Please indicate number of fuel gas piping outlets below:			
Furnace, etc.			
Gas heat pump			
Wall / suspended / unit heater			
Water heater / boiler			
Fireplace			
Range			
Barbecue			
Clothes dryer			
Other:			
Other appliances			
Including oil tanks, gas and diesel generators, gas and electric kilns, gas appliances / equipment not included above		\$32	
Mechanical permit fees			
		Subtotal	
		Minimum permit fee (\$95)	
		Commercial plan review (60% of permit fee)	
		State surcharge (12% of permit fee)	
		TOTAL PERMIT FEE	

RS Permit/No Fees Due

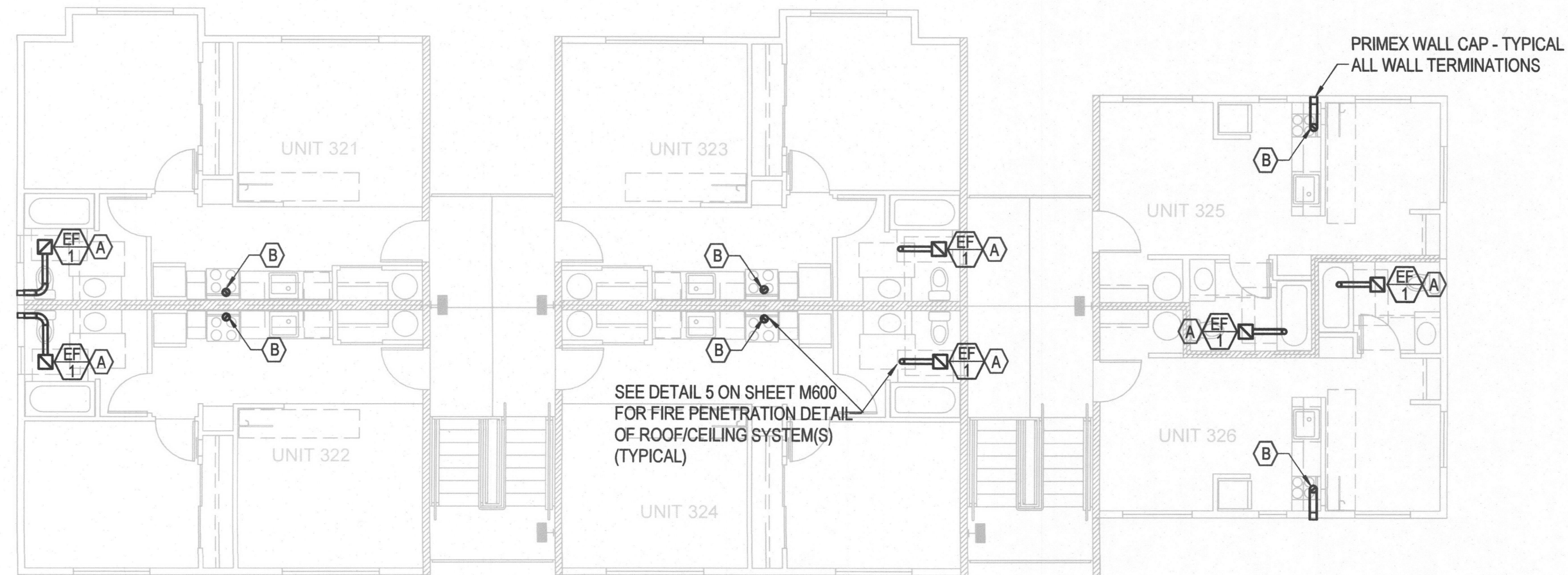
- Residential Combo permit subcontractor submittals only can be faxed to 503-823-7693 or e-mailed to BDSSublabels@portlandoregon.gov.
- Residential FIR permit subcontractor submittals can be faxed to 503-823-7425.

GENERAL NOTES

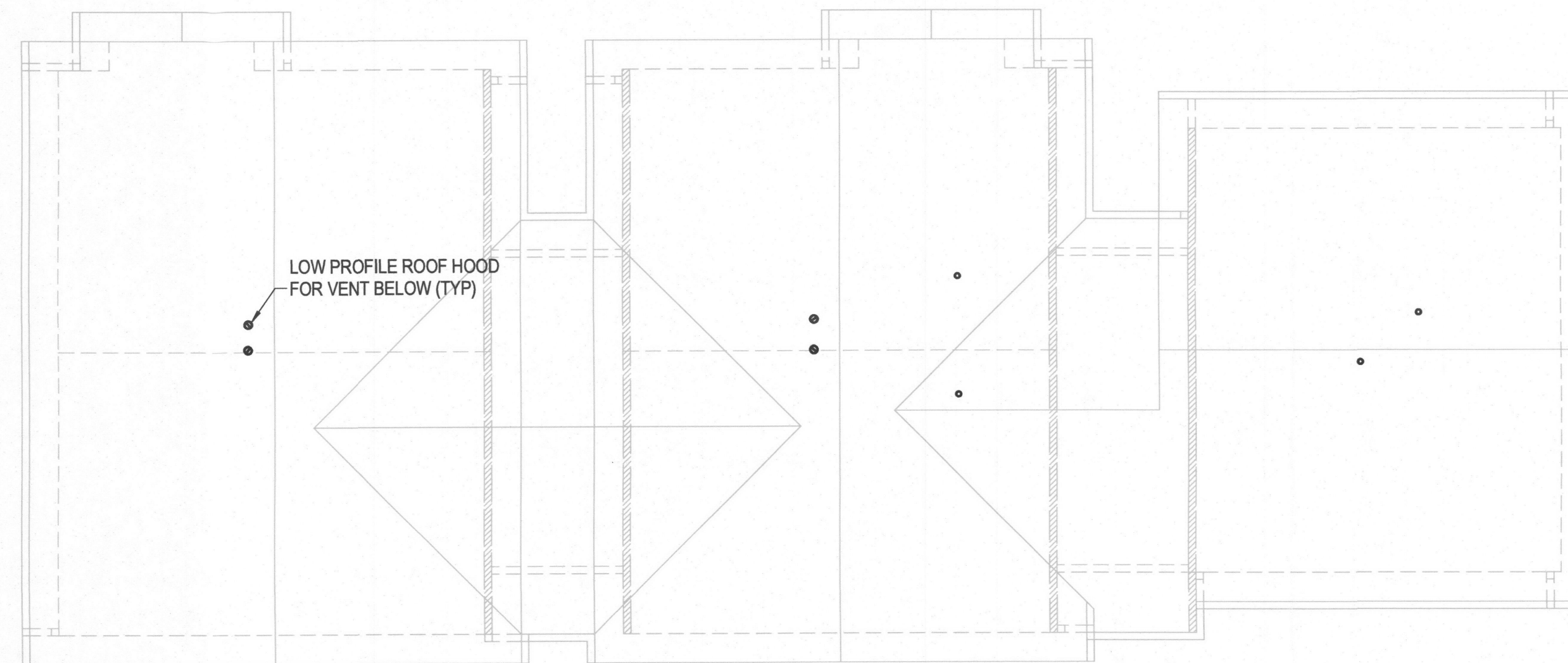
- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS
- MAINTAIN WALL ASSEMBLY FIRE RATING FOR INSTALLATION OF WALL HEATERS IN FIRE RATED WALLS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS.
- ALL ELECTRIC HEATERS PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. TYPICAL ALL UNITS.
- ALL DWELLING UNITS ARE VENTILATED BY NATURAL VENTILATION. OPERABLE WINDOWS & DOORS. AREAS HAVE BEEN SIZED TO PROVIDE A MINIMUM OF 4% OF THE FLOOR AREA.
- ALL EQUIPMENT AND DUCTWORK IS LOCATED BELOW RATED ASSEMBLY.

KEY NOTES

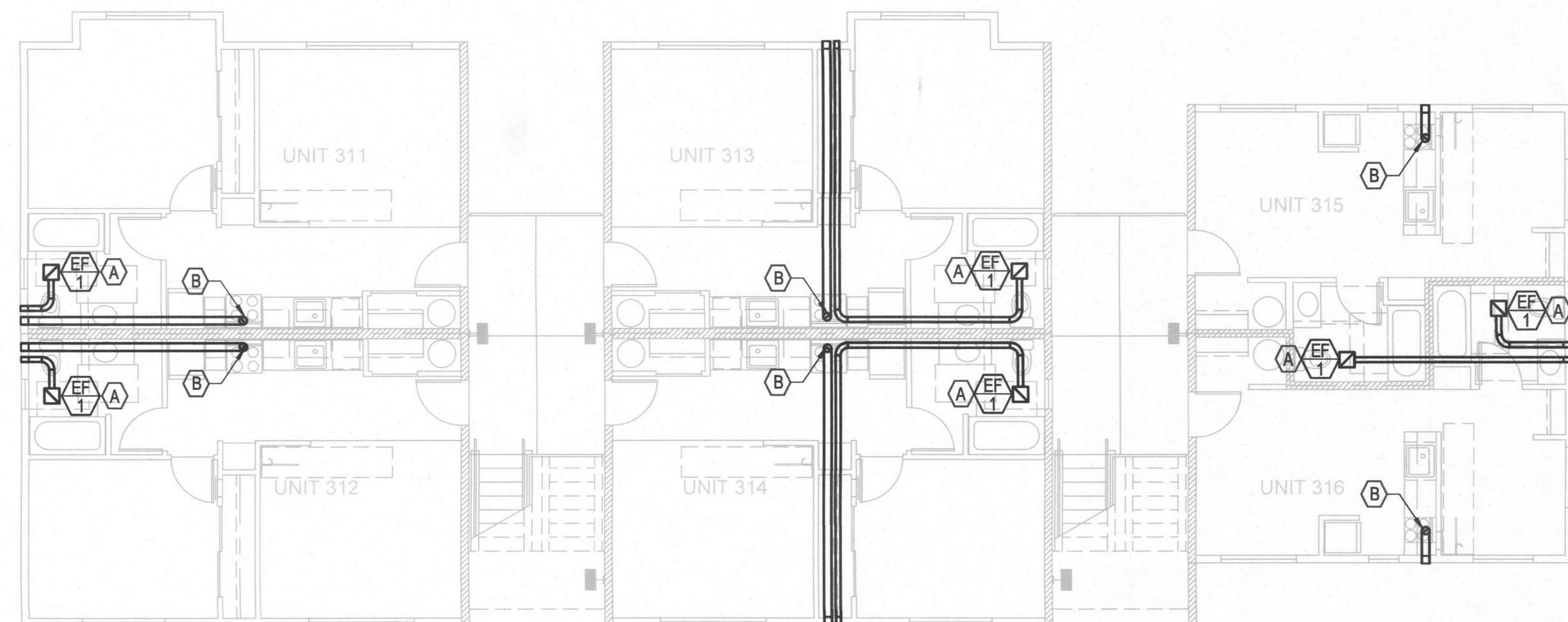
- EF-1 CEILING EXHAUST FAN PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. JACOBS TO DUCT 4" EXHAUST VENT TO EXTERIOR WALL AND/OR ROOF TERMINATION VIA SOFFIT(S) PROVIDED. FAN AND DUCTWORK BELOW RATED ASSEMBLY, UNLESS LINED JOINT-BAY PROVIDED BY GC, WITH (2) LAYERS OF 5/8" SHEET ROCK WITH ALL JOINTS FIRE-TAPED PROVIDING A CONTINUOUS CHAFT FROM THE DUCT ENTRY TO THE BUILDING EXTERIOR.
- 6" HOOD EXHAUST ROUTED TO EXTERIOR WALL AND/OR ROOF TERMINATION VIA SOFFIT(S) PROVIDED. KEEP DUCT AS HIGH IN SPACE AS POSSIBLE. BACK DUCTWORK DAMPER INTEGRAL TO HOOD. HOOD TO OPERATE INTERMITTENTLY. ALL DUCTWORK TO BE BELOW RATED ASSEMBLY. HOOD FAN TO OPERATE INTERMITTENTLY.



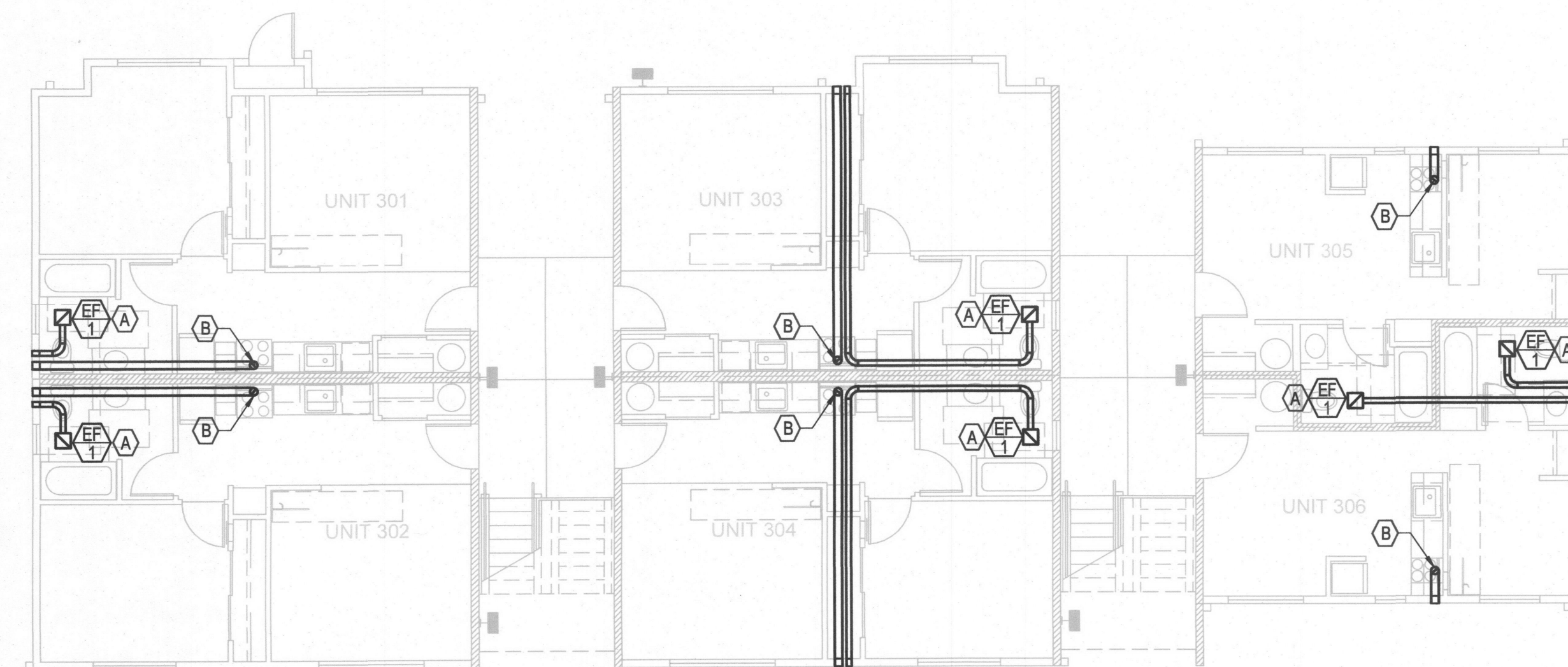
3 3RD FLOOR PLAN
M300 SCALE: 1/8" = 1'-0"



4 ROOF PLAN
M300 SCALE: 1/8" = 1'-0"



2 2ND FLOOR PLAN
M300 SCALE: 1/8" = 1'-0"



1 1ST FLOOR PLAN
M300 SCALE: 1/8" = 1'-0"

EF'S NOT UNDER THIS PERMIT

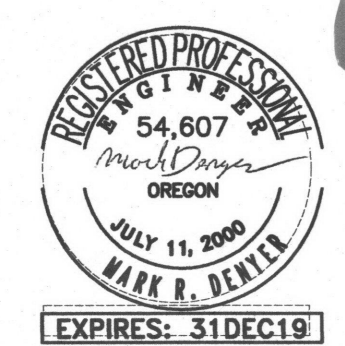
City of Portland
REVIEWED FOR CODE
COMPLIANCE
JUL 03 2019
Permit Number

City of Portland
Bureau of
Development Services
By *SN* Date *7/3/19*
Approved by
Planning and Zoning Review

WILD GINGER APARTMENTS
212 AND 222 SE 143RD AVE - PORTLAND, OR 97233

HVAC PLANS
BUILDING 300

M300



19-188547-M

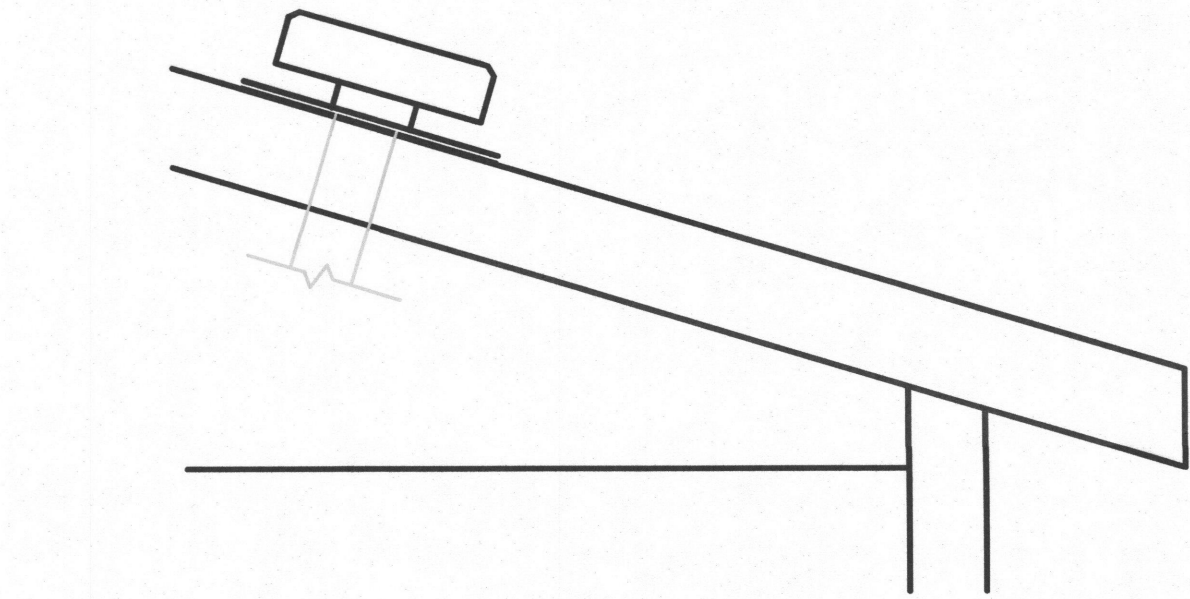
MECHANICAL LEGEND

	SUPPLY AIR DIFFUSER	AFB	ABOVE FINISH FLOOR
	RETURN AIR GRILLE	AHU	AIR HANDLING UNIT
	EXHAUST AIR GRILLE	B.D.	BOTTOM OF DUCT
	PERFORATED RETURN AIR PANEL	BHP	BRAKE HORSEPOWER
	DIRECTIONAL AIR FLOW	BTU	BRITISH THERMAL UNITS
	MANUAL VOLUME DAMPER	CFM	CUBIC FEET PER MINUTE
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	CONN.	CONNECTION
	RETURN AIR DUCT UP & DOWN	CONT.	CONTINUATION
	EXHAUST AIR DUCT UP & DOWN	CW	DOMESTIC COLD WATER
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	DB	DRY BULB
	RETURN AIR DUCT UP & DOWN	DIA.	DIAMETER
	EXHAUST AIR DUCT UP & DOWN	DIST.	DISTRIBUTION
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	EA	EXHAUST AIR
	RETURN AIR DUCT UP & DOWN	EDB	ENTERING DRY BULB TEMPERATURE
	EXHAUST AIR DUCT UP & DOWN	EWB	ENTERING WET BULB TEMPERATURE
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	EWT	ENTERING WATER TEMPERATURE
	RETURN AIR DUCT UP & DOWN	FF	FINISH FLOOR
	EXHAUST AIR DUCT UP & DOWN	FKT.	FIXTURE
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	FPM	FEET PER MINUTE
	RETURN AIR DUCT UP & DOWN	FPS	FEET PER SECOND
	EXHAUST AIR DUCT UP & DOWN	GA.	GAUGE
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	GPM	GALLONS PER MINUTE
	RETURN AIR DUCT UP & DOWN	H	HEIGHT
	EXHAUST AIR DUCT UP & DOWN	HP	HORSEPOWER
	VAV TERMINAL UNIT	I.D.	INSIDE DIAMETER
	WT TERMINAL UNIT	IN.	INCHES
	EXISTING	L	LENGTH
	CONNECT TO EXISTING	LBS.	POUNDS
	THERMOSTAT OR TEMP. SENSOR	LDB	LEAVING DRY BULB
	NOTE	LWB	LEAVING WET BULB
	EQUIPMENT DESIGNATOR	LWT	LEAVING WATER TEMPERATURE
	BALL VALVE	MAX.	MAXIMUM
	GATE VALVE	MBH	THOUSANDS OF BTUs PER HOUR
	CHECK VALVE	MIN.	MINIMUM
	BALANCING VALVE	NC	NOISE CRITERIA
	THERMOMETER	N.C.	NORMALLY CLOSED
	DIRECTION OF FLOW	N.I.M.	NOT IN MECHANICAL
	PUMP	NO.	NUMBER
	STRAINER	N.O.	NORMALLY OPEN
	PRESSURE GAUGE	O.A.	OUTSIDE AIR
	PETE'S PLUG	PSI	POUNDS PER SQUARE INCH
	DOUBLE CHECK ASSEMBLY	P/T	PRESSURE / TEMPERATURE
	PRESSURE REDUCING VALVE	R.A.	RETURN AIR
	UNION	RECT.	RECTANGULAR
	2-WAY CONTROL VALVE	REQ'D	REQUIRED
	3-WAY CONTROL VALVE	S.A.	SUPPLY AIR
	CAP	S.P.	STATIC PRESSURE
	SMOKE DETECTOR	SQ.	SQUARE
	MOTORIZED DAMPER	TEMP.	TEMPERATURE
	FIRE DAMPER	TYP.	TYPICAL
	FIRE / SMOKE DAMPER	VAV	VARIABLE AIR VOLUME
	SMOKE DAMPER	W	WIDTH
	LATERAL BRACING	WB	WET BULB
	LONGITUDINAL BRACING	WPD	WATER PRESSURE DROP
	LONGITUDINAL & LATERAL BRACING	Ø	DIAMETER
	(E) EXISTING		
	(D) DEMOLISH		
	NEW WORK		
	(HWS) HEATING WATER SUPPLY		
	(HWR) HEATING WATER RETURN		
	FIRE DAMPER		
	FIRE / SMOKE DAMPER		
	SMOKE DAMPER		
	SEISMIC BRACING		
	LATERAL BRACING		
	LONGITUDINAL BRACING		
	LONGITUDINAL & LATERAL BRACING		

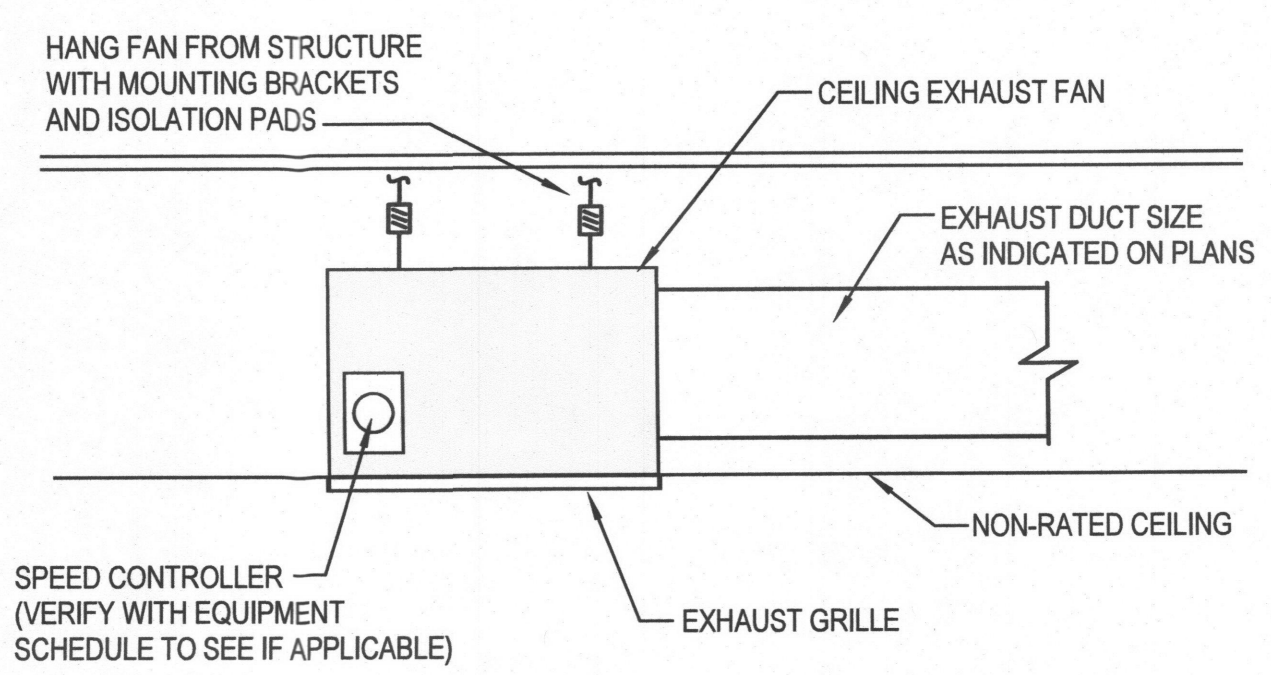
EXHAUST FAN PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR

MARK NUMBER	CEILING CABINET
TYPE	BATHROOM
SYSTEM	BATHROOM
CFM	30/90
TOTAL SP. (IN H2O)	0.20
RPM	1062/1146
TIP SPEED (FPM)	NA
MOTOR WATTS OR HP	5/11.7 W
CONTROLLED BY	*
INTERLOCK WITH	MOTION SENSOR
FAN SPEED CONTROLLER	YES
WHEEL TYPE	BI
BACK DRAFT DAMPER	YES
ISOLATION	RUBBER
DESIGN WEIGHT (LBS)	25
MAX. SONES	0.3/0.6
MAX AMPS - ***	0.27
POWER (VOLTS/PHASE/HZ) - ***	120/1/60
BASIS OF DESIGN:	PANASONIC FV-05-11VKS2

* - FAN TO RUN AT LOW SPEED CONTINUOUSLY, AND INCREASE TO HIGH SPEED UPON ACTIVATION OF THE MOTION SENSOR.
 ** - PROVIDE PANASONIC CONDENSATION SENSOR FV-CSVK1
 *** - PROVIDE PANASONIC CEILING RADIATION DAMPER PC-RD05C5
 **** - ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS

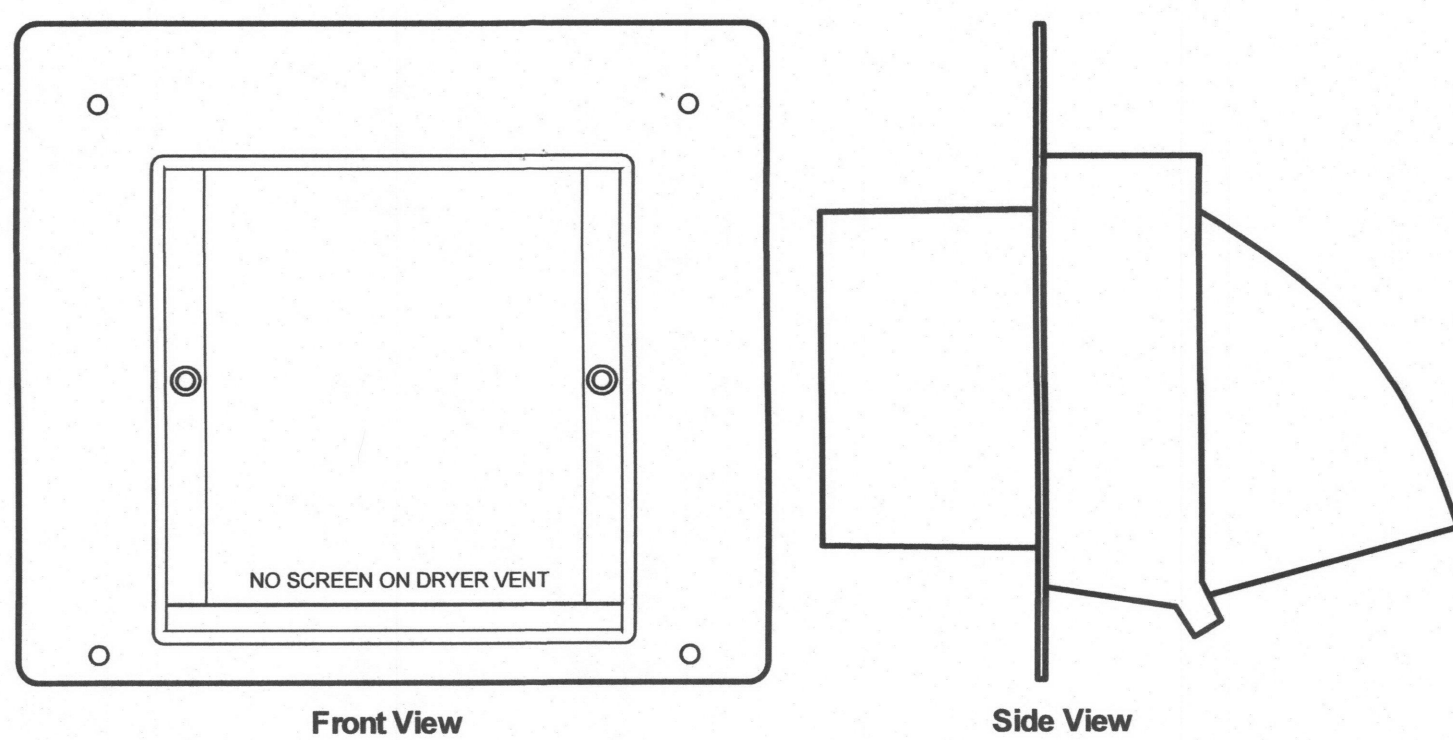


3 LOW PROFILE ROOF EXHAUST HOOD NTS



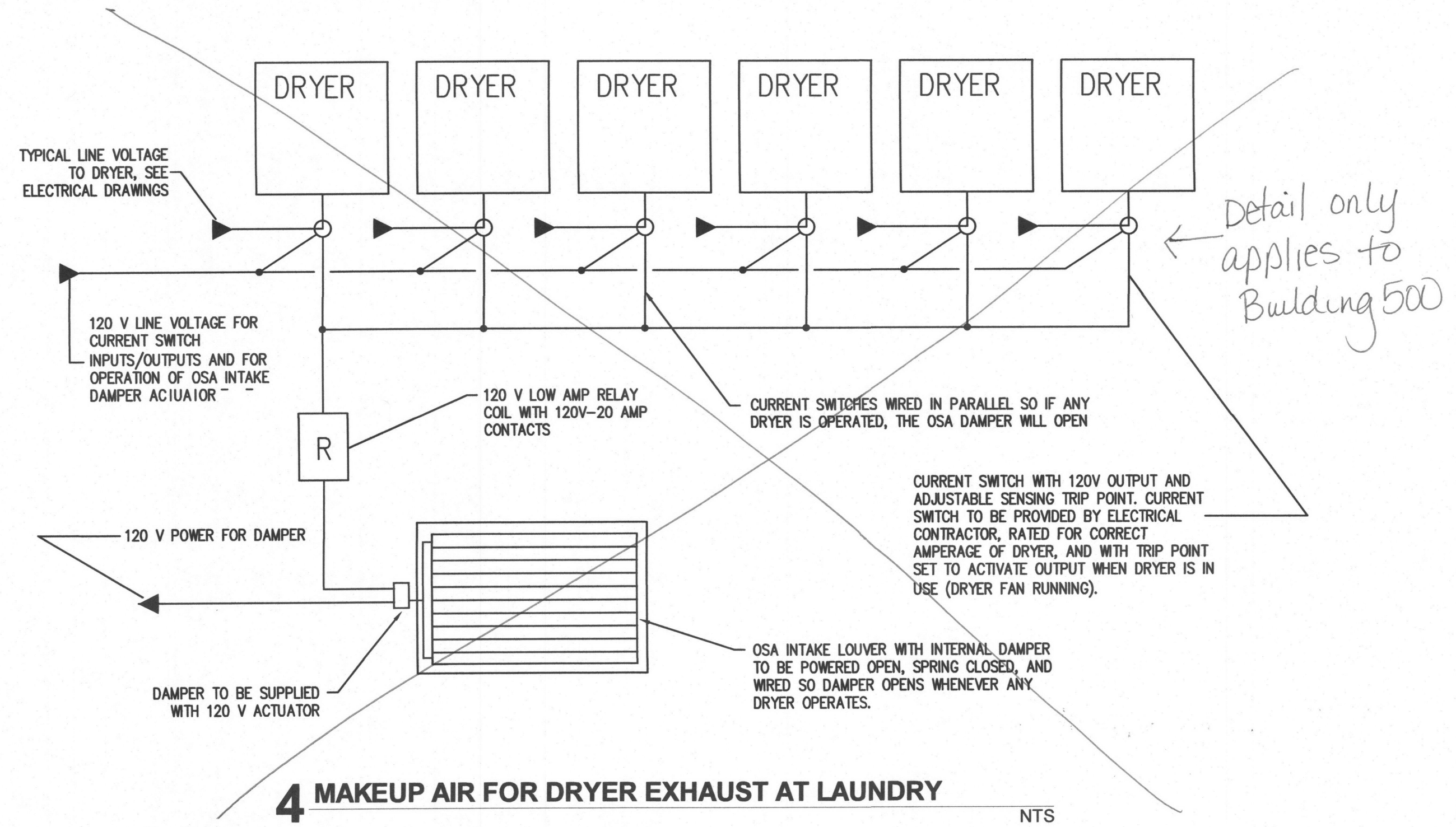
1 CEILING EXHAUST FAN - NON RATED LOCATION NTS

Primex Wall Cap (WC4 4") Shown



PRIMEX WALL CAPS FOR ALL BATH AND HOOD EXHAUST WALL TERMINATIONS

2 PRIMEX WC WALL CAP NTS



4 MAKEUP AIR FOR DRYER EXHAUST AT LAUNDRY NTS

System No. F-C-7057

ANSI/UL1479 (ASTM E814)	CANULC 515
F Rating - 1 Hr	F Rating - 1 Hr
T Rating - 1 Hr	FT Rating - 1 Hr
	FH Rating - 1 Hr
	FTH Rating - 1 Hr

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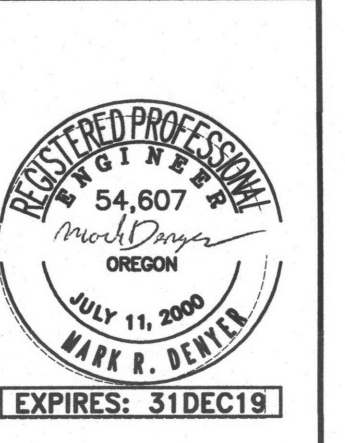
System No. F-C-7057

- Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
 - Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Material as specified in the individual Floor-Ceiling Design. Max area of floor opening is 150 in.2 (0.098 m2) with a max 1.5 in. (38 mm) annular space between duct and framing members.
 - Wood Joists - Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bracing as required and with ends firestopped. Additional framing members installed to form a square enclosure around the perimeter of the opening in the floor and ceiling.
 - Furring Channels - (Where Required - Not Shown) - Resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. (610 mm) OC. If furring channels are used within the assembly, additional furring channels to be installed along the periphery of the opening.
 - Gypsum Board - Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max area of ceiling opening is 150 in.2 (0.098 m2) with a max 1.5 in. (38 mm) annular space between duct and framing members.
- Steel Air Duct - Max 7 in. (178 mm) diam by min 0.0157 in. (No. 30 gauge or 0.40 mm) thick galv steel air duct to be centered within the opening. Max one steel air duct to be installed within opening. Steel duct to be rigidly supported on top side of floor-ceiling assembly.
 - Steel Air Duct - Max 10 by 4 in. (254 by 102 mm) rectangular by min 0.022 in. (No. 26 gauge or 0.66 mm) thick galv steel air duct to be centered within the firestop system. Max one steel air duct to be installed within opening. Steel duct to be rigidly supported on top side of floor-ceiling assembly.
- Firestop System - The firestop system shall consist of the following:
 - Packing Material - Min 9-7/8 in. (251 mm) thickness of unfaced duct wrap material compressed min 25 percent into opening as a permanent form between the insulated steel duct and the periphery of the opening. Packing material to be installed flush with bottom surface of ceiling and recessed from top surface of floor to accommodate the required thickness of fill material.
 - Fill Void or Cavity Material - Sealant - Min 3/4 in. (19 mm) thickness of fill material applied within annulus on top surface of floor. SPECIFIED TECHNOLOGIES INC - SpecSeal Series SSS Sealant or SpecSeal LO Sealant. EGS NELSON FIRESTOP - ES1399 Sealant. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-ONE Sealant or FS-ONE-MAX Intumescent Sealant. TREMCO INC - Fyre-Sil Sealant. DAP PRODUCTS INC - DAP Fire Stop Fire-Rated Silicone Sealant. 3M COMPANY 3M FIRE PROTECTION PRODUCTS - FB-1000 NS Sealant. NUCO INC - Self Seal GG-200.
 - Duct Wrap Material - Min 1/2 in. (13 mm) thick, 8 pcf (128 kg/m3) or nom 1-1/2 in. (38 mm) thick, 8 pcf (66 kg/m3) with foil-kern floors. The steel duct shall be wrapped with one layer of duct wrap installed in accordance with Ventilation Assembly No. V-32. The duct wrap is secured with min No. 16 Gauge (0.040 in. or 1 mm) galvanized steel wire formed into a loop on one end, with the other end passed through the loop, pulled tight and bent over. The wires spaced a max 12 in. (305 mm) OC. See Ventilation Duct Assemblies in Vol. 2 of the Fire Resistance Directory. The annular space between the insulated steel duct and the periphery of the opening shall be a nom 1-1/2 in. (38 mm) Annular Space consisting of an additional layer of 1/2 in. (13 mm) thick, 8 pcf (128 kg/m3) or nom 1-1/2 in. (38 mm) thick, 8 pcf (66 kg/m3) duct wrap, installed over the duct wrap flush with the top surface of the floor and extending outward. All seams and edges shall be sealed with min 3 in. (76 mm) wide pressure sensitive aluminum foil tape. UNIFRAX ILLC - FyreWrap® DPS or FyreWrap® Elite 1.5.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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5 UL PENETRATION NTS



WILD GINGER APARTMENTS
 212 AND 222 SE 43RD AVE - PORTLAND, OR 97233

Building 300

City of Portland
 REVIEWED FOR CODE COMPLIANCE
 JUL 0 3 2019
 Permit Number

HVAC DETAILS

M600