

# DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND BUILDING PERMIT



This is to certify that GARY MARCISSO

Job ID: 2012-01-3080-HVAC

Located At 63 VESPER ST

CBL: 003- E-009-001

has permission to Install a Smith GBX 140 Gas Boiler in the basement with venting in the existing chimney

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED. A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

0

#### **Fire Prevention Officer**

Code Enforcement Officer //Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY PENALTY FOR REMOVING THIS CARD

## City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No: 2012-01-3080-HVAC	Date Applied: 1/10/2012		CBL: 003- E-009-001				
Location of Construction: 63 VESPER ST	Owner Name: GARY & JUSTINA MARCISSO		Owner Address: 65 VESPER ST PORTLAND, ME 04101			Phone:	
Business Name:	Contractor Name: CHARLES MORANG STIMPSON III,		Contractor Address: 30 HARLEY DR., NEW GLOUCESTER MAINE 04260			Phone: 650-3608	
Lessee/Buyer's Name:	Phone:		Permit Type: HVAC			Zone: R-6	
Past Use: Three Family Dwelling	Proposed Use: Same: Three Family Dwelling – to install Smith GBX 140 Heating System			Approved W/ Condethans Denied N/A Capet. Purone 1/16/12		CEO District: Inspection: Use Group: R-2 Type: HVAZ A31HRAE62.1 Signature:	
Proposed Project Description: Install Boiler			Pedestrian Activ	vities District (P.A	A.D.)	1/20/12	
Permit Taken By: Brad		Zoning Approval					
<ol> <li>This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</li> <li>Building Permits do not include plumbing, septic or electrial work.</li> <li>Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.</li> </ol>		Special Za Shorelan Wetlands Flood Za Subdivis Site Plan Maj Maj	s one sion	Zoning Appea Variance Miscellaneous Conditional U Interpretation Approved Denied Date:	se Does not Requires Approved		

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 appication 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 OF APPLICANT	ADDRESS	DATE	PHONE

BUILDING PERMIT INSPECTION PROCEDURES Please call 874-8703 or 874-8693 (ONLY) or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.
- Permits expire in 6 months. If the project is not started or ceases for 6 months.
- If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.

**Final Inspection** 

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, [T MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.



Strengthening a Remarkable City, Building a Community for Life . www.portlandmaine.gov

Director of Planning and Urban Development Penny St. Louis

Job ID: 2012-01-3080-HVAC

Located At: 63 VESPER ST

CBL: 003- E-009-001

## **Conditions of Approval:**

## Building

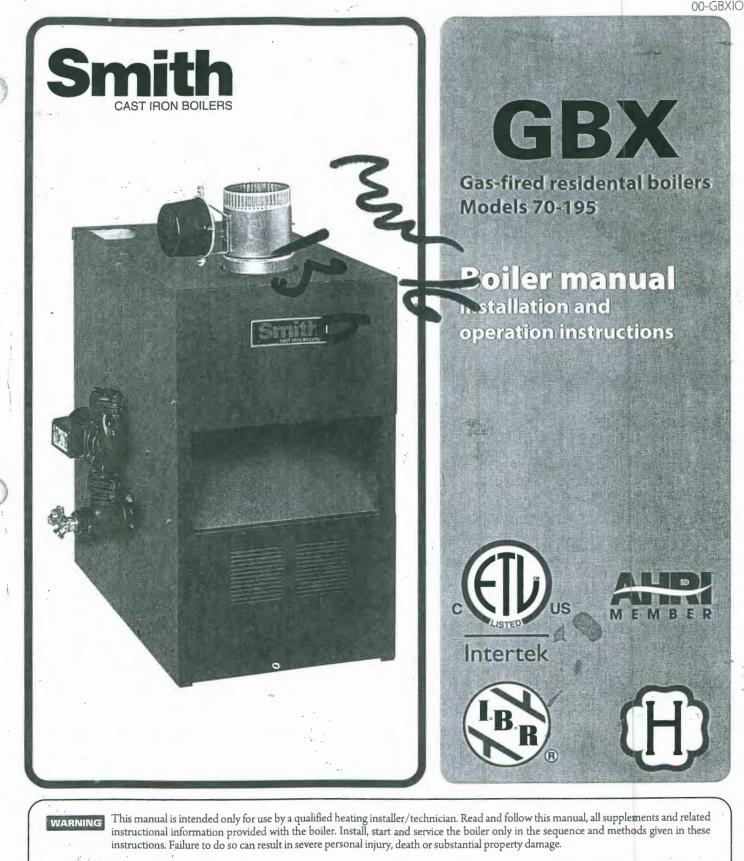
- 1. CO detectors shall be installed in each area within or giving access to bedrooms. That detection must be powered by the electrical service in the building and battery.
- Separate permits are required for any electrical, plumbing, sprinkler, fire alarm, HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
- 3. Equipment and appliance shall be installed in compliance with the manufacturer's specifications and the UL listing.
- 4. Installation shall comply with ASHRAE 62.1 & 90.1 or 62.2, 2007 edition, and the State of Maine gas regulations.

### Fire

- 1. Installation shall comply with City Code Chapter 10.
- 2. Fuel-fired boilers shall be protected in accordance with NFPA 101, Life Safety Code.
- 3. Installation shall comply with NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel–Burning Appliances*;
- 4. NFPA 54, National Fuel Gas Code;
- 5. NFPA 70, National Electrical Code; and the manufacturer's published instructions.

FILL IN AND	SIGN WITH INK
Valle - She	N FOR PERMIT WER EQUIPMENT
accordance with the Laws of Maine, the Building Code of a Location / CBL 63 VESPA PMIM Name and address of owner of appliance 5M-4 America Installer's name and address CMAUS STMSON	Use of Building APACINENT Date 111-11
Location of appliance: Basement I Floor Attic Roof	Type of Chimney: Masonry Lined Factory built
Type of Fuel:       Image: Solid         Image: Solid       Image: Solid         Appliance Name: Solid       Image: Solid         U.L. Approved       Yes       No         Will appliance be installed in accordance with the manufacture's installation instructions?       No         Will appliance be installed in accordance with the manufacture's installation instructions?       No         IF NO Explain:       No         IF NO Explain:       Master Plumber #	<ul> <li>Metal Factory Built U.L. Listing #</li></ul>
<u>Approved</u> Fire: Ele.:	Approved with Conditions See attached letter or requirement
Bldg.:	Inspector's Signature     Date Approved       Pink - Applicant's     Gold - Assessor's Copy

GBXIOM-1 00-GBXIOM



**WARNING Do not use the boiler during construction.** Construction dust and particularly drywall dust, will cause contamination of the burner, resulting in possible severe personal injury, death or substantial property damage. The boiler can only be operated with a dust-free air supply. Follow the instruction manual procedures to duct air to the boiler air intake. If the boiler has been contaminated by operation with contaminated air, follow the instruction manual guidelines to clean, repair or replace the boiler if necessary.

**CAUTION** Affix these instructions near to the boiler/water heater. Instruct the building owner to retain the instructions for future use by a qualified service technician, and to follow all guidelines in the User's Information Manual.

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## **USING THIS MANUAL**

#### A. INSTALLATION SEQUENCE

Follow the installation instructions provided in this manual in the order shown. The order of these instructions has been set in order to provide the installer with a logical sequence of steps that will minimize potential interferences and maximize safety during boiler installation.

#### **B. SPECIAL ATTENTION BOXES**

Throughout this manual you will see special attention boxes intended to supplement the instructions and make special notice of potential hazards. These categories mean, in the judgment of Hydrotherm.:

#### **DANGER**

Indicates a condition or hazard which will cause severe personal injury, death or major property damage.

## \land WARNING

Indicates a condition or hazard which may cause severe personal injury, death or major property damage.

## **CAUTION**

Indicates a condition or hazard which will or can cause minor personal injury or property damage.

## **NOTICE**

Indicates special attention is needed, but not directly related to potential personal injury or property damage.

## **1. PREINSTALLATION**

Read carefully, study these instructions before beginning work.

This boiler must be installed by a qualified contractor.

The boiler warranty can be voided if the boiler is not installed, maintained and serviced correctly.

## A NOTICE

The equipment must be installed in accordance with those installation requirements of the authority having jurisdiction or, in the absence of such requirements, to the current edition of the *National Fuel Gas Code*, ANSI Z223.1/NFPA 54 and/or CAN/CSA B149.1, *Natural Gas and Propane Installation Code*.

Where required by the authority having jurisdiction, the installation must conform to American Society of Mechanical Engineers Safety Code for Controls and Safety Devices for Automatically Fired Boilers, ASME CSD-1.

#### A. ACCESSIBILITY CLEARANCES

Install boiler not less than 24" (610 mm) between the left side, top, and front of the boiler and adjacent wall or other appliance, when access is required for servicing.

#### B. CLEARANCE FROM COMBUSTIBLE CONSTRUCTION

The design of this boiler is certified for alcove installation with the following clearances:

- 1. 6" (152 mm) between sides and combustible construction.
- 2. 24" (610 mm) between top of jacket and combustible construction.
- 3. 6" (152 mm) between draft hood and combustible construction.
- 4. 6" (152 mm) between vent pipe and combustible construction.
- 5. 10" (254 mm) between rear of jacket and combustible construction.

## A WARNING

Do not install this boiler on combustible flooring unless it is installed on a special combustible floor pan provided by the manufacturer. Boiler installation on combustible flooring without the special pan is a fire hazard.

To order combustible floor pan, use the 5-digit stock codes listed in Table 11.1 of this manual.

## \land WARNING

Do not install this boiler on carpeting. Boiler installation on carpeting is a fire hazard. Install this boiler on non-combustible flooring or use a combustible floor pan to install this boiler on other non-carpeted flooring.

#### C. AIR FOR COMBUSTION AND VENTILATION

- 1. Adequate combustion air and ventilation air must be provided for this appliance in accordance with the section of the *National Fuel Gas Code* entitled, "Air for Combustion and Ventilation" or applicable provisions of the local building code. Subsections 2 through 8 as follows are based on the *National Fuel Gas Code* requirements.
- <u>Required Combustion Air Volume</u>: The total required volume of indoor air is to be the sum of the required volumes for all appliances located within the space. Rooms communicating directly with the space in which the appliances are installed and through combustion air openings sized as indicated in Subsection 3 are considered part of the required volume. The required volume of indoor air is to be determined by one of two methods.
  - a. **Standard Method:** The minimum required volume of indoor air (room volume) shall be 50 cubic feet per 1000 BTU/Hr (4.8 m<sup>3</sup>/kW). This method is to be used if the air infiltration rate is unknown or if the rate of air infiltration is known to be greater than 0.6 air changes per hour. As an option, this method may be used if the air infiltration rate is known to be between 0.6 and 0.4 air changes per hour. If the air infiltration rate is known to be below 0.4 then the Known Air Infiltration Rate Method must be used. If the building in which this appliance is to be installed is unusually tight, the manufacturer recommends that the air infiltration rate be determined.
  - b. Known Air Infiltration Rate Method: Where the air infiltration rate of a structure is known, the minimum required volume of indoor air for appliances other than fan assisted and for the boiler shall be determined as follows:

21 ft<sup>3</sup> I other Required Volume<sub>other</sub> = -ACH 1000Btu/hr

where:

- *I*<sub>other</sub> = Input of appliances other than fan assisted in Btu/hr
- ACH = air change per hour (percent of the volume of the space exchanged per hour, expressed as a decimal)

For fan assisted appliances, calculate the required volume of air using the following equation:

Required Volume<sub>fan</sub> = 
$$\frac{15 \text{ ft}^3}{\text{ACH}} \frac{I_{fan}}{1000^{\text{Btu}/\text{hr}}}$$

 $I_{fan}$  = Input of the fan assisted appliances in Btu/hr

Note: These calculations are not to be used for infiltration rates greater than 0.60 ACH.

- Indoor Air Opening Size and Location: Openings connecting indoor spaces shall be sized and located as follows:
  - a. Combining spaces on the same floor: Provide two permanent openings communicating with additional spaces that have a minimum free area of 1 in<sup>2</sup> per 1000 Btu/hr (22 cm<sup>2</sup> per 1000 W) of the total input rating of all gas fired equipment but not less than 100 in<sup>2</sup> (645 cm<sup>2</sup>). One opening is to begin within 12 inches (305 mm) from the top of the space and the other is to begin within 12 inches (305 mm) from the floor. The minimum dimension of either of these openings shall be 3 inches (76 mm). See Figure 1.1 for an illustration of this arrangement.

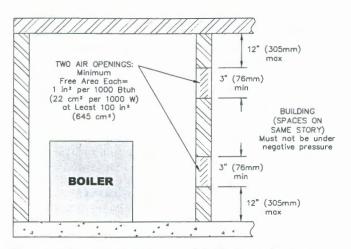
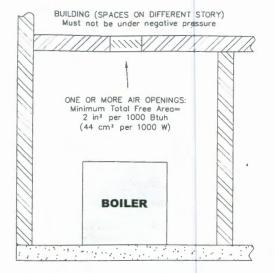


Figure 1.1: Air Openings – All Air from Indoors on the Same Floor

b. **Combining spaces on different floors:** Provide one or more permanent openings communicating with additional spaces that have a total minimum free area of 2 in<sup>2</sup> per 1000 Btu/hr (44 cm<sup>2</sup> per 1000 W) of total input rating of all equipment. See Figure 1.2 for an illustration of this arrangement.



#### Figure 1.2: Air Openings – All Air from Indoors on Different Floors

- <u>Outdoor Combustion Air</u>: Outdoor combustion air is to be provided through one or two permanent openings. The minimum dimension of these air openings is 3 inches (76 mm).
  - a. **Two Permanent Opening Method:** Provide two permanent openings. One opening is to begin within 12 inches (305 mm) of the top of the space and the other is to begin within 12 inches (305 mm) of the floor. The openings are to communicate directly or by ducts with the outdoors or with spaces that freely communicate with the outdoors. The size of the openings shall be determined as follows:
    - i. Where communicating directly or through vertical ducts with the outdoors each opening shall have a minimum free area of 1 in<sup>2</sup> per 4000 Btu/hr (22 cm<sup>2</sup> per 4000 W) of total input rating for all equipment in the space. See Figure 1.3 for openings directly communicating with the outdoors or Figure 1.4 for openings connected by ducts to the outdoors.

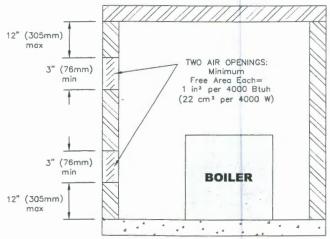


Figure 1.3: Air Openings – All Air Directly from Outdoors

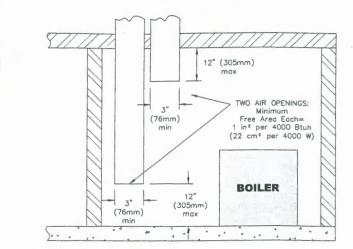
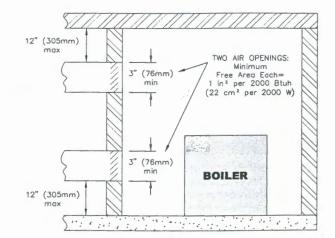


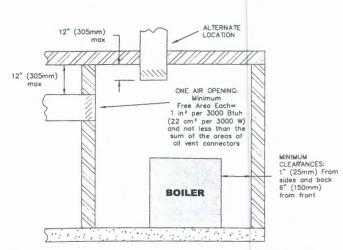
Figure 1.4: Air Openings – All Air from Outdoors through Vertical Ducts

Where communicating with the outdoors through horizontal ducts, each opening shall have a minimum free area of 1 in<sup>2</sup> per 2000 Btu/hr (22 cm<sup>2</sup> per 2000 W) of total rated input for all appliances in the space. See Figure 1.5.



#### Figure 1.5: Air Openings – All Air from Outdoors through Horizontal Ducts

b. One Permanent Opening Method: Provide one permanent opening beginning within 12 inches (305 mm) of the top of the space. The opening shall communicate directly with the outdoors, communicate through a vertical or horizontal duct, or communicate with a space that freely communicates with the outdoors. The opening shall have a minimum free area of 1 in<sup>2</sup> per 3000 Btu/hr of total rated input for all appliances in the space and not less than the sum of the cross-sectional areas of all vent connectors in the space. The gas-fired equipment shall have clearances of at least 1 inch (25 mm) from the sides and back and 6 inches (150 mm) from the front of the appliance. See Figure 1.6 for this arrangement.



## Figure 1.6: Air Openings – All Air from Outdoors through One Opening

- <u>Combination Indoor and Outdoor Combustion Air</u>: If the required volume of indoor air exceeds the available indoor air volume, outdoor air openings or ducts may be used to supplement the available indoor air provided:
  - The size and location of the indoor openings comply with Subsection 3.
  - b. The outdoor openings are to be located in accordance with Subsection 4.
  - c. The size of the outdoor openings are to be sized as follows:

$$A_{req} = A_{full} \times 1 - \frac{V_{avail}}{V_{req}}$$

where:

F

- $A_{reg}$  = minimum area of outdoor openings.
- $A_{full}$  = full size of outdoor openings calculated in accordance with Subsection 4.

 $V_{avail}$  = available indoor air volume

 $V_{reg}$  = required indoor air volume

- Engineered Installations: Engineered combustion air installations shall provide an adequate supply of combustion, ventilation, and dilution air and shall be approved by the authority having jurisdiction.
- 7. Mechanical Combustion Air Supply:
  - a. In installations where all combustion air is provided by a mechanical air supply system, the combustion air shall be supplied from the outdoors at the minimum rate of 0.35 ft<sup>3</sup>/min per 1000 Btu/hr (0.034 m<sup>3</sup>/min per 1000 W) of the total rated input of all appliances in the space.
  - b. In installations where exhaust fans are installed, additional air shall be provided to replace the exhaust air.

- c. Each of the appliances served shall be interlocked to the mechanical air supply to prevent main burner operation when the mechanical air supply system is not in operation.
- d. In buildings where the combustion air is provided by the mechanical ventilation system, the system shall provide the specified combustion air rate in addition to the required ventilation air.
- 8. Louvers & Grills:
  - The required size of openings for combustion, ventilation, and dilution air shall be based on the net free area of each opening.
    - Where the free area through a louver or grille is known, it shall be used in calculating the opening size required to provide the free area specified.
    - ii. Where the free area through a louver or grille is not known, it shall be assumed that wooden louvers will have 25% free area and metal louvers and grilles will have 75% free area.
    - iii. Nonmotorized dampers shall be fixed in the open position.
  - b. Motorized dampers shall be interlocked with the equipment so that they are proven in the full open position prior to ignition and during operation of the main burner.
    - The interlock shall prevent the main burner from igniting if the damper fails to open during burner startup.
    - ii. The interlock shall shut down the burner if the damper closes during burner operation.

- 9. Combustion Air Ducts
  - a. Ducts shall be constructed of galvanized steel or an equivalent corrosion-resistant material.
  - b. Ducts shall terminate in an unobstructed space, allowing free movement of combustion air to the appliances.
  - c. Ducts shall serve a single space.
  - Ducts shall not serve both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air.
  - Ducts shall not be screened where terminating in an attic space.
  - f. Horizontal upper combustion air ducts shall not slope downward toward the source of the combustion air.
  - g. The remaining space surrounding a chimney liner, gas vent, special gas vent, or plastic piping installed within a masonry, metal, or factory built chimney shall not be used to supply combustion air.
  - h. Combustion air intake openings located on the exterior of buildings shall have the lowest side of the combustion air intake opening at least 12 inches (305 mm) above grade.

## Λ WARNING

Liquefied Petroleum (LP) is heavier than air and may collect or "pool" in a low area in the event of a leak from defective equipment. This gas may then ignite, resulting in a fire or explosion.

#### **D. PLANNING THE LAYOUT**

Prepare sketches and notes of the layout to minimize the possibility of interferences with new or existing equipment, piping, venting and wiring.

## 2. BOILER SET-UP

- Provide a sound, level foundation. Locate boiler as near to the chimney or outside wall as possible and centralized with respect to the heating system.
- 2. Locate boiler in front of installation position before removing crate.
- 3. If using combustible floor pan, position pan on foundation or flooring.
- Separate the wood shipping pallet from the boiler base by removing two (2) hold-down bolts at each end of the boiler base.
- Move boiler into final position. If using combustible floor pan, install boiler on pan as outlined in the instructions included with the pan.

Prepared: 1/16/	12, 12:08:43	Outstanding Viola	itions		Page 1
Program: FP322L		by Property Rep	port		
FIRE PREVENTION					
Property address		Property name	Property number		
Inspection	type	Date Inspector			
Seq.	Violation class	Violation type	Reference	Target	Actual
	Location(s)			date	date
0063 VESPER ST,	PORTLAND ME 04101		47481-000-000		
ROUTINE INS	PECTION 1	L/03/11 JOHN MARTELL, Fir	e HQ, Staff 10 hrs		
1	APARTMENT BUILDINGS	EXIT(S) OBSTRUCT	'ED	2/05/11	0/00/00
	3RD FLOOR, REMOVE ITEMS FROM	A LANDING; KEEP ALL LANDIN	IG AND STAIRS CLEAR		
2	APARTMENT BUILDINGS	60-MIN FIRE DOOR	ASSEMBLIES REQ	2/05/11	0/00/00
	2 DOORS EACH APT, ALSO BASME	ENT DOOR			
3	APARTMENT BUILDINGS	HARDWIRED SMOKE	DETECTORS REQUIRED 10-1	2/05/11	0/00/00
	EACH APARTMENT BEDROOM AND C	COMMON AREA; AND WILL BE I	NTERCONNECTED		
4	APARTMENT BUILDINGS	HARDWIRED CARBON	MONOXIDE ALARMS RE 10-3	2/05/11	0/00/00
	2ND, 3RD FLOOR APT. 1ST FLOO	OR CAN USE EXISTIG; PLUG I	N TILL DATE OF EXPIRATION		
5	APARTMENT BUILDINGS	SEAL OPENINGS IN	WALLS & CEILING	2/05/11	0/00/00
	ALL AREAS OF BUILDING				
6	APARTMENT BUILDINGS	HAZARDOUS AREAS	SHALL BE PROTECTED	2/05/11	0/00/00
	SPRINKLER HEAD OVER WASHER/I	DRYER; IN BASEMENT			
Violation Summar	у:				
Open	Closed Total				
6	0 6				

CITY OF PORTLAND, MAINE
Department of Building Inspections
Original Receipt
1/10/12 20
Received from Charles Stimpson
Location of Work 63 Vesper
Cost of Construction \$Building Fee:
Permit Fee \$ Site Fee:
Certificate of Occupancy Fee:
Total:
Building (IL) Plumbing (I5) Electrical (I2) Site Plan (U2)
Other
CBL:
Check #: Total Collected \$ 80
No work is to be started until permit issued. Please keep original receipt for your records.
Taken by:
WHITE - Applicant's Copy YELLOW - Office Copy PINK - Permit Copy