DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND



This is to certify that SCHOOLTHE WAYNFLETE

Located At 336 SPRING

Job ID: 2011-04-811-HVAC

CBL: 061 - - F - 006 - 001 - - - - -

has permission to install a Triange HVAC

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

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

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

PORTLAND MAINE

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

Director of Planning and Urban Development Penny St. Louis

Job ID: 2011-04-811-HVAC Located At: 336 SPRING CBL: 061 - - F - 006 - 001 - - - -

Conditions of Approval:

Zoning

- 1. ANY exterior work requires a separate review and approval thru Historic Preservation. This property is located within an Historic District.
- 2. This property shall remain a school use. Any change of use shall require a separate permit application for review and approval.

Fire

Installation shall comply with City Code Chapter 10.

Fuel-fired boilers shall be protected in accordance with NFPA 101, Life Safety Code.

Installation shall comply with NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances; NFPA 54, National Fuel Gas Code; NFPA 70, National Electrical Code; and the manufacturer's published instructions.

Building

- 1. This appliance/stove shall be installed, operated and maintained per the manufacturers specifications and the UL listing.
- 2. Installation shall comply with 2003 International Mechanical Code and State of Maine Oil and Solid Fuel Board Laws and Rules.

City of Portland, Maine - Building or Use Permit Application

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

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE

Job No: 2011-04-811-HVAC	Date Applied: 4/14/2011		CBL: 061 F - 006 - 001			
Location of Construction: 336 SPRING ST	Owner Name: THE WAYNFLETE SCH	HOOL	Owner Address: 360 SPRING ST PORTLAND, ME -	Phone:		
Business Name:	Contractor Name: AAA ENERGY SERVICE ENERGY SERVICE CO.		Contractor Addre P.O. Box 908 SCA	Phone: (207) 883-1473		
Lessee/Buyer's Name:	Phone:		Permit Type: HVAC - HVAC	Zone:		
Past Use: School	Proposed Use: Same: School – to in boiler in basement	stall new	Cost of Work: \$55,000.00 Fire Dept: Signature:	CEO District: Inspection: Use Group: Type:		
Proposed Project Descriptio Waynflete School- in stall new be Permit Taken By: Lannie			Pedestrian Activi	zoning Appr		
1. This permit application Applicant(s) from meeting Federal Rules. 2. Building Permits do not septic or electrial work. 3. Building permits are vowithin six (6) months of False informatin may in permit and stop all works. The entropy certify that I am the owner of owner to make this application as I application is issued, I certify that the enforce the provision of the code(s).	ing applicable State and tinclude plumbing, id if work is not started f the date of issuance. It is a building k.	Shoreland Wetland: Flood Zo Subdivis Site Plan Maj Date: CERTIF or that the prope to conform to	one ion Min _ MM Conduct ICATION 4 4 posed work is authorized all applicable laws of the	is jurisdiction. In ad-	Not in Dis Not in Dis Does not II Requires II Approved Approved Denied Approved Date: Teques II Teques II ord and that I have been a dition, if a permit for work	tor Landmark Require Review Review W/Conditions Henor work Suparate Af prove uthorized by rk described in
GNATURE OF APPLICAN	IT AI	DDRESS		DA	TE	PHONE

DATE

PHON

Job Summary Report Job ID: 2011-04-811-HVAC

New bolan

Report generated on Apr 14, 2011 3:38:20 PM

55,000

Job Type: **HVAC** Job Description: Waynflete School Job Year: 2011 **Building Job Status Code:** Pin Value: 1145 **Tenant Name:** Initiate Plan Review

Job Application Date: Public Building Flag: N Tenant Number:

Square Footage: Related Parties: SCHOOL WAYNFLETE

Property Owner

AAA ENERGY SERVICE CO - AAA CO PLUMBING CONTRACTOR AAA ENERGY SERVICE CO. - AAA ENERGY SERVICE CO. MECHANICAL CONTRACTOR

AAA ENERGY SERVICE CO.

Job Charges Fee Code Charge **Permit Charge** Net Charge Payment Receipt Payment **Payment Adjustment** Net Payment Outstanding Description Amount Adjustment Amount Date Number Amount Amount Amount Balance

Location ID: 9680

Estimated Value:

Location Details									
Alternate	e Id	Parcel Number	Census Tract	GIS X	GIS Y	GIS Z	GIS Reference	Longitude	Latitude
979440		061 F 006 001		Μ				-70.269911	43.64671

Location Type Subdivision Code Subdivision Sub Code Related Persons Address(es) 1 336 SPRING STREET WEST

Location Use Code Use Zone Fire Zone **Inside Outside** District **General Location Inspection Area** Jurisdiction Variance Code Code Code Code Code Code Code Code LITERARY & SCIENTIFIC MOI Historic DISTRICT 3 WEST END District INS

Structure Details

Structure: Triangle Tube Boiler

Structure Type Code Structure Status Type Square Footage Estimated Value Address

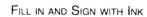
Public Works & Utility Buildings 0 336 SPRING STREET WEST

Longitude Latitude GIS X GIS Y GIS Z GIS Reference User Defined Property Value

Permit #: 20112772

Occupancy Type Code:

iamil





APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT

- 1	
- 1	
- 1	
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- 1	
- 1	- 1

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

T	The undersig	ned hereby	applies j	for a pern	nit to insta	ll the fe	ollowing h	heating,	cooking (or power	equipment	in
accordar	ice with the	Laws of M	aine, the	Building	Code of th	e City	of Portlar	nd, and	the follow	ing speci	ifications:	

Location / CBL 360 SPR ng 5+ Name and address of owner of appliance WAYNFIX +x	Use of Building School Date 3-12-11
Installer's name and address HIFA Energy Se	Telephone (207) 333-1473
Location of appliance: Basement	Type of Chimney: Masonry Lined Factory built
Type of Fuel: Gas Oil Solid	□ Metal Factory Built U.L. Listing # ₽ レ ⊂
U.L. Approved □ Yes □ No	Direct Vent Type RECEIVED
Will appliance be installed in accordance with the manufacture's installation instructions? Yes No No No	Type of Fuel Tank Oil Gas Dept. of Building Inspections City of Portland Maine
The Type of License of Installer: Master Plumber # Solid Fuel # Oil #	Number of Tanks
Approved Fire: Ele.: Bldg.: Signature of Installer	Approved with Conditions See attached letter or requirement Inspector's Signature Date Approved
	ink - Applicant's Gold - Assessor's Copy



Reference the appropriate vent supplement for clearance requirements.

BEST PRACTICE

To provide serviceability to the unit it is recommended that the following clearances be maintained:

Top boiler jacket - 24 inches [610 mm].

Front - 24 inches [610 mm].

Bottom boiler piping - 24 inches [610 mm].

Rear - 0 inches

Sides - 6 inches [153 mm]



If the clearances listed above cannot be maintained or the enclosure in which the boiler is installed is less than 85 cubic feet, the space must be ventilated. See page 6 for ventilation requirements.

NOTICE

When maintaining zero clearance or less than recommended clearances, some product labeling may become hidden and unreadable.



When installing the PRESTIGE Solo in a confined space, sufficient air must be provided for proper combustion and venting and to allow, under normal operating conditions, proper air flow around the product to maintain ambient temperatures within safe limits to comply with the National Fuel Gas Code NFPA 54 - latest edition.

Residential Garage Installations

When installing the PRESTIGE Solo in a residential garage, the following special precautions per NFPA 54/ANSI Z223.1 must be taken:

- Mount the unit a minimum 18 inches [458 mm] above the floor level of the garage. Ensure the burner and ignition devices / controls are no less than 18 inches [458 mm] above the floor level.
- Locate or protect the unit in a manner so it cannot be damaged by a moving vehicle.

Boiler Freeze Protection Feature

The boiler control has a freeze protection feature built in. This feature monitors the boiler temperature and responds as follows when no call for heat is present:

- 46°F Boiler circulator is ON
- 38°F Boiler circulator is ON and burner operates at low fire
- 50°F Burner OFF and boiler circulator operates for approximately 10 minutes



The boiler freeze protection feature is disabled during a hard lockout, however the CH circulator will operate.



The boiler freeze protection feature is designed to protect the boiler. The boiler should be installed in a primary/secondary piping arrangement if it is installed in an unheated space or exposed to water temperatures of 46°F or less. See Section IV for primary/secondary piping examples. See Section IX for antifreeze guides.

Combustion Air Venting



SECTION II - Combustion Air and Venting

Combustion Air Contamination



If the PRESTIGE Solo combustion air inlet is located in any area likely to cause or contain contamination, or if products, which would contaminate the air cannot be removed, the combustion air must be repiped and terminated to another location. Contaminated combustion air will damage the unit and its burner system, resulting in possible severe personal injury, death or substantial property damage.

MARNING

Do not operate a PRESTIGE Solo if its combustion air inlet is located near a laundry room or pool facility. These areas will always contain hazardous contaminants.

Pool and laundry products and common household and hobby products often contain fluorine or chlorine compounds. When these chemicals pass through the burner and vent system, they can form strong acids. These acids can create corrosion of the heat exchanger, burner components and vent system, causing serious damage and presenting a possible threat of flue gas spillage or water leakage into the surrounding area.

Please read the information listed below. If contaminating chemicals are located near the area of the combustion air inlet, the installer should pipe the combustion air inlet to an outside area free of these chemicals per SECTION V of this installation manual.

Potential contaminating products

- Spray cans containing chloro/fluorocar-bons
- Permanent Wave Solutions
- Chlorinated wax
- Chlorine based swimming pool chemicals / cleaners
- Calcium Chloride used for thawing ice
- Sodium Chloride used for water softening
- Refrigerant leaks
- Paint or varnish removers
- Hydrochloric acid / muriatic acid
- Cements and glues
- Antistatic fabric softeners used in clothes dryers
- Chlorine-type bleaches, detergents, and cleaning solvents found in household laundry rooms
- Adhesives used to fasten building products and other similar products

Areas likely to contain these products

- Dry cleaning / laundry areas and establishments
- Beauty salons
- Metal fabrication shops
- Swimming pools and health spas
- Refrigeration Repair shops
- Photo processing plants
- Auto body shops
- Plastic manufacturing plants
- Furniture refinishing areas and establishments
- New building construction
- Remodeling areas
- Garages with workshops



Ventilation and Combustion Air Requirements - Direct Vent

A Direct Vent appliance utilizes uncontamined outdoor air (piped directly to the appliance) for combustion.

For Direct Vent installations, involving only the PRESTIGE Solo, in which the minimum service clearances are maintained as listed on page 4, no ventilation openings are required.

For Direct Vent, zero clearance installations involving only the PRESTIGE Solo, the space / enclosure must provide two openings for ventilation. The openings must be sized to provide 1 square inch of free area per 1,000 BTUH of boiler input. The openings shall be placed 12 inches from the top of the space and 12 inches from the floor of the space.

For installations in which the PRESTIGE Solo shares the space with air movers (exhaust fan, clothes dryers, fireplaces, etc.) and other combustion equipment (gas or oil) the space must be provided with adequate air openings to provide ventilation and combustion air to the equipment. To properly size the ventilation / combustion air openings, the installer must comply with the National Fuel Gas Code NFPA 54, ANSI Z223.1 for installations in the U.S or CSA B149.1 and B149.2 for installations in Canada.

A WARNING

The space must be provided with ventilation / combustion air openings properly sized for all make-up air requirements (exhaust fans, clothes dryers, fireplaces, etc.) and the total input of all appliances located in the same space as the PRESTIGE Solo, excluding the input of a Direct Vent PRESTIGE Solo which uses combustion air directly from the outside, thus additional free area for the openings is not required. Failure to provide or properly size the openings could result in severe personal injury, death or substantial property damage.

Ventilation and Combustion Air Requirements - Category IV

A Category IV appliance utilizes uncontaminated indoor or outdoor air (surrounding the appliance) for combustion.

BEST PRACTICE

In order to reduce the potential risks associated with indoor contaminates (listed on page 5), flammable vapors and tight housing construction (little or no infiltration air), it is recommended to pipe uncontaminated combustion air directly from the outdoors to the appliance. This practice also promotes higher system efficiency by reducing heated indoor air from being exhausted from the house and replaced by cold infiltration air into the house.

For installations in which the PRESTIGE Solo shares the space with air movers (exhaust fan, clothes dryers, fireplaces, etc.) and other combustion equipment (gas or oil) the space must be provided with adequate air openings to provide ventilation and combustion air to the equipment. To properly size the ventilation / combustion air openings, the installer must comply with the National Fuel Gas Code NFPA 54, ANSI Z223.1 for installations in the U.S or CSA B149.1 and B149.2 for installations in Canada, as referenced in this section of the manual and titled Methods of Accessing Combustion Air into a Space.

A WARNING

The space must be provided with ventilation / combustion air openings properly sized for all make-up air requirements (exhaust fans, clothes dryers, fireplaces, etc.) and the total input of all appliances, including the PRESTIGE Solo when located in the same space. Failure to provide or properly size the openings could result in severe personal injury, death or substantial property damage.



Methods of Accessing Combustion Air Into A Space - Category IV

Indoor Combustion Air

NOTICE

The methods listed in this section for accessing Indoor Combustion Air assume that the infiltration rate is adequate and not less than .40 ACH. For infiltration rates less than .40 ACH, reference the NFPA 54 National Fuel Gas Code for additional guidance.

Opening Size and Location

Openings used to connect indoor spaces shall be sized and located in accordance with the following see Fig. 1:

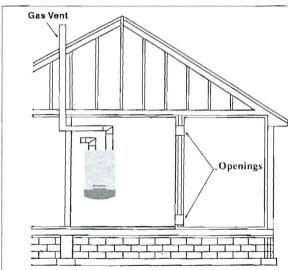


Fig. 1: All Combustion Air from Adjacent Indoor Spaces Through Indoor Combustion Openings

Combining spaces on the same story. Each opening shall have a minimum free area of 1 sq. in./1000 Btu/hr of the total input rating of all gas utilization equipment in the space, but not less than 100 sq. inches. One opening shall commence within 12 inches of the top, and one opening shall commence within 12 inches of the bottom of the enclosure.

The minimum dimension of air openings shall be not less than 3 inches.

Combining spaces in different stories. The volumes of spaces in different stories shall be considered as communicating spaces where such spaces are connected by one or more openings in doors or floors having a total minimum free area of 2 sq. in./1000 Btu/hr of total input rating of all gas utilization equipment.

Outdoor Combustion Air

BEST PRACTICE

Isolating the combustion appliance room from the rest of the building and bringing in uncontaminated outside air for combustion and ventilation is always preferred.

Opening Size and Location

The minimum dimension of air openings shall be not less than 3 inches

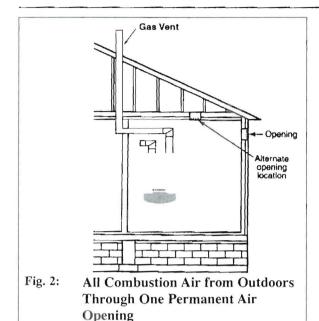
Openings used to supply combustion and ventilation air shall be sized and located in accordance with the following:

One Permanent Opening Method. See Fig. 2

One permanent opening, commencing within 12 in. of the top of the enclosure, shall be provided. The equipment shall have clearances of at least 1 inch from the sides and 6 in. from the front of the appliance. The opening shall directly communicate with the outdoors or shall communicate through a vertical or horizontal duct to the outdoors or spaces that freely communicate with the outdoors and shall have a minimum free area of the following:

 Isq. in./3000 Btu/hr of the total input rating of all equipment located in the enclosures, and



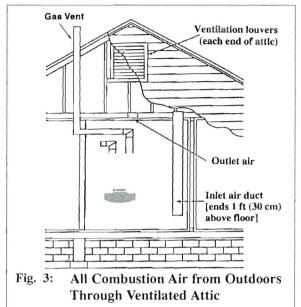


Not less than the sum of the areas of all vent connectors in the space.

Two Permanent Openings Method.

Two permanent openings, one commencing within 12 in. of the top and one commencing within 12 in. of the bottom of the enclosure, shall be provided. The openings shall communicate directly, or by ducts, with the outdoors or spaces that freely communicate with the outdoors, as follows:

- Where directly communicating with the outdoors or where communication to the outdoors is through vertical ducts, each opening shall have a minimum free area of 1 sq. in./4000 Btu/hr of total input rating of all equipment in the enclosure. See Fig.3.
- Where communicating with the outdoors is through horizontal ducts, each opening shall have a minimum free area of not less than 1 sq.in./2000 Btu/hr of total input rating of all equipment in the enclosure. See Fig. 4.



Gas vent
Outlet air duct
Inlet air duct

Fig. 4: All Combustion Air from Outdoors Through Horizontal Ducts

Combination of Indoor and Outdoor Combustion Air

Indoor Openings: Where used, openings connecting the interior spaces shall comply with the Indoor Combustion Air section on page 7.

Combustion Air Venting



Outdoor Opening(s) Location. Outdoor opening(s) shall be located in accordance with the Outdoor Combustion Air section.

Outdoor Opening(s) Size. Outdoor opening(s) shall be calculated in accordance with the following:

- The ratio of the interior spaces shall be the available volume of all communicating spaces divided by the required volume.
- The outdoor size reduction factor shall be 1 minus the ratio of interior spaces.
- The minimum size of outdoor opening(s) calculated in accordance with the above outdoor air section multiplied by the reduction factor. The minimum dimension of air openings shall not be less than 3 in.



DANGER

Do not install the PRESTIGE Solo into a common vent with other gas or oil appliances. This may cause flue gas spillage or appliance malfunction, resulting in possible severe personal injury, death or substantial property damage.

Combustion Air and Vent Piping

The PRESTIGE Solo requires a Category IV venting system, which is designed for pressurized venting and condensate.

The PRESTIGE Solo is certified per ANSI Z21.13 as a Category IV or Direct Vent (sealed combustion) appliance. A Category IV appliance utilizes uncontamined indoor or outdoor air (surrounding the appliance) for combustion. A Direct Vent appliance utilizes uncontaminated outdoor air (piped directly to the appliance) for combustion.

BEST PRACTICE

In order to reduce the potential risks associated with indoor contaminates (listed on page 5), flammable vapors and tight housing construction (little or no infiltration air), it is recommended to pipe uncontaminated combustion air directly from the outdoors to the appliance. This practice also promotes higher system efficiency by reducing heated indoor air from being exhausted from the house and replaced by cold infiltration air into the house.

NOTICE

Install combustion air and vent pipe as detailed in the PRESTIGE Solo Vent Supplement included in the boiler installation envelope. Refer to optional vent kit instructions for addition vent installation instructions.



A DANGER

Verify installed combustion air and vent piping are sealed gas tight and meet all provided instructions and applicable codes, failure to comply will result in severe personal injury of death.



Removal of an Existing Boiler from a Common Vent System

BEST PRACTICE

When an existing boiler is removed from a common venting system, the common venting system is likely to be too large for proper venting of the remaining appliances. At the time of removal of an existing boiler, the following steps shall be followed with each appliance remaining connected to the common venting system placed in operation, while the other appliances remaining connected to the common venting system are not in operation.

- 1. Seal any unused openings in the common venting system.
- 2. Visually inspect the venting system for proper size and horizontal pitch and determine there is no blockage or restriction, leakage, corrosion and other deficiencies which could cause an unsafe condition.
- 3. Insofar as is practical, close all building doors and windows and all doors between the space in which the appliances remaining connected to the common venting system are located and other spaces of the building. Turn on clothes dryers and any appliance not connected to the common venting system. Turn on any exhaust fans, such as range hoods and bathroom exhausts, so they will operate at maximum speed. Do not operate a summer exhaust fan. Close fireplace dampers.
- 4. Place in operation the appliance being inspected. Follow the lighting instructions. Adjust thermostat so appliance will operate continuously.

- 5. Test for spillage at the draft hood relief opening after 5 minutes of main burner operation. Use the flame of a match or candle, or smoke from a cigarette, cigar or pipe.
- 6. After it has been determined that each appliance remaining connected to the common venting system properly vents when tested as outlined above, return doors, windows, exhaust fans, fireplace dampers, and any other gas-burning appliance to their previous condition of use.
- 7. Any improper operation of the common venting system should be corrected so the installation conforms with the National Fuel Gas Code, ANSI Z223.1/NFPA 54 and/or CAN/CGA B149, Installation codes. When resizing any portion of the common venting system, the common venting system should be resized to approach the minimum size as determined using the appropriate tables in Part II of the National Fuel Gas Code ANSI Z223.1/NFPA 54 and/or CAN/CGA B149, Installation codes.



Do not install the PRESTIGE Solo into a common vent with other gas or oil appliances. This may cause flue gas spillage or appliance malfunction, resulting in possible severe personal injury, death or substantial property damage.



Commonwealth of Massachusetts Installations Only

For direct-vent appliances, mechanicalvent heating appliances or domestic hot water equipment, where the bottom of the vent terminal and the air intake is installed below four feet above grade the following requirements must be satisfied:

- 1. If there is not one already present, on each floor level where there are bedroom(s), a carbon monoxide detector and alarm shall be placed in the living area outside the bedroom(s). The carbon monoxide detector shall comply with NFPA 720 (2005 Edition).
- 2. A carbon monoxide detector shall also be located in the room that houses the appliance or equipment and shall:
 - a. Be powered by the same electrical circuit as the appliance or equipment such that only one service switch services both the appliance and the carbon monoxide detector;
 - b. Have battery back-up power;
 - c. Meet ANSI/UL 2034 Standards and comply with NFPA 720 (2005 Edition); and
 - d. Have been approved and listed by the Nationally Recognized Testing Laboratory as recognized under 527 CMR.
- 3. A Product-approved vent terminal must be used, and if applicable, a Product-approved air intake must be used. Installation shall be in strict compliance with the manufacturer's instructions. A copy of the installation instructions shall remain with the appliance or equipment at the completion of the installation.

4. A metal or plastic identification plate shall be mounted at the exterior of the building, four feet directly above the location of vent terminal. The plate shall be of sufficient size to be easily read from a distance of eight feet away, and read "Gas Vent Directly Below".

NOTICE

Installer must provide tag identification plate and ensure the lettering meets code requirements.

For direct-vent appliances, mechanicalvent heating appliances or domestic hot water equipment, where the bottom of the vent terminal and the air intake are installed above four feet above grade the following requirements must be satisfied:

- 1. If there is not one already present, on each floor level where there are bedroom(s), a carbon monoxide detector and alarm shall be placed in the living area outside the bedroom(s). The carbon monoxide detector shall comply with NFPA 720 (2005 Edition).
- 2. A carbon monoxide detector shall:
 - a. Be located in the room that houses the appliances or equipment;
 - b. Be either hard wired or battery powered or both; and
 - c. Shall comply with NFPA 720 (2005 Edition)
- 3. A Product-approved vent terminal must be used, and if applicable, a Product-approved air intake must be used. Installation shall be in strict compliance with the manufacturer's instructions. A copy of the installation instructions shall remain with the appliance or equipment at the completion of the installation.

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.

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, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.