

# HDC

## ADMINISTRATIVE APPROVALS

April 07, 2021

- |     |   |                        |
|-----|---|------------------------|
| 1.  | 37 South Street (LUHD-286)                | - Recommended Approval |
| 2.  | 58 South Street (LUHD-285)                | - Recommended Approval |
| 3.  | 319 Vaughan Street (LUHD-287)             | - Recommended Approval |
| 4.  | 500 Market Street, Unit #2A (LUHD-288)    | - Recommended Approval |
| 5.  | 229 Pleasant Street, Unit #2 (LUHD-289)   | - Recommended Approval |
| 6.  | 135 Congress Street, Unit #145 (LUHD-293) | - Recommended Approval |
| 7.  | 74 Congress Street (LU-21-35)             | - Recommended Approval |
| 8.  | 22 Daniel Street (LUHD-294)               | - Recommended Approval |
| 9.  | 38 Chapel Street (LUHD-295)               | - Recommended Approval |
| 10. | 261 South Street (LUHD-297)               | - Recommended Approval |
| 11. | 16 Porter Street (LUHD-270)               | - Recommended Approval |
| 12. | 166 New Castle Avenue (LUHD-298)          | - Recommended Approval |
| 13. | 17 Hunking Street (LUHD-302)              | - Recommended Approval |
| 14. | 99 Marcy Street (LUHD-303)                | - Recommended Approval |

## 1. 37 South Street - Recommended Approval

**Background:** The applicant is seeking approval for the installation of mechanical equipment (A/C Condenser with drain-pipes) on the rear Northwest corner of the house. Screening to be determined.

**Staff Comment:** Recommended Approval

### Stipulations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LUHD-286****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Mar 08, 2021**Applicant**

kevin charette  
ktc@comcast.net  
37 south street  
portsmouth, nh 03801  
8607127136

**Location**

37 SOUTH ST  
Portsmouth, NH 03801

**Owner:**

CHARETTE KEVIN THOMAS & CHARETTE  
LORI WILLS  
37 SOUTH ST PORTSMOUTH, NH 03801

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

Install a Mitsubishi ductless/ducted mini split air conditioner system consisting of 1) one outdoor condenser; 2) one indoor floor mounted ductless head in 1st floor dining room; and 3) one air handler in attic to support ducted A/C to all 2nd floor rooms.

Condenser: Model MXZ-3C30NA2-UI Dimensions: 31.5" high (approx. 50" with stand) , 37.5" wide, 13" deep

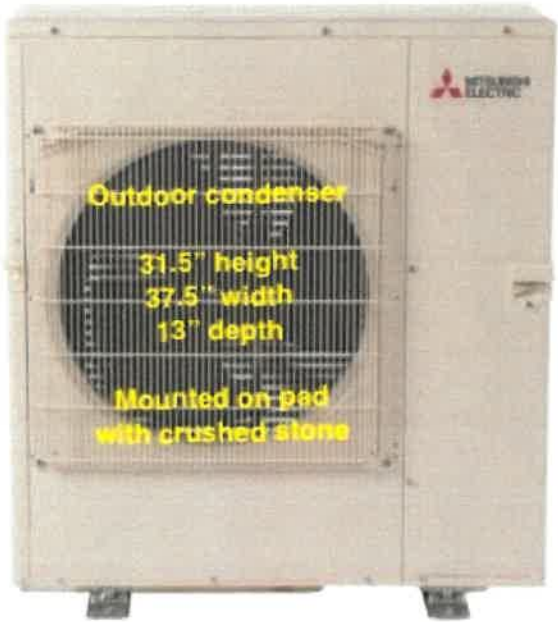
Outdoor condenser location: rear of house on northwest corner; will landscape around unit and possibly include cedar lattice to minimize visibility

Outdoor line-sets / drain lines: connections to 1st floor unit will primarily be via the basement with only a 1-2 feet section visible outside the dining room; outdoor connections to the attic air handler will be on the rear of house (northwest corner) and follow the trim board; all outdoor connections will be covered with Fortress line cover and can be painted to match exterior finish.











small section of  
fortress covered line  
set and drain  
(painted to blend  
with house)  
connected to floor  
standing ductless  
unit in southwest  
dining room

majority of line set  
from backyard  
condenser will travel  
through basement  
to this connection





11:56



rectorseal.com

**4.5" wide x 3.25 deep**

## Fortress Lineset Covers

### 4.5"12'Wall Duct Kit

### White 122

Fortress Lineset Covers provide a durable and cosmetically appealing solution to protect components on the building exterior. Moderately priced, Fortress is compatible with a variety of A/C systems, conceals and protects linesets, wiring and drain hoses from weather and damage.



## 2. 58 South Street - Recommended Approval

**Background:** The applicant is seeking approval for the replacement of (2) double hung windows on the left side of the house.

**Staff Comment:** Recommended Approval

### Stipulations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_





City of Portsmouth, NH

04/01/2021

**LUHD-285****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Mar 08, 2021**Applicant**

Jay Lawrie  
jay.lawrie13@gmail.com  
270 MEADERBORO RD  
FARMINGTON, NH 03835-4410  
6033124729

**Location**

58 SOUTH ST  
Portsmouth, NH 03801

**Owner:**

NATKIEL LUCIANNA  
PO BOX 238 HILL, NH 03243

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

Replace 2 double hung windows on left side of house with marvin CN 2016 sdl double hung windows. The windows to be replaced are not original, I've included a photo . We plan on moving the more rearward unit up to match the other window,

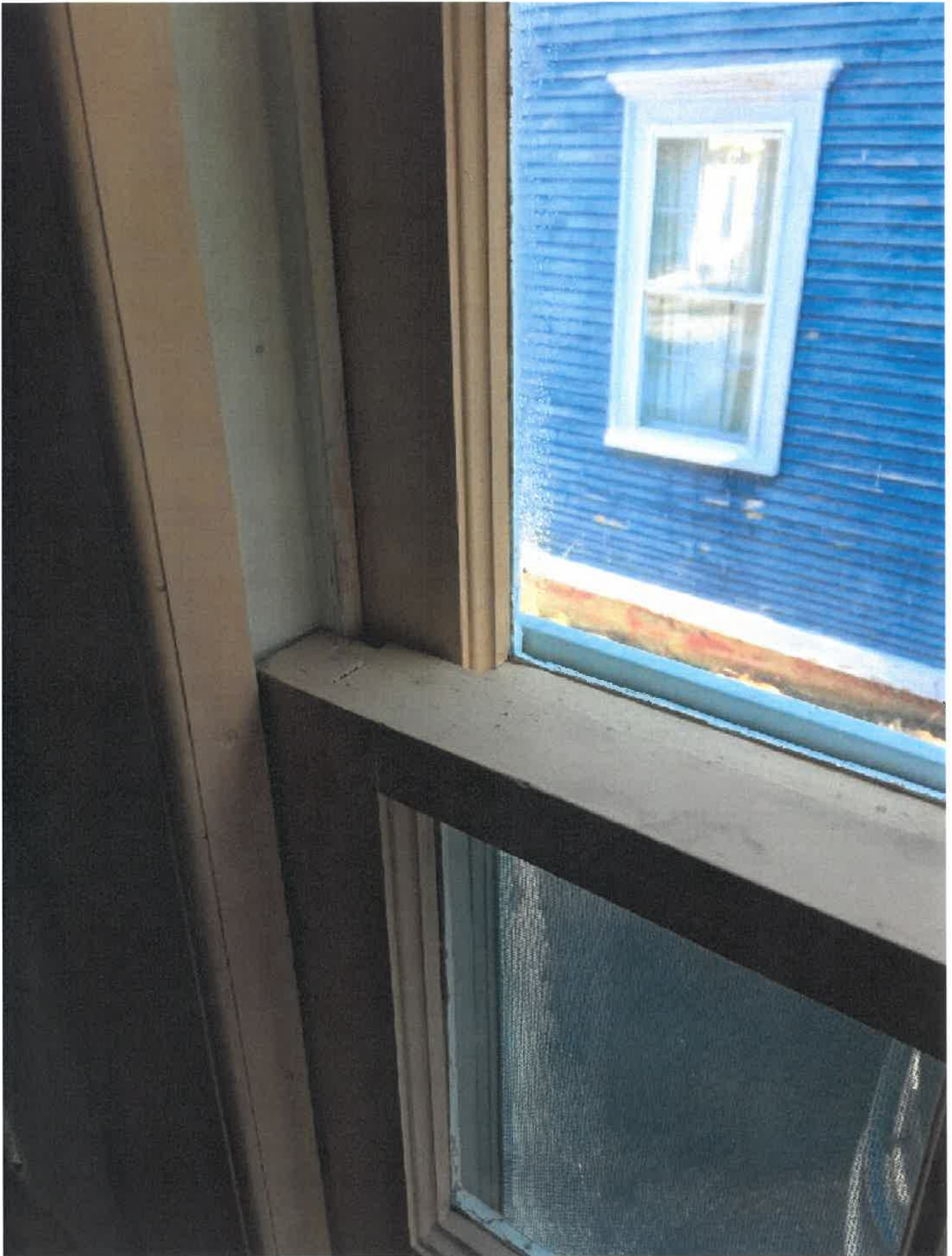
**Description of Proposed Work (Planning Staff)**

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**Acknowledgement****I certify that the information given is true and correct to the best of my knowledge.**

**By checking this box, I agree that this is equivalent to a handwritten signature and is binding for all purposes related to this transaction**





### 3. 319 Vaughan Street

### - Recommended Approval

**Background:** The applicant is seeking approval for the replacement of existing mechanical equipment (roof-top ventilation), the replacement unit will be larger than the outgoing unit.

**Staff Comment:** Recommended Approval

#### **Stipulations:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LUHD-287**

**Historic District Commission Work Session or Administrative Approval Application**

**Status:** Active

**Date Created:** Mar 09, 2021

**Applicant**

Domenic Armano  
darmano@guardian-energy.com  
420 Northboro Rd Central  
Marlborough, MA 01752  
6033610979

**Location**

319 VAUGHAN ST  
Portsmouth, NH 03801

**Owner:**

319 VAUGHAN STREET CENTER LLC & C/O  
KITTYHAWK COMPANY  
PO BOX 21948 PORTSMOUTH, NH 03802

**Application Type**

**Please select application type from the drop down menu below**

Administrative Approval

**Project Information**

**Brief Description of Proposed Work**

The customer (3S Artspace) is replacing an existing rooftop unit with a newer more efficient unit. The unit we're replacing is on the 2nd story roof and is not visible from the road. It is approximately 120' from the road and 65' setback from the roof edge. The new unit is larger than existing due to the need to provide more ventilation.

**Description of Proposed Work (Planning Staff)**

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**Project Representatives**

**Relationship to Project**

Engineer



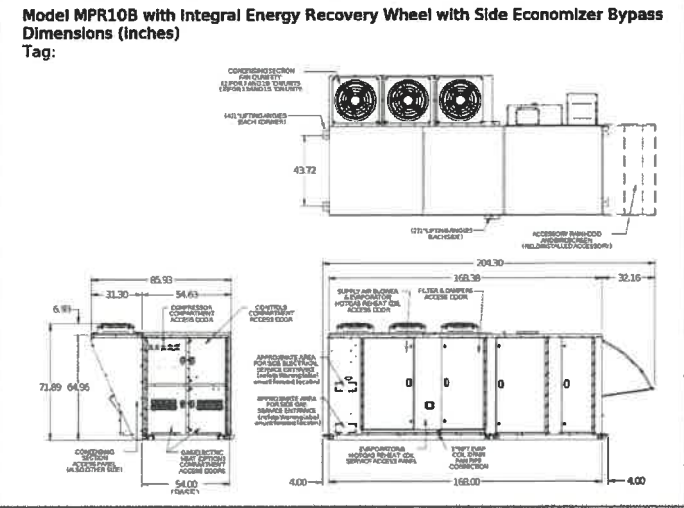
3S Artspace Rooftop Unit Replacement



Existing Rooftop to be replaced

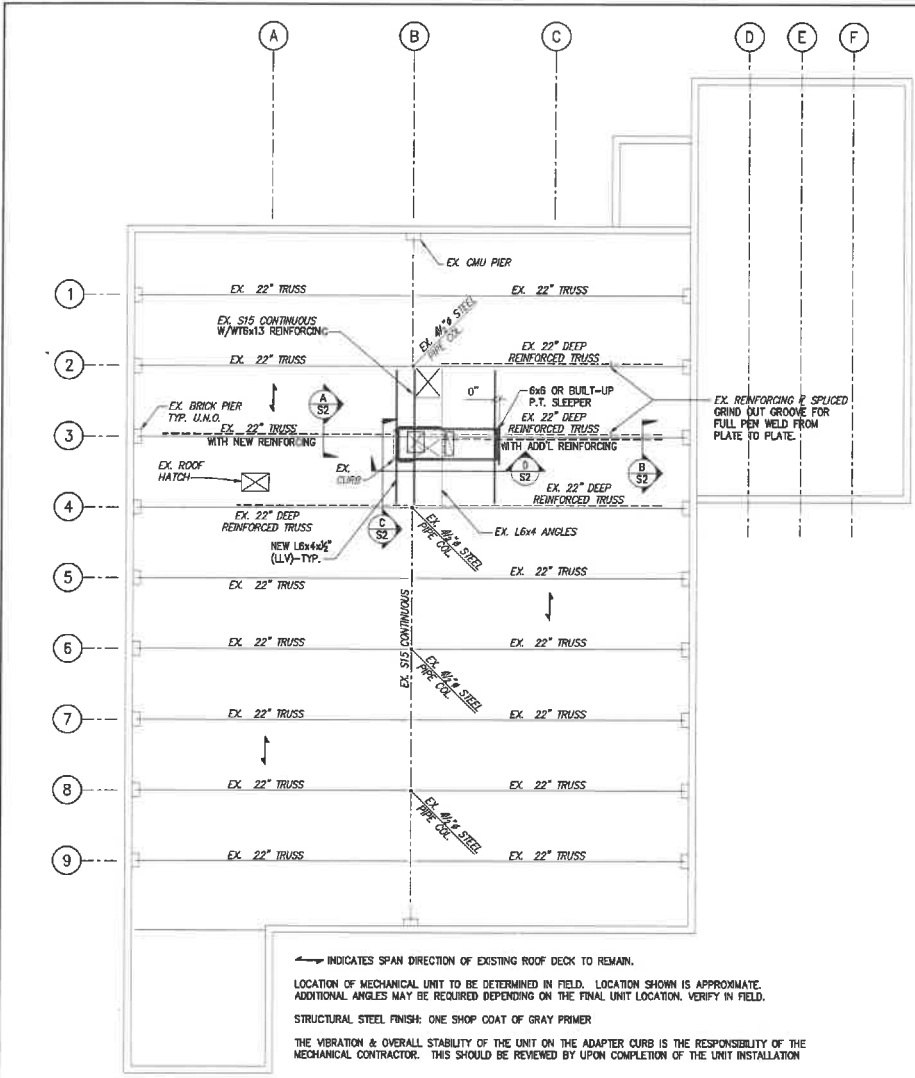


New Rooftop Dimensional Data









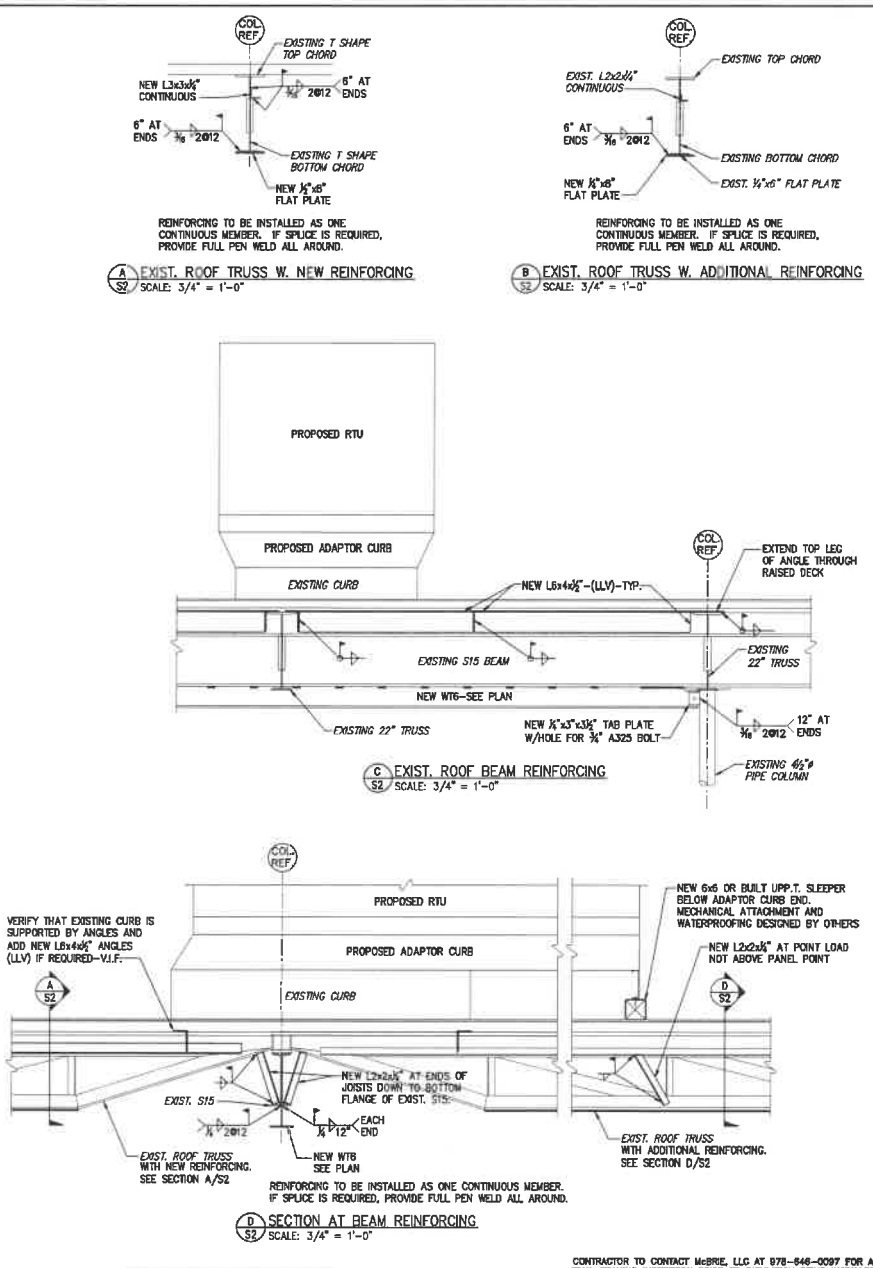
← INDICATES SPAN DIRECTION OF EXISTING ROOF DECK TO REMAIN.

LOCATION OF MECHANICAL UNIT TO BE DETERMINED IN FIELD. LOCATION SHOWN IS APPROXIMATE. ADDITIONAL ANGLES MAY BE REQUIRED DEPENDING ON THE FINAL UNIT LOCATION. VERIFY IN FIELD.

STRUCTURAL STEEL FINISH: ONE SHOP COAT OF GRAY PRIMER

THE VIBRATION & OVERALL STABILITY OF THE UNIT ON THE ADAPTER CURB IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THIS SHOULD BE REVIEWED BY UPON COMPLETION OF THE UNIT INSTALLATION

**ROOF FRAMING PLAN**  
SCALE: 1/8" = 1'-0"



NO.	DATE	REVISIONS

PREPARED FOR:  
GUARDIAN ENERGY MANAGEMENT SOLUTION, LLC  
420 NORTHBORO RD, CENTRAL MARLBOROUGH, MA

RTU REPLACEMENT AT  
3S ARTSPACE  
319 VAUGHAN STREET  
PORTSMOUTH, NH  
MARBLE, LLC PROJECT #20-095

DRAWN BY: NH/PCC  
CHK'D BY: MLP/BLK  
DATE: 02/11/21

**McBrie, LLC**  
Structural Design & Sales  
REL 978-848-0097  
FAX 978-848-0097  
WWW.MCBRIE.COM  
297 TURNPIKE ST.  
NORTH ANDOVER, MA 01845

**ROOF FRAMING PLAN & DETAILS**

**S2**

CONTRACTOR TO CONTACT MCBRIE, LLC AT 978-848-0097 FOR A FINAL FRAMING INSPECTION PRIOR TO INSULATION BEING INSTALLED



**AccuSpec V4.31b  
Transaction #: 15345156**

**JOB TITLE: 319 VAUGHAN**

**Date: 12/10/2020**

**Approved By:**

A handwritten signature in blue ink, appearing to read "Domenic Am".

January 26, 2021

Submittal review and approval required prior to listed unit(s) being released for production and shipment. Unit(s) configured based on information provided. The Approver is responsible for ensuring the units, options, and accessories meet the job specifications.



AccuSpec V4.31b

## SUBMITTAL SCHEDULE & DATA

### Atherion® Commercial Packaged Ventilation and Make-up Air Units

Job Name: 319 VAUGHAN  
 Location:  
 Submitted by: Mike Generelli

Engineer:  
 Architect:  
 Contractor:

<b>UNIT TAG</b>			
<b>MODEL NUMBER</b>		MPR10BB1A1A8WA4M2HLDG3T2	
<b>UNIT QUANTITY</b>		1	
<b>UNIT CONFIGURATION</b>		Fresh & Return Air Dampers, with Energy Recovery Exhaust	
Discharge Arrangement		Bottom Supply	
Supply Voltage		208/60/3	
Altitude (ft. above sea level)		0-2000	
<b>FULL LOAD COOLING CAPACITY<sup>1</sup></b>			
Refrigerant Type		R-410A	
<b>DX Cooling Capacity Data</b>			
Total – Nominal Tons		10	
Total – (Gross / Net) Btu/hr		154,838 / 135,177	/
Sensible – (Gross / Net)		128,206 / 108,544	/
<b>Energy Wheel Capacity Tons<sup>2</sup></b>		6.6	
<b>FULL LOAD HEATING CAPACITY<sup>3</sup></b>		250,000	
<b>HEATING TYPE</b>		Natural Gas	
<b>SUPPLY FAN</b>			
Nominal Supply Airflow (CFM)		5,000	
Maximum Outside Airflow		5,000 (100% OA)	(% OA)
VAV Range (CFM) (if applicable)	Cooling	Constant Speed	
	Heating	Constant Speed	
Ext/Total Static Pressure		1.00 / 3.45	/
Fan Quantity		1	
Fan Diameter (inches) and		16 ANPA	
Fan BHP (Per Fan) / Speed (RPM)		6.84 / 2,896	/
Motor Size (Per Fan) / Motor Type		10 / ODP HE	/
Motor Speed Nominal / Typical		3600 / 3492	/
Design VFD Frequency (Hz)		49.8	
<b>POWERED EXHAUST</b>		46" Total Energy Recovery Wheel - 3A	
Nominal Airflow (CFM)		4,000	
Ext/Total Static Pressure		1.00 / 2.04	/
Fan Diameter (inches)		20	
Fan Power (BHP) / Speed (RPM)		2.14 / 1,304	/
Motor Size (HP) / Motor Type		3 / ODP HE	/
<b>OPERATING WEIGHT EACH (lbs)</b>			
Base Model (model MPR)		4,338	
Total Unit/Option/Accessories <sup>4</sup>		4,433	

1. For complete Cooling conditions and capacity data, please refer to the Cooling Performance section.
2. Applies only to units selected with an Energy Recovery Module, otherwise blank. For complete energy recovery data in both cooling and heating modes, please refer to the Energy Recovery Performance section.
3. For complete Heating conditions and capacity data, please refer to the Heating Performance section.

4. If an Energy Recovery Module and/or Roof Curb has been selected, the weight is included with Total Unit/Option/Accessories.



AccuSpec V4.31b

## SUBMITTAL SCHEDULE & DATA

### Atherion® Commercial Packaged Ventilation and Make-up Air Units

Model	Description	Qty	Tag
MPR10BB1A1A8WA4M2HLDG3T2	Packaged Commercial Ventilation System	1	
	MPR10BB1A1A8WA4M2HLDG3T2	1	
#76963	WIRING DIA 8H007413	1	
#68337	Power Wire/Dist Block Assembly (Factory Info)	1	
#71842	ERM Power Wire Assembly (Factory Info)	1	
#77002	Carel pCOe Expansion Module (Required)	1	
#68104	2" MERV 10 Primary Filters (Qty 6 - 16x25)	1	
#65175	Dirty Filter Pressure Switch	1	
#65215	ERM - Outside Air Filter Pressure Switch	1	
#78412	Energy Recovery Wheel Contactor	1	
#76247	ERM-B 18x Shv Assy: 1258-1477 RPM	1	
#25538	Exh Sheave Setting 4 Turns Open	1	
#65403	CNTRL-SUP FAN-CONSTANT SPEED	1	
#24000	CNTRL-SUP FAN MIN OUTPUT COOL=80%	1	
#24001	CNTRL-SUP FAN MIN OUTPUT HEAT=80%	1	
#24004	CNTRL-SUP FAN MAX VOLTAGE=7.7VDC	1	
#65404	CNTRL-EXH FAN-CONSTANT SPEED	1	
#65408	CNTRL-DAMPER-ENTHALPY ECON CO2 OVERRIDE	1	
#65166	CNTRL(SRVC)-SA TEMP RESET - SPACE-OA	1	
#67313	CNTRL(SRVC)-DEHUM - SPC RH-MIX AIR DEWPT	1	
#24034	CNTRL(SRVC)-OA DAMPER MIN OPEN=30%	1	
#24035	CNTRL(SRVC)-OA DAMPER MAX OPEN=100%	1	
#62941	VFD SETUP: SUP FAN - VFD MAX FREQ - 65HZ	1	
#62944	VFD SETUP: EXH FAN - VFD MAX FREQ - 60HZ	1	
66798	Supply Air Sensor - Fixed Length	1	
65193	Digital Wall Stat - Temp and Humidity	1	
65197	Space CO2 Sensor	1	
68093	Inlet Rainhood	1	
	ADAPTER CURB	1	



AccuSpec V4.31b

## MODEL NOMENCLATURE

### Atherion® Commercial Packaged Ventilation and Make-up Air Units

Tag:

1,2,3	4,5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MPR	10	B	B	1	A	1	A	8	W	A	4	M	2	H	L	D	G	3	T	2

Digit – Nomenclature	Value	Description
1, 2, 3 – Product Type	MPR	Modine Packaged Commercial Ventilation Unit
4,5 – Unit Tons Nominal	10	10 Tons
6 – Casing Size	B	B Cabinet
7 – Air Configuration	B	Fresh & Return Air Dampers, with Energy Recovery Exhaust
8 – Evaporator Coil	1	High Capacity, 4 Row Extended Surface Area Evap Coil
9 – Compressor Staging	A	Tandem Digital Scroll
10 – Hot Gas Reheat	1	Modulating Hot Gas Reheat
11 – Condenser Configuration	A	Standard Fans - VFD Head Pressure Control
12 – Supply Blower Configuration	8	16 Inch Backward Curved Airfoil Plenum Fan (ANPA)
13 – Supply Blower Motor HP	W	10 HP
14 – Supply Blower Motor Type	A	A - ODP - High Eff - 3600 RPM
15 – Unit Supply Voltage	4	208/60/3
16 – Power Options	M	Deadfront Disconnect, Non-Powered Convenience Outlet
17 – Heating Section Type	2	Natural Gas
18 – Heat Capacity	H	250,000 Btu/hr
19 – Heating Air Temperature Rise	L	Gas - 30-Under 70F Temp Rise
20 – Heat Control	D	Modulating
21 – Energy Recovery Wheel Size	G	46" Total Energy Recovery Wheel - 3Å MS
22 – Exhaust Blower Size & Type	3	20 Inch Backward Curved Airfoil Plenum Fan
23 – Exhaust Motor HP (Type Matches Digit 14)	T	T - 3 Hp
24 – Energy Wheel Preheat	2	14.9kW ERM Preheat



AccuSpec V4.31b

## PERFORMANCE DATA – COOLING

### Atherion® Commercial Packaged Ventilation and Make-up Air Units

UNIT TAG		
MODEL NUMBER		MPR10BB1A1A8WA4M2HLDG3T2

DESIGN CONDITIONS				
		Outside Air	Return Air	Evap Inlet Air
Temperatures (DB/WB)	°F	91.0/71.0	75.0/62.6	80.8 / 66.4
Nominal Airflow	CFM	5,000		
Coil Face Area / Velocity		11.11 ft² / 450 FPM		
DX COOLING CAPACITY <sup>1</sup>				
Total – Nominal	Tons	10		
Total – Actual		Total	Sensible	Latent
Gross	Btu/hr	154,838 (12.9 Tons)	128,206	26,633
Net	Btu/hr	135,177 (11.3 Tons)	108,544	26,633
DX + ENERGY WHEEL CAPACITY <sup>2</sup>				
Total – Actual (Gross / Net)	Tons	19.5 / 17.8		
Moisture Removal Capacity	Lb/hr	47.3		
Hot Gas Reheat Capacity @ 70°F	Btu/hr	69,775		
Supply Air Temperature Data		Evaporator Coil	Unit Discharge	Dew Point
Air Off Temperatures	°F	57.1 / 56.5	60.7 / 57.9	56.1
Additional Data				
Compressor Loading	%	100.0		
Total Unit Power	Watts	18,296		
Base Unit Efficiency <sup>3</sup>		11.7 EER / 14.7 IEER		
Application Efficiency <sup>4</sup>	EER	11.7 CEF		
	MRE <sup>5</sup>	2.6 lb/kWh CEF		
REFRIGERANT DATA				
Refrigerant Type		R-410A		
Charge per Circuit x Circuit Qty	lbs.	20.5 x 1		

- Capacities and temperatures shown at full load job specific design conditions.
- DX + Energy Wheel Capacity is the equivalent capacity of the combination of the wheel capacity and the DX capacity. The energy recovery performance is shown later in this submittal.
- The Base Unit Efficiencies shown for a base model MPR10B unit without energy recovery exhaust, when rated in accordance with ANSI/AHRI Standard 340/360 at a design airflow of 3400 CFM, are for reference only. The configuration of the selected unit and/or conditions of operation may not match the base unit, which will impact the actual unit efficiency, and may be outside the scope of ANSI/AHRI 340/360.
- The Application Efficiency is based on actual design conditions and selected unit configuration at full load. Because the unit selected includes energy recovery exhaust, the full load EER is shown as CEF (Combined Efficiency) as defined by AHRI Guideline V to include the combined efficiency of the DX unit and the energy recovery section. The MRE shown as CEF, while not defined by AHRI Guideline V, follows the same calculation methodology of combining capacity of the DX unit and the energy recovery section.



5. MRE (Moisture Removal Efficiency) is a measure that best represents the unit performance at full load for applications with high latent loads, typically 100% outside air applications. If the application is less than 100% outside air or the entering air has a low dew point, the calculated MRE may be low and not applicable.



AccuSpec V4.31b

## PERFORMANCE DATA – HEATING

### Atherion® Commercial Packaged Ventilation and Make-up Air Units

UNIT TAG	
MODEL NUMBER	MPR10BB1A1A8WA4M2HLDG3T2

HEATING CONDITIONS		
Outside Air Temp (DB)	°F	8.0
Return Air Temp (DB)	°F	70.0
Mixed Air Temperature (DB)	°F	45.8
HEATING TYPE		Natural Gas
HEAT EXCHANGER MATERIAL		Tubular 409 Stainless Steel
HEAT CONTROL TYPE		Modulating
GAS MODULATION RANGE		20-100%
FULL LOAD HEATING CAPACITY <sup>1</sup>		
Heating Capacity Input	Btu/hr	250,000
Thermal Efficiency	%	81%
Heating Capacity Output	Btu/hr	202,500
Temperature Rise	°F	37.5
Supply Air Temperature	°F	83.3
GAS CONNECTION SIZE		3/4"

1. Capacities and temperatures shown for Design Conditions.



AccuSpec V4.31b

## PERFORMANCE DATA – ENERGY RECOVERY

### Atherion® Commercial Packaged Ventilation and Make-Up Air Unit

UNIT TAG		
WHEEL SIZE AND TYPE	46" Total Energy Recovery Wheel - 3Å MS	
WHEEL AIRFLOW DATA	SUPPLY	EXHAUST
Nominal Airflow	5,000 CFM	4,000 CFM
External Static Pressure	1.00 "W.C.	1.00 "W.C.
Wheel Static Pressure	0.92 "W.C.	0.74 "W.C.
Total Static Pressure	3.45 "W.C.	2.04 "W.C.
Exhaust Air Transfer Ratio (EATR)	0.62 %	
Outside Air Correction Factor (OACF)	1.08	

### Wheel Performance Data – Summer (Cooling) Mode

<b>SUPPLY AIR</b>		<b>OUTSIDE AIR</b>	
Temperature	80.8 / 66.4 DB/WB (°F)	Temperature	91.0 / 71.0 DB/WB (°F)
Relative Humidity	47.1 %	Relative Humidity	37.5 %
Humidity Ratio	73.9 (gr/lb)	Humidity Ratio	81.7 (gr/lb)
<b>RETURN AIR</b>		<b>EXHAUST AIR</b>	
Temperature	75.0 / 62.6 DB/WB (°F)		
Relative Humidity	50.0 (%)		
Humidity Ratio	64.7 (gr/lb)		

ENERGY RECOVERY	
Total	78,810 Btu/hr
Sensible	52,422 Btu/hr
Latent	26,388 Btu/hr
Total Equivalent Tons	6.6

EFFECTIVENESS	
Total	67.0 %
Latent	53.4 %
Sensible	77.1 %
RECOVERY RATIO	
Enthalpy	54.7 %
Sensible	62.4 %
ECONOMIZER BYPASS	
	Yes



AccuSpec V4.31b

## PERFORMANCE DATA – ENERGY RECOVERY

### Atherion® Commercial Packaged Ventilation and Make-Up Air Unit

UNIT TAG		
WHEEL SIZE AND TYPE	46" Total Energy Recovery Wheel - 3Å MS	
WHEEL AIRFLOW DATA	SUPPLY	EXHAUST
Nominal Airflow	5,000 CFM	4,000 CFM
External Static Pressure	1.00 "W.C.	1.00 "W.C.
Wheel Static Pressure	0.92 "W.C.	0.74 "W.C.
Total Static Pressure	3.45 "W.C.	2.04 "W.C.
Exhaust Air Transfer Ratio (EATR)	0.62 %	
Outside Air Correction Factor (OACF)	1.08	

### Wheel Performance Data – Winter (Heating) Mode



#### SUPPLY AIR

Temperature 45.8 / 37.7 DB/WB (°F)  
 Relative Humidity 45.0 %  
 Humidity Ratio 20.4 (gr/lb)

#### OUTSIDE AIR

Temperature 8.0 / 5.6 DB/WB (°F)  
 Relative Humidity 50.0 %  
 Humidity Ratio 4.7 (gr/lb)

#### RETURN AIR

Temperature 70.0 / 55.8 DB/WB (°F)  
 Relative Humidity 40.0 (%)  
 Humidity Ratio 43.5 (gr/lb)

#### EXHAUST AIR

ENERGY RECOVERY	
Total	267,969 Btu/hr
Sensible	209,158 Btu/hr
Latent	58,811 Btu/hr
FROST DATA	
Threshold	19.0 °F
Control Point	12.1 °F
Electric Preheat	14.9kW ERM Preheat
Preheat Temp Rise	11.8 °F

EFFECTIVENESS	
Total	70.1 %
Latent	53.1 %
Sensible	78.5 %
RECOVERY RATIO	
Enthalpy	53.9 %
Sensible	59.7 %
ECONOMIZER BYPASS	
	Yes



AccuSpec V4.31b

## PERFORMANCE DATA – ELECTRICAL

### Atherion® Commercial Packaged Ventilation and Make-up Air Units

UNIT TAG	
MODEL NUMBER	MPR10BB1A1A8WA4M2HLDG3T2

COMPONENT/SYSTEM		COOLING MODE	HEATING MODE
Compressor 1	Amps	20.4	n/a
Compressor 2	Amps	19.0	n/a
Compressor 3 (D-Cabinet Only)	Amps	0.0	n/a
Compressor 4 (D-Cabinet Only)	Amps	0.0	n/a
Condenser Fan Motors (Total)	Amps	5.6	n/a
Supply Fan Motor 1	Amps	30.8	30.8
Supply Fan Motor 2	Amps	0.0	0.0
Exhaust Fan Motor 1	Amps	10.6	10.6
Exhaust Fan Motor 2	Amps	0.0	0.0
Energy Recovery Wheel Motor	Amps	0.6	0.6
Energy Recovery Preheat	Amps	n/a	41.4
Heating Circuit	Gas	Amps	1.7
	Electric	Amps	0.0
Unit Controls	Amps	1.2	1.2
Powered Convenience Outlet	Amps	0.0	0.0
Unit Full Load Amps	Amps	88.2	86.3
Min Circuit Ampacity (MCA)	Amps	95.9	107.9

FINAL UNIT ELECTRICAL DATA		
Nameplate Full Load Amp (FLA)	Amps	88.2
Min Circuit Ampacity (MCA)	Amps	107.9
Max Overcurrent Protection (MOP)	Amps	125.0



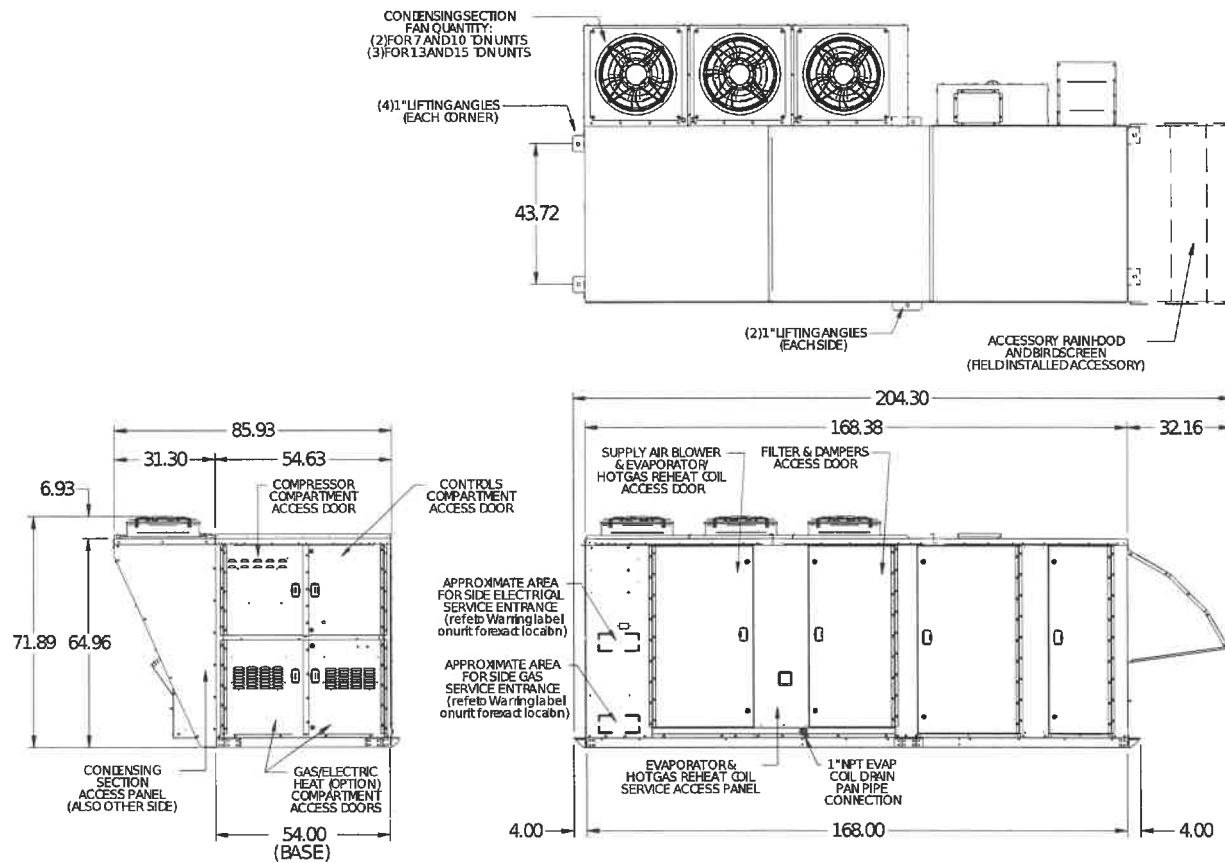
AccuSpec V4.31b

## DIMENSIONS – UNIT WITH INTEGRAL ENERGY RECOVERY

### Model MPR10B with Integral Energy Recovery Wheel with Side Economizer Bypass

Dimensions (inches)

Tag:



Approximate Weight: See Submittal Schedule & Data page.



AccuSpec V4.31b

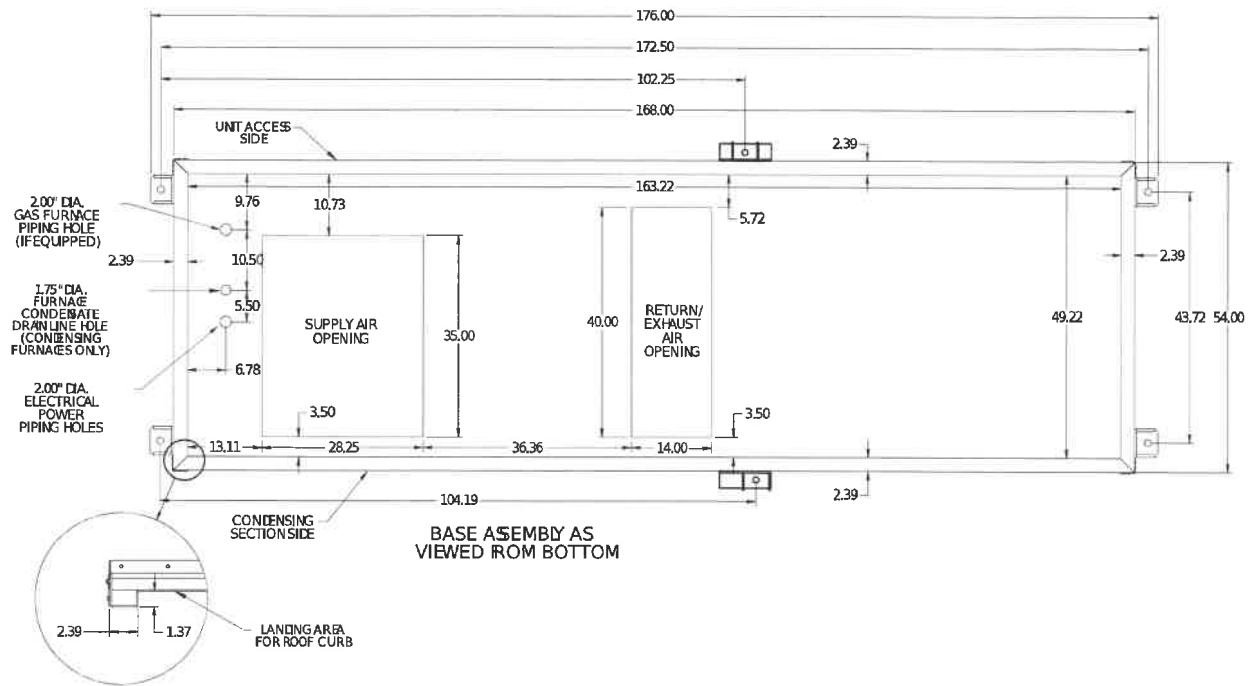
## **DIMENSIONS – UNIT BASE**

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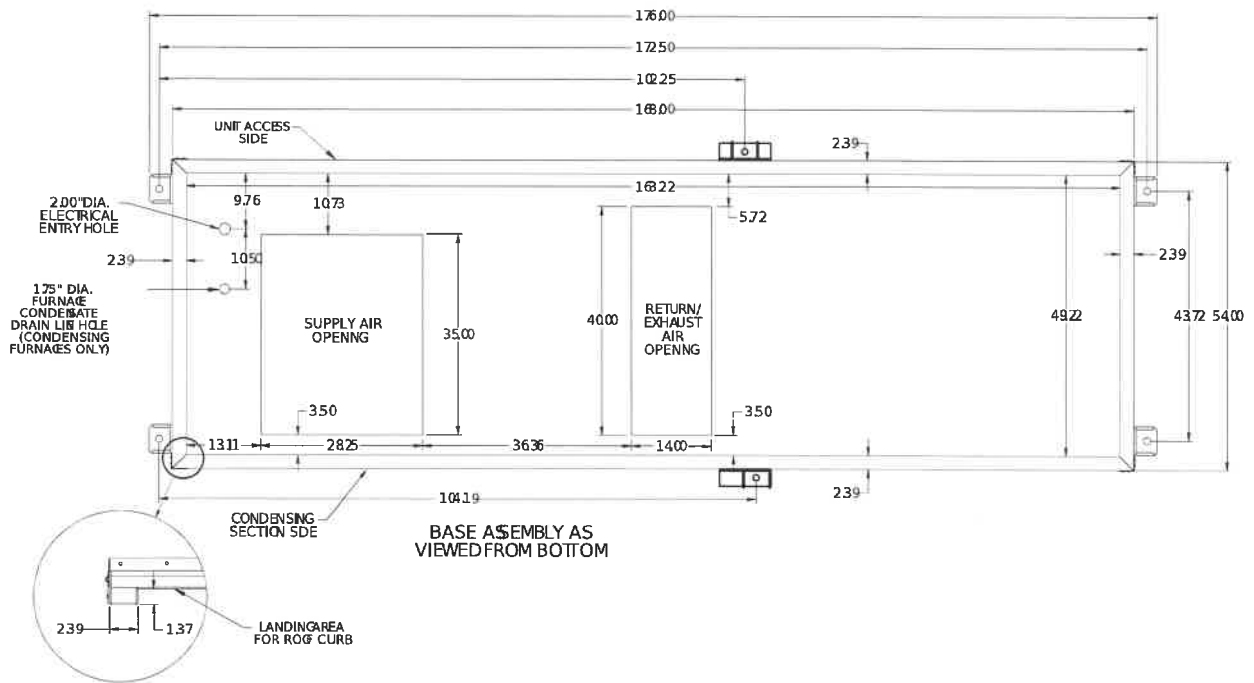
**Model MPR10B Unit with Integral Energy Recovery Base Dimensions (inches)**

Tag:





INSIDE BASE ASSEMBLY DETAIL  
VIEW AS VIEWED FROM SIDE



INSIDE BASE ASSEMBLY DETAIL  
VIEW AS VIEWED FROM SIDE



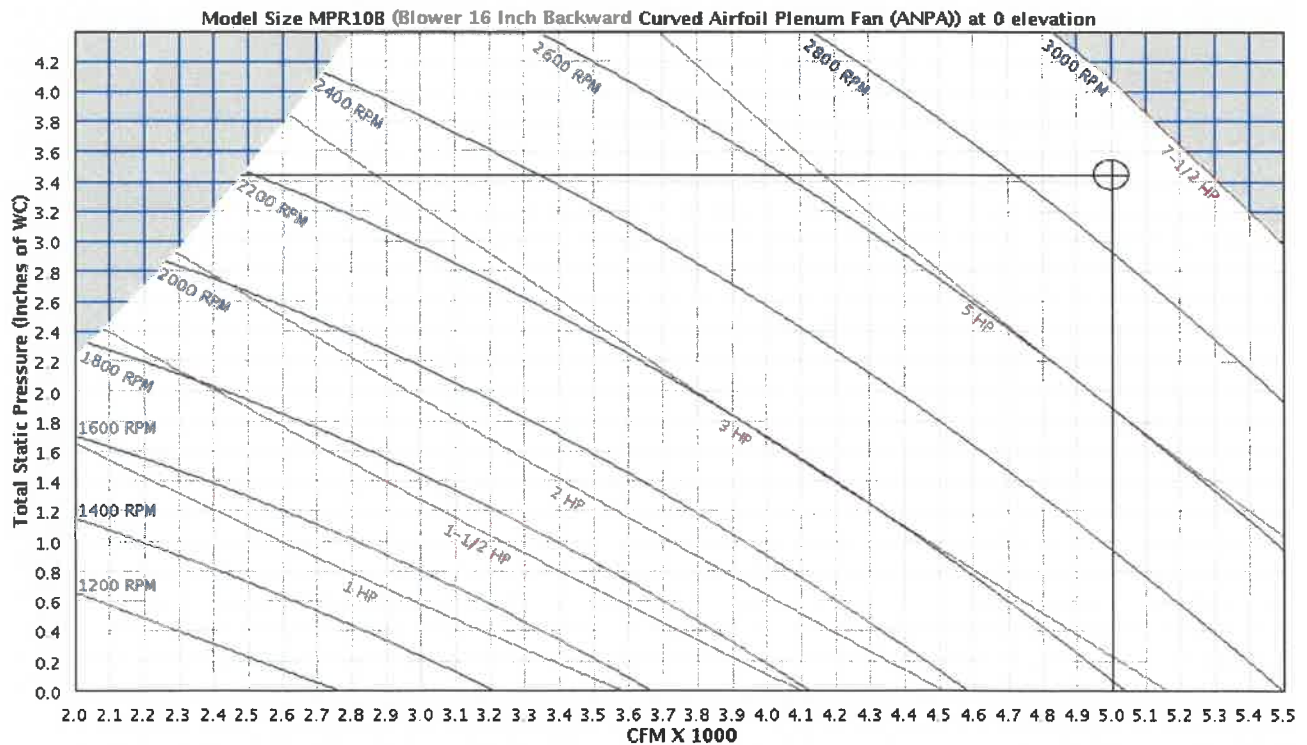
AccuSpec V4.31b

## SUPPLY BLOWER CURVE

Atherion® Commercial Packaged Ventilation and Make-up Air Units

Tag:

Model Number	MPR10BB1A1A8WA4M2HLDG3T2
Airflow (CFM)	5,000
Altitude (ft. ASL)	0-2000
External Static Pressure ("W.C.)	1.00
Total Static Pressure ("W.C.)	3.45
Blower Size x Qty - RPM	16 ANPA x 1 - 2,896 RPM
Rated Motor Size (Per Fan) - RPM	10 HP - 3600 RPM





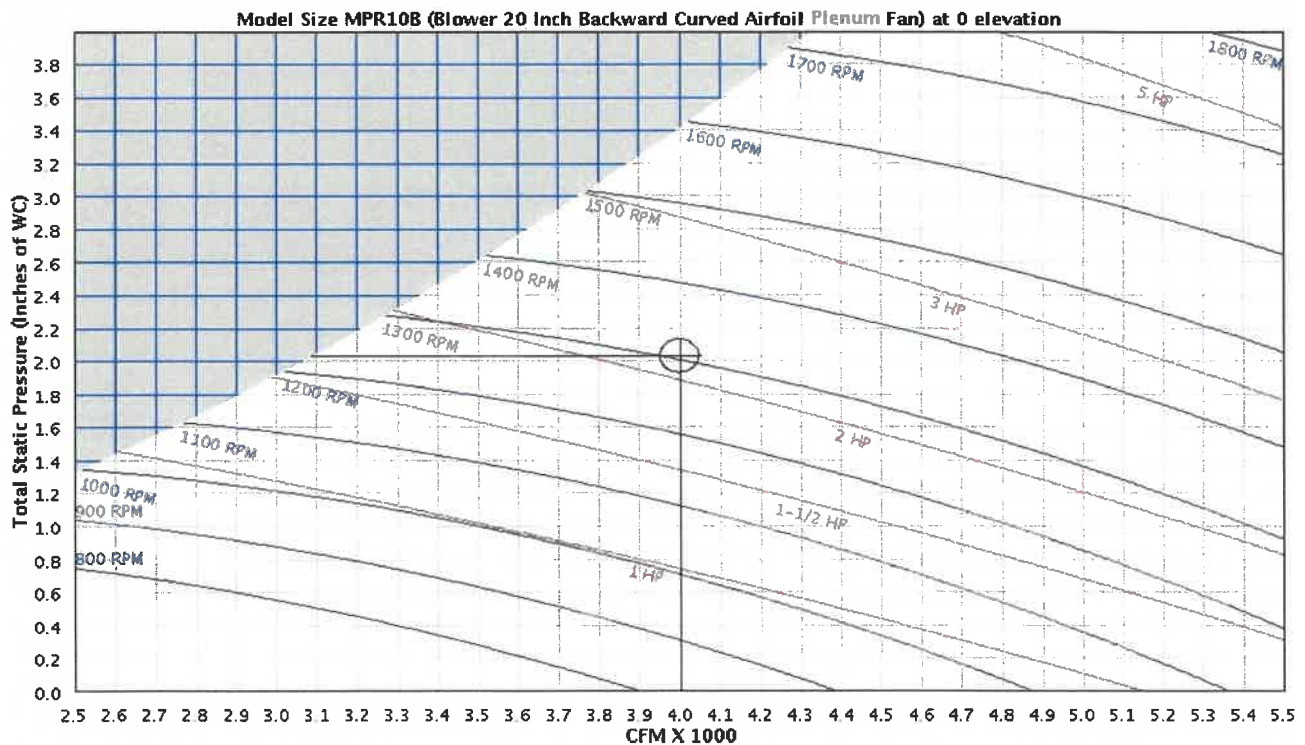
AccuSpec V4.31b

## EXHAUST BLOWER CURVE

### Atherion® Commercial Packaged Ventilation and Make-up Air Units

Tag:

Model Number	MPR10BB1A1A8WA4M2HLDG3T2
Airflow (CFM)	4,000
Altitude (ft. ASL)	0-2000
External Static Pressure ("W.C.)	1.00
Total Static Pressure ("W.C.)	2.04
Blower Size x Qty - RPM	20 x 1 - 1,304 RPM
Rated Motor Size (Per Fan) - RPM	3 HP - 1800 RPM



**SECTION 23 74 33**  
**PACKAGED, OUTDOOR, HEATING AND COOLING**  
**MAKEUP AIR-CONDITIONERS**

**SPECIFICATIONS**

**Tag:**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes rooftop heating and cooling units. Each unit shall be constructed in a horizontal configuration and shall incorporate additional product requirements as listed in the "PRODUCTS" section of this specification. If unit is intended for installation on a concrete slab, verify design requirements and construction responsibility for the slab.

**1.2 SUBMITTALS**

- A. All information in this document, as provided by Modine Manufacturing Company, is provided without representation or warranty of any kind as to the user or any other party, including, without limitation, ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, OR NON-INFRINGEMENT. To the greatest extent permitted by applicable law, Modine Manufacturing Company assumes no liability, and the user assumes all liability and risk, for the use or results from the use of this document or the information contained herein, whether as modified by the user or not. This document must be carefully reviewed by the Engineer to ensure it meets the requirements of the project and local building code(s).
- B. As Modine Manufacturing Company has a Continuous Product Improvement program, it reserves the right to change design and specifications without notice.

**1.3 QUALITY ASSURANCE**

- A. Gas-fired furnace options shall be certified in accordance with ANSI Z83.8/CSA 2.6, "Safety Standard Gas-Fired Furnaces."
- B. Units shall comply with applicable requirements in ASHRAE 62.1-2013, Section 5 - "Systems and Equipment".
- C. Units shall comply with applicable requirements in ASHRAE 90.1-2016, Section 6 - "Heating, Ventilating, and Air-Conditioning."
- D. Unit shall be safety certified by ETL in accordance with UL Standard 1995/CSA C22.2 No. 236, Safety Standard for Heating and Cooling Equipment. Unit nameplate shall include the ETL/ETL Canada listed mark.

- E. Energy recovery wheel performance shall be AHRI 1060 certified and bear the AHRI certified label. Components that are independently tested or "rated in accordance with" shall not be acceptable. Manufacturer membership in AHRI is not an acceptable substitute. Certified components must be listed as active in the AHRI Directory. ([www.ahridirectory.org](http://www.ahridirectory.org))
- F. The energy recovery wheel cassette shall be an Underwriters Laboratory UR recognized component for fire, smoke, and electrical safety and bear the UR symbol. Recognized components shall be listed in the UL directory. (<http://database.ul.com>)
- G. The energy recovery wheel cassette shall comply with NFPA 90A by virtue of UL standard 1812 and UL900 or UL723 fire test for determination of flammability and smoke density.

#### **1.4 WARRANTY**

- A. Standard Unit Warranty:
  - 1. Gas-Fired Heat Exchangers: Ten years from date of first beneficial use by buyer or any other user, within ten years from date of resale by buyer in any unchanged condition, or within 126 months from date of shipment from seller, whichever occurs first.
  - 2. Compressors: Two years from date of first beneficial use by buyer or any other user, within two years from date of resale by buyer in any unchanged condition, or within 30 months from date of shipment from seller, whichever occurs first.
  - 3. Coil Heat Exchangers, Sheet Metal: One year from date of first beneficial use by buyer or any other user, within one year from date of resale by buyer in any unchanged condition, or within 18 months from date of shipment from seller, whichever occurs first.
  - 4. All Other Parts: Two years from date of first beneficial use by buyer or any other user, within two years from date of resale by buyer in any unchanged condition, or within 30 months from date of shipment from seller, whichever occurs first.

### **PART 2 - PRODUCTS**

#### **2.1 GENERAL**

- A. Furnish and install a rooftop heating and cooling unit. Safety certified by ETL in accordance with UL Standard 1995/CSA C22.2 No. 236, Safety Standard for Heating and Cooling Equipment. Unit nameplate shall include the ETL/ETL Canada listed mark. Unit shall be fully assembled, charged, wired, and tested prior to shipment. If unit is intended for installation on a concrete slab, verify design requirements and construction responsibility for the slab.

#### **2.2 MANUFACTURERS**

- A. The basis-of-design product for the Rooftop Heating and Cooling Unit is based on the Modine Atherion® Model MPR.

## 2.3 CABINET

- A. The casing shall be designed for outdoor application with a fully weatherproof cabinet.
1. Rigging Provisions: Unit shall include lifting angles with 1" diameter holes on the base of the unit for rigging.
  2. Roof Construction: Roof shall have a standing roof seam for maximum roof rigidity and prevention of standing water and perimeter drip edges to prevent water from dripping into the access doors.
  3. Exterior Cabinet Construction: Exterior casing parts shall be 18 gauge pre-painted G90 galvanized steel with a finish capable of withstanding a minimum 2500 hour salt spray and fog atmosphere exposure in accordance with ASTM B117 test procedure.
  4. Exterior Cabinet Finish: Paint color shall be standard Modine Commercial Gray Green.
  5. Internal Cabinet Construction: Unit shall be internally insulated on all surfaces with exterior exposure, including walls, floor, and ceiling. Insulation shall be completely encased within standard 20 gauge galvanized steel liners to provide double wall construction that complies with ASHRAE 62.1 to prevent mold growth, allow easy cleaning, and protection of the insulation from the airstream and from entering the airstream.
  6. Insulation: Insulation shall be 2 inch R-8 faced fiberglass, 1-1/2 lb. density.
  7. Unit shall be designed to reduce air leakage and infiltration through the cabinet. Continuous sealing shall be included between panels and between access doors and openings to reduce air leakage. Refrigerant piping and electrical conduit through cabinet panels shall include sealing to reduce air leakage.
- B. Service and Maintenance Access: Access to items needing periodic inspection or maintenance shall be through hinged access doors.
1. Access Door Construction: Access doors shall have full length hinges, painted to match the unit color and the hinge pin is to be stainless steel to prevent corrosion and rust staining. Doors are to have full perimeter gasketing.
  2. Access Door Hardware: Hinged doors shall have recessed door handles. Doors shall be secured closed with quarter turn latches. Doors shall be secured open with mechanical door stays to prevent movement of the door from wind.

## 2.4 AIR CONTROL CONFIGURATION

- A. Unit airflow control configuration shall be fresh and return air dampers and shall include integral energy recovery exhaust.
1. Dampers: Dampers shall be constructed of extruded aluminum, hollow core, airfoil blades with rubber edge seals and aluminum end seals. Dampers shall have a maximum leakage of Class 1A (3

- CFM/sq. ft. of damper area @ 1" w.g. air pressure differential) when tested in accordance with AMCA Standard No. 500, Test Methods for Louvers, Dampers, and Shutters.
2. Actuator: Fresh and return air direct drive damper actuators shall be spring return to close when not powered.
- B. Controls: Damper controls shall be as outlined in the "CONTROLS" section.

## 2.5 REFRIGERATION SYSTEM

- A. Compressor: Single Modulating Digital Scroll with Single Stage Scroll in Tandem Arrangement (2 compressors total).
1. Modulation: Compressor set shall be capable of system capacity modulation from 12.5%-100%.
  2. Refrigerant: Unit shall be factory charged with R-410A refrigerant.
  3. Service Access: Compressor(s) shall be mounted in an isolated compartment to permit operation of the unit without affecting air flow when the compartment door is open.
  4. Vibration Isolation: Compressor(s) shall be mounted on the compressor manufacturer's recommended rubber vibration isolators to reduce transmission of vibration to the building structure.
  5. Internal Overload Protection: Compressor(s) shall include internal thermal overload protection to protect against excessive motor temperatures.
  6. Crankcase Heater: Compressor(s) shall include a crankcase heater to protect against liquid flood-back and the elimination of oil foaming on startup.
- B. Refrigerant Circuit Safety Controls: The standard refrigerant circuit safety controls include:
1. Compressor anti-short cycle delay timer (default 5 minutes, adjustable).
  2. Modulating condenser fan speed control to allow cooling system operation with outside air temperature as low as 45°F.
  3. Ambient temperature compressor lockout (default 45°F, adjustable).
  4. An airflow proving switch is monitored to ensure proper airflow before the refrigeration circuit is energized.
  5. A liquid line sight glass.
  6. Automatic reset low pressure and manual reset high pressure refrigerant controls.
  7. Schrader type valves on both the high pressure and low pressure sides.
  8. Refrigerant liquid line filter/drier.
- C. Evaporator Coil: Evaporator coil shall be a single circuit high capacity 4 row design with copper tubes and mechanically bonded aluminum fins at a spacing of 14 fins per inch. The coil shall feature vertical tube headers and galvanized steel end casings with stainless steel lower bracket.

1. Expansion Valve: Each evaporator coil circuit shall be equipped with an electronic expansion valve with evaporator coil pressure transducer for precise refrigerant control over widely varying outside air conditions. Thermal expansion valves are not permitted.
  2. Evaporator Coil Drain Pan: The coil shall include a double sloped, 316 stainless steel drain pan for positive drainage of condensate. The drain pan shall include a condensate drain pan float switch to disable the compressors if the pan is not draining properly.
- D. Hot Gas Reheat Coil: The unit shall include a hot gas reheat coil to allow the unit to have a dehumidification mode of operation.
1. Hot Gas Reheat Control: The unit shall include hot gas reheat modulating valves, electronic controller, and supply air temperature sensor for enhanced dehumidification control.
  2. Hot Gas Reheat Coil Spacing: The hot gas reheat coil shall be located no less than 6" downstream of the evaporator coil to prevent condensate re-evaporation.
- E. Condenser Coil: The air-cooled condenser shall be a Modine Parallel Flow PF™ micro-channel aluminum fin/tube condenser coil.
1. Condenser Coil Orientation: The condenser coil shall be sloped approximately 60° from horizontal to protect the coil from hail damage.
  2. Condenser Fans: The condenser section shall have vertical discharge axial flow direct drive fans with variable frequency drive for condenser head pressure control.
- F. Controls: The refrigeration system controls shall be as outlined in the "CONTROLS" section.

## 2.6 HEATING SYSTEM

- A. The unit shall have an indirect fired gas heating section.
1. The gas heat section shall consist of a single furnace.
  2. The gas heating section shall be configured for use with Natural Gas. The inlet gas pressure shall be between 8" and 14" W.C.
  3. The thermal efficiency of the section shall be a minimum of 81% for all air flow ranges.
  4. Primary Heat Exchanger: Heat exchanger shall be tubular type with 18 gauge, 409 stainless steel tubes and header.
  5. The heat exchanger shall be certified to withstand 5.0" W.C. external static pressure without burner flame disturbance.
  6. The burners shall be in-shot type, directly firing each heat exchanger tube individually and designed for good lighting characteristics without noise of extinction.
  7. The unit shall be power exhausted and tested to insure proper ignition when the unit is subjected to 40 mile per hour wind velocities. The unit shall also include a factory mounted differential pressure switch designed to prevent main burner ignition until positive venting has been proven.



8. The solid state ignition system shall directly light the gas by means of a direct spark igniter each time on a call for heat. The ignition control shall be 100% shut-off with multi-retry and lockout.
  9. The heating section shall be provided with electronic modulating gas control valve(s), main combination gas valves/regulators, ignition controllers, and automatic reset high limit switches. An airflow proving switch is included to ensure proper airflow before the heating circuit is energized.
  10. The gas controls can modulate the system gas flow between 20-100% of full fire.
  11. Gas supply piping can be brought in through the unit base for through-the-curb piping, or in the outside cabinet wall for across-the-roof piping.
- B. The heating section controls shall be as outlined in the "CONTROLS" section.

## **2.7 SUPPLY AIR FAN AND MOTOR**

- A. Direct Drive Supply Air Blower: The fan shall be an un-housed 16 Inch Backward Curved Airfoil Plenum Fan (ANPA) to cover specified airflow and total static pressure drop. The blower is to be directly connected to and supported by the motor shaft.
- B. Blower Motor: Motor shall be premium efficiency to meet the Energy Independence and Security Act requirements.
1. Motor Type: Motor shall be Open Drip Proof (ODP).
  2. Motor Speed: Motor shall have a synchronous speed of 3600 RPM.
  3. Inverter Duty: Motor shall be inverter duty rated.
  4. Motor Bearings: Bearings shall be ball bearings rated for 200,000 hours. Motors not marked as having permanently lubricated bearings will include grease fittings for periodic lubrication.
- C. Blower and motor assembly shall be dynamically balanced. The entire blower and motor assembly shall be mounted on rubber-in-shear vibration isolators.
- D. Maintenance: The blower and motor assembly is to be self-contained for service or removal from the cabinet.
- E. Supply air fan controls shall be as outlined in the "CONTROLS" section.

## **2.8 FILTERS**

- A. Primary Filters: The unit shall include 2" thick primary filters located upstream of the refrigeration system evaporator coil to filter fresh and return air.
1. Filter Rating: Filters shall be pleated disposable filters with a Minimum Efficiency Reporting Value of MERV 10 per ASHRAE standard 52.2.

- B. Dirty Filter Pressure Switch: The unit shall include a differential pressure switch wired to the main unit microprocessor controller to warn when the filters may be dirty based on a preset maximum pressure drop.

## 2.9 POWER EXHAUST

- A. The unit shall include power exhaust to remove relatively clean air from the building. Maximum continuous operating exhaust temperature is 104°F.
- B. Installation: Power exhaust with energy recovery shall be integral within the packaged rooftop unit casing.
- C. The casing shall be designed for outdoor application with a fully weatherproof cabinet.
  - 1. Roof Construction: Roof shall have a standing roof seam for maximum roof rigidity and prevention of standing water and perimeter drip edges to prevent water from dripping into the access doors.
  - 2. Exterior Cabinet Construction: Exterior casing parts shall be 18 gauge pre-painted G90 galvanized steel with a urethane primer and polyester topcoat finish capable of withstanding a minimum 2500 hour salt spray and fog atmosphere exposure in accordance with ASTM B117 test procedure.
  - 3. Exterior Cabinet Finish: Paint color shall be standard Modine Commercial Gray Green.
  - 4. Internal Cabinet Construction: Unit shall be internally insulated on all surfaces with exterior exposure, including walls, floor, and ceiling. Insulation shall be completely encased within standard 20 gauge galvanized steel liners to provide double wall construction that complies with ASHRAE 62.1 to prevent mold growth, allow easy cleaning, and protection of the insulation from the airstream and from entering the airstream.
  - 5. Insulation: Insulation shall be 2" faced fiberglass, 1-1/2 lb. density.
  - 6. Unit shall be designed to reduce air leakage and infiltration through the cabinet. Continuous sealing shall be included between panels and between access doors and openings to reduce air leakage. Electrical conduit through cabinet panels shall include sealing to reduce air leakage.
  - 7. Service and Maintenance Access: Access to items needing periodic inspection or maintenance shall be through hinged access doors.
  - 8. Access Door Construction: Access doors shall have full length hinges, painted to match the unit color and the hinge pin is to be stainless steel to prevent corrosion and rust staining. Doors are to have full perimeter gasketing.
  - 9. Access Door Hardware: Hinged doors shall have recessed door handles. Doors shall be secured closed with quarter turn latches. Doors shall be secured open with mechanical door stays to prevent movement of the door from wind.
- D. The energy recovery section shall feature a rotary energy recovery wheel mounted within a rigid, non-insulated, corrosion resistant G90 galvanized steel framed module containing the wheel drive motor, drive belt, wheel

seals, and maintenance free bearings. The module shall be able to slide out for servicing.

1. Wheel bearings shall be permanently sealed and selected for a minimum 30 year L-10 life of 400,000 hours. Bearings requiring external grease fittings or periodic maintenance are not acceptable.
  2. All diameter and perimeter seals shall be provided as part of the assembly. Seals shall be non-contact nylon pile brush seal orientated in a labyrinth style configuration. Diameter seals shall be fully adjustable and easily accessible and set to within 0.05 inch of the rotor surface. Perimeter seals shall be permanently mounted to the wheel rim and not require adjustment. Seals that mount to the frame are not acceptable.
  3. Wheel drive belt shall be linked belt type without the need for external adjustment.
  4. The energy recovery wheel shall be made of a corrosion resistant aluminum alloy that is composed of alternating corrugated and flat, continuously wound layers of uniform widths that guarantees laminar air flow, and low static pressure loss.
  5. The wheel shall be a Total Energy Recovery type that transfers both sensible and latent energy. All media surfaces shall be coated with a non-migrating solid absorbent layer prior to being formed into the honeycomb media structure to insure that all surfaces are coated and adequate latent capacity is provided. The desiccant shall be inorganic and specifically developed for the selective adsorption of water vapor. The desiccant shall utilize a 3Å (angstrom) molecular certified by the manufacturer and shall allow high capacity and speed of adsorption and desorption without forming odors. Desiccant shall be non-migrating and shall not dissolve or deliquesce in the presence of water or high humidity.
  6. Wheel energy recovery effectiveness shall be a minimum of 50% at rated conditions, as defined in ASHRAE 90.1 - Energy Standard for Buildings Except Low-Rise Residential Buildings.
- E. The ERM shall include economizer wheel bypass to reduce fan energy usage when energy recovery is not required.
- F. The media shall be cleanable by vacuuming the media surface, without degrading the latent recovery. Dry particles up to 800 microns shall pass freely through the media.
- G. The ERM shall have a dedicated microprocessor controller that is networked to the packaged rooftop unit microprocessor controller.
- H. Exhaust Air Fan: The fan shall be a 20 Inch Backward Curved Airfoil Plenum Fan to cover specified airflow and total static pressure drop.
1. Fan Drive: The fan is to be belt driven by an adjustable V-belt drive with a minimum rating of 140% of the motor nameplate brake horsepower when the adjustable pulley is at the minimum RPM. The V-belt drive is to include an auto belt tensioner.
  2. Fan Bearings: Fan(s) shall feature permanently lubricated bearings.

3. Fan Motor(s): Motor shall be premium efficiency to meet the Energy Independence and Security Act requirements.
  4. Motor Type: Motor shall be Open Drip Proof (ODP).
  5. Motor Speed: Motor(s) shall have a synchronous speed of 1800 RPM.
  6. Inverter Duty: Motor(s) shall be inverter duty rated.
  7. Fan Motor Bearings: Bearings shall be ball bearings rated for 200,000 hours. Motors not marked as having permanently lubricated bearings will include grease fittings for periodic lubrication.
  8. Fans, drives, and motors shall be dynamically balanced.
- I. The module shall include gravity exhaust air relief dampers that are sized for 100% relief of the power exhaust airflow capacity. The exhaust outlet shall include a rainhood and birdscreen.
- J. The following ERM options shall be included:
1. The ERM shall include a field assembled and installed inlet rainhood and a factory mounted inlet birdscreen.
  2. Inlet Air Filters: The ERM shall include 2" MERV 10 disposable pleated filters upstream of the wheel on the inlet air side.
  3. Inlet Air Filter Pressure Switch: The ERM shall include a differential pressure switch wired to the microprocessor controller to warn when the inlet air filters may be dirty based on a preset maximum pressure drop.
  4. Wheel Preheat: The ERM shall include an electric pre-heat module to prevent frost formation on the wheel when the outside air temperature falls below the frost control point. The control shall be single stage.
- K. Controls: The exhaust and energy recovery controls shall be as outlined in the "CONTROLS" section.

## 2.10 ELECTRICAL

- A. Control Panel: The unit shall have an electrical control center where all high and low voltage connections are made.
1. Power Connections: Unit shall have Single Point Power connections consisting of a single set of 3-phase power lugs to which the power feed conductors from a single power source are landed.
  2. Wire Management: All wiring is to be run in conduit that is located between the unit ceiling liner and roof casing with drops from the ceiling to keep wires clear of other internal components, prevent accidental damage to wiring during service, and improve cleanliness of unit interior.
  3. Wiring Diagram: The unit shall have a job specific wiring diagram affixed to the interior of the control compartment access door.
  4. Factory Installed Deadfront Disconnect Switch: Unit shall be provided with a factory installed and wired, dead-front, non-fused disconnect switch.

- B. Access Door Interlock Switch: The unit shall include a fan door switch that disables the unit supply fan operation if the door is opened.
- C. Convenience Outlet: Unit shall be provided with a factory installed 115 volt, 15 amp ground fault service receptacle mounted on the exterior of the unit casing. The outlet requires a separate power supply by others.

## 2.11 CONTROLS

- A. Control Panel: All components located in the panel shall be clearly marked for easy identification. All terminal blocks and wires shall be individually numbered. All electrical wires in the control panel shall be run in an enclosed raceway.
- B. Microprocessor Controller: All units shall include a Carel programmable microprocessor controller mounted in a controls compartment outside the airstream. The controller will be programmed with the Modine Controls System® to operate the unit in an energy efficient manner using pre-engineered control strategies. The controller will monitor output from sensors within each unit subsystem and automatically adjust unit operating parameters to maintain programmed setpoints and strategies.
  - 1. The controller shall contain LED's and/or LCD interface to indicate the power status, communications status, and fault conditions that arise during operation. Fault conditions indicated include but are not limited to supply air sensor failure, outdoor air sensor failure, space sensor failure, mechanical cooling failure, mechanical heating failure, low supply temperature alarm, high supply temperature alarm, and control temperature cooling or heating failure. The controller shall also monitor outside temperature for heating and cooling circuit lockout during mild conditions. If temperatures fall below the low supply temp alarm point, the unit shall be shut down.
  - 2. The Carel controller shall be capable of independent stand-alone operation with field configuration, setpoint adjustment, and scheduling accomplished at the unit with an integral user interface on the controller that includes a backlit LCD display, keypad, and status LEDs to allow the programming of the control parameters (set point, differential band, alarm thresholds) and basic functions by the user (ON/OFF and display of the controlled values).
  - 3. The unit shall be provided with a Carel space mounted digital module, model pAD, which includes a temperature and humidity sensor and backlit LCD display to review unit setpoints and unit output and operating conditions. The pAD module does not allow remote programming of the control parameters, but does allow temporary override of the unit. The device shall be field wired to the main unit controller via the Carel pLAN network using shielded cable by others.
  - 4. The controller shall have a full calendar schedule for occupied, unoccupied, and holiday scheduling.
  - 5. The controller shall retain all programmed values in non-volatile memory in the event of a power failure.

- C. Damper Controls: The damper controls subsystem shall be controlled by the microprocessor controller as follows:
1. The damper control shall be fully modulating with economizer control based on dual point enthalpy sensing comparing indoor against outdoor enthalpy. The position can be overridden based on the reading from a field installed CO2 sensor to proportionately increase the ventilation rate when the level of CO2 rises over a predetermined set point. The shipped loose sensor shall have the capability of measuring CO2 levels from 0 to 2,000 parts per million (ppm) with an accuracy of  $\pm 40 \text{ ppm CO}_2 \pm 3.0\%$  of the reading.
  2. The fresh and return air dampers shall be independently controlled by separate direct mounted damper actuator motors. The damper actuators shall work opposite of one another so that the mixed damper position always totals 100%. The exception is when the unit is in the "OFF" mode of operation, at which point both dampers will be 100% closed to both the outside air and return air.
- D. Supply Fan Controls: The supply fan controls subsystem shall be controlled by the microprocessor controller as follows:
1. The supply fan shall be single speed with variable frequency drive. The fan speed can be adjusted manually, within design limits, from within the Modine Control System.
  2. The variable frequency drive will operate the supply fan at a reduced speed during energy recovery wheel economizer by-pass operation. The reduction in fan speed during economizer bypass mode is to prevent a significant increase in airflow from the reduction in system static pressure when the supply air by-passes the energy recovery wheel.
- E. Exhaust Fan Controls: The exhaust fan controls subsystem shall be controlled by the microprocessor controller as follows:
1. The exhaust fan shall be single speed with variable frequency drive. The fan speed can be adjusted manually, within design limits, from within the Modine Control System.
  2. The variable frequency drive will operate the exhaust fan at a reduced speed during energy recovery wheel economizer by-pass operation. The reduction in fan speed during economizer bypass mode is to prevent a significant increase in airflow from the reduction in system static pressure when the exhaust air by-passes the energy recovery wheel.
- F. Temperature Controls: The temperature controls subsystem shall be controlled by the microprocessor controller as follows:
1. Supply Air Temperature Control with Room and Outside Temperature Reset – The Carrier controller shall monitor and control the supply air temperature to maintain the desired setpoint. Additional room and outside air temperature sensors are used and if the temperature does not meet the programmed setpoint for either of those sensors, the supply air temperature setpoint is lowered to increase cooling or raised to increase heating.
  2. Dehumidification Control based on Room Humidity and Mixed Air Dew Point – The Carrier controller shall monitor both a room mounted temperature/humidity sensor and mixed air

temperature/humidity sensors and enter dehumidification mode if the space humidity and/or mixed air dew point exceeds the desired setpoints. In dehumidification mode, the Carel controller shall monitor an evaporator coil suction line pressure sensor and calculate corresponding coil temperature. The controller shall then modulate the digital scroll compressor to maintain the desired coil temperature, based on suction line pressure, necessary to increase latent heat (moisture) removal. The hot gas reheat option is highly recommended to avoid overcooling the space.

3. When equipped with the hot gas reheat option, the Carel controller shall monitor a factory supplied, field installed supply air temperature sensor and control the modulating hot gas reheat valve to vary the flow of hot condenser gas through the reheat coil to maintain the desired supply air temperature setpoint and prevent temperature swings and overcooling of the space during dehumidification.
  4. The supply air temperature sensor shall be shipped loose for field installation in the ductwork, downstream from the unit discharge to ensure sensing of properly mixed airflow. The sensor shall be 18" fixed length.
  5. The Carel controller shall monitor the outside air temperature sensor and lockout each compressor at a preset adjustable temperature setpoint.
- G. Energy Recovery Controls: The energy recovery controls subsystem shall be controlled by the microprocessor controller as follows:
1. The energy recovery module wheel operation is controlled to rotate when energy recovery is maximized without causing a rise in latent loading to the mechanical cooling equipment.
  2. Wheel Speed Control: The energy recovery wheel shall be single speed contactor, on/off control.
  3. Economizer Bypass: The module shall include an economizer wheel bypass damper. To maximize energy recovery effectiveness, the energy recovery module bypass damper is closed when the wheel is rotating and to minimize supply fan energy consumption, the damper is open when the wheel is not rotating.
  4. Economizer Bypass Jog Mode: The module shall include energy recovery wheel start-stop-jog control to periodically rotate the wheel position during economizer mode to avoid wheel contamination from the airstream.
  5. Wheel Defrost Mode: The module shall include energy recovery wheel defrost control to periodically stop the wheel rotation to allow the warm exhaust air to defrost the wheel.
  6. Wheel Preheat: The module shall include an optional electric preheat element. The control shall cycle the preheat element on or off based on the outside air temperature and indoor air temperature and relative humidity to ensure the temperature to the wheel exceeds the frost threshold setpoint.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Prior to start of installation, examine area and conditions to verify correct location for compliance with installation tolerances and other conditions affecting unit performance. See unit Installation & Service Manual.
- B. Examine roughing-in of plumbing, electrical and HVAC services to verify actual location and compliance with unit requirements. See unit Installation & Service Manual.
- C. Proceed with installation only after all unsatisfactory conditions have been corrected.

### **3.2 INSTALLATION**

- A. Installation shall be accomplished in accordance with these written specifications, project drawings, manufacturer's installation instructions as documented in manufacturer's Installation & Service Manual, Best Practices and all applicable building codes.

### **3.3 CONNECTIONS**

- A. In all cases, industry Best Practices shall be incorporated. Connections are to be made subject to the installation requirements shown above.
- B. Piping installation requirements are specified in Division 22 (Plumbing). Drawings indicate general arrangement of piping, fittings and specialties.
- C. Duct installation and connection requirements are specified in Division 23 (Heating Ventilating and Air Conditioning).
- D. Electrical installation requirements are specified in Division 26 (Electrical).

### **3.4 FIELD QUALITY CONTROL**

- A. Refer to section 01 40 00 "Quality Requirements" for additional requirements.

### **3.5 SYSTEM STARTUP**

- A. Start-up units in accordance with manufacturer's start-up instructions. Test controls and demonstrate compliance with requirements. Replace damaged or malfunctioning controls and equipment.



#### 4. 500 Market Street, Unit 2A - Recommended Approval

**Background:** The applicant is seeking approval for proposed screening to surround HVAC Condensers (the design is to match the design of existing screening at Nobles Island).

**Staff Comment:** Recommended Approval

#### **Stipulations:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LUHD-288****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Mar 11, 2021**Applicant**

Dean Mello  
dmello@onpointccg.com  
1 New Hampshire Avenue  
Suite 125  
Portsmouth, NH - New Hampshire 03801  
603-498-5956

**Location**

500 MARKET ST Unit 2A  
Unit 2A  
Portsmouth, NH 03801

**Owner:**

PMC REALTY TRUST & CARROLL JANETTE M  
TRUSTEE  
500 MARKET ST STE 2C PORTSMOUTH, NH  
03801

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

We are looking for administrative approval as a follow up to our initial HDC Approval Meeting on the 2nd of December 2020. The board had requested we provide additional information on the proposed screening of the new HVAC Condensers. We are planning to match that of the rest of Noble Island behind Building #2. We will provide a (3) sided screening so that the unit is screened from the neighbors and from Market Street as discussed.

**Description of Proposed Work (Planning Staff)**

--

**Project Representatives**



Noble Properties, LLC  
500 Market Street – Building 2  
HDC Administrative Follow Up  
March 11, 2021

As a follow up to our initial HDC meeting that was held on December 2<sup>nd</sup> 2020, we are now presenting the information as discussed for the condenser screening for our building. Below are some examples of the existing screening behind building #2 as well as some photos of the same screening behind some of the other buildings on Noble Island. The intent will be to match that of the rest of Noble Island. The screens will be three sided so that they screen the units from our neighbors behind us as well as from Market Street. As you will see in the photo of the existing screen behind building #2 as it sits today is only two sided.

Existing Screening Behind Building #2 500 Market Street



### Screening Examples Behind Other Buildings on Noble Island





12/7/2020



## CITY OF PORTSMOUTH

Planning Department  
1 Junkins Avenue  
Portsmouth, New Hampshire  
03801  
(603) 610-7216

### HISTORIC DISTRICT COMMISSION

December 7, 2020

Nobles Island Condominium Association  
Attn: Michael Street, Property Manager  
11 Court Street, Suite 100  
Exeter, NH 03833

**RE: 500 Market Street, Building #2**

Dear Owner:

The Historic District Commission, at its regularly scheduled meeting of **Wednesday, December 02, 2020**, considered your application for renovations to existing structure (construct ADA compliant front entrance) as per plans on file in the Planning Department.

Said property is shown on Assessor Map 120, Lot 2 and lies within the Character District 4-L1 (CD4-L1) and Historic Districts. As a result of said consideration, the Commission voted to **grant** the Certificate of Approval with the following stipulation:

1. The applicant shall submit the louver screening design as an Administrative Approval.

#### **Findings of Fact**

##### A. Purpose and Intent

The proposed application meets the following objective(s) of the Historic District (as provided in Section 10.631.20 of the Zoning Ordinance):

- Preserve the integrity of the District.
- Maintain the special character of the District.

12/7/2020

B. Review Criteria

The proposed application also meets the following review criteria of the Historic District (as provided in Section 10.635.70 of the Zoning Ordinance):

-Compatibility of design with surrounding properties.

The Commission's decision may be appealed up to thirty (30) days after the vote. Any action taken by the applicant pursuant to the Commission's decision during this appeal period shall be at the applicant's risk. Please contact the Planning Department for more details about the appeals process.

Approvals may also be required from other City Committees or Boards. Once all required approvals have been received, applicant is responsible for applying for and securing a building permit from the Inspection Department prior to starting any project work.

This approval shall expire unless a building permit is issued within a period of one (1) year from the date granted by the Historic District Commission unless an extension is granted by the Commission in accordance with Section 10.636.70 of the Zoning Ordinance.

*Please note that any changes or modifications to this application require review and approval from the Commission prior to implementation and additional fees may apply.*

The minutes and audio recording of this meeting are available by contacting the Planning Department.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Nick", is written over a horizontal line.

Nicholas J. Cracknell, AICP, Principal Planner  
for Vincent Lombardi, Chairman of the Historic District Commission

cc: Robert Marsilia, Chief Building Inspector  
Rosann Maurice-Lentz, City Assessor

Dean Mello, Applicant  
Noble Properties, LLC, Perspective Owner

November 4, 2020

Portsmouth Planning Department  
Portsmouth City Hall  
1 Junkins Ave  
Portsmouth, NH 03801

Re: Permit and Approval Efforts at 500 Market Street, Units 2A, 2B & 2C, Portsmouth, NH 03801

Dear Whom it May Concern:

This letter serves as written permission from the current owners, PMC Realty Trust, for the potential buyers, Noble Properties LLC, to seek approvals from the City of Portsmouth City for a special exemption permit, approvals from the City of Portsmouth's Historic District Commission for the proposed alterations to the property, and any other permits and approvals needed for their use of the property located at 500 Market Street, Units 2A, 2B & 2C, Portsmouth, NH 03801.

Sincerely,

A handwritten signature in cursive script that reads "Janette Carroll, Trustee". The signature is written in dark ink and is positioned above the printed name and title.

Janette Carroll  
PMC Realty Trust





Property Management  
Trusted. Seasoned. Leaders

November 24, 2020

**Subject: Dean Mello Building 2 ramp and condenser approval**

Dear Mr. Mello,

Thank you for submitting the enclosed revised design plans dated 11/20/20 from Market Square Architects following Board of Director feedback at the Board Meeting on Friday November 20, 2020. The Nobles Island Condo Association Board of Directors have reviewed these revised plans and approve the ramp installation as designed.

The Board of Directors also approves of the replacement of the two condensers shown in the Market Square design plans. The Board requests replacement of the existing corral and the installation of a corral around the condenser that does not already have one. The corral needs to be constructed in like-kind and painted to match all other corrals around the property.

If you have any questions, please do not hesitate to contact me at (603) 778-6300 or [michaels@cpmanagement.com](mailto:michaels@cpmanagement.com).

On Behalf of the Nobles Island Board of Directors,

Michael Street, AMS, CMCA  
Property Manager  
CPManagement, Inc.

PERSPECTIVE VIEW:



AERIAL SITE PLANS:



GENERAL PROJECT DESCRIPTION:

THIS PROJECT CONSISTS OF A MODIFICATION TO THE EXISTING ENTRY TO ONE BUILDING LOCATED AT 500 MARKET STREET, PORTSMOUTH, NH IN NOBLES ISLAND TO MAKE ENTRY ACCESSIBLE.

THE MODIFICATIONS INCLUDE:

- ◊ REMOVAL OF EXISTING STAIRS ELEVATION, & PLAN EAST
- ◊ THE ADDITION OF A RAILING, BRICK SHELF, AND PILLAR TO MATCH EXISTING
- ◊ THE ADDITION OF AN ACCESSIBLE RAMP IN BRICK TO MATCH EXISTING (NO ALTERATION TO EXISTING CURBING).
- ◊ THE ADDITION OF NEW STAIRS TO MAINTAIN 2ND ENTRY OPTION PLAN EAST.
- ◊ REPLACEMENT/ SUPPLEMENTING OF EXISTING CONDENSERS, TO BE INSTALLED AND SCREENED IN KIND.

MARKET SQUARE ARCHITECTS  
104 Congress St., STE 203  
Portsmouth, NH 03801  
603.433.9200  
info@market-square-architects.com

HISTORIC DISTRICT COMMISSION/  
WORKSESSION/  
PUBLIC HEARING  
DECEMBER 2020

NOBLE PROPERTIES, LLC.  
500 MARKET ST.  
PORTSMOUTH, NH

Revisions	Description	Date

SCALE

DRAWN BY: CJP  
CHECKED BY: ALW  
PROJECT NO.: 2000076  
DATE: 11/20/20

11/20/2020 11:22:25 AM

COVER SHEET

CS

© 2016 Market Square Architects



EXISTING/CURRENT SOUTH ELEVATION FROM ACROSS PARKING LOT



VIEW FROM WEST SIDE OF PROPOSED RAMP TO EAST SIDE OF EXISTING/CURRENT BUILDINGS IN COMPLEX



EXISTING/CURRENT SOUTH ELEVATION



VIEW TOWARDS MARKET STREET



VIEW FROM CURRENT EAST STAIR ENTRY TO EXISTING/CURRENT BUILDING



VIEW FROM PROPOSED RAMP ENTRY TO EXISTING/CURRENT BUILDING

MARKET SQUARE ARCHITECTS  
104 Congress St., 2nd Floor  
Portland, ME 04101  
Tel: 207.858.0000  
info@market-square-architects.com

HISTORIC DISTRICT COMMISSION/WORKSESSION/  
PUBLIC HEARING  
DECEMBER 2020

NOBLE PROPERTIES, LLC.  
500 MARKET ST.  
PORTSMOUTH, NH

Revisions	Description	Date

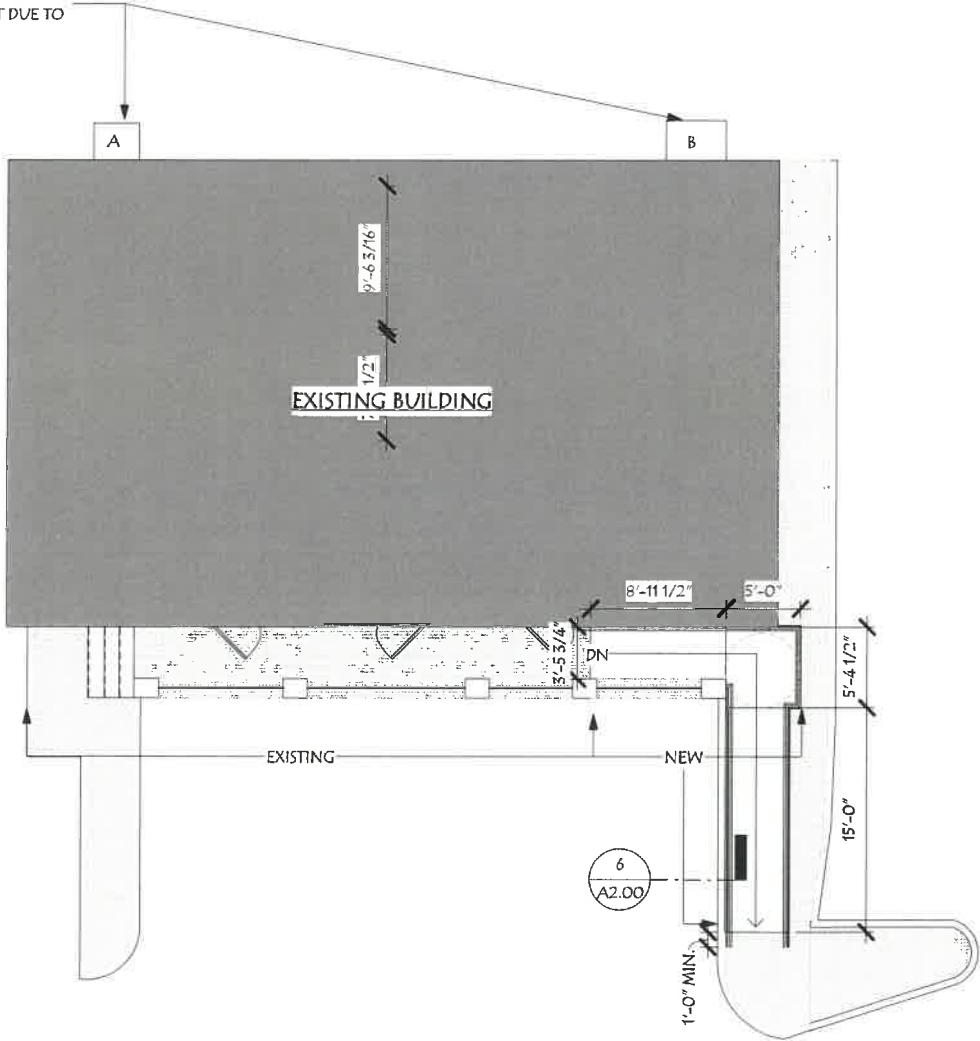
SCALE	DRAWN BY:	CIP	CHECKED BY:	ALW	PROJECT NO.:	2020076	DATE:	11/20/20
TITLE: EXISTING CONTEXT	1	2016 Market Square Architects 11/20/2020 11:42:20 AM						





EXISTING/CURRENT CONDENSER LOCATIONS  
TO BE POSSIBLY REPLACED, AND SCREENED IN KIND.

EXISTING CONDENSERS  
REQUIRING POSSIBLE  
REPLACEMENT DUE TO  
AGE



1 OVERALL PLAN - 1ST FLOOR W/ RAMP HDC  
1/8" = 1'-0"



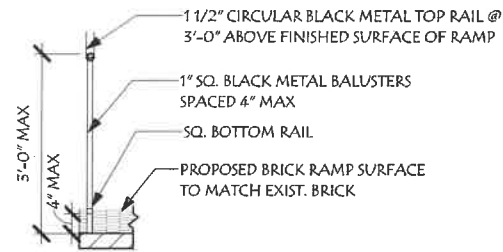
HISTORIC  
DISTRICT  
COMMISSION/  
WORKSESSION/  
PUBLIC  
HEARING  
DECEMBER 2020

NOBLE PROPERTIES, LLC.  
500 MARKET ST.  
PORTSMOUTH, NH

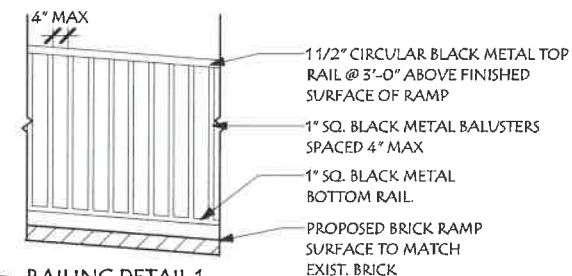
Revisions #	Description	Date

SCALE 1/8" = 1'-0"	DATE 11/20/20
DRAWN BY CJP	PROJECT NO. 2020076
CHECKED BY ALW	DATE 11/20/20 11:42:30 AM

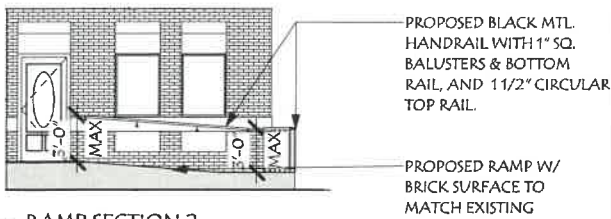
TITLE PLAN	A1.00
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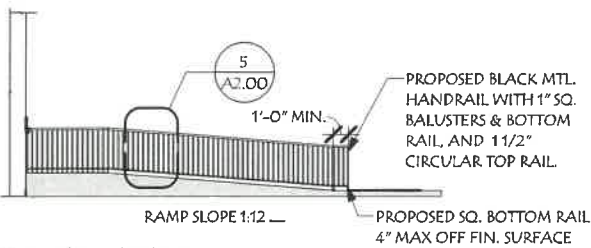
6 RAILING DETAIL 2  
1/2" = 1'-0"



5 RAILING DETAIL 1  
1/2" = 1'-0"



4 RAMP SECTION 2  
1/8" = 1'-0"



3 RAMP SECTION 1  
1/8" = 1'-0"



2 FRONT PERSPECTIVE  
N.T.S



1 South  
1/8" = 1'-0"

NOTE: ALL PROPOSED  
NEW BRICK TO  
MATCH EXISTING



HISTORIC  
DISTRICT  
COMMISSION/  
WORKSESSION/  
PUBLIC  
HEARING  
DECEMBER 2020

NOBLE PROPERTIES, LLC.  
500 MARKET ST.  
PORTSMOUTH, NH

Revision #	Description	Date

As indicated	CIP	ALW	2020076	11/20/20
SCALE:	DRAWN BY:	CHECKED BY:	PROJECT NO.:	DATE:

TITLE	SCALE
BUILDING ELEV., SECTIONS & DETAILS	A2.00

11/20/2020 11:42:28 AM  
© 2016 Market Square Architects

## 5. 229 Pleasant Street, Unit#2 - Recommended Approval

**Background:** The applicant is seeking approval for the installation of mechanical equipment (HVAC Condenser) with screening.

**Staff Comment:** Recommended Approval

### **Stipulations:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LUHD-289****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Mar 11, 2021**Applicant**

Hart Plumbing & Heating, Inc.  
hartplumbing@comcast.net  
PO Box 687  
Portsmouth, NH 03802-0687  
603-431-8688

**Location**

229 PLEASANT ST Unit 2  
Unit 2  
Portsmouth, NH 03801

**Owner:**

BRODE ALEXIS K  
229 PLEASANT ST UNIT #2 PORTSMOUTH,  
NH 03801

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

Install mini splits

**Description of Proposed Work (Planning Staff)**

--

**Project Representatives****Relationship to Project**

Owner

**If you selected "Other", please state relationship to project.**





P.O. BOX 687 • Portsmouth, NH 03802-0687  
(603) 431-8688

October 30, 2020

Alexis Brode  
229 Pleasant St. Unit 2  
Portsmouth, NH 03801

RE: Mini Split Quote

Dear Alexis:

We propose to furnish and install the following mini split system:

- LG LAM127HVP Picture frame head for living room
- LG MLMN079HUT head for master bedroom
- LG LSN120HSV5 head for office area
- Line sets to be run up the side of the building and condenser to be located on left side of building (Line set covering to be tan)

**TOTAL QUOTE:**

**\$ 12,750.00**

**NOTES:**

1. Our electrician gave us a budget price of \$800.00 for power wiring (not included in our quote)
2. Approval needed by Condominium Association and Historic District Office
3. LG has a full 12-year warranty on all parts (Being an LG Excellence contractor)

**OPTION:**

- To run gas to existing fireplace place on second floor, pipe to be run along side of line set covering

**TOTAL QUOTE:**

**\$ 2,500.00**


**NOTE: Chimney will need to be inspected before gas line is run**

*Pulled Permit 11/3/20  
Uploaded GTS calc &  
HEAT LOSS to permit  
11-12-20*

**Terms and Conditions:**

- All parts and labor, as specified in this proposal, are covered under warranty by Hart Plumbing and Heating, Inc. for a period of (1) one year. All work will be completed in a professional and workman like manner.
- This proposal is only good for thirty (30) days and a signed and dated copy must be returned to Hart Plumbing & Heating for this proposal to be considered valid. We reserve the right to withdraw this proposal any time prior to acceptance.
- If payment in full is not received within 10 days of the date of the invoices, interest will accrue at the rate of 1.5% per month on the unpaid balance. All accounts will be submitted to collections if payment has not been received sixty (60) days following invoicing, and customer agrees that they shall be responsible for all costs of collections including, but not limited to, attorney's fees and cost.

All proposals must be signed, dated and returned to Hart Plumbing & Heating, Inc. in order to be considered valid.

Authorized By:   
Robert C. Hart Jr., President

Date: 10/30/20

Accepted By:   
Customer

Date: 11/2/20

**Haven White Condo Association Meeting Minutes**  
**October 31, 2020 – 10:00 AM**  
(recorded by Brigitte Bailey)

Present on Zoom:

Briggs Bailey, Alexis Brode, Donald Koleman, Irv Canner, Vickie Canner, Judith Castle, Bill Castle.

**Bylaws**

The purpose of the meeting was to vote on the revised bylaws, now brought into compliance with current NH laws by the law firm of Shaines & McEachern.

After Irv called the meeting to order, we proposed 2 more revisions:

1. Vickie called our attention to the gendered language describing officers on p. 11. We will ask the law firm to update this language to current practice, which is to render the language gender neutral. However, if the firm insists on being paid to do so, we will withdraw that request.
2. The document says that our budget cycle is Jan 1 to Dec 31. We will request that it be changed to July 1 to June 31, as that is our practice, one that works for our association.

Briggs moved that we accept the bylaws as amended (that is, with the budget cycle dates amended).

Motion passed.

Briggs, as secretary, will follow through with Shaines & McEachern.

**Repairs and renovation plans**

Briggs mentioned that the Palladian window on the landing of the shared staircase has developed 2 problems: a window pane is pulling loose, and the woodwork over one of the window sections leaks considerably in heavy rains. She will contact Mike Goodwin for suggestions for people to do this work—and, finally, the minor roof leak—and get estimates.

Vickie mentioned that there is some wood rot in a window frame (I think) in #4, but this can wait until next year.

Alexis wants to improve her condo unit in 2 ways: by adding the same type of AC the Castles now have (contractor will comply with Historic District regulations) and by installing a gas fireplace. Bill asked if there would be plantings to screen the AC unit; yes, there will be plantings. The Castles and Cannors gave advice on their experiences with installing gas fireplaces in units 1 and 4. Everyone was fine with Alexis's moving ahead with these plans.

We all agreed that the brick sidewalk repairs at #4 were well done.

**Grounds**

Irv said that Mike Tappan, who will plow the snow this year, will also shovel around each entry way, will shovel the path to the trash bins, and will salt walkways. Pricing depends on depth of snow. After the meeting Vickie sent us all Mike's contact information.

Bill said that the gardeners will return for further fall clean up and that they are aware of what's left in the budget.

## **Geri Hart**

---

**From:** Alexis Brode <akbrode@gmail.com>  
**Sent:** Wednesday, January 6, 2021 3:53 PM  
**To:** Geri Hart  
**Subject:** Authorization for administration approval application

To Historic District Commission,

I hereby give my authorization to Hart Plumbing and Heating to submit my application to the Historic District Commission on my behalf. Please contact me directly with any questions. Thanks so much.

Best,  
Alexis Brode

**CERTIFICATION**

WE CERTIFY THAT THIS PLAN ACCURATELY SHOWS THE LOCATION AND BOUNDARIES OF THE SUBMITTED LAND, THE LOCATION AND DIMENSIONS OF THE EXISTING IMPROVEMENTS AS OF THE DATE OF THIS PLAN, AND THE PROPOSED LOCATION OF THE PROPOSED IMPROVEMENTS. I AM SUBMITTING THIS PLAN TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT I AM NOT PROVIDING ANY INFORMATION THAT IS FALSE OR MISLEADING.

*John W. Durgin*  
 J. W. DURGIN, L.L.C.



NOTE: THIS DRAWING IS APPENDIX A OF THE HAVEN WHITE CONDOMINIUM DOCUMENTATION.

THIS PLAN DIFFERS FROM THE TAX MAPS WHICH ARE CONTROLLING FOR RECORD PURPOSES. THE PLANNING BOARD HAS NO REPRESENTATION AS TO THE ACCURACY OF THIS PLAN.

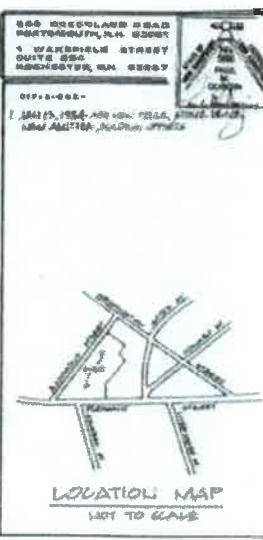
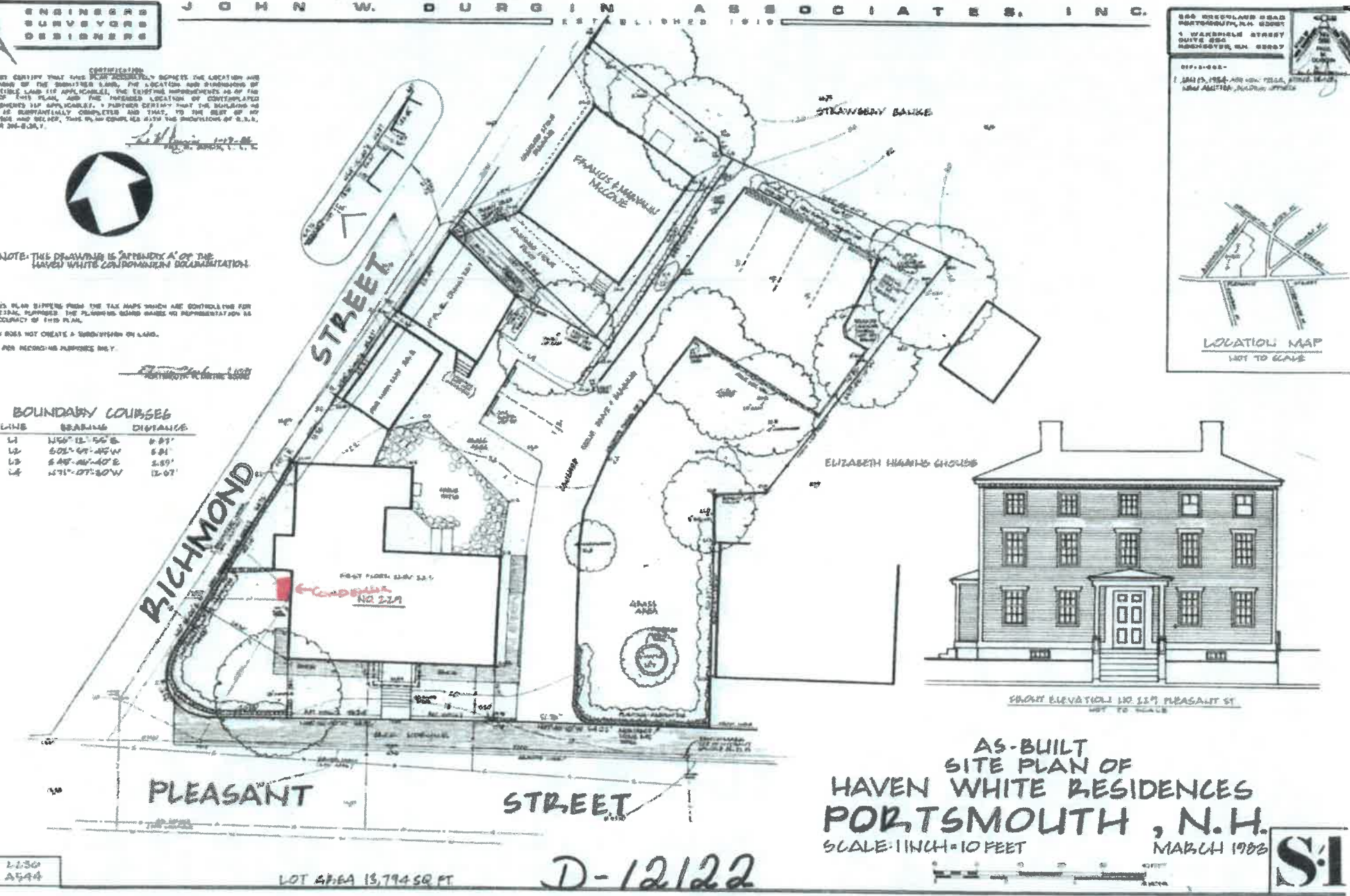
THIS DOES NOT CREATE A SUBDIVISION ON LAND.

FOR RECORDING PURPOSES ONLY.

*John W. Durgin*  
 J. W. DURGIN, L.L.C.

**BOUNDARY COURSES**


LINE	BEARING	DISTANCE
1A	N 66° 15' 00" E	6.81'
1B	S 05° 45' 00" W	6.81'
1C	S 48° 40' 00" E	2.59'
1D	S 71° 07' 30" W	12.07'




AS-BUILT  
 SITE PLAN OF  
 HAVEN WHITE RESIDENCES  
 PORTSMOUTH, N.H.  
 SCALE: 1 INCH = 10 FEET  
 MARCH 1983

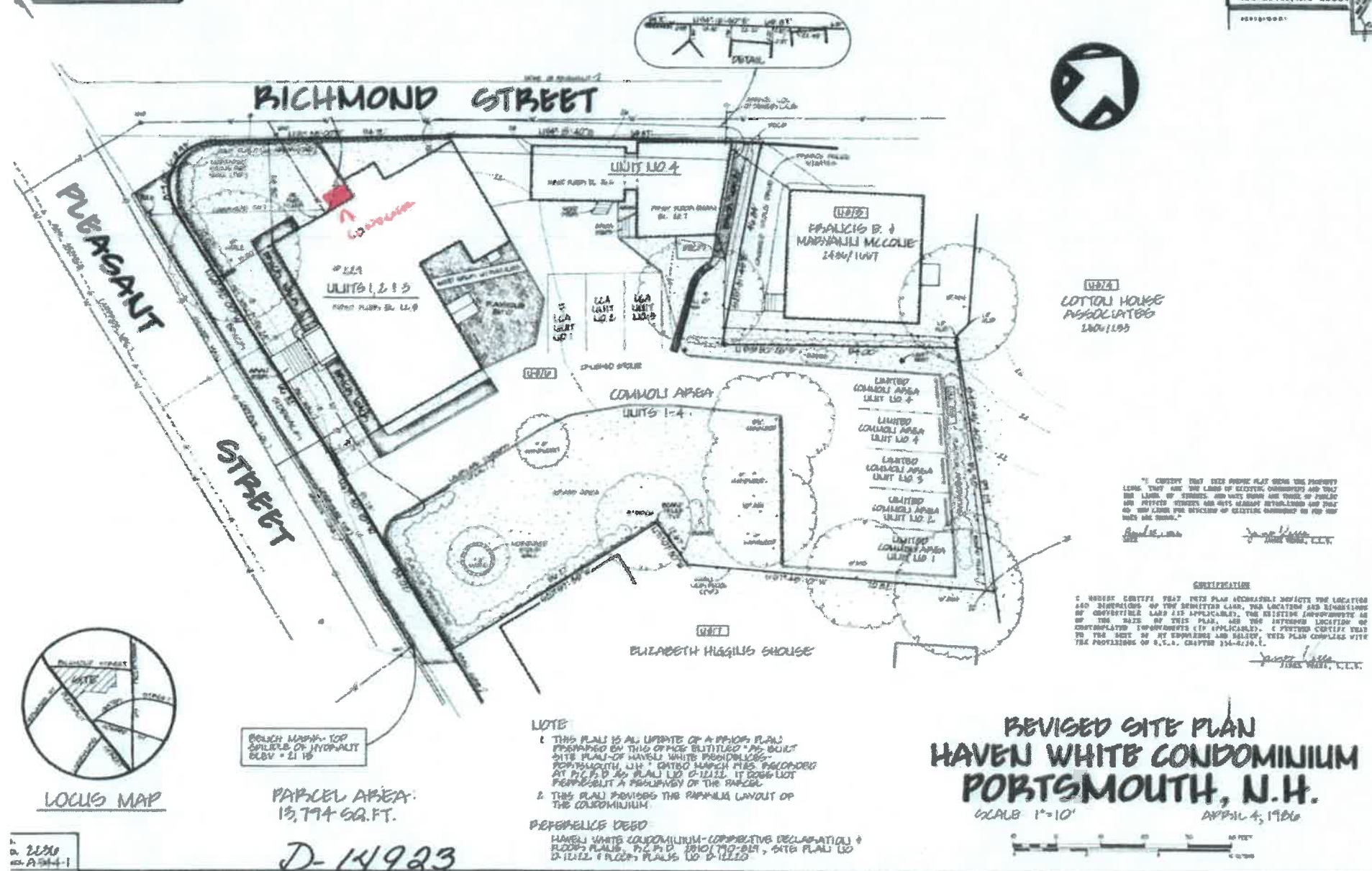
LOT AREA 13,794 SQ. FT.

D-12122

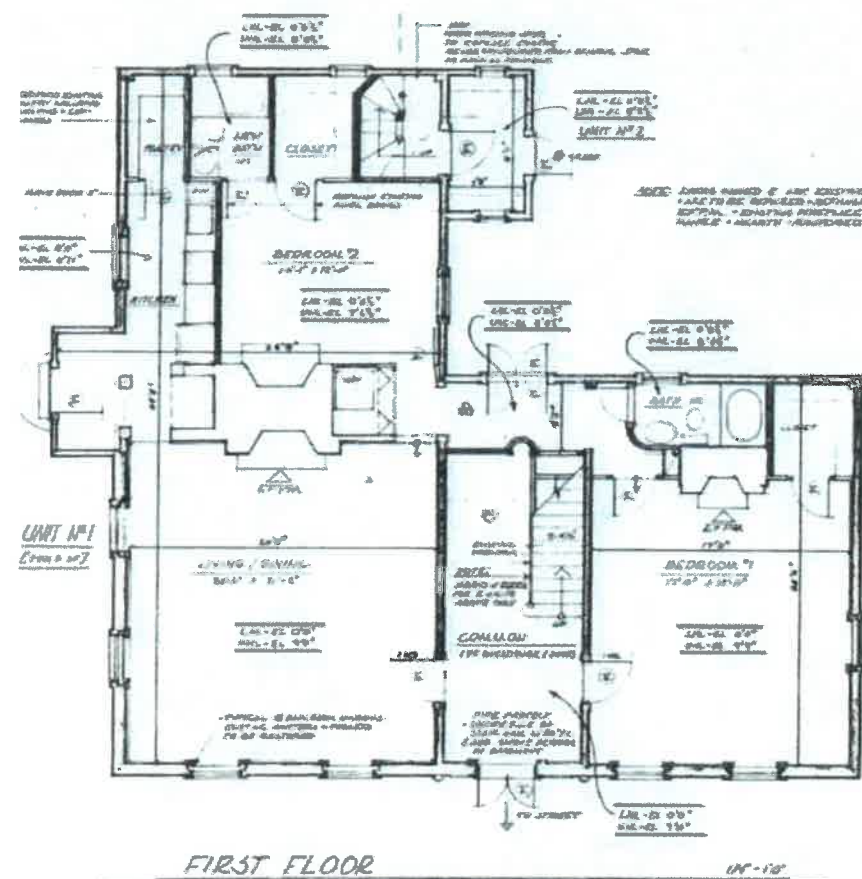








Re 1, 10-20-74

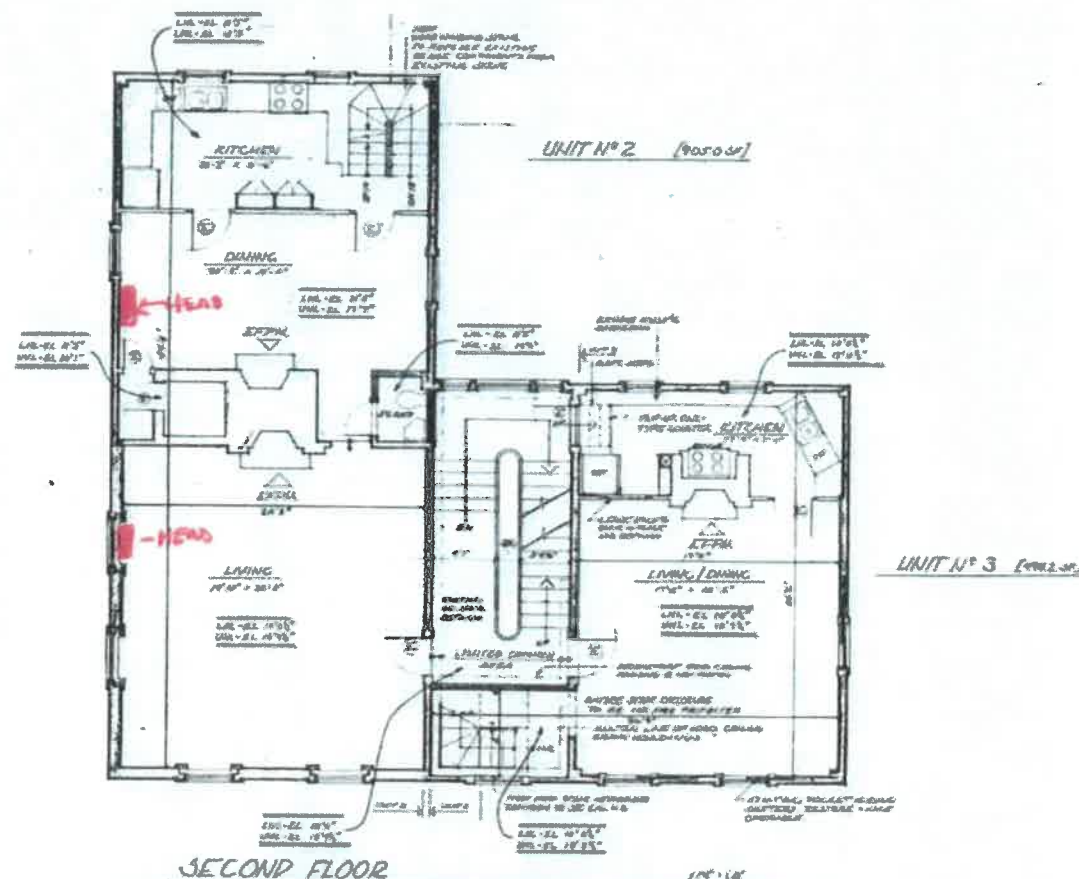


TOTAL SQUARE FOOTAGE	
UNIT #1	1000 SF
UNIT #2	1000 SF
UNIT #3	1000 SF
UNIT #4	1000 SF
<b>TOTAL</b>	<b>4000 SF</b>

**NOTES:**

- 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND ALL APPLICABLE ORDINANCES.
- 2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND ALL APPLICABLE ORDINANCES.
- 3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND ALL APPLICABLE ORDINANCES.
- 4. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND ALL APPLICABLE ORDINANCES.

Sheet 2 of 3  
D-12220



**GENERAL NOTES:**

1. PROJECT CONSISTS OF CONSTRUCTION OF EXISTING BUILDING (1000 SQ. FT.) TO BE USED AS A THREE-UNIT RESIDENCE.

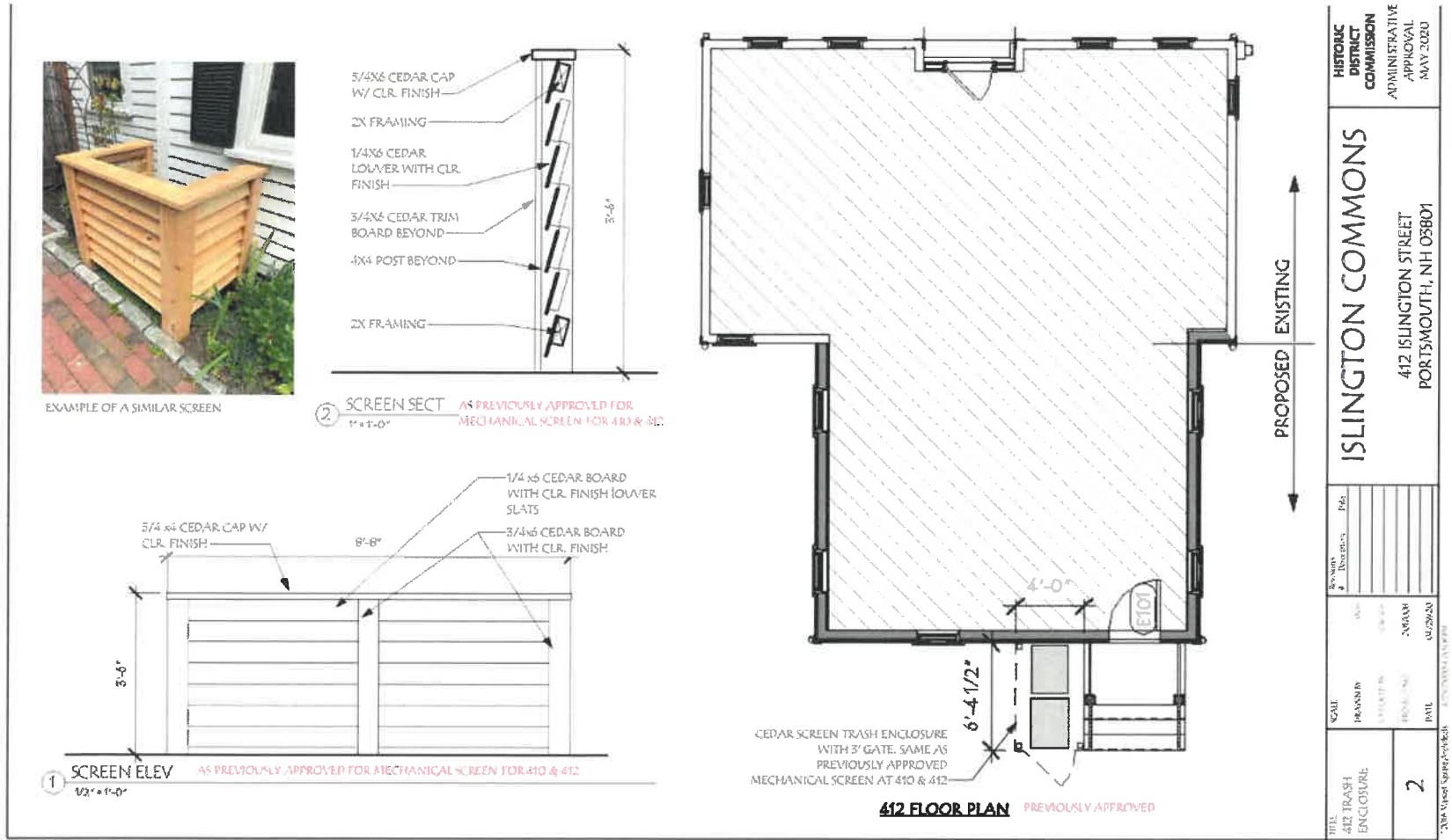
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND ALL APPLICABLE ORDINANCES.

3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND ALL APPLICABLE ORDINANCES.

4. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND ALL APPLICABLE ORDINANCES.

THE UNDERSIGNED HEREBY CERTIFY THAT THE PLAN IS A TRUE AND CORRECT REPRESENTATION OF THE WORK TO BE DONE. OF A.R. 114 320 - B-10 PARAGRAPH 1.			DATE: 10/20/74
ARING SCHROEDER ARCHITECTS 1000 WHITE HOUSE RENOVATIONS 1000 WHITE HOUSE RENOVATIONS 1000 WHITE HOUSE RENOVATIONS			





An Example of Appropriate Screening for Mechanical Equipment in the Portsmouth Historic District



## 6. 135 Congress, Unit #145 - Recommended Approval

Background: The applicant is seeking approval for changes to a previously approved design (change in design of approved lanterns).

Staff Comment: Recommended Approval

### Stipulations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

## LUHD-293

### Historic District Commission Work Session or Administrative Approval Application

**Status:** Active**Date Created:** Mar 19, 2021**Applicant**

Andrew Sidford  
kgezzer@asidfordarchitects.com  
44 Merrimac Street  
Newburyport, Massachusetts 01950  
9784621657

**Location**

135 CONGRESS ST Unit 145  
Unit 145  
Portsmouth, NH 03801

**Owner:**

BLUESTONE PROPERTIES OF RYE LLC  
PO BOX 300 RYE, NH 03870-0300

**Application Type**

**Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

We propose changing the originally selected and approved front lanterns to ones that look more like the original gas lanterns.

The West side existing window openings were filled with CMU to maintain fire ratings. This existing CMU wall is not structurally sound. We are proposing to re-build the wall and finish with brick to match the existing. We plan to set the brick back +/- 1/4" so there is a shadow line to signify the original window openings. Original granite lintels and sills to remain.

**Description of Proposed Work (Planning Staff)**

--

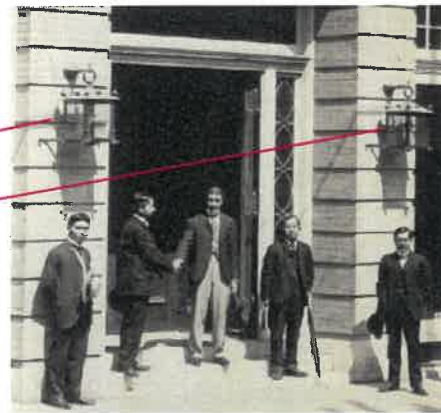
**Project Representatives**



FRONT LANTERNS:



HUBBARDTON FORGE MASON SCONCE  
ORIGINALLY APPROVED ON 7/5/2017



**PROPOSED GAS LANTERN TO LOOK  
SIMILAR TO ORIGINAL LANTERNS**



<b>A-201</b> <b>YNCA BUILDING</b> 135 CONGRESS STREET PORTSMOUTH, NH	<b>DATE:</b>	<b>REV. NUMBER:</b>
	<b>REVISION:</b>	<b>DATE:</b>
	<b>REVISION:</b>	<b>DATE:</b>

**DRAWING TITLE:**

**DRAWING SCALE:**

**PROPOSED SOUTH-FRONT ELEVATION**

**1/4" = 1'-0"**



## 7. 74 Congress Street

- Recommended Approval

**Background:** The applicant is seeking approval for the installation of mechanical equipment (HVAC Condensers).

**Staff Comment:** Recommended Approval

### Stipulations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LU-21-35**

Land Use Application

**Status:** Active**Date Created:** Feb 22, 2021**Applicant**

Jeff Brideau  
jeff@intelligentheatandpower.com  
PO BOX 1081  
Stratham, New Hampshire 03885  
9785780504

**Location**

74 CONGRESS ST  
Portsmouth, NH 03801

**Owner:**

COLACO LLC  
PO BOX 31 RYE BEACH, NH 03871-0031

**Applicant Information****Please indicate your relationship to this project**

B. Property Owner's Representative

**Alternative Project Address****Alternative Project Address**

--

**Project Type****Addition or Renovation:** any project (commercial or residential) that includes an ADDITION to an existing structure or a NEW structure on a property that already has structure(s) on it☐**New Construction:** any project (commercial or residential) that involves adding a NEW structure on a parcel that is currently VACANT. If there are any existing structures on the property (even if you are planning to remove them), you should select Addition and Renovation above☐





See travel times, traffic and nearby places



**PLA-A36EA7 & PUZ-HA36NKA**  
**36,000 BTU/H 3' X 3' CEILING CASSETTE**  
**36,000 BTU/H HYPER-HEATING UNIVERSAL OUTDOOR**



Job Name:

System Reference:

Date:



Indoor Unit.....PLA-A36EA7

Outdoor Unit.....PUZ-HA36NKA

#### INDOOR UNIT FEATURES

- Space-efficient ductless installation
- Equipped with 3D i-see Sensor® for enhanced comfort and energy efficiency
- Airflow settings for high and low ceiling applications
- Individual vane settings for direct/indirect airflow control or variable airflow patterns
- Knockouts for outside-air intake and branch-duct run
- Filter indicator signal
- Easy-to-clean, washable filter (optional high-efficiency filter available - requires multi-function casement)
- Built-in condensate lift mechanism
- Ideal for retail shops, classrooms, office spaces, conference centers, building lobbies, and more
- Multiple control options available:
  - kumo cloud® smart device app for remote access
  - Third-party interface options
  - Wired or wireless controllers

#### OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- High heating capacity: flash injection circuit maintains 100% heating capacity at 5°F outdoor temperature
- Wide heating range: heating performance down to -13°F (average of 80% heating capacity)
- High speed heating at start up: Hyper-Heating INVERTER® reduces the time for heating at start up by about half compared to standard models
- Suction accumulator pre-charged with refrigerant volume for piping length up to 100 ft.
- Twinning of two indoor units possible with the 36 KBTU/H model
- High pressure/temperature protection
- Built-in base pan heater
- Flash injection circuit provides efficient high heating capacities at low ambient temperatures



# SPECIFICATIONS: PLA-A36EA7 & PUZ-HA36NKA

Cooling at 95°F <sup>1</sup>	Maximum Capacity	BTU/H	36,000
	Rated Capacity	BTU/H	36,000
	Minimum Capacity	BTU/H	14,800
	Maximum Power Input	W	2,750
	Rated Power Input	W	2,750
	Moisture Removal	Pints/h	5.5
	Sensible Heat Factor		0.83
Heating at 47°F <sup>2</sup>	Power Factor	%	98.0/98.0
	Maximum Capacity	BTU/H	40,000
	Rated Capacity	BTU/H	38,000
	Minimum Capacity	BTU/H	16,700
	Maximum Power Input	W	2,880
Heating at 17°F <sup>3</sup>	Rated Power Input	W	2,650
	Power Factor	%	98.0/98.0
	Maximum Capacity	BTU/H	38,000
	Rated Capacity	BTU/H	24,200
Heating at 5°F <sup>4</sup>	Maximum Power Input	W	4,785
	Rated Power Input	W	2,715
	Maximum Capacity	BTU/H	38,000
Heating at -13°F <sup>7</sup>	Maximum Power Input	W	5,465
Efficiency	Maximum Capacity	BTU/H	30,400
	SEER		20.0
	EER <sup>1</sup>		13.0
	HSPF [IV]		10.4
	COP at 47°F <sup>2</sup>		4.2
	COP at 17°F at Maximum Capacity <sup>3</sup>		2.3
	COP at 5°F at Maximum Capacity <sup>4</sup>		2.0
	COP at -13°F at Maximum Capacity <sup>7</sup>		1.5
Electrical	ENERGY STAR® Certified		Yes
	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	35
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
Indoor Unit	MCA	A	2.0
	Fan Motor Full Load Amperage	A	0.95
	Fan Motor Output	W	120
	Airflow Rate at Cooling, Dry	CFM	670-850-1020-1200
	Airflow Rate at Cooling, Wet	CFM	630-810-980-1160
	Airflow Rate at Heating, Dry	CFM	670-850-1020-1200
	Sound Pressure Level [Cooling]	dB[A]	32-37-41-44
	Sound Pressure Level [Heating]	dB[A]	32-37-41-44
	Drain Pipe Size	In. [mm]	1-1/4 [32]
	Condensate Lift Mechanism, Maximum Distance	In. [mm]	33-7/16 [849]
	Coating on Heat Exchanger		—
	External Finish Color		White Munsell 6.4Y 8.9/0.4
	Unit Dimensions	W x D x H: In. [mm]	33-1/16 // 37-13/32 x 33-1/16 // 37-13/32 x 11-3/4 // 1-9/16 [840 // 950 x 840 // 950 x 298 // 40]
	Package Dimensions	W x D x H: In. [mm]	35-9/16 // 39-6/16 x 34-5/16 // 38-3/16 x 16-9/16 // 4-12/16 [903 // 1000 x 871 // 970 x 421 // 121]
	Unit Weight	Lbs. [kg]	56 // 11 [25 // 5]
	Package Weight	Lbs. [kg]	77 [35]
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	95 DB, 71 WB / 67 DB, 57 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	80 DB / 70 DB

## NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

<sup>1</sup>Cooling (Indoor // Outdoor)

°F 80 DB, 67 WB // 95 DB, 75 WB

<sup>2</sup>Heating at 47°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 47 DB, 43 WB

<sup>3</sup>Heating at 17°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 17 DB, 15 WB

## Conditions

<sup>4</sup>Heating at 5°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 5 DB, 4 WB

<sup>5</sup>Heating at -4°F (Indoor // Outdoor)

°F 70 DB, 60 WB // -4 DB, -5 WB

<sup>6</sup>Heating at -5°F (Indoor // Outdoor)

°F 70 DB, 60 WB // -5 DB, -6 WB

<sup>7</sup>Heating at -13°F (Indoor // Outdoor)

°F 70 DB, 60 WB // -13 DB, -14 WB

\*Outdoor Unit Operating Temperature Range (Cooling Air Temp (Maximum / Minimum)):

• Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

• Wind baffles required to operate below 23°F DB in cooling mode.

• Cooling-only system with wind baffle: -40°F - 115°F.

• Heat pump system with wind baffle: 0°F - 115°F.

• Refer to wind baffle documentation for further information.

\*\*Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

• System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

## SEACOAST PROTECTION (-BS MODELS)

• External Outer Panel: Phosphate coating + Acrylic-Enamel coating

• Fan Motor Support: Epoxy resin coating (at edge face)

• Separator Assembly Valve Bed: Epoxy resin coating (at edge face)

• Blue Fin treatment is an anti-corrosion treatment that is applied to the condenser coil to protect it against airborne contaminants.

# SPECIFICATIONS: PLA-A36EA7 & PUZ-HA36NKA

Outdoor Unit	MCA	A	26.0
	MOCP	A	42
	Fan Motor Output	W	74
	Airflow Rate	CFM	3880/3880
	Refrigerant Control		LEV
	Defrost Method		Reverse Cycle
	Sound Pressure Level, Cooling <sup>1</sup>	dB(A)	52
	Sound Pressure Level, Heating <sup>2</sup>	dB(A)	53
	Compressor Type		Scroll
	Compressor Model		ANB33FJMMT
	Compressor Rated Load Amps	A	18.0
	Compressor Locked Rotor Amps	A	27.5
	Compressor Oil Type // Charge	oz.	FV50S // 1.4,47
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		Built-in
	Unit Dimensions	W x D x H: In. [mm]	41-5/16 x 14-3/16 x 52-11/16 [1050 x 360 x 1338]
	Package Dimensions	W x D x H: In. [mm]	43 x 18 x 57 [1110 x 480 x 1440]
	Unit Weight	Lbs. [kg]	261 [118]
	Package Weight	Lbs. [kg]	285 [129]
Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F	115 DB / 0 DB
	Heating Air Temp [Maximum / Minimum]	°F	75 DB, 65 WB / -13 DB, -14 WB
	Heating Thermal Lock-out / Re-start Temperatures**	°F	-22.0 / -13
Refrigerant	Type		R410A
	Charge	Lbs, oz	11, 7
	Chargeless Piping Length	Ft. [m]	0.0 [30.0]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.6 [56]
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	5/8 [15.88]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	3/8 [9.52]
	Maximum Piping Length	Ft. [m]	245 [75]
	Maximum Height Difference	Ft. [m]	100 [30]
	Maximum Number of Bends		15

## NOTES:

AHRI Rated Conditions

(Rated data is determined at a fixed compressor speed)

<sup>1</sup>Cooling (Indoor // Outdoor)

°F 80 DB, 67 WB // 95 DB, 75 WB

<sup>2</sup>Heating at 47°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 47 DB, 43 WB

<sup>3</sup>Heating at 17°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 17 DB, 15 WB

Conditions

<sup>4</sup>Heating at 5°F (Indoor // Outdoor)

°F 70 DB, 60 WB // 5 DB, 4 WB

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°F 70 DB, 60 WB // -4 DB, -5 WB

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°F 70 DB, 60 WB // -5 DB, -6 WB

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°F 70 DB, 60 WB // -13 DB, -14 WB

\*Outdoor Unit Operating Temperature Range (Cooling Air Temp (Maximum / Minimum)):

• Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.

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• Refer to wind baffle documentation for further information.

\*\*Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

• System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

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• External Outer Panel: Phosphate coating + Acrylic-Enamel coating

• Fan Motor Support: Epoxy resin coating (at edge face)

• Separator Assembly Valve Bed: Epoxy resin coating (at edge face)

• Blue Fin treatment is an anti-corrosion treatment that is applied to the condenser coil to protect it against airborne contaminants.

## INDOOR UNIT ACCESSORIES: PLA-A36EA7

Control Interface	3-Pin Connector	<input type="checkbox"/> PAC-715AD
	BACnet® and Modbus Interface	<input type="checkbox"/> PAC-UKPRC001-CN-1
	CN24 Relay Kit	<input type="checkbox"/> CN24RELAY-KIT-CM3
	IT Extender	<input type="checkbox"/> PAC-WHS01IE-E
	kumo station® for kumo cloud®	<input type="checkbox"/> PAC-WHS01HC-E
	Lockdown bracket for remote controller	<input type="checkbox"/> RCMKP1CB
	Remote Operation Adapter†	<input type="checkbox"/> PAC-SF40RM-E
	Thermostat Interface	<input type="checkbox"/> PAC-US444CN-1
	USNAP Adapter	<input type="checkbox"/> PAC-WHS01UP-E
Remote Sensor	Wireless Interface for kumo cloud®	<input type="checkbox"/> PAC-USWHS002-WF-2
	Flush Mount Temperature Sensor	<input type="checkbox"/> PAC-USSEN001-FM-1
	Remote Temperature Sensor surface mount	<input type="checkbox"/> PAC-SE41TS-E
Wired Remote Controller	Wireless temperature and humidity sensor for kumo cloud®	<input type="checkbox"/> PAC-USWHS003-TH-1
	Deluxe Wired MA Remote Controller†	<input type="checkbox"/> PAR-40MAAU
	Simple MA Remote Controller†	<input type="checkbox"/> PAC-YT53CRAU-J
Wireless Remote Controller	Touch MA Controller†	<input type="checkbox"/> PAR-CT01MAU-SB
	kumo touch™ RedLINK™ Wireless Controller	<input type="checkbox"/> MHK2
	Wireless Remote Controller	<input type="checkbox"/> PAR-SL100A-E
Casement	Wireless Signal Receiver Panel	<input type="checkbox"/> PAR-SR4LU-E
	Multi-function Casement	<input type="checkbox"/> PAC-SJ41TM-E
Condensate	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	<input type="checkbox"/> X87-721
	Blue Diamond (MegaBlue Advanced) Condensate Pump w/ Reservoir & Sensor	<input type="checkbox"/> X87-835
	Blue Diamond Sensor Extension Cable — 15 Ft.	<input type="checkbox"/> C13-103
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	<input type="checkbox"/> TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	<input type="checkbox"/> TAZ-MS303W
Filter	High Efficiency Filter Element	<input type="checkbox"/> PAC-SH59KF-E
i-see Sensor® Panel	Grille with 3D i-see Sensor® (required)	<input checked="" type="checkbox"/> PLP-41EAEU
Lineset	10' x 3/8" x 10' x 5/8" Lineset (Twin-Tube Insulation)	<input type="checkbox"/> MPLS385812T-10
	100' x 3/8" x 100' x 5/8" Lineset (Twin-Tube Insulation)	<input type="checkbox"/> MPLS385812T-100
	15' x 3/8" x 15' x 5/8" Lineset (Twin-Tube Insulation)	<input type="checkbox"/> MPLS385812T-15
	30' x 3/8" x 30' x 5/8" Lineset (Twin-Tube Insulation)	<input type="checkbox"/> MPLS385812T-30
	50' x 3/8" x 50' x 5/8" Lineset (Twin-Tube Insulation)	<input type="checkbox"/> MPLS385812T-50
	65' x 3/8" x 65' x 5/8" Lineset (Twin-Tube Insulation)	<input type="checkbox"/> MPLS385812T-65
Shutter Plate	Drain Pan	<input type="checkbox"/> PAC-SJ37SP-E
Space Panel	Architectural Surround for Ceiling Recessed Units	<input type="checkbox"/> PLFY-ITP1
	Space Panel	<input type="checkbox"/> PAC-SJ38AS-E

### NOTES:

†PAC-SF40RM-E (Unable to use with wireless remote controller)

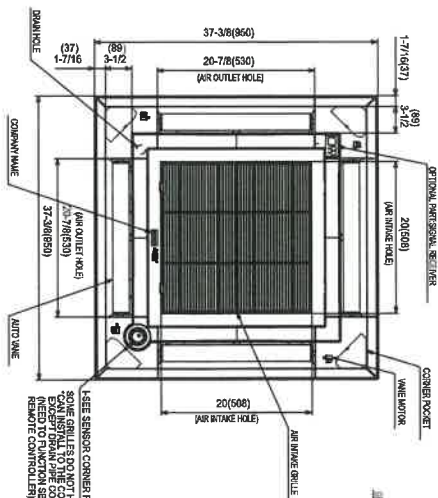
- Ceiling Cassette, Ceiling Suspended, Horizontal-ducted and Multi-position Air Handler

## OUTDOOR UNIT ACCESSORIES: PUZ-HA36NKA

Air Outlet Guide	Air Outlet Guide (1 Piece)	<input type="checkbox"/> PAC-SH96SG-E (two pieces are required)
Centralized Drain Pan	Drain Pan	<input type="checkbox"/> PAC-SH97DP-E
Control/Service Tool	Control/Service Tool	<input type="checkbox"/> PAC-SK52ST
Drain Socket	Drain Socket	<input type="checkbox"/> PAC-SG61DS-E
Hail Guards	Hail Guard	<input type="checkbox"/> HG-A2
M-NET Converter	M-NET Converter	<input type="checkbox"/> PAC-SJ85MA-E
	M-NET Converter	<input type="checkbox"/> PAC-SJ95MA-E
Mounting Pad	Condensing Unit Mounting Pad: 24" x 42" x 3"	<input type="checkbox"/> ULTRILITE2
Optional Defrost Heater	Optional Defrost Heater	<input type="checkbox"/> PAC-SJ20BH-E
Stand	18" Dual Fan Stand	<input type="checkbox"/> QSMS1802M
	24" Dual Fan Stand	<input type="checkbox"/> QSMS2402M
	Condenser Wall Bracket	<input type="checkbox"/> QSWB2000M-1
	Condenser Wall Bracket -Stainless Steel Finish	<input type="checkbox"/> QSWBSS
	Outdoor Unit Stand — 12" High	<input type="checkbox"/> QSMS1202M
Wind Baffle	Front Wind Baffle	<input type="checkbox"/> WB-PA3 (two pieces are required)

**INDOOR UNIT DIMENSIONS: PLA-A36EA7**

Unit: inch (mm)

[illegible]

NOTE: CHOOSE THE GRILLE AMONG THE RECOMMENDED ONE (SEE TABLE) TO OBTAIN THE BEST PERFORMANCE. THE AIR FLOW RATE SHOULD BE ADJUSTED TO THE ROOM VOLUME AND THE AIR EXCHANGE RATE AS REQUIRED, FOR THE SUPERSTION MODEL, USE 410 OR 401.

(PROCEED AT THE LOCAL SITE)

4. FOR PLUMBING AND ELECTRICAL INSTALLATION

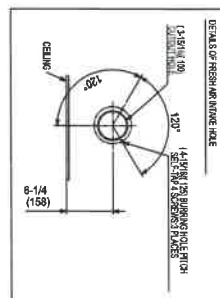
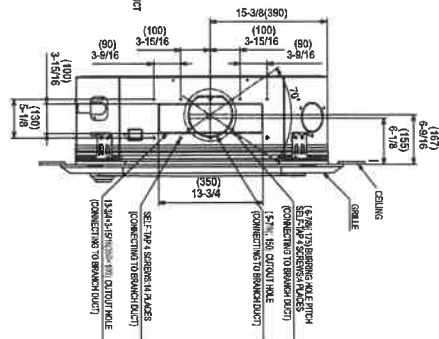
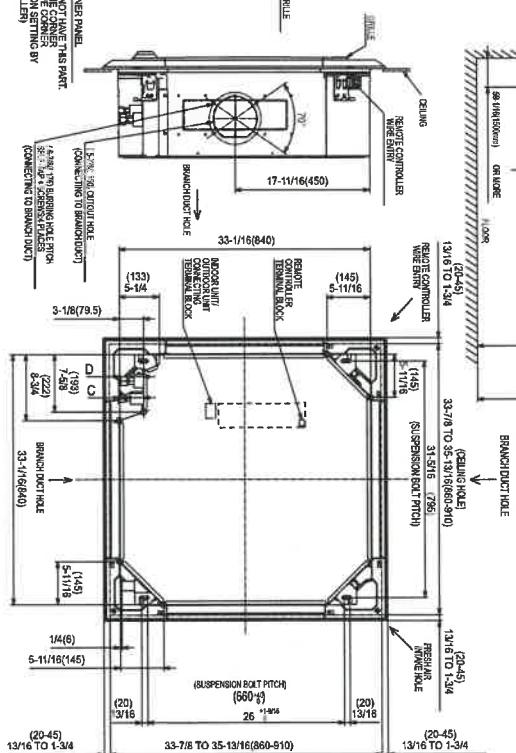
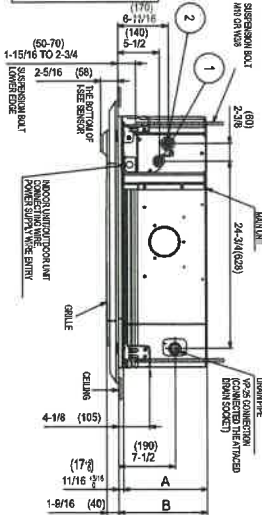
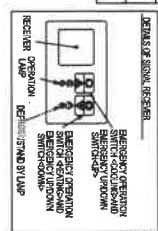
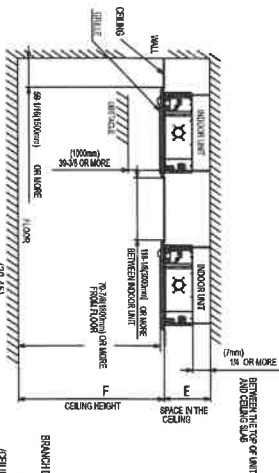
4.1. THE RIGID PIPING MUST BE INSTALLED IN THE CEILING AND THE FLEXIBLE PIPING MUST BE INSTALLED IN THE WALL. THE RIGID PIPING IS MADE OF STAINLESS STEEL AND THE FLEXIBLE PIPING IS MADE OF COPPER. MAKE SURE TO SOLID THE ELECTRICAL WIRE LITTLE BIT WITH CONTROL POINT WHEN CONNECTING.

4.2. THE AIR FLOW RATE IS ADJUSTED BY THE AIR FLOW CONTROL VALVE WHICH IS MADE TO BE ADJUSTED WITH THE GRILLE ATTACHED.

4.3. THERE ARE 3 TYPES OF AIR FLOW SPACE BETWEEN WAGON AND CEILING FOR THE INSTALLATION OF THE AIR FLOW CONTROL VALVE. THE AIR FLOW SPACE BETWEEN WAGON AND CEILING IS 100MM, 150MM AND 200MM. THE AIR FLOW SPACE BETWEEN WAGON AND CEILING IS 100MM, 150MM AND 200MM. OTHERWISE, CONDENSATION AND LEAKAGE MAY OCCUR.

4.4. IT BECOMES THE CAUSE OF DROPLET OR BROKE EFFECT WHEN THE AIR FLOW SPACE BETWEEN WAGON AND CEILING IS TOO SMALL. PLEASE REFER TO THE PAGE 41 OF PLUMBING.

4.5. FOR THE INSTALLATION OF THE OPTIMUM HIGH EFFICIENCY FILTER, OR MULTI-FUNCTIONAL CLEANER, REFER TO SPECIAL DRAWING.





## Unit: mm&lt;ln&gt;





## 8. 22 Daniel Street

## - Recommended Approval

**Background:** The applicant is seeking approval for the replacement of a new front window due to vandalism.

**Staff Comment:** Recommended Approval

### Stipulations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_





City of Portsmouth, NH

04/01/2021

**LUHD-294****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Mar 24, 2021**Applicant**

Cheryl Pagano  
cherylpagano@me.com  
22 Daniel Street  
portsmouth , NH 03801  
603-425-3700

**Location**

22 DANIEL ST  
Portsmouth, NH 03801

**Owner:**

PAGANO ELAINE M  
22 DANIEL ST PORTSMOUTH, NH 03801

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

Replace front window with new design. Our previous window was vandalized and we are currently boarded up.

**Description of Proposed Work (Planning Staff)**

--

**Project Representatives****Relationship to Project**

Other

**If you selected "Other", please state relationship to project.**

Daughter/ building manager

**Moe's Italian Sandwiches**

**Cheryl**

**22 Daniel Street**

**Portsmouth, NH 03801**

**(603)425-3700**

**cherylpagano@me.com**

**Portland Glass®**

**A Glass Doctor Company**

**70 Heritage Avenue**

**Portsmouth NH 03801**

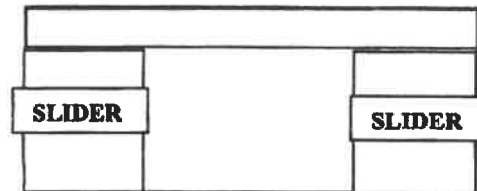
**(603) 431-1500 (ph)**

**(603) 431-1322 (fax)**

**PGShop0360@portlandglass.com**

**Historic District Approval Needed**

### **Store Front Glass**



**Store Front Bronze slider/picture/slider w/ transom**

**Metal frame with 1/4" tempered glass**

**\$7500.00 labor included**

**Removing and Cleanup of existing Window and Frame**

**\$899.00**

**Misc. Shims, Blocks, Caulking, Hardware, etc.**

**\$300.00**

**\$8699.00**

**OPTION 7/8" INSULATED GLASS (same price)**

**Police Detail 1 PO for 8 hrs.**

**792.00**

**City of Portsmouth Parking Permits**

**780.00**

**City of Portsmouth Construction Permits**

**470.00**

**Blocking off sidewalk**

**\$2042.00**

**Total of all items \$10,741.00**

***\*Please allow an estimated 6-8-week lead time for materials once ordered***

***> Taxes, bonds, permits, etc. not included***

***\*Estimate subject to change based on job specifications or material changes.***

***\*Price good for 30 days from above date. Please sign and return.***

***\*A 50% deposit is required for all orders.***

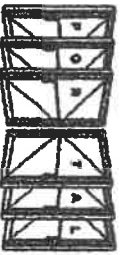
***\*Term Net 30 for account holders, COD upon completion of work for others***

**Accepted: \_\_\_\_\_**

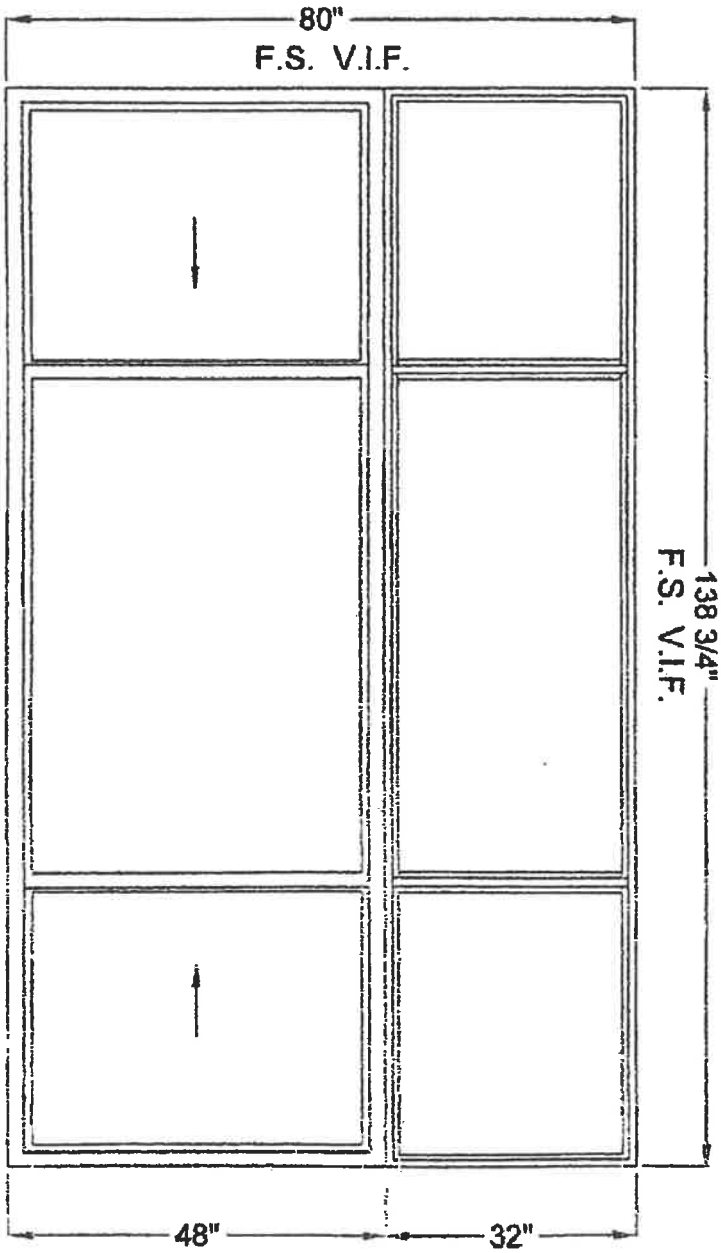
**Portland Glass Company**

**Printed: \_\_\_\_\_**

**Date: \_\_\_\_\_**



**PORTAL INC.**  
10 TRACY DRIVE- AVON, MA. 02322



(1-REQ'D.)

10741.80



Existing Conditions – 22 Daniel Street

## 9. 38 Chapel Street

## - Recommended Approval

**Background:** The applicant is seeking approval for the replacement of (6) windows, to match already replaced and approved windows on the front of the home.

**Staff Comment:** Recommended Approval

### Stipulations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LUHD-295****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Mar 28, 2021**Applicant**

Ryan Patrick  
ryan.patrick@safehold.com  
5 Osprey Cove  
Greenland, NH 03840  
603-969-5725

**Location**

38 CHAPEL ST  
Portsmouth, NH 03801

**Owner:**

Ryan Patrick  
5 Osprey Cv 5 Greenland, New Hampshire  
03840-2195

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

Replace 6 additional windows

**Description of Proposed Work (Planning Staff)**

--

**Acknowledgement****I certify that the information given is true and correct to the best of my knowledge.****By checking this box, I agree that this is equivalent to a handwritten signature and is binding for all purposes related to this transaction**









## 10. 261 South Street

## - Recommended Approval

**Background:** The applicant is seeking approval for the installation of mechanical equipment (HVAC condenser) with fence surround.

**Staff Comment:** Recommended Approval

### Stipulations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LUHD-297**

Historic District Commission Work Session or Administrative Approval Application

**Status:** Active

**Date Created:** Mar 29, 2021

**Applicant**

Thomas Hammer  
tom@thammerinc.com  
235 West Road  
Suite 7  
Portsmouth , NH 03801  
603-431-6464

**Location**

261 SOUTH ST  
Portsmouth, NH 03801

**Owner:**

PROJECT NO. 9 LLC  
9 DOVER ST DOVER, NH 03820

**Application Type**

**Please select application type from the drop down menu below**

Administrative Approval

**Project Information**

**Brief Description of Proposed Work**

Install HVAC condenser as required by code

**Description of Proposed Work (Planning Staff)**

--

**Project Representatives**

**Relationship to Project**

Other

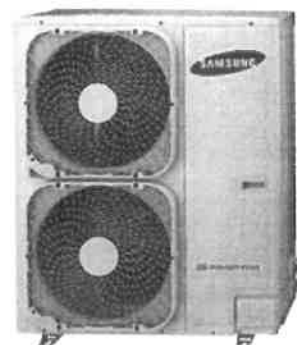
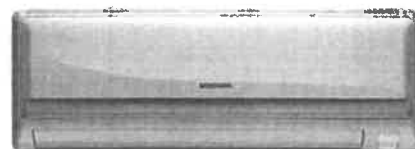
**If you selected "Other", please state relationship to project.**

Construction Manager

Job Name	Location
Purchaser	Engineer
Submitted to	Reference <input type="checkbox"/> Approval <input type="checkbox"/> Construction <input type="checkbox"/>
Unit Designation	Schedule #

#### Specifications

Performance	Nominal Capacity*	Cooling (Btu/h)	33,000
		Heating (Btu/h)	34,000
	Capacity Range	Cooling (Btu/h)	9,000 - 38,000
		Heating (Btu/h)	9,000 - 45,000
	SEER / EER		18.0 / 10.8
	HSPF		9.0
	Condensate (pints/h)		8.45
Power	Voltage (ø/V/Hz)		1 / 208-230 / 60
	Working Voltage Range (VAC)		176 - 254 (max. 3% deviation from each)
	Rated Current	Cooling (A)	3.6 / 14.2 / 18.0
	(Low/Std./Max.)	Heating (A)	3.3 / 15.0 / 21.0
	Max. Breaker (A)		30
	Min. Circuit Ampacity (A)		19.5
Dimensions	W X H X D (in.)	Indoor Unit	50 3/8 X 13 9/16 X 10
		Outdoor Unit	36 11/16 X 45 7/8 X 14 3/4
	Weight (lbs.)	Indoor Unit	40.12
		Outdoor Unit	191.80
	Condensate Connection		11/16" OD
Heat Exchanger	Indoor & Outdoor Unit	Type	Aluminum Fin - Copper Tube
		FPI	18
		Pipe Diameter	1/4 inch
	Indoor Unit		2 row / 18 step
	Outdoor Unit		2 row / 52 step
Sound Pressure Level	Indoor Unit (dB)	(L / H)	33 / 49
	Outdoor Unit (dB)	High	59
Operating Temperatures °F(°C)	Outdoor	Cooling	14 ~ 115°F(-10 ~ 46°C)
		Heating	0 ~ 115°F(-18 ~ 46°C) w/ wind baffle
	Indoor	Cooling	5 ~ 75°F(-15 ~ 24°C)
		Heating	61 ~ 90°F(16 ~ 32°C)
			T ≤ 80°F(27°C)
Pipe Connections	Indoor & Outdoor	High side (flare)	1/4"
		Low side (flare)	5/8"
		Maximum / Minimum Line Set Length (ft.)	164 / 10
		Maximum Vertical Separation (ft.)	98
Refrigerant	Type		R410A
	Control Method		Electronic Expansion Valve
	Factory Charge (oz.)		88.1
	Charged for		25 ft.
	Additional Refrigerant		0.43 oz./ft. over 25 ft.
Compressor	Manufacturer		Samsung
	Type		DC, Inverter Driven, Rotary
	RLA (A)		13.8
	Operating Frequency (Hz)	Cooling (low/std./high)	15 / 55 / 63
		Heating (low/std./high)	15 / 50 / 69
Evaporator Fan	Type		BLDC motor with cross-flow fan (1)
	Air Volume (L / M / H)		580 / 750 / 920
	Consumption W		58
	Operating Current (A)		0.22
Condenser Fan	Motor		BLDC motor with axial fan (2)
	Output W		248
	FLA Amps		1.04
Accessories	Condensate pump	<input type="checkbox"/> ASP-MO-UNIV 110-250	
	Wired Controller (includes sub-PCB and MWR-WE13U controller with scheduling)	<input type="checkbox"/> AQN-WRP2	
	Wall bracket (for outdoor unit)	<input type="checkbox"/> CKN-250	
	Line sets - insulated and flared,	<input type="checkbox"/> 25' - ILS2509	
	interconnect cables included	<input type="checkbox"/> 50' - ILS5009	
	Wind Baffle	<input type="checkbox"/> WBF-4M (2 required)	
		<input type="checkbox"/> WBB-9M	
Safety	Certifications		ETL (UL 1995)
	Devices		PCB fuses, indoor unit terminal block thermal fuse, current transformer, over-voltage protection, crankcase heating, temperature limit protection logic, compressor overload sensing
Warranty	10 Year compressor, 10 Year Parts, 1 year limited labor (conditions apply)**		



- Low ambient control built in
- Outdoor unit shall provide 208/230V power to indoor unit via 14 AWG X 3 interconnect power cable
- Electro-static, washable, HD (high density) main filter as standard

#### Construction

Indoor unit chassis shall be UL94 V0 with a galvanized steel mounting bracket

The outdoor unit shall be galvanized steel with a baked on powder coated finish for durability

#### Heat Exchanger

The heat exchanger shall be mechanically bonded fin to copper tube

#### Refrigerant System

The compressor shall be hermetically sealed, inverter controlled, Twin BLDC Rotary

Refrigerant flow shall be controlled by EEV (electronic expansion valve) at outdoor unit

#### Indoor Fan

The indoor fan shall be a single, antibacterial cross-flow type

Three fan speed settings and auto setting

#### Controls

Control signal shall be DDC type signal

Interconnect control wiring shall be 16 AWG X 2 shielded wire between outdoor and indoor unit

Unit shall be operated via wireless controller (included)

Optional wired control available

#### Convenience

- Auto restart
- Turbo mode (during cooling operation only)
- Auto changeover
- 24 hour timer
- Good'sleep mode
- Quiet mode
- Dry mode

\*Certified in accordance with the AHRI Unitary Small Air-Source Heat Pumps (USHP) Certification Program which is based on the latest edition of AHRI Standard 210/240.

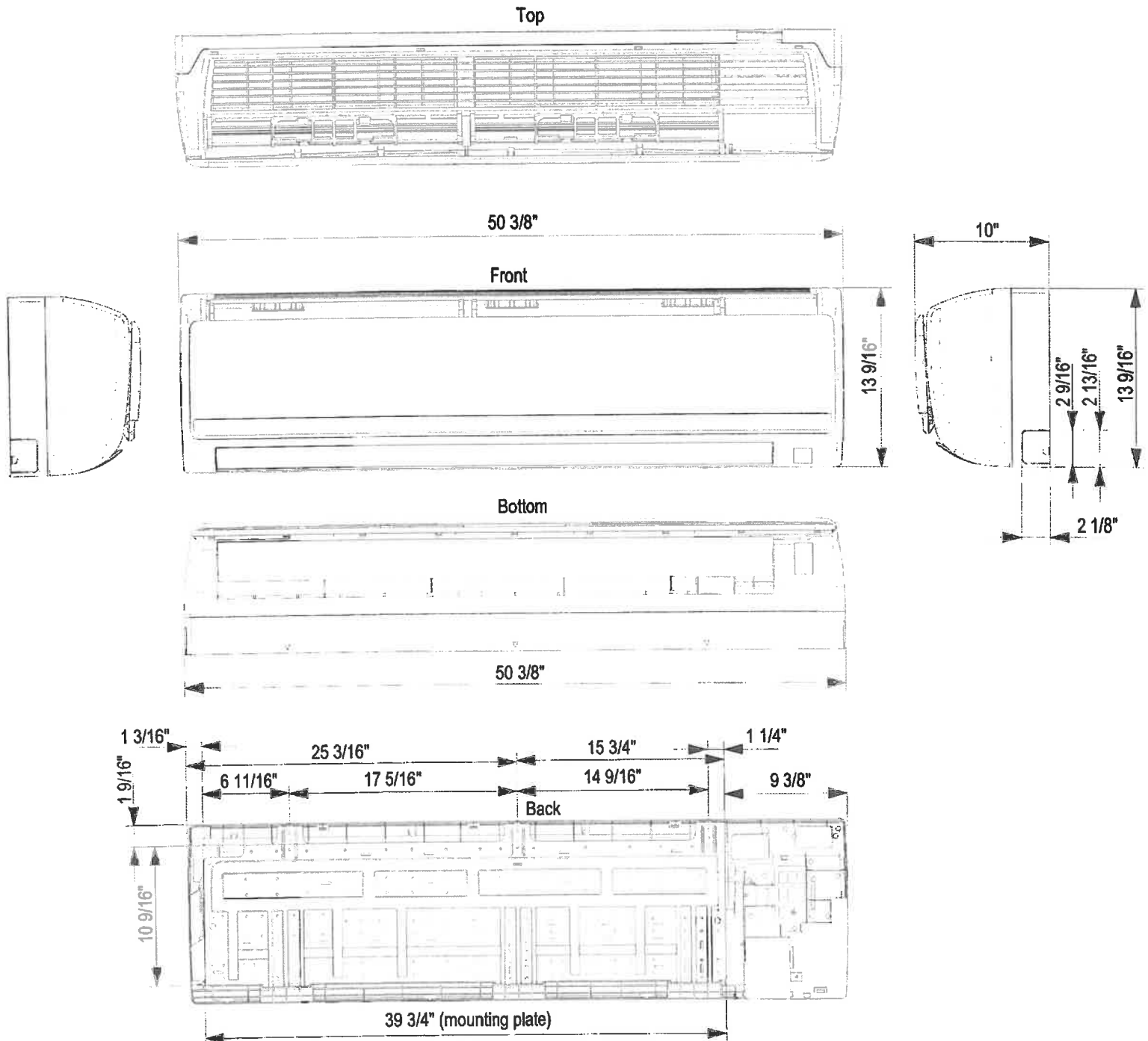
\*\*If registered within 60 days of installation and applies to units manufactured after 2015. Standard warranty is 7 year compressor, 5 year parts

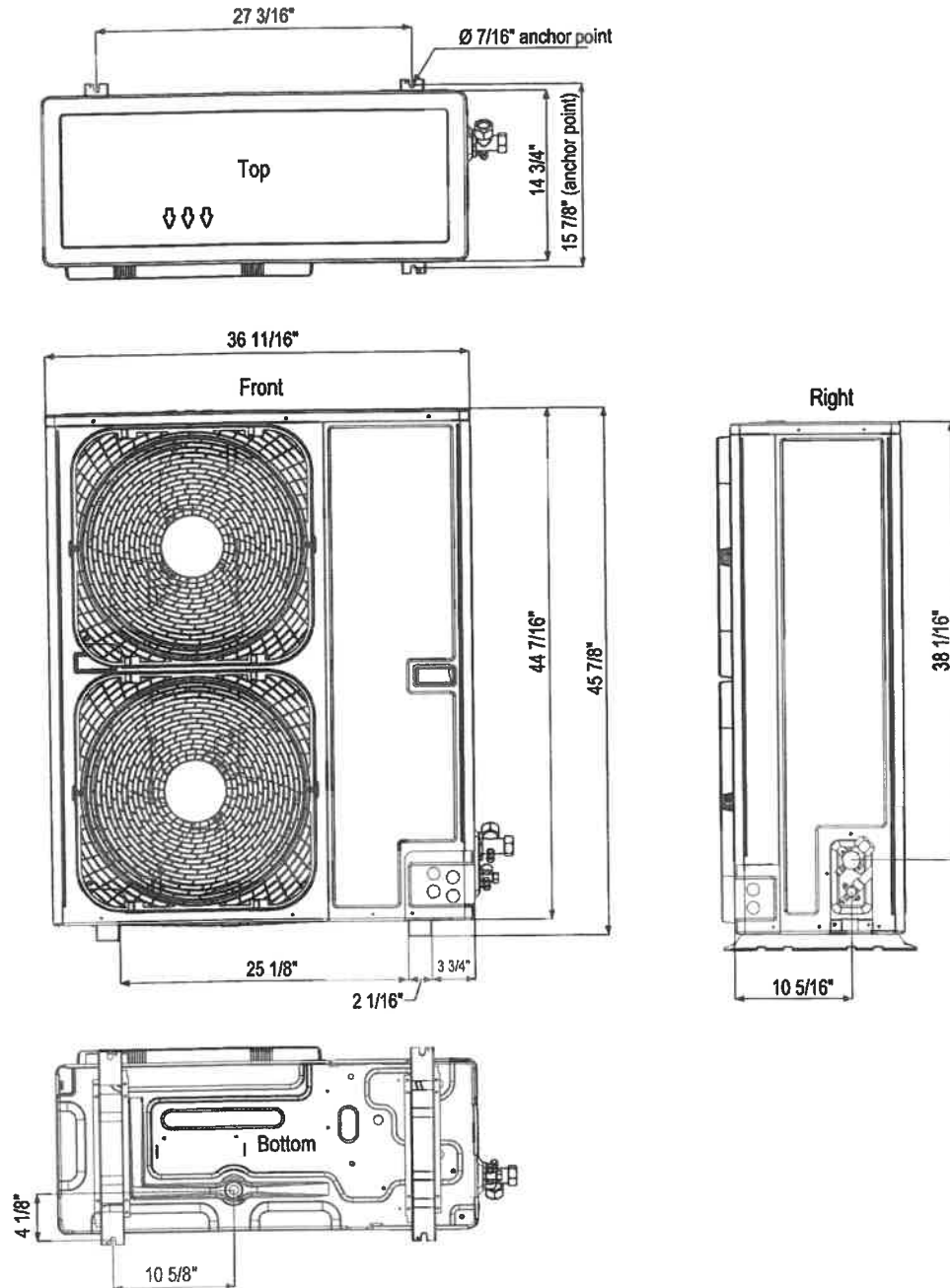
Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice.

Refer to [www.AHRIdirectory.org](http://www.AHRIdirectory.org) for current reference numbers.

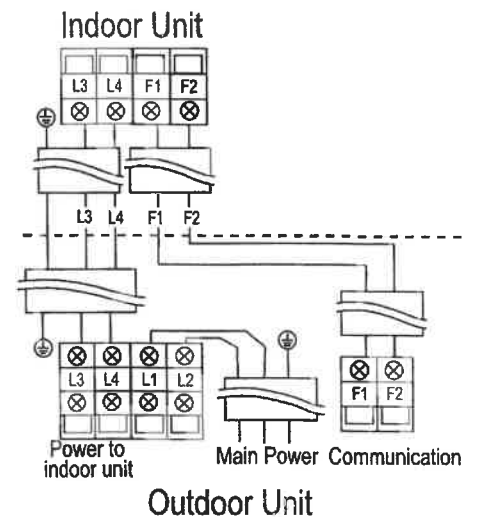
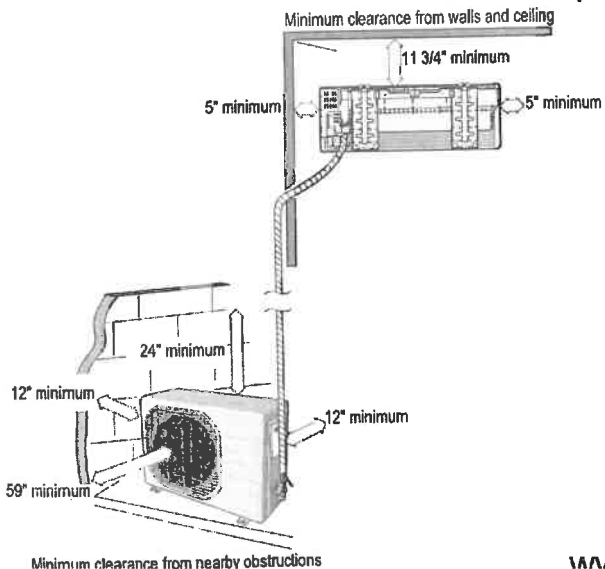
**SUBMITTAL AQN36VFUAGM / AQX36VFUAGM**

AQN36VFUAGM Max, wall mounted evaporator, single zone split system





For reference only. Always refer to installation manual for complete details.



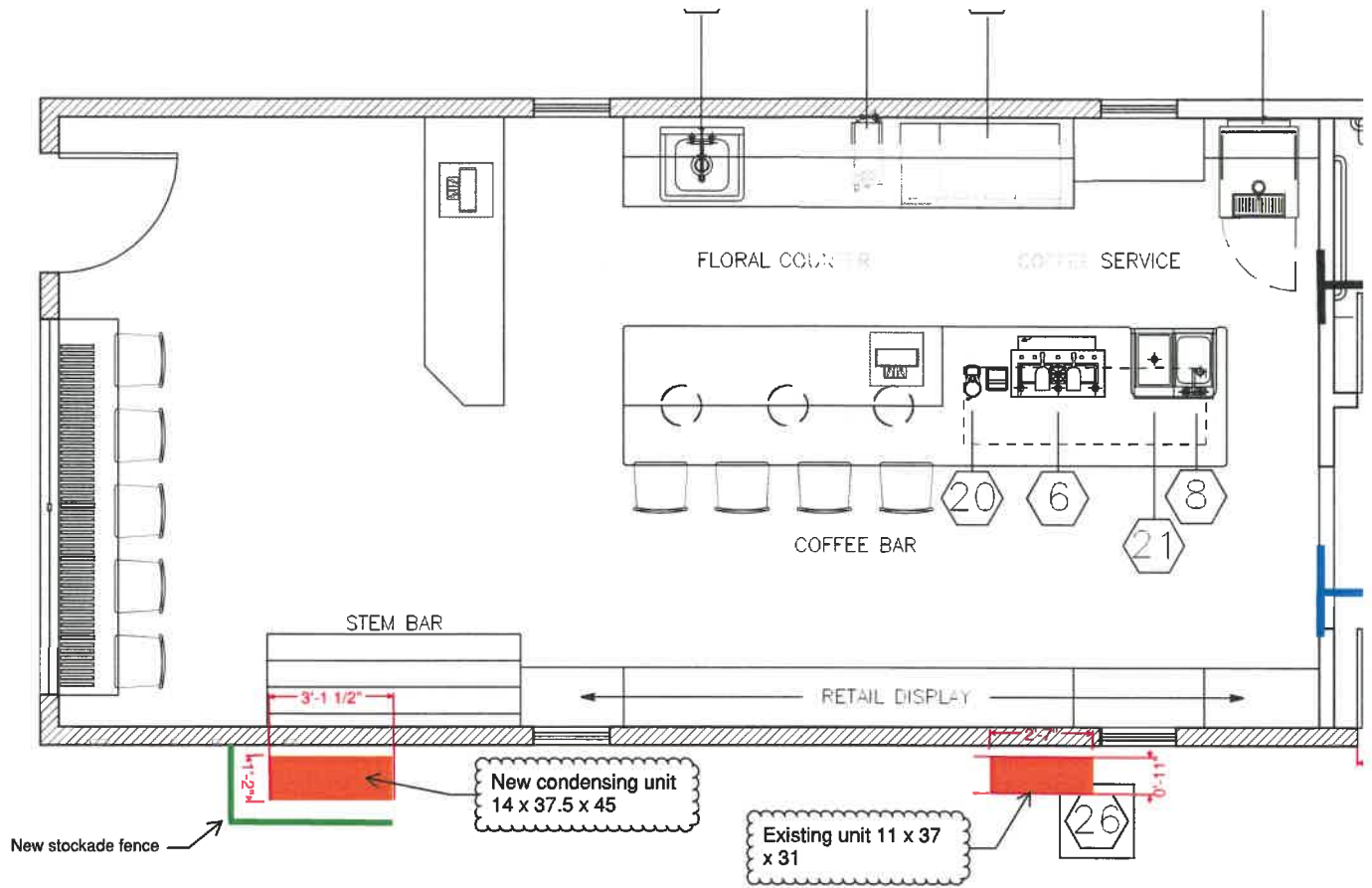














## 11. 16 Porter Street

## - Recommended Approval

**Background:** The applicant is seeking approval for the installation of a radon mitigation system.

**Staff Comment:** Recommended Approval

### **Stipulations:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_





City of Portsmouth, NH

04/01/2021

**LUHD-270****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Feb 02, 2021**Applicant**

Charles Wu  
cwu@baynorthcapital.com  
16 Porter Street  
Portsmouth, NH 03801  
6178617758

**Location**

16 PORTER ST  
Portsmouth, NH 03801

**Owner:**

Porter Street Condo Association  
11 Court Street Exeter, New Hampshire 03833

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

Radon mitigation system installation on the exterior wall up to the roofline. Top of mitigation system will extend 12-18" above roofline where gutter is located. Contractor will run 3" Schedule 40 pipe up the side of the building to first roof line. They will then completely cover system with copper coated channel shown in the first picture. The existing gutters and downspouts are also copper, although tarnished over many years.

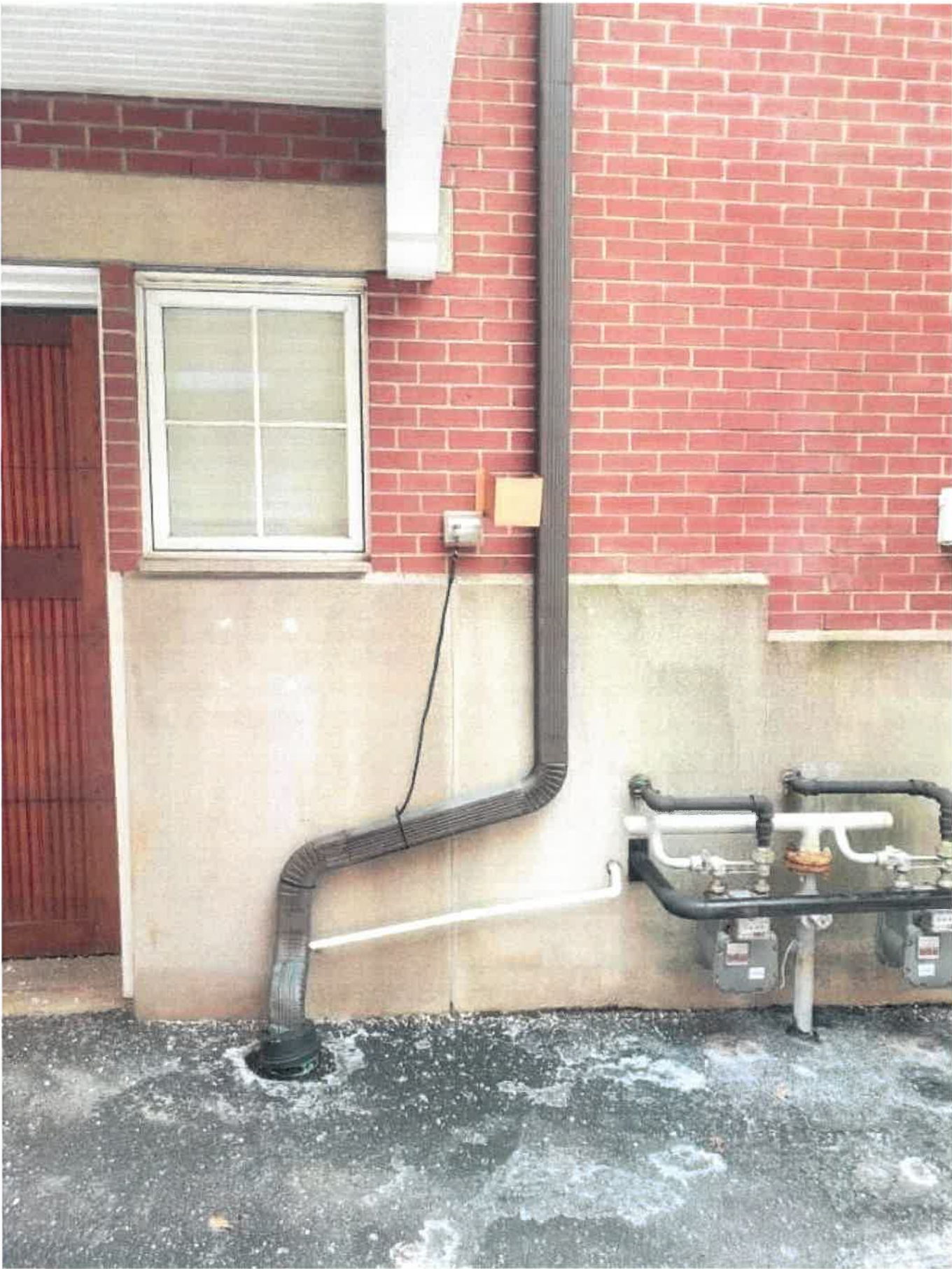
**Description of Proposed Work (Planning Staff)**

installation of a radon mitigation system

**Project Representatives****Relationship to Project**

Owner







2/4/2021

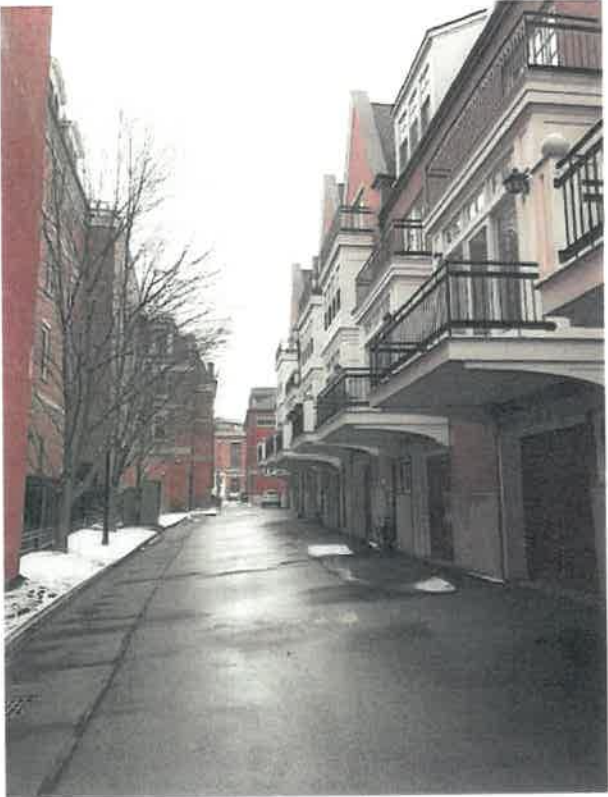
Porter\_Downspout\_Pic\_1\_Tue\_Feb\_2\_2021\_13-55-13.jpg (840x480)



2/4/2021

Porter\_Downpout\_Pic\_2\_Tue\_Feb\_2\_2021\_13-55-44.jpg (640x480)





2/4/2021

Porter\_Aleway\_Pic\_Tue\_Feb\_2\_2021\_13-56-12.jpg (640x480)

## 12. 166 New Castle Avenue - Recommended Approval

**Background:** The applicant is seeking approval for the construction of a roof over a patio door.

**Staff Comment:** Recommended Approval

### **Stipulations:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_





City of Portsmouth, NH

04/01/2021

LUHD-298

Historic District Commission Work Session or Administrative Approval Application

**Status:** Active

**Date Created:** Mar 30, 2021

**Applicant**

Vasilia Tooley  
btooley@comcast.net  
166 New Castle Avenue  
Portsmouth, NH 03801  
603-770-0347

**Location**

166 NEW CASTLE AVE  
Portsmouth, NH 03801

**Owner:**

TOOLEY DAVID J & TOOLEY VASILIA  
166 NEW CASTLE AVE PORTSMOUTH, NH  
03801

**Application Type**

**Please select application type from the drop down menu below**

Administrative Approval

**Project Information**

**Brief Description of Proposed Work**

A small roof over the patio door to mitigate water issues in the corner of the house and the basement

**Description of Proposed Work (Planning Staff)**

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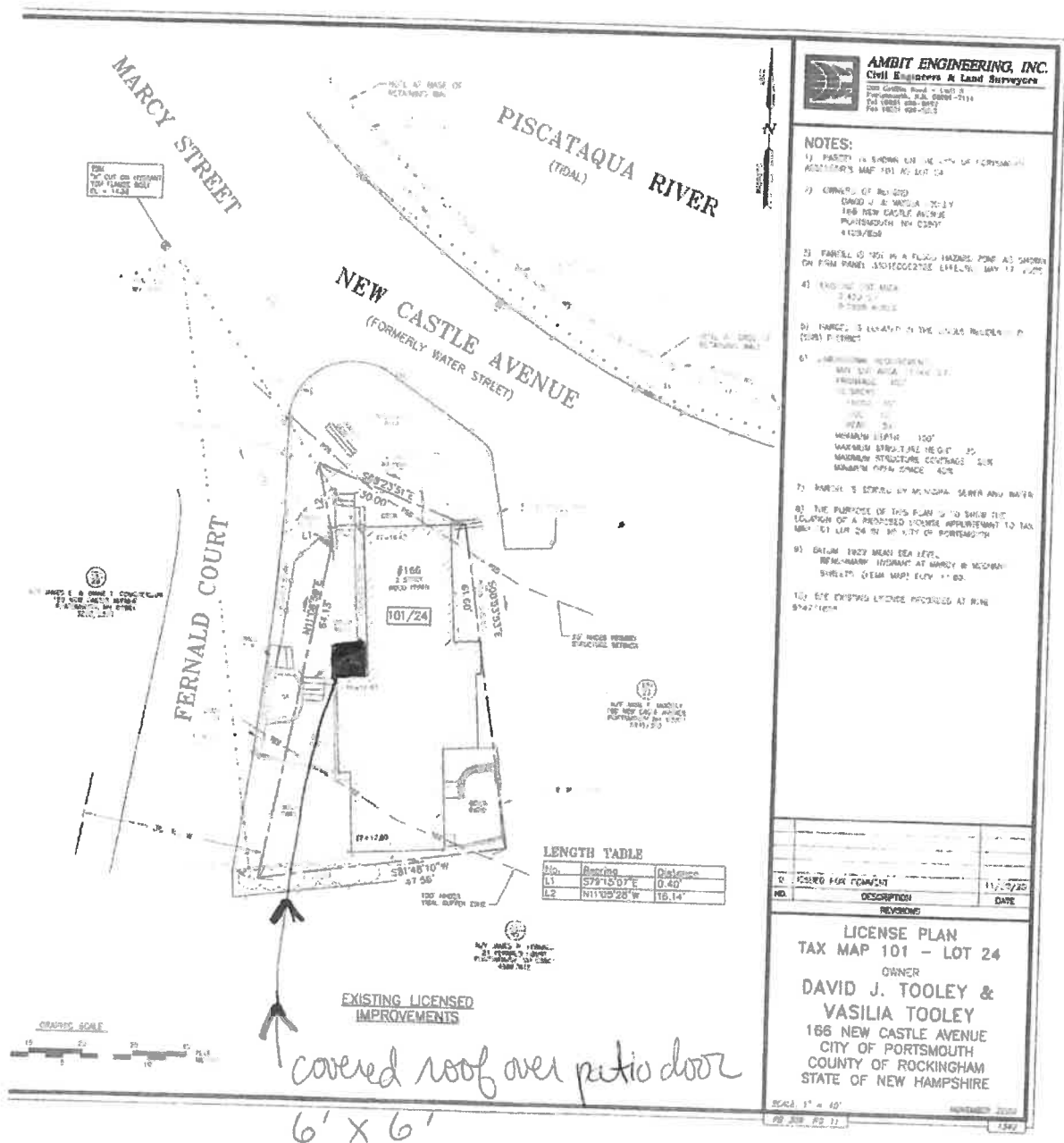
**Project Representatives**

**Relationship to Project**

Owner

**If you selected "Other", please state relationship to project.**





**AMBIT ENGINEERING, INC.**  
Civil Engineers & Land Surveyors  
200 Green Road - Unit 20  
Portsmouth, N.H. 03804-2114  
Tel: 603/886-8877  
Fax: 603/886-8877

- NOTES:**
- 1) PARTIAL IS SHOWN ON THE CITY OF PORTSMOUTH RECORDS MAP 101 - LOT 24
  - 2) OWNER OF RECORD  
DAVID J. & VASILIA TOOLEY  
166 NEW CASTLE AVENUE  
PORTSMOUTH, NH 03804  
4129/200
  - 3) PARCEL IS 100' IN A FULLY MAINTAINED FIRM AS SHOWN ON FIRM PANEL 101/2002702E LATELY MAY 17, 2007
  - 4) EXISTING LOT AREA  
3,424.21  
0.0000 ACRES
  - 5) PARCEL IS LOCATED IN THE CLASS B ZONING DISTRICT
  - 6) MINIMUM REQUIREMENTS  
MIN LOT AREA: 10,000 S.F.  
MINIMUM SETBACK:  
FRONT: 10'  
SIDE: 5'  
REAR: 5'  
MINIMUM ELEVATION: 100'  
MAXIMUM STRUCTURAL HEIGHT: 35'  
MAXIMUM STRUCTURE COVERAGE: 50%  
MAXIMUM FLOOR SPACE: 40%
  - 7) PARCEL IS SURVEYED BY MONROE, SERRA AND BATES
  - 8) THE PURPOSE OF THIS PLAN IS TO SHOW THE LOCATION OF A PROPOSED LICENSE IMPROVEMENT TO THE LOT 24 IN THE CITY OF PORTSMOUTH
  - 9) DATUM: 1929 MEAN SEA LEVEL  
REFERENCE: TRIANGULAR AT MARSHY B. MONROE  
SHEETS (DEAN MAP) ELEV. 11.00'
  - 10) SEE EXISTING LICENSE PROCESSED AT FILE 97471004

NO.	DESCRIPTION	DATE
1	ISSUED FOR COMMENT	11/2/95

**LICENSE PLAN**  
**TAX MAP 101 - LOT 24**  
OWNER  
**DAVID J. TOOLEY & VASILIA TOOLEY**  
166 NEW CASTLE AVENUE  
CITY OF PORTSMOUTH  
COUNTY OF ROCKINGHAM  
STATE OF NEW HAMPSHIRE

SCALE: 1" = 40'

11/2/95



### 13. 17 Hunking Street

- Recommended Approval

**Background:** The applicant is seeking approval for the installation of ventilation piping for new furnace.

**Staff Comment:** Recommended Approval

#### **Stipulations:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

## LUHD-302

Historic District Commission Work Session or Administrative Approval Application

**Status:** Active

**Date Created:** Mar 31, 2021

### Applicant

Katherine Cook  
cookkc@gmail.com  
17 Hunking Street  
Portsmouth, NH 03801  
603-502-6454

### Location

17 HUNKING ST  
Portsmouth, NH 03801

### Owner:

COOK-PODRASKY FAMILY TRUST &  
PODRASKY E J JR & COOK K C TRUSTEES  
17 HUNKING ST PORTSMOUTH, NH 03801

### Application Type

**Please select application type from the drop down menu below**

Administrative Approval

### Project Information

#### Brief Description of Proposed Work

Ventilation pipes installed for new furnace/combi-boiler natural gas unit (replacing broken oil furnace).

#### Description of Proposed Work (Planning Staff)

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### Project Representatives

#### Relationship to Project

Other

**If you selected "Other", please state relationship to project.**



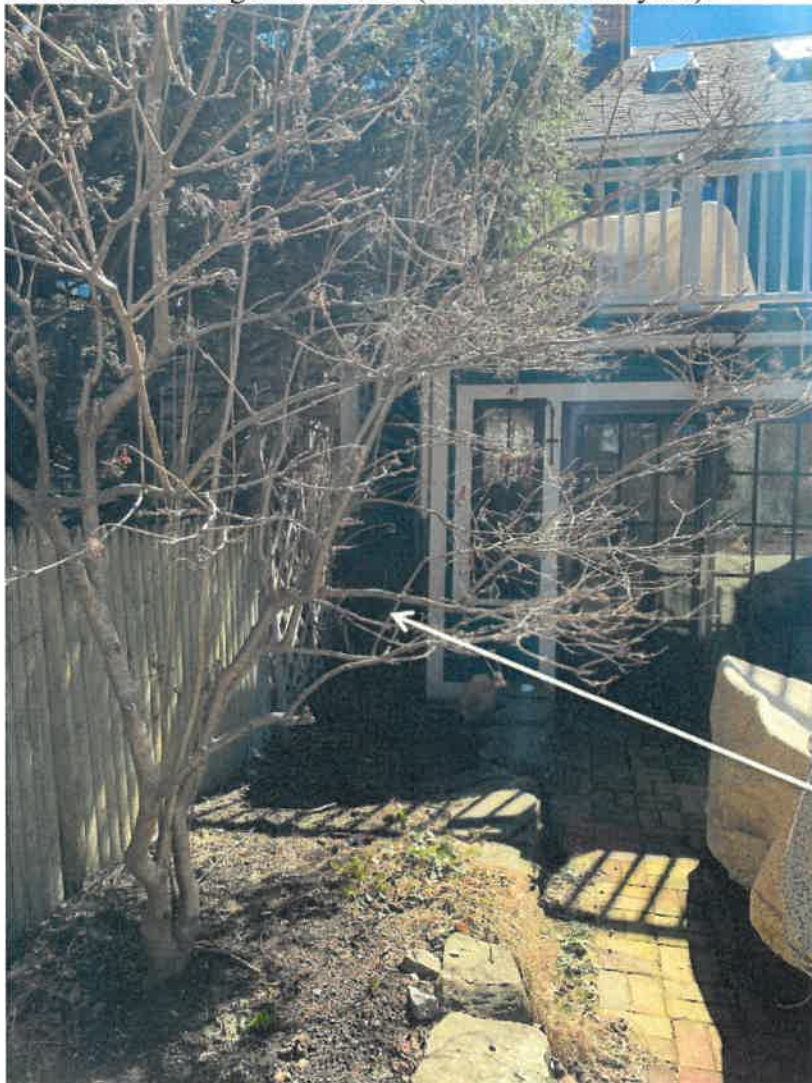
## 17 HUNKING STREET, PORTSMOUTH, NH

We are planning to install a new furnace/combi-boiler system to replace a broken oil burning furnace and a natural gas traditional water heater. The new system will be more energy efficient, and will eliminate the oil tanks and outdated furnace/water heater ventilation (no longer to code) into the fireplace flue currently located in the basement. This will also allow for future restoration of some of the fireplaces in the home. **We request that the Historic District Commission approve all options below, because we are not sure which option will meet city code. The third option is the least desirable, because it is most visible from the street and would require large ventilation pipes to clear the ground. We are hoping one of the first two options meets code.** It is important also to note that the house sits on a hill, so the north side of the basement is above grade allowing for easier ventilation of the furnace system. This is the reason the ventilation on the south side of the home would have to include a few feet of above grade piping.

The city inspector will be reviewing the sites after the HDC approves this application, and we hope to install the new system by the middle of April.

### **Option #1 – Preferred Ventilation Site, Back North Side of Home:**

The ventilation is proposed for the back north corner of the home inside a space between the house and the neighbor's home (view from back yard):



Closer view of space:





This is the proposed location of the furnace vent (not drawn accurately or to scale):



This is the style of piping required in this site (from neighbor's home directly across street, visible from Hunking Street), but the piping would extend out of the corner to avoid any ventilation issues as drawn above:





## **Option #2: Secondary Ventilation Site, North Side of Home**

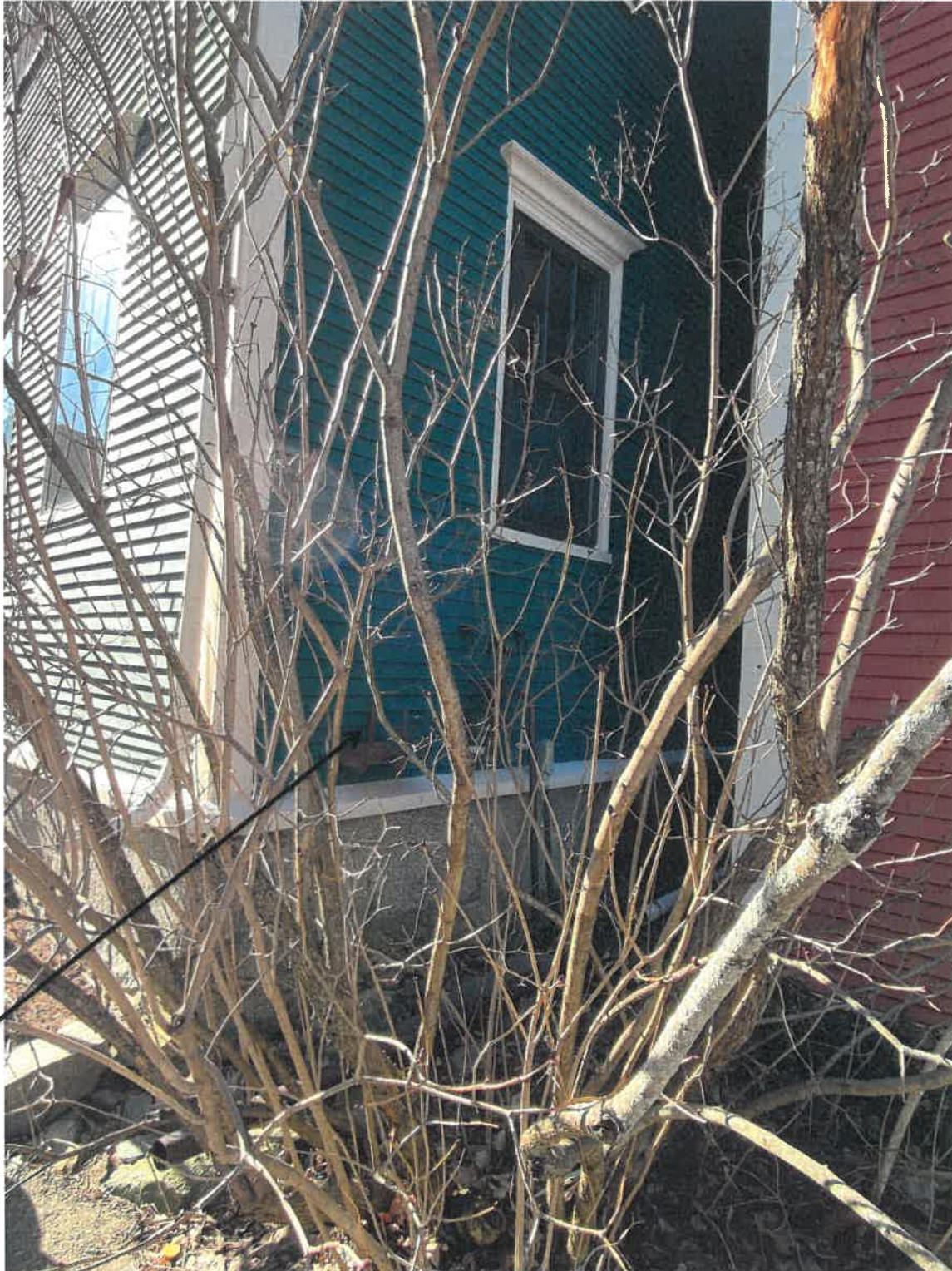
This is our secondary option for ventilation. This is the front north facing side of the house, on the downside of the street. The view of this site is blocked by a lilac bush. It will be blocked from view on the street by a water hose reel.

View from the Street





Closer View from Street (vent would be located approximately where current hose reel is located, the hose reel would move forward on the home to provide cover):

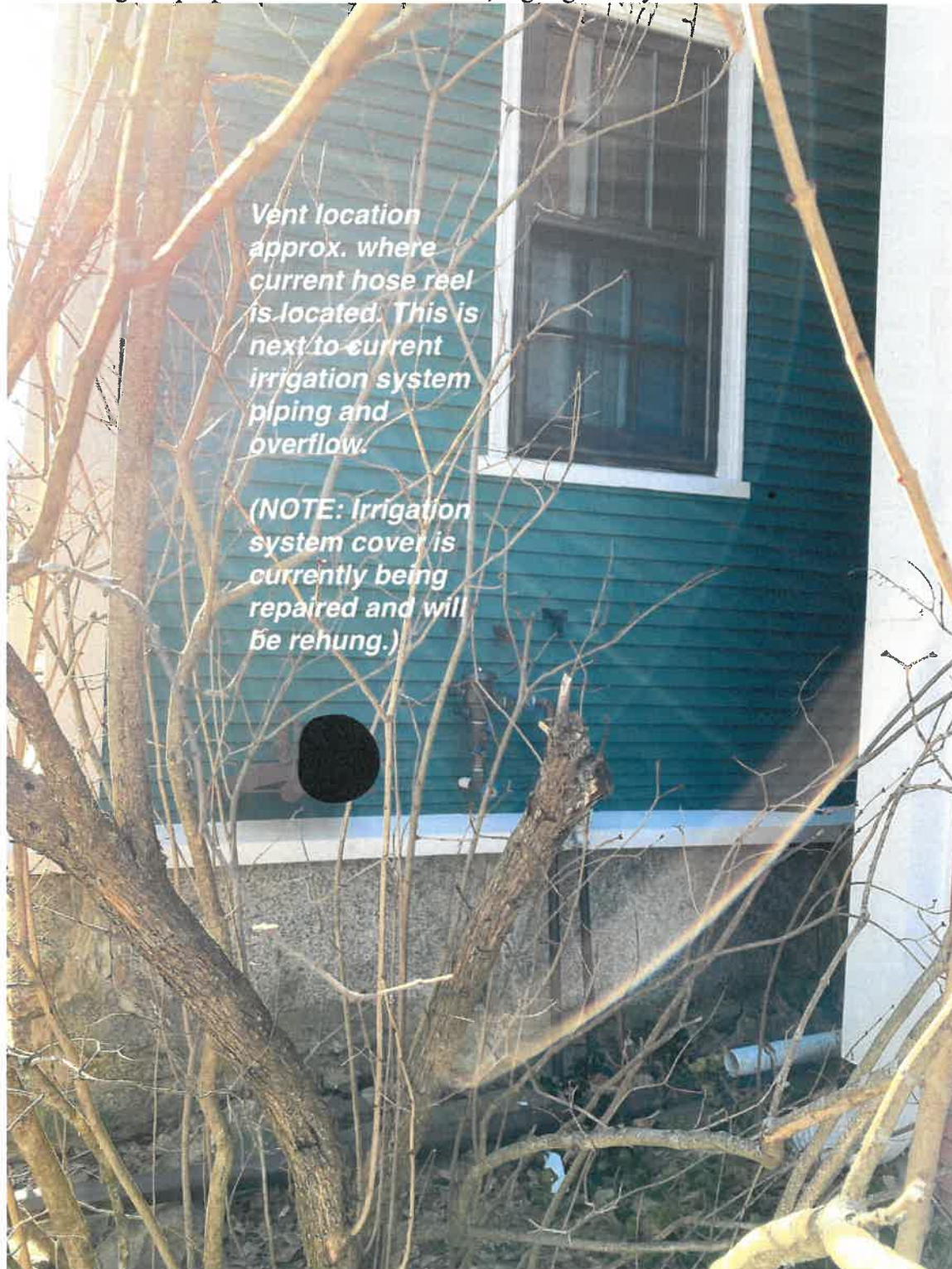




Close Frontal View (vent at location of hose reel, which would move forward to hide vent):



Close image of proposed ventilation location, highlighted by black dot:





At this location, the furnace would be vented using a low-profile vent. While we cannot guarantee the look of the vent, it would be something along the lines of this ventilation style (from Neighbor's House – three houses down):



(from Neighbor's House, two houses down)





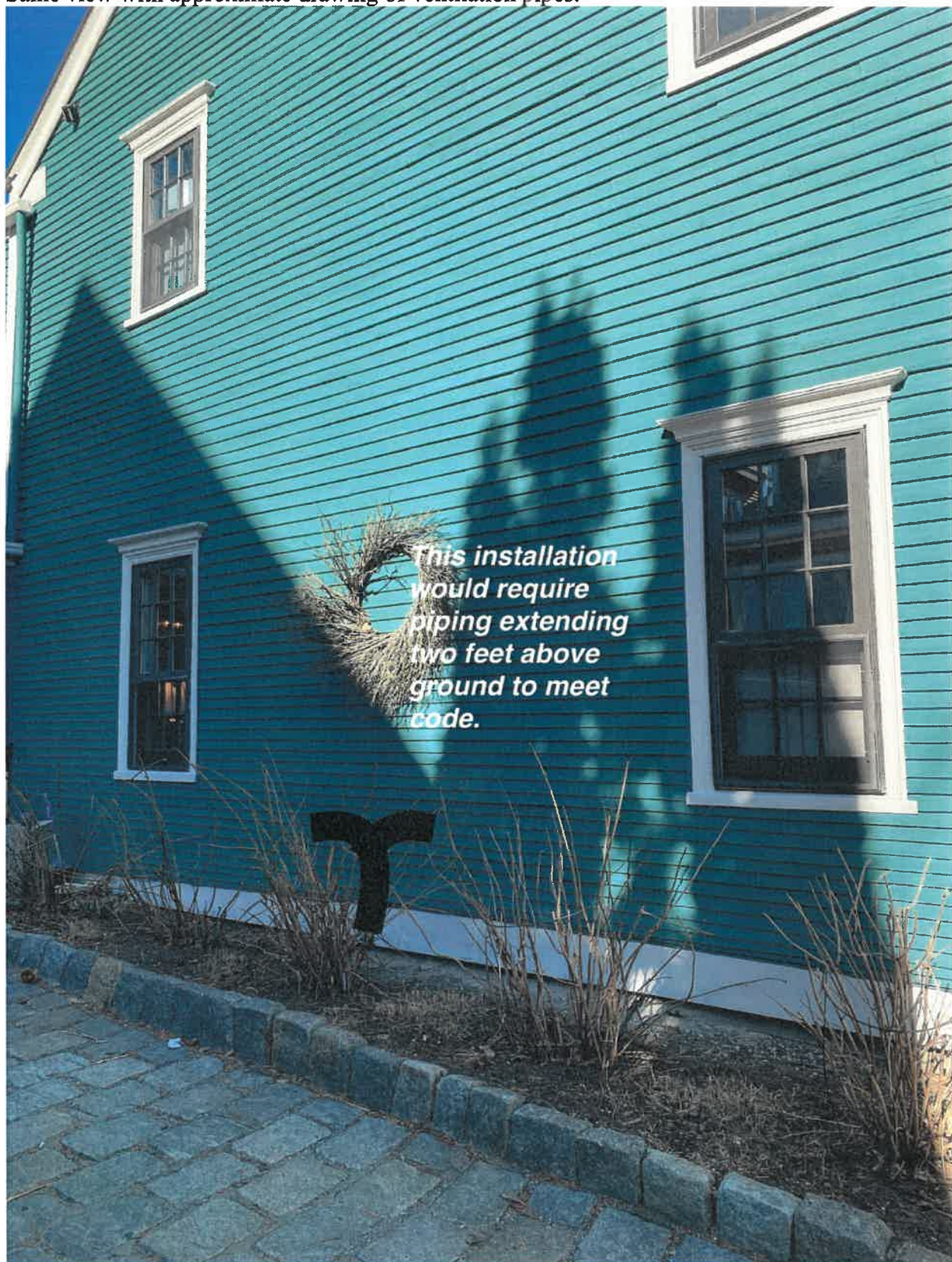
### **Option #3: Ventilation Last Resort, Driveway Side of Home, South Side of Home**

The location is prominent, one of the first locations seen when turning down Hunking Street if the cars are not parked in the driveway. Unfortunately, the ventilation cannot be located towards the front of the home, which is more shielded, because of codes related to placement of ventilation near gas meters and windows. The only available location is directly between the two windows.





Same view with approximate drawing of ventilation pipes:





Again, in this installation, the style of vent would be similar to the ventilation pipes across the street:



**Finale note:** the removal of the gas furnace will also remove the unsightly oil fill pipes on the front of the house (top two). The bottom pipe is a sump pump drain, which is easily camouflaged by plantings in summer.





**14. 99 Marcy Street**

**- Recommended Approval**

**Background:** The applicant is seeking approval for the installation of mechanical equipment (install (3) condensers with screening.

**Staff Comment:** Recommended Approval

**Stipulations:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



City of Portsmouth, NH

04/01/2021

**LUHD-303****Historic District Commission Work Session or Administrative Approval Application****Status:** Active**Date Created:** Mar 31, 2021**Applicant**

Margherita Giacobbi  
margherita@playersring.org  
105 Marcy Street  
Portsmouth, NH 03801  
6032657462

**Location**

99 MARCY ST  
Portsmouth, NH 03801

**Owner:**

THE PLAYERS RING & CITY OF PORTSMOUTH  
105 MARCY ST PORTSMOUTH, NH 03801

**Application Type****Please select application type from the drop down menu below**

Administrative Approval

**Project Information****Brief Description of Proposed Work**

The Players' Ring intends to install Air Conditioning in the building.

The selected system consists of two parts: the first is the installation of 2 Mitsubishi mini-splits inside the theatre, while the second adds A/C capabilities to our existing furnace/ductwork system.

This first part of the work requires the installation of 2 mini-split condensing units that will be hanging from the building wall and will be visible from Water Street, while the first part of the work requires the installation of a square condensing unit on a concrete pad on the opposite side of the building.

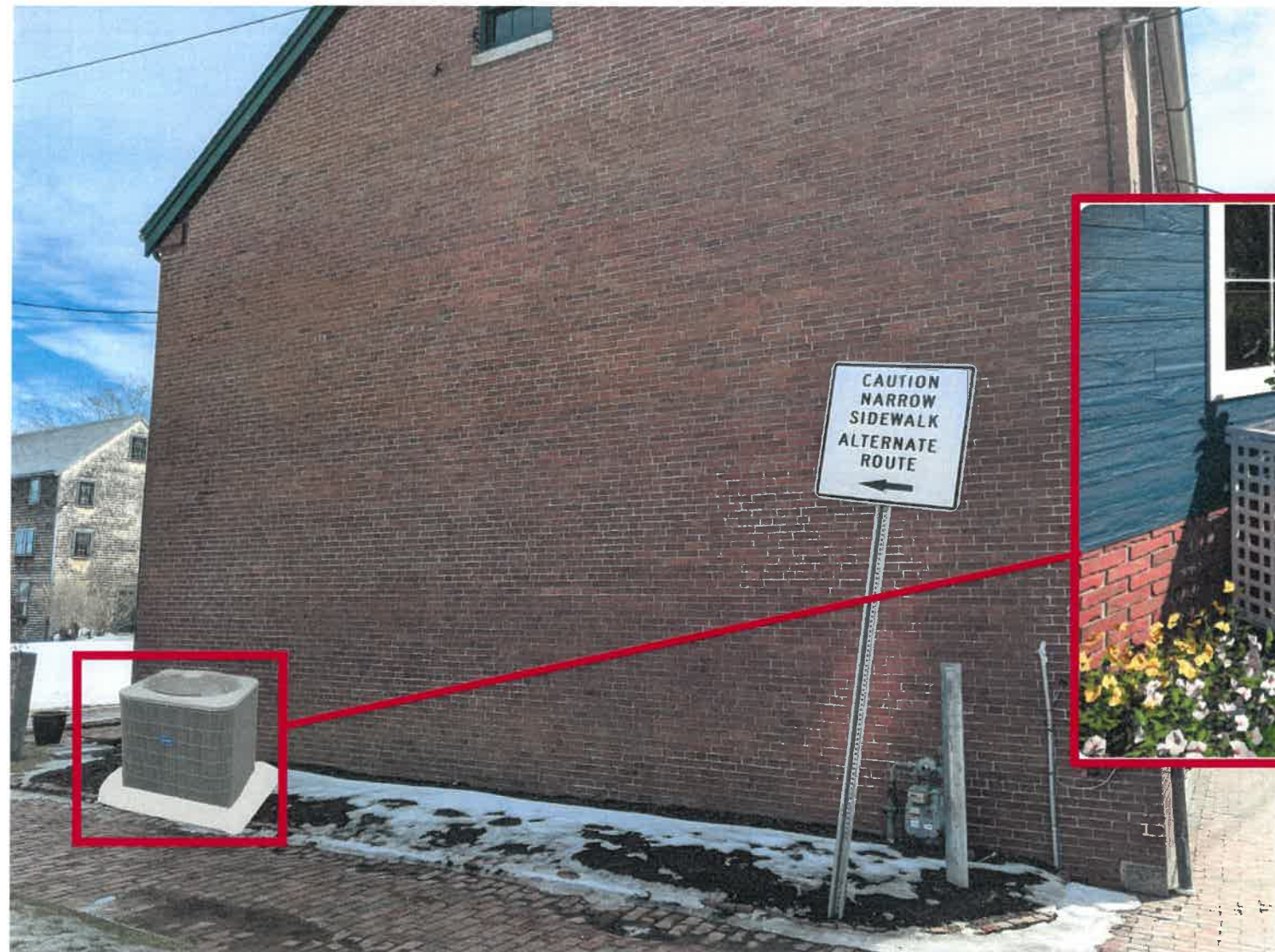
**Description of Proposed Work (Planning Staff)**

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**Project Representatives****Relationship to Project**

Owner





COVER  
(potentially painted  
brick-color)







Option 1  
COVER  
(potentially painted  
brick-color)



Option 2  
EVERGREEN  
PARTITION

