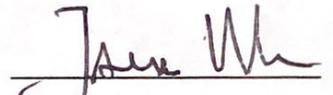


**OWNER'S AUTHORIZATION**

I, James William Woods, Owner/Applicant of 1 Walton Aly, Tax Map 103/Lot27, hereby authorize McHenry Architecture, PLLC to represent me before any and all City of Portsmouth Representatives, Boards and Commission for permitting this project.

Respectfully,

Date: 15<sup>th</sup> August 2022

  
James William Woods

# WALTON ALLEY ADDITION AND GARAGE

HISTORIC DISTRICT COMMISSION PUBLIC HEARING - SEPTEMBER 2022, PORTSMOUTH, NEW HAMPSHIRE

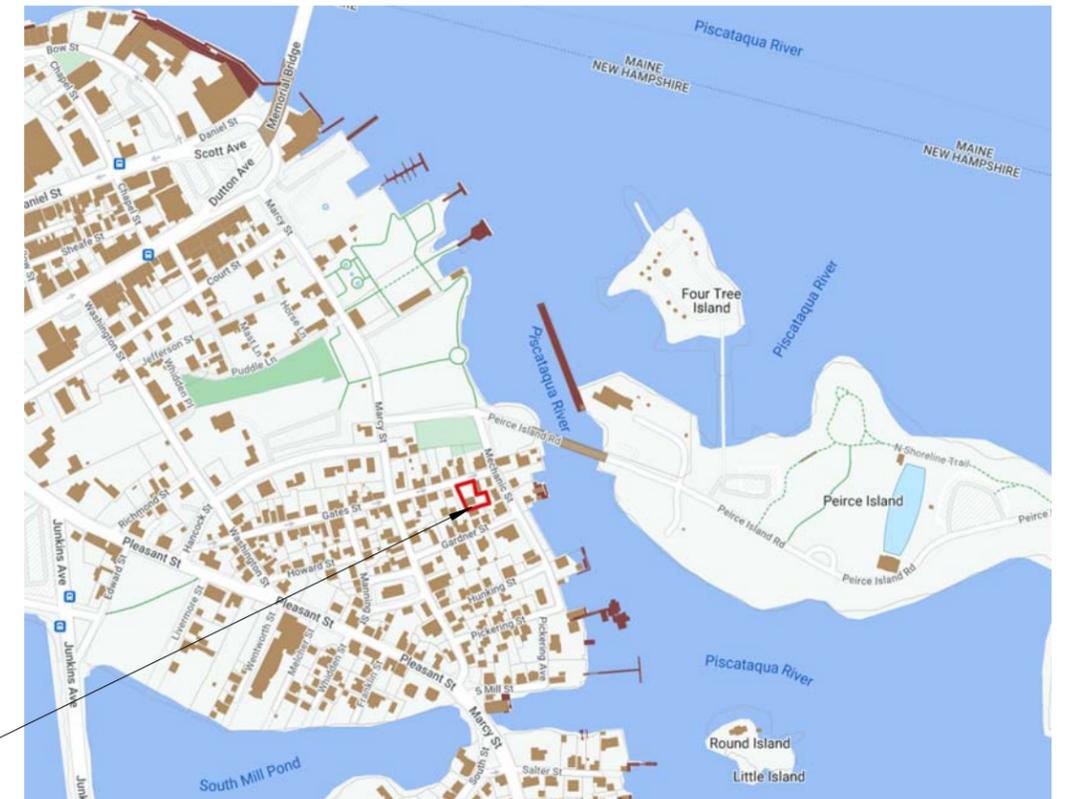
## GENERAL PROJECT DESCRIPTION:

### PROPOSED WORK:

AS PART OF A COMPREHENSIVE OVERALL RENOVATION PROJECT, JAMES WOODS AND ANNEKE MEINARDI ("WOODS") INTEND TO CONSTRUCT A 8' X 14' ADDITION TO THE REAR OF THE EXISTING HOME. THE FIRST FLOOR WILL HOLD A POWDER ROOM AND MUDROOM, WITH A FULL BATH ON THE 2ND FLOOR. THE EXISTING GRAVEL DRIVEWAY WILL BE LENGTHENED AND COPOSED OF COBBLESTONE/ RIVERSTONE, LEADING TO A NEW 12' X 18' DETACHED ONE-STORY GARAGE WITH RELATED LANDSCAPING IMPROVEMENTS LOCATED NEXT TO AN EXISTING 6 FOOT STOCKADE FENCE, WHICH WILL BE REPLACED WITH A NEW FENCE. WINDOWS AND A DOOR WILL BE PLACED IN THE LEFT WALL OF THE GARAGE. NO WINDOWS OR DOORS WILL BE LOCATED ON THE RIGHT SIDE OR REAR. THE EXPOSED CONCRETE FOUNDATION OF THE GARAGE WILL BE COVERED WITH A NATURAL STONE VENEER, IMPROVING IT ASTHETICALLY AND MORE IN KEEPING WITH THE LOOK OF HISTORICAL FOUNDATIONS. WHILE THE REAR ADDITION TO THE HOME IS COMPLETELY COMPLIANT, THE GARAGE REQUIRES RELEIF FROM SIDE AND REAR YARD SETBACK REQUIREMENTS.

### ASIDE FROM THE ADDITION AND GARAGE, THE COMPREHENSIVE RENNOVATION PROJECT INCLUDES:

- REPAIR AND REPLACE THE EXISTING WOOD CLAPBOARD SIDING.
- RESTORE AND REPLACE THE EXISTING WOOD DOUBLE HUNG WINDOWS.
- REMOVE EXISTING SKYLIGHTS ON THE HOUSE ROOF.
- REPLACE EXISTING ASPHALT SHINGLES WITH CEDAR SHINGLES.
- RENOVATE HOME, EXTEND DRIVEWAY WITH COBBLE STRIPS / CENTERED RIVERSTONE.
- CLEAN UP/ LANDSCAPE THE GROUNDS.



1 WALTON ALLEY  
PORTSMOUTH, NH 03801

## GRAPHIC KEY

- : EXISTING
- : TO BE REMOVED
- : PROPOSED

- DOOR NUMBER
- WINDOW TYPE
- KEYNOTE
- LIGHT FIXTURE TAG

## DIMENSION KEY

- XX' - XX" DIMENSION FROM FINISH FACE TO FINISH FACE
- XX' - XX" DIMENSION FROM FACE OF STUD TO FACE OF STUD

## SHEET LIST

Sheet Number	Sheet Name
A1	EXISTING PHOTOGRAPHS
A2	PROPOSED SITE PLAN
A3	PROPOSED ELEVATIONS
A4	ADDITION PLANS
A5	GARAGE PLANS
A6	GARAGE ELEVATION
A7	GARAGE ELEVATION
A8	GARAGE ELEVATION
A9	RENDERED VIEWS
A10	TYP PROFILES
A11	WINDOW AND DOOR SCHEDULE
A12	PRODUCT DATA



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**WALTON ADDITION**

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**COVER**

HDC PUBLIC HEARING

**McHENRY ARCHITECTURE**

4 Market Street  
Portsmouth, New Hampshire

**C**

08/17/2022

McHA: RD / MG / JD

NOT TO SCALE



EXISTING PHOTOGRAPH FROM WALTON ALLEY



EXISTING PHOTOGRAPH DOWN DRIVEWAY



EXISTING PHOTOGRAPH FROM GATES STREET



EXISTING PHOTOGRAPH FROM BACK YARD

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# WALTON ADDITION

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

# EXISTING PHOTOGRAPHS

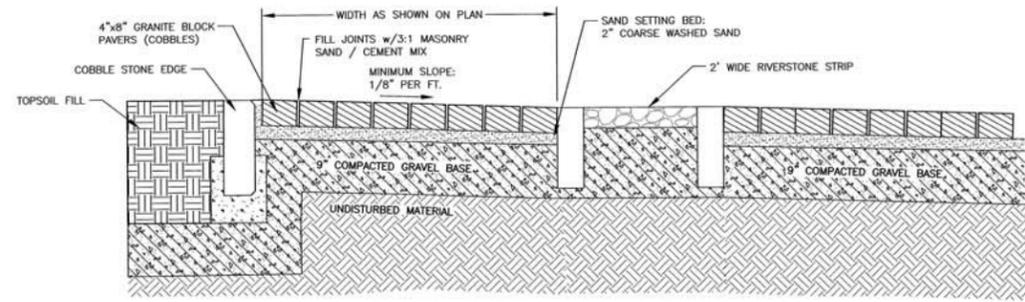
HDC PUBLIC HEARING

# McHENRY ARCHITECTURE

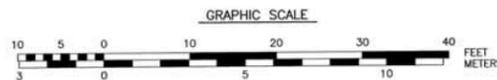
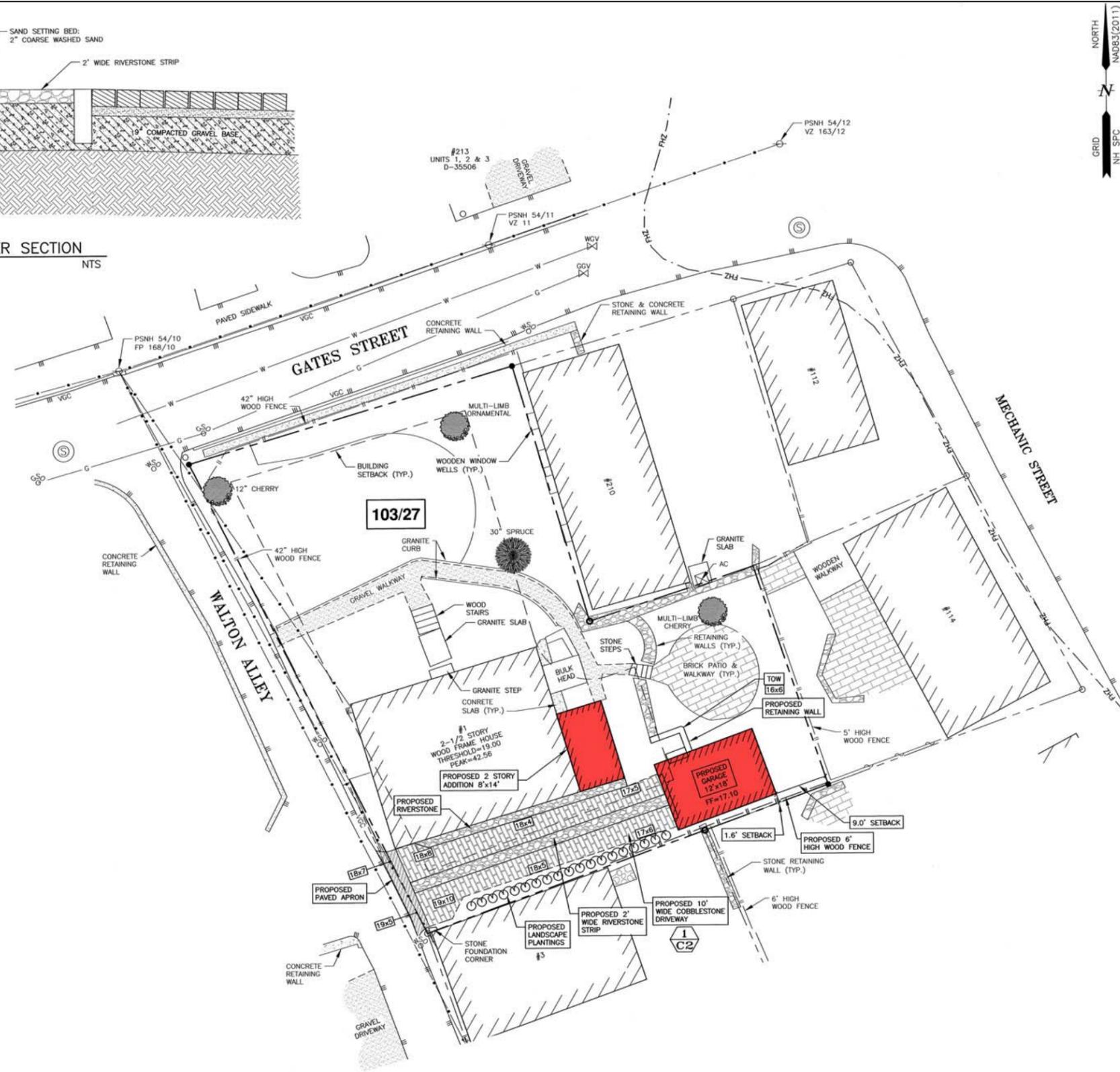
4 Market Street  
Portsmouth, New Hampshire

A1

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McHA: RD / MG / JD  
NOT TO SCALE



1  
C2 COBBLE PAVER SECTION  
NTS



NOTE: SITE PLAN BY AMBIT ENGINEERING, INC.

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# WALTON ADDITION

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

# PROPOSED SITE PLAN

HDC PUBLIC HEARING

# McHENRY ARCHITECTURE

4 Market Street  
Portsmouth, New Hampshire

A2

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NOT TO SCALE



EXISTING PHOTOGRAPH FROM WALTON ALLEY

- REPLACE EXISTING ASPHALT SHINGLES WITH EASTERN WHITE CEDAR SHINGLES.
- REMOVE AND INFILL EXISTING SKYLIGHTS ON THE ROOF.
- REPAIR AND REPLACE WOOD CLAPBOARD SIDING.
- RESTORE OR REPLACE WOOD DOUBLE HUNG WINDOWS.
- EXTEND DRIVEWAY WITH COBBLE STRIPS / CENTERED RIVERSTONE, SEE CIVIL PLAN



EXISTING PHOTOGRAPH FROM GATES STREET



RENDERED VIEW OF BACK YARD

- 8' X 14' REAR ADDITION.
- REPAIR AND REPLACE WOOD CLAPBOARD SIDING.
- RESTORE OR REPLACE WOOD DOUBLE HUNG WINDOWS.
- ADD EXTERIOR GARAGE ADDITION TO THE END OF EXISTING DRIVEWAY.

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# WALTON ADDITION

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

# PROPOSED ELEVATIONS

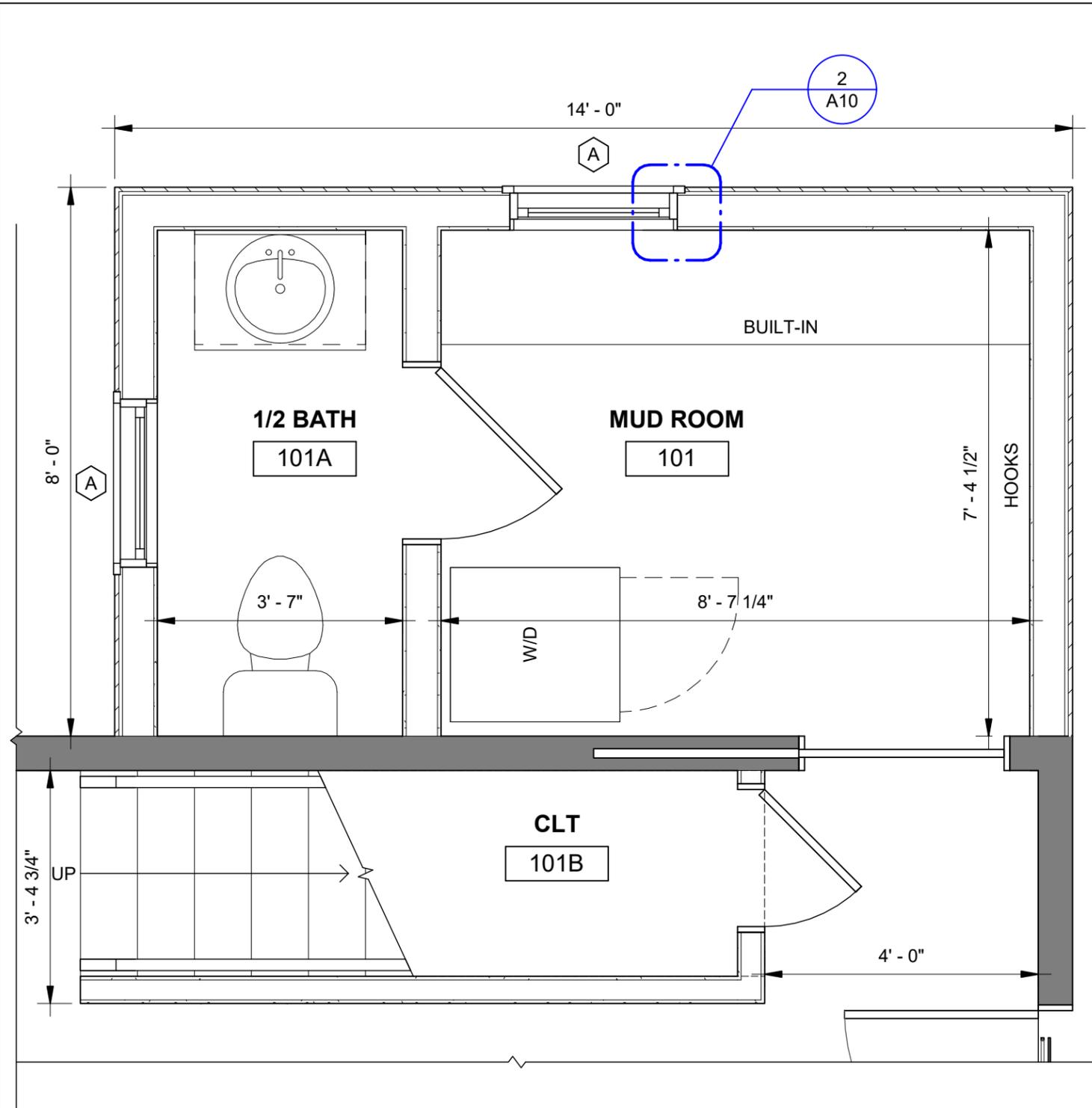
HDC PUBLIC HEARING

McHENRY ARCHITECTURE

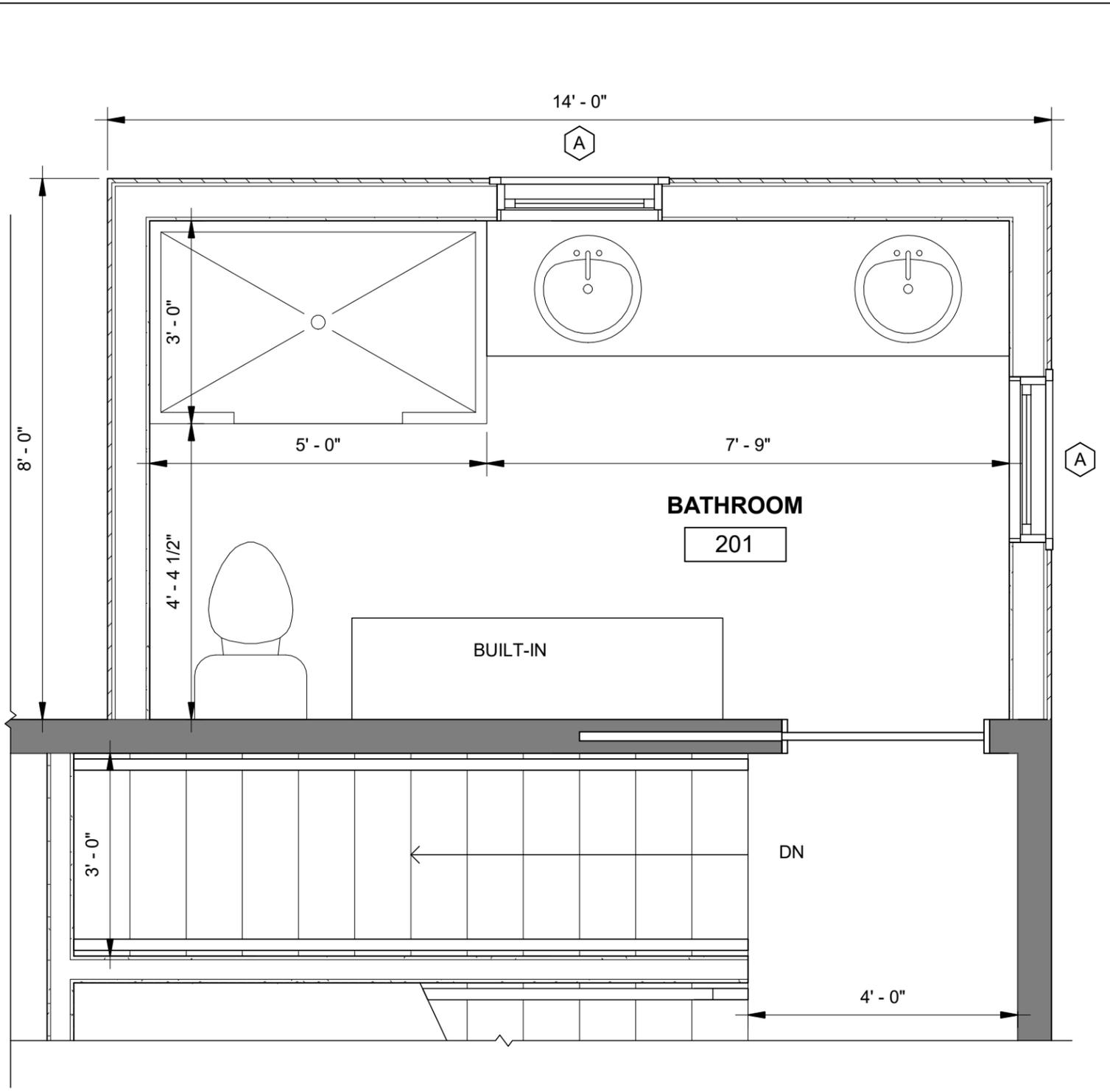
4 Market Street  
Portsmouth, New Hampshire

A3

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NOT TO SCALE



1 FIRST FLOOR  
1/2" = 1'-0"



2 SECOND FLOOR  
1/2" = 1'-0"

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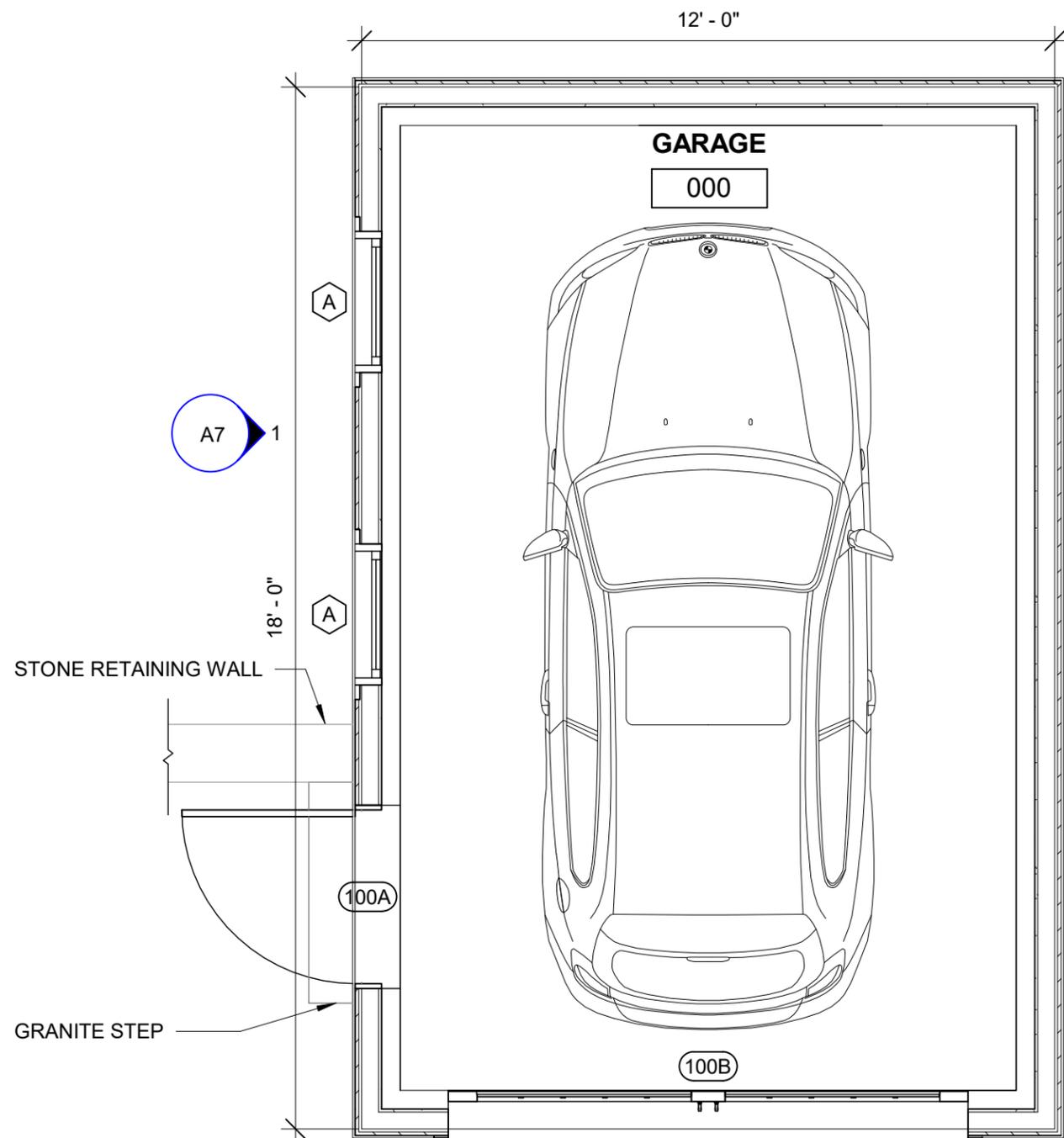
**WALTON ADDITION**  
1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**ADDITION PLANS**  
HDC PUBLIC HEARING

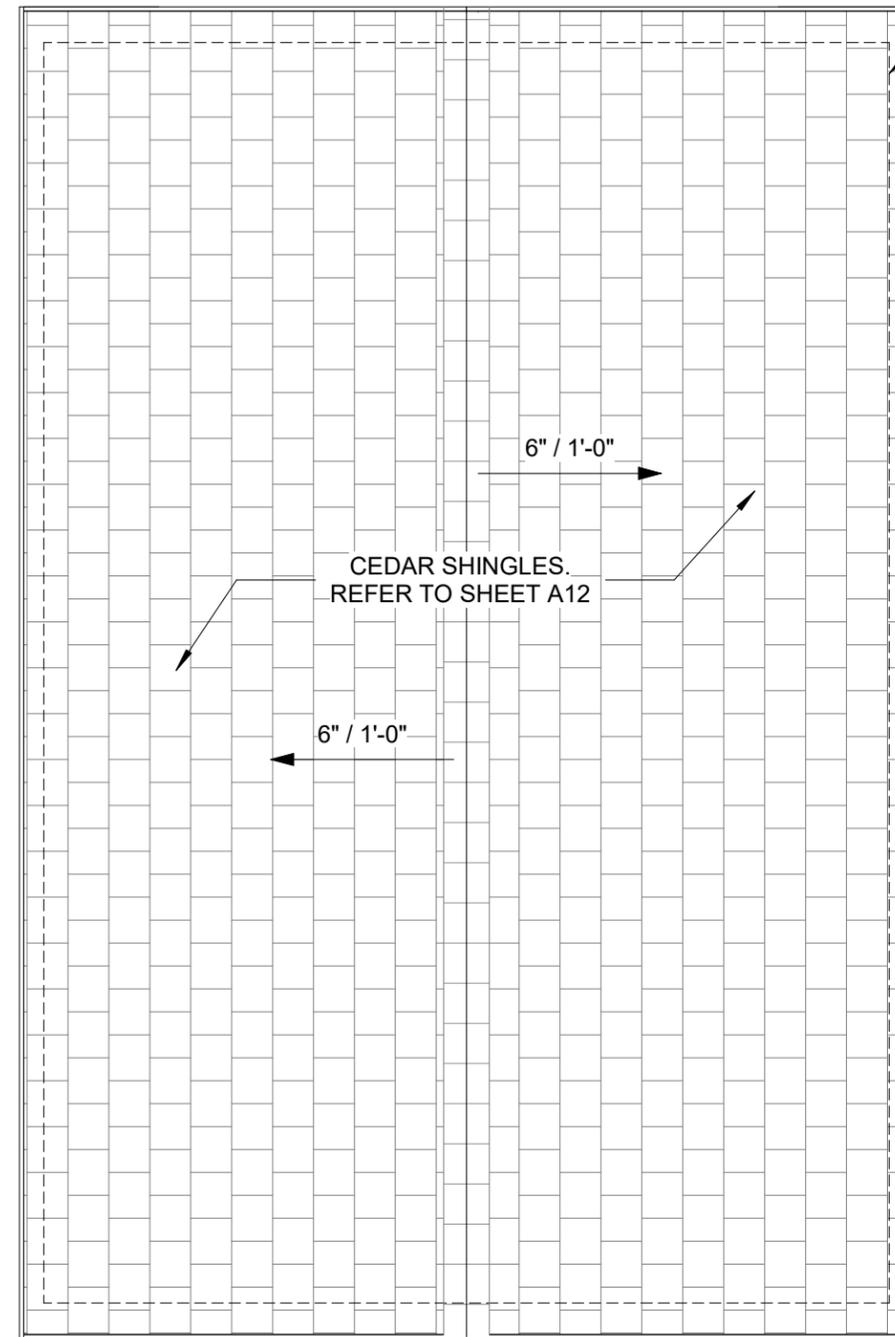
**McHENRY ARCHITECTURE**  
4 Market Street  
Portsmouth, New Hampshire

**A4**

08/17/2022  
McHA: RD / MG / JD  
Scale: 1/2" = 1'-0"



1 FIRST FLOOR - GARAGE  
3/8" = 1'-0"



2 ROOF PLAN  
3/8" = 1'-0"

DASHED LINE REPRESENTS  
EXTERIOR FINISHFACE  
OF WALL BELOW.

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**WALTON ADDITION**

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**GARAGE PLANS**

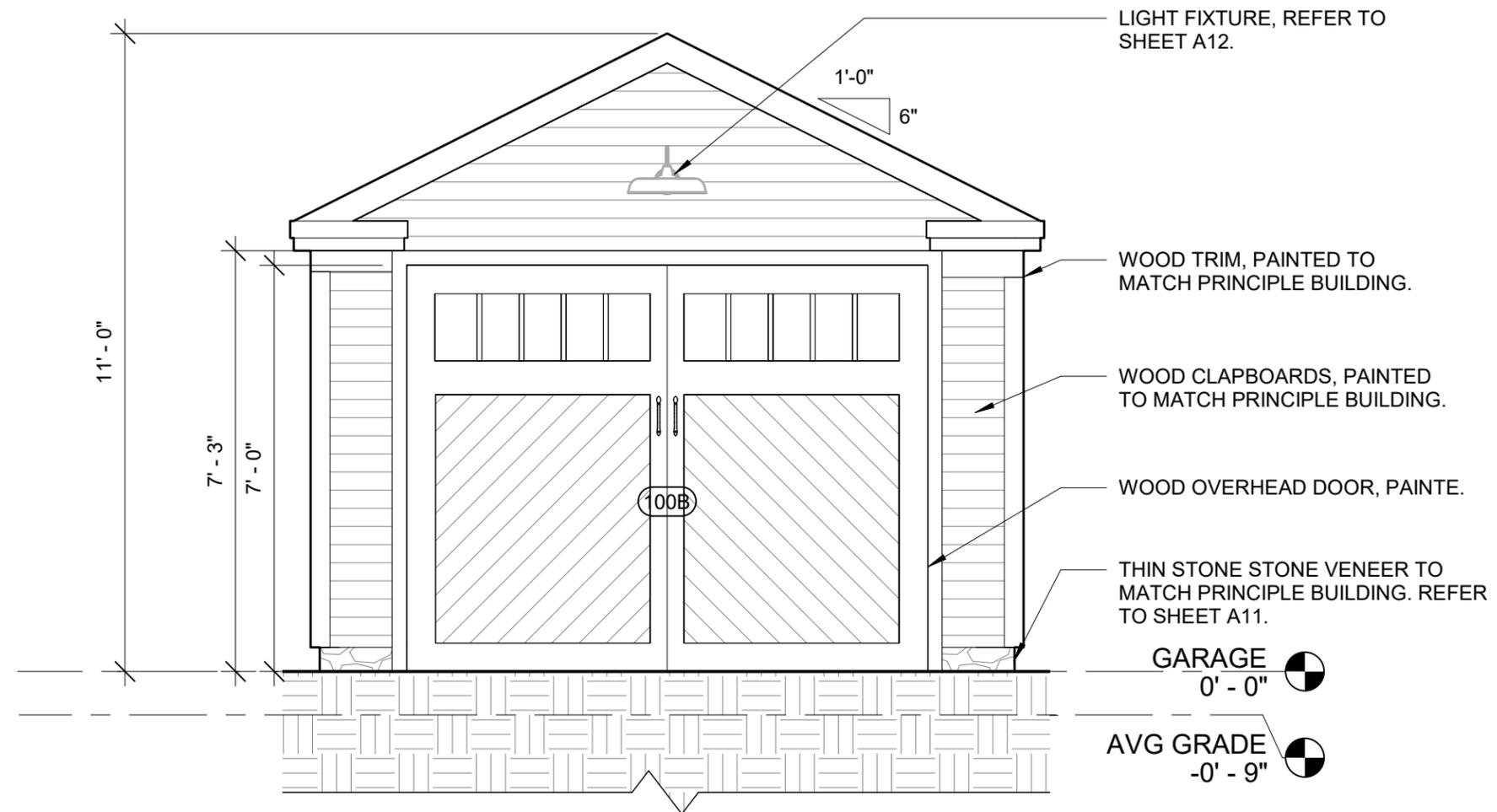
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**McHENRY ARCHITECTURE**

4 Market Street  
Portsmouth, New Hampshire

**A5**

08/17/2022  
McHA: RD/MG/JD  
Scale: 3/8" = 1'-0"



1 WEST ELEVATION  
3/8" = 1'-0"

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**WALTON ADDITION**

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**GARAGE ELEVATION**

HDC PUBLIC HEARING

**McHENRY ARCHITECTURE**

4 Market Street  
Portsmouth, New Hampshire

**A6**

08/17/2022

McHA: RD/MG/JD

Scale: 3/8" = 1'-0"



1 NORTH ELEVATION  
3/8" = 1'-0"

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**WALTON ADDITION**

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**GARAGE ELEVATION**

HDC PUBLIC HEARING

**McHENRY ARCHITECTURE**

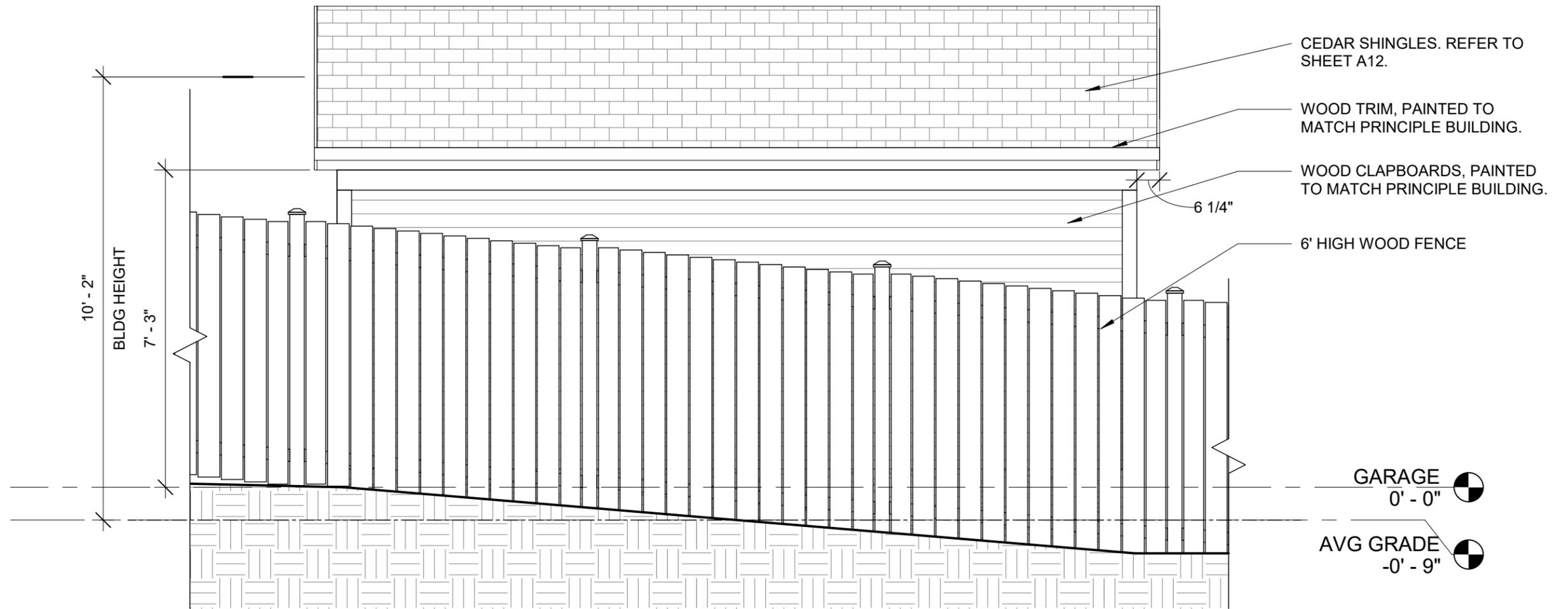
4 Market Street  
Portsmouth, New Hampshire

**A7**

08/17/2022

McHA: RD/MG/JD

Scale: 3/8" = 1'-0"



1 SOUTH ELEVATION  
3/8" = 1'-0"

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**WALTON ADDITION**

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**GARAGE ELEVATION**

HDC PUBLIC HEARING

**McHENRY ARCHITECTURE**

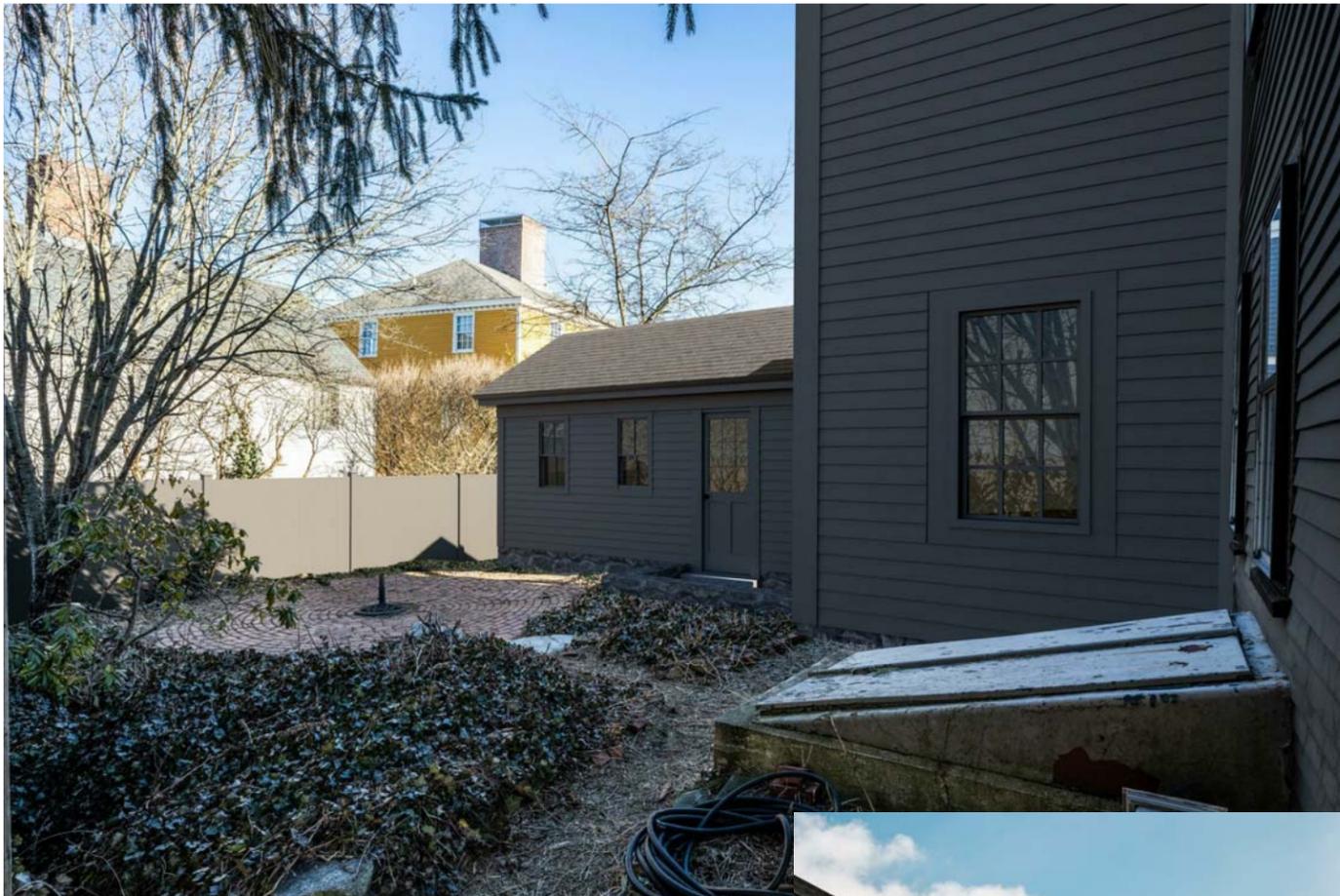
4 Market Street  
Portsmouth, New Hampshire

**A8**

08/17/2022

McHA: RD/MG/JD

Scale: 3/8" = 1'-0"



REAR YARD VIEW



STREET VIEW



REAR YARD VIEW

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**WALTON ADDITION**

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**RENDERED VIEWS**

HDC PUBLIC HEARING

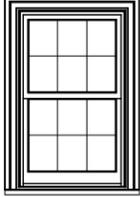
**McHENRY ARCHITECTURE**

4 Market Street  
Portsmouth, New Hampshire

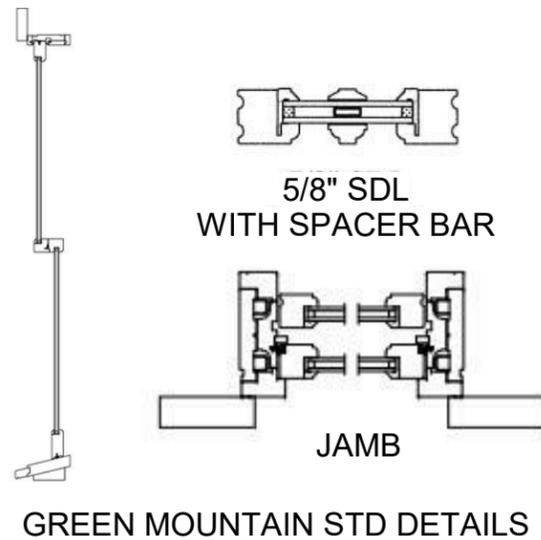
**A9**

REV 7/18/22 08/17/2022  
McHA: RD / MG / JD  
NOT TO SCALE

**WINDOW TYPE**



**TYPE A:**  
DOUBLE HUNG WINDOW TO MATCH EXISTING. 6 OVER 6.

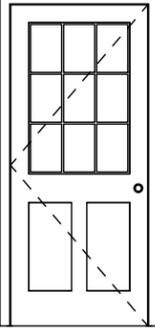
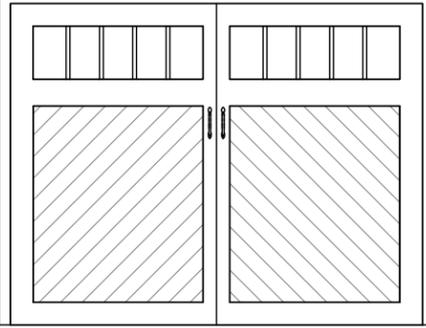


WINDOW SCHEDULE			
Type Mark	Nominal Width	Nominal Height	Comments
A	2' - 6"	4' - 0"	GREEN MOUNTAIN (VIF - MATCH EXISTING), TRIM TO REMAIN, REPAIR AND REPLACE IN KIND.

WINDOW RESTORATION/REPLACEMENT OPTIONS

1. RESTORE EXISTING WOOD DOUBLE HUNG WINDOWS ON THE GATES STREET & WALTON ALLEY FACADES. REPLACE REMAINING WINDOWS WITH GREEN MOUNTAIN WINDOWS.
2. REPLACE ALL DOUBLE HUNG WINDOWS WITH GREEN MOUNTAIN WINDOWS. INSULATED GLASS AND HALF-SCREENS

**DOOR TYPES**

**TYPE A:**  
HALF LITE TWO PANEL WOOD DOOR.

**TYPE B:**  
CUSTOM WOOD GARAGE DOOR, PAINTED.

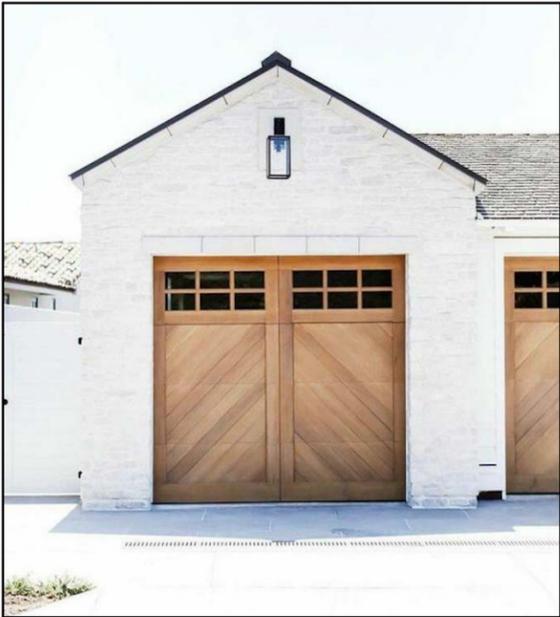


IMAGE OF SIMILAR DOOR

DOOR SCHEDULE						
Mark	Size		Door			Comments
	Height	Width	Type Mark	Material	Finish	
100B	7' - 0"	9' - 0"	B	WOOD	PAINT	



REPLACEMENT STORM WINDOWS

- ALLIED, HOL-OP - OPERATING HISTORIC ONE LITE ALUMINUM STORM WINDOW
- TOP IS FIXED WITH BOTTOM SLIDING STORM AND HALF SCREEN
- TO BE FITTED ON EXISTING RESTORED WINDOWS.

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Gooseneck Barn Light Warehouse Outdoor Wall  
Sconce - B-1 Arm  
By Hi-Lite



Gooseneck Barn Light Warehouse Outdoor Wall Sconce - B-1 Arm  
By Hi-Lite

Product Options

Size: 17 Inch,  
Finish: Black

Details

Material: Metal  
UL Listed Wet  
Made In USA



Dimensions

17 Inch Option Arm: Length 14.5", Height 6",  
Thickness 0.5"  
17 Inch Option Canopy: Diameter 4.75"  
17 Inch Option Fixture: Height 11", Diameter 17"

Lighting

Lamp Type	Incandescent
Total Lumens	2850.0
# of Bulbs	1 (Not Included)
Bulb Type	200W A23 E26
Volts	120
Color Temp	2700 (Warm)
Average Lifespan	2500.00
CRI	100
Equivalent Halogen, CFL or LED Bulb Can Be Used	Yes

Notes:

Prepared by:

Prepared for:  
Project:  
Room:  
Placement:  
Approval:

Additional Details

Product URL:  
<https://www.lumens.com/gooseneck-barn-light-warehouse-outdoor-wall-sconce---b-1-arm-by-hi-lite-HILY1455601269.html>  
Rating: UL Listed Wet

ITEM#: HILY1455601269



Created August 3rd, 2022



EASTERN WHITE CEDAR  
SHINGLES EXAMPLE

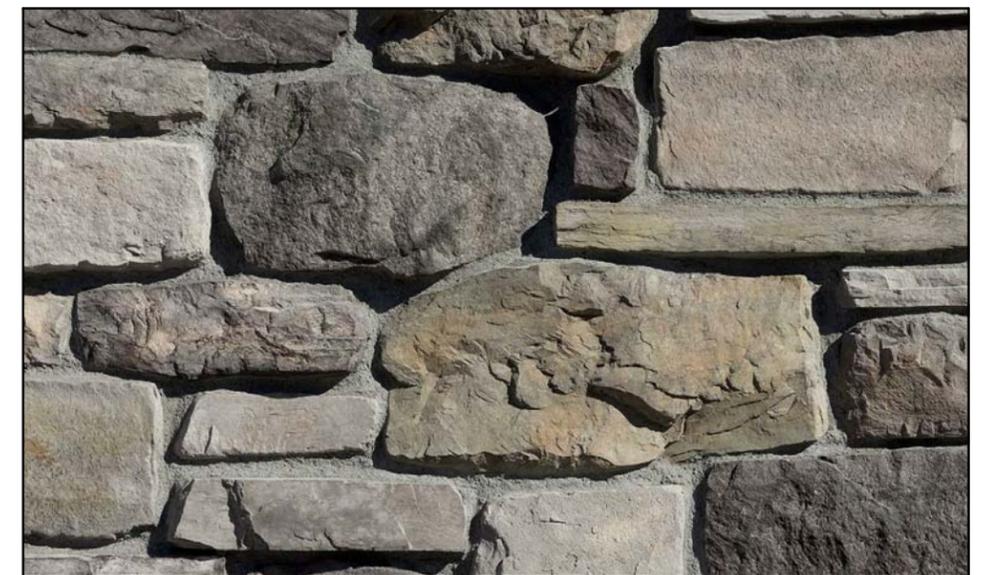


AGED EASTERN WHITE CEDAR  
SHINGLES EXAMPLE

POTENTIAL STONE VENEER OPTIONS



CULTURED STONE: DRESSED FIELDSTONE



ELDORADO STONE: CYPRESS RIDGE

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**WALTON ADDITION**

1 WALTON ALLEY  
PORTSMOUTH, NH 03801

**PRODUCT DATA**

HDC PUBLIC HEARING

**McHENRY ARCHITECTURE**

4 Market Street  
Portsmouth, New Hampshire

**A12**

08/17/2022  
McHA: RD / MG / JD  
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## Green Mountain Window and Door Co.

### Unit Specifications

#### **Frame:**

- Pine wood interior and exterior standard. Options include South American Mahogany, Philippine Mahogany (Marenti), Douglas Fir, Western Red Cedar, Teak, or other. Optional species can be specified for specific parts only (sill, sill nose, casing, etc.)
- Frame width: 4 9/16"
- Frame thickness: 5/8"
- Sill: 14 degree bevel, 1" standard sill nose. Optional 2" "historic" sill nose
- Pine exterior parts are dipped in a water repellent preservative.

#### **Sash:**

- Pine wood interior and exterior standard. Options include South American Mahogany, Philippine Mahogany (Marenti), Douglas Fir, Western Red Cedar, Teak, or other.
- Check rail thickness: 1 5/8"
- Stile and top & bottom rail thickness: 1 1/4"
- Operating sash tilt in for easy cleaning. The top sash of reverse cottage windows can not be tilted in.
- Pine exterior parts are dipped in a water repellent preservative.

#### **Interior and exterior finish:**

- Bare wood interior white primed exterior standard
- Pre-finished exterior options. See your Green Mountain Window Representative for colors and availability.

#### **Hardware:**

- Standard sash lock and keeper: Truth cam lock in Bronze. Option finish: white.
- Upgraded sash lock and keeper: Colonial cam lock in Oil Rubbed Bronze, Nickel, Polished Chrome or Brass. Arts & Crafts pivot lock available in Brass only.
- Sash lift: Truth sash lift in Bronze. Option: finish to match lock choice.
- Balance system: block and tackle balance

#### **Weatherstrip:**

- Foam filled bulb on weatherstrip on top rail, bottom rail, and side jambs. Jamb weatherstrip is light beige.
- Leaf weatherstrip on head parting stop.

#### **Jamb extension:**

- Applied jamb extension available to match virtually any wall thickness
- Standard thickness: 21/32"

#### **Insect Screens:**

- Aluminum framed full screen with charcoal fiberglass mesh screening standard. Optional surround colors: Dark Bronze, Tan or Green. Optional mesh: charcoal aluminum, bright aluminum, or Gore Enlighten high visibility.
- Optional wood screen: full or half screens with charcoal fiberglass mesh screening. Species and finish to match window.
- Optional mesh: charcoal aluminum, bright aluminum, bright bronze, or Gore Enlighten high visibility.

#### **Glass:**

- Double strength glass sealed with Gray Duraseal warm edge spacer. Standard overall glass thickness on wood exterior units is 1/2" with wood exterior glazing bead. Optional 11/16" glass thickness with white vinyl exterior glazing bead.
- Glazing method: silicone wet seal interior and exterior
- Glazing types: single glass, insulating glass
- Option for black Duraseal warm edge spacer
- Standard insulating glass options include: (see NFRC ratings for performance comparison)
  - 1/2" regular insulating glass
  - 1/2" Low E with Argon gas fill
  - 1/2" Low E with Krypton gas fill
  - 11/16" regular insulating glass (white vinyl glazing bead on exterior)
  - 11/16" Low E with Argon (white vinyl glazing bead on exterior)
- Other glass options: tempered, laminated, obscure, mouth blown restoration (wavy), tinted, UL rated, any specified

#### **Optional Divided Lites:**

- Options include: 5/8" white flat airspace grille, 5/8" white profiled airspace grille, 7/8" removable stick grille (interior only), 7/8" removable full surround grille (interior only), 5/8" true divided lite (single glass only), 5/8" simulated divided lite (SDL) with or without spacer bar, 7/8" SDL with or without a spacer and 1 1/4" SDL with or without a spacer bar. Gray SDL spacer is standard with gray SDL tape. Optional black spacer and tape is used when black glass spacer option is chosen.
- See "section details: divided lites for muntin profiles" for standard cuts. Custom configurations are available

# Green Mountain Window and Door Co.

<b>NFRC Values</b>						
<b>Glazing Type and Thickness</b>	<b>U-Factor</b>	<b>CR-Value</b>	<b>SHGC</b>	<b>VT</b>	<b>R-Value</b>	
Single Glass	.86	12	.63	.66	1.16	
Single Glass with TDL	.86	12	.57	.58	1.16	
Single Glass with TDL and Ext. EP	.47	44	.50	.53	2.13	
Single Glass with TDL and Ext. Low E EP	.40	32	.44	.49	2.50	
Single Glass with TDL and Int. EP	.46	45	.50	.53	2.17	
Single Glass with TDL and Int. Low E EP	.37	32	.44	.49	2.70	
Single Glass with TDL and Storm	.43	-	.50	.53	2.33	
Single Glass with TDL and Low E Storm	.32	-	.43	.49	3.13	
Single Glass with TDL and Laminated Storm	.42	-	.43	.52	2.38	
Single Glass with TDL, Ext. EP and Storm	.30	-	.45	.48	3.33	
Single Glass with TDL, Ext. EP and Low E Storm	.25	-	.39	.44	4.00	
Single Glass with TDL, Ext. Low E EP and Storm	.25	-	.40	.44	4.00	
Single Glass with TDL, Ext. Low E EP and Low E Storm	.21	-	.36	.41	4.76	
Single Glass with TDL, Int. EP and Storm	.30	-	.45	.48	3.33	
Single Glass with TDL, Int. EP and Low E Storm	.24	-	.39	.44	4.17	
Single Glass with TDL, Int. Low E EP and Storm	.25	-	.40	.44	4.00	
Single Glass with TDL, Int. Low E EP and Low E Storm	.21	-	.36	.41	4.76	
<b>1/2" Glass Thickness</b>						
1/2" Clear Insulated	.50	42	.56	.60	2.00	
1/2" Clear Insulated with SDL	.50	42	.50	.53	2.00	
1/2" Clear Insulated with SDL and Spacer	.52	40	.50	.53	1.92	
1/2" Low E / Argon	.35	52	.48	.55	2.70	
1/2" Low E / Argon with SDL	.35	52	.43	.49	2.70	
1/2" Low E / Argon with SDL and Spacer	.37	52	.43	.49	2.50	
1/2" Low E / Krypton	.28	57	.43	.49	3.13	
1/2" Low E / Krypton with SDL	.28	57	.43	.49	3.13	
1/2" Low E / Krypton with SDL and Spacer	.30	57	.43	.49	2.94	
1/2" Low E / Argon with Storm	.26	-	.45	.50	3.85	
1/2" Low E / Argon with SDL and Storm	.26	-	.40	.44	3.85	
1/2" Low E / Argon with SDL, Spacer and Storm	.27	-	.40	.44	3.70	
1/2" Low E / Krypton with Storm	.23	-	.44	.50	4.35	
1/2" Low E / Krypton with SDL and Storm	.23	-	.39	.44	4.35	
1/2" Low E / Krypton with SDL, Spacer and Storm	.24	-	.39	.44	4.17	

NFRC Values, cont'd						
Glazing Type and Thickness	U-Factor	CR-Value	SHGC	VT	R-Value	
1/2" Low E / Argon with Low E Storm	.22	-	.41	.46	4.55	
1/2" Low E / Argon with SDL and Low E Storm	.22	-	.36	.41	4.55	
1/2" Low E / Argon with SDL, Spacer and Low E Storm	.23	-	.36	.41	4.35	
1/2" Low E / Krypton with Low E Storm	.19	-	.40	.46	5.26	
1/2" Low E / Krypton with SDL and Low E Storm	.19	-	.36	.41	5.26	
1/2" Low E / Krypton with SDL, Spacer and Low E Storm	.20	-	.36	.41	5.00	
1/2" Low E / Argon with Low E Laminated Storm	.21	-	.36	.45	4.76	
1/2" Low E / Argon with SDL and Low E Laminated Storm	.21	-	.33	.40	4.76	
1/2" Low E / Argon with SDL, Spacer and Low E Laminated Storm	.22	-	.33	.40	4.55	
1/2" Low E / Krypton with Low E Laminated Storm	.19	-	.36	.45	5.26	
1/2" Low E / Krypton with SDL and Low E Laminated Storm	.19	-	.32	.40	5.26	
1/2" Low E / Krypton with SDL, Spacer and Low E Laminated Storm	.20	-	.32	.40	5.00	
11/16" Glass Thickness						
11/16" Insulated Glass	.46	43	.56	.60	2.17	
11/16" Insulated Glass with SDL	.46	43	.50	.53	2.17	
11/16" Insulated Glass with SDL and Spacer	.46	43	.50	.53	2.17	
11/16" Low E Glass with Argon	.32	55	.48	.55	3.13	
11/16" Low E Glass with Argon and SDL	.32	55	.43	.49	3.13	
11/16" Low E Glass with Argon, SDL and Spacer	.33	55	.43	.49	3.03	

= South

Design Pressure Values are based on a 44" x 60" window (per the industry test standard). Unit #1 is based on our standard interior sill stop. Unit #2 has an optional 3/4" tall sill stop. Many installers apply a 3/4" tall stool cap in the place of our standard sill stop. Overall Design Pressure:

Unit #1 – DP 35

Unit #2 – DP 40

Specific Test Results for ANSI/AAMA/NWDA/I.S.2:

Air Infiltration – ASTM E283

Water Resistance – ASTM E547 Unit #1 5.25 psf

Water Resistance – ASTM E547 Unit #2 6.00 psf

Uniform Structural Load – ASTM E330 Unit #1 22.5 psf

“

Uniform Structural Load – ASTM E330 Unit #2 60 psf

“

Forced Entry Resistance – ASTM F588 Grade 10

Operating Force – ASTM E2068

Deglazing – ASTM E987

Results:

.11 scfm/ft<sup>2</sup>

Pass

Pass

.020 in

Pos

.012 in

Neg

.065 in

Pos

.0005 in

Neg

Pass

17 / 17 lb/f

0%

Allowed:

.30 scfm/ft<sup>2</sup>

No Leakage

No Leakage

.164 in

.164 in

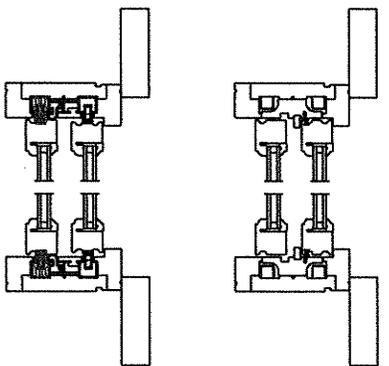
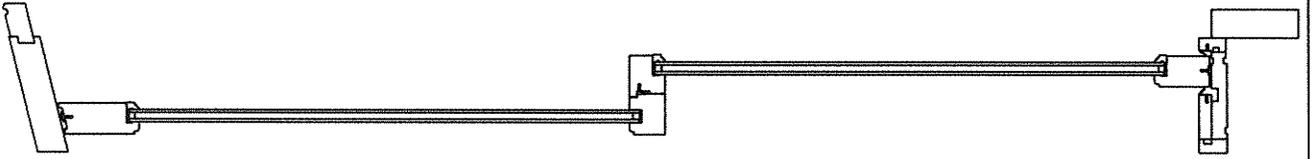
.164 in

.164 in

No Entry

30 lb/f

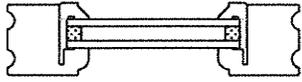
<100%



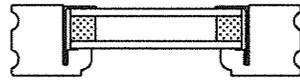
MDH Cross Sections

Green Mountain Window and Door Co.

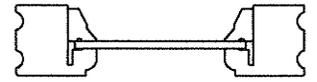
92 Park Street, Rutland, Vermont 05701



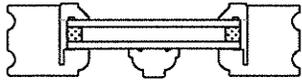
I.G., No Lites  
Wood Bead



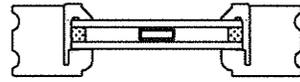
I.G., No Lites  
Vinyl Bead



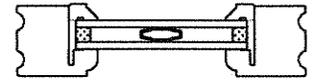
No Lites  
Single Glass



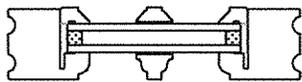
7/8" Grille



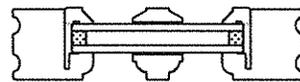
Flat Airspace



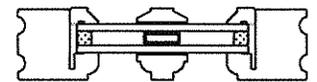
Profile Airspace



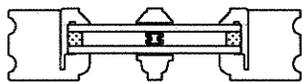
5/8" SDL



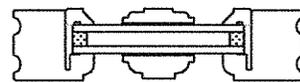
7/8" SDL



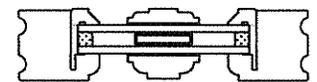
7/8" SDL  
with Spacer Bar



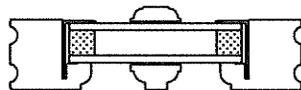
5/8" SDL  
with Spacer Bar



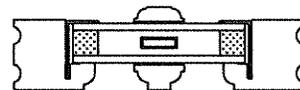
1 1/4" SDL



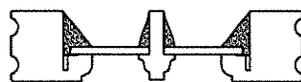
1 1/4" SDL  
with Spacer Bar



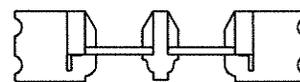
I.G., 7/8" SDL  
Vinyl Bead



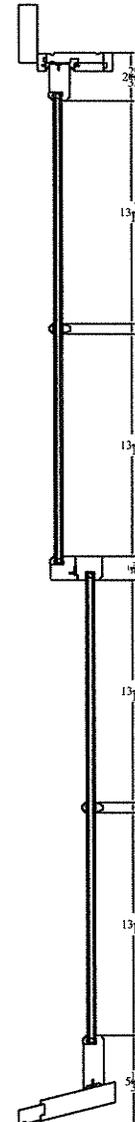
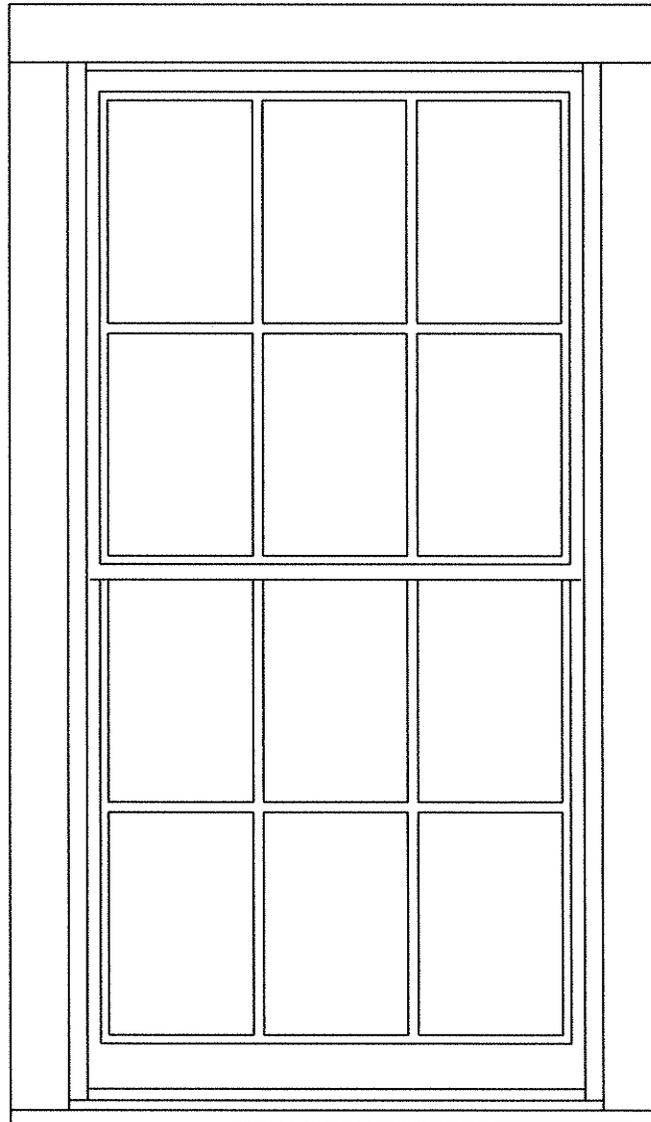
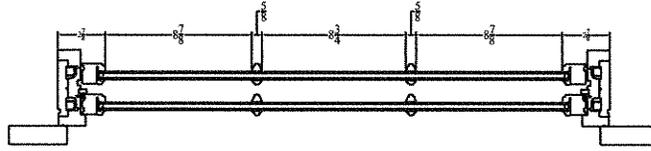
I.G., 7/8" SDL  
with Spacer Bar  
Vinyl Bead



5/8" TDL  
Single Glass  
Putty Glaze



5/8" TDL  
Single Glass  
Wood Bead



## MDH 2828

Note: the example above only applies to a 28 x 28 with 7/8" muntins in a 6/6 pattern.  
 For all other sizes and configurations: determine the overall daylight opening of each sash (without lites) with the formulas on 1.5. Then multiply the number of bars by the bar width and deduct that number from that overall daylight. Divide this number by the number of lites for daylight of each lite.

$$\frac{\text{Overall DLO} - (\text{sum of all bar widths})}{\text{Number of Lites}}$$

1.15

Glass Size Sash Opening Frame Rough Opening	16" 3 1/4" 1' 10-1/4"	20" 3 3/4" 2' 1-1/4"	24" 3 3/4" 2' 5-1/4"	26" 3 3/4" 2' 7-1/4"	28" 3 3/4" 2' 9-1/4"	30" 3 3/4" 3' 0-1/4"	32" 3 3/4" 3' 1-1/4"	36" 4 1/4" 3' 5-1/4"	40" 4 1/4" 3' 9-1/4"
13" 3 1/4" 1' 8-3/8"									
14" 3 1/4" 1' 7-7/8"									
16" 3 3/4" 1' 5-1/8"									
18" 4 1/4" 1' 8-3/8"									
20" 4 1/4" 1' 11-1/8"									
22" 5 1/4" 1' 10-1/8"									
24" 5 1/4" 1' 9-3/8"									
26" 5 3/4" 1' 11-3/8"									
28" 6 1/4" 1' 11-3/8"									
30" 6 3/4" 2' 0-3/8"									
32" 7 1/4" 2' 0-3/8"									
34" 7 3/4" 2' 4-7/8"									
36" 8 1/4" 2' 5-3/8"									

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**Fax:** 513.559.1863

**Residential Email:** [rsales@alliedwindow.com](mailto:rsales@alliedwindow.com)

**Commercial:** [csales@alliedwindow.com](mailto:csales@alliedwindow.com)

**Website:** [www.alliedwindow.com](http://www.alliedwindow.com)

## Recommended Storm - HOL-OP, Operating Historic One Lite

### Operating Historic One Lite

This operable unit provides a self-storing screen contained within the bottom sliding storm assembly unit. The top is fixed and the entire bottom unit is inside removable for cleaning purposes. It provides ease of ventilation without interchanging panels.



### Benefits | Optional Storm Window Features

#### Benefits

**Condensation Reduction** – One of the most welcome benefits of storm windows is the reduction and perhaps elimination of condensation on the interior of the existing window. Any water or ice build up is certain to cause damage to walls, sills, and to the windows themselves

**Energy Savings** – Installing our exterior or interior storm windows over existing single-glazed windows will reduce your energy costs by approximately 50%.

**Prime Window Protection** – Not only will adding our exterior storm window to your existing window protect it from the elements, but also preserve its appearance and reduce the formation of condensation.

**Sound Reduction** – Sound reduction is the major “unexpected” benefit after installation of our storm windows. Many people are surprised at the dramatic reduction in outside noise.

## Optional Storm Window Features

### Interior Storm Window Option

Our capabilities exceed what we can show you on our website. Please contact us to discuss solutions for your specific needs. [CONTACT US](#)

### Special Shape Units

We have the expertise to accommodate windows of any shape for virtually all of our storm window models. Tempered glass is standard in all curve top, shaped units.. [MORE INFO](#)

### Standard or Custom Colors

Allied Window does its own custom-color painting and can match virtually any color. [MORE INFO](#)

### Low E

This is an energy-saving coating which reflects heat outside during the warm months & reflects it back inside during the colder months. The result is added efficiency to your air-conditioning and heating units. There is a slight tint to Low-E glass.

The special pyrolytic coating on the glass can be cleaned carefully like regular glass. It reduces energy loss by about 20% when compared to clear glass.

### Bowed Units

Our capabilities exceed what we can show you on our website. Please contact us to discuss solutions for your specific needs. [CONTACT US](#)

Our screen frames are virtually indestructible as they are comprised of heavy solid-aluminum extrusions.

**Screens/ Ventilation**

Charcoal aluminum screen wire is our standard screen material; however, many requested options are available. (e.g. fiberglass, bronze, stainless steel, etc.) We'll accommodate any custom situation, interior or exterior, including build-out, wicket, and sliding screens. [MORE INFO](#)

**Stained & Leaded Glass  
Windows Protection**

Allied Window can increase the level of protection from the destructive forces of nature and the destructive forces of man - for the window itself, as well as the people and property inside the building. [MORE INFO](#)

**Sound Reduction**

Our capabilities exceed what we can show you on our website. Please contact us to discuss solutions for your specific needs. [CONTACT US](#)

**UV Protection**

Our capabilities exceed what we can show you on our website. Please contact us to discuss solutions for your specific needs. [CONTACT US](#)