# **HDC**

# **ADMINISTRATIVE APPROVALS**

**September 02, 2020** 

- 1. 284 New Castle Avenue (LUHD-187) -Recommended Approval
- 2. 65 Rogers Street (LUHD-188)
  - -Recommended Approval

# 1. 284 New Castle Avenue - Recommended Approval

Background:	The applicant is seeking approval for a change to a previously approved
design (use H	ardie siding on the garage where Lifespan clapboards were approved).

**Staff Comment: Recommended Approval** 

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Historic District Commission Work Session or Administrative Approval Application

# **LUHD-187**

Status: Active

Submitted: Aug 17, 2020

## **Applicant**

Ω

Michael Millikan

6092739388

@ michael.millikan@icloud.com

### Location

284 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**

We are requesting a change to an approval originally granted by the HDC for construction of a detached 2 car garage. As lumber prices have recently increased significantly, we would like to substitute Hardie fiber cement clapboards for the previously approved Lifespan clapboards on the garage only. This will provide significant savings that will help to offset the increased cost of the other materials. The Semprini house, immediately to the East, was constructed in the last 5 years, is a similar design and is sided with Hardie board clapboards.

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

## **Project Representatives**

**Full Name (First and Last)** 

Anne Whitney

Business Name (if applicable)

--

**Email Address** 

archwhit@aol.com

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

\_\_

**Zip Code** 

03801

Relationship to Project

Architect

Mailing Address (Street)

9 Sheafe St

State

NΗ

Phone

6034272832

City/Town

Portsmouth

**Business Name (if applicable)** 

Terrevechia Building & Restoration

Phone

6034270039

City/Town

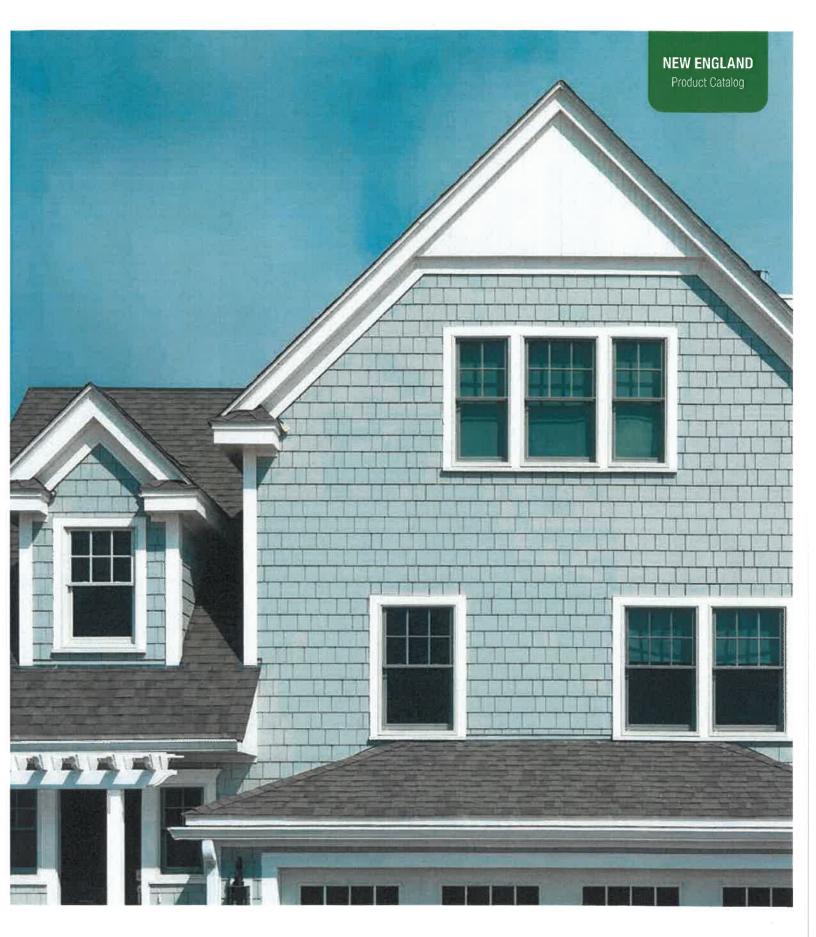
Email Address

Joe.tbr.inc@gmail.com

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

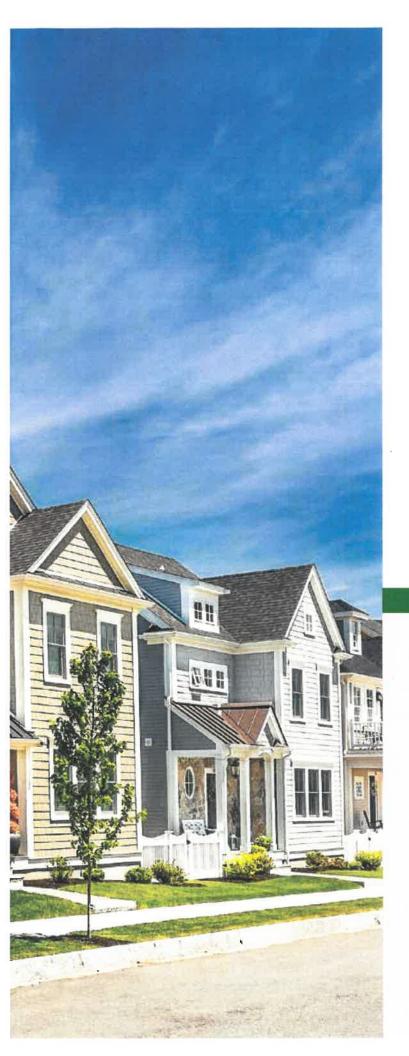
Builder

Relationship to Project



Discover a whole new **SIDE OF HOME.** 







Installed on over 8 million homes\* from coast to coast, James Hardie<sup>6</sup> fiber cement siding products are designed to resist the most extreme conditions while delivering long term beauty and lower maintenance. Enjoy the warm, natural look of wood with unprecedented peace of mind. It's easy to see what makes James Hardie the market leader.

# UNIQUE FORMULATION

We use the highest quality raw materials and proprietary additives for enhanced strength and moisture protection.

# FINISHING TECHNOLOGY

Baked-on color delivers a beautiful finish that resists fading and makes a lasting impression.

# COMPLETE EXTERIOR

Offers homeowners an unrivaled collection of design options with exceptional warranties through a single, trusted manufacturer.

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<sup>\*</sup>Estimate based on total James Hardie siding sales through 2016 and average housing unit size.

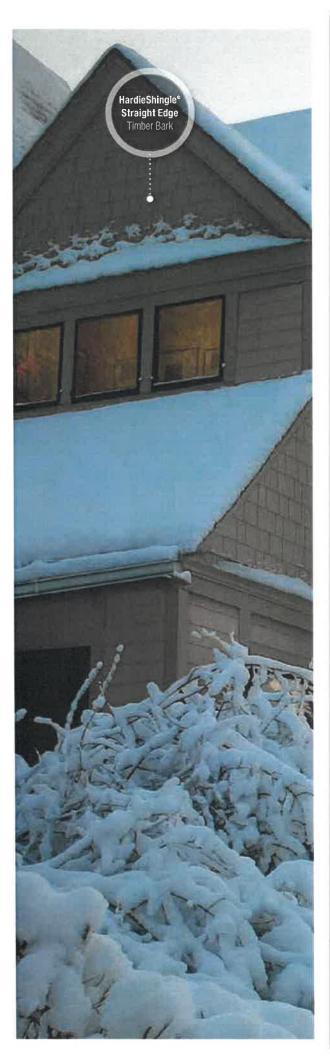
# HardieZone® System

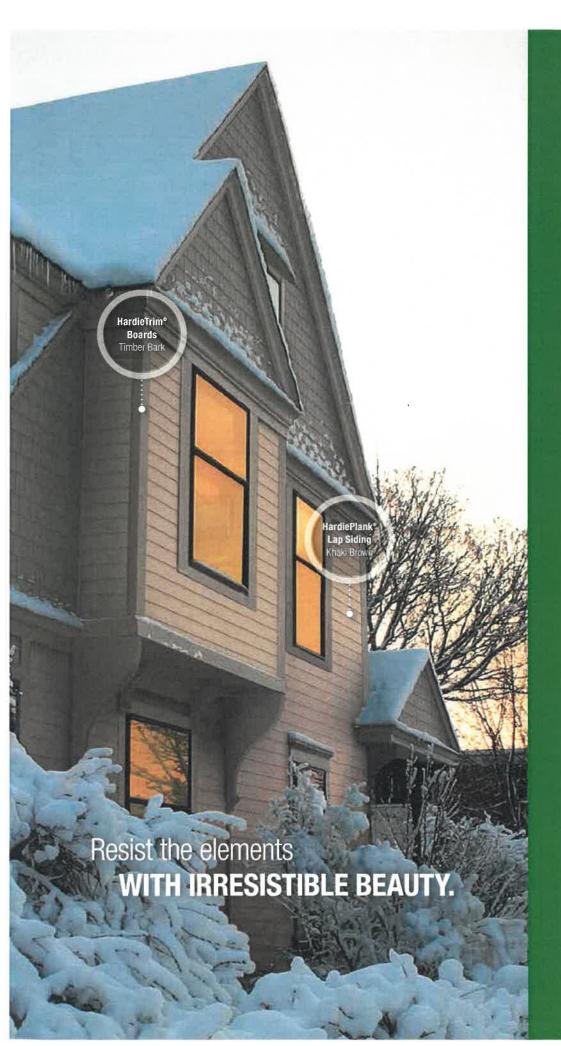
Only James Hardie® fiber cement products are Engineered for Climate®. In the northern U.S. and Canada, HZ5® products resist shrinking, swelling and cracking even after years of wet or freezing conditions. HZ10® products help protect homes from hot, humid conditions, blistering sun and more.

With James Hardie® siding and trim, homeowners have an exterior that's tougher than the elements and easy on the eyes.

# **NO MATTER WHAT NATURE BRINGS**







# TOUGHER THAN THE ELEMENTS



Stands up to storms and harsh weather



Water resistant to protect against swelling, warping and cracking



Won't be eaten by animals or insects



Fire resistant



Helps reduce time and money spent on maintenance

# Unique Formulation HZ5® Substrate

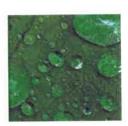
Not all fiber cement is the same. The James Hardie HZ5 product formulation contains the highest quality raw materials. Proprietary additives, combined with an innovative manufacturing process and product design, create a substrate specifically engineered to reduce moisture and resist damage from wet or freezing conditions.

# PROPRIETARY ENHANCEMENTS CREATE DURABLE JAMES HARDIE® SIDING



# Perfect balance of strength and workability

Our balance of high-quality Portland cement, sand and cellulose fiber delivers the best combination of strength and workability.



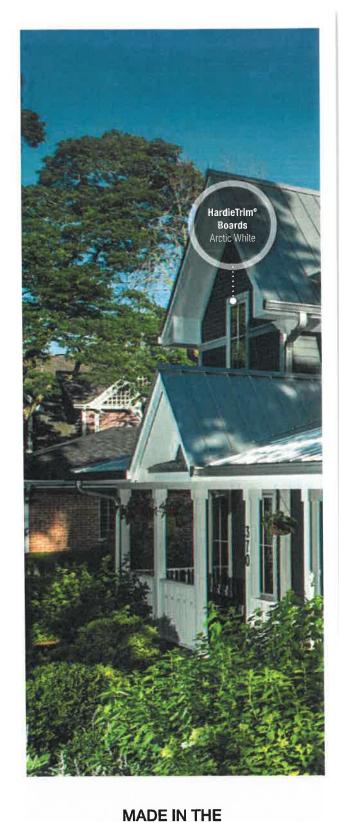
# Enhanced moisture resistance for unmatched durability

Patented and proprietary additives are chemically bonded within the HZ5<sup>s</sup> substrate matrix to provide durable moisture resistance.

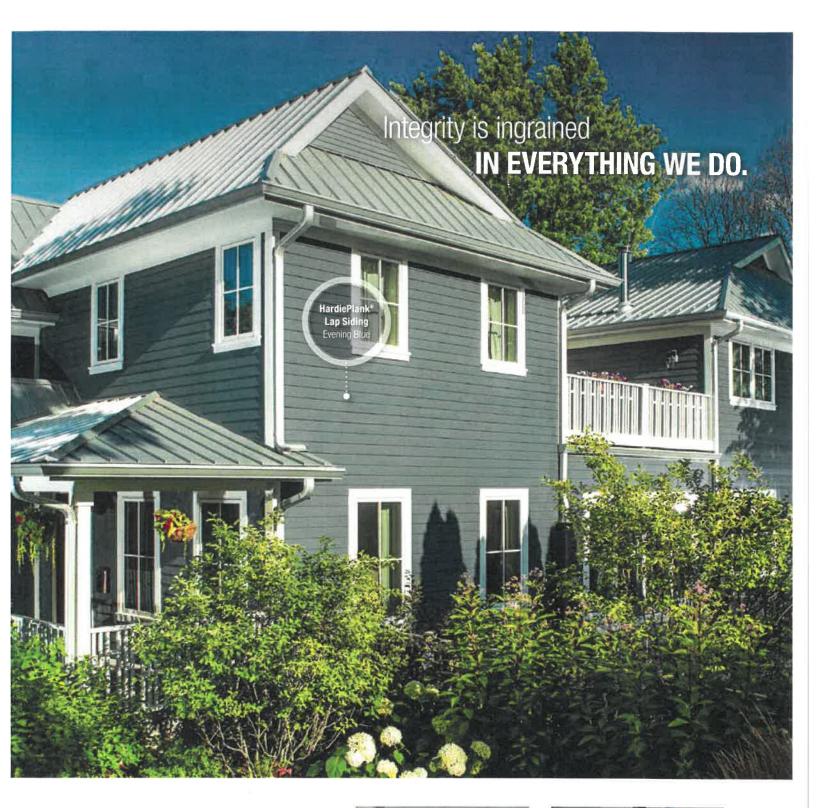


# Increased dimensional stability

Our siding is engineered at the microscopic level to create a fiber cement composite with superior dimensional stability that helps protect against shrinking and splitting.









# The advanced design of HZ5° lap siding improves drainage from top to bottom.

In addition to the enhanced moisture resistance of our product formulation, HardiePlank® HZ5® lap siding features a modified profile with a sloped top and bullnose drip edge for improved drainage over the entire outer face of the board.



# **Sloped Top**

Positive slope at top drains moisture to outer face of lap



**Profiled Drip Edge** 

Bottom bullnose drip edge allows moisture to drain away from lap

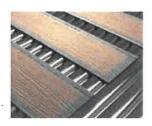
# **Finishing Technology**

# Primer

A quality primer is the first step to ensuring that the paint color you select beautifully expresses a home's true character now – and for years to come. Our distinctive primer is climate-tested and engineered to enhance the performance of paint on James Hardie® fiber cement siding products. It helps to provide consistent, long-lasting paint adhesion, even in the most demanding conditions.

# ColorPlus® Technology

Our advanced ColorPlus® Technology finishes deliver the ultimate in aesthetics and performance. Our products aren't simply painted at the factory. Our proprietary coatings are baked onto the board, creating a vibrant, consistent finish that performs better, lasts longer and looks brighter on your homes.



### **Exceptional finish adhesion**

Our proprietary coating is engineered for exceptional adhesion to our substrate and applied to the surface, edges and features for durable performance.



### **Superior color retention**

Finish is cured onto boards for a stronger bond, which allows for exceptional resistance to cracking, peeling and chipping.



## Superior UV resistance

ColorPlus<sup>6</sup> Technology finishes retain vibrancy longer when compared to vinyl siding and typical field paints on other siding products.





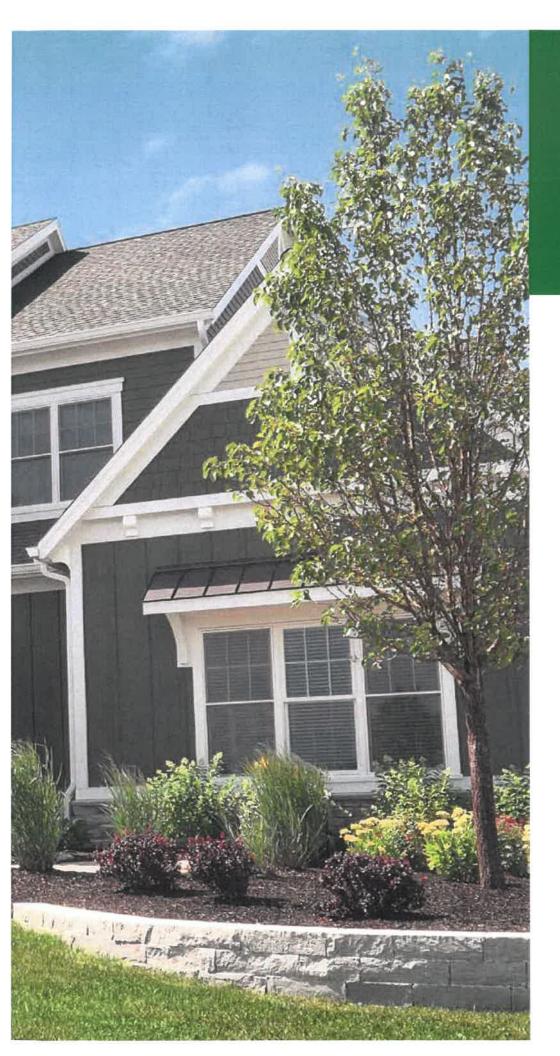
# Our finishes help eliminate stress and reduce costly weather delays when

it's too cold or damp to paint for extended periods. Now there's no reason to question whether or not sub-optimal painting conditions will negatively affect your paint job. In fact, there's no longer any need to paint on-site during installation.

ColorPlus<sup>®</sup> Technology finishes are fully cured in a controlled environment and arrive on your job site ready for year-round installation.







# James Hardie Complete Exterior™

Top to bottom, our exterior product line is defined by excellent performance, aesthetics and design options.

Provide protection from the elements, showcase a homeowner's individual style and install peace of mind with exceptional warranties through a single, trusted manufacturer.



HardieShingle<sup>6</sup> Siding



HardiePanel® Vertical Siding & HardieTrim® Batten Boards



HardiePlank<sup>n</sup> Lap Siding



HardieTrim<sup>®</sup> Boards



HardieSoffit<sup>©</sup> Panels

# **Hardie**Plank

# Thickness 5/16 in Length 12 ft planks

# **SELECT CEDARMILL® & SMOOTH**

Width	5.25 in	6.25 in	7.25 in	8.25 in
Exposure	4 in	5 in	6 in	7 in
Prime Pcs/Pallet	360	308	252	230
ColorPlus Pcs/Pallet	324	280	252	210
Pcs/Sq	25.0	20.0	16.7	14.3

### **SELECT CEDARMILL°**

-	 	 _	

Width	5.25 in	6.25 in	7.25 in	8.25 in
a production	0.20	0.20	7.20 111	0.20 111

STATEMENT **COLLECTION™** 

DREAM

PRIME 🗸

**COLLECTION™** 

### **SMOOTH**



Width	5.25 in	6.25 in	7.25 in	8.25 in
* > 100 600	0.20 111	0.20 111	7.20 111	0.20 111

STATEMENT COLLECTION" DREAM

PRIME 🗸

COLLECTION"

# **BEADED CEDARMILL°**



# **BEADED CEDARMILL® & BEADED SMOOTH**

Width 8.25 in

Exposure 7 in

Prime 240

Pcs/Pallet

ColorPlus 210 Pcs/Pallet

Pcs/Sq 14.3

STATEMENT COLLECTION"

DREAM

COLLECTION"

PRIME

## **BEADED SMOOTH**



# **Hardie**Panel®

Thickness 5/16 in

# SELECT CEDARMILL°, SMOOTH, STUCCO & SIERRA 8

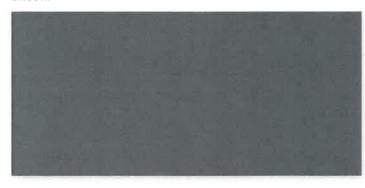
Size	4 ft x 8 ft	4 ft x 10 ft
Prime Pcs/Pallet	50	50
ColorPlus Pcs/Pallet	50	50
Pcs/Sq	3.2	2.5

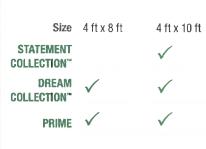
## SELECT CEDARMILL°



Size	4 ft x 8 ft	4 ft x 10 ft
STATEMENT COLLECTION**		$\checkmark$
DREAM COLLECTION"	$\checkmark$	$\checkmark$
PRIME	<b>✓</b>	$\checkmark$

## **SMOOTH**



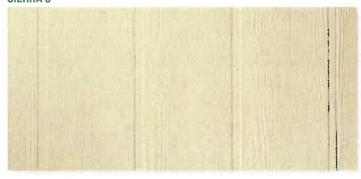


# STUCCO



Size	4 ft x 8 ft	4 ft x 10 ft
STATEMENT COLLECTION		
DREAM COLLECTION	$\checkmark$	$\checkmark$
PRIME	November 1	$\checkmark$

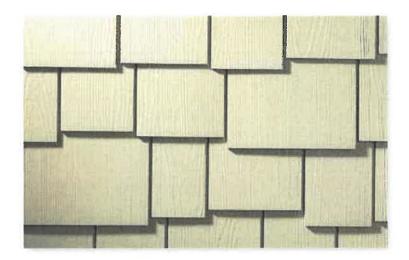
# SIERRA 8



Size	4 ft x 8 ft	4 ft x 10 ft
STATEMENT COLLECTION*		
DREAM COLLECTION"		
PRIME	$\checkmark$	$\checkmark$

# **Hardie**Shingle®

Thickness 1/4 in



### STAGGERED EDGE PANEL

 Length
 48 in

 Height
 15.25 in

 Exposure
 6 in

 ColorPlus Pcs/Pallet
 100

 Sq/Pallet
 2

 Pcs/Sq
 50.0

STATEMENT COLLECTION\*\*

DREAM COLLECTION

**PRIME** 



## STRAIGHT EDGE PANEL

 Length
 48 in
 48 in

 Height
 14 in
 15.25 in

 Exposure
 5 in
 7 in

 ColorPlus Pcs/Pallet
 120
 86

 Sq/Pallet
 2
 2

 Pcs/Sq
 60.0
 43.0

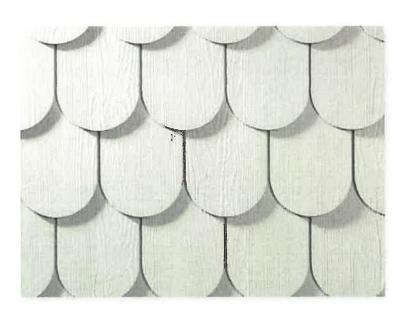
COLLECTION\*\*

DREAM
COLLECTION\*\*

 $\checkmark$ 

 $\checkmark$ 

PRIME



## **HALF ROUNDS**

Length 48 in
Height 15.25 in
Exposure 7 in
Prime 86
Pcs/Pallet 2
Pcs/Sq 43.0

STATEMENT
COLLECTION\*

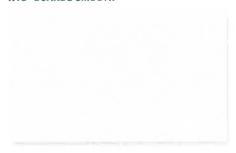
DREAM COLLECTION™

PRIME V

# **Hardie**Trim®

Length 12 ft boards

### NT3° BOARDS SMOOTH



## 4/4 SM00TH

Thickness .75 in Width 3.5 in

5.5 in 7.25 in

9.25 in 104

11.25 in

ColorPlus Pcs/Pallet 312

208

156

104

**STATEMENT COLLECTION™** 

DREAM

**COLLECTION** 

PRIME

## 5/4 SM00TH

Thickness 1 in

Width 3.5 in ColorPlus Pcs/Pallet 240

4.5 in 200

5.5 in 160

7.25 in 120

9.25 in 80

11.25 in 80

**STATEMENT** COLLECTION"

**COLLECTION™** 

DREAM

**PRIME** 

# **BATTEN BOARDS**

**SMOOTH** 

**RUSTIC GRAIN®** 

### **SMOOTH & RUSTIC GRAIN®**

Thickness .75 in Width 2.5 in Prime 190 Pcs/Pallet ColorPlus 437 Pcs/Pallet

STATEMENT **COLLECTION** 

DREAM **COLLECTION™** 

PRIME  $\checkmark$ 

# **Hardie**Soffit®

Thickness 1/4 in

### **VENTED SMOOTH**



### **VENTED SELECT CEDARMILL®**



## NON-VENTED SMOOTH





# **BEADED PORCH PANEL**



## **VENTED SMOOTH & SELECT CEDARMILL®**

	A FIGURE 2 11100	III & SEELOT OF	DANTIMILL
Length	12 ft	12 ft	8 ft
Width	12 in	16 in	24 in
Prime Pcs/Pallet	200	150	100
ColorPlus Pcs/Pallet	216	156	108
Size	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in
STATEMENT COLLECTION*			
DREAM	$\checkmark$	$\checkmark$	<b>✓</b>
COLLECTION™			
PRIME	$\checkmark$	$\checkmark$	$\checkmark$
Size	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in
CTATEMENT			
STATEMENT COLLECTION**			
DREAM	/	/	
COLLECTION™	<b>V</b>	<b>✓</b>	<b>V</b>
DDIME			
PRIME			

## NON-VENTED SMOOTH & SELECT CEDARMILL®

Length Width Prime Pcs/Pallet ColorPlus Pcs/Pallet	12 ft 12 in 200 216	12 ft 16 in 150 156	8 ft 24 in 100 108	8 ft 48 in 50
Size Statement Collection"	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in	8 ft x 48 in
DREAM COLLECTION	$\checkmark$	$\checkmark$	$\checkmark$	
PRIME	$\checkmark$	$\checkmark$	$\checkmark$	<b>✓</b>
Size Statement Collection*	12 ft x 12 in	12 ft x 16 in	8 ft x 24 in	8 ft x 48 in

# BEADED PORCH PANEL

DREAM COLLECTION™

PRIME

Thickness		STATEMENT COLLECTION**
Length Width		DREAM COLLECTION"
ColorPlus Pcs/Pallet	50	PRIME

# STATEMENT COLLECTION

Make your next home stand out with our Statement Collection™ products. Carefully curated by our design experts specifically for your market, the collection brings together the most popular James Hardie ColorPlus® siding and trim styles, textures, and colors. This stunning selection is locally stocked and designed for simplicity - making it easier than ever to get a beautiful, long-lasting home exterior.

# ColorPlus® Technology

# Plank, Panel, Shingle and Batten Color Offering



# **Trim Color Offering**



# **Hardie**Plank®



SELECT CEDARMILL°

Width 5.25 in 6.25 in Exposure 4 in 5 in



**Hardie**Panel®

### **SELECT CEDARMILL°**

Size 4 ft x 10 ft



## **SMOOTH**

Width 5.25 in 6.25 in Exposure 4 in 5 in



## **SMOOTH**

Size 4 ft x 10 ft

# **Hardie**Shingle®



### STRAIGHT EDGE PANEL

15.25 in Height 14 in Exposure 5 in 7 in

# **Hardie**Trim<sup>®</sup>

**4/4 SMOOTH** 

5/4 SM00TH

# **BATTEN BOARDS**

4/4 SMOOTH & RUSTIC GRAIN®



Thickness Length

.75 in 12 ft boards

Width

3.5 in 5.5 in 7.25 in

Thickness

Length

12 ft boards

1 in

Width

3.5 in 4.5 in 5.5 in 7.25 in 11.25 in

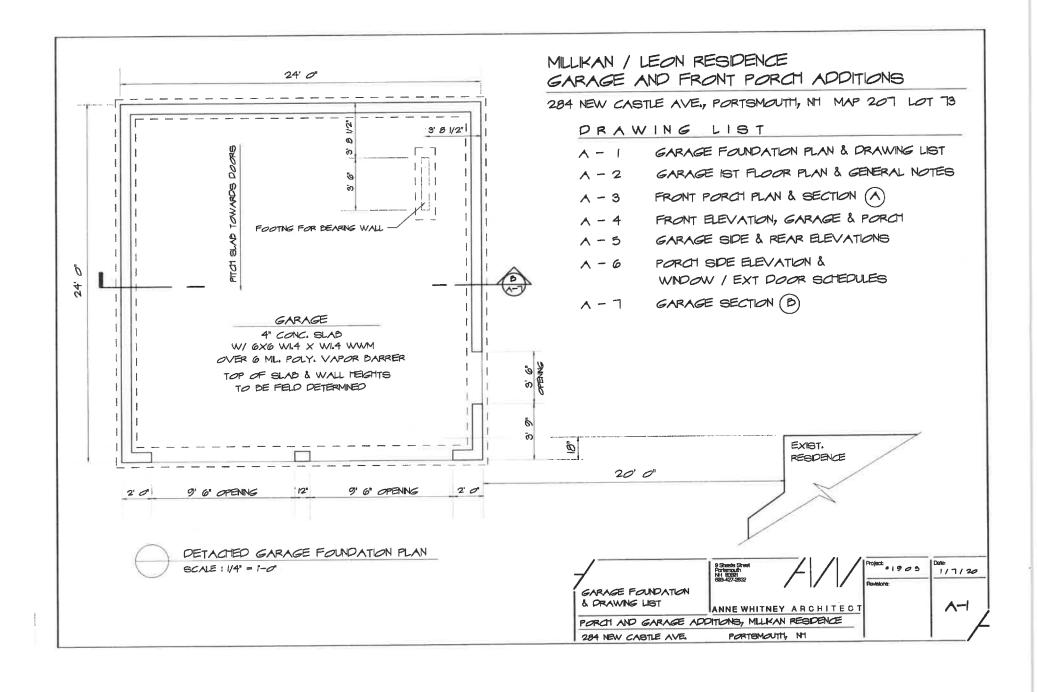


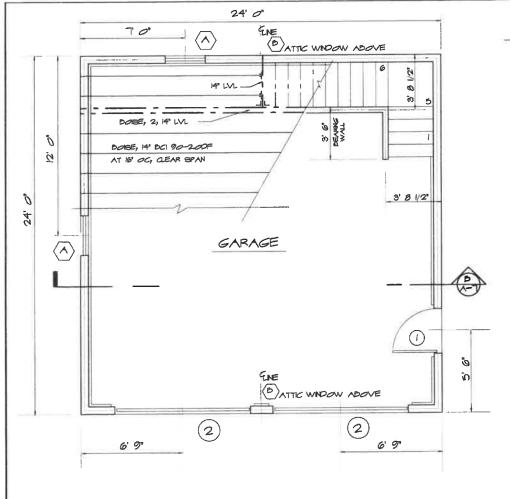
.75 in 2.5 in



Selecting a color? Request a product sample at jameshardiepros.com/samples

11.25 in





# GENERAL NOTES

- Dimensions where provided shall take precedent over scale of
   Drawings. Contractor to measure and verify all dimensions at work.
- 2. Interpretation of Contract Documents: Contractor shall promptly notify the Architect of any ambiguity, inconsistency or error which they may discover upon examination of the Contract Documents, the Site or Local Conditions. If the Contactor knowingly does not notify the Architect of any such ambiguity, inconsistency or error they therefore accept such conditions and will make such additions or corrections necessary to properly complete the work, at their expence
- 3. Perform all work of this CONTRACT according to all Local, State or National Codes and/or Ordinances. Secure all Permits Required.
- Design and installation of the Mechanical Systems is the responsibility of the Subcontractors for the specific trades and must comply with all National, State, Local Codes and Authorities Having Jurisdiction.
- Design and installation of the Electrical Systems is the responsibility of the Subcontractors for the specific trades and must comply with all National, State, Local Codes and Authorities Having Jurisdiction.

DETACTED GARAGE IST FLOOR PLAN SCALE: 1/4" = 1-0"

GARAGE IST FLOOR FLAN

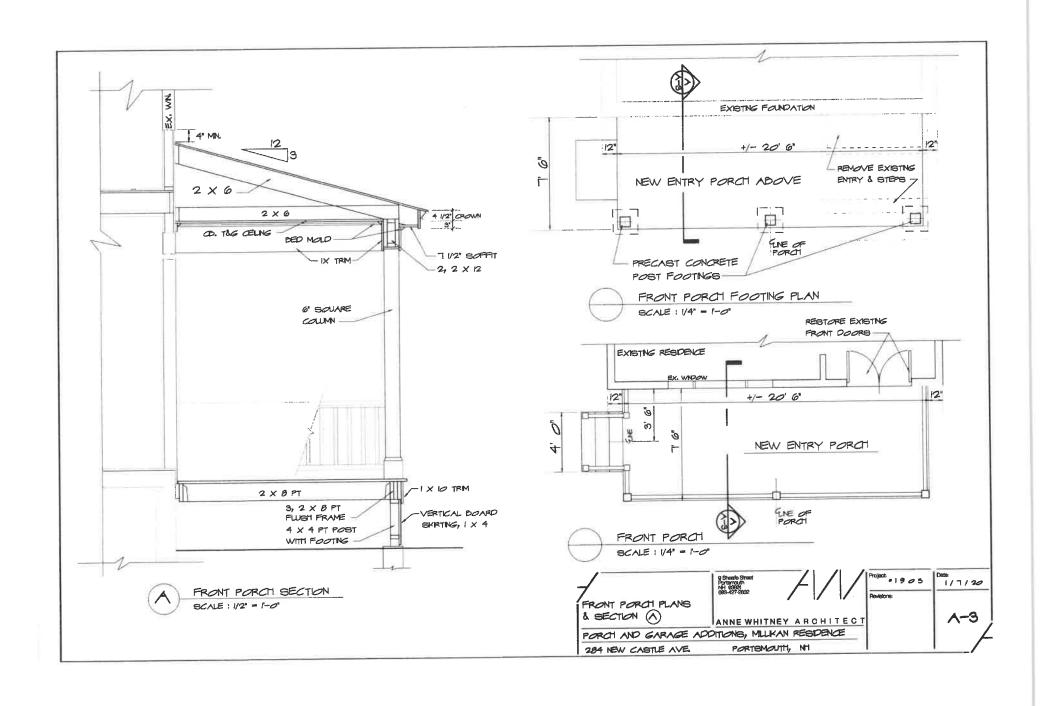
& CENERAL NOTES

ANNE WHITNEY ARCHITECT

PORCH AND GARAGE ADDITIONS, MILKAN RESIDENCE

284 NEW CASTLE AVE.

PORTSMOUTH, NM





# WINDOW SCHEDULE

SYM,	UNIT	LITES	ROUGH OPENING	REMARKS	QUAN.
$\Diamond$	TW 2642	6/6	2'-95/8" × 4'-47/8*	MARVIN INC., Integrity Double Hung, Low E Glazing, SDL with spacer bar, Cladding & Screen Color "Stone White", 2 x 6 wall.	3
(B)	TW 2642	6/6	2'-95/8" × 4'-47/8"	DITTO, Tempered	1

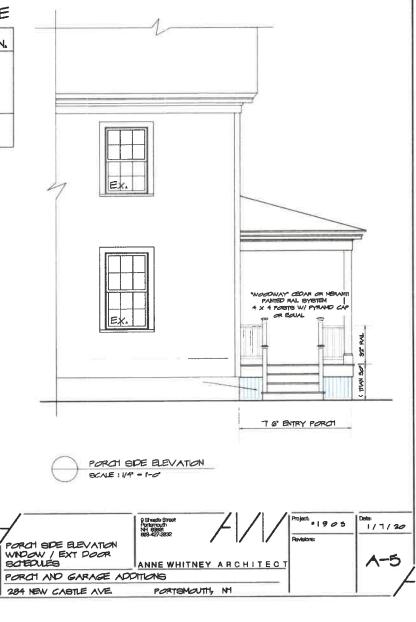
# EXTERIOR DOOR

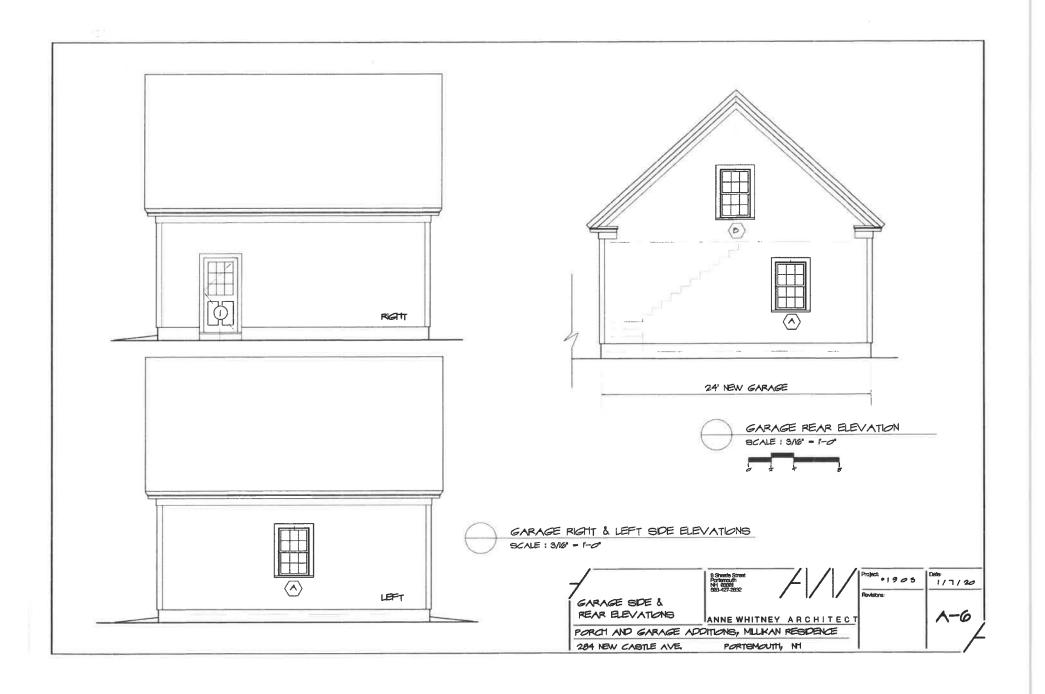
S	H	E	0	U	L	E

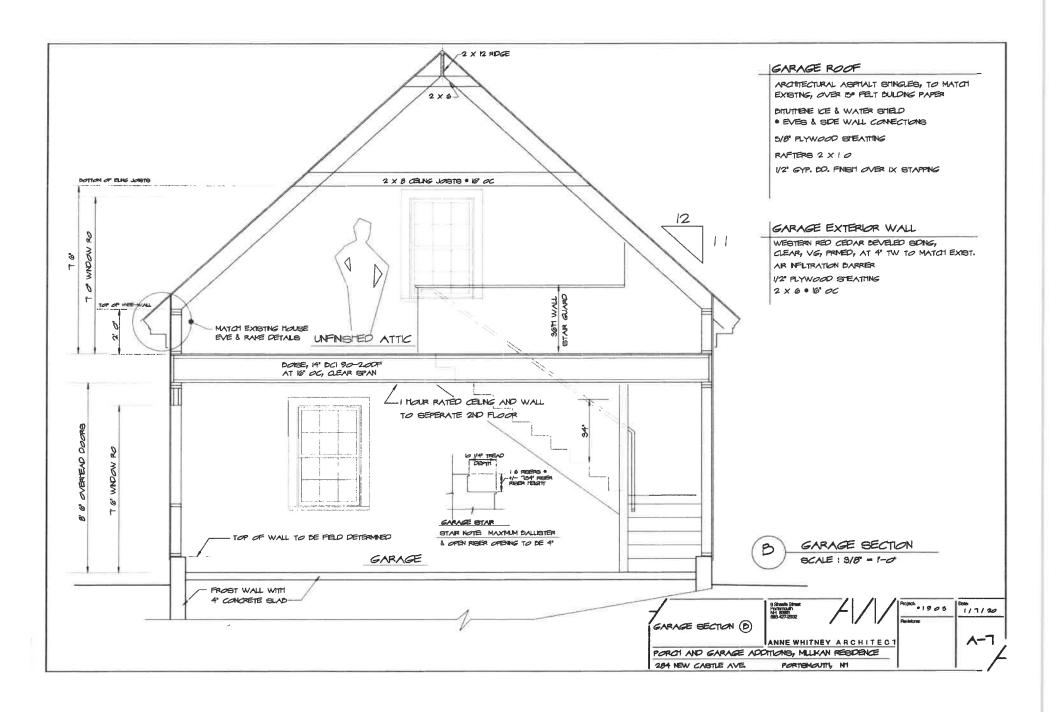
SYM	UNIT	LITES	DOOR SIZE	REMARKS	QUAN.
<u>()</u>	S 2150 1/2 Lite	9 SDL	3' 0" × 7' 0"	THERMA-TRU, SMOOTH STAR FIBERGLASS ENTRY DOOR with Low-E Glazing, Simulated Divided Lites Hardware to be chosen by owner.	1
2	Mod. # 162E	see elev.	7 6"H × 9' 0"W	GENERAL DOOR CORP., Cambridge Series Insulated Wood Composite Garage Door	2

# WINDOW & EXT. DOOR NOTES :

- I. SUBMIT FINAL WINDOW & EXT. DOOR ORDER & SHOP DRAWINGS TO ARCHITECT TO ARCHOTECT FOR REVIEW & APPROVAL BEFORE ORDERING
- 2. BUILDER TO VERIFY RO'S & WALL THICKNESS.







# 2. 65 Rogers Street

# - Recommended Approval

<u>Background</u> : The applicant is seeking approval for the installation of an A/C condenser with fence surround.
Staff Comment: Recommended Approval
Stipulations:
1

Historic District Commission Work Session or Administrative Approval Application

**LUHD-189** 

Status: Active

Submitted: Aug 19, 2020

## **Applicant**

 $\overline{\mathcal{V}}$ 

William Greenier

603-396-8114

@ bill@greenierbuildersinc.com

#### Location

65 ROGERS 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** 

Location of A/C condensers

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

# **Project Representatives**

Phone

603-396-2946

**Business Name (if applicable)** 

Greenier builders

Zip Code

City/Town

Mailing Address (Street)

Relationship to Project

Other

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

Site supervisor

State

--

Full Name (First and Last)

Brad Baker

**Email Address** 

brad@greenierbuildersinc.com

## Acknowledgement

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

true

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

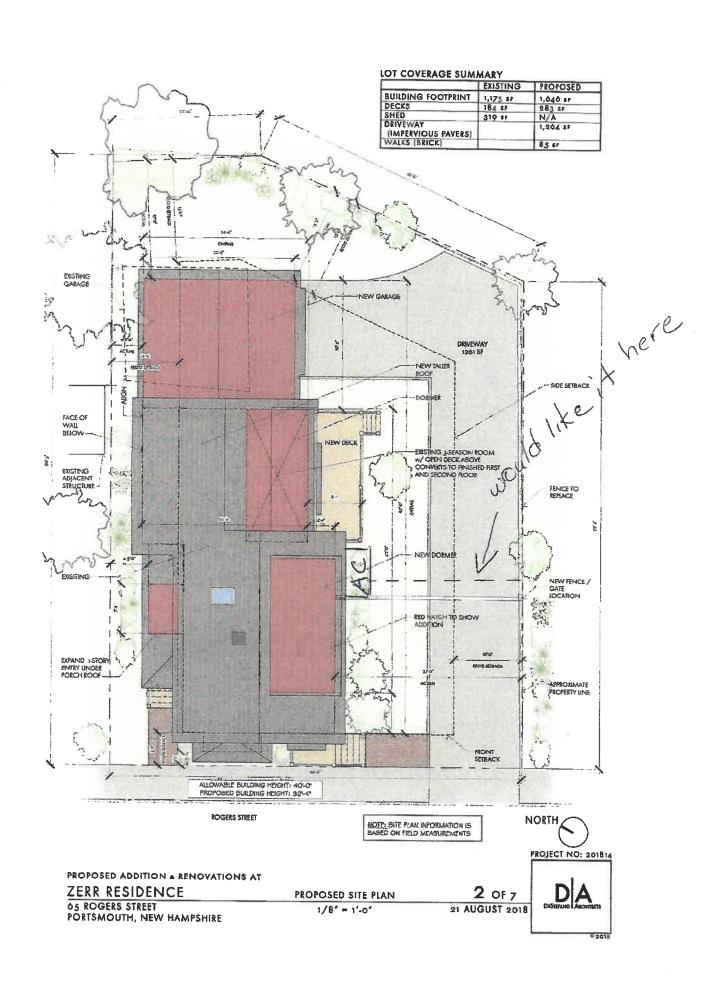
true

I hereby certify that as the applicant for permit, I am

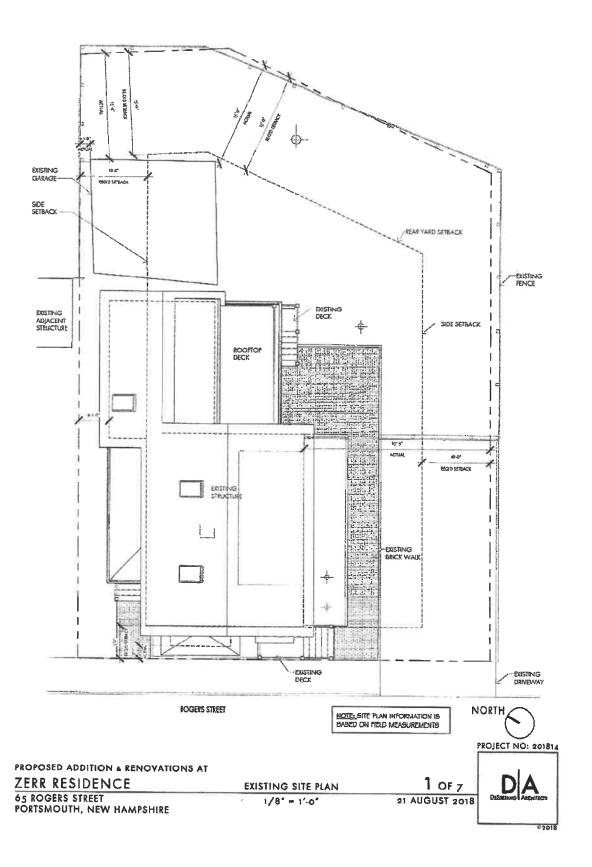
Other

If you selected "Other" above, please explain your relationship to this project. Owner authorization is required.

Supervisor







24VNA9 Infinity® 19VS Variable Speed Air Conditioner with Puron® Refrigerant 1 – 5 Tons



# **Product Data**





The Infinity® 19VS air conditioner offers high-efficiency variable speed performance in a remarkably small cabinet and provides up to 19 SEER cooling efficiency. The variable speed inverter capacity control delivers up to 5 stages of operation for exceptional load matching, dehumidification and zoning performance.

This product has been designed and manufactured to provide flexible system matching and work with a wide variety of indoor units and controls.

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

# INDUSTRY LEADING FEATURES / BENEFITS

# **Energy Efficiency**

- Up to 19 SEER / 13 EER
- Microtube Technology<sup>™</sup> refrigeration system

#### Sound

- Sound level as low as 55 dBA in low speed (Silencer System II).
- · Soft start and smooth ramp to operating speeds

#### Comfort

- Variable speed compressor operates at 5 stages with capacity range from as wide as 25-100%
- · Air cooled Inverter variable speed drive
  - System requires Infinity® Touch Control with version 11 software or newer for 5 stage operation on sizes 24 - 60 and version 12 or higher on size 13.
  - Ratings provided with 2-stage thermostats and suitable non-communicating indoor products for 2-stage operation.

### Reliability

- Puron® refrigerant environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- · Front-seating service valves
- · Inverter control drives compressor and fan motor
- No control module attached to fan motor
- · Infinity intelligence monitors critical system parameters
- · Pressure equalizer valve for easy compressor starting
- · High pressure switch
- Suction pressure transducer
- Compressor discharge temperature sensor
- · Suction temperature sensor
- Filter drier (field installed)
- · Internal crankcase heater standard

### Flexibility and installation:

- 2 control wires to outdoor unit in complete Infinity system and Touch Control
- Energy Tracking capability with the Infinity® Touch Control (Energy Tracking has the ability to monitor and estimate the energy consumption of your Infinity® system.)
- Smaller and lighter than 2-stage units
- Minimum and Maximum adjustments with Infinity® Touch Control
- Compatible with non-communicating thermostats

## **Durability**

WeatherArmor Ultra™ protection package:

- · Solid, Durable sheet metal construction
- · Steel louver coil guard
- · Baked-on, complete outer coverage, powder paint

### **Applications**

- Line sets up to 100 ft (30.5 m) equivalent length
- No long-line accessories required.

# MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13
N	N	Α	Α	A/N	N	N	N	A/N	A/N	A/N	N	N
2	4	٧	N	Α	9	3	6	Α	0	0	3	0
	duct eries	Product Family	Tier	Major Series	SEER	Coolir Capac		Variations	Open	Open	Voltage	Minor Series
24	= AC	V = VS HP	N= Infinity Series	A = Puron	9 = 19 SEER	1,000 B (nomin		A = Standard B = Design	0=Not Defined	0=Not Defined	3=208/230-1	0, 1, 2















# STANDARD FEATURES

EEATH IDEA			Ur	nit Size – V	oltage, Ser	ies		
FEATURES	13	24B	25	36	37	48	49	60
Puron Refrigerant	Х	Х	Х	Х	Х	Х	Х	Х
Variable Speed Rotary Compressor	Х	Х	Х	X	Х	Х	Х	Х
Air-Cooled Integrated Inverter Drive	Х	Х	Х	Х	Х	Х	Х	Х
Louvered Coil Guard	Х	Х	Х	Х	Х	Х	Х	Х
Field Installed Filter Drier	Х	Х	Х	Х	Х	Х	Х	Х
Front Seating Service Valves	Х	Х	Х	Х	X	Х	Х	Х
Internal Pressure and Temperature Protection	Х	Х	Х	Х	Х	Х	Х	×
Suction Pressure Transducer	Х	Х	Х	Х	X	Х	Х	х
High Pressure Switch	Х	Х	Х	Х	Х	Х	Х	Х
Internal Crankcase Heater	Х	X	Х	Х	Х	Х	Х	Х
Enhanced Diagnostics with Infinity® Touch Control (version 11 software or newer for 5 stage operation on sizes 24 — 60 and version 12 or higher on size 13.)	х	х	х	х	х	х	х	х
Deluxe Sound Blanket	Х	Х	Х	Х	Х	Х	X	Х
Outdoor Air Temperature Sensor	Х	Х	Х	Х	Х	X	Х	X

X = Standard

# PHYSICAL DATA

UNIT SIZE SERIES	13-30	248-30	25-31	36-31	37-30	48-30	49-30	60-30
Compressor Type				Variable Sp	peed Rotary			-
REFRIGERANT				Puron®	(R-410A)			
Control				TXV (Puron®	Hard Shutoff)			
Charge lb (kg)	4.6 (2.09)	4.80 (2.18)	5.5 (2.50)	6.0 (2.72)	7.5 (3.40)	7.5 (3.40)	9.6 (4.35)	8.30 (3.76)
COND FAN			Fon	ward Swept Prope	eller Type, Direct I	Drive		
Air Discharge				Ver	tical		91	
Air Qty (CFM)	1600	2500	2500	2500	4500	4500	4800	4500
Motor HP	1/5	1/5	1/3	1/3	1/3	1/3	1/3	1/3
Motor RPM	650	825	1050	1050	850	850	850	900
COND COIL			1.	*11	•			
Face Area (Sq ft)	11.12	11.12	13.90	13.90	21.50	21.50	27.53	23,65
Fins per In.	20	20	20	20	20	20	25	20
Rows	1	1	1	1	1	1	1	1
Circuits	6	5	6	6	8	8	8	8
VALVE CONNECT. (In	n. ID)			.,				
Vapor	5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8
Liquid				3	/8			
REFRIGERANT TUBE	S (In. OD)							
Rated Vapor*	3/4	3/4	7/8	7/8	1-1/8	1-1/8	1-1/8	1-1/8
Max Liquid Line		-1/		3	/8			

<sup>\*</sup> Units are rated with 25 ft (7.6 m) of lineset length. See Vapor Line Sizing and Cooling Capacity Loss table when using other sizes and lengths of lineset.

Note: See unit Installation instruction for proper installation.

# REFRIGERANT PIPING LENGTH LIMITATIONS

## **Maximum Line Lengths:**

The maximum allowable total equivalent length for air conditioners can vary depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the outdoor unit.

### Maximum Line Lengths for Air Conditioner Applications

	MAXIMUM ACTUAL LENGTH ft (m)	MAXIMUM EQUIVALENT LENGTH† ft (m)	MAXIMUM VERTICAL SEPARA- TION ft (m)
Units on equal level	100 (30.5)	100 (30.5)	N/A
Outdoor unit ABOVE indoor unit	100 (30.5)	100 (30.5)	100 (30.5)
Outdoor unit BELOW indoor unit	See Table 'Maximu	ım Total Equivalent Length: Outdoor Unit BELOV	V Indoor Unit'

<sup>†</sup> Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

# Maximum Total Equivalent Length<sup>†</sup> - Outdoor Unit BELOW Indoor Unit

Size Liquid Line Dlameter w/ TXV	vertical Separation π (m) Outdoor unit BELOW indoor unit:							
		0-20 (0 - 6.1)	21-30 (6.4 - 9.1)	31 – 40 (9.4 – 12.2)	41-50 (12.5 - 15.2)	51-60 (15.5 - 18.3)	61-70 (18.6 - 21.3)	71-80 (21.6 - 24.4)
1-Ton	3/8	100*	100*	100*	100*	100*	100*	100*
2-Ton	3/8	100*	100*	100*	100*	100*	100*	100*
3-Ton	3/8	100*	100*	100*	100*	100*	100*	100*
4-Ton	3/8	100*	100*	100*	100*	100	100	
5-Ton	3/8	100*	100*	100*	100*	100	100	

<sup>\*</sup> Maximum actual length not to exceed 100 ft (30.5 m)

# LONG LINE APPLICATIONS

Unit is approved for up to 100 ft (30.5 m) equivalent length and vertical separations shown above with no additional accessories. Longer line set applications are not permitted.

## **COOLING CAPACITY LOSS TABLE**

Nominal			24VN/	49 Cooling Capacity Los	ss (%)	
Size	Line OD (in.)		Tota	l Equivalent Line Lengtl	n (ft)	
(Btuh)		25	50	75	80	100
13	5/8	0.5	1.2	1.8	1.9	2.4
13	3/4	0.1	0.4	0.6	0.7	8.0
24B	5/8	0.5	1.2	1.8	1.9	2.4
24D	3/4	0.1	0.4	0.6	0.7	0.8
	5/8	0.5	1,2	1.8	1.9	2.4
25	3/4	0.1	0.4	0.6	0.7	0.8
	7/8	0.0	0.1	0.3	0.3	0.4
	5/8	1.1	2.4	3.7	4.0	5.0
36	3/4	0.3	0.8	1.3	1.4	1.8
	7/8	0.0	0.3	0.5	0.6	0.8
37	3/4	0.7	1.6	2.4	2.6	3.2
48	7/8	0.3	0.7	1.1	1.2	1.6
49	1 1/8	0.0	0.1	0.2	0.3	0.4
	3/4	1.0	2.3	3.5	3.8	4.8
60	7/8	0.4	1.0	1.7	1.8	2.3
	1 1/8	0.0	0.1	0.3	0.4	0.5

Rating Line Size in BOLD

<sup>†</sup> Total equivalent length accounts for losses due to elbows or fitting.

<sup>-- =</sup> outside acceptable range

## MIN/MAX AIRFLOW TABLES

The indoor airflow delivered by this system varies significantly based on outdoor temperature, indoor unit combination, and system demand. The airflows on these tables are for duct design considerations. Duct systems capable of these ranges will ensure the system will deliver full capacity at all outdoor temperatures. Minimum and maximum airflows can be adjusted from these numbers in the Infinity Control Setup screen.

	Cooling - Comfort Mode	Minimum Cooling						
Size	Max Stage 5 Airflow	Max Stage 1 Airflow	(Dehum or Zoning)					
1 – Ton	420	300	300					
2-Ton	739	300	300					
3-Ton	990	300	300					
4-Ton	1389	542	457					
5-Ton	1600	700	600					

	Cooling - Efficiency Mode	
Size	Max Stage 5 Airflow	Max Stage 1 Airflow
1 – Ton	420	300
2-Ton	825	585
3-Ton	1050	600
4-Ton	1400	875
5Ton	1800	975

	Cooling Max Mode	
Size	Max Stage 5 Airflow	Max Stage 1 Airflow
1 – Ton (550 cfm/ delivered ton)	780	434
2-Ton (24)	850	585
!-Ton (25) (550 cfm/ delivered ton)*	1350	510
3-Ton	1200	600
4-Ton	1600	875
4-Ton-49	1450	875
5-Ton	2000	975

<sup>\*</sup> Serial number beginning with 0115E and newer

Max Capacity Airflow - Stage 5 airflow varies depending on conditions. This is the highest airflow the system will attempt to deliver in this particular mode. Ductwork for non-zoned systems should be sized for this airflow to ensure the system can deliver full capacity when needed. Improper duct design may result in excessive airflow noise and/or cutback occurrences at max airflow conditions.

Highest Min. Capacity Airflow - Stage 1 airflow also varies depending on conditions. In zoned systems, each zone must be capable of delivering this airflow for the system to deliver full capacity into the zone. Otherwise, airflow may be diverted to other zones or cutback may occur.

Min Cooling (Dehum or Zoning) — Lowest airflow the system will deliver. May operate down to this airflow in dehumidification mode or in zoning applications where ductwork restrictions have caused the blower to cut—back.

## **ELECTRICAL DATA**

UNIT SIZE – VOLTAGE, SERIES	V/PH	OPER V	/OLTS*	COI	MPR	FAN	MCA	MAX FUSE ** or
	<b>V</b> /111	MAX	MIN	LRA	RLA	FLA	MOA	CKT BRK AMPS
13-30				N/A	10.3	0.58	13.5	20
24B-30				N/A	10.3	0.58	13.5	20
25-31				N/A	17.7	1.20	23.6	40
36-31		050	407	N/A	18.4	1.20	24.2	40
37-30	208-230-1	253	197	N/A	19.6	1.20	26.0	40
48-30				N/A	20.9	1.20	27.3	40
49-30				N/A	19.6	1.40	26.0	40
60-30				N/A	30.9	1.40	40.0	60

Permissible limits of the voltage range at which the unit will operate satisfactorily

\*\* Time-Delay fuse.

FLA - Full Load Amps

LRA - Locked Rotor Amps

MCA - Minimum Circuit Amps
RLA - Rated Load Amps

NOTE: Control circuit is 24-V on all units and requires external power source. Copper wire must be used from service disconnect to unit.

All motors/compressors contain internal overload protection. Complies with 2010 requirements of ASHRAE Standards 90.1

## CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE-VOLTAGE, SERIES	
13-30	
24B-30	
25-31	If a Touch Control is installed, subcooling recommendation displayed in
36-31	Charging Mode must be followed. If not, subcooling chart shown on the
37-30	charging label must be followed
48-30	
49-30	
60-30	

RPM-CAPACITY-SOUND (dBA)\*

STAGE #	COMP RPM	CAPACITY %	SOUND (dBA)
	24VN	A913	
1	1500	58%	58
2	1867	72%	59
3	2100	81%	59
4	2350	90%	59
5	2600	100%	60
		A924B	
1	1500	35%	55
2	2566	56%	60
3	3150	69%	65
4	3950	87%	66
5	4700	100%	68
- 1 N '71		IA925	
1	1200	36%	56
2	1900	58%	61
3	2400	73%	63
4	2600	79%	67
5	3300	100%	69
	24VN	A936	
1	1200	25%	56
2	2400	50%	61
3	3300	69%	65
4	4200	88%	69
5	4800	100%	71
51771		IA937	DA INCO PROPERTY
1	1200	40%	56
2	1800	60%	63
3	2200	73%	67
4	2600	87%	67
5	3000	100%	68
	24VN	IA948	55 To 10 To
1	1500	35%	62
2	2460	57%	65
3	2800	65%	67
4	3650	84%	70
5	4320	100%	72
	24VN	A949	
_ 1	1200	38%	57
2	1840	59%	62
3	2300	74%	66
4	2700	87%	68
5	3120	100%	73
		IA960	
1	1200	32%	57
	2180	55%	61
2			64
3	2850	70%	04
	2850 3700	90%	70

\*Estimated sound for stages 2, 3, and 4
For 2-stage operation: Low = Stage 2, High = Stage 5

# SOUND POWER LEVEL (dBA)

Unit Size- /oltage, Series	Typical Octave Band Spectrum (without tone adjustment)	Min Speed Cooling	Max Speed Cooling
	Freq (Hz)	1500 RPM	2600 RPM
_	125	62.0	64.0
	250	61.0	59.5
010 00	500	54.0	55.0
013-30	1000	53.0	57.0
-	2000	49.0	50.0
	4000 8000	42.0	49.5
	Sound Rating (dBA)	47.5 59	49.5 63
	Freq (Hz)	1500 RPM	4700 RPM
-	125	63.0	67.5
	250	57.0	66.5
	500	51.5	61.5
024B-30	1000	47.5	58.0
-	2000	41.5	54.5
	4000	38.0	57.5
	8000	45.5	53.5
	Sound Rating (dBA)	55	67
	Freq (Hz)	1200 RPM	3300 RPM
	125	59.5	70.0
	250	56.0	67.5
	500	54.0	67.5
025-31	1000	50.0	63.5
	2000	41.5	59.0
	4000	35.0	58.0
	8000	48.0	51.5
	Sound Rating (dBA)	55	69
	Freq (Hz)	1200 RPM	4800 RPM
	125	59.5	70.0
	250	56.0	68.0
	500	54.0	66.0
036-31	1000	50.0	64.0
	2000	41.5	61.5
	4000	35.0	62.0
	8000	48.0	55.5
	Sound Rating (dBA)	55	72
	Freq (Hz)	1200 RPM	3000 RPM
	125	64.0	74.0
	250	61.0	68.0
	500	57.5	66.5
037-30	1000	53.5	61.5
	2000	49.0	59.5
	4000	42.0	57.5
	8000	44.0	51.0
	Sound Rating (dBA)	60	69
	Freq (Hz)	1500 RPM	4320 RPM
	125	67.0	73.5
	250	63.0	71.5
	500	57.0	69.5
048-30	1000	54.5	64.5
	2000	51.0	62.5
	4000	54.0	62.5
	8000	47.5	54.5
	Sound Rating (dBA)	64	72
	Freq (Hz)	1200	3120
	125 250	44.5 48.5	52.0
_	500	50.5	63.0
49-30	1000	51.5	63.5
70-30	2000	51.5 47.5	67.5 61.5
	4000	47.5	58.5
	8000	43.5	54.5
	Sound Rating (dBA)	57	73.0
	Freq (Hz)	1200 RPM	4140 RPM
-	125	61.5	71.5
-	250	59.5	71.5
_	500	54.5	70.0
060-30	1000	50.5	65.0
200-00	2000	44.0	62.0
-	4000	44.0	60.5
	8000	49.0	58.0

NOTE: Tested in compliance with AHRI 270-1995 but not listed with AHRI.

## **ACCESSORIES**

KIT NUMBER	KIT NAME	13-30	24B-30	25-31	36-31	37-30	48-30	49-30	60
KSASF0101AAA	SPRT FEET KIT						Х	х	Х
KSASF0201AAA	SPRT FEET KIT	Х	Х	Х	Х	Х			
KSATX0201PUR	TXV KIT	Х	Х	Х					
KSATX0301PUR	TXV KIT				X	Х			
KSATX0401PUR	TXV KIT						Х	х	
KSATX0501PUR	TXV KIT								Х
KSBTX0201PUR	TXV KIT	Х	х	Х					
KSBTX0301PUR	TXV KIT				Х	Х			
KSBTX0401PUR	TXV KIT						Х	Х	
LM10KK003	VAPOR LINE MUFFLER	Х	Х	Х	Х	Х	Х	Х	Х

x = Accessory

# **Accessory Description and Usage**

# **Support Feet**

Raises unit above base pad. 2 and 3 ton kit contains 5 feet for stable installation with small base. 4 and 5 ton kit contains 4 feet.

Usage Guideline:

Recommended for rooftop applications

### Thermostatic Expansion Valve (TXV)

A modulating flow-control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator.

Usage Guideline:

Required if indoor unit does not already contain Puron® refrigerant TXV

### Vapor Line Muffler

An external muffler installed in the vapor line to minimize vibration transmitted through refrigerant lines

Usage Guideline:

Recommended if vapor line is not installed per recommendations in the installation instructions and vibration may be transmitted into the structure.

# **CONTROLS**

SYSTXCCITN01-A	Infinity® Touch Control (non-Wi-Fi) (version 11 software or newer for 5 stage operation on sizes 24 - 60 and version 12 or higher on size 13.)
SYSTXCCITC01-A	Infinity® Touch Control (Wi-Fi) (version 11 software or newer for 5 stage operation on sizes 24 – 60 and version 12 or higher on size 13.)
SYSTXCCITW01-A	Infinity® Touch Control with Wi-Fi & Wireless Access Point
SYSTXCC4ZC01	Infinity® 4-Zone Damper Control Module
SYSTXCCSMS01	Infinity® Smart Sensor (Optional wall control used to monitor temperature and/or fan control in an individual zone.)
SYSTXCCNIM01	Infinity® Network Interface Module (Connects Heat Recovery and Energy Recovery Ventilators on non-zoning applications.)
SYSTXCCSMS01	Infinity® Smart Sensor

# **THERMOSTATS**

PART NUMBER	PROGRAM	GAS	ELECTRIC	HEAT	COOL
TP-PAC01	7-Day	V	V	1	1
TP-NRH01-A	NP	V	√	3	2
TP-NAC01	NP	V	√	1	1

2004-04-04-0000000   0	UNIT	SERIES	CHARA	CTRICAL CTERIST	ics	,	4		В		c		•	E		F	•	G		ŀ	1				J		к		ATING IGHT		PING IGHT	LENGTH	PPING I/WIDTH iq.)	SHIPI	
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A SO.  AIR DISCHARGE  FIELD POWER SUPPLY COMP.  GY 18** (G/22.2) HOLE WITH  GY 118** (G/22.2) HOLE  GY 3/8** (G/22.2) HOLE  GY 3/8** (G/22.2) HOLE  AIR IN  AI	24VNA960A0030050	0 0	YN	N	N	31 3/16	792.5	42 13/16	1086.9	7/8	22.2	6 9/16	166,1	24 11/16	626.3	9 1/8	231.3	5/16	7.9	3	76.2	16 1/2	419.1	15	381.0	20	508.0	241	109,3	282	127,9	33 5/16	846.6	46 1/4	1224.8
X SO. 1 13/16* (46.7)  1 13/16* (12.7)  2 13/16* (2) PLACES  AIR. IN	B	Ø 7/8'	POWER S (Ø22.2 (Ø27.8** Ø7.8** LIOUID 3 3/4*	UPPLY ) HOLE (SUPPLY (\$22.)  \$18"(\$22.)  \$18"(\$22.)	COMM. WIT CKOU Y CO 2) H	N=NO		B	AI	R DISCH	JARGE /					K	9	H (1)	/2" 2.7)			F		AIR	NTER IN	A1 01 01 01 01 01 01 01 01 01 01 01 01 01	SCHARGE	i D	J	E					
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- 25 3/4 654.0 20 7/16 518.5 37,48,60 31 3/16 792.5 22 15/16 583.2 NOTE: ALL DIMENSIONS IN INICH (MAN)	37 49 60									+														_											
37,48,60 31 3/16 /32.5 22 15/16 583.2 NOTE: ALL DIMENSIONS IN INCH (MM) U.S. ECCN: Not Subject to Regulation (N.S.R.)										1			NC	) TE: A	LL D	IMEN	OIS	NS IN	INC	ı (M∖	/I)		U.S	s. ECC	ON: N	iot Sub	oject to	Regu	lation	(N.S.F	₹.)		SD	1238.4 BEV	

