



APPLICATION
CERTIFICATE of APPROPRIATENESS-or-
DESIGN APPROVAL-or-EXEMPTION

Deliver or mail to:
Environment Department
Boston City Hall, Rm 709
Boston, MA 02201

For Office Use Only

APPLICATION # _____
RECEIVED _____
FEE _____
HEARING DATE _____

DO NOT RETURN THIS FORM BY FAX OR EMAIL

DO NOT STAMP THIS BOX

I. PROPERTY ADDRESS _____

NAME of BUSINESS/PROPERTY _____

The names, telephone numbers, postal and e-mail addresses requested below will be used for all subsequent communications relating to this application. Environment Department personnel cannot be responsible for illegible, incomplete or inaccurate contact information provided by applicants.

II. APPLICANT _____

CONTACT NAME _____ RELATIONSHIP TO PROPERTY _____

MAILING ADDRESS _____ ZIP _____

PHONE _____ EMAIL _____

PROPERTY OWNER _____ CONTACT NAME _____

MAILING ADDRESS _____ ZIP _____

PHONE _____ EMAIL _____

ARCHITECT _____ CONTACT NAME _____

MAILING ADDRESS _____ ZIP _____

PHONE _____ EMAIL _____

CONTRACTOR _____ CONTACT NAME _____

MAILING ADDRESS _____ ZIP _____

PHONE _____ EMAIL _____

III. DESCRIPTION OF PROPOSED WORK

A BRIEF OUTLINE OF THE PROPOSED WORK *MUST* BE GIVEN IN THE SPACE PROVIDED BELOW, OR THE APPLICATION WILL *NOT* BE ACCEPTED. This description provides the basis for the official notice and subsequent decision, and it must clearly represent the entirety of the project. Additional pages may be attached, if necessary, to provide more detailed information.

REQUIRED DOCUMENTATION: Please include all required documentation with this application; review instructions carefully for details.

ESTIMATED COST OF PROPOSED WORK: _____

IV. DULY AUTHORIZED SIGNATURES (both required)

The facts set forth above in this application and accompanying documents are a true statement made under penalty of perjury.

APPLICANT _____

OWNER* _____

*(If building is a condominium or cooperative, the chairman must sign.)

PRINT Embarc Studio LLC, by Dartagnan Brown PRINT Dartagnan Brown, for 46 Clarendon St., LLC

Environment Department personnel cannot be responsible for verifying the authority of the above individuals to sign this application. Misrepresentation of signatory authority may result in the invalidation of the application.

UNSIGNED OR PARTIALLY SIGNED FORMS WILL BE REJECTED

THIS APPLICATION IS NOT COMPLETE WITHOUT SIGNATURES, FEES AND REQUIRED DOCUMENTATION.

The checklist below is for reference only: Please refer to the detailed application instructions for deadlines, fee schedule and required documentation specific to your proposal.

COMPLETED APPLICATION FORM

APPLICATION FEE (Check or money order made payable to City of Boston; see fee schedule in Instructions)

DESCRIPTION OF WORK (A brief description must be included on the front page; additional pages of detailed information may be attached. **Applications that only note "see attached" will not be accepted.**)

PHOTOS OF EXISTING CONDITIONS

DRAWINGS AND SPECIFICATIONS AS REQUIRED (See "documentation requirements" in instructions)

DESCRIPTION OF PROPOSED WORK – 46 Clarendon St

1. PREVIOUSLY APPROVED WORK:

- a. Repair and repoint existing brick masonry facades, cornices, and chimneys, as required.
- b. Clean, repair, and repoint existing brick masonry façades, as required.
- c. Repair existing brownstone decoration, lintels, and sills as required. Paint Benjamin Moore HC-69.

2. Install (2) new skylights in enlarged openings at roof. Refer to spec.
3. Repair and restore existing front stoop as required.
4. Install new metal garden rail to complement neighboring rails. Paint black. Refer to drawings.
5. Install new Pella Architect Series '6 over 6' wood windows in existing window locations. Refer to attached drawings.
6. Install new Pella Architect Series '2 over 2' wood windows in existing dormer window locations. Refer to attached drawings.
7. Install new rear deck at second floor with black metal railing. Install new wood and glass door for access.
8. Install new wood and glass door system to rear patio at Garden Level. Refer to attached drawings.
9. Expand existing rear dormer. Paint HC-69. Refer to attached drawings.
10. Install new rear deck with black metal railings off of rear dormer.
11. Install new wood and glass door in expanded rear dormer. Refer to attached drawings.
12. Install new Pella Architect Series casement windows and transoms on rear. Refer to drawings.
13. Install new copper gutters as required.
14. Repair and restore existing front entry doors and door hardware. Paint door black.
15. Install new pendant entry light. Refer to spec.
16. Install new A/V intercom system at front entry brick return.
17. Construct (2) new window wells at street level windows to complement neighboring window wells. Refer to attached drawings.
18. Install (2) new star bolt tie backs at top floor on Clarendon St. façade.

46 CLARENDON STREET

BOSTON, MA

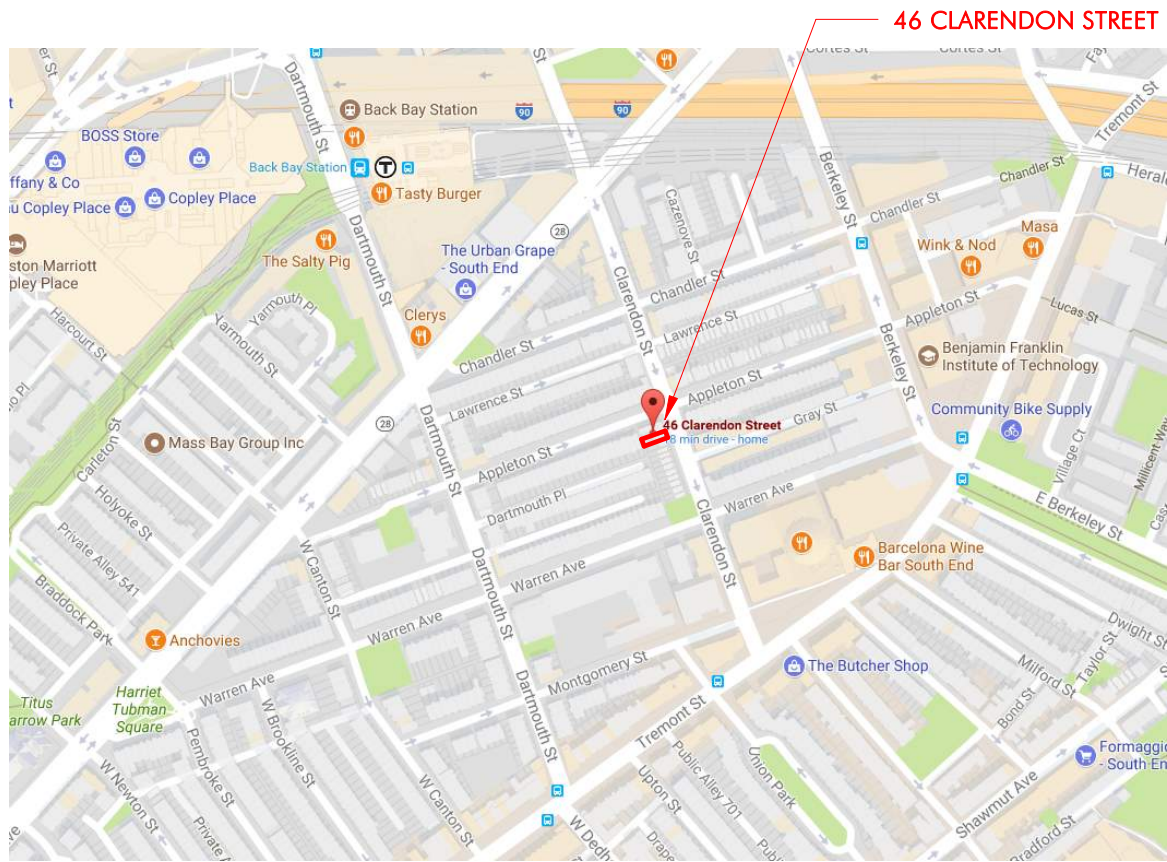
46 CLARENDON ST, LLC

SELDC

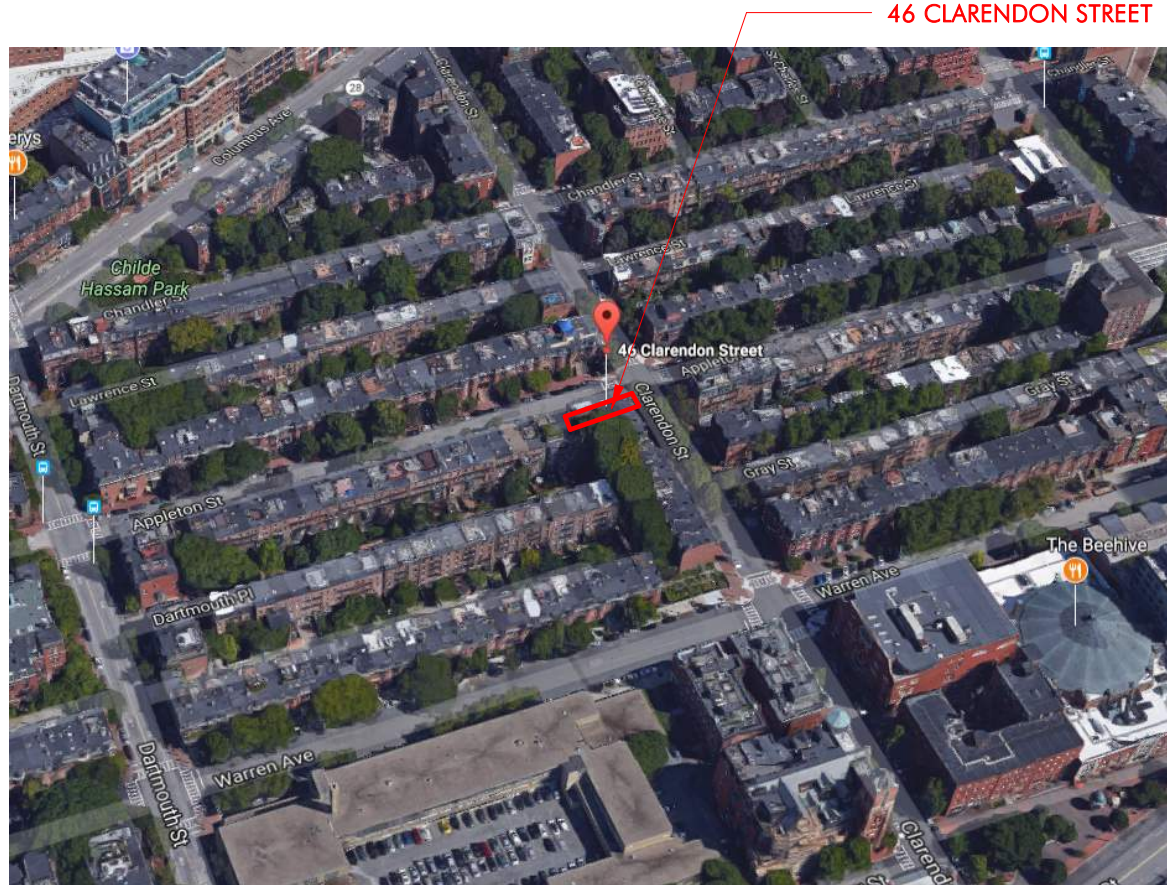
OCTOBER 17, 2017



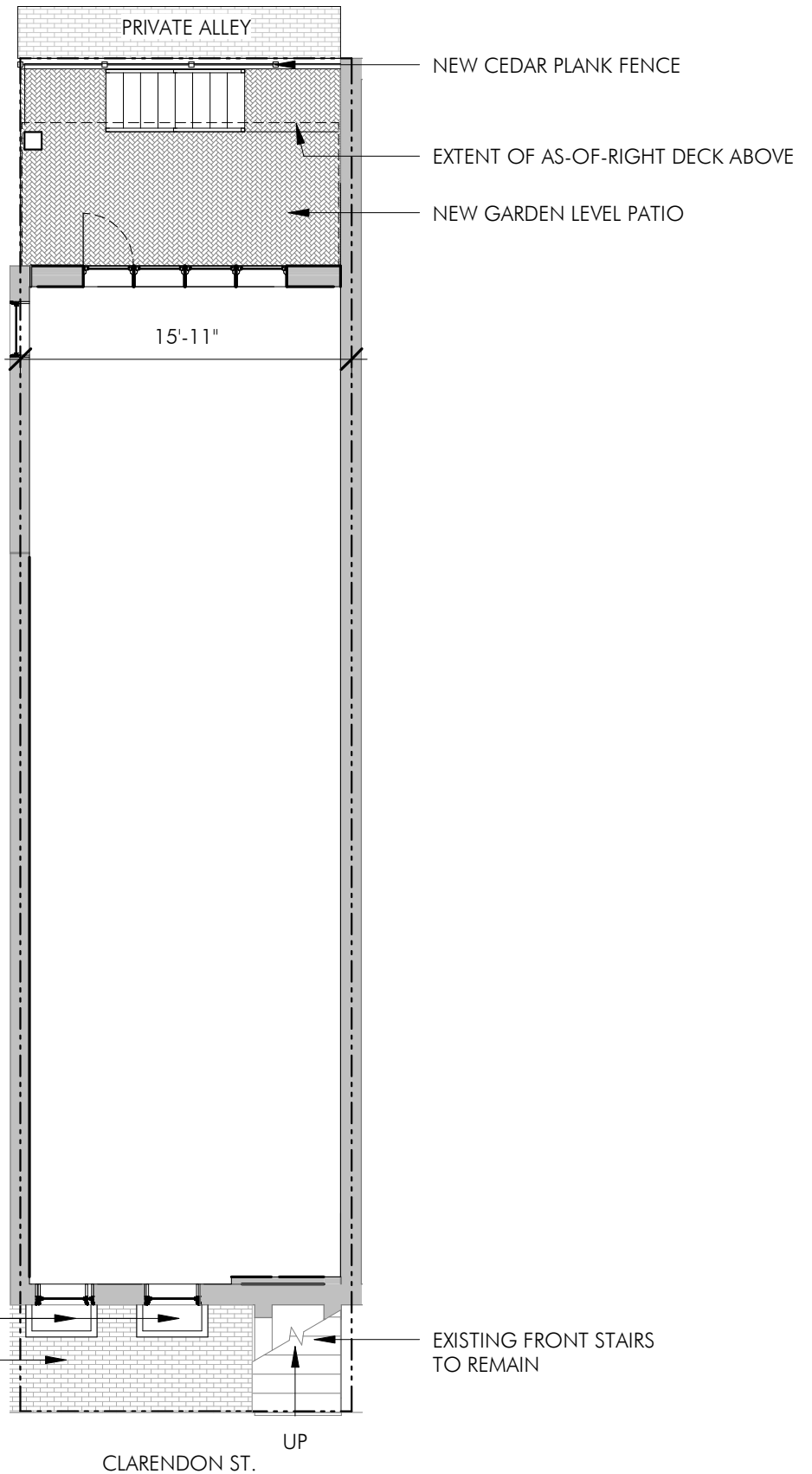
EMBARC STUDIO
ARCHITECTURE + DESIGN



46 CLARENDON STREET



46 CLARENDON STREET



1 SITE PLAN
1/8" = 1'-0"

1/8" = 1'-0"

46 CLARENDON ST



CLARENDON STREET FACING SOUTH

46 CLARENDON ST



46 CLARENDON STREET

46 CLARENDON ST



CLARENDON STREET FACING NORTH



REAR ALLEY VIEW FACING APPLETON ST



REAR ALLEY VIEW FACING AWAY FROM APPLETON ST



FRONT STOOP TO BE REPAIRED AND RESTORED, AS REQUIRED.
STAIR RAILING TO BE REPLACED TO MATCH NEIGHBORING RAILS.



REPAIR AND RESTORE STONE SILLS AND LINTELS, AS REQUIRED.
REPLACE WINDOWS WITH NEW PELLA ARCHITECT SERIES '6 OVER 6' WOOD WINDOWS
CREATE NEW WINDOW WELLS TO MATCH NEIGHBORING WINDOW WELLS.



REPAIR AND RESTORE EXISTING FRONT ENTRY DOOR AND HARDWARE.
INSTALL NEW PENDANT ENTRY LIGHT.



- REPLACE EXISTING ROOF WITH ECOSTAR SHINGLES.
- REPAIR AND RESTORE EXISTING DORMER, AS REQUIRED. PAINT HC-69.
- REPLACE EXISTING DORMER WINDOWS WITH NEW '2 OVER 2' PELLA ARCHITECT SERIES WOOD WINDOWS IN EXISTING MASONRY OPENINGS, TYP.
- REMOVE EXISTING FIRE ESCAPE
- (2) NEW STAR BOLTS TO TIE BACK WALLS
- REPLACE ALL EXISTING WINDOWS WITH NEW '6 OVER 6' PELLA ARCHITECT SERIES WOOD WINDOWS IN EXISTING MASONRY OPENINGS, TYP.
- PREVIOUSLY APPROVED: REPAIR AND REPOINT STONE LINTELS AND SILLS, AS REQUIRED. PAINT HC-69.
- PREVIOUSLY APPROVED: REPAIR, REPOINT, AND WASH FACADE, AS REQUIRED.
- INSTALL NEW PENDANT AT ENTRY
- INSTALL A/V SECURITY AND INTERCOM SYSTEM AT BRICK RETURN.
- REPAIR AND RESTORE EXISTING FRONT DOOR AND HARDWARE.
- REPLACE EXISTING FRONT RAILING AT STAIR TO COMPLEMENT NEIGHBORING STAIR RAILS.
- INSTALL NEW BLACK METAL RAIL AT FRONT YARD TO COMPLEMENT NEIGHBORING RAILS.
- REPAIR AND RESTORE FRONT STOOP, AS REQUIRED.
- (2) NEW WINDOW WELLS AND WINDOWS IN ENLARGED MASONRY OPENINGS; SIZE AND DETAIL TO MATCH NEIGHBORING WINDOW WELLS.

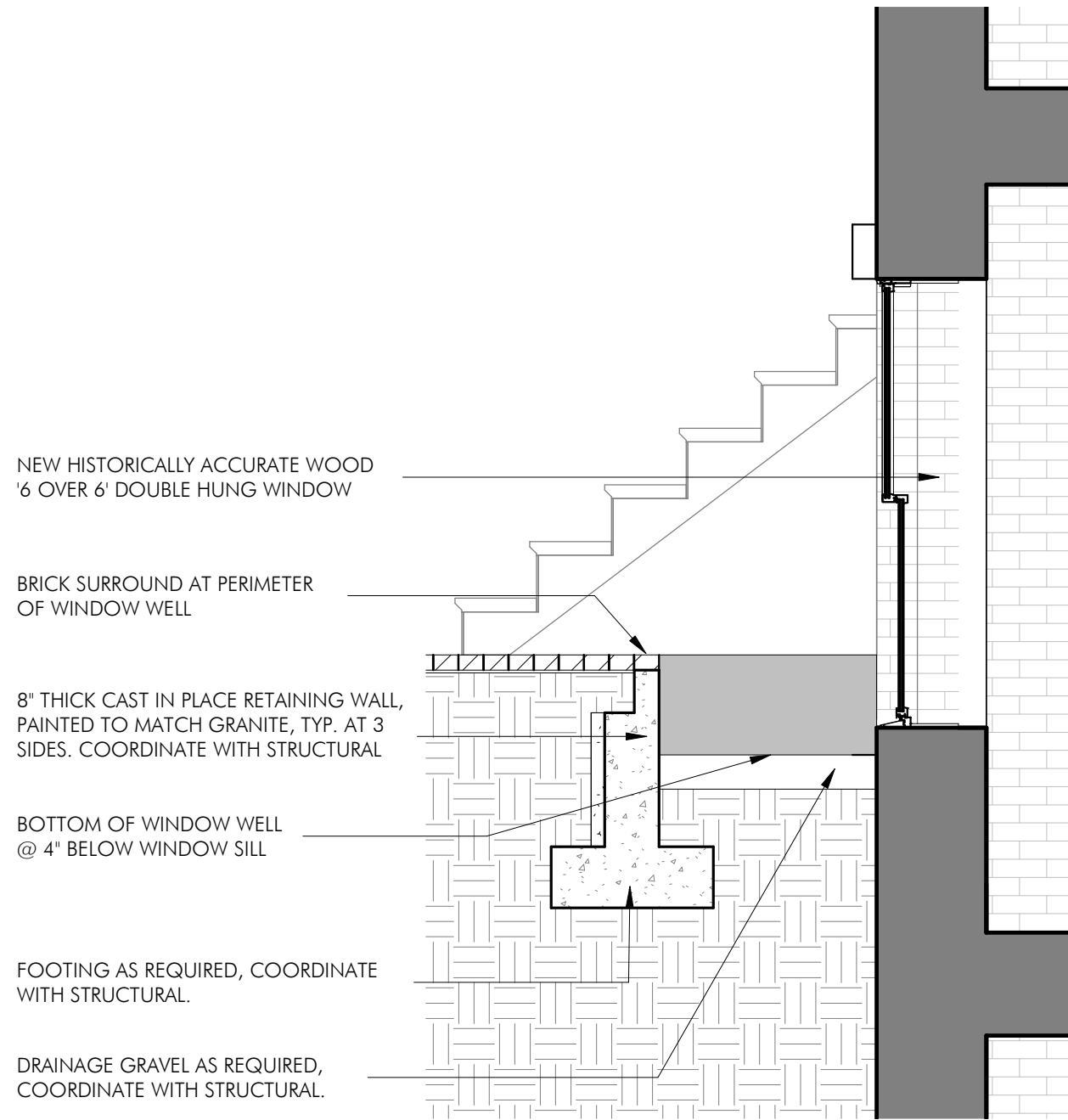
3/16" = 1'-0"



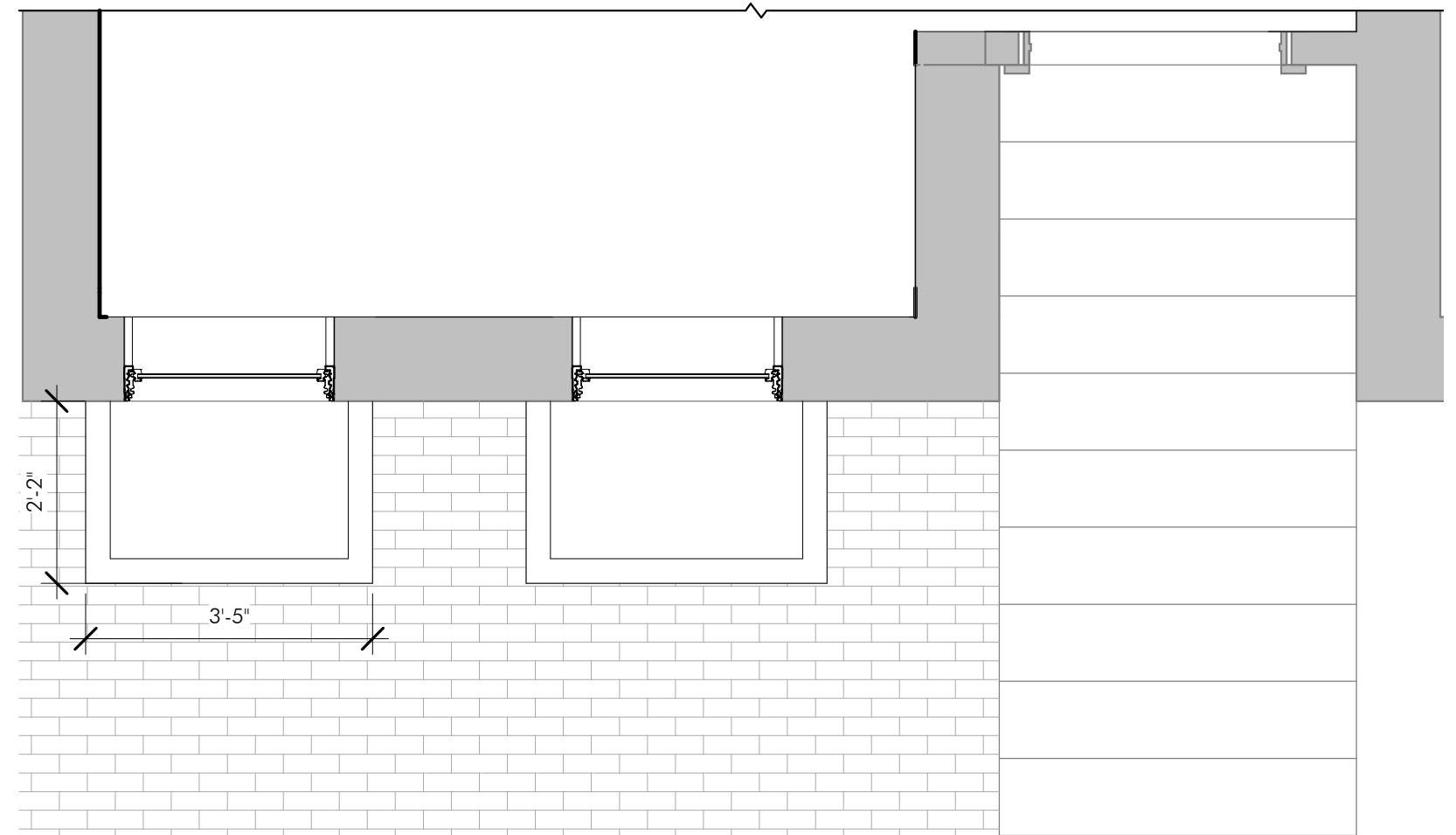
WINDOW WELL AT 42 CLARENDON STREET



WINDOW WELL AT 44 CLARENDON STREET



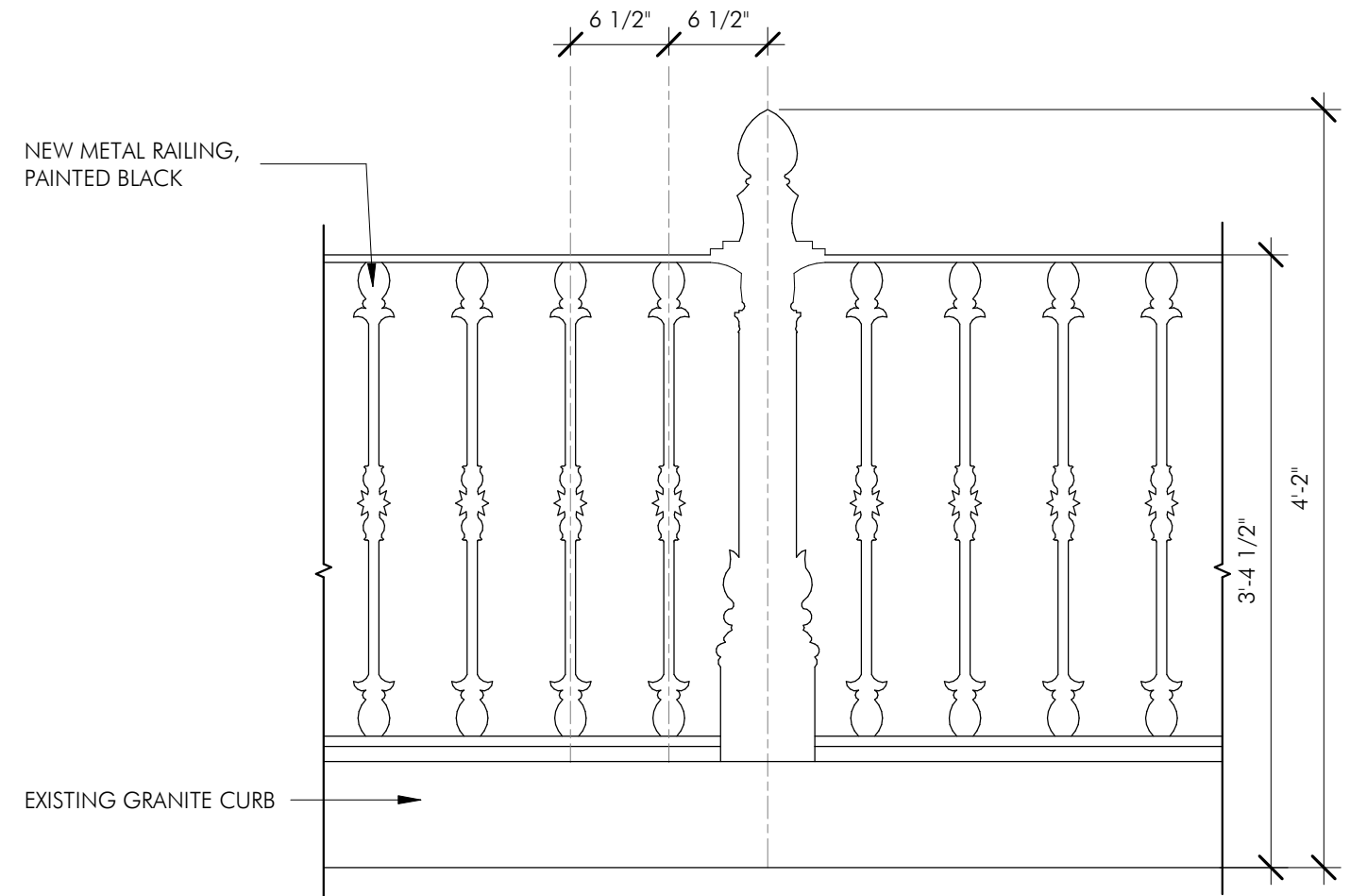
1 PROPOSED WINDOW WELL SECTION
1/2" = 1'-0"



2 PROPOSED FRONT YARD PLAN
1/2" = 1'-0"



PRECEDENT RAILING - FOUND AT 42/44 CLARENDON ST
 PROPOSED RAILING TO WRAP UP STOOP STAIR TO MATCH PRECEDENT



1 PROPOSED FRONT YARD RAILING
 1" = 1'-0"



1 EXISTING REAR ELEVATION
3/16" = 1'-0"



NEW EXPANDED DORMER

NEW DECK WITH BLACK METAL RAILING

NEW PELLA ARCHITECT SERIES CASEMENT/FIXED WINDOWS IN NEW MASONRY WALL.

NEW PELLA ARCHITECT SERIES CASEMENT/FIXED WINDOWS IN NEW MASONRY WALL.

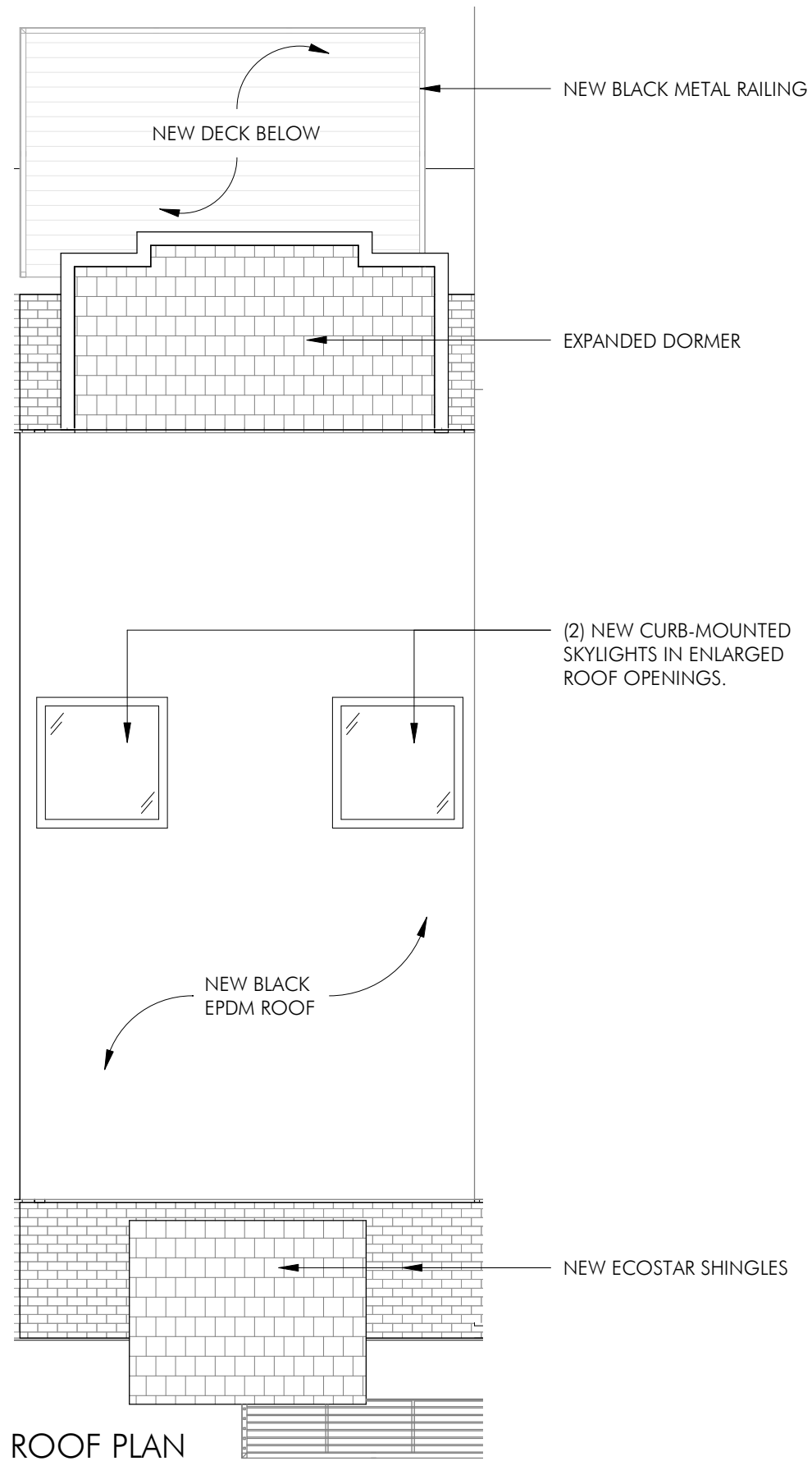
REAR AS OF RIGHT DECK

NEW PELLA ARCHITECT SERIES CASEMENT/FIXED WINDOWS IN EXPANDED MASONRY OPENINGS

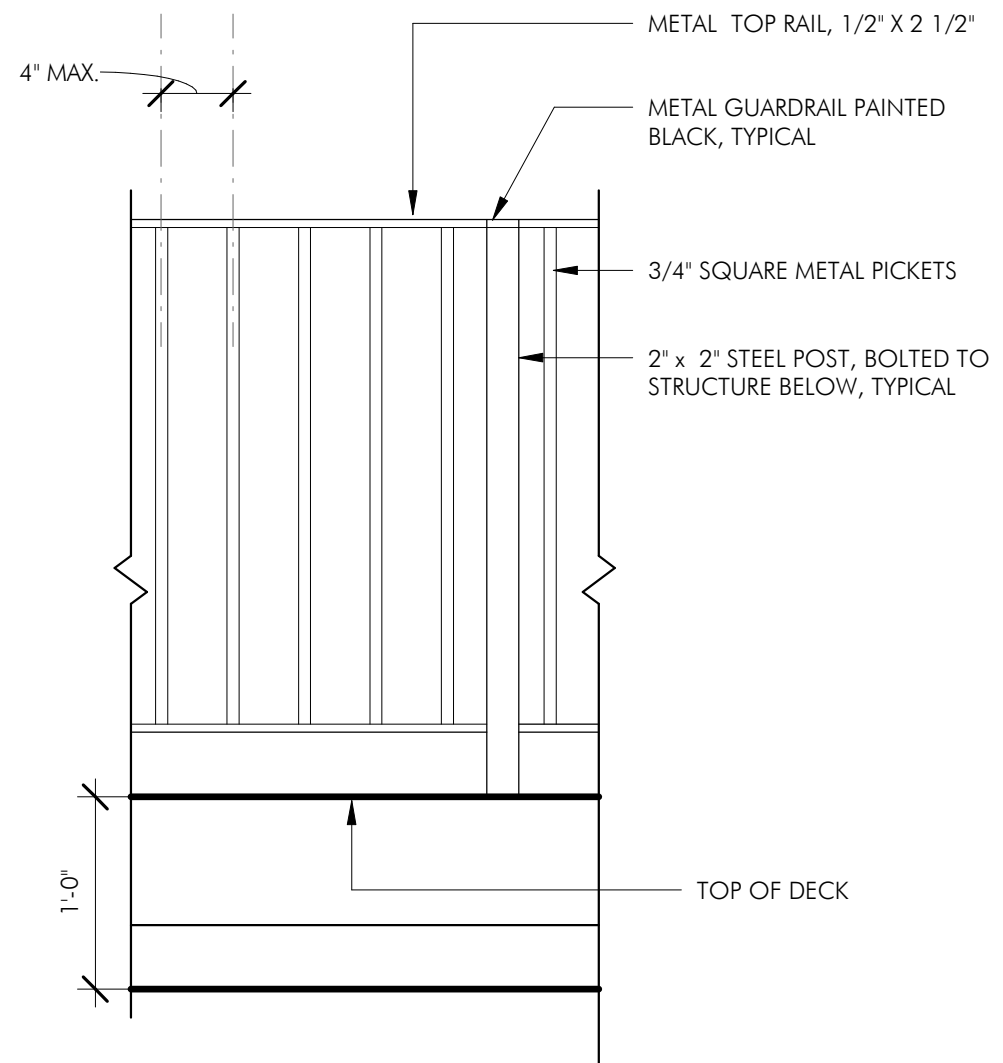
NEW NANAWALL IN EXPANDED MASONRY OPENINGS. VERIFY M.O. WITH NANAWALL SYSTEM.

2 PROPOSED REAR ELEVATION
3/16" = 1'-0"

3/16" = 1'-0"



1 PROPOSED ROOF PLAN
3/16" = 1'-0"



2 PROPOSED DECK RAILING ELEVATION
1" = 1'-0"



BURKE 27920Z
OIL RUBBED BRONZE

WIDTH:	9.0"
HEIGHT:	13.0"
WEIGHT:	5.0 LBS
MATERIAL:	ALUMINUM
GLASS:	ETCHED OPAL
CANOPY:	5" DIA.
SOCKET:	1-100W MED
MAX HEIGHT:	54.5"
LEADWIRE:	120.0"
DOWN RODS:	2-6", 2-12"
CERTIFICATION:	C-US DAMP RATED
VOLTAGE:	120V
UPC:	640665279207
INSTALL OPTIONS:	UP, INSTALL ON SLOPED CEILING 90°

AT HINKLEY, WE EMBRACE THE DESIGN PHILOSOPHY THAT YOU CAN MERGE TOGETHER THE LIGHTING, FURNITURE, ART, COLORS AND ACCESSORIES YOU LOVE INTO A BEAUTIFUL ENVIRONMENT THAT DEFINES YOUR OWN PERSONAL STYLE. WE HOPE YOU WILL BE INSPIRED BY OUR COMMITMENT TO KEEP YOUR 'LIFE AGLOW.'

*life*AGLOW®



WHITALL BROWN



Whitall Brown HC-69



GOES WITH



SHADES



SIMILAR

Whitall Brown

LRV: 17

This color is part of the Historic Color collection. A collection of 191 time-honored hues comprises our most popular palette. Steeped in tradition, the refined, elegant colors of the Historical Collection deliver timeless color that can be used in traditional as well as contemporary spaces. Unveiled in 1976 to celebrate the US bicentennial, a collection of 191 colors inspired by America's historic landmarks.



ALL COLORS



SEE IN ROOM



SHARE



BUY SAMPLE

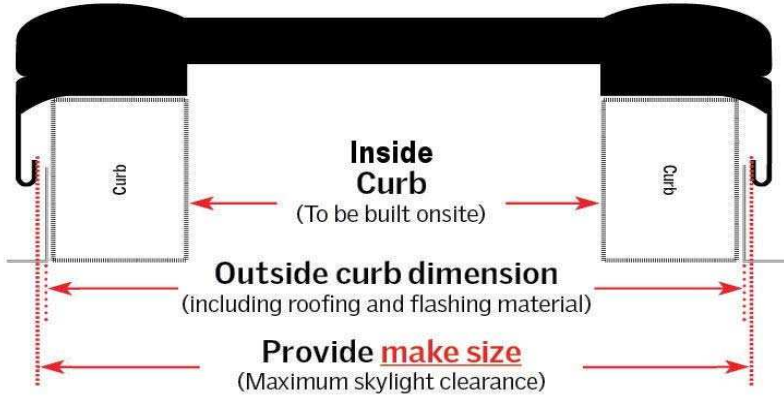
Date: June 5, 2017
 Updated by: CJA



FCM Product Data Sheet

Starting Production Code: 43AX10A

Description	General	FCM Fixed Curb Mount Skylight that mounts to a site built curb (residential curbs typically 2x4 or 2x6). Fixed skylight, provided with various glazings, is approved for all wind zones; and manufactured with an aluminum profile with an insulated glass unit. Intergral gasket prevents air and water infiltration while allowing the removal of interior condensation.	
	Variant	FCM xxxx 00yyz (xxxx = size of unit) (yy = glazing) (z = generation code)	
Installation	Instructions	Installation instructions provided - VAS 452846 (US), VAS 452195 (AUS, NZ)	
	Orientation	No designated top, bottom, or sides for installation in any direction	
	Applications	Single unit applications only (combi applications not possible) 0 degrees to 60 degrees, use standard installation procedure Above 45 degrees, use water diverter as illustrated in installation instructions; water diverter provided by installer	
Compatibility	Flashings	Applications less than 10 degree roof pitch - flashing provided by others	
		ECL - Engineered flashing for a single installation with thin roofing material for roof pitch above 10 degrees	
		ECW - Engineered flashing for a single installation with tile roofing material for roof pitch above 14 degrees	
	Interior Accessories	Accessory Tray; mounts to curb; allows for installation of blinds	
		FSCC - Solar powered Room darkening - double pleated blind	
		FSLC - Solar powered Light filtering - single pleated blind	
		DSC - Solar powered Blackout - flat blind	
		RSC - Solar powered Light filtering - flat blind	
		FHCC - Manually Operated Room darkening - double pleated blind	
		FHLC - Manually Operated Light filtering - single pleated blind	
RFC - Manually Operated Light filtering - flat blind			
DKC - Manually Operated Blackout - flat blind			
Materials	Corner Keys	One at each corner, Made of ASA Luran in neutral grey finish	
	Cladding	15 gauge, 1.5 mm (0.06") roll formed aluminum (3105-H22) with neutral grey Kynar 500 finish	
	Glazing	Standard stocked glazings are type 05, 04, 06, 07, 08. Consult VELUX for stocked sizes for each glazing. Consult with Customer Service for special glazing options	
		05 - A LoE3 double sealed insulated panes with warm edge technology, stainless steel spacer, 95% argon gas and coated with three layers of microscopic silver particles to increase thermal performance. Overall pane thickness is 17.2 mm.	
		05C - A LoE3 double sealed insulated panes with warm edge technology, stainless steel spacer, 95% argon gas and coated with three layers of microscopic silver particles to increase thermal performance. Overall pane thickness is 13.2 mm. (Canada)	
		04 - LoE3 Laminated - All the benefits of the 05 LoE3 glazing, plus a laminated interior pane for safety. Features Neat® glass coating on exterior pane that stays cleaner, longer. Overall pane thickness is 17.6mm. Laminated material. 0.30 PVB.	
		06 - Impact - Laminated heat strengthened with tempered LoE3. Features Neat® glass coating that stays cleaner, longer. Over all pane thickness is 18.2mm. Laminated interlayer is 0.90 PVB.	
	08 - White laminated - Laminated heat strengthened with tempered LoE3. Same as 04 but a white inner layer. Features Neat® glass coating on exterior that stays cleaner, longer. Overall pane thickness is 17.6mm. Laminated interlayer is 0.30 PVB.		
	Gasket	Black TPE rubber gasket to prevent air infiltration and water penetration.	
	Seal	Primary seal at glazing and cladding is structural silicone.	
Fastners	#8 x 1-3/4" stainless steel, black coated screw. Attaches to skylight curb.		
	Skylight Size	No. of Fastners	
	1430, 1446, 2222, 2230, 2234, 2246	12	
2270, 3030, 3046, 3434, 3446, 4646	14		

Sizes	Standard Sizes	1430, 1446, 2222, 2230, 2234, 2246, 2270, 3030, 3046, 3434, 3446, 4646				
	Cross Section	 <p>The diagram shows a cross-section of a skylight with a black frame. Two white rectangular sections labeled 'Curb' are shown on either side of the central opening. Red arrows indicate three dimensions: 'Inside Curb (To be built onsite)' between the inner edges of the curbs, 'Outside curb dimension (including roofing and flashing material)' between the outer edges of the curbs, and 'Provide make size (Maximum skylight clearance)' between the outer edges of the curbs.</p>				
Dimensions		Size	Inside Curb	Outside Curb	Make Size	
		14	14-1/2"	17-1/2"	18-5/8"	
		22	22-1/2"	25-1/2"	26-5/8"	
		30	30-1/2"	33-1/2"	34-5/8"	
		34	34-1/2"	37-1/2"	38-5/8"	
		46	46-1/2"	49-1/2"	50-5/8"	
		Custom Sizes (max)		Width	50-3/4"	Height
Certification	General	WDMA Hallmark, Florida Product Approval, Texas Dept. of Insurance, Miami-Dade NOA.				
	Structural Uplift/Download	Certified through WDMA/Hallmark, LA Research Report, IAPMO-ES				
	Thermal	NFRC certified and labeled to exceed Energy Star U-value and Solar Heat Gain (SHGC) requirements for all US climate zones.				
	Impact/Hurricane	WDMA Hallmark, Florida Product Approval, Texas Dept. of Insurance, Miami-Dade NOA.				
Warranty	Installation	10 years from the date of purchase; VELUX No Leak Warranty; warrants skylight installation.				
	Skylight	10 years from the date of purchase; VELUX warrants that the skylight will be free from defects in material and workmanship.				
	Glass Seal	20 years from the date of purchase; VELUX warrants that the insulated glass pane will not develop a material obstruction of vision due to a failure of the glass seal.				
	Hail Warranty	10 years from the date of purchase; VELUX warrants laminated glass panes against hail breakage.				
	Accessories and Electrical Components	5 years from the date of purchase, VELUX warrants that VELUX blinds and control systems will be free from defects in material and workmanship.				
Changes From Earlier Versions	Exterior	Neutral gray color - NCSS 7500-N, nearest RAL = 7043				
	Interior	N/A				
Type Sign	Example	FCM 2222 0004D 01BF05				
	Location	Etched into exterior frame cover.				
Other Information	Features & Benefits					



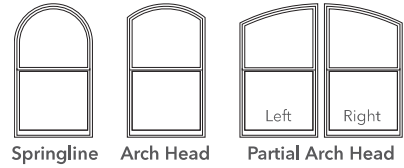
SIZE TABLES

Wood and Aluminum-Clad Exteriors
Double- and Single-Hung



Fixed Transoms

	(552) (533)	(654) (635)	(756) (737)	(857) (838)	(959) (940)	(1 060) (1 041)	(1 162) (1 143)	(1 238) (1 219)
Opening	1' 9 ³ / ₄ "	2' 1 ³ / ₄ "	2' 5 ³ / ₄ "	2' 9 ³ / ₄ "	3' 1 ³ / ₄ "	3' 5 ³ / ₄ "	3' 9 ³ / ₄ "	4' 0 ³ / ₄ "
Frame	1' 9"	2' 1"	2' 5"	2' 9"	3' 1"	3' 5"	3' 9"	4' 0"
(375) (356)	2114	2514	2914	3314	3714	4114	4514	4814
(451) (432)	2117	2517	2917	3317	3717	4117	4517	4817
(654) (635)	2125	2525	2925	3325	3725	4125	4525	4825



Pella Architect Series single-hung windows are available in shapes shown above, and additional custom shapes per drawing. For specifications, size limitations, and details on these units, contact your local Pella sales representative.

Vent Units

(908) (889)	2135	2535	2935	3335	3735	4135	4535	4835
(1 060) (1 041)	2141	2541	2941	3341	3741	4141	4541	4841
(1 213) (1 194)	2147	2547	2947	3347	3747	4147	4547	4847
(1 365) (1 346)	2153	2553	2953	3353	3753	4153	4553	4853
(1 467) (1 448)	2157	2557	2957	3357	3757	4157	4557	4857
(1 518) (1 499)	2159	2559	2959	3359	3759	4159	4559	4859
(1 670) (1 651)	2165	2565	2965	3365	3765	4165	4565	4865

Opening Dimensions

CLAD EXTERIOR UNITS:

Dimensions shown in standard size tables are rough opening dimensions.

WOOD EXTERIOR UNITS:

Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

FRAME	ROUGH		MASONRY	
Brickmould	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Egress Notes:

Check all applicable local codes for emergency egress requirements.

E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².

E1 = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

See Design Data pages in this section for clear opening dimensions.

Clear opening (egress) information does not take into consideration the addition of a Rolscreen (or any other accessory) to the product. You should consult your local building code to ensure products with Rolscreens meet egress requirements.

Not to scale.

Traditional grille patterns shown. Refer to Grille Types section for additional patterns and profiles.



HUNG

SIZE TABLES

Wood and Aluminum-Clad Exteriors
Double- and Single-Hung



Vent Units

	(552) (533)	(654) (635)	(756) (737)	(857) (838)	(959) (940)	(1 060) (1 041)	(1 162) (1 143)	(1 238) (1 219)
Opening	1' 9 ³ / ₄ "	2' 1 ³ / ₄ "	2' 5 ³ / ₄ "	2' 9 ³ / ₄ "	3' 1 ³ / ₄ "	3' 5 ³ / ₄ "	3' 9 ³ / ₄ "	4' 0 ³ / ₄ "
Frame	1' 9"	2' 1"	2' 5"	2' 9"	3' 1"	3' 5"	3' 9"	4' 0"
(1 822) (1 803)								
(1 975) (1 956)								
(2 153) (2 134)								

Opening Dimensions

CLAD EXTERIOR UNITS:

Dimensions shown in standard size tables are rough opening dimensions.

WOOD EXTERIOR UNITS:

Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood sub sill.

FRAME	ROUGH		MASONRY	
Brickmould	Width	Height	Width	Height
STD	+ 3/4"	+ 1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+ 1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Egress Notes:

Check all applicable local codes for emergency egress requirements.

E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².

E1 = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

See Design Data pages in this section for clear opening dimensions.

Clear opening (egress) information does not take into consideration the addition of a Rolscreen (or any other accessory) to the product. You should consult your local building code to ensure products with Rolscreens meet egress requirements.

Not to scale.

Traditional grille patterns shown. Refer to Grille Types section for additional patterns and profiles.



HUNG

SIZE TABLES

Wood and Aluminum-Clad Exteriors
Double- and Single-Hung Fixed



Fixed Units

	(1 060) (1 041)	(1 213) (1 194)	(1 365) (1 346)	(1 518) (1 499)
Opening	3' 5 ³ / ₄ "	3' 11 ³ / ₄ "	4' 5 ³ / ₄ "	4' 11 ³ / ₄ "
Frame	3' 5"	3' 11"	4' 5"	4' 11"
(908) (889)	2' 11 ³ / ₄ "	2' 11"		
(1 060) (1 041)	3' 5 ³ / ₄ "	3' 5"		
(1 213) (1 194)	3' 11 ³ / ₄ "	3' 11"		
(1 365) (1 346)	4' 5 ³ / ₄ "	4' 5"		
(1 467) (1 448)	4' 9 ³ / ₄ "	4' 9"		
(1 518) (1 499)	4' 11 ³ / ₄ "	4' 11"		
(1 670) (1 651)	5' 5 ³ / ₄ "	5' 5"		
(1 822) (1 803)	5' 11 ³ / ₄ "	5' 11"		
	4135	4735	5335	5935
	4141	4741	5341	5941
	4147	4747	5347	5947
	4153	4753	5353	5953
	4157	4757	5357	5957
	4159	4759	5359	5959
	4165	4765	5365	5965
	4171	4771	5371	5971

Opening Dimensions

CLAD EXTERIOR UNITS:

Dimensions shown in standard size tables are rough opening dimensions.

WOOD EXTERIOR UNITS:

Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

FRAME	ROUGH		MASONRY	
	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Not to scale.

Traditional grille patterns shown. Refer to Grille Types section for additional patterns and profiles.

Grille patterns will align with companion hung window with equal sash split.

5-lite high grille patterns may be ordered in 5'5" fixed units to match cottage sash vent units.

Grilles are equally-divided on fixed units with odd-number lites high.



SIZE TABLES

Wood and Aluminum-Clad Exteriors
Replacement Double-Hung and Transoms



Transoms

	(616) (597)	(718) (699)	(762) (749)	(819) (800)	(921) (902)	(1 022) (1 003)	(1 073) (1 054)
Opening	2' 0 1/4"	2' 4 1/4"	2' 6 1/4"	2' 8 1/4"	3' 0 1/4"	3' 4 1/4"	3' 6 1/4"
Frame	1' 11 1/2"	2' 3 1/2"	2' 5 1/2"	2' 7 1/2"	2' 11 1/2"	3' 3 1/2"	3' 5 1/2"
1' 2"	23.5 x 14	27.5 x 14	29.5 x 14	31.5 x 14	35.5 x 14	39.5 x 14	41.5 x 14
1' 5"	23.5 x 17	27.5 x 17	29.5 x 17	31.5 x 17	35.5 x 17	39.5 x 17	41.5 x 17
2' 1"	23.5 x 25	27.5 x 25	29.5 x 25	31.5 x 25	35.5 x 25	39.5 x 25	41.5 x 25

Vent Units

(921) (902)	3' 0 1/4"	2' 11 1/2"	23.5 x 35.5	27.5 x 35.5	29.5 x 35.5	31.5 x 35.5	35.5 x 35.5	39.5 x 35.5	41.5 x 35.5
(872) (853)	3' 2 1/4"	3' 1 1/2"	23.5 x 37.5	27.5 x 37.5	29.5 x 37.5	31.5 x 37.5	35.5 x 37.5	39.5 x 37.5	41.5 x 37.5
(1 073) (1 054)	3' 6 1/4"	3' 5 1/2"	23.5 x 41.5	27.5 x 41.5	29.5 x 41.5	31.5 x 41.5	35.5 x 41.5	39.5 x 41.5	41.5 x 41.5
(1 175) (1 156)	3' 10 1/4"	3' 9 1/2"	23.5 x 45.5	27.5 x 45.5	29.5 x 45.5	31.5 x 45.5	35.5 x 45.5	39.5 x 45.5	41.5 x 45.5
(1 226) (1 206)	4' 0 1/4"	3' 11 1/2"	23.5 x 47.5	27.5 x 47.5	29.5 x 47.5	31.5 x 47.5	35.5 x 47.5	39.5 x 47.5	41.5 x 47.5
(1 327) (1 308)	4' 4 1/4"	4' 3 1/2"	23.5 x 51.5	27.5 x 51.5	29.5 x 51.5	31.5 x 51.5	35.5 x 51.5	39.5 x 51.5	41.5 x 51.5
(1 378) (1 359)	4' 8 1/4"	4' 5 1/2"	23.5 x 53.5	27.5 x 53.5	29.5 x 53.5	31.5 x 53.5	35.5 x 53.5	39.5 x 53.5	41.5 x 53.5
(1 473) (1 461)	4' 10 1/4"	4' 9 1/2"	23.5 x 57.5	27.5 x 57.5	29.5 x 57.5	31.5 x 57.5	35.5 x 57.5 E1	39.5 x 57.5 E	41.5 x 57.5 E

Opening Dimensions

CLAD EXTERIOR UNITS:

Dimensions shown in standard size tables are rough opening dimensions.

WOOD EXTERIOR UNITS:

Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood sub sill.

FRAME	ROUGH		MASONRY	
Brickmould	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Egress Notes:

Check all applicable local codes for emergency egress requirements.

E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².

E1 = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

See Design Data pages in this section for clear opening dimensions.

Clear opening (egress) information does not take into consideration the addition of a Rolscreen (or any other accessory) to the product. You should consult your local building code to ensure products with Rolcreens meet egress requirements.

Not to scale.

Traditional grille patterns shown. Refer to Grille Types section for additional patterns and profiles.



SIZE TABLES

Wood and Aluminum-Clad Exteriors Replacement Double-Hung



Vent Units

	(616) (597)	(718) (699)	(762) (749)	(819) (800)	(921) (902)	(1 022) (1 003)	(1 073) (1 054)
Opening	2' 0 1/4"	2' 4 1/4"	2' 6"	2' 8 1/4"	3' 0 1/4"	3' 4 1/4"	3' 6 1/4"
Frame	1' 11 1/2"	2' 3 1/2"	2' 5 1/2"	2' 7 1/2"	2' 11 1/2"	3' 3 1/2"	3' 5 1/2"
(1 530) (1 511) (1 581) (1 562) (1 683) (1 664) (1 835) (1 816)	5' 0 1/4"	4' 11 1/2"					
		5' 2 1/4"	5' 1 1/2"				
		5' 6 1/4"	5' 5 1/2"				
		6' 0 1/4"	5' 11 1/2"				
	23.5 x 59.5	27.5 x 59.5	29.5 x 59.5	31.5 x 59.5	35.5 x 59.5 E ₁	39.5 x 59.5 E	41.5 x 59.5 E
	23.5 x 61.5	27.5 x 61.5	29.5 x 61.5	31.5 x 61.5 E ₁	35.5 x 61.5 E	39.5 x 61.5 E	41.5 x 61.5 E
	23.5 x 65.5	27.5 x 65.5	29.5 x 65.5	31.5 x 65.5 E ₁	35.5 x 65.5 E	39.5 x 65.5 E	41.5 x 65.5 E
	23.5 x 71.5	27.5 x 71.5 E ₁	29.5 x 71.5 E ₁	31.5 x 71.5 E	35.5 x 71.5 E	39.5 x 71.5 E	41.5 x 71.5 E

Opening Dimensions

CLAD EXTERIOR UNITS:

Dimensions shown in standard size tables are rough opening dimensions.

WOOD EXTERIOR UNITS:

Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood sill.

FRAME	ROUGH		MASONRY	
Brickmould	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Egress Notes:

Check all applicable local codes for emergency egress requirements.

E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².

E1 = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

See Design Data pages in this section for clear opening dimensions.

Clear opening (egress) information does not take into consideration the addition of a Rolscreen (or any other accessory) to the product. You should consult your local building code to ensure products with Rolcreens meet egress requirements.

Not to scale.

Traditional grille patterns shown. Refer to Grille Types section for additional patterns and profiles.



CASEMENT

SIZE TABLES

Wood and Aluminum-Clad Exteriors



	(451) (432)	(552) (533)	(603) (584)	(654) (635)	(756) (737)	(832) (813)	(908) (889)
Opening	1' 5 3/4"	1' 9 3/4"	1' 11 3/4"	2' 1 3/4"	2' 5 3/4"	2' 8 3/4"	2' 11 3/4"
Frame	1' 5"	1' 9"	1' 11"	2' 1"	2' 5"	2' 8"	2' 11"
1' 2"	1714	2114	2314	2514	2914	3214	3514
1' 5"	1717	2117	2317	2517	2917	3217	3517
1' 9"		2121					
1' 11"			2323				
2' 1"	1725	2125	2325	2525	2925	3225	3525
2' 5"				2929			

Opening Dimensions

CLAD EXTERIOR UNITS: Dimensions shown in tables are rough opening dimensions.

WOOD EXTERIOR UNITS: Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

FRAME	ROUGH		MASONRY	
Brickmould	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Not to scale.

Ⓡ = Fixed Unit Only

Traditional grille patterns shown. Refer to Clad/Wood Overview Section for additional patterns and profiles.

Venting transoms are available as casements or awnings.



CASEMENT

SIZE TABLES

Wood and Aluminum-Clad Exteriors



Vent and Fixed Units

	(451) (432)	(552) (533)	(603) (584)	(654) (635)	(756) (737)	(832) (813)	(908) (889)
Opening	1' 5 3/4"	1' 9 3/4"	1' 11 3/4"	2' 1 3/4"	2' 5 3/4"	2' 8 3/4"	2' 11 3/4"
Frame	1' 5"	1' 9"	1' 11"	2' 1"	2' 5"	2' 8"	2' 11"
(908) (889)	1735	2135	2335	2535	2935 E ₃	3235 E ₂	3535 E ₁ E ₂
(1 060) (1 041)	1741	2141	2341	2541 E ₃	2941 E ₂	3241 E ₂	3541 E
(1 213) (1 194)	1747	2147	2347	2547 E ₂	2947 E	3247 E	3547 E
(1 365) (1 346)	1753	2153	2353	2553 E ₂	2953 E	3253 E	3553 E
(1 518) (1 499)	1759	2159	2359	2559 E ₂	2959 E	3259 E	3559 E
(1 670) (1 651)	1765	2165	2365	2565 E ₂	2965 E	3265 E	3565 E
(1 822) (1 803)	1771 (T)	2171	2371	2571 E ₂	2971 E	3271 E	3571 E
(1 873) (1 854)	1773 (T)	2173	2373	2573 E ₂	2973 E	3273 E	3573 E

Opening Dimensions

CLAD EXTERIOR UNITS: Dimensions shown in tables are rough opening dimensions.

WOOD EXTERIOR UNITS: Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

FRAME	ROUGH		MASONRY	
	Width	Height	Width	Height
Brickmould				
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with HurricaneShield® impact-resistant glass, see the product installation instructions or refer to local building code requirements.

Egress Notes:

Check all applicable local codes for emergency egress requirements.

- E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².
- E1 = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².
- E2 = With optional side pivot hardware, window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².
- E3 = With optional side pivot hardware, window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

See Design Data pages in this section for clear opening dimensions.

Clear opening (egress) information does not take into consideration the addition of a Rolscreen (or any other accessory) to the product. You should consult your local building code to ensure products with Rolscreens meet egress requirements.

Side pivot hardware reduces Performance class to 'R'.

Not to scale.

(T) = Tempered glass due to aspect ratio.

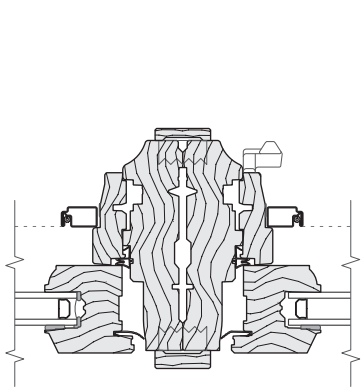
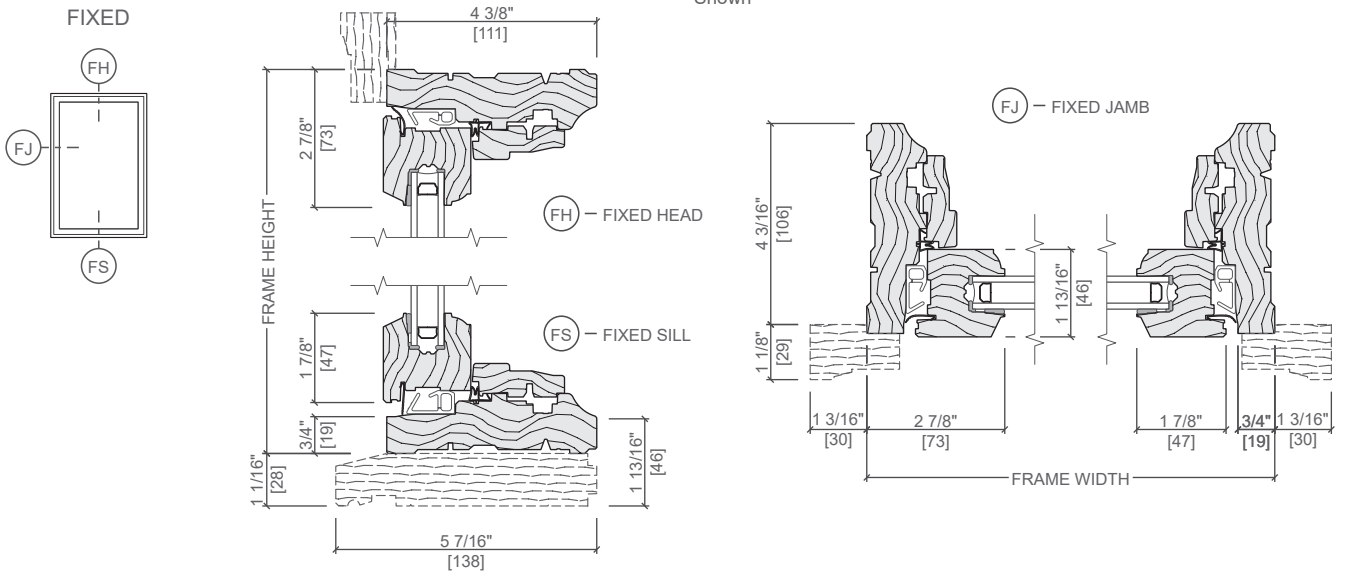
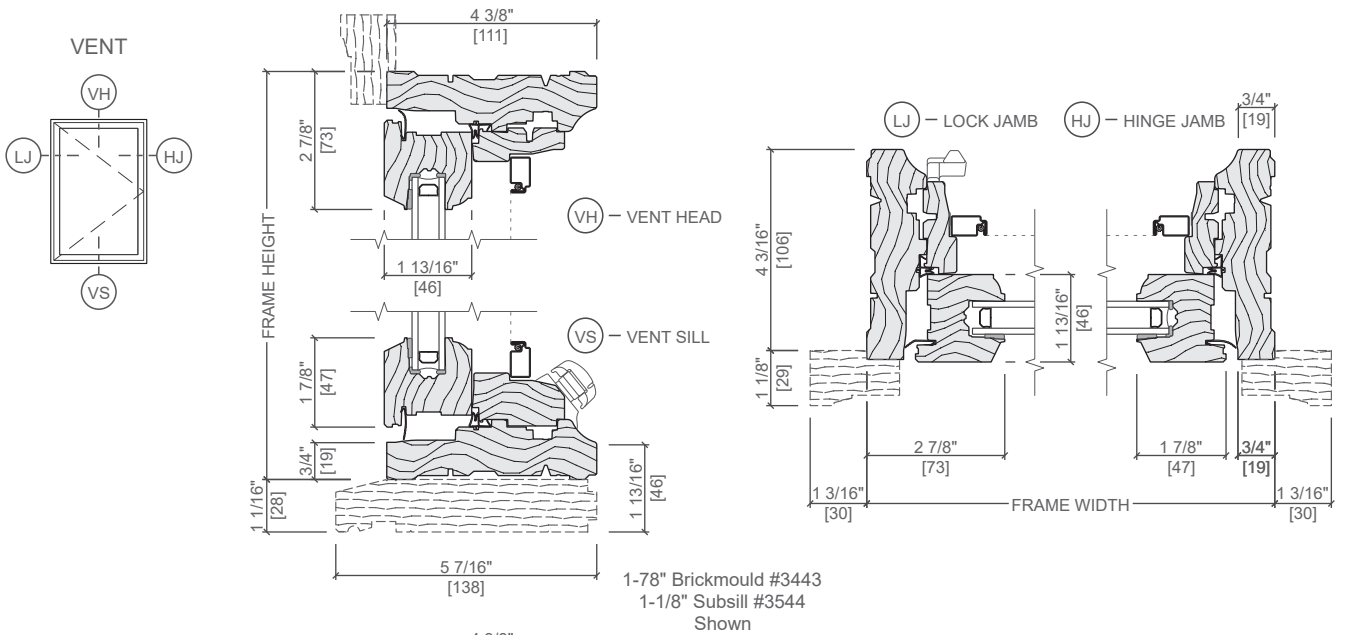
Traditional grille patterns shown. Refer to Clad/Wood Overview Section for additional patterns and profiles.



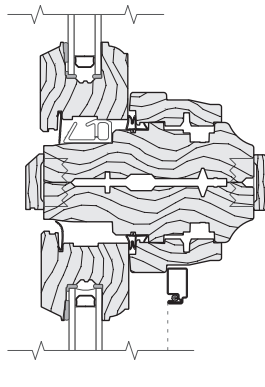
CASEMENT

UNIT SECTIONS

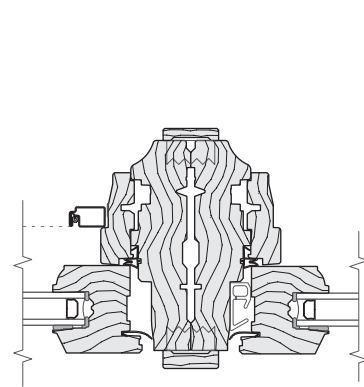
Wood Exterior



VERTICAL JOINING MULLION
VENT / VENT



HORIZONTAL JOINING MULLION
FIXED / VENT



VERTICAL JOINING MULLION
VENT / FIXED

Scale 3" = 1' 0"

All dimensions are approximate.



IN-SWING DOOR

DESIGN DATA

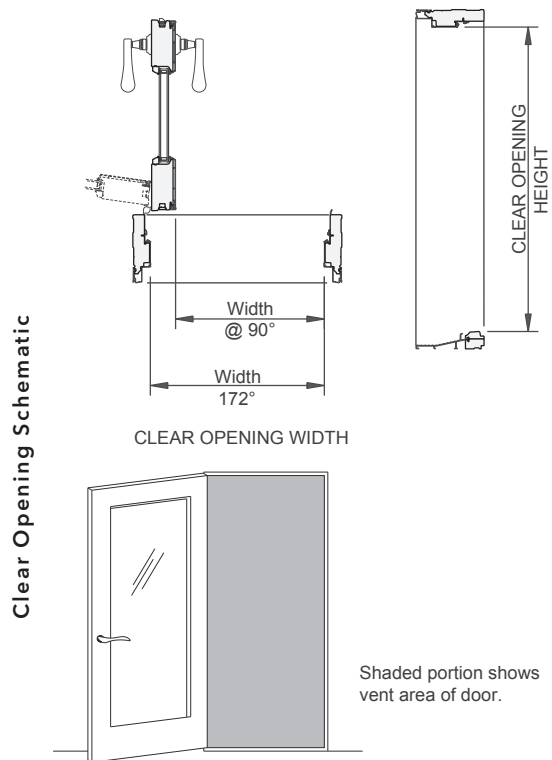
Wood and Aluminum-Clad Exteriors
Miscellaneous Formulas



Miscellaneous Formulas

	VISIBLE GLASS	ACTUAL GLASS
DOORS	Width (Single Door) = Frame - 11-5/8" Width (Double Door) = (Frame Width / 2) - 11-1/4" Height = Frame - 15-3/4"	Width (Single Door) = Frame - 10-5/8" Width (Double Door) = (Frame Width / 2) - 10-1/4" Height = Frame - 14-3/4"
TRANSOMS – FIXED FRAME DIRECT SET	Width = Frame - 3-1/4" Height = Frame - 3-1/4"	Width = Frame - 2" Height = Frame - 2"
TRANSOMS – FIXED CASEMENT	Width = Frame - 5-3/4" Height = Frame - 5-3/4"	Width = Frame - 4-3/8" Height = Frame - 4-3/8"
TRANSOMS – WIDE STILE CASEMENT	Width = Frame - 11-5/8" Height = Frame - 5-3/4"	Width = Frame - 10-1/4" Height = Frame - 4-3/8"
SIDELIGHTS	Width = Frame - 6-5/8" Height = Frame - 15-3/4"	Width = Frame - 5-5/8" Height = Frame - 14-3/4"

	CLAD AND WOOD	
	WIDTH	HEIGHT
CLEAR OPENING (@ 90°)	Width (Double Door–Active Panel) = (Frame / 2) - 5" Width (Double Door–Both Panels) = Frame - 7-1/2" Width (Single Door) = Frame - 5-5/16"	Height = Frame - 3-1/16"
CLEAR OPENING (@ 172°)	Width (Double Door–Active Panel) = (Frame Width / 2) - 2-13/16" Width (Double Door–Both Panels) = Frame - 3" Width (Single Door) = Frame - 3-3/16"	Height = Frame - 3-1/16"



To convert areas to square meters (m²), multiply square feet by 0.0929.



Sustainable Roofing



Designer Series Slate

Beaver Tail | Beveled Edge | Chisel Point



Environmentally friendly synthetic slate roofing tiles proudly made in the USA

Pioneers of sustainable roofing since 1993

Designer Series Slate



Many unique shapes and designs have been seen in slate roofing throughout history. Designer Series Slate tiles allow building owners the opportunity to continue that expression of individuality. EcoStar LLC, the leading manufacturer of premium synthetic steep-slope roofing products, offers three classic shapes as part of the Designer Series Slate collection. Made with the same formulas and offering the same benefits as Majestic Slate™ and Empire Slate™, Designer Series Slate offers unlimited creative possibilities.

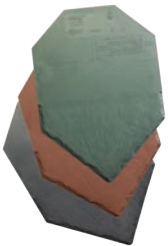
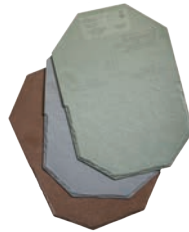


Beaver Tail

The rounded look makes this classic slate tile perfect for designing unique roof patterns or creating a true carriage house appeal.

Beveled Edge

The look of scalloped edges in a hexagonal pattern makes beveled edge tiles a classic. This rare style can be intermixed with traditional slate tiles or used separately for historical applications.



Chisel Point

Chisel Point tiles form a beautiful diamond pattern on the roof, reminiscent of European roof designs.

Available Colors:

Majestic Slate 11 color palette, Empire Slate 12 color palette, and a wide range of custom colors.

Note: Sample pieces, photographs or color samples may not accurately represent the true color level or variations of color blends that will appear on the roof. Before installation, ten tiles or so should be laid out and reviewed for conformity to desired color level. If color levels are unsatisfactory, advise your dealer before proceeding with installation. Colors and specifications are subject to change without notice. EcoStar is not liable for color variations or shading. Tiles must be randomly blended for best results. Limited warranties carry terms and conditions.

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Advantages

- Weighs significantly less than natural slate
- Easy application keeps installation costs down

Architectural Flexibility

- The various styles of Designer Series Slate can be blended together with Majestic Slate or Empire Slate traditional tiles to create unique designs
- Special shapes replicate those found in historical, carriage house and European architecture
- Available in a wide array of standard and custom colors
- Available in three different shapes: Beaver Tail, Beveled Edge and Chisel Point
- Natural appearance of real slate roofing

Strength & Durability

- Formulated to provide improved durability and superior protection from extreme weather conditions that include wind, hail and driving rain
- Significant life cycle savings

Warranty Options

- 50-Year Limited Material Warranty available
- 50-Year Gold Star Labor & Material Warranty available
- 110 mph Wind Warranty available

Environmental Sustainability



- Manufactured with post-industrial recycled rubber and plastics

Technical Information

- UL listed Class A fire resistance (UL 790)
- UL listed Class C fire resistance (UL 790)
- UL listed wind resistance to 110 mph (D3161)
- UL Class 4 impact resistance (UL 2218)
- Prolonged UV Exposure (ASTM G155)
- ICC-ES, AC07 approved (ESR-1715 & ESR-3325)
- Contributes to LEED® points
- Manufactured in strict adherence to ISO 9001:2008 Quality Management



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