



**Product Approval**  
USER: Public User

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OFFICE OF THE  
SECRETARY

FL #

FL1435-R28

Application Type

Revision

Code Version

2023

Application Status

Approved

Comments

Archived



Product Manufacturer

PGT Industries

Address/Phone/Email

1070 Technology Drive  
North Venice, FL 34275  
(941) 486-0100 Ext 21140  
jrosowski@pgtindustries.com

Authorized Signature

Jens Rosowski  
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Address/Phone/Email

Quality Assurance Representative

Address/Phone/Email

Category

Windows

Subcategory

Single Hung

Compliance Method

Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer  
☐ Evaluation Report - Hardcopy Received

Florida Engineer or Architect Name who developed the Evaluation Report

A. Lynn Miller, P.E.

Florida License

PE-58705

Quality Assurance Entity

Keystone Certifications, Inc.

Quality Assurance Contract Expiration Date

12/31/2032

Validated By

Steven M. Urlich, PE

☒ Validation Checklist - Hardcopy Received

Certificate of Independence

[FL1435 R28 COI Cert of Independence.pdf](#)

Referenced Standard and Year (of Standard)

**Standard**

**Year**

AAMA/WDMA/CSA 101/IS2/A440

2011

AAMA/WDMA/CSA 101/IS2/A440

2022

ASTM E1886

2013

ASTM E1996

2012

Equivalence of Product Standards

Certified By

Florida Licensed Professional Engineer or Architect  
[FL1435 R28 Equiv AAMA 101-17 and AAMA 101-22 Equivalency Letter PGT.pdf](#)

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

08/28/2024

Date Validated

09/03/2024

Date Pending FBC Approval

09/04/2024

Date Approved

10/15/2024

#### Summary of Products

FL #	Model, Number or Name	Description
1435.1	SH-5400	EnergyVue Vinyl Single Hung Window
<b>Limits of Use</b> <b>Approved for use in HVHZ:</b> No <b>Approved for use outside HVHZ:</b> Yes <b>Impact Resistant:</b> No <b>Design Pressure:</b> N/A <b>Other:</b> Please see the Installation Instructions for design pressure, size and anchorage information.		<b>Installation Instructions</b> <a href="#">FL1435_R28_II_SH5400-NI - REV D.pdf</a> Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No <b>Evaluation Reports</b> <a href="#">FL1435_R28_AE_SH5400 - REV D.pdf</a> Created by Independent Third Party: No
1435.2	SH-5400 with U-Lite Thin Triple Glazing	Vinyl Single Hung Window
<b>Limits of Use</b> <b>Approved for use in HVHZ:</b> No <b>Approved for use outside HVHZ:</b> Yes <b>Impact Resistant:</b> No <b>Design Pressure:</b> N/A <b>Other:</b> Please see the Installation Instructions for design pressure, size and anchorage information.		<b>Installation Instructions</b> <a href="#">FL1435_R28_II_SH5400FPA-U-Lite.pdf</a> Verified By: A. Lynn Miller, P.E. PE-58705 Created by Independent Third Party: No <b>Evaluation Reports</b> <a href="#">FL1435_R28_AE_SH5400 - U-Lite - ENG EVAL.pdf</a> Created by Independent Third Party: No
1435.3	SH-5500	WinGuard Vinyl Single Hung Window
<b>Limits of Use</b> <b>Approved for use in HVHZ:</b> No <b>Approved for use outside HVHZ:</b> Yes <b>Impact Resistant:</b> Yes <b>Design Pressure:</b> N/A <b>Other:</b> Please see the Installation Instructions for design pressure, size and anchorage information.		<b>Installation Instructions</b> <a href="#">FL1435_R28_II_SH5500LMI - REV C.pdf</a> Verified By: A. Lynn Miller, P.E. 58705 Created by Independent Third Party: No <b>Evaluation Reports</b> <a href="#">FL1435_R28_AE_Eng Eval - SH5500 - REV C1.pdf</a> Created by Independent Third Party: No

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Product Approval Accepts:



1) THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT FLORIDA BUILDING CODE.

2) SHUTTERS ARE REQUIRED WHEN USED IN WIND-BORNE DEBRIS REGIONS.

3) MASONRY ANCHORS MAY BE USED INTO WOOD AS PER TABLES 2&3. ALL WOOD BUCKS LESS THAN 1-1/2" THICK ARE TO BE CONSIDERED 1X INSTALLATIONS. 1X WOOD BUCKS ARE OPTIONAL IF UNIT IS INSTALLED DIRECTLY TO SUBSTRATE. WOOD BUCKS DEPICTED AS 2X ARE 1-1/2" THICK OR GREATER. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED TO PROPERLY TRANSFER LOADS TO THE STRUCTURE. WOOD BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD.

4) ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO. USE ANCHORS OF SUFFICIENT LENGTH. ANCHORS AND FRAME CORNERS SHOULD BE SEALED. OVERALL SEALING/FLASHING STRATEGY FOR WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS AND IS BEYOND THE SCOPE OF THESE INSTRUCTIONS.

5) SHIMS ARE REQUIRED AT EACH ANCHOR LOCATION WHERE THE PRODUCT IS NOT FLUSH TO THE SUBSTRATE. USE SHIMS CAPABLE OF TRANSFERRING APPLIED LOADS. WOOD BUCKS, BY OTHERS, MUST BE SUFFICIENTLY ANCHORED TO RESIST LOADS IMPOSED ON THEM BY THE WINDOW.

6) THE ANCHORAGE METHODS SHOWN HAVE BEEN DESIGNED TO RESIST THE WIND LOADS CORRESPONDING TO THE REQUIRED DESIGN PRESSURE. THE 33-1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. THE 1.6 LOAD DURATION FACTOR WAS USED FOR THE EVALUATION OF ANCHORS INTO WOOD. ANCHORS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FOR CORROSION RESISTANCE.

7) FRAME FLANGES OR INTEGRAL FINS MAY BE TRIMMED IN-FIELD TO CREATE EQUAL-LEG FRAME.

Window Buck Size		Configuration	Reinf. Level	Design Pressure		Product Rating
Width	Height			(+) psf	(-) psf	
40"	63"	Equal-lite	R4	50.0	70.0	R-PG50
36"	62"	Std. ProView	R4	50.0	50.0	LC-PG50
36"	67-9/16"	Custom Sash				
52-1/8"	84"	Equal-lite	R1	50.0	50.0	LC-PG50
52-1/8"	84"	Std. ProView				
52-1/8"	91-13/16"	Custom Sash				
52-1/8"	84"	Equal-lite	R2	65.0	70.0	LC-PG65
52-1/8"	84"	Std. ProView				
52-1/8"	91-13/16"	Custom Sash				

SHAPES MAY BE USED BY  
INSCRIBING THE SHAPE IN  
A BLOCK AND OBTAINING  
DESIGN PRESSURES FOR  
THAT BLOCK SIZE FROM  
THE TABLE ON THIS SHEET.

Revision:

D) NO CHANGES ON THIS SHEET.

PREPARED BY A. LYNN MILLER  
1070 TECHNOLOGY DRIVE  
N. VENICE, FL 34275  
(941) 480-1600

**PGT**  
Custom Windows and Doors

REGISTRATION #29296

06/12/11

VINYL SINGLE HUNG WINDOW (NI)

A. MORLESIN

ion.

49

SH5400EPA-NI

MG  
No.

OF 4

next

SH5400

series

ANTHONY LYNN MILLER  
 LICENSE  
 No. 58705  
 A. Lynn Miller  
 10/11/23  
 STATE OF  
 FLORIDA  
 PROFESSIONAL ENGINEER

A. LYNN MILLER, P.E.  
 P.E.# 58705



TABLE 2: ANCHORS INSTALLED THROUGH FRAME

Anchor	Substrate	Min. Edge Distance	Min. Embedment
#10 SMS (steel, 18-8 S.S. or 410 S.S.) Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
#12 SMS (steel, 18-8 S.S. or 410 S.S.)	P.T. Southern Pine (SG=0.55)	9/16"	1-3/8"
	Steel, A36	3/8"	0.050"
	Steel Stud, A653 Gr. 33	3/8"	0.0346" (20 Ga.)
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
3/16" Ultracon+ Max. DP of 50.0 psf	P.T. Southern Pine (SG=0.55)	7/16"	1-3/8"
	Concrete (min. 3 ksi)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
1/4" Ultracon+	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3 ksi)	1-3/16"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	1"	1-1/4"
1/4" Crete-Flex (410 S.S.)	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Concrete (min. 3.35 ksi)	1"	1-3/4"
	Ungrouted CMU, (ASTM C-90)	2-1/2"	1-1/4"
1/4" Aggre-Gator (18-8 S.S.)	Concrete (min. 3.275 ksi)	1-1/2"	1-3/8"
	P.T. Southern Pine (SG=0.55)	1"	1-3/8"
	Ungrouted CMU, (ASTM C-90)	2"	1-1/4"

TABLE 3: ANCHORS INSTALLED THROUGH INTEGRAL FIN

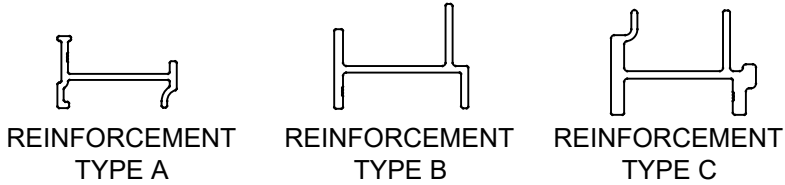
Anchor	Substrate	Min. Edge Distance	Min. Embedment
2-1/2" x .131" Common Nail Max. DP of 50.0	P.T. Southern Pine (SG=.55)	9/16"	2-7/16"
2-1/2" x .131" Ring-shank Nail	P.T. Southern Pine (SG=.55)	9/16"	2-7/16"
2-1/2" x .145" Roofing Nail	P.T. Southern Pine (SG=.55)	9/16"	2-7/16"
#10 SMS (steel, 18-8 S.S. or 410 S.S.)	P.T. Southern Pine (SG=.55)	3/4"	1-3/8"
	Aluminum, 6063-T5	3/8"	0.0713" (14 Ga.)
	Steel Stud, Gr. 33	3/8"	0.0346" (20 Ga.)
	Steel, A36	3/8"	0.050"

ANCHOR NOTES FOR TABLES 2 & 3:

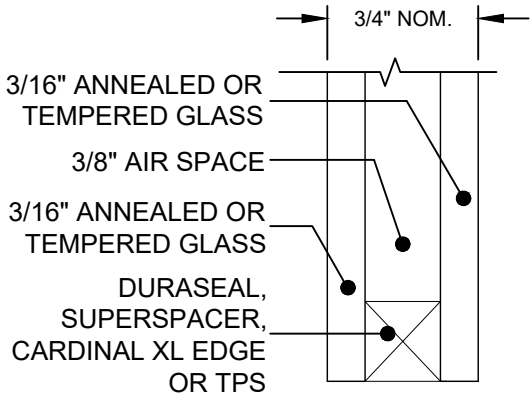
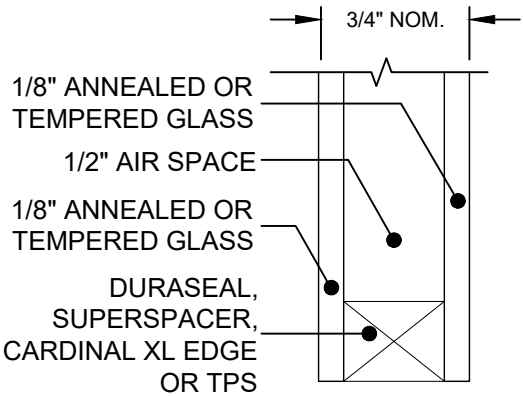
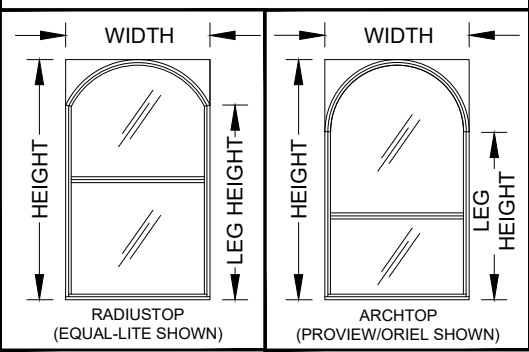
- 1) "UNGROUTED CMU" VALUES MAY BE USED FOR GROUTED CMU APPLICATIONS.
- 2) ALL ANCHOR HEAD TYPES ARE ACCEPTABLE.
- 3) ANCHOR LENGTH TO BE SO THAT A MIN. OF 3 THREADS EXTEND BEYOND THE METAL SUBSTRATE.

TABLE 4: REINFORCEMENT TYPES

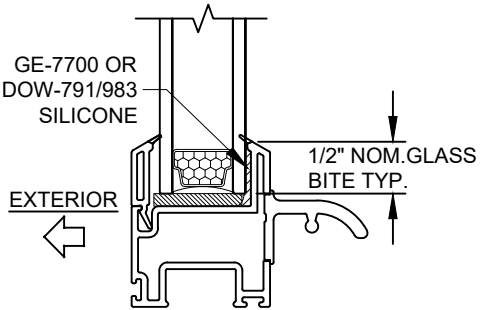
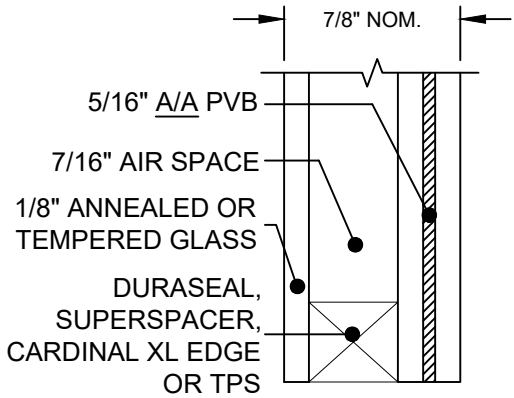
Level	Reinforcement			
	Upper Lite	Lower Lite		
	Bottom Rail	Top Rail	Bottom Rail	Side Rails
R1	B	A	A	A
R2	C	A	A	A
R4	B	A	A	N/A



WINDOW SHAPES AS SHOWN BELOW OR SIMILAR, MAY BE USED BY INSCRIBING THE SHAPE IN A BLOCK AND OBTAINING DESIGN PRESSURES AND ANCHORAGE FOR THAT BLOCK SIZE FROM THE TABLE ON SHEET 1.



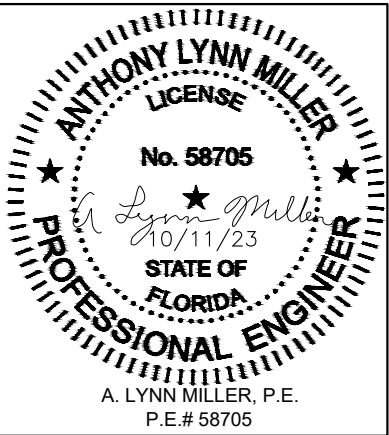
GLASS TYPES

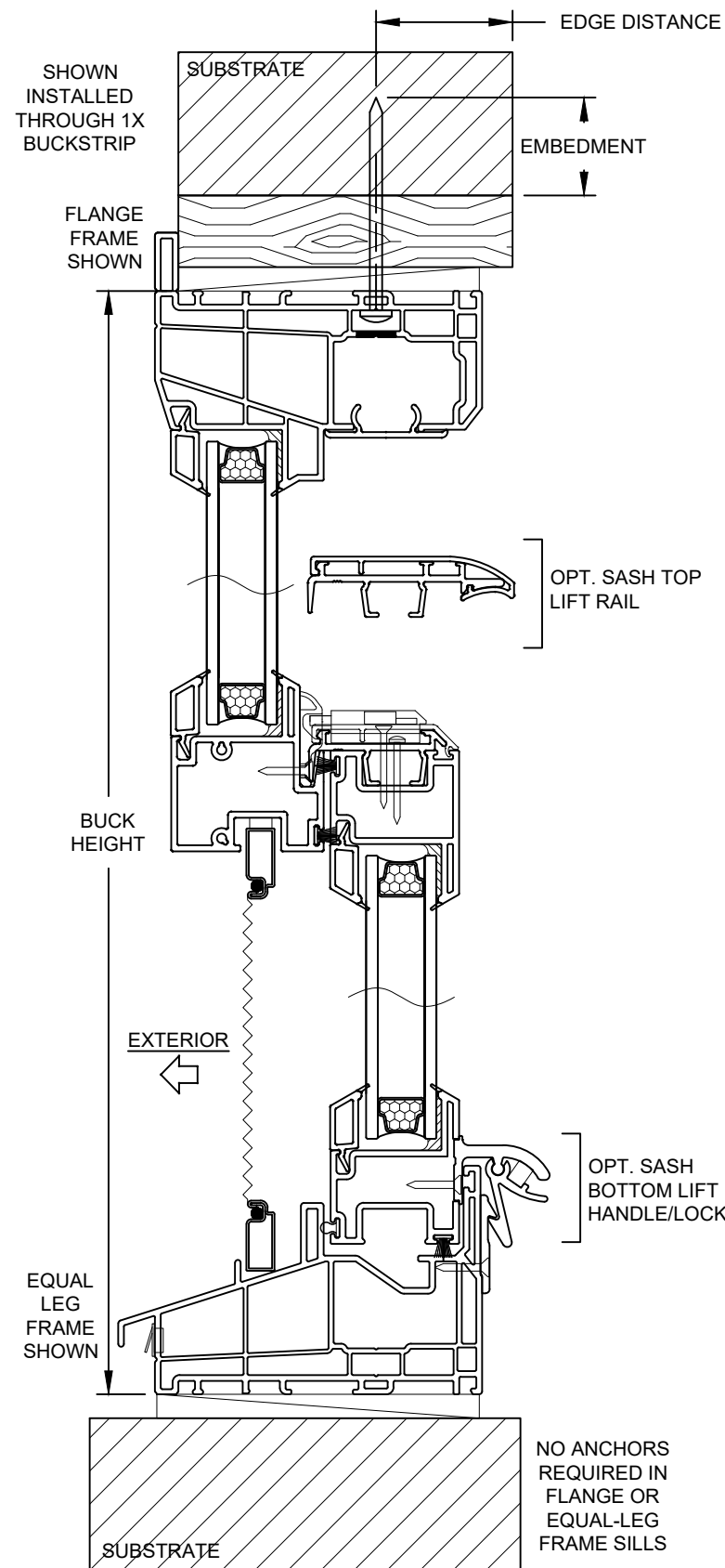


TYP. GLAZING DETAIL  
PVB INTERLAYER MANUFACTURED BY KURARAY AMERICA, INC.

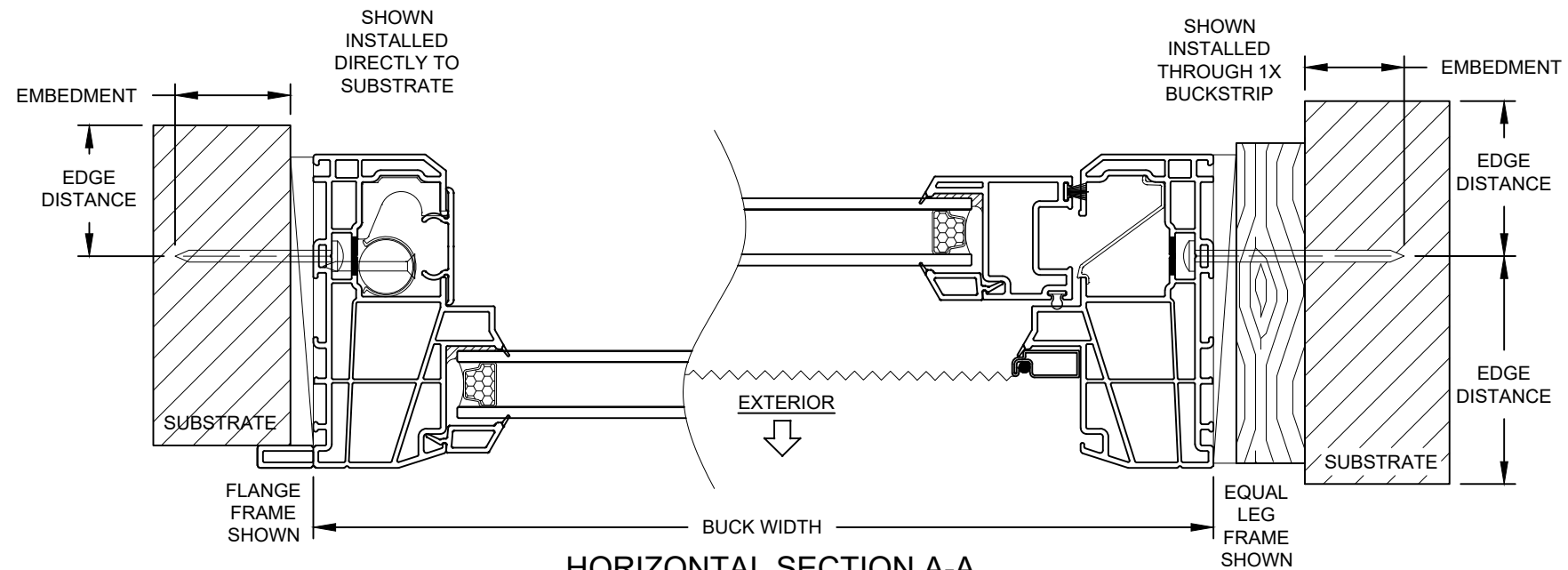
D) REMOVED ULTRACON 1/4" & 3/6" FROM ANCHOR TABLES.

PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	REGISTRATION #29296	Date	06/12/11	By	A. MORLESIN	DWG No.	SH5400FPA-NI	Rev.	D
		VINYL SINGLE HUNG WINDOW (NI)		ANCHOR & GLAZING DETAILS.		2 OF 4	SH5400		

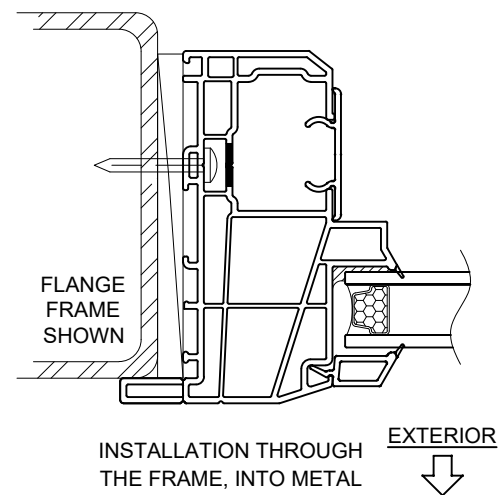




**VERTICAL SECTION B-B**



**HORIZONTAL SECTION A-A**

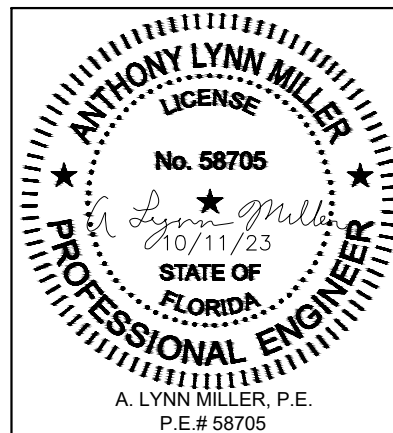


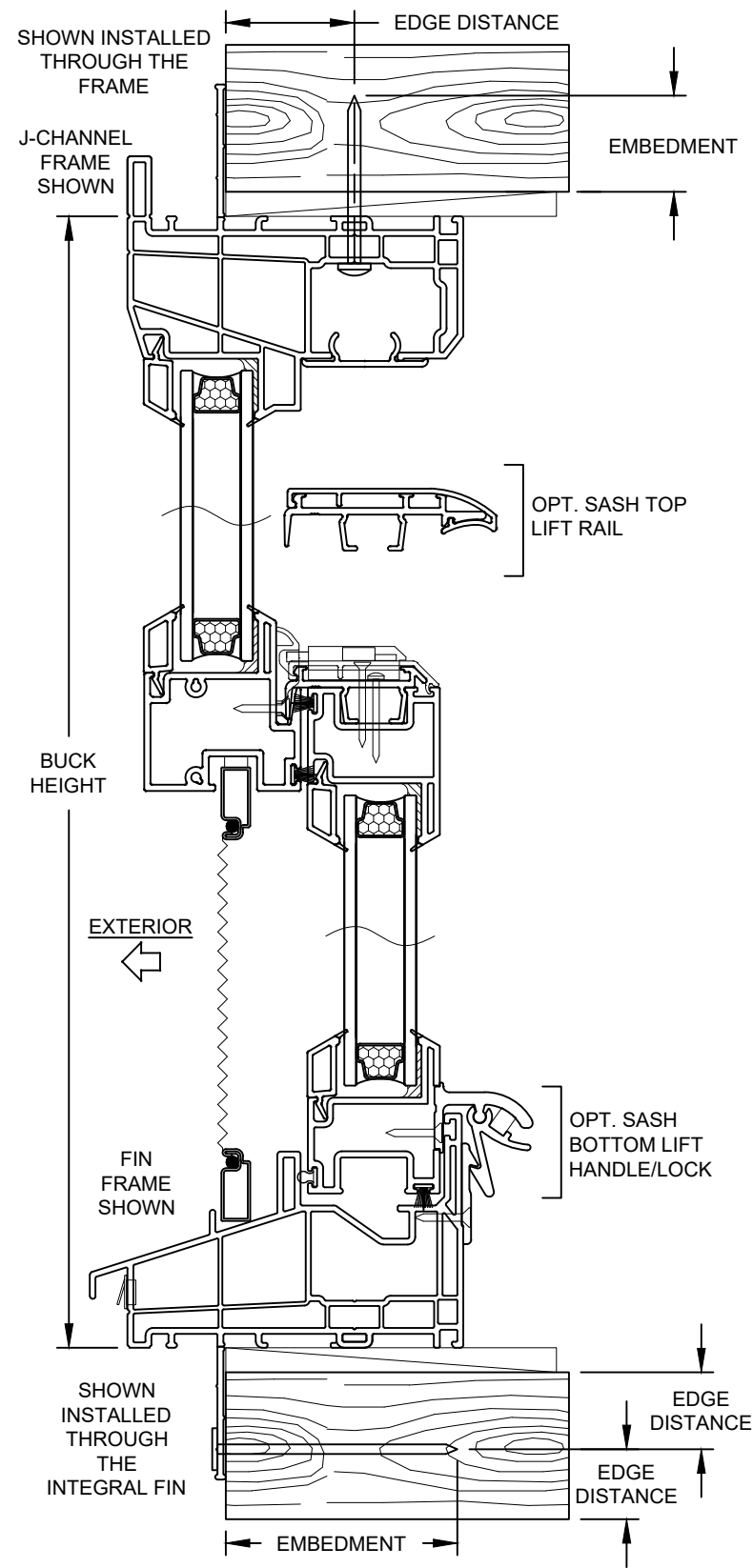
**INSTALLATION NOTES:**

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.

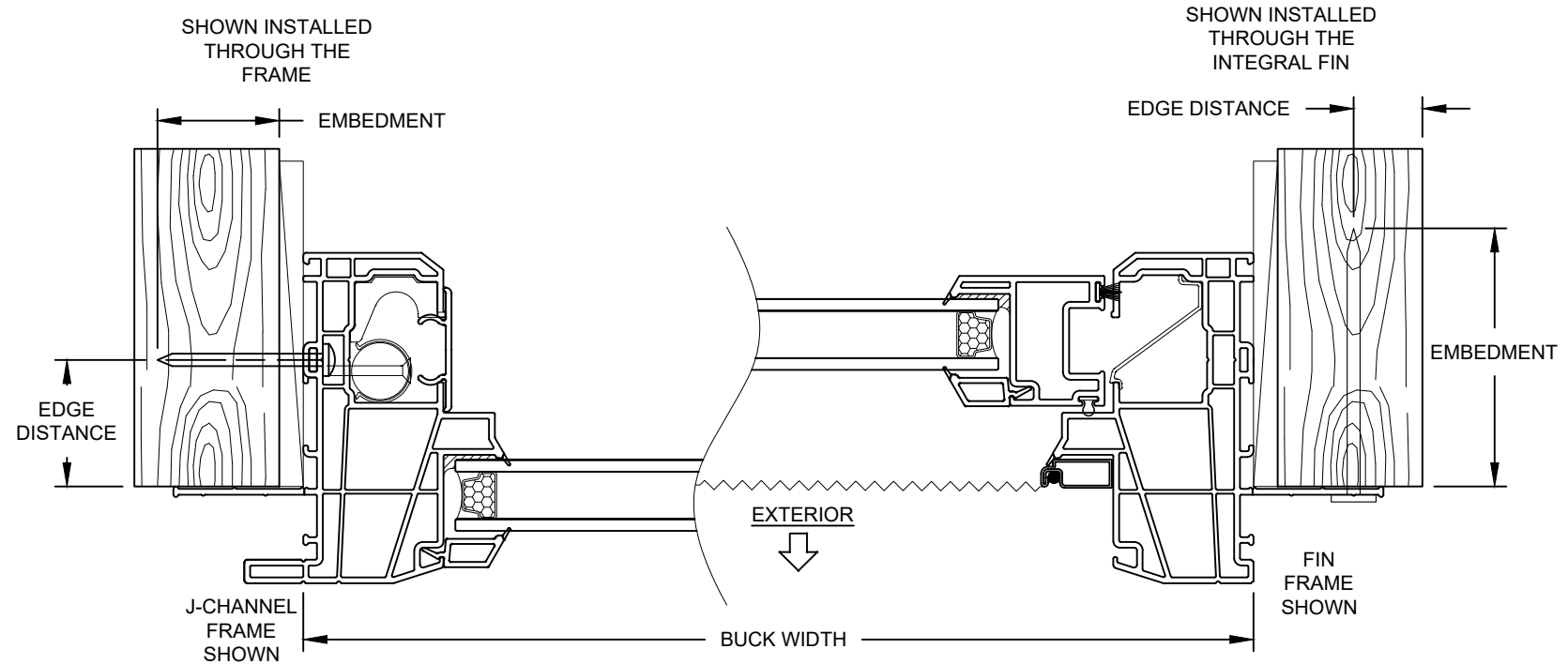
Revision: D) NO CHANGES IN THIS SHEET.

<b>PGI</b> Custom Windows and Doors 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296		Date 06/12/11	Rev. D
	VINYL SINGLE HUNG WINDOW (NI)		By A. MORLESIN		No. SH5400FPA-NI	
	FLANGE INSTALLATIONS.		3 OF 4		Sheet SH5400	
					Series SH5400	

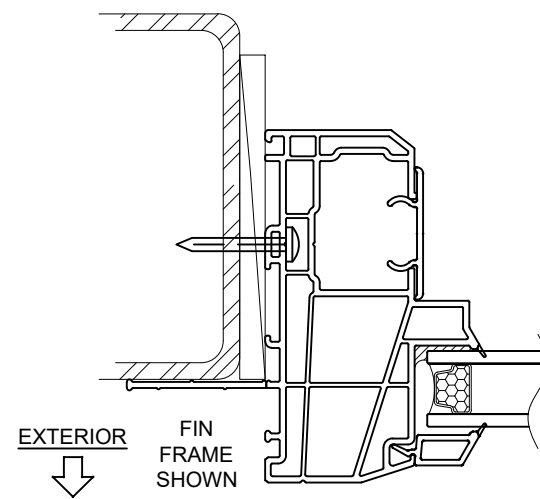




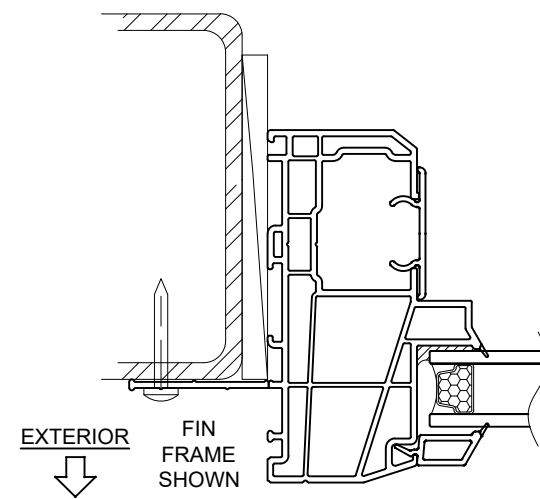
**VERTICAL SECTION D-D**



**HORIZONTAL SECTION C-C**



INSTALLATION THROUGH THE FRAME, INTO METAL



INSTALLATION THROUGH THE INTEGRAL FIN, INTO METAL

**INSTALLATION NOTES:**

- 1) SEE SHEET 1 FOR SPACING REQUIREMENTS.
- 2) SEE TABLE(S) ON SHEET 2 FOR ANCHORAGE AND SUBSTRATE REQUIREMENTS.
- 3) MAX. SHIM THICKNESS TO BE 1/4".
- 4) GLASS SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY AND MAY DIFFER TO MEET DESIGN REQUIREMENTS.
- 5) FIN AND/OR FLANGE MAY BE REMOVED TO CREATE OTHER FRAME TYPES.

Revision: D) ADD NOTE INSTALL OP. 4

<b>PGI</b> Custom Windows and Doors 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600	PREPARED BY A. LYNN MILLER 1070 TECHNOLOGY DRIVE N. VENICE, FL 34275 (941) 480-1600		REGISTRATION #29296 06/12/11 A. MORLESIN SH5400FPA-NI		D
	VINYL SINGLE HUNG WINDOW (NI) FIN INSTALLATIONS.		4 OF 4	SH5400	Rev.

